



The Impact of Open Unemployment, Education, and PAD on Economic Growth and Employment Opportunities in the Bali Province Districts and Cities

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Abstract. Economic growth and increasing employment opportunities are important indicators for regional development, especially in Bali Province characteristics by tourism. Conditions in Bali Province show that growth has not automatically created employment opportunities evenly due to differences in dominant sectors between regions. The objective of this study: (1) examine the affect of open unemployment, education, and PAD on economic growth; (2) examine the impact of open unemployment, education, PAD, and economic growth on employment opportunities; and (3) determine the indirectly affect of open unemployment, education, and PAD on employment opportunities through economic growth in Bali Province's districts/cities. A quantitative method is employed with a panel data regression path analysis approach, with data from 2017-2024 in nine districts/cities, 72 observations. The FEM is used. The findings indicate that (1) open unemployment has a negative and significant large impact on economic growth, education and PAD have a positive and significant effect on economic growth. (2) Employment opportunities are negatively and significantly impacted by open unemployment, not positively and significantly by education, positively and insignificantly by PAD, and not positively and not significantly impacted by economic growth. So, (3) the affects of open unemployment, education, and PAD on employment opportunities in Bali Provinces districts/cities are not mitigated by economic growth. In order to promote growth and equal job opportunities in Bali Province, our findings highlight strategies that lower unemployment, match education to labor market demands, and maximize PAD.

Keywords: Economics Growth, Job Opportunities, Open Unemployment, Education, PAD

1. INTRODUCTION

Economic growth reflects the development performance of a region and is correlated with a decrease in unemployment, as explained by Mankiw (2009) through Okun's Law. However, the benefits of growth are evenly distributed, as the jobs created are often concentrated in certain sectors, while low-skilled groups continue to have difficulty accessing them (Wahyuni *et al.*, 2014). In Bali, the disparity in economic growth between districts/cities is visible post-COVID-19 pandemic, with Badung and Denpasar districts recovering faster due to their reliance on tourism, while agricultural-based areas such as Bangli and Karangasem have lag behind (BPS Bali, 2024). This has an impact on the gap in labor absorption, considering that high economic growth is usually followed by an expansion of employment opportunities (Hafiz & Haryatiningsih, 2021).

Inequality is also seen in Bali's employment structure, where the informal sector dominates with vulnerable employment conditions (BPS, 2024). Although the open unemployment (TPT) decreased from 5,63 percent (2020) to 1,79 percent (2024), disparities

between regions remain, such as the TPT being higher in Denpasar and Buleleng compared to Bangli.

Table 1
Open Unemployment Rate Bali Province by District/Cities (percent) 2020-2024

Districts/Cities	Open Unemployment Rate Bali Province by District/Cities (percent)				
	2020	2021	2022	2023	2024
Badung	6,92	6,92	6,87	2,72	1,83
Gianyar	7,53	6,90	6,78	2,96	1,98
Klungkung	5,42	5,35	1,96	1,29	1,23
Buleleng	5,19	5,38	5,20	3,60	2,06
Jembrana	4,52	4,11	3,94	2,52	1,53
Tabanan	4,21	3,94	3,82	2,64	1,85
Karangasem	2,42	2,32	3,09	2,61	1,63
Bangli	1,86	1,80	0,76	0,75	0,73
Denpasar	7,62	7,02	5,08	2,85	2,11
Bali Province	5,63	5,63	5,37	2,69	1,79

Source: SAKERNAS of Bali Province, 2024

Education is a key factor where areas with a higher average length of schooling, such as Badung and Denpasar, have better labor productivity (Saifuddin, 2016). However, educational gaps still exist, with non-SARBAGITA areas such as Karangasem and Bangli lagging behind the 12-year target (Permendikbud No. 80/2013).

By allocating funds for education and training, Regional Original Income (PAD) contributes significantly to the aconomy and job creation (Ahmad & Brosio, 2006). Bali Province;s PAD realization varies, nevertheless, with notable differences between places like Banglu (IDR 155,17 billlion) and Badung (IDR 6,54 trillion in 2024) (Kemenkeu, 2024). Diversification of revenue sources is required because PAD's relaince on tourism leaves it susceptible to outside shocks.

These will look at the following (1) analyze how impacted of open unemployments, education, and PAD on economics growth in Bali Province's districts and cities; (2) analyze the impact of open unemployment, education, PAD, and economic growth on employment opportunities in those distrctits and cities; and (3) determine the indirectly affect of open unemployment, education, and PAD on employment opportunities through economics growth in districts/cities of Bali Province.

2. LITERATURE REVIEW

1) Classical Economic Growth

Adam Smith (1776) views that if the economy develops, either through increased trade, innovation, or capital accumulation, then the demand for labor will also increase. Economic growth tends to lead to expansion of productive sectors (Todaro, 2020: 628).

2) Modern Economic Growth

Harrod-Domar highlighted the importance of investment in boosting economic growths through to the development of strategic sectors that are able to absorb labor. Effective economic growths must be directed towards creating broad employment opportunities (Todaro, 2020: 118).

3) Okun's Law

According to Arthur Okun (1962), there is an inverse relationship between GDP economic growths and unemployment rate, in known as Okun's Law. Generally this principle explains why GDP tends to increase when unemployment declines (Mankiw, 2009: 261).

4) Keynesian Theory

John M. Keynes (1939) stated that when unemployment falls, more people work, then productivity will increase in labor absorption opportunities. However, when unemployment is high it indicates that there is no increase in labor absorption in economic sectors (Priyono & Ismail, 2012:76).

5) Human Capital Theory

Becker (1964), that when someone has received an education they can teach skills that can increase labor productivity so that income and purchasing power increase, this affects increasing economic growth (Priyono & Ismail, 2012:199).

Rosen (1999), employment prospects, productivity, and income all increase with educational attainment. In other words, when workers have good quality (knowledge or ability), are more productive and have a higher chance of being hired (Hidayati et al., 2022:28).

6) Fiscal Federalism

Oates (1972) stated that well-managed PAD is considered capable of encouraging local economic growth (Ahmad & Brosio, 2006:273).

Bahl (2005) view defines fiscal decentralization as an effort to empower communities, such as opening programs to help absorb labor through local revenue (Ambya, 2023:7).

3. RESEARCH METHODOLOGY

The impact of open unemployment (X_1), education (X_2), and PAD (X_3) on economic growth (Y_1) and employment opportunities (Y_2) in 9 districts/cities in Bali Province for the period 2017-2024, prior to, during and after COVID-19, is investigated in this study using an associative quantitative approach with panel dta path analysis regression. 72 observation (9 areas x 8 years) were obtained using cross-sectional and time series data gathered from BPS, SAKERNAS, and APBD reports. Economic growth is measured through GRDP at Constants Price, and employment opportunities through the labor absorption rate, while independent variables include the Open Unemployment Rate (TPT), average length of schooling (RLS), and PAD realization (logarithmized). Statistical tests were conducted using EViews version 0.9 to estimate the coefficient and significance of direct/indirect influence. The data collection technique relies on non-participant observation. Interpretation of the results focuses on the significance of the coefficients ($\alpha = 5\%$). The model consists of two equations:

Model Specification

1) Economic Growth Equation

$$Y_{it1} = \beta_1 X_{it1} + \beta_2 X_{it2} + \beta_3 \ln X_{it3} + e_{it1}$$

Where:

Y_{it} = Economic growth in regency/city i at year t

X_{1it} = Open unemployment rate

X_{2it} = Education level (average schooling years)

$\ln X_{3it}$ = Natural log of PAD

β_1 - β_3 = Regression coefficients for unemployment, education, and PAD effects

ε_{1it} = Error term

i = 9 regencies/cities;

t = 2017–2024

2) Employment Opportunity Equation

$$Y_{it2} = \beta_4 X_{it1} + \beta_5 X_{it2} + \beta_6 \ln X_{it3} + \beta_7 Y_{it1} + e_{it2}$$

Where:

Y_{2it} = Employment opportunities

Y_{1it} = Economic growth (from first equation)

β_4 - β_7 = Coefficients for unemployment, education, PAD, and economic growth effects

ε_{2it} = Error term

4. RESULTS AND DISCUSSIONS

RESULTS

DESCRIPTIVE OF STATISTIC

Table 2
The Outcome of Descriptive Statistic

	N	Min	Max	Mean	Standar Deviation
Open Unemployment (X ₁)	72	0,4	7,62	2,77625	2,029721
Education (X ₂)	72	5,52	11,53	8,6125	1,573635
PAD (X ₃)	72	4,647463	8,785201	6,13454	1,049477
Economic Growth (Y ₁)	72	8,3244632	10,54537	9,534258	0,690491
Employment Opportunities (Y ₂)	72	92,38051	99,59782	97,22326	2,029538
Valid N (listwise)	72				

Source: EViews Output Results

Descriptive analysis is the initial stage to explain the research variables, as a general description of the data that has been collected. The Open Unemployment Rate (X₁) shows a range of values between 0,4 percent and 7,62 percent with an average of 2,78 percent and a standard deviation of 2,03. Variables in Education (X₂) with a range of 5,52 (equivalent to elementary school) to 11,53 (equivalent to high school/ vocational high school graduates), the average length of education in Bali Province is 8.61 years. When expressed as a natural logarithm, PAD (X₃) has an average of 6.31 and a range of 4,65 to 8,79. Economic Growth (Y₁) The economic growth of Bali Province during the study period ranged from 9,46 to 9,62 with an average of 9,52. Employment Opportunities (Y₂) shows a very high average of 97,22 percent with a range of 92,38 percent to 99,60 percent.

PANEL DATA MODEL SELECTION TESTS

(1) Chow Test on Fixed Effect Model

The Chow test is used to determine whether an effect common or. Select the Common Effect (CEM) and accept H₀ if sig > α . Then, H₁ (choose the Fixed Effect Model) if sig ≤ α then is. The results are as follows:

Tabel 3
Test Results for Chow Structure 1

Redundant Fixed Effects Test Results				
Formula for test: Untitled				
Examine cross-section fixed effects				
Effects Test	Statistic	d.f.	Probability	
Cross-section F	1378.084014	(8,60)	0.0000	
Cross-section Chi-square	375.766127	8	0.0000	

Source : EViews Output Results

Based on Chow of structure 1, it firmly rejected the null hypothesis. In other words, the more appropriate panel model in structure 1 is fixed or random effect compared to common effect. So, we can move to next test which is Hausman test.

Tabel 4
Chow Structure 2 Test Result

Redundant Fixed Effects Tests				
Formula: Untitled				
Test cross-section fixed effects				
Effects Test	Statistic	d.f.	Prob.	
Cross-section F	1.835989	(8,59)	0.0882	
Cross-section Chi-square	16.005695	8	0.0423	

Source: EViews Output Results

Cross-section F's Chow Test structure 2 results show that it fails to reject H_0 , indicating the usage of the PLS model with a probability of 0,0882 ($p > 0,05$).

(2) Hausman Test on Random Effect Model

The Hausman test distinguishes between fixed effects and random effects. Select the Random Effect Model and then accept H_0 if the $\text{sig} > \alpha$. H_1 is then acceptable (choose the Fixed Effect Model) if the $\text{sig} \leq \alpha$. The following are the outcomes:

Tabel 5
The Results of Hausman Test Structure 1

Correlated Random Effects				
Equation name: Untitled				
Test cross-section random effects				
Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.	
Cross-section random	17.728144	3	0.0005	

Source: Results of EViews Output

The Hausman test results for structure 1 unambiguously support the adoption of fixed effects, with a probability of 0,0005 ($p < 0,05$). Therefore, Fixed Effect Model (FEM) is the estimate type used in structure 1.

Tabel 6
Hausman Structure 2 Test Results

Correlated Random Effects				
Equation: Untitled				
Test cross-section random effects				
Test Summary		Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random		10.945645	4	0.0272

Source: Output Results of EViews

The results of Hausman structure 2 showed was the probability of 0,272 ($p < 0,05$), as a result, Hausman supports fixed effects as a more appropriate model.

(3) Breusch-Pagan LM Test

Common effects and random effects are distinguished by the Breusch-Pahan LM Test. H_0 is approved if the pvalue $< 0,05$. Then, H_1 allowed if the ($p \leq 0,05$). The outcomes of both structures are as follows:

Tabel 7
LM Results of the Breusch-Pagan Structure 1 Test

Residual Cross-Section Dependence Test			
Null hypothesis: No cross-section dependence (correlation) in residuals			
Periods included: 8			
Cross-sections included: 9			
Total panel observations: 72			
Test	Statistic	d.f.	Prob.
Breusch-Pagan LM	130.6660	36	0.0000
Pesaran scaled LM	10.09583		0.0000
Pesaran CD	11.01593		0.0000

Source: EViews Output Results

According to results of Breusch-Pagan LM structure 1, common effect is inappropriate if it is applied, with a probability 0,0000 ($p < 0,05$).

Tabel 8
LM Breusch-Pagan Structure 2 Test Results

Residual Cross-Section Dependence Test			
Null hypothesis: No cross-section dependence (correlation) in residuals			
Equation: Untitled			
Periods included: 8			
Cross-sections included: 9			
Total panel observations: 72			
Test	Statistic	d.f.	Prob.
Breusch-Pagan LM	35.02479	36	0.5148
Pesaran scaled LM	-1.175589		0.2398
Pesaran CD	-0.420321		0.6743

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Source: EViews Output Results

The Breusch-Pagan LM test resuots for structure 2 suggest that common effects may be used. The FEM is more suitable than the REM, according to the Hausman test results on this structure, which are significant. Thus, the FEM is used in both structures.

ANALYSIS OF PANEL DATA REGRESSION

EViews 0.9 software was used to estimate the model, and the results were analyzed to ascertain the directin and strength of the degree to whoch the variable are related. The Hausman test findings for both architectures indicated that FEM the best.

(1) The Effect of Open Unemployment (X_1), Education (X_2), and Local PAD (X_3) on Economic Growth (Y_1) in Districts and the Cities of Bali Province

Tabel 9
Structure 1's Outcomes Regression Analysis of Panel Data

Dependent Variable: ADHK				
The Method: Panel Least Squares				
Sample: 2017 2024				
Periods included: 8				
Cross-sections: 9				
Total panel in balanced observations: 72				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	8.500911	0.096810	87.80980	0.0000
TPT	-0.014963	0.002415	-6.196522	0.0000
RLS	0.085035	0.016269	5.226951	0.0000
LN PAD	0.055836	0.019928	2.801828	0.0068

Source: EViews Output Results

The results of the structure 1 estimation in Table 8 are in the form of unstandardized coefficients from EViews, which can be converted into standardized coefficients (beta coefficients) using the formula from Wooldridge (2020:185):

$$\beta_j = B_j \times \left(\frac{SD_{X_j}}{SD_Y} \right)$$

where:

B_j = Unstandardized coefficient for the variable

SD_{X_j} = is the standard deviation of the independent variable X_j

SD_Y = is the standard deviation of the dependent variable Y

These calculations can be combined into Table 10 below.

Tabel 10
Calculations Combined 1 Standardized Coefficients Structure

Coefficients					
Model	Unstandardized Coefficients		Standardized Coefficients	t-Statistic	Prob.
	B	Std. Error	B		
C	8.500911	0.096810		87.80980	0.0000
TPT	-0.014963	0.002415	-0.044	-6.196522	0.0000
RLS	0.085035	0.016269	0.194	5.226951	0.0000
LN_PAD	0.055836	0.019928	0.085	2.801828	0.0068

Source: EViews Output Results

According on the output results and the conversion of the form into standardized coefficients (beta coefficients), the formula obtained is as follows:

$$Y_{it1} = -0.044 X_{it1} + 0.194 X_{it2} + 0.085 \ln X_{it3}$$

The regression equation demonstrates that, when all independent variables are zero, a constant of 8,500911 represents the funfamental level of economic growth, according to the findings of the first structural model estimation with fixed effect (economic growth). This number is statistically significant

According to the first structural regression model, in districts and the cities in Bali Province, open unemployment was a negatively and significantly impacts on econmic growth (standardized beta coefficients values of -0,044 and p-values of 0,0000), education has a positive and significant impact on economic growth) standardized beta coefficients values of 0,194 and p-value of 0,0000), and PAD has a positive and significant impact on economic growth (standardized beta coefficients values of 0,085 and p-value of 0,0068), with all three being statistically significant and able to explain 99,8 percent of the variation in economic growth ($R^2 = 0,998$).

(2) The Impact of Open Unemployment (X_1), Education (X_2), Local Revenue (X_3), and Economic Growth (Y_1) on Employment Opportunities (Y_2) in Bali Province's Regencies/Cities

Tabel 11
Structure's Outcomes Regression Analysis of Panel Data 2

Dependent Factor: TPTK				
Approach: Panel Least Squares				
Sample: 2017 2024				
Periods included: 8				
Cross-sections present: 9				
Total panel (balanced) observations: 72				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	100.0318	0.098234	1018.304	0.0000
TPT	-0.999740	0.000276	-3625.774	0.0000
RLS	-0.003721	0.001750	-2.126613	0.0376
LN_PAD	0.003364	0.001890	1.780400	0.0802
ADHK	-0.002268	0.011511	-0.197012	0.8445

Source: The Outcomes Eviews Results

The calculation of standardized coefficients form EViews, which can be converted into standardized coefficients (beta coefficients) using the formula from Wooldridge (2020:185). The calculation of the form into standardized coefficients (beta coefficients) can be combined into Table 12 below:

Tabel 12
Calculations Combined 2 Standardized Coefficients Structure

Coefficients					
Model	Unstandardized Coefficients		Standardized Coefficients	t-Statistic	Prob.
	B	Std. Error	B		
C	100.0318	0.098234		1018.304	0.0000
TPT	-0.999740	0.000276	-0.9997	-3625.774	0.0000
RLS	-0.003721	0.001750	-0.00288	-2.126613	0.0376
LN_PAD	0.003364	0.001890	0.00174	1.780400	0.0802
ADHK	-0.002268	0.011511	-0.00077	-0.197012	0.8445

Source: The EViews Output Results

According the outcome and the conversion of the form into standardized coefficients (beta coefficients), the formula obtained is as follows:

$$Y_{it2} = - 0.9997 X_{it1} - 0.00288 X_{it2} + 0.00174 \ln X_{it3} - 0.00077 Y_{it1}$$

The regression equation demonstrates that, when all independent variables are zero, a constant of 100,0318 reflects the fundamental level of economic growth, according to the findings of the secondt structural model estimation with FEM (employment opportunities). This number is statistically significant.

Education has a coefficients of -0,00288 with a p-value of 0,0376 and TPT coefficients of -0,9997 with a p-value of 0,0000, both of which have a significant impact on labor absorption, according to fixed effect structure model 2. Nevertheless, education has an impact that defies the notion. Economic growth, whose regression coefficients are -0,00077 with a p-value of 0,8445, has no significant effect, while Pam which has a coefficient of 0,00174 with a p-value of 0,0802, has a positive but weak effect and is only significant at the 10 percent level. The model explains 99,99 percent of the variation ($R^2 = 0,9999$).

(3) Results of Indirect Effect Analysis Through Mediation Variables

According to the analysis's findings, economic growth has a standardized coefficient on employment opportunities of -0,00077, and its significant value (p-value of 0,8445) is $p > 0,05$. This figure suggests there is non statistically significant relationship between economic growth and employment opportunities. According to the findings, it does not satisfy the mediation test's requirements. Only when there is a significant correlation between the independent and dependent variable can the Sobel test be conducted, in accordance with Baron and Kenny (1986) approach (Anesthesia & Analgesia, 2013).

DISCUSSION

THE DIRECT EFFECT

(1) The direct effect between Open Unemployment (X_1) and Economic Growth (Y_1) in districts/cities in Bali Province

The direct relationship between open unemployment and economic growth in the districts/cities of Bali Province that show significant negative effect on it, according to Okun's Law which holds that rising unemployment lowers GDP since the workforce is not being used to its full potential, open unemployment has a major detrimental impact on economic growth in the districts and cities of Bali Province. Numerous earlier research by Lubis (2021), Zahari (2022), and Damanik (2023).

(2) The direct effect of Education (X_2) on Economic Growth (Y_1) in districts/cities in Bali Province

Education has a considerable positively and significantly impact on economic growth districts/cities of Bali Province, according to with Gary S. Becker's (1964) Human Capital theory which holds that educational investment boosts individual productivity and propels economic progress economic growth. Numerous earlier investigations by Giri & Karmini (2022), Hanifah (2023), and Jin & Kim (2024) corroborate this conclusion.

(3) The directly effect of PAD (X_3) on Economic Growth (Y_1) in district/cities in Bali Province

According with Wallace E. Oates's Fiscal Federalism theory (1972) which highlights the significance of PAD administration to enhance regional fiscal capacity, PAD in Bali Province's districts and cities has a positive and significant impact on economic growth. These study has same results by Priambodo (2015), Simanjuntak (2017), and Aslam (2022) that corroborate these findings.

(4) The direct effect of Open Unemployment (X_1) on Job Opportunities (Y_2) in districts/cities in Bali Province

Open unemployment was a negatively and severe significantly impact on the employment chances in Bali Province's districts/cities, according to Keynesian theory which states that high unemployment indicate an imbalance between the number of job seekers and available jobs, an imbalance between the number of job seekers and available jobs. Prior research by Musa (2024) and Tobing (2024) support this conclusion.

(5) The direct effect of Education (X_2) on Job Opportunities (Y_2) in districts/cities in Bali Province

Contrary to Human Capital theory, education in Bali Province's districts and cities has no beneficial impact on employment opportunities in other word no positively and significantly because of the poor relevance formal education to the labor market and the mismatch between industry demands and graduate competencies. The ILO (2018) and Putra & Wijaya (2021) support this conclusion.

Over-education that is out of step with the demands of the labor market is a phenomenon, according to study conducted by International Labour Organization or ILO in 2018.

(6) The direct influence of PAD (X_3) on Job Opportunities (Y_2) in districts/cities of Bali Province

Although raising PAD has the ability to boost job creation through regional spending, the impact is still minimal and suboptimal. This is demonstrated by the fact that PAD has a positive but negligible effect on employment opportunities in the districts and cities of Bali Province. Previous research by Simanjuntak et al. (2017) and Karnila (2024) supports this finding, which is consistent with according to Bahl (2005) the Fiscal Federalism theory.

(7) The direct influence of Economic Growth (Y_1) on Job Opportunities (Y_2) in districts/cities in Bali Province

The fact that employment prospects or opportunities are not positively and significantly impacted by economic growth in Bali Province's districts and cities suggests that economic growth has not been able to produce new jobs as effectively as it could. Previous research by Kumaat (2020), Darma and friends (2022), Wambemu with team (2023), and Haider (2023) have reinforced the notion that this is because of competency mismatches, the low multiplier effect of tourism on local workers, and the dominance of capital-intensive sectors.

According to the findings of study by Darma and friends (2022), capital-intensive investments such as star hotels, which only hired highly qualified foreign workers, were the main driver of Bali Province's economic growth between 2015 and 2020. Local workers, on the other hand, lacked sufficient opportunities and were not as talented.

THE INDIRECT EFFECT

Since economic growth had no discernible impact on employment prospects, this study did not employ the Sobel test since it did not satisfy the mediation test's conditions. This indicates that there is no indirect relationship between work chances through economic expansion in Bali Province's districts and cities and open unemployment, education, and PAD. This research highlights how crucial it is that local governments promote inclusive growth rather than concentrating only on economic growth.

5. CONCLUSION AND RECOMMENDATIONS

The following conclusions can be made in light of the findings of the earlier study and discussion: 1) The economic growth of districts and cities in the Bali Province is negatively and significantly impacted by open unemployment; 2) Education has a positive and significant impact on economic growth in districts and cities in Bali Province; 3) PAD has a positive and significant impact on economic growth in districts and the cities of Bali Province; 4) Employment opportunities in districts and the cities in Bali Province are negatively and significantly impacted by open unemployment; 5) Education has no positive and significant effect on employment opportunities in Bali Province's districts and cities; 6) PAD has a positive but negligible effect on employment opportunities in Bali Province's districts and cities; 7) Economic growth has no positive effect on employment opportunities in Bali Province's districts and cities; 8) Open unemployment, education, and PAD have no indirect

affect on employment opportunities through economic growths of the Bali Province's districts and the cities.

The following conclusions can be made in light of the findings of the earlier study and discussion: 1) For future research, add moderating variables for more comprehensive analysis and expand the study period to identify long-term trends, 2) Optimize PAD, allocate regional budgets efficiently to priority sectors (education, vocational training and UMKM), increase transparency in PAD management to avoid inefficiency, 3) Education reform, adjust the curriculum to the needs of the labor market, strengthen vocational training programs to reduce skill mismatch, 4) Multisectoral collaboration, coordination between government, industry, and education to encourage inclusive growth, provide incentives and funding facilities for UMKM and labor intensive sectors.

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