Agricultural Land Conversion, Poverty and Adaptation Failure of Peasants in Industrial Transition in Rice Center Areas-Indonesia

Af Sigit Rochadi
Department of Sociology, Universitas Nasional, Pasar Minggu South Jakarta, Indonesia
Email: sigitrochadi@yahoo.com

Ichmi Yani Arinda Rohmah
Department of Sociology, Universitas Nasional, Pasar Minggu South Jakarta, Indonesia
Email: ichmi.yani.arinda.rh@gmail.com

Acnestasya Dwi Yulyanti
Department of Sociology, Universitas Nasional, Pasar Minggu South Jakarta, Indonesia
Email: tasyadwij@gmail.com

Dion Harley Hakim
Department of Sociology, Universitas Nasional, Pasar Minggu South Jakarta, Indonesia
Email: dionhkm16@gmail.com

Abstract:
This study discusses the conversion of agricultural land in Karawang Regency, West Java, which was known as the national rice granary for almost a century. However, the role of agriculture has decreased drastically since the regency was designated as an industrial area replaced by the secondary sector. This study aims to explain the actions of farmers during and after land conversion in rice-producing areas in Muslim community, Indonesia. A quantitative method and data analysis with cross-tabulation using google sheets were used. The results showed that the conversion of agricultural land involves capital and political power. Peasants are actively persuaded by accomplices in different ways to give up land. Lack of support and guidance by government officials and investors, causes land conversion to take place less transparently and it is detrimental to farmers. About 30 percent are getting poorer and failing to adapt in the process of transition to an industrial society. Around 28 percent become temporary workers or disguised unemployment. Therefore, a transparent conversion process, fair compensation, as well as effective and targeted
government with business strategies are needed to prevent farmers from falling into poverty. The land conversion only fosters potential conflicts that can turn into riots at any time without such strategies.

**Keywords:** Adaptation Failure, Agricultural Land Conversion, Global Industry, Industrial Transition, Poverty.

1. **Introduction**

The role of agriculture in labor absorption and food production in developing countries continues to decline as global business investment increases in the region. For example, in countries of the Organization of Islamic Cooperation (OIC), the population working in agriculture has decreased by 8.5 percent over the last two decades (SESRIC, 2020). The main cause is the decrease in the availability of agricultural land, which is not attractive to the younger generation. Borras et al. (2011) described the rapid conversion by global companies as the movement of a Tornado hurricane sweeping through poor farmers. Land acquisition is associated with the production of flexible commodities with high commercial relevance that can be moved from one country to another. The rapid increase in agricultural land functions outsources production and the new sites for capital-intensive industries (https://grain.org/article/entries/93-seized-the-2008-landgrab). Meanwhile, the scale differs according to authoritative sources, for example between 2004-2009, the International Food Policy Research Institute / IFPRI estimated 20 million hectares of agricultural land converted. The World Bank predicted 45 million hectares between 2007-2008 and Oxfam recorded 227 million hectares of land converted between 2000-2010 (TNI Agrarian Justice Programme, 2013). In 2018 only 36.9% of agriculture remained due to its continuous decrease (https://data.worldbank.org/indicator/AG.LND.AGRI.ZS).

There are policies in developing countries that support the entry of investors and do not protect the interest of farmers. Certain areas are designated as industrial zones and are given to investors by the government. They use such land to erect infrastructures for the mobility of goods and services. Industrialization and infrastructure development reduce agriculture and accelerate the economic and industrial growth of a country. This is supported by policies such as education, employment, and land. Urbanization and the formation of metropolitan buffer cities are consequences that cannot be avoided (Rondhi et al., 2018).

Several factors promote the conversion of agricultural lands, such as industrialization, construction of settlements, offices, and infrastructure. The entire process is a land trading activity since the government initiated and failed to effectively control it (Firman, 2000). Syahyuti (2018) considered the very strategic position of the food economy, and it becomes a new 'gold field'
followed by a wave of investment in the crop sector. This causes land conversion in developing countries to take place on a large scale. For example, in 1950-2000, forest conversion reached 99.6 million ha in Indonesia. Meanwhile, the area of agricultural land decreased from 36.8 million ha in 2014 to 34.8 million ha in 2018 (Kementerian Pertanian, 2019).

The study of agricultural land conversion in rice-producing areas explains the farmers' actions during and after land conversion. Furthermore, it compares their economic conditions of income and post-conversion work and analyzes their adaptability in industrial transition societies.

2. Literature Review

Previous studies on the conversion of agricultural land have led to a variety of causes. The study conducted by Agus and Irawan (2006) in early 2000 concluded that people still ignore the meaning of multifunctional agriculture such as environmental functions, food security, and socio-culture events that increase conversion of agricultural land. In the Indochina region, changes from agricultural to non-agricultural land are taking place very quickly, and it is driven by the desire of the government and its people to build cities. The cost of urban development is cheaper on agricultural land than in the suburbs (Nguyen et al., 2016). While in Indochina and China, the land is jointly owned, and the state has the right to govern it. When the land in an area is decided to be used for a development project, the people are obliged to obey the order. The government's hegemony in land management cannot be separated from the experience of being led by socialist and communist parties.

In contrast to the Nguyen et al. (2016), Gellert (2015), Dell’Angelo et al. (2017) only found the keywords 'coercion' and 'violent', especially for small farmers. Land conversion is not done voluntarily, but by coercion. The same is also shown by Borras et al. (2011), TNI Agrarian Justice Programme (2013), Syahyuti (2018), Gonda (2019), and Dell’Angelo et al. (2021). It was pointed out that land grabbing for transnational business expansion has become a global phenomenon. However, the scale is different since the pattern is similar from one region to another. There is a level of cooperation between transnational and local investors that is supported by dominant political forces to condition land grabbing. The role of local power is decisive in new democracies due to the spread of political power. Also, the strong role of money politics in legislative elections and the evolution of investors as cukong (boss) or dealer for politicians increased the looting of farmers’ land for agribusiness and global industrial interests.
Meanwhile, the land conversion concept was used by Firman (2000), Agus and Irawan (2006), Rondhi et al. (2018), and Duong et al. (2020). There is evidence that land status changes are conducted by coercive and violent means (TNI Agrarian Justice Programme, 2013), (Gellert, 2015), (Dell’Angelo et al., 2017), (Dell’Angelo et al., 2021). Most of the conversion is conducted by coercion either by state officials, investors, brokers, or cooperation between them. Meanwhile, the sought land is strategically located for businesses with lower prices. The capitalist are also tricky by buying farmers’ land which is far from the highway since they have no other choice besides selling. Usually, the investors cooperate with state officials that understand regional spatial planning to know the short-term and medium-term plans for land use in an area. They use this information to hunt for land from farmers that are generally economically and politically weak. Faced with such conditions, the most common response of farmers is to refuse conversion because agricultural land is the only source of life. The Lack of cooperation, weak resources, networks, and leadership decrease the survival level of farmers.

Theories about the expansion of investor investment in developing countries have long involved local actors, both state and businessmen. They act as partners or intermediaries such as the use of the comprador and triple alliances concept in dependency theory that triumphed in the 1970s. The concept of oligarchs was brought up in the early 2000s and developed in the 1950s to show how business elites, politicians, and rulers work together to maintain and increase prosperity. This concept is also increasingly used to explain the behavior of local elites in helping global investors to obtain land. The study of Visser et al. (2012) in Russia stated that the behavior of oligarchs in obtaining and controlling land did not impoverish farmers. This is because a lot of lands were abandoned after the Soviet Union. In contrast, Ananta (2016) study in Karawang found that land grabbing by oligarchs was prohibited since some farmers were forced to suffer both physically and economically. They do not have a medium-term plan in utilizing the compensation money due to limited resources. Meanwhile, a lack of experience in managing large sums of money worsened the economy of the farmers. This is because many of them fall into poverty and face increasingly fierce competition with migrants having stronger resources in fighting for jobs.

3. Methods

A quantitative approach is used in this study where the researcher prepares a questionnaire to be given to the respondents. The questionnaire measures the variables of agricultural land
conversion, economic conditions before and after conversion, and the main occupation before and after conversion. This study was conducted in Karawang, known as the Indonesian rice granary. The regency is about 70 km from Jakarta and takes 2 hours drive, and was chosen because land conversion in this area is relatively fast. This is because of its designation as an industrial area by Presidential Decree no. 53 in 1989. Between 2014 and 2018, the area of rice fields decreased by 1,916 hectares even though this regency is the mainstay in supplying rice to the provinces of Jakarta and West Java.

The data published by the Central Statistics Agency (BPS) on the agricultural area of Karawang Regency differs from that of the Ministry of Agriculture. The area of agricultural land has increased by 4521 hectares in the last 5 years. This study uses data published by BPS Karawang since it is more up-to-date and detailed. Of the 30 districts in Karawang Regency, there are 8 where agricultural land conversion is more than 100 hectares per district between 2010-2018. Klari and Cikampek districts are the largest, with 915 and 225 hectares, respectively. Therefore, the study focused on the Klari and Cikampek districts. There are 117 heads of families (KK) where agricultural lands have been converted. These families were tracked down and became potential respondents. However, due to the Covid-19 pandemic, only 93 families were managed as respondents. During data collection (March to May 2021), the Karawang regency was declared a red zone for the Covid-19 pandemic. The data collection is carried out by closed questionnaire and the analysis by frequency and cross-tabulation.

For agricultural land conversion variables, indicators of rice field type, area of rice fields, information on land conversion will be carried out, and reasons for selling the land. For economic condition variables, indicators of the use of money from agricultural land conversion, income before and after land conversion are used. While the work mobility variable is used as the respondent's main occupation indicator before and after land conversion. Failure of work mobility is also called failure to adapt to industrialization because the Karawang district has become an industrial area.

4. Result And Discussion

The implementation of the development planned since the early 1970s quickly transformed Indonesia into an industrialized country. However, during the first 15 years the development strategy prioritized the agricultural sector, its growth was less rapid than the industrial sector. It
follows that the growth of the informal sector in urban areas is rapid and shows the appearance of structural deformations, and these symptoms persist. Besides the decline in agricultural land and productivity, which cannot meet demand, another important factor is the continued decrease in the motivation of young people trained to work in this sector. The next implication is the continued reduction in the contribution of the primary sector in the formation of gross domestic product. In the early 1980s the contribution of the agricultural sector was around 52 percent; at the end of 2018 it was only 13.04 percent (Badan Pusat Statistik, 2020).

Over the last 5 years, the area of rice fields has decreased by 12.97 percent, the most extensive compared to dry fields, and land that is temporarily not cultivated. The overall reduction in agricultural land reached 24.66 percent in 2014-2018. At the end of 2018, Indonesia's agricultural land area was only 34.8 million hectares (Kementerian Pertanian, 2019). In the study location, the reduction is much smaller, and over the last 5 years, it has decreased by 2 percent or 1916 hectares (BPS Kabupaten Karawang, 2021). The reduction occurred in strategic locations for industry, housing, offices, and warehousing, and the determination of Karawang as an industrial area makes it difficult for the regency since its status as a national rice granary should be maintained.

Over 54 percent of farmers that released land had low education (no school and did not finish elementary school), and only 2 percent had higher education. Meanwhile, 58 percent of the land that was converted is irrigated. Therefore, the position of farmers and efforts to maintain irrigated fertile land are less successful since rice fields are annually narrowed. The results of the 2018 Agricultural Census showed that the average Indonesian farmer owns 0.8 hectares of land. The number that owns less than 1 hectare of land reaches 74.92 percent of households (Badan Pusat Statistik, 2018). Such fragmentation also occurs in the study location since 75.3 percent of respondents own less than 1 hectare of land. The inheritance system by dividing family land to sons and selling part for business capital, performing the pilgrimage, and seeking medical treatment are the dominant causes of fragmentation.

4.1. Land Conversion: The Global Industrialization Agenda

None of the 93 respondents stated that land conversion was carried out voluntarily. However, 17.2 percent stated that the reason for releasing their land was because they 'needed business capital'. There is evidence that farmers relinquished their land due to pressure from
officials, community leaders, and capital owners. About 69.9 percent sold because of 'pressure from other parties, while some 'requires business capital'. Observing the conversion of rice fields into foreign company buildings proves that the agricultural land in the study location is part of the global industrialization agenda. These findings support the results of Gonda (2019), and Dell’Angelo et al. (2021). The involvement of the capital apparatus is very intensive since they visit farmers' houses, persuade them with electronic and automotive goods that are the dreams of young people. These include motorbikes, mobile phones, gadgets, and promising their children to work in the companies they build. The role of 'company peoples' reached 52.6 percent and 'housing developer' was 27 percent while 'village apparatus' and 'community leaders' were 12.9 percent.

The data above shows the role of the authorities and the owners of capital in pressuring farmers to control their land. In contrast to the Soeharto era (1966-1999) where the oligarchs were still shy about appearing under the guise of development or for the public interest, they openly mobilize their accomplices to acquire farmer lands currently. They work closely with village officials, youths that are members of various local organizations, and community leaders. About 19.3 percent of farmers were persuaded by village officials and community leaders involving Hamlet's heads. Land brokers were the most active among the hunters, and they persuaded about 52.6 percent of farmers. They consist of local village people that have information on land use plans. Furthermore, teachers, religious leaders, even district officials may be land brokers. About 26.8 percent of farmers were persuaded by employees of housing companies, and when faced with such greater economic and political power, they had no bargaining power.

4.2. Poverty and Vulnerability

After the conversion of agricultural land which took place between 3 and 6 years ago, the economic condition of farmers declined drastically. Those that stated their income was less than 1 million rupiahs per month increased from 27.9 percent to 31.2 percent, while recipients from 1.1 to 2.5 million decreased from 35.5 percent to 14 percent (Figure 1). However, there are 21.5 percent with an increased income of more than 5 million rupiahs per month and can be grouped as middle class. Generally, 62.4 percent of farmers with converted land had their income below the city minimum wage. According to the Decree of the Governor of West Java No. 561 of 2020, the minimum wage for the Karawang city is 4.8 million rupiahs/month for single workers with a working period of less than one year. This comparison showed a serious disparity between farmers
and workers in Karawang. It explains the less attractive work of farming for young people. The poverty line indicator of the Central Statistics Agency of IDR. 454652/capita/month showed that 23 percent of farmers are poor after land conversion.

The decline in the economic conditions of post-conversion farmers is also indicated by the loss of income sources. Of the 61.9 percent of respondents, only 15.9 percent were left after land conversion with the main occupation as farmers. Meanwhile, the number of non-permanent or disguise unemployment increased 2 times from 20.4 percent to 43 percent. They become involved in any kind of work, such as motorcyclists (ojek), masseurs, foragers for cattle, and housemaids. Their position is more vulnerable because they do not have income certainty. Meanwhile, many of their children that are growing up are trapped in human trafficking. This is conditioned by the decline in job opportunities, changes in the lifestyle of young people, the proliferation of shopping and entertainment centers.

**Figure 1** The Change in Peasants’ Income (IDR)  
**Figure 2** Work Changes of Peasants having ≤ 1 ha of Land Converted

Peasant poverty raises a more serious problem of unrest and tension. This is because inequality occurs in a striking way between rural communities where farmers live in industrial and residential areas. Around 60 percent of the workers in the manufacturing industry, with better lives, come from outside Karawang. When respondents were asked to name the most troubling situation, it turned was not the problem of drugs just like in other cities. They stated that 'immigrants took over the work of the natives and 'conflicts between residents', the figures were 50.5 percent and 26.8 percent, respectively. This unrest has been felt since 2014 through demands from village heads and Youth Organization administrators (*Karang Taruna*) that urged the regent to limit the entry of workers from outside Karawang. By the *Singaperbangsa* Labor Union, these concerns were aggregated and articulated into regional issues. At the urging of village officials and social
organizations, such as the Farmers' Union, the *Pangkal Perjuangan* Labor Coalition issued decree number 8 of 2016 concerning the Expansion of Employment Opportunities in Karawang Regency. This decree requires every company to employ Karawang natives at least 60 percent. By the Supreme Court, the regent's decision was annulled because it was against the principles of openness and justice.

Figure 3. Work Changes of Peasants having 1.01 – 2.0 ha of Land Converted

Figure 4. Work Changes of Peasants having 2.01 – 3.0 ha

4.3. Failure to Adapt

Farmers that their land was converted to industrial and residential areas failed to adapt as an integral part of industrial society. The promises of intermediaries, developers, and village officials to employ farmers or one of their families in the company did not materialize. Meanwhile, Regent Decree No. 8/2016 which was expected to become legally binding was annulled by the Supreme Court. All groups of farmers failed to succumb to actors with secondary education. The ability to survive and increase income occurs for landowners that are not mainly farmers. Figure 2 below shows the relationship between land area conversion and adaptation to off-farm work.

The farmers with a land area less than or equal to 1 ha suffer the most. This group has the largest proportion as temporary workers or unemployed in disguise (46.3 percent). This data proves that farming is their only job and their source of income is lost when their land is converted. Off-farm work is more attractive to farmers that have lost their land due to higher wages. Figure 5 presents data showing that job mobility only occurs from farmers to non-farmers. The theory of job mobility which is characterized by the movement of jobs between sectors is not proven in the study location even though the area was industrialized. Also, the direction of change is still linear as suggested by classical and modernization theories. Only 2.0 percent of farmers managed to find
work in the formal sector. Meanwhile, about 16.0 percent switched professions as small traders such as sellers of meatballs, fried rice, fruit sellers, and various other commodities. The premature swelling of the service sector by modernization theory is called structural deformation. They call themselves 'entrepreneurs' even though they do not have sufficient innovation and capital like entrepreneurs.

Permanent buildings and excavations replace the expanse of green rice fields which is beautiful and cool scenery. Farmers stand by the roadside watching their land been turned into a housing complex, factory, and office area. They were eliminated from the industrialization process since their education and skills do not qualify as a global industrial apparatus. Nguyen et al. (2016) in Vietnam, showed that they have opportunities to work in the non-agricultural sector since they are faced with various difficulties in working in the non-agricultural sector, in finding stable alternative livelihood activities, and in using compensation for investment. This is seen from their failure to choose the type of investment and eventually become temporary workers. Only 16 percent managed to survive as small traders, while 28 percent became underemployed. Small trading becomes a rational choice due to limited capital. The type of commodity traded is common and easy to produce, and 33.3 percent switch this profession.

Structural pressures on farmers are getting harder because local sources of financing are starting to decline. Figure 6 showed that arisan (saving) developed in rural Java in the late 18th century (Wertheim, 1956), was only followed by 31 percent of farmers with certain income. The circulation of money between residents acts as social security when facing a crisis or having a celebration such as marrying a child, tuition fees, or when a family member is sick. Various instruments of social cohesion such as cooperation and security system also declined. In contrast,
the recitation forum which emerged in the late 1990s when Indonesia was hit by a multidimensional crisis is still running well. However, these religious ties have a little economic impact due to a continual decrease in participation. As a Muslim community, religion has not played a role in the economic empowerment of farmers since the land conversion process is dominated by pressure from officials and owners of capital. This condition exposed the farmers openly to the power of capital and politics, and they did not succeed in adapting to the industrial environment. They choose to be migrant workers due to this structural pressure and the penetration of global capital and labor from outside the region, although many are victims of human trafficking.

5. Conclusion

Industrialization conducted by converting agricultural land does not always have a positive impact on farmers. This is because they mostly lose their only source of income, live in poverty, and have difficulty adapting to their new environment. They also find it hard to choose alternative jobs because of weak resources and a lack of attention from the authorities to prepare early for the conversion process. In this study, farmers' land is targeted by global investors through village officials and their accomplices. Various efforts were made to acquire the land without assistance in adapting to the new environment. Structural transformation theories do not fully explain the conversion of agricultural land. The industrial sector is growing rapidly, and the development of the tertiary has resulted in a structural deformation.

In contrast to the results of Borras et al. (2011), and Dell’Angelo et al. (2021), which showed that the looting of farmers' lands is carried out by force and violence, they are persuaded by financiers, community leaders, and village officials in various ways. They have high trust in village officials because of the good relationship for many years. Farmers have high hopes for these officials since they are the traditional authority holders. In such cases, attention should be paid to the future of farmers. Compensation and targeted strategy of support from the government and entrepreneurs to prevent farmers from getting poorer should also be encouraged. This is because the land conversion only fosters potential conflicts that can turn into riots at any time without such strategy.

Conflict of Interest
There is no conflict of interest

**Acknowledgments**

We would like to thank the rector Universitas Nasional for the financial support in this research.

**References**


