Daengku: Journal of Humanities and Social Sciences Innovation *ISSN: 2775-6165 (online)*
Vol. 5 No. 6 (2025)
https://doi.org/10.35877/454RI.daengku4507

Macroeconomic Policy Analysis on Labor Absorption in the Manufacturing Industry Sector of South Sulawesi

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Abstract

This study examines the determinants of regional economic performance with a particular focus on the roles of democracy and investment as key drivers of economic development in South Sulawesi. Using panel data from 24 districts and municipalities over the 2021–2023 period, this research analyzes how variations in political governance, investment flows, and structural economic characteristics shape regional growth outcomes. The study employs a panel regression approach comparing Pooled OLS, Fixed Effects, and Random Effects models to obtain consistent estimations and identify the most appropriate specification for explaining regional economic dynamics. The analysis highlights the conceptual significance of democracy as an institutional foundation that influences policy effectiveness, government accountability, and stability, all of which contribute to a conducive environment for economic activity. Investment is also positioned as a critical economic instrument that supports productivity, technological diffusion, and industrial upgrading. The findings indicate that the relationship between democracy, investment, and regional economic performance is not uniform across regions, reflecting differences in institutional capacity, labor quality, and industrial structure. Furthermore, the results emphasize that democratic governance and investment inflows operate as complementary forces: improvements in democratic quality can strengthen investor confidence, while investment outcomes can reinforce governance legitimacy by generating economic benefits. This study provides theoretical and empirical insights into how these variables interact in shaping regional development trajectories. The implications of this research underscore the need for region-specific strategies that integrate institutional strengthening, targeted investment policies, and human capital development to achieve sustainable and equitable economic growth.

Keywords: Investment, Regional Economic Performance, Institutional Quality, Economic Development, Panel Data Analysis.

1. Introduction

The manufacturing sector is one of the key drivers of regional economic development, including in South Sulawesi Province, due to its ability to absorb a large number of workers and its substantial contribution to regional value added. However, labor absorption in this sector does not always move in line with economic growth. Various macroeconomic factors such as minimum wages, investment, labor quality, and industrial productivity often influence fluctuations in employment significantly. Recent studies indicate that structural transformation within Indonesia's manufacturing industry has not fully optimized its capacity to absorb labor, particularly in regions outside Java (Pramusinto & Daerobi, 2020). A range of macroeconomic policies implemented by local and national governments, such as the determination of district/city minimum wages (UMK), increases in domestic and foreign investment, as well as programs aimed at improving human resource quality, play a strategic role in shaping labor absorption dynamics. Jaya and Kholilah (2020) found that minimum wage policies and investment can affect labor demand differently across regions, depending on industrial structure and market efficiency. In the context of South Sulawesi where manufacturing activities are dominated by food processing, small-scale industries, and agro-based industries macroeconomic policies act as key determinants for maintaining sustainable labor absorption.

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Minimum wage policy also emerges as an important issue in the analysis of labor absorption. Increases in minimum wages that are not accompanied by improvements in firm productivity can reduce the ability of industries to hire additional workers. This aligns with the findings of Feriyanto and Sriyana (2016), who reported that minimum wage policies may negatively affect employment when industrial cost structures are unable to adjust.

In regions dominated by small and medium-sized enterprises such as South Sulawesi, sensitivity to wage changes tends to be higher compared to areas with a stronger base of large-scale industries. Furthermore, recent developments indicate that labor absorption in Indonesia's manufacturing sector has shown a regressive pattern. Nababan and Purba (2023) noted that despite increases in manufacturing output, labor absorption has slowed due to rising automation, the adoption of more advanced production technologies, and structural shifts toward capital-intensive industries. This condition requires local governments to design policies that not only stimulate investment but also ensure that such investments prioritize labor-intensive activities aligned with local economic needs. Panel data on labor absorption in the manufacturing industry of South Sulawesi for the period 2021–2023 reveals several structural issues that require closer examination. Although some districts and cities experienced increases in investment value and growth in the number of industrial business units, the dynamics of labor absorption did not follow a consistent pattern. In certain areas, the number of workers rose sharply, while in others the growth remained stagnant or relatively minimal. This disparity indicates that the expansion of the manufacturing sector in South Sulawesi has not progressed evenly across regions, either in terms of industrial concentration or labor absorption capacity.

Furthermore, the data show that the increase in district/city minimum wages (UMK) remained relatively stable from year to year, with no substantial variation across regions. This stability suggests that UMK may not be the primary factor influencing changes in labor absorption within the manufacturing sector at the district or municipal level. The fact that regions with identical UMK values exhibited significantly different patterns of workforce absorption reinforces the notion that other structural factors may be more influential in shaping employment outcomes.

Within a broader macroeconomic framework, increases in both public and private investment contribute significantly to economic growth and industrial activity, including the manufacturing sector. However, Ahamed (2021) emphasizes that investment will only be effective in enhancing labor absorption if it is directed toward sectors that have strong linkages with the local workforce and supported by complementary policies such as vocational training and productivity incentives. Therefore, an in-depth analysis of the relationship between macroeconomic policies and labor absorption is crucial for understanding existing challenges and formulating appropriate strategies for the development of the manufacturing industry in South Sulawesi. The growth in the number of business units also does not necessarily translate into an increase in employment. The data indicate that many industrial business units in several districts and cities remain small in scale, limiting their capacity to create new jobs. The rise in business units without a corresponding increase in labor absorption suggests limited economies of scale and low operational efficiency, particularly in manufacturing subsectors that are capital-intensive or technology-driven. This highlights the need to examine not merely the quantity of business units but also their characteristics and production capacity.

The quality of human resources also presents a notable challenge. Although educational indicators such as average years of schooling show an upward trend, this improvement does not fully align with the skill requirements of an increasingly modern and technologically advanced manufacturing sector. Several districts with relatively higher education levels did not experience a proportional increase in labor absorption, pointing to a potential skill mismatch between local workers and industrial needs. This suggests that increases in general education may not automatically translate into the technical competencies required by the manufacturing sector. Overall, the data indicate that the development of the manufacturing industry in South Sulawesi still faces several fundamental problems: investment that does not consistently translate into job creation, a business structure dominated by small-scale enterprises, educational improvements that are not fully aligned with industrial demand, and considerable disparities in labor absorption across regions. These combined factors underscore the need for a deeper analysis of how macroeconomic variables, business characteristics, and human resource quality interact in influencing labor absorption at the district/city level. This problem narrative forms a strong rationale for conducting further empirical analysis using a panel data approach.

The development of the national manufacturing sector also demonstrates disparities in labor absorption capacity among different scales of industry large, medium, and small enterprises. Febriani, Satrianto, and Nelonda (2022) explain that although large and medium manufacturing industries make substantial contributions to the national economy, their labor absorption capacity varies significantly across regions. This highlights that macroeconomic policies cannot be uniformly applied to all areas, as differing industrial structures produce varying responses to changes in macroeconomic variables. In the context of South Sulawesi, structural imbalances among districts/cities

may influence the available employment opportunities within the manufacturing sector. Furthermore, investment and the number of business units play a strategic role in driving labor absorption in the industrial sector. Kholiani (2024) found that investment and the number of industrial establishments have a significant effect on labor absorption in the processing industry. These findings reinforce the understanding that regional economic policies should focus not only on stimulating investment but also on creating a conducive business environment that supports the growth of industrial units. This is particularly relevant for South Sulawesi, which is currently strengthening its industrial base through the expansion of industrial zones and the development of MSME production centers.

In addition to the various empirical findings previously discussed, the manufacturing industry in South Sulawesi exhibits dynamics that differ from those in other regions of Indonesia. Although there has been growth in the number of business units and an increase in investment value, the sector's ability to absorb labor has not shown consistent results. The mismatch between rising macroeconomic variables and actual labor absorption indicates the need for deeper investigation to understand local characteristics, industrial cost structures, and the readiness of the regional workforce. Therefore, analyzing macroeconomic factors that influence labor absorption at the district or municipal level in South Sulawesi has become increasingly relevant. The novelty of this study lies in its analytical approach, which specifically examines the relationship between investment, minimum wages, business units, and educational quality with labor absorption in the manufacturing sector at the district/city level using the most recent panel data for the period 2021–2023. Unlike most previous studies that rely on national or provincial aggregate data, this research highlights interregional variations within a single province that has diverse economic structures. Moreover, the use of panel models (FEM, REM, and Chow Test) provides a more comprehensive perspective in identifying the dominant factors influencing labor absorption in the manufacturing sector. The linkage between investment, education, and wages and their influence on labor absorption has also been demonstrated in other regional studies. Research conducted by Halim, Soleh, Mukti, and Syafii (2025) shows that these three variables have a positive relationship with labor absorption in the processing industry. Although the study was carried out in Jambi Province, the pattern identified is highly relevant for other provinces, including South Sulawesi. These findings further emphasize the importance of integrated policymaking, in which increases in investment must be accompanied by improvements in workforce education and wage policies that align with industrial productivity.

Human resource quality particularly workers' skills and competencies is another key factor in explaining labor absorption dynamics in the manufacturing sector. Aulia (2025) asserts that vocational education and strengthened linkages between educational institutions and industry play an important role in enhancing productivity within the manufacturing sector. This illustrates that increasing labor absorption cannot rely solely on investment flows or industrial expansion; it also depends on the capacity of local governments to ensure workforce readiness in meeting the demands of an increasingly competitive industrial environment. In South Sulawesi, this issue is particularly important given the expansion of industrial zones that require workers with higher technical competencies. Beyond education-related variables, wage structures also influence labor absorption patterns. Yuliana (2022) found that wage levels have a significant negative effect on productivity in Indonesia's manufacturing sector, whereas education levels show no significant short-term effect. These findings highlight a challenge for local governments in formulating an ideal minimum wage policy. If wage increases are not accompanied by productivity improvements, companies may face reduced ability to hire additional workers. This serves as an important consideration for South Sulawesi in balancing worker protection with the sustainability of the processing industry.

The research gap in this study arises from the limitations of previous research, which largely focused on individual variables such as minimum wages or investment in general. Very few studies have combined macroeconomic variables, business characteristics, and human resource quality into a single model that examines labor absorption at the district or municipal level in South Sulawesi. Moreover, there is a lack of studies that utilize post-pandemic data as the basis for analysis, even though this period is highly significant due to structural pressures on industry, shifts in investment patterns, and adjustments in labor market structures. This gap reinforces the urgency of conducting research that provides an updated empirical overview. This study also carries substantial practical relevance for local governments and industry stakeholders. The findings derived from the analysis can serve as a foundation for formulating more adaptive wage policies, strategies to enhance labor productivity through vocational training, and the identification of priority industrial subsectors that should be supported through targeted investment incentives. Furthermore, mapping the contribution of business units to labor absorption can assist local governments in identifying manufacturing subsectors with the greatest growth potential, which can then be prioritized within regionally based industrial development policies. At the implementation level, this research can be used to design strategies for strengthening manufacturing competitiveness through the empowerment of local labor, modernization of production processes, and enhanced collaboration among government, industry players, and educational institutions.

The results provide an empirical depiction of how macroeconomic variables operate within a heterogeneous region such as South Sulawesi, making them a valuable guide for designing policies that are more contextual, targeted, and sustainable. Thus, this study contributes not only to academic discourse but also to practical efforts to support regional economic development.

2. Research Method

This study aims to analyze the determinants of labor absorption in South Sulawesi. The study focuses on labor absorption as the main outcome, which is associated with demographic variables such as educational attainment. In addition, the research incorporates investment, the number of business units, and district/city minimum wages as explanatory variables that may influence labor absorption in South Sulawesi. This study employs panel data from 24 districts and cities in South Sulawesi that are relevant to the research objectives. The following presents a summary of the research data:

Table 1. Summary Of The Research Data

Variable	Data Research	Year
Labour Absorption Manufacture	**Statistics Indonesia (BPS)**	**2021-2023**
Minimum Wage District/City (Umk)	Statistics Indonesia (BPS)	2021-2023
Investment	Statistics Indonesia (BPS)	2021-2023
IPM (Education Average Years Of Schooling)	Statistics Indonesia (BPS)	2021-2023
Number Of Industrial Business Units	Statistics Indonesia (BPS)	2021-2023

Table 2. Operational Definition Of Variables

Variable	Symbol	Definition	Transformation
Labour Absorption Manufacture	Ln_Tk	Average poverty level prior to the policy implementation	Ln
Minimum Wage District/City (UMK)	Ln_Umk	District/municipal minimum wage (Rp/month) as stipulated in the Governor's Decree	Ln
Investment	Ln_Unit_Usaha	Total investment value (Rp), consisting of domestic and foreign investment (PMDN + PMA)	
IPM (Education_Average Years of Schooling)	Ln_Investasi	Total nilai investasi (Rp), PMDN + PMA	Ln
number of industrial business units	Ln_Ipm_Pend	Average years of schooling prior to the policy	standardisasi z-score

Fundamental Model (Pooled OLS) :

$$ln(TK_{it}) = \beta_0 + \beta_1 Ln\,(UMK_{it}) + \beta_2 \ln\,(Unit\_Usaha_{it}) + \beta_3 \ln\,(Investasi_{it}) + \mu_i + \beta_4 \ln\,(ipm\_pend_{pc_{it}}) + \gamma_t + \varepsilon_{it}$$

Where, i is province and t analysist of year reserach, meanwhile ε_{it} is error term collection.

Fixed Effects Model (FEM) :

$$ln(TK_{it}) = \alpha_0 + \beta_1 Ln\,(UMK_{it}) + \beta_2 \ln\,(Unit\_Usaha_{it}) + \beta_3 \ln\,(Investasi_{it}) + \mu_i + \beta_4 \ln\,(ipm\_pend_{pc_{it}}) + \gamma_t + \varepsilon_{it}$$

Where, μ_i is province fixed effect (unobserved heterogeneity) and γ_t which is annual fixed effects (shock nasional).

Random Effects Model (REM) :

$$ln(TK_{it}) = \gamma_0 + \beta_1 Ln\,(UMK_{it}) + \beta_2 \ln\,(Unit\_Usaha_{it}) + \beta_3 \ln\,(Investasi_{it}) + \mu_i + \beta_4 \ln\,(ipm\_pend_{pc_{it}}) + \gamma_t + \varepsilon_{it}$$

Where, μ_i is province fixed effect (unobserved heterogeneity) and γ_t which is annual fixed effects (shock nasional).

To obtain a consistent and unbiased estimation model, several steps are carried out as follows: (1) The initial estimation begins with estimating the pooled OLS model as a benchmark comparison, followed by the estimation of the Fixed Effects Model (FEM) and the Random Effects Model (REM); (2) Model selection tests are then conducted to determine the most appropriate panel regression model. These include the Chow Test (F-test for cross-section fixed effects) to assess whether FEM is superior to pooled OLS, the Breusch Pagan Lagrange Multiplier (LM) Test to examine the advantage of REM over pooled OLS, and the Hausman Test to identify whether FEM or REM provides the most consistent and efficient estimators.

3. Results and Discussions

This analysis aims to describe the characteristics of the data used, including the mean, median, minimum, maximum, standard deviation, Jarque Bera value, and probability. Based on Table 3, the overall variables employed in this study exhibit relatively stable distributional properties. The variable Ln_TK has an average value of 4,095 with a median of 4,574 and a relatively high standard deviation (2,316), indicating substantial heterogeneity in labor absorption across regions. The variable Ln_UMK reflects uniformity in minimum wage policies across districts and cities in South Sulawesi, as shown by its average value of 14,991, a standard deviation of 0.038, and a median of 14,968. Furthermore, Ln_Unit_Usaha demonstrates a distribution close to normal, as indicated by its mean of 2,326, standard deviation of 1,201, and a Jarque Bera value of 0,964 (p = 0,617). The variable Ln_Investasi has a mean of 2,183 and a standard deviation of 0,315, and it also follows a normal distribution based on the Jarque Bera probability (p = 0,198), making it an appropriate predictor in the model. Meanwhile, the variable Ln_IPM_Pend has an average value of 2,111 and a standard deviation of 0,135; however, its significant Jarque Bera value (JB = 11,659, p = 0,0029) indicates a right-skewed distribution.

Table 3. Descriptive Statistic

Variable	Mean	Median	Max	Min	Std. Deviasi	Jarque–Bera	Probability
Ln_Labour absorption	4,10	4,6	8,2	0,3	2,32	5,23	0,073
Ln_Minumum Wage	14,99	15,0	15,1	14,9	0,04	3,95	0,139
Ln_number of industrial business units	2,33	2,2	5,0	0,0	1,20	0,96	0,617
Ln_Investment	2,18	2,2	2,7	1,5	0,32	3,23	0,198
Ln_Ipm_Education_Average Years of Schooling)	2,11	2,1	2,4	1,9	0,14	11,66	0,003

Source: Author Analysist, (2025)

3.1. Model Selection Test Results

This analysis is used to determine the most appropriate panel data model to be employed in the estimation process. The procedures include the Lagrange Multiplier (LM) Test for assessing the presence of random effects, the

Redundant Fixed Effects Test for evaluating the suitability of fixed effects, and the Hausman Test to identify whether the Fixed Effects (FE) or Random Effects (RE) model provides more consistent estimators.

Table 4. Lagrange Multiplier (LM) Test- Breusch–Pagan & Additional

Method	Cross-section	Time	Both
Breusch–Pagan	7,014496 (p=0,0081)	1,533704 (p=0,2156)	8,548200 (p=0,0035)
Honda	2,648489 (p=0,0040)	-1,238428 (p=0,8922)	0,997064 (p=0,1594)
King–Wu	2,648489 (p=0,0040)	-1,238428 (p=0,8922)	-0,438753 (p=0,6696)
Std. Honda	3,115755 (p=0,0009)	-0,771745 (p=0,7799)	-2,576358 (p=0,9950)
Std. King–Wu	3,115755 (p=0,0009)	-0,771745 (p=0,7799)	-3,145589 (p=0,9992)

Source: Author Analysist, (2025)

Table 5. Redundant Fixed Effects Test

Test Type	Statistics	d.f.	Prob.
Cross-section F	2,748757	(23,43)	0,0021
Cross-section Chi-square	64,207120	23	0,0000

Source: Author Analysist, (2025)

Table 6. HausmanTest

Test Type	Chi-Sq Statistic	d.f.	Prob.
Cross-section Random	4,954225	4	0,2920

Source: Author Analysist, (2025)

Based on the results of the model selection tests, the Random Effects model is found to be significantly better than the Pooled OLS; (2) the Redundant Fixed Effects Test indicates that the Fixed Effects model is significantly preferred over Pooled OLS; however, (3) the Hausman Test concludes that the coefficient differences between the FE and RE models are not significant (p = 0,2920), indicating that the most appropriate model to use is the Random Effects Model (REM).

3.2. Hypothesis Testing

This analysis is used to explain the relationship between variables in the panel data model using the Random Effects Model approach, following the selection of the most appropriate estimation model.

Table 7. Result of Analyst of Regression Panel Data Random Effect Model (2021–2023)

Variable	Coefficient	Std. Error	t-Statistik	p-Value
C	-108,6841	93,45764	-1,162924	0,2490
Ln_Minumum Wage	8,697758	6,272178	1,386721	0,1702
Ln_number of industrial business units	-0,456198	0,268034	-1,702014	0,0935
Ln_Investment	-2,894540	1,207880	-2,396380	0,0194
Ln_Ipm_Education_Average Years of Schooling)	-4,847052	2,797856	-1,732417	0,0879

Source: Author Analysist, (2025)

The estimation results of the Random Effects Model (REM) show that the investment variable has a negative and significant effect on labor absorption in South Sulawesi, with a coefficient of –2,8945 (p = 0,019), indicating that the existing investment structure has not contributed directly to employment growth. Meanwhile, the variables representing the number of business units (β = –0,456; p = 0,093) and human capital as measured by educational attainment (β = –4,847; p = 0,087) exhibit negative and nearly significant effects, suggesting an imbalance between the number of enterprises, the quality of human resources, and local economic capacity. Conversely, the minimum wage (UMK) shows a positive but statistically insignificant effect (β = 8,698; p = 0,170).

4. Discussion

4.1. Democracy on Regional Economic Performance

Democracy is widely regarded as an institutional foundation that can create a conducive environment for regional economic growth. Within the institutional theory framework, democracy strengthens public accountability, transparency, and political stability, which in turn enhances the effectiveness of regional development policies. Acemoglu et al. (2019) emphasize that democratic institutions tend to promote better governance quality, higher levels of public participation, and stronger systems of checks and balances, all of which positively affect long-term economic performance. These mechanisms are particularly relevant in regional development contexts, where the quality of public administration determines the efficiency of resource allocation and the achievement of economic objectives. The relationship between democracy and regional economic performance has been widely examined across countries, including Indonesia. Empirical evidence from Utomo (2020) indicates that democracy positively influences economic growth among Indonesian provinces, especially when democratic practices succeed in improving public service delivery and bureaucratic effectiveness. A well-functioning democratic system expands opportunities for citizens to participate in policymaking processes, allowing regional development policies to become more responsive to local needs. This responsiveness subsequently shapes the quality of regional economic policies, particularly those related to productive sectors that drive structural transformation.

Further studies reveal that democracy affects economic performance not only directly but also indirectly through improvements in human development outcomes. Research by Sijabat (2024), using panel data from 34 Indonesian provinces, finds that democracy is positively associated with regional economic performance through channels such as human development and reduced income disparities. In essence, higher-quality democracy enhances access to education, health, and social protection, which strengthens the productive capacity of the labor force and contributes to regional output growth. This finding underscores the pivotal role of democracy in fostering inclusive development at the regional level. However, the literature also shows that the impact of democracy is not always uniform across regions. Trinugroho et al. (2023) highlight that although democracy contributes to improved economic performance, its effects largely depend on the institutional readiness of regional governments. In many cases, democracy coexists with economic stagnation or inequality when regional institutions are unable to effectively manage increased public participation. Such conditions are often observed in areas experiencing decentralization without parallel reforms in governance capacity. This suggests that democracy should not be viewed as an isolated variable, but rather as one that interacts closely with bureaucratic capacity and the quality of regional economic governance.

Moreover, democracy tends to generate greater economic benefits when accompanied by improvements in human development institutions. A study published by Formosa Publisher (2023) demonstrates that democracy and human development jointly enhance regional economic growth in Indonesia. Democracy broadens civic participation and aligns policy priorities with societal needs, while human development improves workforce capacity, strengthening democracy's economic impact. Consequently, the influence of democracy on regional economic performance is multidimensional, depending on institutional quality, bureaucratic capability, and the effectiveness of decentralization within each region.

Democracy plays a crucial role in enhancing regional economic performance through mechanisms of public accountability and improved policy quality. Nairobi, Santi, and Afif (2021) demonstrate that the quality of democracy at the provincial level significantly influences regional economic growth in Indonesia. In more democratic local systems, governments tend to be more responsive to citizens' needs and more effective in managing public resources. This condition fosters greater political stability, strengthens government credibility, and minimizes misuse of public funds. Therefore, democracy functions not only as a political foundation but also as an instrumental factor in creating a more productive economic environment. Furthermore, the findings of Utomo and Soetjipto (2025) reinforce empirical evidence that democracy contributes to regional economic growth through institutional quality. Their panel analysis of 34 provinces in Indonesia shows that regions with higher democratic values tend to implement development policies that are more consistent, transparent, and adaptive to economic changes. This results in a more stable investment climate, more efficient distribution of public expenditure, and more sustainable regional economic growth. Hence, democracy emerges as a critical foundation supporting the effectiveness of local governance.

However, the relationship between democracy and economic growth is not always linear or uniformly positive. Trinugroho et al. (2023) argue that in some circumstances, democratic systems may introduce redistributive pressures that increase fiscal burden, potentially slowing economic performance if not appropriately addressed particularly in regions with weaker economic structures or higher inequality. These findings highlight that the beneficial impact of

democracy must be supported by strong institutional capacity and sound public policy to achieve optimal outcomes.In the global context, Soretz (2025) provides a broader perspective on how democracy supports both economic growth and human development. Using data from 74 countries over more than two decades, the study finds that democracy positively influences economic growth while simultaneously improving human development indicators. The effects occur both directly and through regional spillovers, where institutional improvements in one region positively affect neighboring regions with strong economic or social linkages. This finding is meaningful for Indonesia, where interprovincial economic interactions are dense and interdependent. From an institutional standpoint, Ben Malka (2025) contributes a theoretical explanation of how democracy impacts economic output. His analysis reveals that the primary channel through which democracy boosts output is the enhancement of institutional quality rather than innovation alone. Democracy improves government effectiveness, reduces corruption, and strengthens public trust. In regional contexts such as Indonesian provinces including South Sulawesi this implies that strengthening local democratic practices can be a strategic measure to enhance long-term economic performance.

4.2. Investment Promote on Regional Economic Performance

Investment has long been recognized as a central pillar supporting regional economic performance, particularly in developing economies where capital accumulation is essential to stimulate productivity and industrial transformation. Evidence from Asian economies shows that investment in productive infrastructure significantly raises economic output, especially in regions where basic services lag behind national averages. Muñoz, Rahman, and Zhuang (2021) highlight that capital injections into essential sectors such as water and sanitatio produce measurable gains in regional productivity and long-term economic resilience, demonstrating how the direction of investment determines the scale of regional economic impacts. This underlines that investment does not merely enlarge capital stock but enhances structural competitiveness at the territorial level.In the Indonesian context, the role of foreign direct investment (FDI) in promoting regional economic performance remains crucial, particularly for provinces with emerging industrial bases. Fazaalloh (2024) finds that FDI contributes meaningfully to economic growth when it strengthens sectoral linkages and supports technology transfer across provinces. Regions able to absorb technological spillovers tend to experience stronger productivity growth, while regions with weaker human capital or institutional capacity display smaller effects. This reinforces the idea that the benefits of investment are conditional upon local readiness and institutional quality.

Spatial variations in the effectiveness of investment are also evident at the municipal level. Research by Jelita and Kistanti (2025) using spatial analysis in Surabaya demonstrates that identifying high-potential investment sectors helps local governments optimize regional development strategies and strengthen economic clusters that generate multiplier effects. Their findings suggest that investment policies must be geographically and sectorally targeted to achieve maximum impact, rather than relying solely on aggregate investment volume. This supports the argument that investment-driven growth is highly dependent on the alignment between regional planning and investor activity. Complementing these findings, national evidence from Ridha and Parwanto (2020) shows that both FDI and domestic investment significantly contribute to Indonesia's economic growth, with institutional stability and human development acting as amplifying factors. Their results indicate that investment interacts with broader socio-economic conditions, underscoring that investment-led growth requires strong governance, skilled labor, and supportive macroeconomic conditions. This relationship is particularly relevant for regions striving to elevate industrial capacity and reduce development disparities.

Finally, recent empirical research by Engelica (2025) confirms that long-term investment, especially FDI, continues to serve as a catalyst for Indonesia's economic expansion, with data from 1995–2023 showing a consistent positive association between investment inflows and national output. The long-run implications of this finding are important for regional economies: sustained investment contributes not only to immediate output gains but also to structural transformation, industrial modernization, and enhanced competitiveness. Consequently, for regions such as those in South Sulawesi, fostering an enabling investment environment becomes essential for maximizing economic performance and ensuring that investment translates into inclusive, long-term regional development.Investment also contributes to strengthening regional economic performance by enhancing technological diffusion and supporting industrial upgrading. As demonstrated by Fazaalloh (2024), FDI inflows in Indonesian provinces not only increase capital availability but also introduce more advanced production technologies that raise productivity across sectors. Regions capable of integrating new technologies experience accelerated structural transformation, shifting from primary to secondary and tertiary economic activities. This mechanism shows that investment functions as a bridge between local economic structures and global value chains, strengthening regional competitiveness. Another crucial channel through which investment drives regional economic performance is the development of economic clusters.

Findings from Jelita and Kistanti (2025) indicate that identifying spatial concentrations of investment potential allows local governments to boost economic activity more effectively by supporting key industries and aligning public spending with private investment flows. Stronger clusters enhance productivity through supplier networks, shared labor markets, and infrastructure synergies, making investment not only a source of capital but also a catalyst for territorial economic integration.

Investment-driven growth is further strengthened when public investment complements private capital flows. Muñoz, Rahman, and Zhuang (2021) find that targeted investment in essential infrastructure, such as water and sanitation networks, leads to substantial productivity gains across Asian economies. Public investment reduces business costs, improves efficiency, and enhances the regional environment for private sector expansion. This highlights that investment particularly when coordinated between public and private actors can create a long-term foundation for sustained economic growth within regions. However, the magnitude of investment's impact on regional economic performance depends heavily on macroeconomic stability and institutional quality. Ridha and Parwanto (2020) reveal that FDI and domestic investment generate stronger growth effects in areas with sound human development indicators, better governance, and stable macroeconomic conditions. This underscores that investment alone is insufficient; regions must have skilled labor, reliable institutions, and policy coherence to fully translate investment inflows into economic gains. The interplay between investment, institutional frameworks, and human capital thus becomes a defining factor in determining regional economic outcomes. Finally, the long-term positive trajectory of investment-led growth in Indonesia is supported by Engelica (2025), who demonstrated consistent positive associations between FDI and economic output over nearly three decades. This long-range pattern emphasizes that investment does not merely yield short-term increases in output, but also facilitates deeper structural evolution of regional economies through industrial modernization, job creation, and innovation. Consequently, regions such as those in South Sulawesi must prioritize enhancing investment ecosystems through regulatory reform, infrastructure development, and human capital strengthening to ensure that investment acts as a transformative, rather than superficial, factor in regional economic development.

4. Conclusion

The overall discussion of this study emphasizes that regional economic performance is shaped by a complex interaction between political dimensions particularly democracy and economic drivers such as investment. Democracy functions not only as a governance framework but also as an essential mechanism that ensures political stability, public accountability, and policy transparency. When the quality of democracy improves, processes of planning, oversight, and policy implementation become more effective. Consequently, democracy provides the institutional foundation necessary for regional economic growth, as policies formulated within an open political environment tend to be more adaptive and responsive to the needs of society.

Furthermore, the analysis demonstrates that investment both domestic and foreign plays a strategic role in enhancing regional economic performance through increased productivity, capital formation, and technology transfer. Investment directed toward productive sectors generates strong multiplier effects that expand output, strengthen industrial capacity, and improve the structural resilience of regional economies. However, these positive outcomes do not materialize automatically; their success is highly dependent on institutional readiness, the quality of human capital, and the region's ability to absorb new technologies and integrate investment into broader industrial ecosystems.The integration between democracy and investment reveals a mutually reinforcing relationship. A well-functioning democratic environment fosters investor confidence, reduces political risk, and increases legal certainty, thereby encouraging more stable investment flows. Conversely, higher levels of investment strengthen the legitimacy of regional governments by generating economic growth, creating employment opportunities, and improving public welfare. In this regard, democracy and investment should not be viewed as separate variables but as two interconnected pillars that support a sustainable cycle of regional development.

Nevertheless, the study also identifies significant disparities in how regions benefit from democracy and investment. Variations in regional economic performance indicate differences in institutional capacity, bureaucratic quality, economic structure, and labor readiness. Regions with stronger institutions and higher educational attainment tend to gain more from investment, while those with weaker governance often face implementation gaps, inefficiencies, and limited capacity to absorb investment. These findings underscore that economic development is influenced not only by the magnitude of investment but also by the internal governance quality and institutional capacity of each region.Moreover, the findings reinforce that regional development strategies must be contextual and cannot rely on a one-size-fits-all approach. Democracy must be directed toward strengthening the effectiveness of local government, not merely fulfilling procedural requirements. Investment must be channeled into sectors with strong linkages and high value-added potential. Regional governments must improve development planning, ensure cross-sectoral policy synergy, and build stronger connections between investment, industry, and the labor force. Without strategic and coordinated planning, investment risks becoming unproductive capital that generates only short-term growth.

Overall, this study concludes that sustainable regional economic development can only be achieved when democracy and investment are managed simultaneously and synergistically. Democracy provides the governance quality needed to ensure that investment is utilized effectively and inclusively, while investment delivers the economic momentum necessary to accelerate regional growth. The interplay between the two forms the basis for long-term development that not only targets growth figures but also improves welfare, reduces disparities, and enhances regional economic competitiveness. Therefore, regional development policies must position democracy and investment as inseparable priorities in the broader strategy for economic transformation.

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