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Analysis of Labor Absorption in East Kalimantan Province 2017-2021

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Abstract

Creating job opportunities for a wider community is a method aimed at promoting equitable prosperity, recognizing that society plays a pivotal role in shaping a region's economy. With this perspective in mind, the objective of this study is to examine the impact of the District Minimum Wage (UMK), Gross Regional Domestic Product (GRDP), and Human Development Index (IPM) of East Kalimantan Province. The study was conducted over the period from 2017 to 2021 in 10 cities and towns within the East Kalimantan province, utilizing a data panel analysis tool called Eviews 9.0. Based on the analysis results, it can be concluded that there exists a positive correlation between the variables of Minimum Wage and Gross Regional Domestic Product (GRDP) and the employment of temporary workers in Kalimantan. Conversely, the Human Development Index (IPM) variable displays a negative trend in relation to the hiring of laborers in Kalimantan.

1. INTRODUCTION

Indonesia's multifaceted development involves human resources functioning as the workforce that contributes to progress. This aspect is closely tied to the country's population, a pivotal component of development. However, a significant population alone doesn't necessarily correlate with development progress. Without qualified human resources, the sustainability of development can be hindered, turning a large population into a burden (Atiyatna, Muhyiddin, & Soebyakto, 2016).

Economic development is intricately linked with economic growth. Growth stands as a vital indicator of successful development, driven by improved and increased factors of production. Macro-level economic analysis relies on a country's economic growth rate, a measure of its real national income evolution. Diversity plays a role in creating both developed and underdeveloped regions (Armawaddin & Afiat, 2018).

Diminished job opportunities contribute to declining labor participation levels. Human resource quality significantly affects employment levels. Indices like the quality of life and the Human Development Index (HDI) offer insights into human capital quality. A lower HDI can lead to decreased labor productivity (Raynaldo, Russiadi, Efendi, & Rangkuty, 2022). Beyond human capital, understanding structural shifts and production complexity is crucial for analyzing economic growth disparities. Studies highlight that the dynamic productive structure of an economy, or "structural change," plays a pivotal role in economic growth determination (Teixeira & Queirós, 2016). Indonesia, a developing nation, grapples with workforce-related issues in development and economic growth due to a mismatch between available jobs and workforce size. High unemployment rates pose an obstacle to development. Addressing unemployment becomes a critical responsibility for the state.

Regional economic development involves local governments and communities managing existing resources and collaborating with the private sector to create new job opportunities and foster regional economic growth. The core aim is to enhance local competitiveness and employment prospects. To achieve this, local governments and communities must collaborate on regional development initiatives, leveraging existing resources to plan and nurture regional economic expansion (Soebagiyo & Hascaryo, 2015).

Increased employment opportunities and higher income, leading to overall societal

welfare, can be deduced from rising economic growth rates across various regions (Prastyadewi, Suman, & Pratomo, 2013). Labor significantly impacts regional output, stemming from a sizeable labor force nurtured by a large population. However, rapid population growth raises concerns about its potential negative effect on economic growth. East Kalimantan Province, for instance, had a population of 3,721,389 in 2019, with a 2.49 percent rise in the working-age population from 2018 to 2019.

Table 1. Total working population and unemployed population in East Kalimantan

Year	Work	Unemployed
2017	1,540,675	114,289
2018	1,618,285	114,313
2019	1,704,808	110,574
2020	1,692,796	124,884
2021	1,720,361	126186

Source: Central Statistics Agency of East Kalimantan

Table 1 illustrates the annual fluctuation in the number of employed individuals, with a significant surge in the working population noted solely in 2018 and 2019. Concurrently, the count of unemployed individuals underwent oscillations, reaching its peak during 2018-2019. This surge in unemployment signifies an increased labor supply, necessitating a corresponding elevation in labor demand to ensure comprehensive workforce absorption. In response, the government must formulate policies to tackle unemployment, including generating employment opportunities in alignment with the available workforce, effectively curbing the count of unemployed individuals.

Achieving parity in employment opportunities marks a governmental triumph in addressing Indonesia's unemployment issue. The creation of more job opportunities inherently leads to a decrease in the unemployment rate, which, in turn, bolsters workforce absorption. This development yields augmented income, purchasing power, and the overall welfare of the Indonesian populace (Indradewa & Natha, 2015). In the study by Indradewa & Natha (2015), it is evident that all three independent variables examined yield a significant collective impact.

Specifically, while minimum wage and GRDP demonstrate a noteworthy positive impact on employment individually, inflation showcases a negative coefficient, though statistically insignificant, regarding labor absorption within Bali Province. Analyzing the Province of South Kalimantan, Alamsyah & Effendi (2020) underscore the collective influence of education level and minimum wage on employment. Education emerges as the dominant factor influencing employment in the region during 2014-2018. Alisman's (2018) analysis discloses constants and regression coefficients, indicating the effect of economic growth and government spending on employment in West Aceh District.

These variables jointly explain a substantial portion of the variance, with economic growth and government spending accounting for 48.1%, and the remainder influenced by unaccounted factors. Rosalina & Wardani (2013) discern that areas witnessing significant provincial development attract migrants seeking urbanization. Limited economic job opportunities trigger labor concentration, leading to high unemployment rates in rapidly developing regions. Real wages, investments, and gross regional domestic product (GRDP) significantly influence employment.

An upsurge in GRDP, wages, and investment accordingly corresponds with heightened employment rates. Nugroho & Moonti's (2019) study highlights diverse

factors. Capital spending negatively impacts the workforce, while economic growth exhibits a contrary relationship due to its inverse correlation with labor force participation. Conversely, education level, as measured by high school scores, positively influences employment in Gorontalo Province, aligning with the principles of endogenous growth theory.

The research by Habanabakize, Meyer, & Olah (2019) concludes that investment spending incrementally impacts employment, with a 1% surge resulting in a mere 0.188% increase in employment. Similarly, labor productivity's 1% elevation yields a 0.722% employment hike, while a 1% real wage boost translates into a 0.234% employment decline. Hence, emphasizing labor productivity improvement is vital for enhancing employment rates in the South African labor market.

2. METHOD E RESEARCH

This research employs quantitative data as its primary data type. The study utilizes secondary data sourced from the Central Bureau of Statistics of East Kalimantan. Panel data, encompassing a blend of time series and cross-sectional data spanning from 2017 to 2021, is incorporated. This dataset comprises information on the District Minimum Wage, Gross Regional Domestic Product (GDP), and Human Development Index within East Kalimantan Province during the 2017-2021 period. The data stems from annual reports compiled and published by the Central Bureau of Statistics (BPS). In collecting data for this study, non-behavioral observation techniques are employed, with the researcher serving as an impartial observer. The study encompasses the entire East Kalimantan province, employing data obtained from the Central Statistics Agency (BPS) relating to the Minimum Wage, Human Development Index, and Gross Regional Domestic Product (GDP) within the province for the 2017-2021 timeframe. The regression model chosen for this research is the panel data regression. This model amalgamates cross-sectional and time series data. The notable advantage of panel data regression lies in its ability to amalgamate insights from time series and cross-sectional data, thereby offering a wealth of information and enhanced degrees of freedom, while simultaneously addressing concerns arising from omitted variables. The research employs Panel Data Regression analysis via Eviews 9 software. Within panel data regression analysis, three estimation models are adopted: Common Effect, Fixed Effect, and Random Effect Models. To discern the most suitable model, the Chow test and Housman test are applied. The panel data regression equation can be expressed as follows:

$$Y_{it} = \beta_0 + \beta_1 X_{1it} + \beta_2 X_{2it} + \beta_3 X_{3it} + \mu_{it}$$

Information:

Y_{it}	= Absorption of Labor (Soul)
β_0	= intercept coefficient
$\beta_1, \beta_2, \beta_3$	= Regression Coefficient
X_1	= Minimum Wage (Rupiah)
X_2	= Human Development Index (Score Rating)
X_3	= GRDP (Million Rupiah)
μ	= term error
i	= Number of Observations (Districts) of East Kalimantan
t	= Time (2017-2021 Period)

In this study, the hypotheses were tested using the t-test, which demonstrated that the independent factors and the dependent variable exhibited partial effects. It is anticipated that a probability (t-statistic) of variable X < 0.05 would indicate a significant effect on variable Y.

To assess the collective impact of the independent variables on the dependent variable, the F-test was employed. If the probability (F-Statistic) is < 0.05, then it indicates that all variables X have a significant effect on variable Y when considered simultaneously. The quality and adequacy of the model were evaluated using the R Square test (R^2) or the coefficient of determination.

The criterion is that if R square > 0.5, then the dependent variable's ability to explain the independent variable is strong. This test effectively gauges the independent variable's ability to explain the dependent variable when considered collectively. The research employs two types of variables: the dependent variable and the independent variables. The dependent variable in this case is employment, specifically labor absorption (Y), representing the number of workers accepted for employment each year in the Regency/City of East Kalimantan from 2017 to 2021.

The independent variables used are as follows: Minimum Wage (X1), which represents the monthly wage set by the East Kalimantan Provincial government; Human Development Index (X2), a measure of the quality of life for human development assessed through the Human Development Index; and Gross Regional Domestic Product (X3), which encompasses all finished goods and services produced by various economic activities within a region over a specified time frame. Data for this study were collected from the East Kalimantan District/City Human Development Index statistics for 2017-2021 and Gross Regional Domestic Product data for 2017-2021, both sourced from the Central Bureau of Statistics. These variables were used to conduct data regression analysis.

3. RESULTS AND DISCUSSION

Based on the panel regression results that were conducted and validated through the Chow test and Housman test, the panel data regression outcomes indicate the utilization of the Random Effect (RE) method. The subsequent presentation showcases the findings from the random effect panel data regression analysis conducted using Eviews9:

Table 1

Variable	coefficient	std. Error	t-Statistics	Prob.
C	73272.41	206424.3	0.354960	0.7242
UMK	0.015230	0.005510	2.764069	0.0082
GRDP	0.002170	0.000464	4.673122	0.0000
IPM	-734.7059	3053799	-0.240587	0.8109

Source: Data processed by Eviews9

And here are the effect specifications of the selected Random Effect (RE) model:

Table 2

R-Square	Adjusted R-Square	F-Statistics	Prob(F-Statistic)
0.998261	0.997698	1770,446	0.000000

Source: Data processed by Eviews9

Based on the results of the panel data regression test, the estimates in this study are as follows:

$$PTKI = 73272.41 + 0.015230X1 + 0.002170 - 734.7059 + \mu^{it}$$

In this study, hypothesis testing was employed to examine the partial and simultaneous effects of the independent variables on job absorption in East Kalimantan

Province. The findings reveal that the t-statistic probability (prob. t-statistic) for variable X < 0.05, indicating a significant effect on variable Y. Conversely, the HDI demonstrates a negative and insignificant impact on employment in East Kalimantan Province, as the prob. t-statistic > 0.05. The simultaneous test (Test F), as demonstrated in Table 2, indicates that all independent variables collectively impact the dependent variable. Thus, the UMK, GRDP, and HDI together exhibit a significant influence on employment absorption in East Kalimantan Province.

The Adjusted R-Square (R^2) value is 0.997698, signifying that the combined influence of UMK, GRDP, and IPM on employment in East Kalimantan Province is at 99.7%. The remaining 0.3% is attributed to other variables beyond the model's scope. The results indicate that the independent variables (UMK, GRDP, and HDI) have a positive and significant impact on the dependent variable (labor absorption). This is demonstrated by the MSE coefficient of 0.015230, reflecting a positive relationship with a probability of 0.0082, which is less than α 0.05. The research findings align with Rakhmawati & Boedirochminarni's study (2018), concluding that the minimum wage has a positive and significant effect on employment.

The study suggests that wage fluctuations, agreed upon by stakeholders (government, workers, employers), impact employment rates. Additionally, employees' active performance meets their demands and needs, attracting more people to join the labor force. The existence of a high district minimum wage encourages labor absorption, contributing positively to workforce deployment. Gross Regional Domestic Product (GRDP) is found to have a positive and significant impact on employment absorption in East Kalimantan Province.

This is underscored by the GRDP coefficient of 0.002170, indicating a positive relationship with a probability of 0.0000, less than α 0.05. The study suggests that labor demand increases with growing business output, as GRDP growth is inversely proportional to economic growth. However, the Human Development Index (HDI) shows no significant effect on employment in this study.

The regression coefficient for the HDI variable is -734.7059, suggesting that an increase of 1 point in HDI results in a decrease of -734.7059 points in employment. These results align with prior research, emphasizing that a high HDI does not guarantee maximum employment absorption, as it relates to qualifications and the appropriateness of wages sought by employers. In summary, the study presents a comprehensive analysis of the relationships between independent variables (UMK, GRDP, and HDI) and their impact on employment absorption in East Kalimantan Province..

4. CLOSING

4.1 Conclusion

In summary, the analysis results indicate that within the scope of this study, the Regency Minimum Wage (UMK) and Gross Regional Domestic Product (GDP) exhibit a positive and significant impact on employment in East Kalimantan Province during the period of 2017-2021. However, the Human Development Index (IPM) demonstrates a negative and statistically insignificant effect on employment in the same province during the specified timeframe.

4.2 Suggestions

Drawing from the outcomes of this study, it is advisable for governmental bodies to align the hiring of employees with the growth in job opportunities, thereby mitigating unemployment issues for individuals seeking employment. Furthermore, future research endeavors should consider incorporating additional independent variables to comprehensively explore their impacts on employment dynamics.

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