

THE GROWTH OF AGRICULTURAL SECTOR AND POVERTY REDUCTION IN INDONESIA

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Abstract

There is ample empirical evidence that a robust agricultural sector is crucial for both economic growth and poverty reduction. In Indonesia, despite its substantial role in employment, it often fails to provide a decent income for its workers. This study aims to identify the role of the agricultural sector in poverty reduction in Indonesia. The research methods used is panel data regression with time series data from 2011-2024 and cross-sectional data from 34 provinces in Indonesia. The dependent variables are total GRDP, GRDP in agriculture, manufacture, and service, while the independent variables are the change in the number of poor people for three locations: total of rural and urban, rural, and urban. The results show that general economic growth is effective in reducing total and rural poverty. Growth in the agricultural sector appears to be associated with an increase in total and rural poverty. Both manufacturing and services GRDP growth are linked to an increase in urban poverty. Growth in services and manufacturing, despite some negative effects on urban poverty, shows a positive impact on rural poverty. This research provides evidence that economic growth alone, particularly in agriculture, is not inherently pro-poor. This is a critical finding that warrants further investigation. It could point to issues like uneven distribution of benefits from agricultural growth, displacement of labor, or increasing inequality within the rural agricultural sector. Policies must be specifically designed to ensure that the benefits of growth are inclusively distributed and directly address the vulnerabilities of poor households.

Keywords: economic growth, agriculture, poverty, Panel Data Regression, GRDP

INTRODUCTION

Indonesia has long recognized the critical role of its agricultural sector not only in economic growth but also in poverty reduction. Despite ongoing shifts towards industrial and service-based economies, agriculture remains the primary source of livelihood for a significant portion of the Indonesian population, particularly in rural areas where poverty incidence tends to be higher. This sector encompasses diverse activities including food crops, plantations, livestock, fisheries, and forestry, directly influencing the income, food security, and overall well-being of millions of households.

Historically, agricultural growth has been a potent force in alleviating poverty in Indonesia. Studies indicate that agricultural growth has had a substantial impact on poverty reduction, particularly in rural areas, where most Indonesia's poor reside. This is largely due to the sector's high labor absorption capacity. Figure 1 shows the contribution of labor absorption in three main sectors of GDP, namely agricultural sector, wholesale trade sector, accommodation, and food service, as well as the manufacturing industry sector. In 2011, agricultural sector absorbed the largest share of labor at 36.4%. This widespread employment, even at relatively lower wages compared to other sectors, provides a vital safety net and a direct pathway out of poverty for many low-income households. However, it shows a consistent and significant downward trend throughout the period, reaching 28.6% by 2024. Despite this decline, agriculture remains one of the largest single sectors in terms of labor absorption. The declining contribution of agricultural sector indicates an ongoing structural

shift where labor is gradually moving out of the primary sector, a common phenomenon in developing economies where labor shifts from lower-productivity agriculture to higher-productivity industrial and services sectors. In Indonesia's case, the services sector (specifically trade and food services) appears to be the primary absorber of labor transitioning out of agriculture, more so than the manufacturing sector.

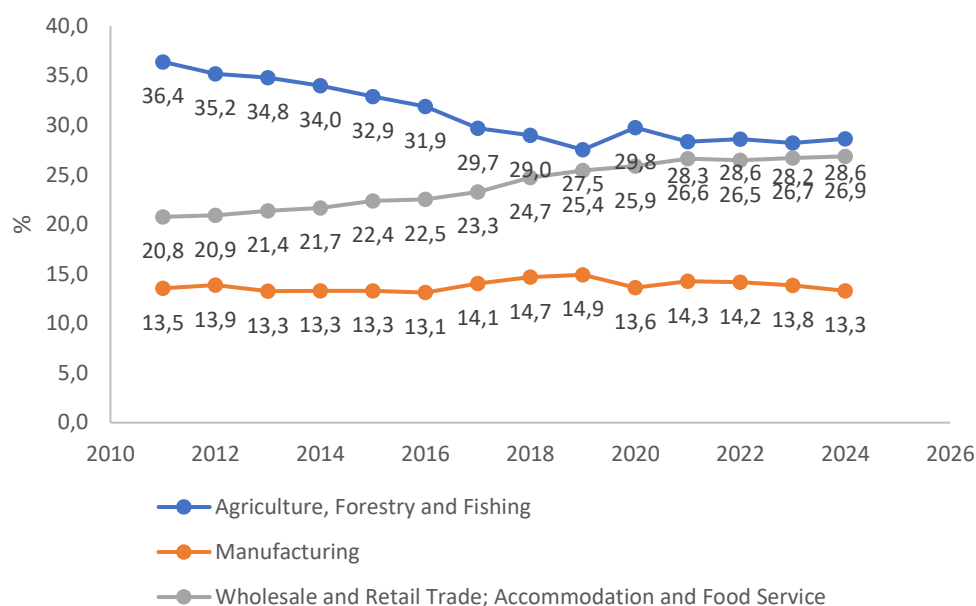


Figure 1. Contribution of labor absorption in three main sectors of GDP, 2011 - 2024

Source: BPS, 2025

Beyond direct employment, the agricultural sector contributes to poverty reduction through various channels. It ensures food security by producing staple foods, which helps stabilize food prices and makes food more accessible for vulnerable populations. Furthermore, the sector provides raw materials for agro-industries, creating backward linkages that stimulate economic activity and generate additional employment opportunities in processing, distribution, and trade. Investments in agricultural development, including improved productivity, access to markets, and infrastructure, can significantly enhance farmers' incomes and improve their overall welfare.

Unfortunately, the contribution of agricultural sector on labor absorption in Indonesia has not been accompanied by evidence that this sector can provide a decent income. Most poor households in Indonesia work in the agricultural sector (BPS, 2025). Figure 2 shows the main source of income for poor households in the period 2013 – 2024 in Indonesia. Throughout the entire period, agriculture consistently remains the largest main source of income for poor households in Indonesia. Its share fluctuates but generally stays above 45%, peaking at 53.58% in 2014 and remaining high, around 49-50% in the later years. This strongly underscores the sector's critical role in the livelihoods of the poor. The main sources of income for poor households, after the agricultural sector, are other sectors, unemployed and the industrial sector, respectively.

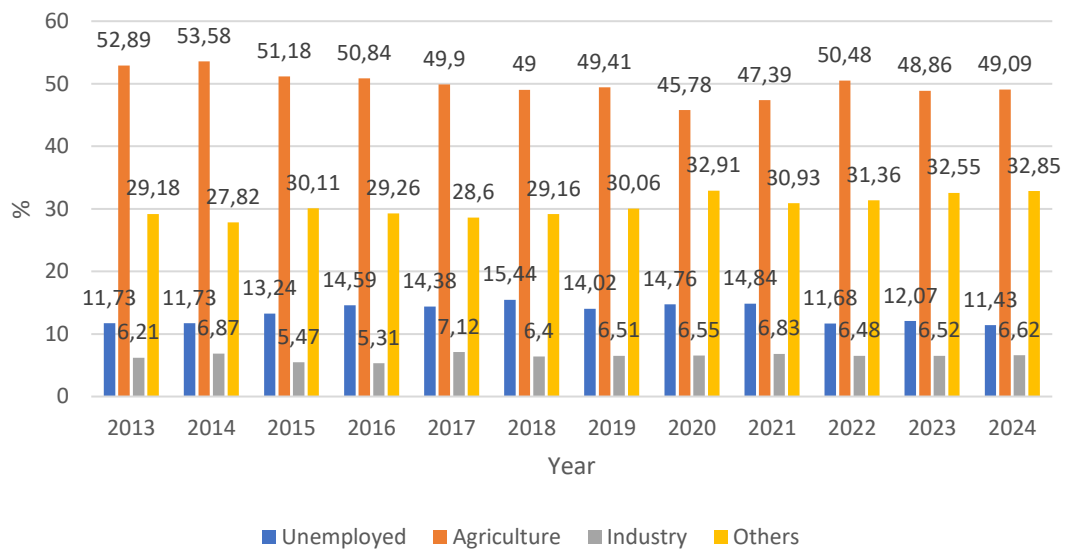


Figure 2. Main source of income for poor households in Indonesia, 2013-2020
 Source: BPS, 2025

Figure 3 shows the plotting between total poverty, GDP and GDP in agriculture in Indonesia. The movement of GDP growth shows its negative correlation with poverty rate. The consistent decline in poverty rates from 2011 to 2019 largely correlates with stable positive overall GDP growth, suggesting that broader economic expansion is crucial for poverty alleviation. In 2020, when GDP growth drops to -2.07%, the poverty rate goes up. The resumption of poverty reduction post-2020 aligns with the recovery in GDP growth.

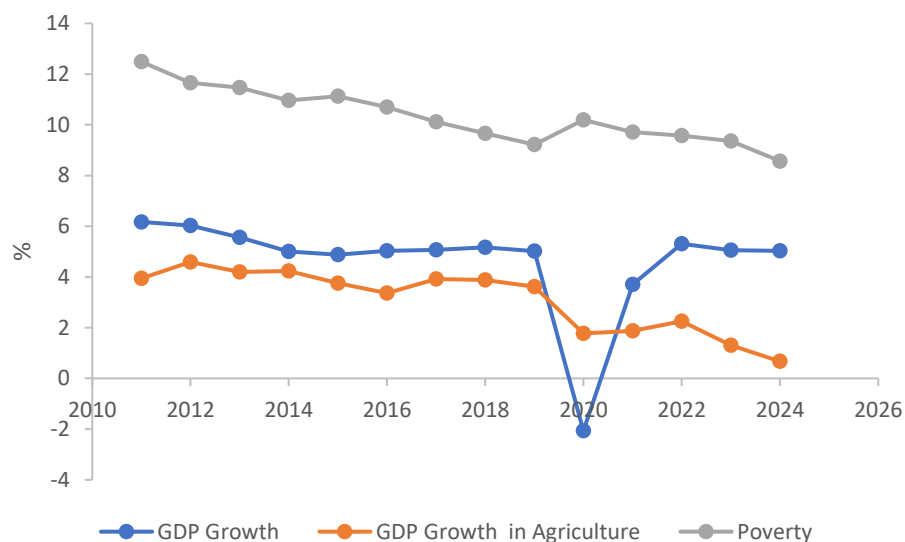


Figure 3. GDP Growth, GDP Growth in Agriculture and Poverty in Indonesia, 2011-2024
 Source: BPS, 2025

In 2020, when overall GDP growth plunged into negative territory, agricultural GDP growth remained positive, albeit at a lower rate (around 1.77%). This highlights the resilience of the agricultural sector during economic crises, acting as a buffer against deeper economic contraction and potentially preventing a more severe increase in poverty. While agriculture is often considered a key driver for poverty reduction, especially in rural areas, the direct correlation between the rate

of agricultural GDP growth and the rate of poverty reduction is not always immediately obvious in the aggregated graph. For instance, in some years (e.g., 2011-2013), agricultural growth was relatively stable, while poverty continued to decline. Post-2020, agricultural growth is lower than pre-pandemic levels, yet poverty continues its downward trend, suggesting that other sectors or factors are also significantly contributing to poverty reduction, or that the impact of agriculture is more nuanced and perhaps through indirect channels or long-term structural changes rather than just year-on-year growth fluctuations. This raises a question whether agriculture sector still has a significant contribution on the poverty rate reduction in Indonesia. Therefore, this study aims to identify the role of the agricultural sector in poverty reduction in Indonesia.

LITERATURE REVIEW AND HYPOTHESIS FORMULATION

Previous studies consistently highlight the critical role of agriculture in fostering economic growth and, more specifically, in achieving poverty reduction, particularly in developing countries. The following literature review synthesizes findings from a range of studies, demonstrating agriculture's multifaceted contributions, its evolving significance in structural transformation, and the policy considerations for maximizing its pro-poor impact. Roemer & Gugerty (1997) state that there are two arguments against the proposition that economic growth can reduce poverty. First, the Kuznets hypothesis. In 1955, Kuznets hypothesized that as incomes grow in the early stages of development, the distribution of income will become more unequal and then will improve as the population participates in increasing economic income. If the distribution of income is increasingly unequal with economic growth, of course, poverty will not decrease. Second, many field actors in economic development have found the fact that efforts to increase growth often deepen poverty, especially in the short term.

Numerous studies underscore the direct and profound impact of agricultural growth on poverty reduction. Christiaensen et al. (2011) empirically demonstrate that agriculture's role in poverty reduction is most pronounced in the early stages of development and for the poorest segments of the population. This argument is further strengthened by Christiaensen & Martin (2018), who offer "eight new insights" into how agriculture facilitates structural transformation while remaining a potent force against poverty. Christiaensen & Martin (2018) states that the contribution of the agricultural sector—when compared to other sectors—to poverty reduction will be much greater for the poor and this contribution will decrease when a country becomes more prosperous. This opinion is also supported by de Janvry & Sadoulet (2009), namely that economic growth originating from the agricultural sector can be three times more effective in reducing poverty than growth originating from other economic sectors. However, not all agricultural growth is equally effective, or, in other words, it is not true in all economies/countries. Dao (2009) delves deeper, showing how agriculture influences not only overall poverty levels but also income distribution in developing countries.

The concept of "pro-poor growth" is central to this discussion, as defined by Pernia & Kakwani (2000) and elaborated by Ravallion (2004). This framework emphasizes growth that disproportionately benefits the poor. Pernia & Kakwani (2000) argue that the rich have immanent advantages in the form of human and material capital so that they will experience more benefit from the growth process compared to the poor. Thus, there is need to promote a growth that enables the poor to actively participate in and significantly benefit from economic activity or a pro-poor growth. Ravallion (2004) adds that a growth process can be said as "pro-poor" if and only if poor people benefit in absolute terms, as reflected in an appropriate measure of poverty. Moreover, de Janvry & Sadoulet (2009) define pro-poor growth as a growth that benefits the poor, as the better alternative to poverty reduction for those who can work. The idea of pro-poor growth then raises the question of identifying the pathways through which growth helps reduce poverty. Valdés & Foster (2010) specifically reflect on how agricultural development can be intentionally geared towards achieving such pro-poor outcomes.

Beyond its direct effects on poverty, agriculture is consistently identified as a fundamental engine of overall economic growth. Tripathi (2016) provides empirical evidence from Uttar Pradesh, India, asserting agriculture's continued role in driving economic expansion. Similarly, Agrawal (2007) shows the broader link between economic growth and poverty reduction in Kazakhstan, a process to which agriculture often contributes significantly. Tsakok & Gardner (2007) address the "chicken and egg" dilemma of agriculture's role in economic development, ultimately affirming its critical, often initiating, role. Earlier works, such as Sumodiningrat (1990) on Central Java, Indonesia, highlighted the immense potential of agriculture and agro-industry to spur regional economic activity. Roemer & Gugerty (1997) offer a broader perspective on how economic growth in general contributes to poverty reduction, providing context for agriculture's role as a key contributor to that growth.

The roles of the agricultural sector in development, according to Sumodiningrat (1990) are: (1) providing food for the community, (2) providing employment opportunities, (3) saving and collecting foreign exchange, and (4) providing support for the development of other sectors. Furthermore, Anriquez & Stamoulis (2007) add that in many countries, the agricultural sector has strong relationships with other sectors. Productivity-driven expansion of the agricultural sector can "pull" other sectors, increasing economic activity and employment opportunities in rural areas. The direct contribution of the agricultural sector (including food crops, livestock, forestry and fisheries) to the national economy is reflected in its contribution to total GDP, foreign exchange earnings and its role in providing employment for other sectors (Valdés & Foster, 2010). However, there is also an opinion that agricultural development is not necessary for economic growth and a country can directly develop the industrial sector (Tsakok & Gardner, 2007).

A substantial portion of the literature focuses on specific country contexts, providing granular evidence for agriculture's impact. In Indonesia, multiple studies validate agriculture's importance. Arham et al. (2020) directly examine whether agricultural performance contributes to rural poverty reduction, affirming a positive link. Hermawan (2015) extends this, analyzing agriculture's role in poverty reduction in both rural and urban areas within Indonesia, suggesting broader spillover effects. Tambunan (2009) provides a direct assessment of agricultural growth's importance for poverty reduction in Indonesia. More recent works by Rusastra et al. (2016), Rusliyadi et al. (2018), Rusliyadi & Libin (2018), and Susilastuti (2017) delve into agricultural development policies, agricultural extension, and specific poverty reduction models for Indonesia, highlighting the ongoing efforts and challenges. Zulgani et al. (2018) characterize poverty and agricultural development in Indonesia as an unfinished agenda, emphasizing the continued need for strategic interventions. Permatasari et al. (2017) showcase regional planning based on agriculture for poverty reduction in West Kalimantan.

Beyond Indonesia, Bello (2021) examines the economic importance of agriculture for poverty reduction in Nigeria, reinforcing the cross-country applicability of these findings. Singh et al. (2024) provide a recent perspective on the role of agriculture in poverty alleviation and rural development, indicating that this remains a highly relevant research area globally.

Given agriculture's critical role, the literature also emphasizes the necessity of well-designed policies. Dorward et al. (2004) outline a comprehensive "policy agenda for pro-poor agricultural growth," stressing interventions that directly empower and benefit the rural poor. Anriquez & Stamoulis (2007) implicitly advocate for policies that acknowledge agriculture's continued centrality in rural development and poverty reduction. The findings from studies on Indonesia, such as those by Rusliyadi et al. (2018) on agricultural extension policy, underscore that effective policy implementation is paramount for agricultural growth to translate into meaningful poverty reduction. In conclusion, the literature overwhelmingly supports agriculture's enduring and often central role in both economic growth and poverty reduction. While its specific contributions may evolve as economies undergo structural transformation, agriculture remains particularly potent in lifting the poorest out of destitution, especially in rural areas. Based on the literature review, the hypothesis for this research is as followed:

H1: In Indonesia, sustained growth in the agricultural sector leads to significant reductions in both rural and, indirectly, urban as well as total poverty rates.

Assuming the hypothesis is confirmed, policy recommendations should focus on fostering inclusive and sustainable agricultural growth while strengthening its linkages to broader economic development.

RESEARCH METHODS

This study uses quantitative methods in the form of panel data regression. Panel regression estimation refers to the statistical methods used to analyze panel data, which combines both cross-sectional (multiple entities) and time-series (multiple time periods) dimensions. The primary goal is to estimate the relationship between a dependent variable and independent variables while accounting for the unique structure of panel data. In this study, the time series data are the year of 2011 – 2024, while the cross-sectional data are 34 provinces in Indonesia.

To answer the research objective, which is to identify the role of the agricultural sector in poverty reduction efforts in Indonesia, the simple model used is a replication of the research of Tambunan (2009) and Agrawal (2007) as follows:

$$\% \Delta P_{it} = \alpha_0 + \alpha_1 \% \Delta y_{it} + \varepsilon \quad (1)$$

where P_{it} is the change in the number of poor people for three regions: total (rural and urban), rural and urban and y_{it} is real GRDP. Equation (1) is used to estimate the effect of economic growth in the agricultural sector on changes in poverty indirectly through total economic growth.

To identify the role of the agricultural sector, processing industry and other services, an estimate is made through equation (2) which is also a replication of Tambunan's (2009) research:

$$\% \Delta P_{it} = \alpha_0 + \alpha_1 \% \Delta y_{1it} + \alpha_2 \% \Delta y_{2it} + \alpha_3 \% \Delta y_{3it} + \varepsilon \quad (2)$$

where y_{1it} is real GRDP in agriculture, y_{2it} is real GRDP in manufacture and y_{3it} is real GRDP in service.

Panel regression consists of three main estimation approaches, namely: (1) the pooled ordinary least square (pooled OLS) which treats all observations across different entities and time periods as if they were independent; (2) the fixed effects (FE) model which addresses the issue of unobserved, time-invariant individual-specific effects by explicitly accounting for them; and (3) the random effects (RE) which accounts for unobserved individual-specific effects, but treats them as random variables drawn from a larger population, rather than fixed constants for each entity. Selecting the appropriate model among Pooled OLS, FE, and RE is crucial when conducting panel regression because each model makes different assumptions about the unobserved individual-specific effects, and mis-specifying the model can lead to biased or inefficient estimates.

The tests to select the most appropriate model are: (1) the Chow test to help determine if there are significant fixed effects; (2) the Hausman test to determine whether the unobserved individual effects are correlated with the independent variables; and (3) Breusch-Pagan Lagrange Multiplier test to decide between Pooled OLS and Random Effects.

RESULTS AND DISCUSSION

The model selection tests for both equation (1) and equation (2) result in the use of FE model (Table 1). The FE model is particularly suitable to control for unobserved, time-invariant characteristics specific to each province that might influence both agricultural GDP and poverty.

Table 1. Results of Model Selection Tests

Type of Test	Total GDP					
	Total Poverty		Urban Poverty		Rural Poverty	
Breusch-Pagan LM	p-value < α	Reject H_0	p-value < α	Reject H_0	p-value < α	Reject H_0
Hausman	p-value < α	Reject H_0	p-value < α	Reject H_0	p-value < α	Reject H_0
Chow	p-value < α	Reject H_0	p-value < α	Reject H_0	p-value < α	Reject H_0
Type of Test	GDP in Agriculture, GDP in Manufacturing, GDP in Services					
	Total Poverty		Urban Poverty		Rural Poverty	
Breusch-Pagan LM	p-value < α	Reject H_0	p-value < α	Reject H_0	p-value < α	Reject H_0
Hausman	p-value < α	Reject H_0	p-value < α	Reject H_0	p-value < α	Reject H_0
Chow	p-value < α	Reject H_0	p-value < α	Reject H_0	p-value < α	Reject H_0

Note:

1. H_0 Breusch-Pagan LM test: no random effects are present
2. H_0 Hausman test: the preferred model is random effects
3. H_0 Chow test: there are no significant fixed effects

Table 2 shows the estimation results of equation (1) and equation (2). From the estimation results of equation (1), when GRDP grows by 1%, there is decrease in total, rural, and poverty of less than 1%. An increase of 1% total GRDP growth leads to a -0.11% decrease in total poverty growth, indicating that overall economic growth is effective in reducing total poverty. For urban areas, a 1% increase in total GRDP growth is associated with a 0.47 percentage point increase in urban poverty growth. This effect is statistically significant. This counterintuitive finding suggests that while overall growth reduces total poverty, it might exacerbate poverty in urban areas, possibly due to factors like increased urbanization pressures, rising living costs, or a lack of inclusive growth in cities. In rural areas, an increase of 1% in total GRDP growth is associated with a -0.41% decrease in rural poverty growth. The result is highly significant in confidence level of 99%, implying that general economic growth helps reduce rural poverty. Economic growth reduces poverty through reduced unemployment and higher real wages (Agrawal, 2007).

Table 2. The Effect of a 1% GRDP Growth Increase on the Percentage of Poverty Growth

Growth	Changes		
	Total Poverty	Urban Poverty	Rural Poverty
Total GRDP	-0.11***	0.47*	-0.41***
GRDP in agriculture	0.11*	-0.02	0.74***
GRDP in manufacturing	-0.0006	0.21***	-0.05***
GRDP in services	-0.17***	0.21**	-0.77***

Note:

- *) significant on alpha 10%
 **) significant on alpha 5%
 ***) significant on alpha 1%

Further estimation with equation (2) shows that, statistically, economic growth in agriculture has significant effects on total and rural poverty. An increase of 1% in GRDP growth in agriculture leads to a 0.11% increase in total poverty growth and a 0.74% increase in rural poverty growth. The results are counter-intuitive. It suggests that agricultural growth, in this context, might not be effectively translating into overall poverty reduction or could be associated with other factors that increase poverty. Meanwhile, in rural areas where agriculture is typically a major sector, the result could imply issues like commercialization and inequality (benefits of agricultural growth do not reach smallholders or lead to land concentration), labor displacement (mechanization or shifts in agricultural practices reducing demand for labor) and price volatility (farmers being vulnerable to price fluctuations despite increased output). The regression estimation of agricultural growth on urban poverty is not statistically significant, suggesting that the growth has little direct impact on urban poverty. Tsakok & Gardner (2007) suggest that agricultural development is not necessary for economic growth and a country can directly develop the industrial sector.

Manufacturing growth does not seem to have a strong direct impact on overall poverty growth. For urban poverty, a 1% increase in GRDP in manufacturing leads to a 0.21% increase in urban poverty growth. This finding is surprising, as manufacturing growth is often expected to reduce poverty through job creation. This is a significant concern and suggests that urban economic growth, while potentially creating wealth, might not be inclusive or could exacerbate existing urban challenges for the poor. It could indicate that the jobs created are low-paying, that only a specific segment of the urban population benefits, or that manufacturing growth leads to increased costs of living that disproportionately affect the poor. Moreover, a 1% increase in GRDP in manufacturing results in a -0.05% decrease in rural poverty growth. The result is highly significant. This is a positive effect, suggesting that manufacturing growth, even if primarily urban-centric, might have some spillover benefits or opportunities for rural populations, perhaps through supply chains or remittances.

The services sector emerges as a strong driver for poverty reduction, particularly in rural areas, and for total poverty. This underscores its potential as a key sector for inclusive growth. An increase of 1% in GRDP in services leads to a -0.17% decrease in total poverty growth. This is highly significant, albeit with a small elasticity, indicating that the services sector plays a significant role in reducing overall poverty. For urban poverty, a 1% increase in GRDP in services results in a 0.21% increase in urban poverty growth. Similar to manufacturing, this is a counter-intuitive finding. This highlights a critical challenge for urban development and poverty alleviation strategies in Indonesia. It could be that the growth in the services sector is concentrated in high-skill, high-wage areas, or that it leads to increased costs of living in urban areas, negatively impacting the urban poor. Conversely, the GRDP in services has a highly significant and a strong positive effect on rural poverty. A 1% increase in GRDP in services is associated with a -0.77% decrease in rural poverty growth. This suggests that the growth of the services sector has a substantial beneficial impact on reducing rural poverty, possibly through improved access to services, new employment opportunities, or remittances from family members working in the services sector.

CONCLUSION

The agricultural sector is still the main economic activity for the community, as can be seen from its largest contribution to employment and as the main source of livelihood for poor households. However, results of the study suggest that GRDP growth of the agricultural sector significantly increase rural and total poverty in Indonesia. This contradicts the conventional expectation that growth in a dominant sector should reduce poverty, especially for the poor reliant on it. This suggests that the current model of agricultural growth in Indonesia may be non-inclusive, leading to greater inequality or displacement rather than poverty reduction. The results strongly suggest that economic growth alone, particularly in agriculture and certain urban-centric sectors, is not inherently pro-poor. Policies must be specifically designed to ensure that the benefits of growth

are inclusively distributed and directly address the vulnerabilities of poor households, especially in agriculture and urban areas. Suggested policies that can increase the contribution of agricultural sector are: promoting inclusive agricultural growth strategies, addressing issues of inequality and labor displacement, and increasing added value through modern corporation-based agriculture.

BIBLIOGRAPHY

- Agrawal, P. (2007). Economic growth and poverty reduction: Evidence from Kazakhstan. *Asian Development Review*, 24(2), 90–115.
- Anriquez, G., & Stamoulis, K. (2007). Rural development and poverty reduction: Is agriculture still the key? In *ESA Working Paper* (Vol. 07, Issue 02).
- Arham, M. A., Fadhli, A., & Dai, S. I. (2020). Does Agricultural Performance Contribute to Rural Poverty Reduction in Indonesia? *Jejak*, 13(1), 69–83. <https://doi.org/10.15294/jejak.v13i1.20178>
- Bello, K. M. (2021). *Economic Importance of Agriculture for Poverty Reduction in Nigeria*. 23, 324–334. https://doi.org/10.1007/978-3-319-95867-5_124
- BPS. (2025). *Statistics by Subjects*. <https://www.bps.go.id/en>
- Christiaensen, L., Demery, L., & Kuhl, J. (2011). The (evolving) role of agriculture in poverty reduction- An empirical perspective. *Journal of Development Economics*, 96(2), 239–254. <https://doi.org/10.1016/j.jdeveco.2010.10.006>
- Christiaensen, L., & Martin, W. (2018). Agriculture, structural transformation and poverty reduction: Eight new insights. *World Development*, 109, 413–416. <https://doi.org/10.1016/j.worlddev.2018.05.027>
- Dao, M. Q. (2009). Poverty, income distribution, and agriculture in developing countries. *Journal of Economic Studies*, 36(2), 168–183. <https://doi.org/10.1108/01443580910955051>
- de Janvry, A., & Sadoulet, E. (2009). Agricultural growth and poverty reduction: Additional evidence. *World Bank Research Observer*, 25(1), 1–20. <https://doi.org/10.1093/wbro/lkp015>
- Dorward, A., Kydd, J., Morrison, J., & Urey, I. (2004). A policy agenda for pro-poor agricultural growth. *World Development*, 32(1), 73–89. <https://doi.org/10.1016/j.worlddev.2003.06.012>
- Hermawan, I. (2015). Analisis Eksistensi Sektor Pertanian terhadap Pengurangan Kemiskinan di Pedesaan dan Perkotaan. *Mimbar*, 28(2), 135–144.
- Permatasari, N., Priyarsono, D. S., & Rifin, A. (2017). Perencanaan pembangunan ekonomi wilayah berbasis pertanian dalam rangka pengurangan kemiskinan di Kalimantan Barat. *Jurnal Agribisnis Indonesia*, 4(1), 27. <https://doi.org/10.29244/jai.2016.4.1.27-42>
- Pernia, E., & Kakwani, N. (2000). What is pro-poor growth? *Asian Development Review*, 18(1).
- Ravallion, M. (2004). *Pro-Poor Growth : A Primer*.
- Roemer, M., & Gugerty, M. K. (1997). *Does economic growth reduce poverty ?* Harvard Institute for International Development.
- Rusastra, I. W., Sumaryanto, N., & Simatupang, P. (2016). Agricultural Development Policy Strategies for Indonesia : Enhancing the Contribution of Agriculture to Poverty Reduction and Food Security. *Forum Penelitian Agro Ekonomi*, 23(2), 84. <https://doi.org/10.21082/fae.v23n2.2005.84-101>
- Rusliyadi, M., Bin Hj Mohd Jamil, A., Othman, M., Maselena, A., & Tri Kumalasari, R. (2018). Agricultural extension policy, agricultural growth and poverty reduction in Indonesia. *International Journal of Engineering & Technology*, 7(4), 5539–5550. <https://doi.org/10.14419/ijet.v7i4.13337>
- Rusliyadi, M., & Libin, W. (2018). Agriculture development programs for poverty reduction evidences from Indonesia and China-Comparative study case. *Asian Journal of Agriculture and Rural Development*, 8(2), 104–118. <https://doi.org/10.18488/JOURNAL.1005/2018.8.2/1005.2.104.118>
- Singh, A. K., Pathak, M., Joshi, M. D., Kumar, S., Kashyap, S., & Hasan, W. (2024). The Role of

- Agriculture in Poverty Alleviation and Rural Development. *Journal of Scientific Research and Reports*, 30(8), 529–549. <https://doi.org/10.9734/jsrr/2024/v30i82276>
- Sumodiningrat, G. (1990). Potensi pertanian dan prospek agroindustri di Jawa Tengah. *Journal of Indonesian Economy and Business*, 5(1), 1–20.
- Susilastuti, D. (2017). Poverty reduction models: Indonesian agricultural economic approach. *European Research Studies Journal*, 20(3), 164–176. <https://doi.org/10.35808/ersj/702>
- Tambunan, T. (2009). The Assessment of the importance of agricultural growth for poverty reduction in Indonesia. *Seoul Journal of Economics*, 22(3), 341–373. http://ezproxy.puc.cl/docview/215585302?accountid=16788%0Ahttp://todosibuc.uc.cl/openurl/56PUC_INST/56PUC_INST_SP?url_ver=Z39.88-2004&rft_val_fmt=info:ofi/fmt:kev:mtx:journal&genre=article&sid=ProQ:ProQ%3Aabiglobal&atitle=The+Assessment+of+the+Importance+
- Tripathi, A. (2016). Agriculture is still the engine of economic growth : Empirical evidence from Uttar Pradesh , India. *Asian Journal of Agriculture and Development*, 13(1), 1–20.
- Tsakok, I., & Gardner, B. (2007). Agriculture in economic development: Primary engine of growth or chicken and egg? *American Journal of Agricultural Economics*, 89(5), 1145–1151. <https://doi.org/10.1111/j.1467-8276.2007.01075.x>
- Valdés, A., & Foster, W. (2010). Reflections on the role of agriculture in pro-poor growth. *World Development*, 38(10), 1362–1374. <https://doi.org/10.1016/j.worlddev.2010.06.003>
- Zulgani, Z., Syaparuddin, S., Armandelis, A., & Amir, A. (2018). Poverty and Agriculture Development in Indonesia: Unfinishing Agenda. *American Scientific Research Journal for Engineering, Technology, and Sciences*, 50(1), 122–132. https://asrjetsjournal.org/index.php/American_Scientific_Journal/article/download/4503/1609