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# Trade Openness Studies In ASEAN-5 and It's Effect On Unemployment

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**ABSTRACT**

*The aim of this analysis is to examine the linkages among trade, population growth, interest rates, GDP growth, and unemployment rates in the five ASEAN nations of Indonesia, Malaysia, the Philippines, Singapore, and Thailand between the years 2002 and 2021. This paper is Unique because it simultaneously examines the ASEAN-5 (Founding nations of ASEAN). The source for this research was sourced from the World Bank. The Fix Effect panel data regression model is the most effective model for this research since it can be used to accomplish the goals of the study's descriptive statistical methods, according to the likelihood test. This test demonstrates that the Fix effect model's regression results indicate that the Trade, LnPop, and inflation variables have a significantly negative impact, while GDP growth and wage with unemployment in Asian nations while GDP growth has a positive but not significant. The study demonstrates the necessity of continuing free trade policies.*



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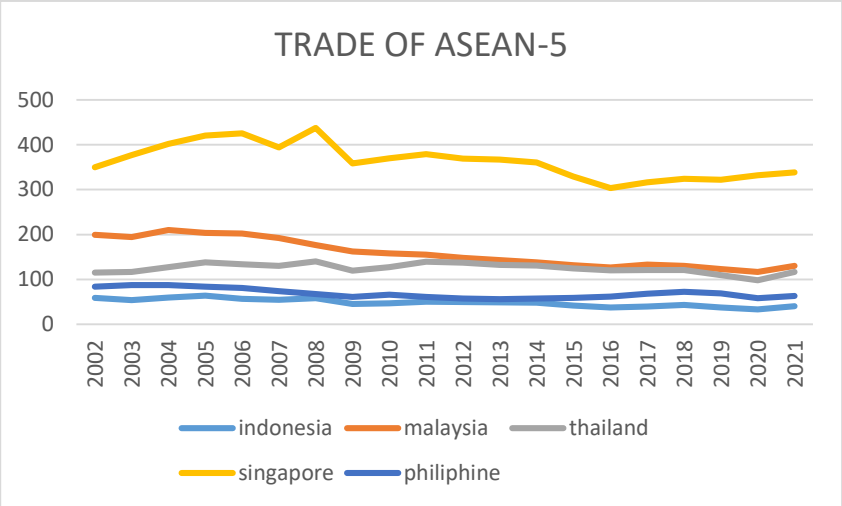
## 1. INTRODUCTION

The topic of unemployment will always be relevant for discussion. The unemployment rate is a crucial macroeconomic factor. Unemployed individuals are those who have the necessary skills, are eager to work, and are in need of employment but are unable to do so. Depending on whether the country is developed or underdeveloped, there are different causes of unemployment that are related to the economic structure of that nation. (Soylu, Ö. B., Çakmak, İ., & Okur, F. 2018). Moreover, The pandemic in 2019 had a significant influence on the global economy; Due to COVID-19, many individuals lost their jobs and died. Trade is one of the issues that many nations around the world are very concerned about.

The two sides of a coin are exactly how international trade appears to work. By encouraging the improvement of efficiency and competitiveness, Trade is among the most important factors in fostering global economic expansion. But what frequently leads to income inequality is the high rate of international trade, which is partly sparked by technological advancement (Norris et al., 2015). International trade is advantageous because it improves the welfare of the trading nations. International trade results in the concentration of production in one location due to scale economics. As a result, international trade ensures efficiency gains through global specialization Krugman, (1980). Dutt et al. (2009) provide convincing evidence that trade openness and unemployment are negatively correlated.. By shifting labor from contracting to growing sectors, trade openness may, in the short run, increase job turnover, claim Bernard et al. (2007).

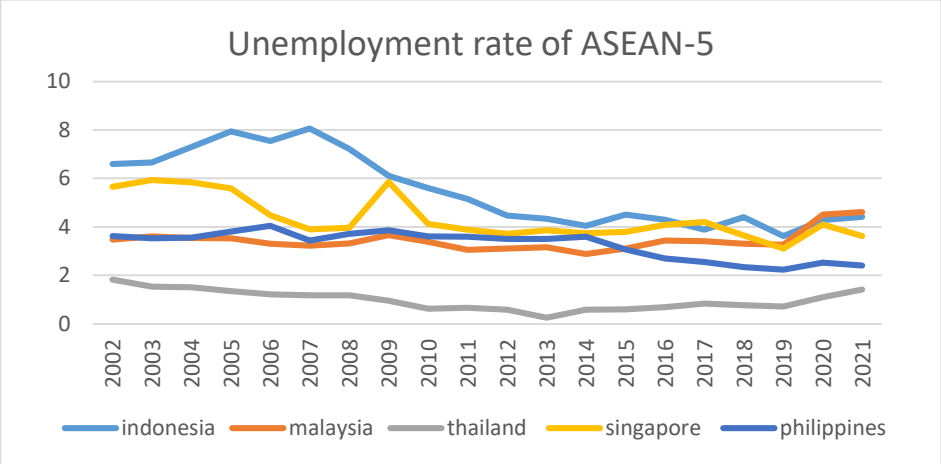
There has been prior research on the relationship between TO and unemployment. It draws a range of conclusions regarding the relationship between unemployment and trade openings. This paper is Unique because it simultaneously examines the five ASEAN nations, which have the most developed economies in ASEAN, to determine the association between ASEAN-5 unemployment and trade openness. ASEAN (Association of Southeast Asian Nations) was founded in Bangkok in 1967, while many of the previous papers was focusing on a single nation or focused on the influence of trade on Economic growth rather than its effect on the unemployment rate of the ASEAN-5 countries.

GRAPH 1




From graph 1, We can conclude that The Philippines and Indonesia have relatively low levels of trade compared to the other four nations, whereas Singapore has the highest trade among 4 other nations with the minimum of 300 in 2016, it is still much higher if compare to, Malaysia, Indonesia, Philippine, and Thailand have high levels of trade relative to the other four countries.

GRAPH 2




As seen in graph 2, Indonesia had a relatively high unemployment rate compared to four other countries in 2007 due to several economic factors, but Indonesia was able to lower it to close to 5% in 2010, slightly above the level of unemployment of Singapore. Malaysia and the Philippines quite have had stable levels of unemployment for the last 20 years. Thailand, on the other hand, has had a very low unemployment rate below 2% for 20 years.

Based on the literature, the purpose of this article is to investigate the relationship between trade openness and unemployment, with an emphasis on ASEAN-5, using a variety of control variables, such as GDP, population, inflation, and wages. The government of each nation needs this analysis to formulate sound policies for promoting sustainable trade growth and lowering unemployment rates. The essay is structured as follows:

Evidence and a review of the literature are presented in Section 2. The data utilized in the analysis are submitted in Section 3. Section 4 presents the primary empirical findings, and Section 5 presents the findings and conclusion.

## 2. LITERATUR REVIEW

### Trade openness and unemployment

An individual who is prepared to work for the going rate but is unable to obtain employment is said to be unemployed. The several types of unemployment include hidden unemployment, cyclical unemployment, cyclical unemployment, technological unemployment, involuntary unemployment, and frictional unemployment (Soylu, B., akmak, & Okur, F.) (2018)

Utilizing cross-sectional data on a larger group of countries and panel data from 20 OECD countries, Felbermayr and Gabriel. (2011) establish the fact, The study paper's conclusion shows an empirical regularity: trade openness does not, over time, result in a rise in structural unemployment. Contrarily, in the majority of the previous regressions, this finding is resistant to sample selection and estimation techniques, and it is independent of the specific openness measure or definition of the unemployment rate that was chosen. Fernandes. (2014) looks at the impact of trade openness on female unemployment In emerging countries, where women typically have fewer resources, including time and money, and are more likely to struggle to complete higher education. The study used data from 119 developing nations between 1990 and 2012 to conduct its research. The study makes use of estimates from Ordinary Least Squares (OLS) regressions and Instrumental Variables regressions to analyze the empirical results, Studies demonstrate that the countries' increased trade openness causes higher rates of female unemployment.

Using annual data, Rath, B. N., and Ridhwan. (2020) examine the relationship between employment, labor productivity, and trade openness in Brazil, Russia, India, China, Indonesia, and South Africa (BRICS), (1991–2018). The findings point to a long-term correlation of the variables, but only in these economies' agricultural sectors. Nguyen, 2021) Analyzing the nonlinear connection between trade openness (TO) and economic growth (EG) in the Asean-6 Nations (Malaysia, Thailand, Singapore, Philippines, Indonesia, and Vietnam). utilizing a fixed-effect panel threshold method model demonstrates that TO had a nonlinear impact on Economic Growth and the Trade openness has two threshold values. Additionally, her research demonstrates that Economic Growth is both positively and negatively impacted by domestic investment and financial crises.

And so Dhamija. (2019) empirically analyzes the relationship between trade liberalization and joblessness in the Indian economy. (separately for rural and urban areas). The simply assume that the effects of free trade have varied for the Indian states. is supported by this study. The research show proof of the inverse relationship among

unemployment and trade openness. The relation between unemployment and TO reduces unemployment as a result.

On another case, Nwaka, I. D., Uma, K. E., & Tuna, G. (2015) analyzes the effects of trade strategy on unemployment rates in Nigeria. It employs the vector error correction algorithm using time series data from 1970 to 2010. The results show that over time, actual output and per-person earnings result in a decrease in unemployment, whereas trade openness strategy is linked to a rise in unemployment. Foreign policy shocks, as shown by commodity prices, also have a favorable impact on the rates of unemployment but do not ultimately help the economy return to equilibrium. But it is seen that the initial effects of openness and foreign price shocks are observed to lower unemployment. In an unbalanced panel framework, Gozgor. (2013) draws the conclusion that protectionism is of little value in lowering the rate of Unemployment in industrialized economies and that the process of globalization should continue.

Dutt et al (2009). explore the link between unemployment and trade openness for a collection of developing nations over the years 1985 to 2004 and discover that unemployment and trade openness are adversely associated both between the countries (cross-section analysis) and within the countries (panel analysis). They argued that trade openness lowers unemployment by generating more jobs and job searching. Thus, Felbermayr et al. (2011b) analyze the search-unemployment model with heterogeneous companies as described by Dutt et al. and claim that unemployment may decrease as a result of trade liberalization given that trade liberalization increases aggregate productivity. This may occur as a result of the least productive enterprises being pushed out and workers being reallocated to more productive firms. (Nessa, H., Alauddin, M., & Khan, H. R. (2021).

Whereas Ulima (2021) Examines the relationship between unemployment and trade openness, salaries, inflation, economic development, as well as the population of the D-8 OIC member nations using 30 years data from 1991 to 2020. The study's findings indicate that the unemployment rates of the D-8 OIC member countries are significantly impacted simultaneously by trade openness, wages, inflation, economic growth, and population. Although openness to trade had a considerable positive result on unemployment, there is a significant inverse link between unemployment and wages, inflation and economic growth. Unemployment is significantly influenced favorably by the population.

**Inflation and Unemployment**

QIN. (2020) uses the Vector Autoregression (VAR) technique to examine the stability of the Phillips Curve in the American economy from Q2 1962 to Q4 2019 Impulse Response Function (IRF) and Variance Decomposition (VD) calculations are created to look into the link between inflation and the unemployment rate, The Granger-causal Test results demonstrate that knowledge of past unemployment rates aids in improving

inflation estimates. Phillips Curve remains valid in the long- and short-term U.S. economy based on impulse response function.

Both developed and emerging nations struggle economically with both inflation and unemployment. In order to sustain the economy, inflation and unemployment must be regulated since they will lower levels of personal well-being as real money value declines. Both unemployment and inflation have been mentioned as indices for gauging a nation's economic health. Economic growth has been shown to be significantly influenced by inflation. Excessive inflation slows down economic expansion, lowers the number of open positions, and raises the unemployment rate. These data demonstrate that there is an imbalance between inflation and economic growth. (Thanh, 2015 in Lisani, N., Masbar, R., & Silvia, V. (2020).)

While The nature of inflation-unemployment dynamic causal linkages is experimentally examined in the ASEAN-10 from 1989 to 2018 in both the long-term - and short-term. The short-run correlations between unemployment and inflation were minor, according to the study's analysis using the Vector Error Correction Model (VECM), The study only confirmed the long-term applicability of the Phillips curve theory. Lisani, N., Masbar, R., & Silvia, V. (2020). Kurniasih, E. P., Kartika, M., & Tanjungpura, U. (2020) attempts to reexamine whether Indonesia over the previous 30 years experienced the Phillips theory's trade-off between the unemployment rate and inflation rate, on the basis of a study, In Indonesia, there is no trade-off between inflation and joblessness. in the short-term, though it does have a positive impact on inflation that is not significant. However, unemployment has a significant negative impact on inflation in the long term, which means a trade-off exists between those. Wherein if the rate of unemployment increases, the results will slow the inflation rate and vice versa. Increased inflation results from falling unemployment.

The same with Umaru & Zubairu, (2012) Both unemployment and inflation should be kept at a low level in order to maintain economic stability. It is frequently impossible to reduce both unemployment and inflation at the same time because there are always trade-offs between the two, especially in the short term. Short-term Inflation is inversely correlated with unemployment, meaning therefore inflation will be low while unemployment is high and vice versa. The expansion of the money supply will result in high prices for goods and services (inflation). According to Phillip's curve, the short-term relationship between unemployment and inflation is nonexistent. (1958) (Friedman. 1968)

Furthermore, Suharti. (2021) examines Data on unemployment and inflation in Indonesia between 2001 and 2019. According to the investigation, inflation only accounted for 18.6% of unemployment, making it a minor cause of unemployment. Whereas other factors caused the remaining 80.4% of the problem This is because natural and man-made factors, rather than an increase in overall demand, are to blame for the price increase. While (Giri, 1994) examines the implocation of investment and inflation on unemployment

in the Bali Province from 1994 to 2013. The analysis's findings indicate that there is evidence that unemployment is significantly positively impacted by inflation to some extent. Accordingly, unemployment will increase as inflation rises. A significant negative impact on unemployment is partially caused by investment. Accordingly, unemployment will decline as investment increases, and both inflation and investment have an impact on unemployment at the same time. Although, Haug and King (2014) used up-to-date econometric techniques and quarterly US data from 1952 to 2010 to reexamine the long-term correlation between inflation and unemployment. in periods of time ranging from 8 to 25 or even 50 years, they discovered convincing evidence of a positive link is existed, with inflation leading to unemployment by about 3 until 3 1/2 years.

**ECONOMIC GROWTH (GDP GROWTH) AND UNEMPLOYMENT**

(Khrais, 2016) Analyze the correlation between MENA countries' growth of the and the rate of unemployment during the time (1990–2016). The findings showed that all participating countries' unemployment rates were impacted by the GDP values taken into account. The annual gross domestic product (GDP) encompassing every country included in the study on unemployment across all nations, the results were derived using labor force statistics the following nations did not show any significant impact, according to the level of significance (F), which is bigger than (a = 0.05). Amount of impact is regarded as being really negligible (- 0.009). This result indicates that GDP may not be the sole component influencing unemployment. And so Chand, K., Tiwari, R., & Phuyal, M. (2018) Attempts to determine the impact of impact of economic expansion on India's unemployment rate, Growth in the economy, and the unemployment rate have been found to be strongly negatively correlated. Additionally, it was shown that 48% of the reasons why the unemployment rate changed may be attributed to GDP. The outcomes are in line with both the results of prior studies and Okun's law. Employment problems result from shortfalls in overall demand at certain points in the business cycle, making it very challenging to create more jobs for people who are interested in working. These kinds of demands are cyclical and involuntary because they are seasonal in nature.

Where, Hussain, T., Siddiqi, M. W., & Iqbal, A. (2009).analyze the relationship between growth and unemployment using Pakistan time series data from 1972 to 2006, As shown by Johanson Cointegration that growth and unemployment have a long-term link. The study makes use of the Vector Error Correction Model (VECM) for causality as well as dynamics in the short term. Using capital as an explanatory variable, together with labor and human capital, the VECM results indicate that growth and unemployment have a short- and long-term causal relationship. In Algeria, Egypt, Morocco, and Tunisia, four Arab nations, two models are used to assess how responsively unemployment is to output as reflected by Okun's law. Considering that Okun's coefficient is never statistically significant suggests that increasing output does not result in more employment. There are a few explanations offered for this fact, which shows that increasing GDP is not a necessary prerequisite for lowering unemployment in Arab nations. The first rationale is that these

nations' unemployment rates are not cyclical. The second and third explanations are related to these nations' economic architecture. (Moosa, I. A. (2008)

ZAGLER, M (2003) Examines a vector error correction model of economic development and the rate of unemployment in France, Germany, Italy, and the UK, the four leading economies in Europe. Reveals a strong link between economic development and unemployment, which caused using the identical autoregressive unit root that is common to most endogenous growth models. Recent economic theories on endogenous development and unemployment contend that growth in the economy and unemployment are positively connected over the long term, contrary to Okun's law. In the short run, an increase in the equilibrium of the unemployment rate suggests a slowing of the rates of economic growth. Alhdiy, F. M., Johari, F., Daud, S. N. M., & Rahman, A. A. (2015). Examine the connection between employment and growth in Egypt from the first quarter of 2006 through the second quarter of 2013. The connection between unemployment and Gross Domestic Product was examined utilizing the Standard Granger Causality Test (GDP), the Johansen Co-integration Test, and the Dickey-Fuller (ADF) unit root test. The findings showed that the variables of unemployment and GDP did not have a co-integration relationship, explicitly demonstrating the absence of a long-term relationship between the factors. Nevertheless, there has been evidence of a short-run direct linkage between the unemployment rate and economic expansion. The experimental findings of this study support the conclusion that Egyptian economy's economic progress and unemployment are unrelated.

Furthertmore Kreishan (2011) Uses time series techniques to look into unemployment rates and economic development in Jordan between 1970 and 2008. The analysis concluded that the unemployment rate would not be considerably impacted by demand management-related economic strategy.

**WAGE AND UNEMPLOYMENT**

Stewart (2007) investigates the degree of unemployment state dependency and the impact of being involved in low-paying employment. comparing a variety of dynamic random and fixed-effects estimators. It is discovered that low-wage employment has a virtually identically negative impact on future chances of unemployed, with the difference in their effects being negligible. The likelihood of recurring unemployment is significant. And so, Poschke (2019) demonstrates that they have high rates of unemployment compared to wage employment and that self-employment is especially high in areas with high unemployment-wage employment ratios. increased by low-paying work, which acts as its main pathway. The likelihood of experiencing repeated unemployment is significantly reduced by landing a higher-paying job. Where Pinheiro & Visschers (2015) Pay disparities between similar workers in less secure jobs and more secure jobs are common. showed that when all employees are the same and businesses only vary in terms of job security (for instance., the likelihood that the employee does not become unemployed), equilibrium can result from this absence of differential compensation for the risk of unemployment.

The marginal price that an employee is prepared to pay for job security in a situation where employees look for new jobs is Endogenous both on and off the work, rising dependent on the behavior of all businesses in the labor market as well as the rent that a worker receives from his employment.

Pissarides (2009) has demonstrated that the pay bargain in new employment is a key factor in driving factor behind the job-finding rate's erratic behavior is the lack of jobs. In the canonical model, when all salaries are fixed by the Nash bargaining solution, the volatility of the job-finding rate stays unchanged, even if the Nash bargaining solution is only used to fix wages in new positions. Haefke, C., Sonntag, M., & van Rens, T. (2013). It is discovered that new hires' salaries almost exactly match variations in productivity changes. In contrast, workers' salaries in long-term employment link seldom change at all. derived on a workers' collective salary time series recently employed of unemployment created based on CPS microdata, this result was reached. For this outcome, it is crucial to account in cyclical fluctuation in the workforce's composition of skills; the mean length of time spent in schooling captures the workforce's well-rounded average skill level. The salaries of new hires who leave their current jobs behave similarly to the salaries of job movers.

Aloi & Hoefele (2019) looked into how the process of pay setting affects the impact of outsourcing on unemployment. In a typical search and matching model, they assumed staggered wage contracts. The contract wage in this situation is also based on anticipated future circumstances. This study demonstrated that greater wage contracting flexibility led to increased offshore, a decline in the increased likelihood of finding jobs and worker wages during work periods. Particularly, reduced stickiness results in a decrease in the rents that companies pay may collect from domestic production.

Moreover, Faryna et al. (2022) in Ulima, A. O. (2022) analyzed the association between labor market circumstances and wage breakthroughs by using a special dataset of more than one million online job openings. They discovered that the trade-off between unemployment and overall wage inflation was modest. When wage inflation is broken down by industry and occupation, the connection between the two is more obvious. The analysis, which used data at the vacancy level, revealed a negative relationship between proposed salary and unemployment. Nonetheless, there were differences in the level of pay elasticity between areas and skill groups.

**POPULATION AND UNEMPLOYMENT**

Utilizing quarterly data from 1992 to 2015, Sadikova (2017) examines the effects of unemployment in Russia and the effects of energy consumption, population increase, and investment from abroad. The analysis of the long-term association among the estimated factors was done using Johansen cointegration. The outcomes revealed that population increase and energy consumption have a favorable and statistically significant impact on unemployment. The Granger causality finding demonstrated bidirectional causal

association between population and energy use as well as between unemployment and FDI.

Oshora (2021) investigates the relationship between Ethiopia's population increase, economic growth, investment, and unemployment. Secondary time series information was gathered from the International Monetary Fund, World Bank, and National Bank of Ethiopia sources. He found that a rise in unemployment has a positive linkage connected, Nevertheless, the reverse of economic expansion, investment, and population growth, and the population of employed age. Moreover, Soylu, Ö. B., Çakmak, İ., & Okur, F. (2018) Looked into Eastern European nations from 1992 to 2014 using a panel data approach. researched the relationship between economic expansion and joblessness. Panel Johansen Co-integration tests, Pooled Panel OLS, and Panel Unit Root are used in each case. it demonstrates that At the first level, economic growth and unemployment series are stationary, with unemployment positively impacted by the growth of economics, as demonstrated by Eastern European nations' Okun's coefficient, which predicts that the unemployment rate will drop by 0.08% for every 1% growth in GDP. These significant macroeconomic variables also exhibit co-integration.

Musa, K. (2019) explored how Nigeria's population growth has affected unemployment. From 1991 through 2017, the data on population, unemployment, and Unit roots were looked for in the consumer price index, currency rate, and foreign direct investment. He found that unemployment was linearly impacted by currency rata and population, While the Negative effects were seen in the Income per capita, consumer price index, and foreign direct investment, the long-term unemployment rate decreased as a result.

## 3. MODEL & METHODOLOGY DATA PLANEL

In this work, quantitative causality methodologies were employed as the research methodology. The goal of quantitative research is to create mathematical models, theories, and/or hypotheses about the topic being examined. Quantitative research employs numerical or numeric-form data analysis.

This research's major goal is to investigate how trade openness affects unemployment in the ASEAN-5 nations of Indonesia, Malaysia, Thailand, Singapore, and the Philippines. using yearly statistics from the ASEAN 5 from 2002 to 2021. The World Bank database was used to compile the data on Trade openness is calculated as a percentage of GDP as the sum of all commodities and service exports and imports.

The dependent variable utilized is the unemployment rate, which is calculated as the proportion of the workforce that is entirely unemployed. It so shows the proportion of the labor force that is neither employed nor looking for work. Economic growth is the market's annualized GDP growth rate based on a stable local currency. Population growth refers to a rise in a population's overall size or dispersed group. Inflation is measured as a

yearly percentage of the World Bank's consumer price index. The following model analysis of this study is based on panel data regression with a fixed effect:

$$UNEMPit = \alpha + \beta 1TRADE + \beta 2INF + \beta 3GDPG + \beta 4LNPOP + \beta 5WAGE + e \quad (1)$$

The dependent variable utilized is the unemployment rate, which is calculated as the percentage of the labor force that is really unemployed. That is, it shows the proportion of the labor force that is neither employed nor seeking for employment, according to statistics gathered from the World Bank.

In equation (1), the Unemployment Rate is denoted by (UNEMP), which is our dependent variable, whereas independent variables are Trade Openness (% of GDP) which is represented by (Trade), Inflation rate by (inf), Gross Domestic Product Growth denoted by (GDPG) and Total wage and salary earners (as a % of all employment) represented by (Wage), where e is the error term within the model.

Panel data are a type of data format used in regression analysis. In regression analysis with cross-section data, parameter estimation is often carried out using the Ordinary Least Squares method of least squares estimation (OLS).

In data panel regression, measurements are made using the same unit cross-section at several periods using cross-section data and time series. Alternatively said, panel data is information gathered from some of the individuals who were monitored over a predetermined length of time. Using panel data, we will have a total number of observation units of N x T if we have T time periods (t = 1, 2,..., T) and N people I = 1, 2,..., N). It is referred to as a balanced panel if each person's aggregate unit of time is the same. Instead, if each person's quantity of time units varies, the panel is said to be unbalanced.

## 4. RESULT AND DISCUSSION

**TABLE 1**

| | Unempl | Wage | Trade | Gdpg | Lnpop | Inflation |
|---|---|---|---|---|---|---|
| **Mean** | 3.58 | 60.38 | 156.51 | 5.13 | 17.65 | 3.29 |
| **Median** | 3.61 | 54.16 | 127.25 | 5.09 | 18.04 | 2.85 |
| **Maximum** | 8.06 | 86.54 | 437.33 | 14.52 | 19.41 | 13.11 |
| **Minimum** | 0.25 | 34.53 | 37.42 | -1.51 | 15.23 | -0.90 |
| **Std. Dev.** | 1.77 | 17.23 | 116.67 | 2.24 | 1.33 | 2.69 |

| | | | | | | |
|---|---|---|---|---|---|---|
| **Skewness** | 0.28 | 0.26 | 1.09 | 0.19 | -0.55 | 1.23 |
| **Kurtosis** | 3.16 | 1.52 | 2.86 | 6.64 | 2.20 | 5.09 |
| **Observation** | 89 | 89 | 89 | 89 | 89 | 89 |

Table 1 displays descriptive statistics for all variables. Between 2002 and 2021, the unemployment rate averaged 3.58, at least with a value of 0.25 and the highest possible of 8.06. This finding demonstrates, when compared to a global unemployment rate of 6.18% for 2022, the ASEAN 5 countries have a relatively low rate of unemployment. The unemployment variable has a 1.77 standard deviation. The graph also shows that the mean of Trade is 156.50 with a lowest value of 37.42 and a highest number of 437.33 with a standard deviation of 116.67.

**TABLE 2**

| Variable | Coefficient | T-statistic | Significant | Result |
|---|---|---|---|---|
| **Trade** | -0.017535 | -3.806947 | 0.0003 | Negative Significant |
| **Inflation** | -0.0112309 | -1.280357 | 0.2042 | Not Significant |
| **Wage** | -0.026211 | -0.824171 | 0.4123 | Not significant |
| **GDP growth** | -8.411454 | -7.175927 | 0.0000 | Negative significant |
| **Ln Population growth** | -8.411454 | -7.175927 | 0.0 000 | Negative Significant |
| **$R^2$** | 0.887926 | | | |
| **Adjusted $R^2$** | 0.875158 | | | |
| **F-significant** | 0.0000 | | | |

Table 2 shows the outcome of fixed effect estimation and Demonstrates that the unemployment rate has a statistically significant negative link with trade openness in the ASEAN-5 countries when Trade Openness of 1% more is added The unemployment rate will drop by 0.017% keeping the other variables constant. This is similar to a previous study conducted by (Dhamija 2019) who, separately for rural and urban areas, discovered proof of an inverse correlation between the rate of unemployment and trade openness in India. As a result of the relationship between trade openness and unemployment,

unemployment declines, and also In an unbalanced panel framework. Gozgor (2013) conducts an empirical analysis of the impact of four different trade openness and globalization indicators on the unemployment rate and draws the conclusion that developed economies would benefit little from protectionism in terms of reducing unemployment, and that the process of globalization should continue. The G7 Countries— Germany, Canada, Italy, France, the United States (US), Japan, and the United Kingdom (UK)— are examined within that article. robust empirical results from panel data projections show that all metrics of The rate of unemployment have a strong negative relationship with trade openness and globalization, market size, as well as macroeconomic indicators.

But it contradicts with Ulima A (2022) who discovered that trade openness significantly reduces unemployment in a positive way, wages, and economic growth in D-8 OIC countries, and according to Fernandes (2014), these nations' increased trade openness causes a rise in the unemployment rate for women. Anjum (2016) Mean Group and Pooled to analyze the long-run correlations among the variables in the study and to determine the long-run and short-run parameters, Mean Group Heterogeneous Panel Cointegration Techniques were used. The normality and stationarity of the relevant variables were examined using the IPS panel unit root test. The research finds the same negative significant relationship between trade and unemployment, the research used the information for 75 countries with a high labor force and 44 countries with a high capital base from 1990 to 2012.

Furthermore, The relation between wage and unemployment is adverse but insignificant. Due to this, if the number of salaried workers is rising, the unemployment rate will also be declining. This result is consistent with Poschke (2019) Finding a higher-paying job significantly lowers the possibility of experiencing repeated unemployment.

Where Economic growth (GDP growth) has an adverse but insignificant association with unemployment, it’s in line with Kreishan. (2011) which Uses time series techniques to look into unemployment rates and economic development in Jordan between 1970 and 2008, found that the Economic measures connected to demand management would not have a substantial impact on the unemployment rate. And (Khrais, 2016) discovered a linkage but nothing significant. This contradicts with, ZAGLER (2003) examined a vector error correction model, which reveals a substantial connection between economic development and unemployment and unemployment in 4 countries in Europe.

Considering that there is a rise in the population will lead to a drop of 1% in the unemployment rate, the population's impact on the unemployment rate will continue to be significantly negative. This is related to the idea that as the population grows, there will be a greater demand, resulting in a greater demand for workers in factories and a decrease in the unemployment rate. And the last, The correlation between inflation on

Unemployment is a positive and significant relationship, which means that unemployment will rise by 0.11 percent for every percent increase in inflation holding other factors fixed. When the inflation is higher the goods and services become higher which created higher costs and an increasing unemployment rate. In line with (Lisani, N., Masbar, R., & Silvia, V. 2020). Kurniasih, E. P., Kartika, M., & Tanjungpura, U. (2020) that found there is no trade of between those in the short term, and According to conventional opinion, the Phillips curve is vertical in the long term.

## 5. CONCLUSSION

This review investigated into how trade openness (import-export) affected the unemployment rate in the ASEAN-5 (Indonesia, Malaysia, Singapore, Thailand, and Philippines). When using a number of control variables, including inflation, economic growth, population growth, and wage between the years 2002 and 2021, the results show that trade and population variables are negatively significant, inflation is positively significant, and GDP growth and wage have a negative relationship with unemployment but are not statistically significant.

Regarding Trade Openness: The outcomes of the research give an indication of Trade Openness is crucial in reducing unemployment. As a result, the Asean-5 nations must promote Trade Openness and efficient management. Care should be made in their promotion and administration to make sure that Trade Openness is suitable for the distinctive features of each nation. In order to avoid resource waste It's important to avoid having too much trade openness and to accompany it with the right management measures. The Asean-5 nations must raise the value of their exports. In order to boost their export value and gain competitive advantages, the Asean-5 countries must initially determine which major exportable goods are suitable for their respective national characteristics. The Asean-5 nations must simultaneously increase the value of their exports in existing markets and expand their exports to new, very promising markets.

The study's flaw is that it solely looks at how trade openness affects unemployment. Analysis of the determining factor that influences unemployment in ASEAN-5 appears to call for the use of factor analysis in future research. Lastly, based on This study the policymaker should continue free trade policies in ASEAN-5 to reduce the unemployment rate and create welfare in society.

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