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Regional Finance And Employment Dynamics: An Empirical Study Based On Secondary Data In Indonesia

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ABSTRACT

This study explores the impact of regional financial management on employment dynamics in Indonesia using secondary data from 2019 to 2023. The focus of this study is on three main components of finance: Regional Original Revenue, Balance Fund, and Regional Expenditure, as well as analysis of their influence on employment indicators such as the Open Unemployment Rate and the Labor Force Participation Rate. The results showed that although these financial variables had a high correlation with labor market outcomes, their individual effects were often not statistically significant. This indicates a challenge in the effectiveness of current fiscal policies in reducing unemployment and increasing labor force participation. The study also identified problems such as multicollinearity and autocorrelation, which indicate the need for better financial management strategies. This study emphasizes the importance of policy reforms to optimize the role of regional finance in encouraging inclusive employment growth, especially in the face of Indonesia's unique economic structure and post-pandemic challenges. In addition, the study provides empirical insights into the direct relationship between fiscal decentralization and labor market performance in developing countries. Thus, this research contributes to the existing literature by highlighting the importance of more effective regional financial management to achieve employment goals.

INTRODUCTION

Regional finance plays an important role in driving economic growth and development, especially in creating jobs. In the framework of fiscal decentralization, regional financial management is centered on three main sources: Regional Original Revenue (PAD), Balance Fund, and Regional Expenditure. PAD derived from regional revenues is used to fund activities related to regional autonomy, while the Balance Fund from the State Revenue and Expenditure Budget (APBN) aims to encourage equity and support decentralization. However, despite the increasing financial autonomy granted to local governments, their effectiveness in encouraging job growth and improving the quality of work is still a question mark (Kementrian Keuangan, 2023).

Although fiscal decentralization aims to empower local governments in financial management, its effectiveness in resolving employment challenges is still questionable. Despite an increase in budget allocation to local governments, the alignment between public spending and job creation results shows inconsistencies. For example, the General Allocation Fund (DAU), Special Allocation Fund (DAK), and Revenue Sharing Fund (DBH) are important tools to support regional development. However, ineffective use and distribution of the

budget raises concerns, especially related to the persistent problem of unemployment, low labor force participation, and stagnant regional employment growth (Maryanti et al., 2023; Maryanti et al., 2022).

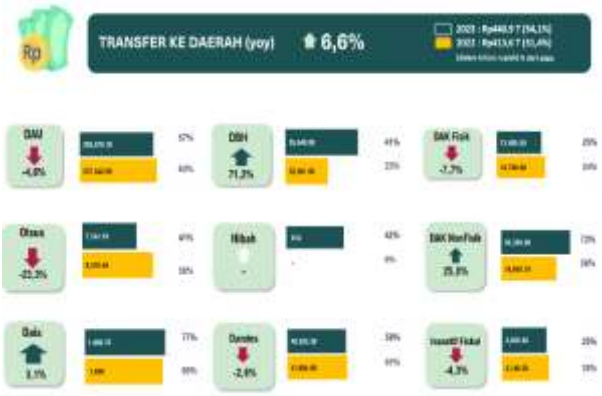

Figure 1: Realization and Percentage of TKDD Allocation
Source: Kemenkeu.go.id

Differences in regional expenditure performance show challenges in achieving optimal results in employment. Although the financial capacity of the regions has increased nominally, the quality and quantity of work in the formal sector do not always show commensurate improvement. Inefficiencies in spending allocation—where the focus tends to be on employee spending and goods/services spending rather than capital and infrastructure investments—highlights critical imbalances that require further exploration (Keuangan & Perbendaharaan, 2021).

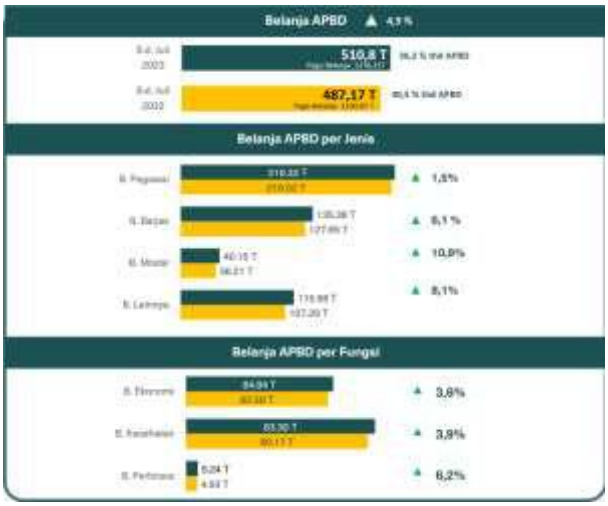

Figure 2: Regional Expenditure Performance in 2023
Source: Kemenkeu.go.id

This inefficiency can be seen in the realization of regional spending, which in 2023 will only reach 39.96%, with most of the budget channeled to non-productive expenditures. This trend could exacerbate employment challenges, especially when regions do not have sufficient fiscal resources to effectively address job creation needs. In the context of fiscal decentralization, this study aims to assess the impact of regional financial management on employment dynamics using quantitative approaches and secondary data.

Although fiscal decentralization has been in place for more than two decades, Indonesia still faces a substantial unemployment gap among its provinces. According to data from the Central Statistics Agency (BPS), the national unemployment rate in February 2023 reached 5.45%, with several provinces showing much higher levels. Regions with limited PAD or high dependence on the Balance Fund face additional barriers to

funding employment programs, which limits their ability to effectively handle crises. The COVID-19 pandemic exacerbated this problem, exposing structural weaknesses in regional financial management and their implications for employment outcomes.

In the case of Indonesia, existing studies have mostly focused on how fiscal decentralization affects economic growth or infrastructure development. However, the specific impact of regional finance on employment is still poorly explored. Although international research in developed countries provides valuable insights, the findings are not always applicable to developing countries such as Indonesia, which face different structural challenges (Ferdian & Satrianto, 2022) . Therefore, there is a research gap in understanding how the structure of regional revenue and expenditure directly affects job creation and unemployment reduction at the provincial level.

Fiscal decentralization aims to empower local governments in optimizing resource allocation, improving public services, and creating jobs. However, despite regional autonomy, many local governments still rely on the transfer of funds from the central government, which hinders their flexibility in dealing with local employment challenges. This dependence often leads to inefficiencies in capital expenditure, resulting in lost opportunities for labor-intensive projects and increased regional competitiveness.

This research contributes to the existing literature by empirically analyzing the relationship between regional financial management and employment dynamics in Indonesia. Using data from BPS and the Ministry of Finance for the 2019-2023 period, this study explores how regional fiscal policies affect not only unemployment but also labor force participation rates (TPAK) and employment growth. By focusing on the structure of regional spending—especially capital expenditure and social spending—this study aims to provide insights on how to optimize regional financial management to support inclusive job creation.

These findings are expected to provide empirical evidence of the effectiveness of regional fiscal strategies in creating jobs and reducing inequality. Furthermore, comparative analysis between provinces with different economic characteristics offers valuable policy implications to strengthen inclusive development and improve community welfare in a sustainable manner throughout Indonesia.

This study makes a new contribution by empirically investigating the relationship between regional financial management and employment dynamics in Indonesia. In contrast to previous studies that focused more on the impact of fiscal decentralization on economic growth or overall infrastructure development, this study specifically analyzes how the structure of regional revenues and expenditures affects employment and unemployment at the provincial level. This study uses secondary data from BPS and the Ministry of Finance for the 2019-2023 period to assess not only the direct impact of PAD, equity funds and regional spending on unemployment, but also how regional fiscal policies affect the labor force participation rate (TPAK) and employment growth.

This study provides new findings by providing empirical analysis based on secondary data that directly connects the dynamics of regional employment and finance in Indonesia. Compared to previous studies that focused more on the influence of regional finance on infrastructure or overall economic development, this study specifically examines how the structure of regional spending, especially capital expenditure and social spending, affects job creation and the decline in the unemployment rate.

This research is expected to provide deeper insights into how to optimize regional financial management to support inclusive job creation. Furthermore, the results of this study can be an input for policymakers in formulating a more effective and efficient regional fiscal strategy to minimize the gap between regions and improve the welfare of people throughout Indonesia in a sustainable manner.

In addition, this study uses a quantitative approach with secondary data from the last few years. It uses data from BPS and the Ministry of Finance, as well as additional indicators such as the unemployment rate, the Human Development Index (HDI), and the distribution of central government funds to the regions. In addition, this study included a comparative analysis between provinces, which has not been done much in Indonesia. The purpose of this analysis is to explore the differences in the impact of regional finance on employment in regions with various economic characteristics.

LITERATURE REVIEW

Regional Finance in the Framework of Fiscal Decentralization

The fiscal decentralization policy has four main pillars, namely political, administrative, fiscal and economic, which aims to minimize vertical and horizontal inequality between regions, efficient allocation of national resources, flexibility in responsible regional spending to achieve minimum service standards, optimization of the implementation of public services between the central and regional governments (Puspita et al., 2021).

In Indonesia, fiscal decentralization prioritizes the decentralization of spending, so tax levies and regional levies are relatively limited, but regions have a lot of authority to spend according to their needs and priorities (Nurhemy & Suryani, 2015). Forms of fiscal decentralization in Indonesia include Transfers to Regions and Village Funds (TKDD). TKDD consists of the Balance Fund, Regional Incentive Fund, Special Autonomy Fund and Village Fund., which aims to accelerate regional development, reduce poverty and unemployment (Amir & Payu, 2019) and improving the quality of public services (Mega Christia & Ispriyarso, 2019).

In implementing fiscal decentralization, there are several things that are of concern, namely the use of PAD, minimizing corruption practices in the regions in the use of the budget, the necessary protection from the central government, and maximizing community participation so that it is carried out on target (Shara Ningsih et al., 2023).

Fiscal decentralization improves local finances by giving local government authorities to prioritize budget allocations, enabling tailored responses to health, social, and economic needs amid challenges such as the Covid-19 pandemic (Hardiana, 2023). According to Haptari et al., (2022) Fiscal decentralization has an impact on regional finance by affecting financial independence, with varying effects in various districts/cities

Impact of Regional Finance on Economic Growth and Employment

The economic growth of a region depends on the financial condition of the region. Economic growth is said to be of quality if it is accompanied by an improvement in problems in the area such as unemployment. Because it is able to attract investors to invest in labor so that labor absorption increases.

The implementation of decentralization in Indonesia is considered relatively low because it is relatively weak in supporting regional spending, this can be seen from the original regional revenue (Wibowo, 2019). Fiscal decentralization is a process of gradually increasing responsibilities from the central government to local governments with limited regional autonomy so that when there are still weaknesses in implementation, it is still considered reasonable as long as it does not have a significant impact on regional economic growth (Bonet, 2006; Correa & Steiner, 1999; Iregui AM et al., 2001; Sanchez F et al., 2002).

Regional finance boosts economic growth and employment by improving access to financial services, promoting small and micro business financing, and fostering innovation, ultimately driving local prosperity and job creation (Jingxuan Li, 2023). Economic financialization significantly boosted real economic growth in the eastern region, while the central and western regions showed no significant impact, affecting overall employment opportunities differently across the region (Ping & Fei, 2023). Financial developments positively affect economic growth, demonstrating a potential relationship with employment growth through increased economic activity in the region (Moraes et al., 2022).

Irregularities in the implementation of fiscal decentralization that are considered to have an impact on employment occur if government consumption expenditure and taxes have a positive impact on unemployment while government investment expenditure has a negative impact on unemployment (Murwirapachena et al., 2013). This is reinforced by a study conducted by (Delen et al., 2019) dimana The source of funds does not have a significant effect on the quality of economic growth even though the direction is positive.

Studies related to the impact of fiscal decentralization have been widely conducted, generally the research carried out is to see how the influence of PAD, DAU, DAK on economic growth as measured through Gross Regional Domestic Product (GDP). The results of this study stated that PAD and DAU had a positive and significant effect on economic growth and employment (Gunantara & Dwirandra, 2014). Setyowati & Suparwati, (2012) concluded that regional revenue directly has a positive effect on economic growth and employment, while general allocation funds have a negative effect on economic growth and

employmentn. Maryati & Endrawati, (2010) and (Permanasari, 2013) It was found that regional revenue and general allocation funds had a significant positive effect on economic growth and employment, while special allocation funds did not have a significant positive effect on economic growth. In line with the research conducted Paseki et al., (2014) simultaneously the General Allocation Fund and Direct Expenditure have no effect on economic growth and employment. (Setyowati & Suparwati, 2012) found that local original revenue, general and special allocation funds were proven to have a positive effect on HDI through capital expenditure budget allocation (PABM).

The Covid 19 Pandemic and Its Impact on Regional Finance and Manpower.

Covid 19 has caused all economic joints to undergo significant changes. There is no exception in terms of regional finances. During the Covid-19 pandemic in 2020-2021, the regional original income (PAD) of each region in the district/city declined, but the growth of PAD by 5% exceeded the balance fund of only 2%. This shows that the trend is positive with a steep slope, so that the level of independence in general will increase in class. However, regions with a Regional Financial Independence Ratio (RKKD) of 0-18 %; 25-38%; and 50-63% are expected to remain unchanged (Syarifudin & Ramadhani, 2023).

The impact of Covid 19 conditions mainly occurred in the employment sector, where mass Termination of Employment (PHK) occurred. According to a study conducted by SMERU in 2020, the unemployment rate increased to 6.69% (SMERU, 2020). This disruption will have an impact on economic activity. One of the budgets that must be issued by the government to overcome the problem of unemployment is the stimulus carried out by the government, namely the provision of economic packages in the business world, income tax incentives for workers, social safety net assistance, pre-employment card programs, expansion of labor-intensive industries and providing protection for migrant workers (Kemenkeu, 2021).

The study reveals that the COVID-19 pandemic has significantly impacted economic activity and increased uncertainty across the Eurozone economy, affecting regional finance and employment differently among different countries (Vrontos et al., 2024).

Methodology

Design Research

This study uses a quantitative approach by conducting empirical studies related to regional financial relations and employment dynamics in Indonesia. The study was conducted using secondary data from official government sources which aims to obtain a comprehensive picture of how regional finance affects employment in Indonesia.

Data Source

The data used is secondary data sourced from the Indonesian Central Statistics Agency (BPS), the Ministry of Finance of the Republic of Indonesia and the Regional Government Financial Statements (LKPD). The data used covers the time period of 2019 – 2023. The choice of the time period was because it could describe the pandemic conditions and various fiscal policies implemented at that time to mitigate the crisis and economic recovery in Indonesia.

Population and Sample

The research covers all provinces in Indonesia. The sampling method uses purposive sampling, namely by selecting provinces that have complete data during the 2019 – 2023 time period so that the results obtained are more accurate.

Analisa Data

To answer the formulation of the problem in this study, it was carried out through several stages, namely: Descriptive Statistics to provide an overview of regional financial and employment data trends during the 2019 – 2023 time period. Multiple Regression Analysis to identify the influence of independent variables (Regional Original Revenue (PAD), Balance Fund, Regional Expenditure) on dependent variables (Open Unemployment Rate (TPT), Labor Force Participation Rate (TPAK), Employment Growth). To ensure whether the regression models have met the requirements so that the results obtained are more precise, classical assumption tests are used which include multicollinearity tests, heteroskedasticity tests and normality tests. Finally, a correlation analysis was carried out to show whether there was a positive or negative relationship between regional finance and employment indicators.

Research Hypothesis

H_1: Regional Original Income (PAD) has a negative influence and significance on the Open Unemployment rate (TPT) in Indonesia

H_2: The Balance Fund has a positive and significant influence on the Labor Force Participation Rate (TPAK) in Indonesia

H_3: Regional spending has a positive and significant influence on employment growth in Indonesia

H_4: Regional Original Revenue, Balance Fund and Regional Expenditure have a positive and significant effect on the Labor Force Participation Rate

H_5: Regional Original Revenue, Balance Fund and Regional Expenditure have a negative influence and significance on the Open Unemployment Rate

H_6: Regional Original Revenue, Balance Fund and Regional Expenditure have a negative effect and significance on Employment Growth

H_7: The Balance Fund and Expenditure simultaneously have a significant influence on the Open Unemployment Rate, the Labor Force Participation Rate and employment growth in Indonesia.

Empirical Analysis

To analyze the effect of PAD on TPT, the following equation is used:

$$TPT_i = \alpha + \beta_1 Regional/Local\ Revenue_i + \epsilon_i$$

To analyze the influence of the balance fund on the TPAK, the following equation is used:

$$TPAK_i = \alpha + \beta_2 Balanced\ Fund_i + \epsilon_i$$

To analyze the contribution of Regional Expenditure to employment development, the following equation is used:

$$Labor\ Force\ Growth_i = \alpha + \beta_3 Regional/Local\ Expenditure + \epsilon_i$$

To analyze simultaneously, the following equation is used:

$$TPT_i = \alpha + \beta_1 Regional/Local\ Revenue_i + \beta_2 Balanced\ Fund_i + \beta_3 Regional/Local\ Expenditure_i + \epsilon_i$$

$$TPAK_i = \alpha + \beta_1 Regional/Local\ Revenue_i + \beta_2 DBalanced\ Fund_i + \beta_3 Regional/Local\ Expenditure_i + \epsilon_i$$

$$Labor\ Force\ Growth_{i_i} = \alpha + \beta_1 Regional/Local\ Revenue_i + \beta_2 Balanced\ Fund_i + \beta_3 Regional/Local\ Expenditure_i + \epsilon_i$$

RESULTS

In this study, six stages were carried out to obtain answers to the hypothesis of this research.

Analysis of Regional Original Income and Open Unemployment rate.

Table 1: Regression of Regional Original Income and Open Unemployment Rate

Linear Regression

Model Fit Measures

Model	R	R^2	Adjusted R^2
1	0.515	0.265	0.0206

Omnibus ANOVA Test

	Sum of Squares	df	Mean Square	F	p
Regional/Local Revenue	1.15e+12	1	1.15e+12	1.08	0.374
Residuals	3.18e+12	3	1.06e+12		

Note. Type 3 sum of squares

Model Coefficients - Open Unemployment Rate

			95% Confidence Interval				
Predictor	Estimate	SE	Lower	Upper	t	p	Stand. Estimate
Intercept	1.34e+7	4.81e+6	-1.87e−6	2.87e+7	2.79	0.068	
Regional/Local Revenue	-1.63e−8	1.56e-8	-6.60e−8	3.34e-8	-1.04	0.374	-0.515

Assumption Checks

Durbin–Watson Test for Autocorrelation

Autocorrelation	DW Statistic	p
-0.146	1.53	0.212

R (correlation coefficient) of 0.515 indicates a moderate correlation between regional real income and the open unemployment rate. **An R^2** (determination coefficient) of 0.265 indicates that about 26.5% of the variation in the open unemployment rate can be explained by this model. **An adjusted R^2** of 0.0206 shows that when the number of variables in the model is taken into account, the model is only able to account for 2.06% of the variation in the open unemployment rate.

A **statistical F-value** of 1.08 and a **p-value** of 0.374 indicate that the model as a whole is not significant in explaining the variation in the open unemployment rate. This means that, statistically, local real income does not contribute significantly to the change in the open unemployment rate.

Intercept has an estimate of 1.34x107 with a **t-statistic** value of 2.79 and **a p-value** of 0.068. Although the value is close to significant at the 10% level, it is still above the general significance level (5% or 1%).

Regional/Local Revenue has an estimate of -1.63x10-8 with **a t-statistic** value of -1.04 and **a p-value** of 0.374, which indicates that this coefficient is not significant in predicting the open unemployment rate. This means that there is no strong statistical evidence that local real income affects the open unemployment rate in this model.

The Durbin-Watson Statistic of 1.53 with a p-value of 0.212 indicates no autocorrelation in the model, which means that the residuals in the data are not correlated with each other. **A Variance Inflation Factor (VIF)** of 1.00 indicates no meaningful multicollinearity between the variables in the model. **The Normality Test (Shapiro-Wilk)** with **a p-value** of 0.032 indicates that the residual is not fully normally distributed, because the p-value is less than 0.05. This can affect the assumption of the validity of linear regression.

This linear regression model shows that local real income is not significant in explaining the open unemployment rate in Indonesia, based on the data used. In addition, the results of the assumption test show that there is a problem with the distribution of normality in residuals, which can affect the accuracy of the estimation and statistical inference of the model. The model has a low Adjusted R^2 value, which indicates that it is not well able to account for variations in the open unemployment rate.

Analysis of the Balance Fund and Labor Force Participation Rate

Table 2: Regression of Balance Fund and TPAK

Linear Regression

Model Fit Measures

Model	R	R^2	Adjusted R^2
1	0.109	0.0118	-0.318

Model Coefficients - Labor Force Participation Rate

Predictor	Estimate	SE	t	p
Intercept	70.3	10.7	6.568	0.007
Balanced Fund	-2.88e−15	1.52e-14	-0.190	0.862

Assumption Checks

Durbin–Watson Test for Autocorrelation

Autocorrelation	DW Statistic	p
0.262	0.681	0.020

Collinearity Statistics

	VIF	Tolerance
Balanced Fund	1.00	1.00

Normality Test (Shapiro-Wilk)

Statistic	p
0.853	0.204

R (correlation coefficient) of 0.109 This coefficient ranges from -1 to 1, with 0 indicating no linear relationship. A value of 0.109 indicates a very weak positive relationship between the predictor (Balanced Fund) and the dependent variable (Labor Force Participation Rate). **R^2** of 0.0118: This is the coefficient of determination. This coefficient shows that only 1.18% of the variance in the Labour Force Participation Rate is explained by the Balance Fund. This value is very low, which indicates that the model has very poor predictive power. **Adjusted R^2** of -0.318, which is negative. This is a modified version of R^2 that is adjusted to the number of predictors in the model. A negative value indicates that the model performs worse than the horizontal line (i.e., it only uses the mean of the dependent variables as a prediction).

Intercept has an estimate of 70.3 with p-value = 0.007. This is an estimate of the Labor Force Participation Rate when the Balanced Fund is zero. The p-value is less than 0.05, which indicates that this intercept is statistically significant. **Balanceeed Fund** of -2.88×10^{-15}, p = 0.862. This coefficient is a change in the Labor Force Participation Rate for an increase of one unit in the Balanced Fund. A very small coefficient (-2.88×10^{-15}) indicates that the change in the Balanced Fund has a negligible effect on the Labour Force Participation Rate. A high p-value (0.862) indicates that this effect is not statistically significant.

Durbin-Watson Test: DW = 0.681, p = 0.020 This test checks for autocorrelation in residuals. DW statistics range from 0 to 4, with 2 indicating the absence of autocorrelation. A value of 0.681 indicates a positive autocorrelation. A low p-value (0.020) indicates that this autocorrelation is statistically significant, violating the assumption of residual independence.

Collinearity: VIF = 1.00 VIF (Variance Inflation Factor) measures multicollinearity. A value of 1.00 indicates no multicollinearity, which is expected in a simple regression with only one predictor. Normality Test (Shapiro-Wilk): Statistics = 0.853, p = 0.204 This test checks whether the distributed residuals are normal. The value of p(0.204) is greater than 0.05, which indicates that we have failed to reject the null hypothesis of normality. Therefore, the assumption of normally distributed residual is not violated.

In short, the results of this study describe a very poor model. The Balanced Fund is not a good predictor of the Labor Force Participation Rate. The model explains very little variance in dependent variables, and there are problems with autocorrelation in residuals. The only positive aspect is that the residuals seem to be normally distributed. This model is not considered reliable for making predictions or drawing conclusions about the relationship between the Balance Fund and the Labour Force Participation Rate.

Analisis Labor Force Growth and Regional/Local Expenditure

Table 3: Regresi Labor Force Growth and Regional/Local Expenditure

Linear Regression

Model Fit Measures

Model	R	R^2	Adjusted R^2
1	0.178	0.0317	-0.291

Model Coefficients - Labor Force Growth

Predictor	Estimate	SE	t	p
Intercept	5.68	12.0	0.473	0.669
Regional/Local Expenditure	-3.21e−17	1.02e-16	-0.313	0.775

Assumption Checks

Durbin–Watson Test for Autocorrelation

Autocorrelation	DW Statistic	p
-0.181	2.16	0.824

Collinearity Statistics

	VIF	Tolerance
Regional/Local Expenditure	1.00	1.00

Normality Test (Shapiro-Wilk)

Statistic	p
0.899	0.406

R (Correlation Coefficient) = 0.178: A low R value indicates that the relationship between the independent variable (Regional/Local Expenditure) and the dependent variable (Labor Force Growth) is very weak**. R^2 = 0.0317: An R^2 of 0.0317** means that only about 3.17% of the variation in Labor Force Growth can be explained by this model. This shows that the model has very weak predictive abilities**. Adjusted R^2 = -0.291:** A negative adjusted R^2 indicates that adding an independent variable to the model actually worsens the model's predictive ability. This often happens when the variables used in the model do not have a significant relationship with the dependent variables.

Intercept: Estimate = 5.68, p=0.669: An intercept of 5.68 is insignificant ($p > 0.05$), meaning it has no meaningful contribution in predicting Labor Force Growth. **Regional/Local Expenditure: Estimate = -3.21×10^{-17}, p=0.775**: This coefficient indicates that regional/regional expenditure has no significant effect on labor growth ($p > 0.05$). A very small coefficient value indicates a practically non-existent or very weak influence.

Durbin-Watson Test: DW Statistic = 2.16, p=0.824: This result indicates that there are no autocorrelation issues in the model residue. The Durbin-Watson value is close to 2, which is a good indication that the error terms are not correlated. **Collinearity: VIF = 1.00**: A Variance Inflation Factor (VIF) of 1.00 indicates that there is no multicollinearity problem in this model. **Normality Test (Shapiro-Wilk): Statistic = 0.899, p=0.406**: A p-value greater than 0.05 indicates that the assumption of normality of the error terms is acceptable. This means that the distribution of residues in this model is quite close to the normal distribution.

Analysis Labor Force Paticipation Force and Regional/Local Revenue, Balanced Fund, Regional/Local expenditure

Table 4: Regresi Labor Force Paticipation Force and Regional/Local Revenue, Balanced Fund, Regional/Local expenditure

Linear Regression

Model Fit Measures

				Overall Model Test			
Model	**R**	**R^2**	**Adjusted R^2**	**F**	**df1**	**df2**	**p**
1	0.998	0.996	0.985	88.0	3	1	0.078

Omnibus ANOVA Test

	Sum of Squares	**df**	**Mean Square**	**F**	**p**
Regional/Local Revenue	1.20121	1	1.20121	122.0	0.057
Balanced Fund	0.48380	1	0.48380	49.1	0.090
Regional/Local Expenditure	0.42301	1	0.42301	43.0	0.096
Residuals	0.00985	1	0.00985		

Note. Type 3 sum of squares

Model Coefficients - Labor Force Participation Rate

			95% Confidence Interval					95% Confidence Interval	
Predictor	**Estimate**	**SE**	**Lower**	**Upper**	**t**	**p**	**Stand. Estimate**	**Lower**	**Upper**
Intercept	69.2	2.41	38.6	99.9	28.73	0.022			
Regional/Local Revenue	5.39e-14	4.88e-15	-8.11e−15	1.16e-13	11.05	0.057	2.201	-0.331	4.73
Balanced Fund	1.66e-14	2.36e-15	-1.35e−14	4.66e-14	7.01	0.090	0.626	-0.508	1.76
Regional/Local Expenditure	-2.49e−16	3.79e-17	-7.31e−16	2.33e-16	-6.55	0.096	-1.224	-3.598	1.15

Assumption Checks

Durbin–Watson Test for Autocorrelation

Autocorrelation	DW Statistic	p
-0.776	3.46	0.366

Collinearity Statistics

	VIF	Tolerance
Regional/Local Revenue	10.52	0.0951
Balanced Fund	2.11	0.4740
Regional/Local Expenditure	9.24	0.1082

Normality Test (Shapiro-Wilk)

Statistic	p
0.983	0.949

R (Correlation Coefficient): An R value of 0.998 indicates a very strong relationship between the independent variables (Regional/Local Revenue, Balanced Fund, and Regional/Local Expenditure) and the dependent variable (Labor Force Participation Rate). **R^2 (Coefficient of Determination):** An R^2 of 0.996 means that 99.6% of the variation in the dependent variable can be explained by the independent variable in this model. This shows the model has excellent predictive ability. **Adjusted R^2**: The adjusted R^2 value of 0.985 is still high, which indicates that after accounting for the number of variables in the model, the explainability remains strong. **F-statistic** and **p-value**: An F-statistic of 88.0 with a p-value of 0.078 indicates that the model as a whole is not significant at the 5% level (due to a $p > 0.05$), but is close to significance.

Regional/Local Revenue has an F-statistic of 122.0 with a p-value of 0.057, close to the significance level of 5%, which means that the influence of this variable on the Labor Force Participation Rate is almost significant. **The Balanced Fund** has an F-statistic of 49.1 with a p-value of 0.090, which means its influence is insignificant at the 5% level. **Regional/Local Expenditure** has an F-statistic of 43.0 with a p-value of 0.096, also insignificant at the 5% level.

Intercept: A coefficient of 69.2 indicates the base value of the Labor Force Participation Rate when all independent variables are zero. **Regional/Local Revenue** has a coefficient of 5.39e-14 with a p-value of 0.057, which is close to significance at the 5% level. The standard estimate is 2,201, indicating that this variable has a positive influence on the Labor Force Participation Rate. **The Balanced Fund** has a coefficient of 1.66e-14 with a p-value of 0.090, which is insignificant at the 5% level. The standard estimate is 0.626. **Regional/Local Expenditure** has a coefficient of -2.49e-16 with a p-value of 0.096, also insignificant at the level of 5%. The standard estimate is -1,224, indicating a negative influence.

Durbin-Watson Test for Autocorrelation: DW Statistic of 3.46 with a p-value of 0.392 indicates that there are no serious autocorrelation problems in this model. **Collinearity Statistics (VIF): Regional/Local Revenue** has a VIF of 10.52, indicating a fairly high multicollinearity.**The Balanced Fund** has a VIF of 2.11, which is at a reasonable level. **Regional/Local Expenditure** has a VIF of 9.24, indicating a high multicollinearity as well. Multicollinearity can cause problems in the interpretation of regression coefficients due to the strong relationships between independent variables.

The regression model has a very high R^2 value, which suggests the model can account for most variations of dependent variables. Although the overall model is almost significant, some independent variables are not significant at the 5% level, which suggests that their influence on the Labor Force Participation Rate needs to be analyzed more deeply. There is an indication of high multicollinearity in some independent variables, which may affect the stability of the model. There were no significant autocorrelation issues based on the results of the Durbin-Watson test.

Analysis Labor Force Paticipation Force and Regional/Local Revenue, Balanced Fund, Regional/Local expenditure

Table 5: Regression of Regional Original Revenue, Balance Fund, Regional Expenditure and Unemployment Rate Open.

Linear Regression

Model Fit Measures

				Overall Model Test			
Model	**R**	**R^2**	**Adjusted R^2**	**F**	**df1**	**df2**	**p**
1	**0.998**	**0.995**	**0.981**	**69.3**	**3**	**1**	**0.088**

Omnibus ANOVA Test

	Sum of Squares	df	Mean Square	F	p
Regional/Local Revenue	**1.29e+12**	**1**	**1.29e+12**	**62.2**	**0.080**
Balanced Fund	**3.61e+11**	**1**	**3.61e+11**	**17.4**	**0.150**
Regional/Local Expenditure	**2.68e+12**	**1**	**2.68e+12**	**129.3**	**0.056**
Residuals	**2.07e+10**	**1**	**2.07e+10**		

Note. Type 3 sum of squares

Model Coefficients - Open Unemployment Rate

			95% Confidence Interval					95% Confidence Interval	
Predictor	**Estimate**	**SE**	**Lower**	**Upper**	**t**	**p**	**Stand. Estimate**	**Lower**	**Upper**
Intercept	**5.47e+7**	**3.49e0+6**	**1.03e+7**	**9.91e0+7**	**15.65**	**0.041**			
Regional/Local Revenue	**5.58e-8**	**7.08e0-9**	**-3.41e−8**	**1.46e0-7**	**7.89**	**0.080**	**1.770**	**-1.081**	**4.620**
Balanced Fund	**1.43e-8**	**3.43e0-9**	**-2.92e−8**	**5.79e0-8**	**4.18**	**0.150**	**0.420**	**-0.857**	**1.696**
Regional/Local Expenditure	**-6.26e−10**	**5.50e-11**	**-1.32e−9**	**7.34e-11**	**-11.37**	**0.056**	**-2.392**	**-5.064**	**0.281**

Assumption Checks

Durbin–Watson Test for Autocorrelation

Autocorrelation	DW Statistic	p
-0.776	3.46	NaN

Collinearity Statistics

	VIF	Tolerance
Regional/Local Revenue	10.52	0.0951
Balanced Fund	2.11	0.4740
Regional/Local Expenditure	9.24	0.1082

Normality Test (Shapiro-Wilk)

Statistic	p
0.983	0.949

R^2 (0.995) and **Adjusted R^2 (0.981)** show that this regression model is able to account for 99.5% of the variability in the data related to the open unemployment rate. This value is very high, indicating that this model has excellent predictive power. **F-statistic (69.3)** with **p-value (0.088):** A high F-statistic indicates that the model is significant overall, even though the p-value is above the general significance level (0.05), so this result is statistically insignificant at the 5% level. However, this value is almost close to significance, which can indicate a trend.

ANOVA analysis shows that the Regional/Local Revenue, Balanced Fund, and Regional/Local Expenditure variables each have a high F value, with each p-value approaching or above the significance level of 0.05. This suggests that the influence of these variables on the individual open unemployment rate may not be significant at the 5% level.

Intercept: A coefficient value of 5.47e+7 indicates the cut-off point of regression with the Y axis when all independent variables are zero. **Regional/Local Revenue (Estimate: 5.58e-8)** has a p-value of 0.080, indicating that there is a positive relationship between regional/local income and the open unemployment rate, although the effect is not significant at the 5% level. **The Balanced Fund (Estimate: 1.43e-8)** has a p-value of 0.150, indicating that the balanced fund has no significant effect on the open unemployment rate. **Regional/Local Expenditure (Estimate: -6.26e-10)** showed a significant negative influence on the open unemployment rate with a p-value of 0.056, which means that regional/local expenditure tends to decrease the unemployment rate even though it is not significant at the level of 5%.

Durbin-Watson Test for Autocorrelation: A Durbin-Watson statistical value of 3.46 indicates the presence of an autocorrelation in the data, which means that there is a dependency between the residual values. This may indicate a violation of the assumption of independence in the regression model. **The VIF (Variance Inflation Factor)** for these variables shows that Regional/Local Revenue (10.52) and Regional/Local Expenditure (9.24) have a fairly high VIF, close to or above the critical value of 10. This indicates the existence of multicollinearity, that is, these variables are strongly correlated with each other, which can affect the stability of the regression coefficient estimation.

This regression model shows a strong relationship between economic variables and the open unemployment rate, but some variables are not statistically significant at the 5% level. In addition, the problem

of autocorrelation and multicollinearity needs to be considered, because it can affect the validity of the regression analysis results.

Analysis of Regional Original Revenue, Balance Fund, Regional Expenditure and Employment Growth.

Table 6: Regression of Regional Original Revenue, Balance Fund and Regional Expenditure on Employment Growth

Linear Regression

Model Fit Measures

				Overall Model Test			
Model	**R**	**R^2**	**Adjusted R^2**	**F**	**df1**	**df2**	**p**
1	0.963	0.928	0.711	4.29	3	1	0.338

Omnibus ANOVA Test

	Sum of Squares	**df**	**Mean Square**	**F**	**p**
Regional/Local Revenue	0.1874	1	0.1874	1.265	0.463
Balanced Fund	1.4386	1	1.4386	9.708	0.198
Regional/Local Expenditure	0.0982	1	0.0982	0.663	0.565
Residuals	0.1482	1	0.1482		

Note. Type 3 sum of squares

Model Coefficients - Labor Force Growth

			95% Confidence Interval				
Predictor	**Estimate**	**SE**	**Lower**	**Upper**	**t**	**p**	**Stand. Estimate**
Intercept	14.5	9.35	-104	133	1.548	0.365	
Regional/Local Revenue	-2.13e−14	1.89e-14	-2.62e−13	2.19e-13	-1.125	0.463	-0.980
Balanced Fund	-2.86e−14	9.17e-15	-1.45e−13	8.79e-14	-3.116	0.198	-1.216
Regional/Local Expenditure	1.20e-16	1.47e-16	-1.75e−15	1.99e-15	0.814	0.565	0.665

Assumption Checks

Durbin–Watson Test for Autocorrelation

Autocorrelation	**DW Statistic**	**p**
-0.776	3.46	0.704

Collinearity Statistics

	VIF	Tolerance
Regional/Local Revenue	10.52	0.0951
Balanced Fund	2.11	0.4740
Regional/Local Expenditure	9.24	0.1082

Normality Test (Shapiro-Wilk)

Statistic	p
0.983	0.949

R^2 (Coefficient of Determination): The value is 0.928, which indicates that about 92.8% of the variation in the dependent variable (labor force growth) can be explained by independent variables in the model (Regional/Regional Revenue, Allocation Fund, and Regional Expenditure). **Adjusted R^2:** The value is 0.711. An adjusted R^2 lower than R^2 indicates that some variables in the model may not be very robust in explaining data variability and it is possible that the model is too complex.

F-statistic and p-value: An F-statistic of 4.29 with a p-value of 0.338 indicates that the model as a whole is not statistically significant at the commonly used confidence level (e.g., 0.05). This means that independent variables are not strong enough in explaining changes in dependent variables.

The ANOVA test shows that **Regional/Regional Revenue:** F = 1.265, p = 0.463 (insignificant). **Allocation Fund:** F = 9.708, p = 0.198 (insignificant). **Regional Expenditure:** F = 0.663, p = 0.565 (insignificant). This shows that the three independent variables are not significant in affecting the dependent variables individually.

Intercept: A value of 14.5 with a value of p = 0.365 indicates that the intercept is insignificant. **Regional/Local Revenue: A** coefficient of -2.13e-14 with a value of p = 0.463, which is insignificant. **Balanced Fund: A** coefficient of -2.86e-14 with a value of p = 0.198, which is also insignificant. **Regional/Local Expenditure:** A coefficient of 1.20e-16 with a value of p = 0.565, also insignificant.

Durbin-Watson Test: A Durbin-Watson value of 3.46 with p-value = 0.704 indicates a fairly high autocorrelation in the data, which means that the assumption of independence from residual may not be met. **Collinearity Statistics (VIF):** There are high VIF values, especially for Regional/Regional Revenue (10.52) and Regional Expenditure (9.24). A VIF value greater than 10 indicates a multicollinearity problem, which means that the independent variables are highly correlated with each other, reducing the accuracy of the regression coefficient estimation**.**

Overall, this regression model shows some problems: A low Adjusted R^2 indicates that the model may not be good at predicting or explaining variations in dependent variables. A high p-value on all variables indicates that these variables are not significant in explaining the dependent variable. High autocorrelation and multicollinearity problems can reduce the reliability of regression results.

DISCUSSION

Based on the above analysis, it was found how independent variables such as Regional Original Revenue (PAD), Balance Fund, and Regional Expenditure affect several employment indicators in Indonesia, namely the Open Unemployment Rate (TPT), Labor Force Participation Rate (TPAK), and Labor Force Growth. Here's a breakdown of the regression results for each model:

Effect of PAD on TPT: The regression results showed a correlation (R) between PAD and TPT of 0.515, which illustrates a moderate relationship. However, the coefficient of determination (R^2) of 0.265 only shows about 26.5% of the TPT variation that can be explained by PAD, the rest is due to other factors outside the

model. A low Adjusted R^2 value (0.0206) indicates that this model is not able to explain the TPT variation. In addition, a statistical F-value of 1.08 with a p-value of 0.374 indicates that the model is not significant overall. The insignificant PAD coefficient (estimated -1.63e-8, p-value 0.374) confirms that PAD has no strong effect on TPT. The assumption test showed the absence of autocorrelation (Durbin-Watson 1.53), but there was a violation of residual normality (Shapiro-Wilk test p-value 0.032).

The Effect of the Balance Fund on TPAK: The results of the analysis show a very weak correlation (R = 0.109) between the Balance Fund and TPAK. An R^2 value of 0.0118 indicates that only about 1.18% of the TPAK variation can be explained by the Balance Fund. A negative adjusted R^2 (-0.318) actually indicates a decrease in the model's prediction ability. The Balance Fund Coefficient of -2.88e-15 with a p-value of 0.862 is insignificant. In addition, there was a significant autocorrelation in this model (Durbin-Watson 0.681, p-value 0.020), which indicated a violation of the assumption of residual independence.

The Effect of Regional Expenditure on Labor Force Growth: The correlation coefficient (R) between Regional Expenditure and Labor Force Growth of 0.178 indicates a very weak relationship. An R^2 value of 0.0317 signifies only about 3.17% variation in Labor Force Growth that can be explained by Regional Expenditure, indicating a model with very low predictive power. A negative adjusted R^2 (-0.291) confirms the model's ineffectiveness. The Regional Expenditure Coefficient of -3.21e-17 with a p-value of 0.775 was insignificant, although no autocorrelation problems were found (Durbin-Watson 2.16) and the residual distribution was quite normal (p-value 0.406).

Effect of PAD, Balance Fund, and Regional Expenditure on TPAK: The regression results show an R value of 0.998, describing a very strong relationship between the independent variables (PAD, Balance Fund, and Regional Expenditure) and TPAK. An R^2 value of 0.996 indicates that about 99.6% of the TPAK variation can be explained by this model. However, a lower Adjusted R^2 (0.985) indicates a slight decrease in predictive power. Although the ANOVA results showed an F value of 88.0 with a nearly significant p-value of 0.078, each independent variable had a p-value above 0.05, indicating that there were no individually significant variables. The assumption test also showed no autocorrelation problems (Durbin-Watson 1.96), and the residual distribution tended to be normal.

Overall, the results of the study show that fiscal variables such as PAD, Balance Fund, and Regional Expenditure are not significant in influencing employment indicators (TPT, TPAK, and Labor Force Growth). The regression model used shows weak prediction ability, as seen from the low and even negative Adjusted R^2 values. The violation of the assumption of normality in some models also confirms that the interpretation of regression results needs to be done with caution. These results can be the basis for further studies on the influence of regional fiscal policies on employment indicators by considering other more relevant variables.

CONCLUSIONS AND SUGGESTIONS

Regional Original Revenue (PAD) has no significant influence on the Open Unemployment Rate (TPT) as shown by the Adjusted R2 value of 0.0206. The Balance Fund has a very weak relationship with the Labor Force Participation Rate, with R^2 at only 1.18%. Adjusted R^2 negative. Regional/Regional expenditure was not significant in affecting labor growth, with a very low R^2 value (0.0317) and a negative adjusted R^2.

Regional Revenue, Balance Fund, and Regional Expenditure have a very strong correlation with the Labor Force Participation Rate (R = 0.998) and R^2 of 99.6%, but individually these variables are not significant. Regional Revenue, Balance Fund, and Regional Expenditure to predict employment growth are also insignificant. A high R^2 value (92.8%) was not followed by a comparable adjusted R^2 (0.711).

Based on the conclusions obtained from the analysis, the following suggestions are proposed, namely: Policies related to Regional Revenue and Regional Expenditure need to be improved to be more effective in reducing the unemployment rate and increasing labor force participation, considering that the results of the current model show a low contribution to employment indicators.

Re-evaluating the role of the Balance Fund and regional expenditure in driving employment growth is essential to ensure a more efficient and strategic allocation of resources at the regional level.

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