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The Effects of Sectoral GRDP and Per Capita Expenditure on Income Inequality through Employment Absorption in Micro and Small Industries in South Sulawesi Province

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ABSTRACT

Thiis study aiims to analyze the effects of agriicultural-sector GRDP, manufacturiing-sector GRDP, and per capiita expendiiture on iincome iinequaliity through employment absorptiion iin miicro and small iindustriies (MSIis) iin South Sulawesii Proviince duriing the periiod 2006–2025. Thiis research employs a quantiitatiive approach usiing secondary tiime-seriies data consiistiing of 20 observatiions obtaiined from the Central Statiistiics Agency of South Sulawesii Proviince. The data were analyzed usiing multiiple liinear regressiion, path analysiis, and the Sobel test wiith the assiistance of EViiews software. The results show that agriicultural-sector GRDP has a negatiive but iinsiigniifiicant effect on MSIi employment absorptiion. Manufacturiing-sector GRDP has a posiitiive but iinsiigniifiicant effect, whiile per capiita expendiiture has a posiitiive and siigniifiicant effect on MSIi employment absorptiion. Regardiing the diirect effects, agriicultural-sector GRDP has a posiitiive but iinsiigniifiicant effect on iincome iinequaliity. Manufacturiing-sector GRDP has a negatiive and siigniifiicant effect, whereas per capiita expendiiture has a posiitiive but iinsiigniifiicant effect. Meanwhiile, MSIi employment absorptiion has a posiitiive and siigniifiicant effect on iincome iinequaliity. The iindiirect-effect analysiis iindiicates that MSIi employment absorptiion does not siigniifiicantly mediiate the effects of agriicultural-sector GRDP and manufacturiing-sector GRDP on iincome iinequaliity. However, MSIi employment absorptiion siigniifiicantly mediiates the effect of per capiita expendiiture on iincome iinequaliity. These fiindiings iindiicate that strengtheniing productiive sectors, iincreasiing household purchasiing power, and developiing MSIis through iinclusiive poliiciies are necessary to ensure that economiic growth contriibutes to more equiitable iincome diistriibutiion iin South Sulawesii.

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1. INTRODUCTION

Economic development should not only be directed toward increasing economic growth but also toward achieving a more equitable distribution of income and expanding employment opportunities. High economic growth does not necessarily provide equal benefits if it is concentrated only in certain sectors, regions, or groups of society. Therefore, income inequality is an important indicator for evaluating the success of regional development (Wibowo, 2016).

Income inequality refers to disparities in income distribution among individuals or groups within a region, which may be triggered, among other factors, by the concentration of economic control among a limited number of parties (Sahrani et al., 2026). Income inequality is commonly measured using the Gini ratio, which ranges from 0 to 1. A value closer to 0 indicates a more equal income distribution, whereas a value closer to 1 indicates a higher level of inequality. Uncontrolled inequality can hinder development, reduce social mobility, increase poverty, and generate various social problems (Maharani et al., 2025).

South Sulawesi Province is one of the centers of economic growth in Eastern Indonesia. Its economic structure is supported by the agricultural, manufacturing, trade, and services sectors. Although the economy of South Sulawesi has continued to develop, income inequality remains an issue that requires attention. Based on data from Statistics Indonesia (BPS), the Gini ratio in South Sulawesi decreased from 0.382 in 2021 to 0.363 in 2024 and 2025. This decline indicates an improvement in income distribution; however, the level of inequality remains within the moderate category.

The agricultural sector plays an important role in the economy of South Sulawesi by providing employment, food, and raw materials for the industrial sector. However, an increase in agricultural-sector GRDP does not necessarily correspond to a more equitable increase in household income. This may occur due to differences in land ownership, productivity, technology, market access, and the value added received by farmers (Sitepu et al., 2024).

In addition to agriculture, the manufacturing sector also plays a strategic role in creating value added and expanding employment opportunities. Increased manufacturing activity can stimulate the development of related sectors, including trade, transportation, services, and household industries. Accordingly, the development of the manufacturing sector is expected to increase household income and reduce income inequality (Novianti & Widawati, 2025).

Per capita expenditure is used as one of the indicators of household welfare. An increase in per capita expenditure indicates an improvement in people's ability to meet their needs for goods and services. However, an increase in per capita expenditure does not necessarily reflect a more equitable distribution of welfare if the benefits are enjoyed primarily by certain income groups (Rohmah & Prakoso, 2022).

Employment absorption is one of the drivers of economic growth because population growth over time can increase the supply of labor and enable an economy to expand its production capacity. On the other hand, population growth may also constrain economic growth if it is not properly managed (Asrahmaulyana, 2022). In this context, the micro and small industry (MSI) sector plays a strategic role. Micro and small industries are characterized by their labor-intensive nature, relatively limited capital requirements, and proximity to local resources and markets. Therefore, this sector has the potential to serve as an important means of employment generation, particularly for individuals with lower levels of education, informal workers, and groups facing difficulties in accessing formal employment. However, an increase in the number of workers absorbed by MSI does not necessarily guarantee a reduction in income inequality, as job quality, wage levels, productivity, and the distribution of businesses are also important factors (Fajrin, 2025).

Based on the above discussion, this study analyzes the effects of agricultural-sector GRDP, manufacturing-sector GRDP, and per capita expenditure on income inequality through employment absorption in the micro and small industry sector in South Sulawesi Province over the period 2006–2025.

2. METHODS

This study employs a quantitative approach using an explanatory research design, which aims to analyze causal relationships among the research variables and test the formulated hypotheses. The data used are secondary time-series data covering the period from 2006 to 2025, resulting in 20 observations. The data were obtained from publications of the Statistics Indonesia (BPS) of South Sulawesi Province, as well as relevant literature and scientific publications.

The dependent variable in this study is income inequality (Y_2), measured using the Gini ratio. The intervening variable is employment absorption in the Micro and Small Industry (MSI) sector (Y_1). Meanwhile, the independent variables consist of agricultural-sector GRDP (X_1), manufacturing-sector GRDP (X_2), and per capita expenditure (X_3).

Data analysis was conducted using multiple linear regression and path analysis with the assistance of EViews software. Path analysis was employed to examine the direct effects of agricultural-sector GRDP, manufacturing-sector GRDP, and per capita expenditure on income inequality, as well as their indirect effects through employment absorption in the MSI sector.

The first regression model was used to analyze the effects of the independent variables on employment absorption in the MSI sector and is specified as follows:

$$Y_1 = \alpha_0 + \alpha_1 \, LnX_1 + \alpha_2 \, LnX_2 + \alpha_3 \, X_3 + \mu_1$$

The second regression model was used to analyze the effects of agricultural-sector GRDP, manufacturing-sector GRDP, per capita expenditure, and employment absorption in the MSI sector on income inequality, as follows:

$$Y_2 = \beta_0 + \beta_1 \, LnX_1 + \beta_2 \, LnX_2 + \beta_3 \, X_3 + \beta_4 \, Y_1 + \mu_2$$

Where Y_1 represents employment absorption in the MSI sector, Y_2 represents income inequality, X_1 represents agricultural-sector GRDP, X_2 represents manufacturing-sector GRDP, X_3 represents per capita expenditure, Ln denotes the natural logarithm, α_0 and β_0 represent the constants, α_1 and β_1 represent the regression coefficients, and μ_1 and μ_2 represent the error terms.

Before estimating the regression models, classical assumption tests were conducted, including normality, multicollinearity, heteroscedasticity, and autocorrelation tests. Subsequently, the coefficient of determination (R^2), simultaneous significance test (F-test), and partial significance test (t-test) were conducted at a 5% significance level. To examine the role of employment absorption in the MSI sector as an intervening variable, path analysis and the Sobel test were employed.

3. FINDINGS AND DISCUSSION

Development of Research Variables

The research data indicate that the variables exhibited different trends over the period 2006–2025. Agricultural-sector GRDP increased from IDR 13.21 billion in 2006 to IDR 47.65 billion in 2025. Manufacturing-sector GRDP also increased, from IDR 18.83 billion to IDR 55.55 billion. Per capita expenditure increased from IDR 4,800 thousand per person per year in 2006 to IDR 12,773 thousand in 2025. Employment absorption in the Micro and Small Industry (MSI) sector increased from 120,381 workers to 256,500 workers.

Meanwhile, income inequality, as measured by the Gini ratio, fluctuated throughout the study period. The lowest Gini ratio was recorded in 2006 at 0.361, while the highest was recorded in 2013 at 0.432. At the end of the study period, the Gini ratio declined to 0.363 in both 2024 and 2025.

Agricultural-Sector GRDP, Manufacturing-Sector GRDP, Per Capita Expenditure, Employment Absorption in the Micro and Small Industry Sector, and Income Inequality in South Sulawesi Province, 2006–2025

Year	Agricultural Sector GRDP (Billion Rp)	Manufacturing Sector GRDP (Billion Rp)	Per Capita Expenditure (Thousand Rp/Person/Year)	Labor Absorption in Micro and Small Industries (Persons)	Income Inequality (Gini Ratio)
2006	13,21	18,83	4.800	120.381	0,361
2007	14,09	19,72	5.400	132.320	0,38
2008	14,99	21,44	6.500	148.155	0,37
2009	16,16	22,22	8.000	163.540	0,394
2010	17,16	23,65	9.331	180.800	0,404
2011	18,87	25,73	9.459	203.000	0,427
2012	20,11	27,96	9.560	228.210	0,418
2013	21,75	30,54	9.632	242.984	0,432
2014	23,29	33,29	9.723	236.069	0,426
2015	25,87	35,54	9.992	245.991	0,424
2016	35,28	38,47	10.281	260.000	0,426
2017	40,31	40,40	10.489	263.986	0,407
2018	41,86	40,78	10.814	207.809	0,397
2019	41,64	44,83	11.118	262.044	0,389
2020	41,29	42,78	11.079	264.745	0,382
2021	42,87	44,07	11.184	223.990	0,382
2022	43,71	48,36	11.430	233.907	0,377
2023	42,96	50,44	11.841	237.611	0,377
2024	44,43	52,88	12.275	241.771	0,363
2025	47,65	55,55	12.773	256.500	0,363

Data Source: Statistics Indonesia (BPS) of South Sulawesi Province, 2026

These developments indicate that growth in the economic sectors and increases in per capita expenditure occurred alongside an increase in employment absorption in the Micro and Small Industry (MSI) sector. However, income inequality continued to fluctuate, indicating that the relationships among the variables need to be further examined using regression analysis and path analysis.

Classical Assumption Test Results

Before conducting multiple linear regression analysis, the research models were first subjected to classical assumption tests. These tests were conducted to ensure that the regression models were appropriate for use in the study.

Normality Test of the Equations Y_1

The normality test was conducted to determine whether the residuals in the regression models were normally distributed. The test was performed using the Jarque–Bera test. If the probability value is greater than 0.05, the residuals are considered to be normally distributed.

Statistical Test	Value
Jarque-Bera	2,065590
Probability	0,356010

Source: EViews-Processed Data, 2026

The test results show that the Jarque–Bera probability value is 0.356010, which is greater than 0.05. Therefore, the residuals of equation Y_1 are normally distributed.

Multicollinearity Test for Equation Y_1

The multicollinearity test was conducted to determine whether there was a high correlation among the independent variables. The model is considered free from multicollinearity if the centered VIF values are below 10.

Variable	Centered VIF
C	NA
X1	1,158999
X2	5,650800
X3	5,299813

Source: EViews-Processed Data, 2026

All centered VIF values are below 10. Therefore, equation Y_1 does not exhibit multicollinearity.

Autocorrelation Test for Equation Y_1

The autocorrelation test was conducted using the Breusch–Godfrey or Lagrange Multiplier (LM) test. If the probability value is greater than 0.05, the model is considered free from autocorrelation.

Statistik Uji	Nilai
Prob. F(2,14)	0,1093
Prob. Chi-Square (2)	0,0665

Source: EViews-Processed Data, 2026

The Prob. Chi-Square value is 0.0665, which is greater than 0.05. Therefore, equation Y_1 does not exhibit autocorrelation.

Heteroscedasticity Test for Equation Y_1

The heteroscedasticity test was conducted to determine whether there were differences in the variance of residuals across observations. The test was performed using the Breusch–Pagan–Godfrey test.

Statistik Uji	Nilai Prob.
Prob. Chi-Square (3)	0,0651
Prob. Chi-Square (3)	0,7703

Source: EViews-Processed Data, 2026

The Prob. Chi-Square value for Obs*R-squared is 0.0651, which is greater than 0.05. Therefore, equation Y_1 does not exhibit heteroscedasticity.

Normality Test for Equation Y_2

Uji Statistik	Nilai
Jarque-Bera	0,193235
Probability	0,907903

Source: EViews-Processed Data, 2026

The Jarque–Bera probability value is 0.907903, which is greater than 0.05. Therefore, the residuals of equation Y_2 are normally distributed.

Multicollinearity Test for Equation Y_2

Variable	Centered VIF
C	NA
X1	1,356833
X2	6,002843
X3	9,550934
Y1	7,526226

Source: EViews-Processed Data, 2026

All centered VIF values are below 10. Therefore, equation Y_2 does not exhibit multicollinearity.

Autocorrelation Test for Equation Y_2

Statistik Uji	Nilai
Prob. F(2,13)	0,9252
Prob. Chi-Square (2)	0,8879

Source: EViews-Processed Data, 2026

The Prob. Chi-Square value is 0.8879, which is greater than 0.05. Therefore, equation Y_2 does not exhibit autocorrelation.

Heteroscedasticity Test for Equation Y_2

Statistik Uji	Nilai Prob.
Prob. Chi-Square (4)	0,5161
Prob. Chi-Square (4)	0,8382

Source: EViews-Processed Data, 2026

The Prob. Chi-Square value for Obs*R-squared is 0.5161, which is greater than 0.05. Therefore, equation Y_2 does not exhibit heteroscedasticity.

Multiple Linear Regression Analysis Results

Equation Y_1

The regression model for equation Y_1 was used to examine the effects of agricultural-sector GRDP, manufacturing-sector GRDP, and per capita expenditure on employment absorption in the Micro and Small Industry (MSI) sector.

Variable	Coefficient	t-Statistic	Prob.
C	4,393905	3,842247	0,0014
X1	-0,075261	-0,291174	0,7747
X2	0,171469	0,437845	0,6674
X3	0,748164	3,665326	0,0021

Source: EViews-Processed Data, 2026

The estimated regression equation is as follows:

$$Y_1 = \alpha_0 + \alpha_1 \, LnX_1 + \alpha_2 \, LnX_2 + \alpha_3 \, X_3 + \mu_1$$

The interpretation of the regression equation is as follows:

1. The constant coefficient of 4.393905 indicates that when all independent variables are held constant, the baseline level of employment absorption in the MSI sector is 4.393905 in natural logarithmic form.
2. The coefficient of agricultural-sector GRDP is −0.075261, indicating a negative relationship with employment absorption in the MSI sector. However, this effect is not statistically significant.
3. The coefficient of manufacturing-sector GRDP is 0.171469, indicating a positive relationship with employment absorption in the MSI sector. However, this effect is not statistically significant.
4. The coefficient of per capita expenditure is 0.748164, indicating a positive relationship with employment absorption in the MSI sector. This effect is statistically significant.

Equation Y_2

The regression model for equation Y_2 was used to examine the effects of agricultural-sector GRDP, manufacturing-sector GRDP, per capita expenditure, and employment absorption in the MSI sector on income inequality.

Variable	Coefficient	t-Statistic	Prob.
C	-3,020191	-6,163276	0,0000
X1	0,023451	0,292813	0,7737
X2	-0,313015	-2,571047	0,0213
X3	0,056558	0,661054	0,5186
Y1	0,374798	4,851251	0,0002

Source: EViews-Processed Data, 2026

The estimated regression equation is as follows:

$$Y_2 = \beta_0 + \beta_1 \, LnX_1 + \beta_2 \, LnX_2 + \beta_3 \, X_3 + \beta_4 \, Y_1 + \mu_2$$

The interpretation of the equation is as follows:

1. The constant coefficient of −3.020191 represents the baseline level of income inequality when all independent variables are held constant.
2. The coefficient of agricultural-sector GRDP is 0.023451, indicating a positive relationship with income inequality; however, the effect is not statistically significant.
3. The coefficient of manufacturing-sector GRDP is −0.313015, indicating a negative and statistically significant relationship with income inequality.
4. The coefficient of per capita expenditure is 0.056558, indicating a positive relationship with income inequality; however, the effect is not statistically significant.

5. The coefficient of employment absorption in the MSI sector is 0.374798, indicating a positive and statistically significant relationship with income inequality.

Coefficient of Determination (R^2) – Equation Y_1

R-squared
0,845271

Source: EViews-Processed Data, 2026

The R-squared value is 0.845271, or 84.5271%. This indicates that 84.5271% of the variation in employment absorption in the MSI sector can be explained by agricultural-sector GRDP, manufacturing-sector GRDP, and per capita expenditure. The remaining 15.4729% is explained by other factors outside the research model.

Simultaneous Significance Test (F-Test) – Equation Y_1

F-statistic	Prob(F-statistic)
29,13559	0,000001

Source: EViews-Processed Data, 2026

The probability value of the F-statistic is 0.000001, which is less than 0.05. Therefore, agricultural-sector GRDP, manufacturing-sector GRDP, and per capita expenditure simultaneously have a statistically significant effect on employment absorption in the MSI sector.

Partial Significance Test (t-Test) – Equation Y_1

Variabel	Coefficient	t-statistic	Prob.
X1	-0,075261	-0,291174	0,7747
X2	0,171469	0,437845	0,6674
X3	0,748164	3,665326	0,0021

Source: EViews-Processed Data, 2026

Based on the regression results, the partial test results are as follows:

Agricultural-sector GRDP has a coefficient of −0.075261 with a probability value of 0.7747, which is greater than 0.05. This indicates that agricultural-sector GRDP has a negative but statistically insignificant effect on employment absorption in the MSI sector. Therefore, the hypothesis stating that agricultural-sector GRDP has a positive and significant effect on employment absorption in the MSI sector is rejected.

Manufacturing-sector GRDP has a coefficient of 0.171469 with a probability value of 0.6674, which is greater than 0.05. This indicates that manufacturing-sector GRDP has a positive but statistically insignificant effect on employment absorption in the MSI sector. Therefore, the research hypothesis is rejected.

Per capita expenditure has a coefficient of 0.748164 with a probability value of 0.0021, which is less than 0.05. This indicates that per capita expenditure has a positive and statistically significant effect on employment absorption in the MSI sector. Therefore, the research hypothesis is accepted.

Coefficient of Determination (R^2) – Equation Y_2

R-squared
0,785117

Source: EViews-Processed Data, 2026

The R-squared value is 0.785117, or 78.5117%. This indicates that 78.5117% of the variation in income inequality can be explained by agricultural-sector GRDP, manufacturing-sector GRDP, per capita expenditure, and employment absorption in the MSI sector. The remaining 21.4883% is explained by other factors outside the research model.

Simultaneous Significance Test (F-Test) – Equation Y_2

F-statistic	Prob(F-statistic)
13,70134	0,000068

Source: EViews-Processed Data, 2026

The probability value of the F-statistic is 0.000068, which is less than 0.05. Therefore, agricultural-sector GRDP, manufacturing-sector GRDP, per capita expenditure, and employment absorption in the MSI sector simultaneously have a statistically significant effect on income inequality.

Partial Significance Test (t-Test) – Equation Y_2

Variable	Coefficient	t-Statistic	Prob.
X1	0,023451	0,292813	0,7737
X2	-0,313015	-2,571047	0,0213
X3	0,056558	0,661054	0,5186
Y1	0,374798	4,851251	0,0002

Source: EViews-Processed Data, 2026

Based on the regression results, the partial test results are as follows:

Agricultural-sector GRDP has a coefficient of 0.023451 with a probability value of 0.7737, which is greater than 0.05. This indicates that agricultural-sector GRDP has a positive but statistically insignificant effect on income inequality. Therefore, the research hypothesis is rejected.

Manufacturing-sector GRDP has a coefficient of −0.313015 with a probability value of 0.0213, which is less than 0.05. This indicates that manufacturing-sector GRDP has a negative and statistically significant effect on income inequality. Therefore, the research hypothesis is accepted.

Per capita expenditure has a coefficient of 0.056558 with a probability value of 0.5186, which is greater than 0.05. This indicates that per capita expenditure has a positive but statistically insignificant effect on income inequality. Therefore, the research hypothesis is rejected.

Employment absorption in the MSI sector has a coefficient of 0.374798 with a probability value of 0.0002, which is less than 0.05. This indicates that employment absorption in the MSI sector has a positive and statistically significant effect on income inequality. Therefore, the research hypothesis is rejected because the direction of the observed effect differs from the direction hypothesized.

Path Analysis

Sobel Test 1: Agricultural-Sector GRDP

Sobel test statistic	P-value
-0,2906513	0,77131802

Source: EViews-Processed Data, 2026

The p-value is 0.77131802, which is greater than 0.05. Therefore, the indirect effect of agricultural-sector GRDP on income inequality through employment absorption in the MSI sector is not statistically significant. Employment absorption in the MSI sector does not significantly mediate the relationship.

Sobel Test 2: Manufacturing-Sector GRDP

Sobel test statistic	P-value
0,43607288	0,66278385

Source: EViews-Processed Data, 2026

The p-value is 0.66278385, which is greater than 0.05. Therefore, employment absorption in the MSI sector does not significantly mediate the effect of manufacturing-sector GRDP on income inequality.

Sobel Test 3: Per Capita Expenditure

Sobel test statistic	P-value
2,92446573	0,00345048

Source: EViews-Processed Data, 2026

The p-value is 0.00345048, which is less than 0.05. Therefore, employment absorption in the MSI sector significantly mediates the effect of per capita expenditure on income inequality.

Direct Effects

Influence between variables	Direct Effect	Sig.	Relationship	Indirect Effect	Total Effect
X1 → Y1	-	0.7747	Not Significant	-	-
X2 → Y1	-	0.6674	Not Significant	-	-
X3 → Y1	0.748164	0.0021	Significan	-	0.748164
X1 → Y2	-	0.7737	Not Significant	-	-
X2 → Y2	-0.313015	0.0213	Significant	-	-0.313015
X3 → Y2	-	0.5186	Not Significant	-	-
Y1 → Y2	0.374798	0.0002	Significan	-	0.374798
X1 → Y1 →Y2	-	0.7713	Not Significant	-	-
X2 → Y1 →Y2	-	0.6627	Not Significant	-	-
X3 → Y1 → Y2	-	0.0034	Significant	-	-

Source: EViews-Processed Data, 2026

Discussion

Effect of Agricultural-Sector GRDP on Employment Absorption in the MSI Sector

Agricultural-sector GRDP has a negative but statistically insignificant effect on employment absorption in the Micro and Small Industry (MSI) sector. The coefficient of −0.075261, with a probability value of 0.7747 > 0.05 and a t-statistic of −0.291174, indicates that an increase in agricultural-sector GRDP tends to reduce employment absorption in the MSI sector, although the effect is not statistically significant.

This finding is consistent with Agricultural Production Theory (cited in Sinaga et al., 2025), particularly the law of diminishing returns, which suggests that technological improvements, such as the adoption of improved seeds and mechanization, shift the production curve upward, reduce surplus

labor, and facilitate the reallocation of labor toward industrial activities. This finding is also consistent with Zahrotussolichah (2023), who found a negative but statistically insignificant effect of labor on employment-related outcomes in Southeast Sulawesi during 2017–2022.

Effect of Manufacturing-Sector GRDP on Employment Absorption in the MSI Sector

Manufacturing-sector GRDP has a positive but statistically insignificant effect on employment absorption in the MSI sector. The coefficient of 0.171469, with a probability value of 0.6674 > 0.05 and a t-statistic of 0.437845, indicates that an increase in manufacturing-sector GRDP tends to increase employment absorption in the MSI sector, although the effect is not statistically significant.

This finding is consistent with Richardson's (2001) Economic Base Theory (cited in Lestari, 2022), which states that external demand can stimulate regional economic growth. Manufacturing industries that utilize local resources for export can generate regional income and create employment opportunities. Consequently, an increase in manufacturing-sector GRDP tends to increase employment absorption in the MSI sector. This finding is also consistent with Sulistyawan (2021), who reported a positive and significant effect in Semarang Regency, attributed to industrial growth.

Effect of Per Capita Expenditure on Employment Absorption in the MSI Sector

Per capita expenditure has a positive and statistically significant effect on employment absorption in the MSI sector. The coefficient of 0.748164, with a probability value of 0.0021 < 0.05 and a t-statistic of 3.665326, indicates that an increase in per capita expenditure significantly increases employment absorption in the MSI sector.

This finding is consistent with Halim's Theory (2012, cited in Siregar, 2023), which suggests that total consumption expenditure per household member on daily goods and services is related to employment absorption in the micro and small industry sector, as increased consumption can stimulate demand for products and consequently increase labor absorption. This finding is also consistent with Oliviani (2023), who found a positive and statistically significant effect.

Effect of Agricultural-Sector GRDP on Income Inequality

Agricultural-sector GRDP has a positive but statistically insignificant effect on income inequality. The coefficient of 0.023451, with a probability value of 0.7737 > 0.05 and a t-statistic of 0.292813, indicates that an increase in agricultural-sector GRDP tends to increase income inequality, although the effect is not statistically significant.

This finding is consistent with the Kuznets Hypothesis (Kuznets, 1955, cited in Hermawan & Taher, 2025), which proposes that during the early stages of economic development, labor reallocation from agriculture to industry may increase income inequality, while inequality tends to decline at later stages, resulting in an inverted-U relationship. This finding is also consistent with Suzana and Kapantow (2025), who found that agricultural land area did not have a statistically significant effect on the Gini Index in North Sulawesi.

Effect of Manufacturing-Sector GRDP on Income Inequality

Manufacturing-sector GRDP has a negative and statistically significant effect on income inequality. The coefficient of −0.313015, with a probability value of 0.0213 < 0.05 and a t-statistic of −2.571047, indicates that an increase in manufacturing-sector GRDP tends to significantly reduce income inequality.

This finding is consistent with Dumairy's theory (1996, cited in Firman et al., 2023), which views industry as a leading sector capable of stimulating other sectors of the economy. An increase in manufacturing-sector GRDP may therefore affect income inequality through value creation, structural transformation, and income distribution. This finding is also consistent with Iman, Al, and Alfidhatun (2025), whose study on sectoral GRDP, inflation, economic growth, and income inequality in Java found a negative and statistically significant effect.

Effect of Per Capita Expenditure on Income Inequality

Per capita expenditure has a positive but statistically insignificant effect on income inequality. The coefficient of 0.056558, with a probability value of 0.5186 > 0.05 and a t-statistic of 0.661054, indicates that an increase in per capita expenditure tends to increase income inequality, although the effect is not statistically significant.

This finding is consistent with Myrdal's theory (1997, cited in Agusalim, 2016), particularly the concept of the backwash effect, whereby capital and resources are redirected toward more developed regions, increasing incomes in those areas while disadvantaged regions fall further behind. Consequently, an increase in per capita expenditure concentrated in developed areas may widen income disparities. However, Salsabila and Arcana (2022), in their study of village funds and other economic factors affecting income inequality in rural Indonesia during 2015–2022, found a positive and statistically significant effect.

Effect of Employment Absorption in the MSI Sector on Income Inequality

Employment absorption in the MSI sector has a positive and statistically significant effect on income inequality. The coefficient of 0.374798, with a probability value of 0.0002 < 0.05 and a t-statistic of 4.851251, indicates that an increase in employment absorption in the MSI sector is associated with an increase in income inequality in the research model.

This finding is consistent with Malthusian Theory (Malthus, 1798, cited in Guszalina et al., 2022), which explains that a rapid increase in population can increase the supply of labor in micro and small industries, potentially reducing wages and widening income disparities, whereas a decline in population may produce the opposite effect. This finding is also consistent with Pramarta (2021), who found that employment growth in the tertiary sector had a positive effect on inequality in the Special Region of Yogyakarta.

Effect of Agricultural-Sector GRDP on Income Inequality through Employment Absorption in the MSI Sector

Employment absorption in the MSI sector does not significantly mediate the effect of agricultural-sector GRDP on income inequality. The Sobel test produces a test statistic of −0.2906513 with a p-value of 0.77131802 > 0.05.

This finding can be related to Adam Smith's Theory of Economic Growth (Smith, 1776, cited in Adi, 2020), which suggests that structural transformation can encourage labor movement from agriculture toward industrial activities, including micro and small industries. It is also consistent with Setiawan and Barokatuminalloh (2024), who found that agricultural-sector development had a negative and statistically significant effect on income inequality by creating more employment opportunities and promoting a more equitable distribution of income.

Effect of Manufacturing-Sector GRDP on Income Inequality through Employment Absorption in the MSI Sector

Employment absorption in the MSI sector does not significantly mediate the effect of manufacturing-sector GRDP on income inequality. The Sobel test produces a test statistic of 0.43607288 with a p-value of 0.66278385 > 0.05.

This finding can be related to the Two-Sector Lewis Model (Lewis, 1954, cited in Nugraha et al., 2023), in which an increase in manufacturing-sector GRDP can attract workers from the MSI sector toward modern sectors characterized by higher productivity and wages. However, because employment absorption may be selective and favor skilled workers, such labor mobility can potentially widen income disparities. Thus, the nature of employment absorption may determine whether industrial development improves or worsens income distribution. This interpretation is consistent with Gordon and Resosudarmo (2022), who found that growth in the manufacturing and services sectors increased income inequality in Indonesia, whereas agricultural-sector growth reduced it.

Effect of Per Capita Expenditure on Income Inequality through Employment Absorption in the MSI Sector

Employment absorption in the MSI sector significantly mediates the effect of per capita expenditure on income inequality. The Sobel test produces a test statistic of 2.92446573 with a p-value of 0.00345048 < 0.05.

This finding is consistent with the Kuznets Hypothesis (Kuznets, 1955, cited in Rambey, 2020), which suggests that during the early stages of development, an increase in per capita expenditure may widen income inequality because labor shifts from agriculture to industrial activities, including the MSI sector, thereby increasing income disparities. At later stages, as the MSI sector absorbs more workers and per capita expenditure continues to increase, inequality may decline because the benefits of economic growth become more broadly distributed. This finding is also consistent with Fransiska and Mustika (2026), who examined the determinants of income inequality in Kalimantan and Sumatra and found a positive and statistically significant relationship, although an increase in per capita expenditure may reduce inequality, while an increase in the number of workers does not automatically reduce disparities if job quality does not improve.

4. CONCLUSION

Conclusion

1. Agricultural-sector GRDP has a negative but statistically insignificant effect on employment absorption in the Micro and Small Industry (MSI) sector in South Sulawesi Province.
2. Manufacturing-sector GRDP has a positive but statistically insignificant effect on employment absorption in the Micro and Small Industry (MSI) sector in South Sulawesi Province.
3. Per capita expenditure has a positive and statistically significant effect on employment absorption in the Micro and Small Industry (MSI) sector in South Sulawesi Province.
4. Agricultural-sector GRDP has a positive but statistically insignificant effect on income inequality in South Sulawesi Province.
5. Manufacturing-sector GRDP has a negative and statistically significant effect on income inequality in South Sulawesi Province.
6. Per capita expenditure has a positive but statistically insignificant effect on income inequality in South Sulawesi Province.
7. Employment absorption in the Micro and Small Industry (MSI) sector has a positive and statistically significant effect on income inequality in South Sulawesi Province.
8. Employment absorption in the Micro and Small Industry (MSI) sector is not proven to mediate the effect of agricultural-sector GRDP on income inequality in South Sulawesi Province.
9. Employment absorption in the Micro and Small Industry (MSI) sector is not proven to mediate the effect of manufacturing-sector GRDP on income inequality in South Sulawesi Province.
10. Employment absorption in the Micro and Small Industry (MSI) sector is proven to mediate the effect of per capita expenditure on income inequality in South Sulawesi Province.

Recommendations

1. The government should develop local-potential-based manufacturing industries and strengthen Micro and Small Industries (MSIs) through improved access to capital, training, technology, licensing, quality improvement, and market expansion. Employment creation should be accompanied by adequate wages, worker protection, and equitable employment opportunities.
2. Productivity and household incomes, particularly among farmers, should be improved through better access to production inputs, infrastructure, financing, technology, agricultural processing, and productive business development. Improvements in purchasing power should be supported by expanded employment opportunities to ensure that the benefits are distributed more equitably.

3. Future research may incorporate additional variables, such as investment, poverty, education, minimum wages, unemployment, and government expenditure. Future studies may also employ district/city-level panel data or apply more diverse analytical methods.

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