EMPLOYERS, RECRUITMENT AND THE UNEMPLOYED IN INDONESIA

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Abstract

The goal of this study is to examine the variables affecting unemployment in Indonesia. Secondary data for this study came from the Investment and Coordinating Board (BKPM) and the Central Statistics Agency (BPS). The data used include cross-sections of 34 Indonesian provinces and panel data from time series data for the years 2015–2022. The descriptive analysis's findings indicate that the unemployment rate for men is typically greater than for women each year. Additionally, compared to rural areas, the unemployment rate in metropolitan areas is typically about twice as high. The panel data regression analysis results demonstrate a substantial relationship between Indonesian unemployment and the variables of economic growth, inflation, wage rates, and the dummy economic crisis during the COVID-19 epidemic.

Keywords: Consumption Behaviour, Financial Literacy, Product Knowledge, Saving Behaviour.

1. INTRODUCTION

One of the primary issues with employment that emerging nations, including Indonesia, encounter is unemployment. According to Muslim (2014), unemployment is a complicated issue. Issue since it influences and is influenced by numerous elements that interact with one another in a way that is sometimes difficult to understand. A contributing aspect is Indonesia's enormous population, which annually adds to the labor force and affects the rate of unemployment. The 2020 Central Statistics Agency (BPS) report states Population Census findings, there are 270.20 million people living in Indonesia, a rise of 32.56 million from the 2010 Population Census. According to the Central Statistics Agency's (BPS) population estimate, Indonesia will have a total population of more than 300 million by 2035, with a greater proportion of the population falling into the productive age range of 15 to 64 years. As a result, Indonesia has entered the demographic dividend era, when the productive age can be used to boost development or burden the economy by raising unemployment, for example.

Unemployment became a bigger issue during the pandemic of Covid-19. The Covid-19 outbreak worsened the jobless issue. This is in line with what the International Labor Organization (ILO) has stated. The ILO (2021) claims that COVID-19 has had a detrimental effect on the workplace in the form of shortened working hours and job losses. Covid-19 has had a greater influence on the workplace than the financial crisis of 2009. According to the ILO, there were 255 million fewer full-time jobs last year, or about 9% of all working hours worldwide. The Covid-19 pandemic significantly reduced worldwide labor revenue, which is about equivalent to 4.4% of the global GDP. Regardless of a country's degree of economic

development, economic growth and unemployment continue to be major issues. Countries focus on establishing economic growth and lowering unemployment via their economic strategies.

The direction and strength of the connection between unemployment and economic growth are not universally agreed upon, despite the extensive literature on the subject. The connection between unemployment and economic growth is greatly influenced by variations in economic systems between nations. Okun (1962) first emphasized the negative relationship between economic expansion and unemployment. The majority of the information put forth by subsequent studies is similar to Okun's work.

These investigations can be divided into two categories in the literature. The inflation rate is a factor that impacts unemployment in addition to economic growth. The Phillips curve, named after economist A. W. Phillips, can be used to describe the short- long-term correlation between the unemployment rate and the rate of inflation. The trade-off or short-term adverse link between unemployment and inflation is explained by the Philips curve. According to A.W. Phillips, the premise underlying the spread of the link between inflation and the unemployment rate is that inflation is a reflection of rising aggregate demand. According to the theory of demand, prices will rise if overall demand grows. High prices (inflation) force producers to improve their production capacity by hiring more workers to keep up with demand (assuming labor is the only input that can boost output). Unemployment will decline as a result of a rise in labor demand and rising prices (inflation).A minimum wage that is set at a level that is too high may have a detrimental effect on employment. The minimum wage causes unemployment by driving out of the market businesses with little value contributed. The minimum wage decreases employment inflows by creating wage rigidity at the bottom of the wage distribution and by forbidding businesses from paying lower rates, particularly to new workers. Employees who attempt to reinstate salary differentials above the minimum wage may experience widespread wage pressures as a result of significant increases in the minimum wage. Based on Harrod Domar's argument presented in Kurniawan (2010), the relationship between investment and unemployment may be shown. According to Harrord Domar, investment not only increases demand but also production capability. In other words, if "full employment" is assumed, the requirement for a workforce increases as production capacity increases. This is so because investment adds to production factors, one of which is labor. In this manner, the economy as a whole can take in as much work as feasible, increasing labor force participation. It is seen to be crucial in a growing nation like Indonesia to conduct research on the variables affecting unemployment.

In 2030, Indonesia will also experience a demographic boost. It is possible to forecast that Indonesia will experience a high unemployment rate if there are insufficient jobs available for the population in the productive age group. It is for this reason that the subject of factors affecting unemployment in Indonesia is one that is worth studying. This study tries to examine Indonesia's unemployment situation. In order to offer policy recommendations for addressing the unemployment issue, this study also investigates the variables that affect unemployment in Indonesia.

2. METHODOLOGY

The Central Statistics Agency (BPS) additionally, secondary data for this study was given by the Coordination and Investment Agency (BKPM). The data used include cross sections of 34 Indonesian provinces and panel data from time series data for the years 2015–2022.. The information in this study is:

Table 1: Types and sources of data in research

Variable	Information	Source
The Rate of Unemployment	The official rate of unemployment in every Indonesian province	Agency of The Central Statistics
Economic growth	GDP Ratio at 2010 Prices Percentage	Agency of The Central Statistics
Inflation	Indonesian provincial GDP deflators	Agency of The Central Statistics
Wage rate	Indonesian province-by-province regional minimum wage	Agency of The Central Statistics
Investment	Total investment in each Indonesian province, including foreign and domestic	Agency of The Central Statistics

Analysis Method

In this study, a descriptive and quantitative analytical approach was adopted. The overall description of unemployment in Indonesia is explained using the descriptive method. The factors that affect unemployment in Indonesia are then examined using the quantitative method and panel data regression analysis.

Panel Data Regression Analysis

With panel data, the linear regression model can be expressed as follows:

$$y_{it} = \propto_{it} + X_{it}\beta + u_{it}; for\ i = 1, \ldots \ldots. N; \quad t = 1, \ldots., T \qquad (1)$$

Where T is the number of time periods and N is the number of individuals (cross-sectional units). The number of independent variables employed in the model is indicated by the k slopes (not including intercepts) in X_it. On the other hand, α_i represents an individual effect that may be constant for the whole t period or may even change for every i-th individual. For panel data regression, there are three different kinds of standard estimates: the random effects model, fixed effects model, and common effects model (pooled regression) (Baltagi 2015).

1. Model of Common Effects Since the individual and time dimensions are ignored by this model, it is assumed that an individual's behavior remains constant across time. The OLS method's conventional linear regression assumptions hold true for this model.

2. Model of Fixed Effects The underlying premise of this approach is that the intercept differences can account for individual differences. Every cross-section's intercept, however, is fixed and not arbitrary. The dummy variable strategy is used to estimate the fixed effects model with distinct intercepts between individuals.

3. Model of Random Effects the uncertainty of the model being employed is frequently revealed when panel data with fixed effects are estimated using the dummy variable

technique. We can use the random effects method, which is predicated on the idea that each individual effect is random and uncorrelated with the independent variables, to get around this issue. Baltagi (2015)

Panel Data Estimation Model Selection

1. Using the residual sum of squares (RSS), the Chow test was performed using the F test statistic in order to determine whether the panel data regression technique with fixed effects is superior to the panel data regression model without dummy variables (common effects).

2. The Hausman Exam Hausman significance is used to identify the optimal model between fixed effects and random effects.

3. Bruesch-Pagan, Uji Lagrange Multiplier (LM) test created by Bruesch-Pagan can be used to determine whether random effects model outperforms common effects model.

Residual Variance-Covariance Structure Test

It is possible to assess the variance-covariance structure if the chosen model is a fixed effect or conventional effect model. The homoscedasticity and non-cross-sectional correlation assumptions are tested for fulfillment using the residual variance-covariance structure. In order to verify these two assumptions, a formal assumption test is required. The Lagrange Multiplier (LM) test is used to verify heteroscedasticity, while the Lambda Lagrange Multiplier (LM) test is used to verify cross-sectional correlation. Feasible Generalized Least Square (FGLS)/Seemingly Uncorrelated Regression (SUR) estimate is used to solve the model if the residual variance-covariance structure is heteroscedasticity and there is a cross-sectional correlation.

Assumption Classic Test

To ascertain the specifications of a model to be employed, an assumption test is conducted. The anticipated model is a coherent, workable, and efficient model; however, it must be used to identify model assumption breaches. The regression equation is frequently violated by residuals that do not follow a normal distribution, residual variance variation (heteroscedasticity), strong correlations between independent variables (multicollinearity), and correlations between observations and a single variable (autocorrelation).

Model Specifications

This study adapts an existing model to meet its research objectives. The equation model employed by Aqil et al. (2014) is cited in this paper.

The following is how the estimating model is determined:

$$YU_{it}=\beta_0+\beta_1 EG_{it}+\beta_2 INF_{it}+\beta_3 LN\_W_{it}+\beta_4 LN\_INV_{it}+\beta_5 DC_{it}+U_i+\varepsilon_{it} \quad (2)$$

Information:

Yu_{it}: The rate of unemployment in province i-t year (in percent),

EG_{it}: The Growth of Economic in the i-th province in the t-year (in percent),

INF_{it}: The Inflation of i-th province year t (in percent),

LN_W_{it}: The rate of Wage i-th province year t (in percent),

LN_INV_{it}: The Investmen of ith province of the tth year (in percent),

D_{it}: dummy economic crisis during the Covid-19 pandemic in the i-th province, year t (before 2020 = 0, 2020 and 2021 = 1),

U_I: The Component of Error of the i-th province, t: Error component for the i-th province of the t-th year.

RESULT AND DISCUSSION

According to data from the Central Bureau of Statistics' August National Labor Force Survey (Sakernas), 2020 saw the highest unemployment rate in Indonesia, coming in at 7.07 percent. This occurred as a result of the Covid-19 pandemic, which had a significant impact on Indonesia's labor market. Gender-based analysis reveals that men's unemployment rates are often greater than women's on an annual basis.

When the unemployment rate is broken down by place of residence, it can be seen that metropolitan areas typically have an unemployment rate that is almost twice as high as rural places. This is affected by the influx of villages into urban areas. When the rate of rural-to-urban migration outpaces the supply of new jobs, the result is a labor shortage and high unemployment in the city.

Table 2: Indonesia's Unemployment Rate in 2018-2022

Unemployment Rate	2018	2019	2020	2021	2022
Man	5,40	5,24	7,46	6,74	7,21
Woman	5,26	5,22	6,46	6,11	7,10
Urban	6,45	6,29	8,98	8,32	8,52
Rural	4,04	3,92	4,71	4,17	4,36
Total	5,34	5,23	7,07	6,49	6,79

Source: BPS

Analyses of the Indonesian Unemployment Factors

Best Model Choice

The Chow test used to choose the best model yields an F-statistic value of 32.75 and a p-value less than 0.05, which is equivalent to 0.00. The null hypothesis is disproved as a result, and it

may therefore be said that the fixed effect model is superior to the common effect model. The following test is the Hausman test, which yields a Hausman-statistic of 26.93 and a p-value of 0.00, which is less than the alpha 0.05 threshold. It can be concluded that the fixed effect model is superior to the random effect model because the decision was made to reject the null hypothesis

Table 3: Best Model Selection Page

Model Selection	Statistical Value	Prob
Chow Test	32,75	0,00
Hausman Test	26,93	0,00

Source: Output Eviews Processed

Considering the Premises of the Linear Regression Model The fixed effects model is the panel data regression equation that was chosen. It is discovered via the use of the Lagrange Multiplier (LM) and Lambda Lagrange Multiplier (LM) tests that the residual variance-covariance matrix has a heteroscedastic structure and cross-sectional correlation. The chosen fixed effect model employs FGLS estimation to get around this.

The assumptions of normality and residual (error) have been satisfied. This is evident from the Jarque-Bera significance, which indicates that all residual cross-sections have a probability value of 0.18, or more than 5% alpha. The conclusion reached was that the residuals were normally distributed, or in other words, the assumption of normality in the best model had been satisfied. As a result, it was decided that the null hypothesis was not rejected. The homoscedasticity premise has been proven correct.

The probability value for each independent variable was found to be greater than an alpha value of 5% based on the Glejser test. Based on the results of this test, it has been determined that the estimate model does not violate the heteroscedastic assumption. The estimating model has not violated the autocorrelation assumption, according to the findings of the Durbin Watson test, which confirms the assumption's fulfillment.

Additionally, the non-multicollinearity premise has been verified. This is seen when the correlation between the independent variables is less than 0.80. As a result, the inference is that the independent variables do not have a linear relationship (multicollinearity).

Indonesian Panel Data on Unemployment Regression

After passing through a number of test phases, Model of the fixed employing the FGLS estimation method is the panel data regression equation that was chosen. Statistical values are obtained from the processing outcomes using Eviews 10 and are shown in Table 4.

R-squared adjusted value of 0.93. Accordingly, 93 percent of Indonesia's unemployment may be attributed to independent variables, with other factors influencing the remaining 3 percent.

The F test's p-value reveals that at least one independent of the variable has a substantial impact on Indonesia's unemployment rate, with a significant threshold of 5%. The factors of economic growth, inflation, pay rates, and the dummy economic crisis during the Covid-19 epidemic all significantly affect unemployment in Indonesia, according to a partial test using t-test statistics.

Table 4: Estimating Results of the Unemployment Model in Indonesia

Independent Variable	Coefficient	Prob.
C	46,66	0,01
ENG	-0,04*	0,01
INF	-0,04**	0,00
LN_W	-2,81	0,00
LN_INV	-0,03	0,73
DC	1,18*	0,01
Number of Observations		239
R-Squared		0,91
Adjusted R Squared		0,92
F Statistics		80,00
Prob (F Statistic)		0,01

Description:*significant at 1 %; ** significant at 5 %; *** significant at 10 %Source: Output Eviews 10, processed

The unemployment rate in Indonesia is significantly and negatively impacted by economic growth. Assuming all other independent factors remain constant, an increase in economic growth of one percent will result in a 0,04 percent reduction in unemployment in Indonesia. This is consistent with Mankiw's (2013) justification, which claims that rising economic growth will stimulate more goods and services to be produced.

The use of labor as one of the production elements will be encouraged by the increase in output, which will result in labor being absorbed into the economy and a decrease in unemployment. In Indonesia, inflation has a negative and considerable impact on unemployment.

To put it another way, it may be claimed that if inflation rates fall, unemployment rates will rise. These findings suggest that the Phillips curve phenomenon is still present in Indonesia. It is clear from these findings think there's a trade-off between unemployment and inflation Within Indonesia, The pay rate significantly and negatively affects unemployment.. These results are consistent with a study by Prakoso (2020), which concluded that raising Raising the minimum wage will help Indonesia's unemployment rate.. The government's continued increase in the minimum wage, which boosts people's purchasing power, can be cited as the source of this.

In Indonesia, investment has a detrimental but insignificant impact on unemployment. The fact that investment realization in Indonesia is not inversely correlated with labor absorption in the nation lends support to these findings. This is due to the fact that most investments in Indonesia are capital-intensive rather than labor-intensive.

Another factor in Indonesia's high unemployment rate is the absence of government support for the growth of labor-intensive industries and economic pursuits. Each year, the labor-intensive industries like agriculture and industry have contributed less to the economy than the capital-intensive industries.

The Covid-19 outbreak-related economic crisis has a positive and significant effect on Indonesia's unemployment rate.

Because of insecure working conditions brought on by the Covid-19 outbreak, Indonesia's unemployment rate has skyrocketed. The epidemic led the company's operating activities to be disrupted, which resulted in many employees experiencing layoffs. Additionally, labor absorption was less efficient because to the pandemic's reduction in the number of open positions.

CONCLUSION

According to the findings of the descriptive study, Indonesia's unemployment rate peaked in 2020 as a result of the Covid-19 pandemic. Every year, the unemployment rate for men is typically higher than that for women. In general, the unemployment rate in metropolitan areas is nearly twice as high as that in rural areas. According to the panel data regression analysis's findings, Indonesian unemployment is significantly influenced by the factors of economic growth, inflation, wage rates, and the fictitious economic crisis during the Covid-19 pandemic. The government is anticipated to encourage foreign investors to work with Indonesian businesses and Micro Small Medium Enterprises (MSMEs) to concentrate more on labor-intensive industries. Additionally, the government is anticipated to work diligently to increase employment prospects. For instance, by increasing the area and accessibility for job searchers to be able to improve hard skills and soft talents through accredited training that has been acknowledged by businesses.

References

1) Ajzen, I. (1991). The theory of planned behavior. Organizational Behavior and Human Decision Processes, 50(2), 179–211. https://doi.org/10.1016/0749-5978(91)90020-T

2) Aqil, M., Qureshi, M.A., Ahmed, R.R.A., & Qadeer, S. (2014). Determinants of Unemployment in Pakistan. International Journal of Physical and Social Sciences.

3) Baltagi,B. (2015). Econometrics Analysis of Panel Data (7th ed). England: John Wiley & Sons Ltd.

4) Bellante,D., & Jackson,M. (1990). Ekonomi Ketenagakerjaan. Jakarta: Lembaga Penerbit Fakultas Ekonomi Universitas Indonesia.

5)   Dewi, S., Listyowati, D., & Napitupulu, B. E. (2018). Bonus Demografi Di Indonesia: Suatu Anugerah Atau Petaka. Journal Of Information System, Applied, Management, AccountingAnd Research, 2(3), 17-23.

6)   Gujarati,D. (2003). Dasar-Dasar Ekonometrika Buku 2. Jakarta: Salemba Empat.International Labour Organization. 2021. ILO Monitor: COVID-19 and the world of work. Seventh edition. https://www.ilo.org/global/topics/coronavirus/impacts-and responses/WCMS_767028/lang--en/index.htm

7)   International Labour Organization. (2020). The impact of the COVID-19 pandemic on jobs and incomes in G20 economies. https://www.ilo.org/global/about-the-ilo/how-the-ilo-works/multilateral system/g20/reports/WCMS_756331/langen/index.htm

8)   International Labour Organization. (2020). ILO Monitor: COVID-19 and the world of work. Fourth edition.https://www.ilo.org/global/topics/coronavirus/impacts-and responses/WCMS_745963/lang--en/index.html

9)   Jaimovich, N., & Siu, H. E. (2019). How automation and other forms of IT affect the middle class: Assessing the estimates. Brookings Economic Studies, Report.

10) Karr, J., Loh, K., & San Andres, E. (2020). COVID-19, 4IR and the future of work. APEC Policy Support Unit Brief, (34).

11) Kurniawan, A.B. (2011). Analisis Pengaruh Pertumbuhan Ekonomi, Upah Minimum,dan Investasi terhadap Jumlah Pengangguran di Kabupaten Gesik. Jurnal Ilmiah.

12) Mankiw,N.G. (2013).Macroeconomics. New York: Worth Publishers.

13) Muslim, M.R. (2014). Pengangguran Terbuka dan Determinannya. Jurnal Ekonomi dan Studi Pembangunan.

14) Nachrowi,N.D., Usman,H. (2006). Pendekatan Populer dan Praktis Ekonometrika untuk Analisis Ekonomi dan Keuangan. Jakarta: Badan Penerbit Universitas Indonesia.

15) Nuriskia, C. S., & Nugroho, A. A. (2022). Perlindungan Hukum Pekerja Dalam Penerapan Sistem Remote Working Sebagai Pembaharuan Sistem Kerja. Jurnal Usm Law Review, 5(2), 678-692

16) Pindyck, R. S., & Rubinfeld, A. L. (2013). Microeconomics (8th ed). New Jersey: Pearson Education.

17) Prakoso, E.S. (2020). Analisis Pengaruh Tingkat Pendidikan, Upah Minimum, Inflasi, dan Investasi terhadapTingkat Pengangguran di Indonesia Periode 2010-2019. Jurnal Ilmiah Mahasiswa FEB.

18) Salvatore,D. (1997). Ekonomi Internasional. Jakarta: PT Erlangga.

19) Samuelson,P.A., & Nordhaus,W.D. (2003). Ilmu Makro EkonomiEdisi Tujuh Belas. Jakarta: PT Media Global Edukasi.

20) Santoso,R.P. (2012). Ekonomi Sumber Daya Manusia dan Ketenagakerjaan (Edisi 1). Yogyakarta: UPP STIM YKPN.

21) Sukirno, S. (2006). Makroekonomi Teori Pengantar. Jakarta: PT Raja Grafindo Persada.Todaro, M.P. (2000). Pembangunan Ekonomi di Dunia. Jakarta: Erlangga.

22) Susanto, A. (2017). The explosion of productive age "Challenges to empower Youth and Social Security". Yogyakarta. BPJS Ketenagakerjaan