Analysis Absorption of Labor in the ASEAN Region

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Info Article	Abstract
    	This research aims to determine the impact of wages, investment, economic growth and internet users on labour absorption in all countries in the ASEAN region in 2014-2021. This research uses secondary data obtained from the World. The data analysis technique uses panel data regression analysis. Based on the findings of data analysis, the fixed effect model (FEM) is the model that best suits this research. The results of the analysis show that investment, economic growth and internet users have a positive and significant effect on labour absorption in ASEAN in 2014-2021, while wages have a negative and significant effect on labour absorption in ASEAN in 2014-2021.

INTRODUCTION

Labour is one of the main resources for the sustainability of a company in carrying out production activities. In carrying out production activities, labour is required, especially for high productivity and efficiency in carrying out the production process (Aksin and Nur, 2018) . One of the roles of labour is a production factor that can influence national income. When the quality of the workforce is better this results in an increase in production factors.

In this era of globalization, almost all countries are strengthening relations or cooperation with other countries. The impact resulting from this era is that a country's economy is increasingly integrated. This can also trigger the formation of regional or regional cooperation within a country, such as the formation of ASEAN. Where in the current era of globalization it requires countries to collaborate.

ASEAN (Association of Southeast Asian Nations) is an association of 11 countries with members namely Indonesia, Brunei Darussalam, Laos, Cambodia, Malaysia, the Philippines, Myanmar, Singapore, Timor Leste, Thailand and Vietnam. This association has a role in the rapid growth of the global economy. Where economic growth in the ASEAN region has increased significantly in the last few years. However, absorbing labour in ASEAN is still a challenge in itself.

Many factors support increased labour absorption. Such as wages, investment, economic growth, and information and communication technology. These factors can increase labour absorption.

Based on production output and income, the company must pay wages to workers as compensation for carrying out production activities. The negative impact is felt by job seekers due to an increase in wages for workers, namely a reduction in labour absorption. This is because companies will reduce the number of workers when wages increase so that the company's production output will decrease (Siregar, 2019).

In labour absorption, wages are an issue related to the policies that will be provided. Wages must be given by producers which function as payment for services for the costs of production activities that have been carried out by workers in return for the work. In the theory of demand for labour, wages for labour are placed as prices. In this context, it means the maximum number of services or goods that buyers hope to purchase at every possible price at a certain time (Wihastuti and Rahmatullah, 2018).

Dwirainaningsih (2017) in his research entitled "The Effect of Minimum Wages on Labor Absorption and Community Welfare in Pekalongan City" states that variables that have a significant negative effect are shown in the issue of wages on labour absorption. This incident was caused by an increase in wages which also resulted in decreasing labor absorption, especially for workers with low productivity.

The existence of cooperative relations between countries can trigger investors to make investments as capital placements, investors hope that there will be reciprocity in the future by gaining profits. The greater the capital provided to the company, the company's activities in purchasing production goods will also increase. So that the ability to produce goods and services becomes higher, this can result in opening up opportunities for companies (Prasojo, 2009). As production output increases, the amount of national output will increase, so that economic growth will also increase (Romdhoni, 2017).

Almost all economists emphasize that investment is the main factor in economic growth because investment is the main part of driving the wheels of the economy. Investment or capital investment for companies is used to purchase goods that will be used in production activities. In the sense that investment is an investment activity in the economic activity sector (production) which is expected to make a profit. When investment increases, the production process will also increase, so this requires additional labour so that companies will absorb labour (Bustam, 2016).

Investment is an important factor in expanding the number of industries and increasing production capacity. The growing domestic and international demand for manufactured goods has a significant impact on investment. The large workforce in economic activities is influenced by market demand (Dharma and Djohan, 2015).

The investment aims to streamline total production in the long term. The value of the investment made has a big impact on labour absorption. The more investment invested, the greater the company's capital, this can increase production which

results in the company having a shortage of workers. So new workers are needed to increase production, which has a high influence on labour absorption.

Paramita and Christianingrum (2022) in their research entitled "The Effect of Investment on Labor Absorption" stated that the investment variable has a significant positive influence on the workforce absorbed. This means that the higher the incoming investment, the greater the number of workers absorbed.

Labour absorption is a factor that can support the achievement of growth in the economic sector, the aim of which is to create balance in growth in the economic sector. When national production increases, demand for production factors also increases. It can be concluded that the need for labour, technology and capital will increase as national production increases

Growth in economics generally has two theories, namely growth theory in modern economics and growth theory in classical economics. The classical theory analyzes based on trust and effective free market mechanisms. This theory is according to classical economists, namely David Ricardo and Adam Smith. Meanwhile, modern economic theory put forward by Harrod-Domar focuses on investment as an important aspect of economic growth. When investment increases, the economy gets better, and investment also influences aggregate supply, not just aggregate demand, the influence of which is caused by production capacity (Adisasmita, 2013).

The success of economic development can be seen from the level of growth in the economic sector. Apart from that, growth in the economic sector can be used as a benchmark for how developed a country's economy is. Growth in the economic sector can influence labour absorption. When a country's economy grows, the level of productivity also increases, so that labour is needed to carry out production activities.

Sari, Yulmardi, and Bhakti (2017) in their research entitled " Influence Growth Resident Growth in the Field Economics, as well Labor Productivity To " Absorption of Labor in Jambi City" stated that the growth variable economy has a positive and significant influence on absorption power Work. It can be said that the level of labour absorption depends on growth in the economic sector.

The Industrial Revolution 4.0 has resulted in rapid progress in digital technology, especially Information and Communication Technology (ICT), which makes this era a combination of networks and technology. Information and Communication Technology (ICT) is a necessity in supporting economic activities in this digital era. The increasing demand for ICT in the human aspect over time has contributed to a fast and efficient economic sector. The ICT sector in terms of technology and access is one of the inputs that continues to be developed (Ulya, 2022).
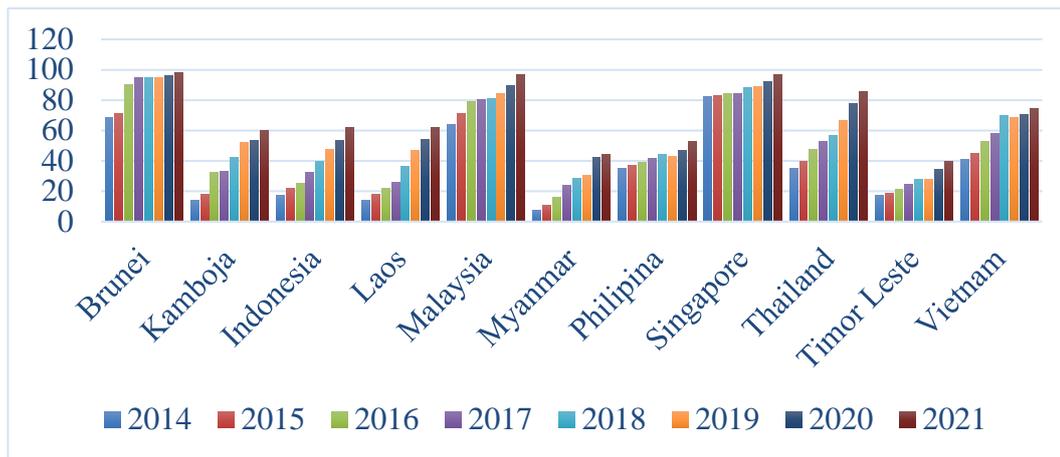
The internet is growing rapidly based on the uses and functions it provides. The Internet as a communication medium has a function, namely as a medium for searching for information without any restrictions, anyone can access it freely without any obstacles, as well as a place for providing information (Eksanika and Riyanto, 2017).

The use of the internet has a function that can increase employment, where this function is as a communication tool that can be used in discussions at unlimited

distances, apart from that some media promotes job vacancies that can be updated at any time.
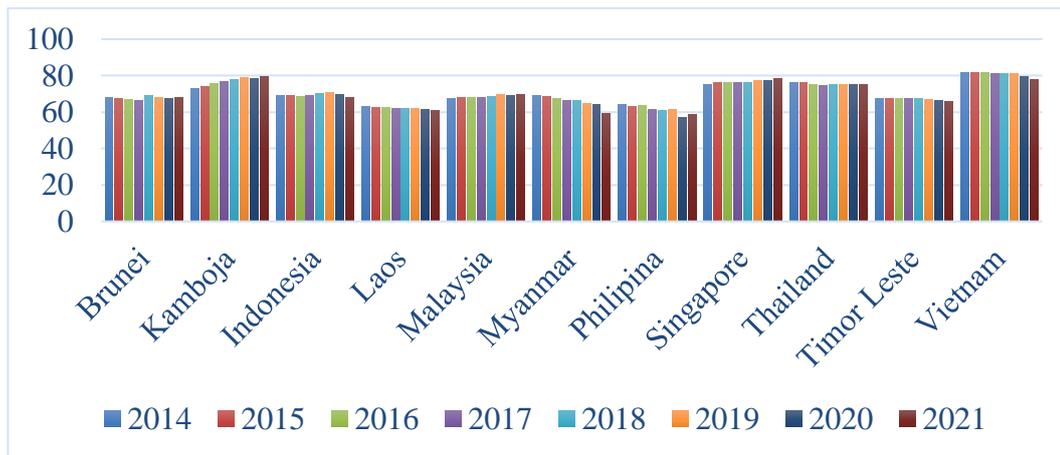
Davani and Sulistyaningrum (2023) in their research "The Effect of Digitalization on the Absorption of Indonesian Female Workers" stated that the influence of the use of ICT has a positive and significant role in the absorption of the workforce using a sub-index approach.

Table 1. Processed Internet User Data.

Based on the graph above, shows that statistics on internet users in the ASEAN region from 2014 to 2021 have increased every year. This means that more and more people are accessing communication networks via smartphones in their various activities. The penetration of internet use is expected to encourage employment, more and more advertisements about new job opportunities or people looking for work can be facilitated through telecommunications networks.

Table 2. Processed Data on Labor Absorption.

Based on the picture on show If statistics absorption power work in the ASEAN region from 2014 to 2021 almost all countries experienced fluctuating development. This matter makes attention special, especially in existing countries in the ASEAN region for absorption power You can work in each country to improve.

Based on study previous ones that have been conducted by (Pamungkas, 2015) with the title " Absorption of Labor in ASEAN (2006-2015) shows that the variables are wages, investment, and growth economy influential significant to absorption power Work ".

Recency study This that is adding the variable information communication technology (ICT) indicated by internet users (% of the total population), with the revolution development industry the technology the more fast expected to be there internet users can push absorption power Work.

Many factors can influence labour absorption. However, this research aims to analyze the influence of wages, investment, economic growth and internet users on labour absorption in the ASEAN region.

RESEARCH METHODS

Types of research

This research uses a quantitative type of research. According to (Sugiyono, 2019) quantitative research is research that uses numbers in the data and the analysis tools use statistics. Based on a certain population and sample, this research can be said to be quantitative. The use of data in this research was carried out to determine the hypothesis that has been created to obtain the influence between research variables. This research was conducted to find out the factors that influenced labour absorption in the ASEAN region in 2014-2021.

Data collection technique

The variables in this research are targets that can be used as interesting and suitable material for conducting research. This research uses 5 variables consisting of 1 dependent variable and 4 independent variables.

Where the dependent variable is a factor that can be influenced and limited by other variables, in this research Labor Absorption (Y) is the dependent variable used. The labour absorption referred to is the total workforce in ASEAN countries in percent.

Meanwhile, independent variables are variables that have no impact on other variables. In this research, the independent variable uses wages (X1) which is meant to be the compensation given to workers in percent units, investment (X2) which is meant to be foreign direct investment in percent units, economic growth (X3) which is meant to be growth in the economic sector. per year in percent units, and Internet Users (X4) in question are individuals who have used the Internet (anywhere) in the last three months in percent units of the total population.

Secondary data in this processing uses panel data regression, where panel data regression is a combination of data from time series and timelines. The years used in this research are 2014 to 2021 with data on 11 ASEAN countries. The data collection comes from the World Bank and other supporting sources related to this research.

RESEARCH STRUCTURE

Following this is an equation model from panel data regression in research This is :

$$Y = \beta0 + \beta 1X1_{it} + \beta2X2_{it} + \beta3X3_{it} + \beta4X4_{it} + e_{it} \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots(1)$$

$\beta0$ = Intercept ; $\beta1, \beta2, \beta3, \beta4$ = Coefficient ; Y = Labor Absorption (% of the total force Work); $X1$ = Wage (% of total force Work); $X2$ = Investment (% of GDP); $X3$ = Growth economic (% annual); $X4$ = Internet Users (% of total population); I = 11 Countries in ASEAN; t = time (2014 – 2021); e = Error confounding (standard error)

DATA ANALYSIS TECHNIQUES

Study This uses technique data analysis viz analysis panel regression, where in engineering panel data analysis is available three regression models namely the common effect model, fixed effect model, and random effect model. After doing regression so furthermore, that is do selecting the best model by carrying out the Likelihood Ratio Test (Chow Test), Hausman Test, and LM Breusch Pagan. After the selection of the best model Regression testing is carried out by testing the hypothesis on the t-test where the test is For finding out the level of significance, f test ie For knowing what is the independent variable. together affects the dependent variable, as well as Adj. R-squared to know how much big influence variable free to variable bound.

RESULTS

Best Model Selection Test

In determining an efficient and accurate estimation model, then needs to be considered in testing election estimation of regression models on panel data. In this test, there are various methods The available estimation models are the Likelihood Ratio Test (Chow Test), Hausman Test, and LM Breusch-Pagan.

Table 3. Selection of the Best Model.

Test Chow			
Effect test	Statistics	df	Prob.
Cross-section F	140.688574	(10.73)	0.0000
Cross-section Chi-Square	264.814944	10	0.0000
Test Hausman			
Test Summary	Chi-Sq. Statistics	Chi.Sq df	Prob.
Cross-section random	9.849034	4	0.0430

In testing the best model in the Likelihood Ratio Test (Chow Test) it lacks lacking of 0.05 value Cross-section probability F, so It means rather than the common effect model, a model in accordance is a fixed effects model. As well as probability not enough of 0.05 on the Hausman test probability The cross-section value is random, which means the fixed effect model is most appropriate rather than a random effects model. From the two regressions, the selection of the best model makes the fixed effect model better than the common effect model and the random effect model.

Estimation Test Results Regression

The purpose carried out in perform data regression models through estimation tests regression which is To know whether Enough describes the connection between the dependent variable and the independent variable. After determining the model of estimation regression on panel data, determining the fixed effect research model This is the best model in question study. In other words to know the feasibility of the model then Hypothesis testing is required (T-test and F-test), as well as the R-squared determinant test component testing model feasibility.

Table 4. Best Model Regression

Variables	Coefficient	Std. Error	t-Statistics	Prob.
C	87.820130	5.514596	15.925030	0.0000
X1	-0.388638	0.108199	-3.591868	0.0006
X2	0.151022	0.04157	3.632957	0.0005
X3	0.149685	0.033025	4.532406	0.0000
X4	0.028626	0.013580	2.107975	0.0385
Adj. R-Squared	0.957302			
Prob. (F- Statistics)	0.000000			

$$Y = 87.8201304623 - 0.388638219165*X1 + 0.151022264539*X2 + 0.14968465951*X3 + 0.0286262995052*X4 + [CX= F]… …………………………(2)$$

t-test

The result of Data processing is indicated if X1 (Wage) has enough influence against Y (Labor Absorption) with a value probability namely 0.0006.

The result of Data processing is indicated if X2 (Investment) has enough influence against Y (Labor Absorption) with a value probability namely 0.0005.

The result of Data processing is indicated if X3 (Growth in the field economics) has enough influence against Y (Labor Absorption) with a value probability namely 0.0000.

The result of Data processing is indicated if X4 (Internet User) has enough influence against Y (Labor Absorption) with a value probability namely 0.0385.

F test

The results of the fixed effect model show The prob value (F-statistic) is 0.0000 or less than 0.05 then can stated that the variables are wages, investment, growth economics, as well concurrent internet users' influence absorption power working in ASEAN countries from 2014 to 2021.

Adj. R-Squared

Adj. R-squared indicates the calculated value 0.957302 or 95.73% use numbers This. Where is the dependent variable namely a capable workforce absorbed influenced by the independent variable namely Wages, Investment, Growth in the field economy, and Internet Users by 95.73% at once? The remaining factors that were not included in the research amounted to 4.27%.

DISCUSSION

The Influence of Wages on Labor Absorption

From the research, it can be seen that wages have a negative and significant influence on labour absorption. The coefficient value is -0.388638 with a probability level of 0.0006 according to the results of the wage test for the process of absorbing labour. So this indicates that for every 1% increase in wages, there will be a 0.38% decrease in labour absorption.

This research provides results that wages in the ASEAN region have a significant negative influence on the absorption of labour for work, where there will be a decrease in the absorption of labour if there is an increase in labour wages. One reason is that wages are something that the company must pay to its workers for the services they have provided. Where when wages increase, companies try to reduce the number of workers, especially workers who have low levels of productivity.

This is by Susilowati and Wahyuni (2019) who conducted research, stating that wages reduce the ability to absorb labour. This can result in decreased labour elasticity, it is assumed that a company that initially pays 10 workers before the wage increase will have its productivity output met, but when there is an increase in wages, the company will reduce its workforce so that its productivity output will also decrease.

Need to remember that wages can bring up opportunities new although in certain situations certain can impact negative absorption power For Work. Workers who receive wages can create an economic cycle where the wages received are used for consumption, investment, or other things.

The Effect of Investment on Labor Absorption

This research is based on the results, showing that investment has a positive and significant influence on labour absorption. The coefficient value is 0.151022 with a probability level of 0.0005, according to the results of the investment test on labour absorption. Therefore, this indicates that every time investment increases by 1%, labour absorption also increases by 0.15%.

This research provides results that investment in countries in the ASEAN region has a positive and significant influence on labour absorption, where when investment increases, labour absorption will also increase in the ASEAN region.

One reason is that investment is an important factor in encouraging the development of companies or industrial sectors. Where when a company obtains additional capital through investors, the company's productivity level can be increased, and the greater the amount that can be produced, the company needs new workers to carry out production activities, this investment has a positive influence on labour absorption.

This is by (Widyapangesti & Soelistyo, 2022) who conducted previous research, stating that investment can absorb labour. This is related to the availability of employment through the GNP growth rate. When GNP growth can be maximized, labour absorption in an area increases.

It should be remembered that high investment can give rise to new threats even though in certain situations it has a positive impact on labor absorption. The reduction in labour begins with the use of technology to increase the productivity of a company. This is because the level of effectiveness in repetitive and routine production activities in using new technology will reduce labour.

The Effect of Economic Growth on Labor Absorption

Based on research, shows that growth in the economic sector can have a positive and significant influence on labour absorption. The coefficient value is 0.149685 with a probability level of 0.0000 according to the test results of economic growth on labour absorption. This indicates that for every 1% increase in economic growth, labour absorption also increases by 0.14%.

This research provides results that in the ASEAN region, growth in the economic sector has a positive and significant influence on the absorption of the workforce. Where when growth in the economic sector increases, labour absorption will also increase.

One reason is that growth in the economic sector is one of the factors that the workforce is influenced by through the rate of growth. Labour absorption is positively influenced by economic development and can be influenced negatively when the economy contracts or recessions.

This is by Ardiansyah, Zuhroh, Abdullah (2018) who has conducted previous research, stating that growth in the economic sector can absorb labour. Due to the increasing increase in services and goods, the production of which is through economic activities. In determining the level of growth achieved in the economic sector, it is necessary to calculate real national income at fixed prices, namely at the prices prevailing in the selected base year.

Improvements in the economic sector can encourage the creation of more and more jobs. By creating more jobs, the economic sector can increase, apart from that, unemployment will also decrease due to the absorption of labour.

The Influence of Internet Users on Labor Absorption.

Based on the results, it can be seen that internet users can influence positively and significantly labour absorption. The coefficient value is 0.028626 with a probability level of 0.0385 according to the results of internet user tests on employment. This shows that internet users have increased by 1%, so labour absorption has also increased by 0.02%.

One reason is that internet users are a factor that can influence labour absorption, this is because people can search for information via social media or the internet in looking for work. Companies can also provide information that they need new workers via social media.

The Indonesian Internet Network Providers Association (APJII) in research (Winarko, 2017) stated that internet usage penetration in Indonesia is 34.9%. However, according to the survey, 87.4% are used as social networks and 27.3% are used as video streaming/video uploads. 11% is used for shopping, 4.2% for financial

transactions, and 0.8% for learning. The use of social media is not useful or less productive so labour absorption is still not optimal.

This is by Safrilia, Martha, and Artha (2022) who conducted research, stating that internet use has a significant positive influence on labour absorption. This indicates that the industry is taking advantage of Internet technology to market its products and sell its products via the Internet, which causes production output to increase.

CONCLUSION

Based on research analyzing the influence of wages, investment, economic growth and internet users on labour absorption in the ASEAN region in the period 2014 to 2021. The following conclusions can be drawn. The test results prove that wages can have a negative and significant influence on labour absorption. This means that every time wages increase, labour absorption will decrease. The test results show that investment has a significant positive influence on labour absorption. This means that every time investment increases, it will increase labour absorption. The test results show that economic growth has a significant positive influence on labour absorption. This means that labour absorption will increase every time there is an increase in economic growth. The test results show that internet users have a significant positive influence on labour absorption. This means that every time there is an increase in internet users, labour absorption will increase. Simultaneous test results show that wages, economic growth, investment, and internet users influence labour absorption.

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