

Land Conversion and Farmer Exclusion: Land Tenure Change and Livelihoods Transformation in Sukamakmur Village, Karawang Regency

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ABSTRACT

The conversion of agricultural land in Karawang Regency, particularly in Sukamakmur Village, has significantly disrupted farmers' livelihoods. This study examines the socio-economic changes farmers experienced before and after exclusion from their cultivated lands. Using a qualitative case study approach, data were gathered through interviews with ten informants across different land tenure classes, alongside insights from government officials and stakeholders. The findings reveal that policies favoring industrial development, speculative land sales, and inadequate irrigation infrastructure have driven widespread land conversion. These forces compelled farmers to sell their land, resulting in shifts in land ownership, reduced incomes, and altered livelihoods. Many displaced farmers became tenants, sharecroppers, or laborers, while others left agriculture entirely. Low education and skill deficits further hindered their ability to transition to industrial jobs, exacerbating inequality and poverty. This study highlights the systemic marginalization of farmers and calls for policies to protect their rights and promote equitable rural development.

Keywords: farmer exclusion, land conversion, livelihood changes, rural poverty, West Java

INTRODUCTION

As a developing nation, Indonesia is seeing a sharp increase in its population, which has significant ramifications for societal institutions, economic growth, and land use. Its population grew from 264.2 million in 2018 to 269.6 million in 2020, according to census data, and is expected to reach 319 million by 2045 (BPS, 2020; Supas, 2015–2035). In addition to being a statistical fact, this population growth is causing pressures on land resources to rise, especially for residential, commercial, and service uses. These demands frequently result in the loss of agricultural land, as noted by Munibah et al. (2009) and Pewista & Harini (2013), which causes major changes in land usage throughout the country.

A pivotal point in Indonesia's growth trajectory is the conversion of agricultural land to non-agricultural uses. This tendency creates a competitive environment between agricultural and non-agricultural industries and is intimately related to population pressures, economic expansion, and resource scarcity (Dwipradnyana et al., 2015; Iqbal & Sumaryanto, 2016). According to Suratha (2017), population expansion has major socioeconomic and environmental effects because it not only raises the demand for land but also sets off systemic land conversion processes. Speculative activities like land banking by real estate developers, especially in key locations close to major cities like Jakarta, frequently make this process worse in peri-urban settings (Winarso & Kartiwa, 2019).

Karawang Regency, which is near Jakarta, is an interesting example of these processes. Due to its advantageous position and economic potential, Karawang, which has long been known as Indonesia's "national rice barn," has experienced tremendous urbanization and industrialization. Given the overcrowded capacity of the Bodetabek (Bogor, Depok, Tangerang, Bekasi) region, Karawang, which has been designated as an industrial growth area, also acts as a crucial buffer zone for Jakarta (Amalina et al., 2018). Though frequently at the expense of its agricultural foundation, its geographic advantages – such as accessibility via the North Coast (Pantura) route and closeness to southern regions – have expedited economic expansion (Chofyan et al., 2016).

It is concerned with how much agricultural land is being converted in Karawang. While industrial and residential land grew by 17,140 hectares and 9,825 hectares, respectively, between 2007–2013, the region lost about 1,723 hectares of rice fields to non-agricultural uses between 2010 and 2017 (BPS, 2010 & 2018; Chofyan et al., 2016; Rafiuddin et al., 2016). These changes, which represent systemic transformations in land use objectives and governance, are not merely quantitative but also profoundly transformative. Local farmers, whose numbers fell by 13,259 between 2013 and 2018 (2013 Agricultural Census; 2018 Inter-Census Survey), are also affected. The loss of 140 hectares between 2007 and 2017 increases the vulnerabilities of subdistricts like Teluk Jambe Timur, which already has the smallest area of rice fields in Karawang (BPS, 2007 & 2017).

Conversion of agricultural land is a profound social and economic phenomenon rather than just a land-use problem (Tridakusumah et al., 2019). As observed in many places, it frequently leads to tensions and conflicts among impacted groups (Phuc et al., 2014; Bachriadi et al., 2023). Among the many difficulties faced by farmers, especially those with small landholdings, are low pay, lack of participation in decision-making, and weak social security systems (Zhang & Xie, 2019). According to Hall et al. (2011), these practices constitute a type of exclusion in which farmers are routinely separated from the lands on which they have historically depended for their livelihoods.

The conversion of agricultural land and the exclusion of farmers significantly alter their livelihood systems (Oktarina, 2013; Scoones, 2021). In most cases, farmers are excluded from decision-making in the land conversion process, despite their deep reliance on cultivated land as the foundation of their livelihoods. Without access to arable land, the entire livelihood framework of farmers – encompassing economic, social, cultural, and ecological dimensions – faces disruption.

Livelihoods, as a concept, stem from the ways individuals or communities sustain themselves within their ecological and social contexts. They evolve through long-term adaptation to environmental conditions, shaping both family and community structures. As Scoones (2021) emphasizes, livelihoods develop from the ground up, driven by individuals' activities to secure their means of living.

Changes in the physical environment, whether due to natural causes or policy interventions, inevitably reshape livelihood strategies (Scoones, 2021). The degree to which individuals or communities can adapt to these changes largely depends on their economic standing and land tenure security. Those who lose access to land are often forced to seek alternative sources of income on their own. Furthermore,

farmers' ability to cope with land conversion varies, as differences in land ownership and control influence their decision-making and the strategies they employ to navigate these challenges.

Farmers' marginalization as a result of agricultural land conversion is a reflection of larger institutional and structural dynamics. Land rivalry is influenced by market factors, regulatory frameworks, and sociopolitical power disparities, making it more than just a local problem. Regulation, market dynamics, coercion, and legitimacy are the four main processes of exclusion, according to Hall et al. (2011). Similarly, Sikor & Thanh (2007) point to several elements that contribute to farmers' marginalization, including corporatization, financial exclusion, and overlapping state and customary norms. Global and local factors such as economic disparities, climate change, and limited access to knowledge and technology exacerbate these dynamics even further (Ponte & Gibbon, 2005).

These discriminatory practices take various forms in Karawang. Local farmers, who often lack the necessary knowledge and skills for industrial employment, remain largely unable to benefit from the new job opportunities created by industrialization (Abhipraya et al., 2020). The socioeconomic marginalization of local workers is further cemented by the fact that their average educational attainment frequently falls below the minimal requirements for entry-level industrial occupations.

This study seeks to analyze the patterns of livelihood changes among farmers in Karawang following their exclusion from agricultural activities due to land conversion. It also aims to uncover the rationale behind their post-conversion livelihood choices and assess the broader socio-economic impacts of these shifts. By examining these dynamics, the study contributes to a deeper understanding of how agricultural land conversion and exclusion processes reshape livelihoods, economic patterns, and social structures in peri-urban Indonesia.

METHODS

This study was conducted over a three-month period, from October to December 2022, in Sukamakmur Village, located in Teluk Jambe Timur District, Karawang Regency. It employed a qualitative research design (Creswell, 2014; Flick, 2018) especially a case study approach (Yin, 2018; Flyvbjerg, 2006) to explore the impact of agricultural land conversion on farmers' livelihoods. The case study method was chosen to gain a comprehensive understanding of how displaced farmers navigated their exclusion from agricultural land, the decisions they made in response, and the subsequent changes in their livelihoods.

Sukamakmur Village was chosen as the focus of this study based on several considerations:

1. **Land Ownership Transfers:** The village has witnessed significant transfers of agricultural land ownership to external parties, including companies and non-resident individuals, altering the socio-economic fabric of the community.
2. **Irrigation Assets:** Sukamakmur is known for its well-maintained irrigation systems, which are vital for agricultural productivity. However, these assets have been compromised due to land conversion activities, affecting the village's agricultural potential.
3. **Forced Land Conversion Incident:** In 2020, a notable case occurred where technically irrigated, fertile rice fields were converted to non-agricultural use. Farmers cultivating the land were forced to vacate it just days before harvest, exemplifying the abrupt and detrimental nature of such conversions.

The study used a case study methodology and a qualitative research design to investigate the decision-making processes of farmers who were evicted from their land, the adaptation tactics they used, and the ensuing socioeconomic consequences. Primary and secondary sources were combined in the data collection process. Ten farmers from different land tenure classes and important stakeholders, such as academic activists and local government representatives, participated in in-depth interviews. These interviews were complemented by on-site observations and analysis of relevant documentation, as well as statistical data from the Central Statistics Agency (BPS).

The study employed a triangulation strategy, using data from several sources to cross-verify results, to guarantee trustworthiness. This approach offered a thorough comprehension of the intricate dynamics underlying land conversion and its effects. Using Yin's case study approach as a guide, the investigation sought to understand the reasons behind farmers' land abandonment, their adaptations to marginalization, and the new livelihood systems that are resulted.

RESULTS AND DISCUSSION

Informant Profiles

Ten informants – two of whom were women – who were farmers, landowners, or had previously been actively involved in agriculture before agricultural property was sold are the subject of this study. In terms of their land tenure status and farming methods both before and after the land sales, these informants come from a wide variety of socioeconomic backgrounds. Key attributes of these interviewees, such as gender, age, education, primary source of income, and land control status, are compiled in Table 1 across two periods – before and after the land sale.

Table 1. Informants Profile

Informant	Gender	Age (Year)	Last Education	Main Livelihood Now	Land Control*	
					Before Land Sale	After Land Sale
A (DI)	Male	55	Elementary School	Laborers	Landholders	-
B (DT)	Female	65	Elementary School	Farmer	Landowner cum operator	Landowner cum operator
C (SM)	Male	70	Elementary School	Unemployment	Landowner cum operator	-
D (KR)	Male	65	Elementary School	Farmer	Landowner cum operator	Sharecropper
E (OT)	Male	45	Senior High School	Agriculture Coordinator at The Village Office	Landowner cum operator	-
F (SP)	Male	75	Elementary School	Bertani	Sharecropper	Sharecropper
G (OM)	Male	60	Elementary School	Farmer	Landless	Landless
H (WS)	Female	50	Junior High School	Farmer	Share tenancy	Landless
I (KS)	Male	53	Elementary School	Farmer	Sharecropper	Sharecropper
J (NS)	Male	65	Senior High School	Farmer	Landowner	Share tenancy

*Notes:

- Landowner: A person owning land, either cultivating it themselves or renting it out.
- Sharecropper: Farming on someone else's land under a profit-sharing agreement.
- Share tenancy: Renting land for agricultural purposes, either cultivating it personally or employing laborers.
- Landless: Engaged in agricultural labor on land owned by others.

Five of the informants were still categorized as being in the productive age group (15–64 years), despite their ages ranging from 45 to 75. This fruitful category included eight informants prior to the land sales. Younger farmers are generally more nimble, physically fit, and receptive to new ideas, which makes them better able to adjust to changes, claims Soekartawi (2001). This is consistent with the informants' descriptions of their ability to overcome obstacles prior to and following the land conversion.

Informants attribute their skills and problem-solving abilities to lessons passed down by parents, demonstrating the profound generational knowledge ingrained in farming in Sukamakmur Village. This intergenerational relationship highlights smallholder farmers' vulnerabilities as well as their resilience. While their inherited knowledge provided a foundation for adaptation, the structural changes caused by land conversion created significant barriers to sustaining traditional livelihoods.

Seven of the informants completed elementary school, one reached junior high school, and two completed senior high school, indicating poor educational attainment. Informants stressed that family customs and experiential learning were the main sources of farming expertise, even in the face of a lack of formal schooling. Their capacity to tackle agricultural difficulties was largely attributed to the generational transfer of skills and hands-on field experimentation. Their farming methods were not much influenced by outside agricultural extension programs.

Before the land conversion, farming was the primary source of livelihood for all informants except one, who engaged in civil service before transitioning into farming. Farming experience among the group spanned over 35 years for most informants. To diversify household revenues, a number of people took on additional jobs in addition to farming, such as trading charcoal or doing odd jobs.

The sale of agricultural land significantly disrupted livelihood patterns:

- Non-farming livelihoods: three informants completely exited agriculture, transitioning to non-farming roles such as laborers or becoming unemployed.
- Shift to tenancy: several informants transitioned from landownership to sharecropping or tenancy arrangements, reflecting a decline in their socio-economic status.
- Adaptive strategies: one informant, who previously cultivated abandoned “dead land,” continued this practice after the sale by relocating to other plots, demonstrating resilience and adaptability.

Many informants were compelled to look for alternate sources of income after losing their property, but they frequently had little success since they lacked non-agricultural skills and had little education. Even those who continued to work in agriculture had to deal with issues like less independence and a greater reliance on landlords or rental contracts. A decline in their socioeconomic status was evident, for example, when individuals who had been landowner-operators were forced into labor or sharecropping roles. Due to a lack of education and skill sets, many who completely left farming had trouble adjusting to non-agricultural fields.

Mechanisms and Causes of Farmer Exclusion

The increasing conversion of agricultural land in Sukamakmur Village, Karawang Regency, driven by industrial and housing development policies, has resulted in significant socio-economic exclusion of farmers. This exclusion is rooted in state policies that favor land use change from agricultural to non-agricultural purposes. The process began with the issuance of Presidential Decree No. 53 of 1989 regarding Industrial Zones, followed by West Java Governor Decree No. 593 of 1990, which designated approximately 5,500 hectares of land in Karawang for industrial development. These policies accelerated the conversion of agricultural land. According to Chofyan et al. (2016), between 1994 and 2013, approximately 1,388 hectares of rice fields in Karawang disappeared due to such conversions. This process has led to significant livelihood losses for many farmers who depended on these lands.

Significant land use changes due to land conversion have also taken place in Sukamakmur Village, located in Teluk Jambe Timur District. Positioned along the West Karawang Toll Interchange, the village experiences high traffic activity, making it a dynamic area in terms of mobility and accessibility. As a result, the dominant land use in Sukamakmur Village has shifted away from agriculture, with most of the area now developed for residential purposes (BPS Teluk Jambe Timur District, 2022: 3, 29-30), with the following details:

Table 2. Land Use in Sukamakmur Village, 2011 - 2021

Year	Village (km ²)		Rice Fields (km ²)		Plantation (km ²)		Residential, Office & Yard (km ²)	
	Area	%	Area	%	Area	%	Area	%
2011	2.80	100	1.50	53.5	0.08	2.85	1.22	43.5
2021	2.33	100	0.95	40.7	0.35	15.1	1.03	44.2

Source: BPS Kecamatan Teluk Jambe Timur 2022: 29-30 & 2011: 52-53

Between 2011 and 2021, significant changes occurred in land use in Sukamakmur Village. The recorded total area decreased from 2.80 km² in 2011 to 2.33 km² in 2021. Rice fields experienced a substantial reduction, from 1.50 km² (53.5%) to 0.95 km² (40.7%), indicating land conversion to other uses such as plantations or residential areas. Conversely, plantation land expanded from 0.08 km² (2.85%) to 0.35 km² (15.1%), reflecting a shift in land use that may have been influenced by economic factors. Meanwhile, the area for residential, office and yard use changed slightly, from 1.22 km² (43.5%) to 1.03 km² (44.2%). Although it decreased in absolute terms, its percentage increased due to the reduction in total recorded land area. Overall, these changes indicate a trend of agricultural land conversion into

plantations and residential areas, likely driven by urbanization, population growth, and economic dynamics in Sukamakmur Village.

The mechanism of farmer exclusion in Sukamakmur occurred through several stages involving interactions between various actors, including the government agencies, landowners, and land speculators. Landowners, who previously managed agricultural land either personally or through tenant farming, faced economic pressures and difficulties in managing their land. One of the key factors driving the decision to sell land was limited access to irrigation water, exacerbated by the village's topography, which hindered natural water distribution. Farmers were forced to incur high costs to use water pumps, adding a heavy financial burden. Since 1999, many farmers opted to sell their land to brokers or speculators, who then resold it to external parties, including investors and industrialists interested in building industrial facilities or housing developments.

This land sale process, predominantly involving land speculators, placed tenant farmers at a highly vulnerable position. Tenant farmers, who had relied on sharecropping agreements with landowners, lost their rights to the land they cultivated without guarantees for continued cultivation. This practice of selling land without securing the rights of the tenant farmers is a form of exclusion referred to by Hall et al. (2011) as *an intimate exclusion*, which occurs when people who external buyers who often have no social ties to the farmers. As a result, tenant farmers and sharecroppers were forced to abandon their livelihoods and received little to no compensation. In many cases, no formal agreements were made to protect the rights of sharecroppers, despite Indonesian laws that guarantee continued land cultivation under production-sharing agreements.

Table 3. Processes of exclusion by non-farmers

Actor	Causes of Exclusion	Consequences	Results/Impacts
Government Agency	Economic and regional development policies that increase land values	An increase in land prices that encourages people, including farmers, to sell their land voluntarily	Elimination of farmers cultivating the land, including farm laborers who work on the land
	Issuance of a number of spatial planning rules and regulations that encourage land sales, land conversion, or transfer of land rights for the development of various types of facilities and infrastructure	Landowners are encouraged to relinquish their rights to land, either voluntarily or by force	
	Absence of policies or programs to deal with disasters	Damage to land and crops due to repeated disasters has forced landowners to sell land	
	There is no special program for intensive maintenance, let alone protecting the existence of irrigation canals	Agricultural lands (rice fields) experience water shortages	
Entrepreneur	Purchasing agricultural land to be used for non-agricultural economic activities	Owners of agricultural land sell their land	Elimination of farmers who use the land, both owners and cultivators, as well as farm workers who work on the land
	Evicting users of land that has been purchased but is not used directly afterward	---	
Land Speculators	Purchasing of land for speculative purposes or to gain profits due to differences in land value	Owners of agricultural land sell their land	---
	Evicting users of land that has been purchased when the land is resold	---	

Source: primary data

In addition to land conversion, the economic difficulties faced by farmers were a key cause of their exclusion. As operational costs increased, particularly the costs of obtaining irrigation water, farmers in

Sukamakmur were unable to continue farming effectively. The rising cost of fuel for water pumps, compounded by reductions in fuel subsidies, placed further strain on farmers already in a precarious economic situation. In this context, policies prioritizing industrial and housing development over agricultural sustainability worsened the economic conditions of farmers, leading them to sell their land. Moreover, the sharecropping system prevalent in Sukamakmur contributed to the farmer's lack of control over the land they worked. Most sharecroppers, who didn't own the land they cultivated, had no guarantee of continued access to the land once it was sold by the landowner. Although Indonesia law, specifically Law No.2 of 1960 regarding Production Sharing Agreements, guarantees the continuation of land cultivation for at least three years, the implementation of these legal provisions was weak. The lack of effective legal protection for sharecroppers led to their exclusion when landowners sold their land. This situation further exacerbated the insecurity of tenure for tenant farmers, who were left without legal protection when they were displaced from the land they had worked on for years.

Another contributing factor to farmer exclusion was the high level of land speculation in Karawang. Land sold by farmers was often purchased by land speculators, who then resold it at a significantly higher price, inflating the cost of land and making it increasingly difficult for farmers to reacquire the land. These land speculators, often external investors, purchased land for industrial or housing development purposes, further excluding farmers who could not compete with larger capitalized buyers. The process of land speculation also intensified social-economic inequalities, as speculators profited from land conversion at the expense of farmers who lost their livelihoods.

In conclusion, the exclusion of farmers in Sukamakmur is driven by a combination of agricultural land conversion policies favoring industrial and housing development, the economic difficulties faced by farmers, and the weak implementation of legal protections for tenant farmers. The massive conversion of agricultural land, coupled with farmers' access to land, has historically been their primary source of livelihoods. Thus, this exclusion reflects broader challenges in addressing development dynamics that do not prioritize agricultural sustainability and the well-being of farmers.

Land Tenure Changes

This study examines land tenure status before and after the sale of agricultural land for non-agricultural purposes. Before land sales occurred, influenced by policies encouraging land conversion, 50% of informants were landowners, either cultivating their land themselves or employing farm workers. After the sales, only seven informants continued farming, through renting cultivating abandoned land, or sharecropping. Three informants, however, were forced to abandon farming due to the loss of access to land, including two former landowners and one former sharecropper.

Before the land sales, some informants were landless farmers, meaning they did not own land but managed it through sharecropping, land rental, or as occupants. Landownership was categorized as small (<0.5ha), medium (0.5-0.99ha), and large (>1 ha). Following extensive land sales in the early 2000s, five informants who were previously landowners saw their numbers reduced to one. Among the four former landowners, only one continued farming as a sharecropper or tenant, while two others ceased farming completely, becoming landless.

Sharecroppers who were displaced by land sales either continued farming elsewhere or became fully landless. For example, one informant who previously rented land was forced to abandon farming after the land was sold, becoming a landless laborer.

The shifts show that while some informants remained engaged in agriculture, their farming activities were relocated outside Sukamakmur Village, indicating that the shrinking of agricultural land pushed farm laborers to seek land in other areas. The conversion of agricultural land has significantly altered the socio-economic landscape of Sukamakmur, exacerbating social inequality and economic vulnerability for the displaced farmers.

In simple terms, the phenomenon of changes in land tenure after land sales that occurred in Sukamakmur Village, based on the experience of informants, can be described as follows.

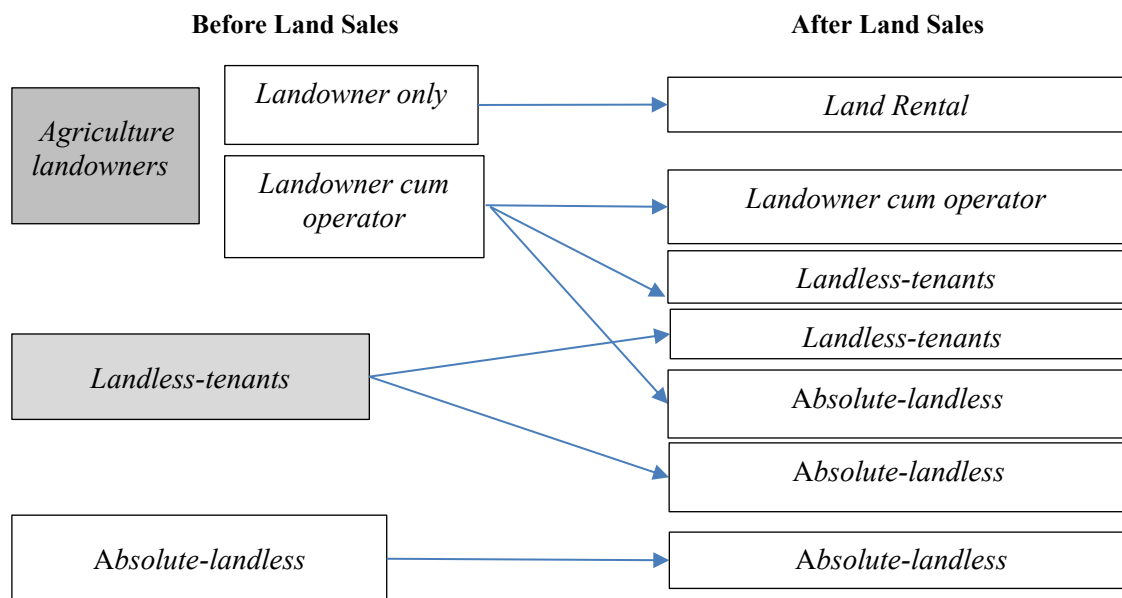


Figure 1. Pattern of Changes in Land Tenure After Land Sale in Sukamakmur (Interview Results)

Livelihoods Transformation

The livelihood transformation experienced by farmers in Sukamakmur Village is intricately linked not only to changes in how they access and manage land but also to the direct impact on the income they generate. Prior to significant land conversion, farmers with landholding more than 0.5 hectares but less than 2 hectares of land relied on agriculture as their primary source of income. This income varied, but generally, farmers who had direct access to their land earned around IDR 1,500,000 per month from agricultural activities, depending on land size, crop types, and weather conditions. Most of these farmers either worked their land themselves (landowner-cum-operator) or employed laborers to help process their harvest.

On the other hand, farmers with smaller plots or those working as sharecroppers (land-tenants) could not depend solely on agricultural earnings. With landholdings of less than 0.5 hectares, they typically sought additional income from other sectors, such as factory work in the rapidly growing Karawang area, to meet household needs. In these cases, agricultural income was insufficient to cover all living expenses, and their earnings were also dependent on daily wages as farm laborers, approximately IDR 80,000 per day for female workers and IDR 100,000 per day for male workers.

Post-land conversion, the livelihood transformation clearly illustrates the direct effect on farmers' income, which often decreased or even disappeared entirely. Farmers who sold all their land and lacked other skills outside of agriculture tended to become sharecroppers on others' land or rented land to continue farming. Choosing to rent land proved more beneficial for some, especially if the rental price was lower than the sale price of their land. However, their income remained affected by dependence on agriculture, which faces uncertainty in both crop prices and yields. For farmers who no longer engaged in farming, their income shifted to alternative sources, such as house rental business or non-agricultural jobs, offering more stable and higher income. For instance, rental income could range from IDR 1,500,000-2,000,000 per room per month, which is significantly higher compared to agricultural income, which is only generated at the end of each harvest season.

Nevertheless, for many farmers who continued as sharecroppers, their income remained limited and heavily dependent on harvest outcomes and commodity prices. Even though prices saw an increase after 2020, with dry rice reaching IDR 4,700 per kilogram, their earnings remained contingent upon the amount of land they worked and their dependence on profit-sharing arrangements with landowners. In many instances, these profit-sharing systems resulted in lower income for farmers compared to non-agricultural sectors such as house rentals or industrial jobs.

This shift in income is also strongly influenced by the uncertainty farmers face. With a shrinking agricultural land base, farmers who once relied on agricultural now experience a significant decline in

income. This exacerbated by their generally low education and skill levels, which limit their ability to transition into non-agricultural jobs in the rapidly growing industrial sector in Karawang. Farmers with lower education struggle to compete with migrant workers who have higher skills and education, limiting their access to better, more stable jobs outside of agriculture.

The diminishing reliance on agriculture directly impacts income inequality and the rising levels of poverty in Sukamakmur Village. The decline in income is reflected in the increasing poverty rates, which are also visible in statistical data such as the Gini Index and the poverty line in Karawang Regency. These figures indicate a growing income disparity, with the Gini Index showing an upward trend, and the poverty line continuing to rise after year, signaling that this income transformation is contributing to greater economic inequality in the region.

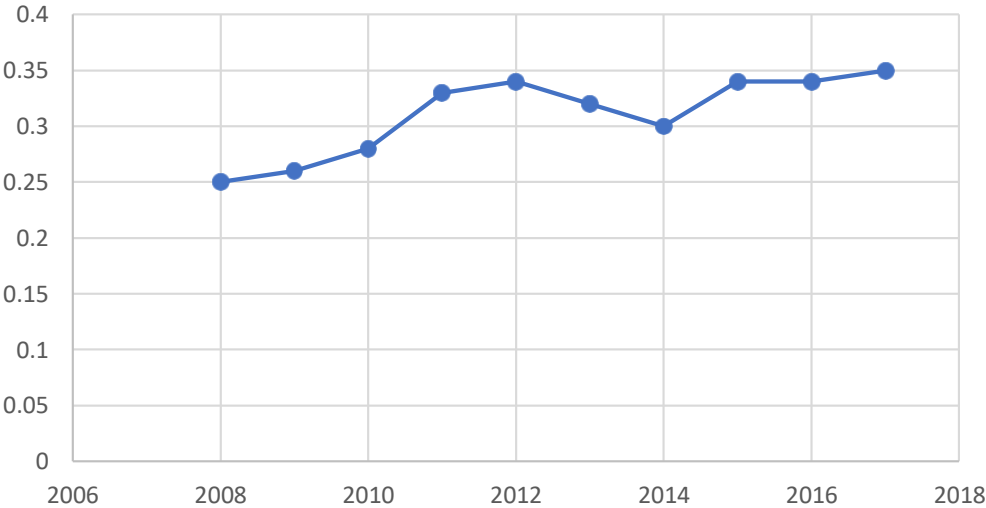


Figure 2. Gini Ratio Karawang Regency by Income Distribution, processed (BPS Karawang Regency, 2006-2018)

Moreover, this transformation has broader social impacts, where some farmers realize that their children may not want to continue farming. They increasingly hope that their children will pursue higher education and work in industries with more promising job opportunities. Thus, this livelihood transformation not only affects current economic conditions but also creates a shift in social expectations, where future generations no longer view agriculture as their primary career path.

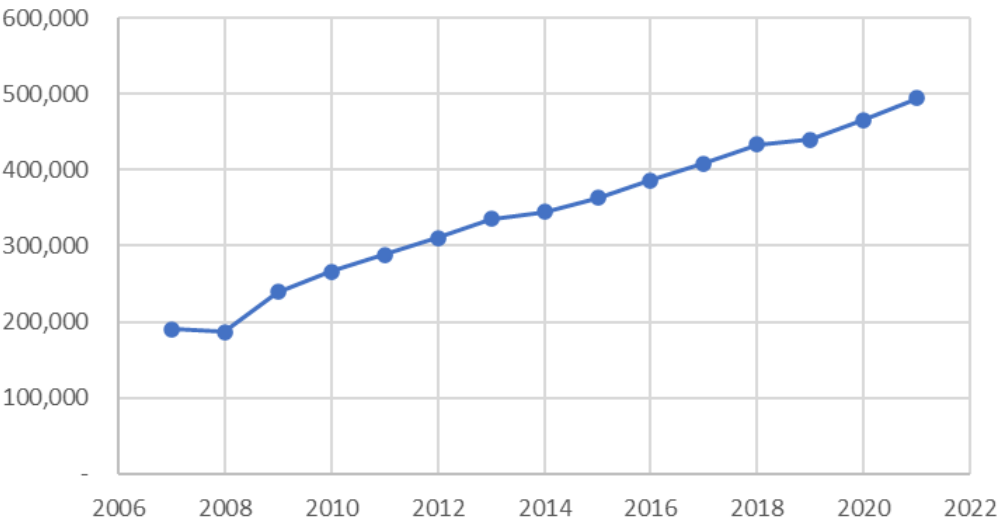


Figure 3. Poverty Line Karawang Regency, processed (BPS Karawang Regency,2022)

This is reaffirmed by the increase in the Poverty Line Curve for Karawang Regency which is increasing every year. In 2007 the poverty line figure was 190,712 then until 2021 it increased to 494,201.

Overall, the changes in livelihoods for farmers in Sukamakmur are closely tied to declining income due to land conversion and limited access to non-agricultural employment. The income that once depended on agriculture is now shrinking, leading to greater inequality and rising poverty. If these challenges are not addressed through appropriate policies, they could worsen the socio-economic conditions in Sukamakmur and the surrounding areas.

CONCLUSION

The findings of this study underscore the far-reaching consequences of land conversion in Sukamakmur Village, revealing a systematic pattern of farmer exclusion driven by economic, political, and structural factors. Land conversion, primarily motivated by industrialization and speculative investments, has significantly altered the region's agrarian landscape, pushing farmers into precarious socio-economic positions. The lack of effective land tenure security, coupled with weak institutional protections, has accelerated the dispossession of farmers, leaving many unable to sustain their livelihoods. The loss of agricultural land has not only altered ownership patterns but has also significantly disrupted traditional livelihoods, forcing many farmers into precarious sharecropping arrangements or complete disengagement from agriculture.

The exclusion of farmers in Sukamakmur aligns with broader theoretical frameworks on land dispossession and agrarian change. Hall et al. (2011) identify exclusion mechanisms such as regulation, market forces, coercion, and legitimacy, all of which are evident in this case. The interplay between government policies, land speculation, and economic hardship has created a structural disadvantage for smallholder farmers, reinforcing cycles of poverty and economic marginalization. Similar patterns have been observed in peri-urban settings across the Global South, where agrarian communities are displaced by urban expansion.

Moreover, the study highlights the limitations of current land governance frameworks in safeguarding the rights of farmers. The failure to enforce land tenure security, coupled with speculative land markets, exacerbates social inequality and economic vulnerability. Such trends contribute to the broader restructuring of rural economies, where agricultural livelihoods are systematically undermined.

This study underscores the urgent need for policy interventions that prioritize sustainable agricultural land and rural resilience. Strengthening legal protections for tenant farmers, preventing land speculation, and ensuring equitable access to alternative livelihoods are critical steps in mitigating the adverse effects of land conversion. Without such measures, the exclusion of farmers will continue to deepen economic disparities, further marginalizing rural communities and threatening long-term food security. Future research should explore alternative land tenure models that integrate both agrarian and non-agrarian economic opportunities, protecting agricultural land, and ensuring that land conversion processes do not disproportionately disadvantage the most vulnerable populations.

To effectively address the challenges identified in this study, a comprehensive and collaborative approach is essential, involving the government, local communities, and the private sector. The government must take proactive steps to strengthen land ownership regulations, enforce stricter protections against speculative land grabs, and ensure transparency in land conversion processes. Additionally, it is crucial to implement targeted programs that empower affected farmers, such as skills training in both agricultural and non-agricultural sectors, financial assistance, and access to alternative livelihoods. The private sector should also be encouraged to invest in sustainable and inclusive agricultural development, prioritizing long-term rural resilience over short-term profits. It is our hope that with these concerted efforts, land conversion can be managed more efficiently and equitably, preventing the further marginalization of small farmers and securing their economic stability. Ultimately, by foresting policies that balance development with agrarian sustainability, rural communities can thrive, and food security can be safeguarded for future generations.

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