

## The Interplay of Migration Dynamics with Agricultural Paradigm Shifts in Indonesia

Rani Andriani Budi Kusumo <sup>1,\*</sup>, , Ganjar Kurnia <sup>1</sup>, , Iwan Setiawan <sup>1</sup>, , and  
Riwanto Tirtosudarmo <sup>2</sup>, 

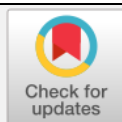
<sup>1</sup> Department of Agricultural Socio-Economics, Faculty of Agriculture, Universitas Padjadjaran, Jatinangor, 45363, West Java Province, Indonesia

<sup>2</sup> Research Group on International Migration of Indonesian Migrant Workers, Research Center for Population, National Research and Innovation Agency, Indonesia

\* Corresponding Author: [rani.andriani@unpad.ac.id](mailto:rani.andriani@unpad.ac.id)

### ARTICLE INFO

**Publication Info:**  
Research Article



#### How to cite:

Kusumo, R. A. B., Kurnia, G., Setiawan, I., & Tirtosudarmo, R. (2023). The Interplay of Migration Dynamics with Agricultural Paradigm Shifts in Indonesia. *Society*, 11(2), 329-342.

DOI: [10.33019/society.v11i2.441](https://doi.org/10.33019/society.v11i2.441)

Copyright © 2023. Owned by author (s), published by Society

OPEN  ACCESS



This is an open-access article.

License: Attribution-NonCommercial-ShareAlike (CC BY-NC-SA)

Received: November 8, 2022;  
Accepted: December 5, 2023;  
Published: December 14, 2023;

### ABSTRACT

*The nexus between migration and agricultural transformation encapsulates the dynamics of rural community livelihoods. Existing studies have not explicitly delineated the landscape of out-migration from rural regions in Indonesia. This study aims to elucidate migration behaviors intertwined with the lives of farming households and the utilization of remittances for agricultural investment activities. Through a comprehensive examination of literature and meta-analyses encompassing various migration cases in Indonesia, the findings reveal that both local and international migration by rural residents illustrate the adaptive strategies employed by households to cope with constrained income within the agricultural sector and limited employment prospects outside it in their villages. The enduring bond of rural communities with the agricultural sector aligns with the discernible pattern of remittance utilization, where a portion is earmarked for agricultural investments, such as land acquisition, including rice fields. The outcomes of this meta-analysis offer a holistic perspective on the relationship between migration and agriculture in Indonesia, serving as a foundation for optimizing the potential of migrants through well-tailored reintegration strategies aimed at mitigating poverty in rural areas.*

**Keywords:** Agriculture; Meta-Analysis; Migration; Rural Communities; Transformation

## 1. Introduction

Analysis of migration in some literature has been associated with poverty (Bilsborrow, 1992; Ellis, 1999; Gilbert & Gugler, 1996; Sunam & McCarthy, 2016) and agricultural activities and rural areas (Caulfield et al., 2019; Chen & Zhao, 2017; Connell, 1987; Gautam & Andersen, 2016; Kelly, 2011; Nelson, 2001; Pritchard et al., 2019; Qin & Liao, 2016; Xiao & Zhao, 2018). Understanding migration, especially in rural areas, can provide a comprehensive picture of the interrelationships between migration, agricultural activities, and rural development. Rural development, characterized by agricultural activities, cannot be separated from the support of human resources.

The agricultural sector in rural areas is still the basis of life for most of the population. However, actors in the agricultural sector are still dominated by peasants and farm laborers (Mukbar, 2009). In reality, population pressure on limited land has increased the number of smallholders, as seen in the Agricultural Census results. In 2013, according to BPS-Statistics Indonesia, the number of smallholder households in West Java was 2.298 million or 75.61 percent of the total agricultural households. This figure increased in the 2018 SUTAS (Inter-Census Agricultural Survey) results, where the percentage of smallholders became 77.60 percent of the total agricultural household. This shows that the level of farmer welfare has not improved when viewed from the cultivated land area.

In these conditions, farmer households employ coping strategies to survive amidst limitations. With the development and diversity of other sectors outside agriculture, there are more and more alternatives for local people to obtain additional products outside the agricultural sector. Household members use various strategies to seize these opportunities according to their skills and economic orientation.

Migration is one way to survive amidst economic limitations (Bilsborrow, 1992; Ellis, 1999; Gilbert & Gugler, 1996; Sunam & McCarthy, 2016; Tanle & Awabuso-Asare, 2012). Increasing economic pressure and weakening social relations in rural areas have led to the “throwing out” of small farmers and farm laborers to migrate (Kurnia, 1999). Changes in the agricultural system and mechanization, which began with the Green Revolution, replaced much labor with agricultural technology, becoming a driving factor for migration from villages (Hugo, 1988; Kurnia, 1999; Tirtosudarmo, 1984). Those who remain in the village are mostly farmers who own land. The decision to stay in the village is likely due to access to land as a production factor (Tirtosudarmo, 1984).

The growth of the non-agricultural sector, surpassing that of the agricultural sector, has led to a widening income gap between the industrial and agricultural sectors (Bremen & Wiradi, 2004). The allure of income beyond the agricultural sector, coupled with the “pressure” felt by some rural residents, spurs population mobility from rural areas to industrial centers predominantly located in urban areas. Research in West Java indicated that most mobility undertaken by rural residents is non-permanent (Hugo, 1975). In line with Hugo’s findings, Mantra identified three types of population mobility in rural Yogyakarta: ‘*nglaju*’ (commuter), circular, and permanent migration, with commuting and circular migration being the most prevalent forms (Mantra, 1981). However, with the growing demand for labor from abroad, international migration is also rising (Tirtosudarmo, 2009). Currently, international migration is a defining aspect of the rural migration phenomenon. Despite a lack of definitive data illustrating the ratio of international migration to internal migration (commuting, circular) in rural areas, the Indonesian Migrant Workers Protection Agency (Indonesian: Badan Perlindungan Pekerja Migran Indonesia or BP2MI) notes an increasing trend in the number of Indonesian migrant workers. The explanation above illustrates that internal and international

migration occur side by side, whether as individual or family responses or institutional reactions to the labor market and job opportunities (Tirtosudarmo, 2020).

Numerous prior studies have demonstrated that micro-generated remittances can economically boost household income and assets (Buchori & Amalia, 2005; Pratama, 2014; Primawati, 2011; Suyanto, 2018). Despite extensive research, no study has generalized and described the relationship between migration and agricultural change in Indonesia. Changes in agriculture reflect how migration, especially out-migration, impacts farming activities. Various aspects have been analyzed to explain the impact of migration on agricultural activities, including changes in agricultural land ownership and management (Caulfield et al., 2019; Gamso & Yuldashev, 2018; Xiao & Zhao, 2018; Xu et al., 2018) changes in the use of agricultural technology (Bhandari & Ghimire, 2016; Hull, 2007) and livestock ownership (Redehegn et al., 2019).

This study aims to describe the general pattern of migration behavior related to farmer household life and analyze agricultural changes affected by migration activities. The paper will discuss the results of literature studies and meta-analyses of various migration cases in Indonesia. The use of meta-analysis oriented towards different migration cases in Indonesia is considered appropriate to provide a broader understanding of the complexities of the relationship between migration and agriculture, which may be overlooked in individual case studies (Qin & Grigsby, 2016; Rudel, 2008).

## **2. Literature Review**

In general, migration is driven by various factors in both origin and destination areas. Lee characterized the origin and destination areas by positive (+) and negative (-) factors that can either encourage or deter individuals from migrating (Lee, 1966). Lee emphasized that individuals play a crucial role in the decision to migrate, and whether factors are perceived as positive or negative depends on how individuals interpret them. While economic factors often act as driving forces for migration, the influence of the social environment is also vital in understanding migration behavior. Migration tends to occur from economically disadvantaged rural areas, even though migrants may not necessarily come from the poorest community groups (Connell, 1987).

For small farmer households, household income often originates from agricultural activities and sending a household member to work outside the agricultural sector. This serves as a survival strategy and an attempt to mitigate the risk of reduced income due to agricultural failures (Davis & Lopez-Carr, 2014; Massey, 2013).

Research in Nepal indicates that most impoverished households migrate to escape poverty (Sunam & Mccarthy, 2016). However, it is crucial to note that prosperous migrant households usually have diverse income sources from agricultural and non-agricultural activities, not solely from working as migrant laborers. Additionally, small farmers in rural areas generally diversify their income through migration due to limited access to the local labor market and a low ability to cope with risks and income shocks (Redehegn et al., 2019).

Furthermore, migration analysis can be linked to a Sustainable Livelihood (SL) framework. Livelihoods combine activities, assets, and access that individuals or households employ to survive and enhance living standards (Ellis, 1999). Within the SL framework (Chambers & Conway, 1992), every family must 1) be adaptable to shocks and stresses, 2) maintain their capacity and assets, and 3) ensure livelihoods for the next generation. Five indicators that illustrate households achieving sustainable livelihoods are 1) opportunities for work and business, 2) increased welfare, 3) enhanced capacity and resilience of livelihoods, 4) fulfillment

of food needs, and 5) guaranteed sustainability and preservation of natural resources for the next generation.

Households under economic pressure adopt various survival strategies. Achieving sustainable livelihoods may include agricultural intensification, livelihood diversification, and migration (Ellis, 1999). Households can combine different strategies, and these strategies may influence each other. Regarding migration, the resulting remittances will likely impact agricultural intensification activities or job diversification outside the agricultural sector (McDowell & de Haan, 1997).

Households frequently use remittances from migration activities for capital accumulation, either as initial business capital or to change their farm management (e.g., buying new equipment or technology). Additionally, the generated remittances serve as a means to improve social status within the community, such as purchasing vehicles, jewelry, house repairs, and more (Davis & Lopez-Carr, 2014).

Research on the impact of out-migration on small-scale agriculture in the Southern Ecuador region reveals that migration does not bring about changes in the agricultural sector (Gray, 2009). Farm households can generally overcome labor loss through other strategies but not by altering commercial agriculture. Various other studies have produced different results concerning the impact of migration on the agricultural sector. Out-migration affects agricultural intensification, which is evident in using fewer inputs per unit of land area and the potential for increased land area neglect (Rudel et al., 2005). This results from a decrease in the number of workers in farmer households.

The generated remittances can offset the effects of a labor shortage through investment in agricultural technology (Hull, 2007). Remittances also have a positive impact on agricultural activities. Remittances increase the number of livestock in northwestern Guatemala (Taylor, 1999), while remittances positively impact the irrigation network in Morocco (de Haas, 2006). However, several other studies have shown that remittances are primarily used for consumptive purposes, such as daily living expenses, buying clothes, household appliances, electronic equipment, repairing houses, and paying off debts. Although remittances are proven to improve household economic conditions, their use has not been focused on investment and production activities (Bachtiar, 2011; Brown, 2006; Islam et al., 2012; Primawati, 2011; Suyanto, 2018).

### 3. Research Methodology

This study adopts a meta-analysis approach to describe the general relationship pattern between migration and agricultural change. The cases analyzed in this study focus on various regions or communities in Indonesia where migration has led to changes in the agricultural sector. The literature used in this analysis is obtained based on search results on Google Scholar, ProQuest, and Science Direct with the keywords: “migration” AND “agriculture” or “agricultural” or “farming” AND “Indonesia” and keywords in the literature in Indonesian: “migrasi” AND “pertanian” or “usahatani.”

Based on these keywords, 266 article titles were obtained. Articles used as part of the analysis are articles that result from empirical research and discuss the relationship between migration and agriculture, either in whole or only part of the article itself. After the selection process, 13 cases from 12 publications were obtained to be reviewed in the meta-analysis. Articles used as cases in the analysis must be in the form of small study sites that explain empirical, evidence-based conclusions regarding the impact of migration on agriculture and provide sufficient information regarding socio-economic conditions in the research location.



The relationship between migration and agricultural activities can be analyzed through the factors driving rural migration and using remittances for agricultural investment. Various research results show various patterns; the patterns and impacts of migration on agricultural activities and rural life are highly context-dependent and not easy to generalize (Qin & Liao, 2016).

In **Table 1** below, several variables can be analyzed to answer the relationship between migration and agriculture in Indonesia. All cases (13 cases) will be reviewed to explain the variables on which the analysis is based.

**Table 1. Definition of Variables in Meta-Analysis**

Variable	Definition	Limitation
Migration type	Type of migration in the study case	- Rural-urban - International
Topography	Characteristics of research locations based on altitude	- Coast - Lowland - Highland
Agri dependence	The dependence of the research location on agricultural activities	Yes / No
Land ownership	Informant or respondent's land ownership in the research location	- Large - Medium - Narrow - Landless
Non-farm work	Local job opportunities outside the agricultural sector	- Nothing / Little - Lots
Network to migrate	Owned social networks that encourage informants/respondents to migrate	Yes / No
Impact of migration	Impact of migration on agricultural activities at the research location	- Yes: migration has an impact on changes in agriculture, both positive and negative - No: migration does not cause any change in agriculture

The initial phase of the analysis involves sorting out the diverse combinations of variable constraints in each case (refer to **Table 1**). The subsequent step is to examine the overarching patterns observed in various migration cases in Indonesia. In Indonesia, rural-urban circular, international, and permanent migration predominantly transpires in rural areas. This indicates that the primary direction of labor flow is outward from rural areas.

## 4. Results and Discussion

### 4.1. Out-Migration and Agriculture in Indonesia

Most migrants from rural areas rely on the agricultural sector for their livelihoods. They are classified as small farmers with land under 0.5 hectares; some do not own land, only holding status as cultivators and agricultural laborers (**Table 3**). This condition results in less promising outcomes from the agricultural sector, making it insufficient to meet the necessities of life. Consequently, members of farm households are compelled to seek other employment opportunities outside the agricultural sector. Data from BPS-Statistics Indonesia shows that the

agricultural sector is currently not the primary source of income for most farmer households, especially small farmers, where the largest source of income comes from outside the agricultural sector (Table 2).

**Table 2. Number of Small Farmers Based on Household Income Sources**

Main Source of Income	1983	1993	2013
Agriculture	90.8%	83.2%	20.7%
Non-Agriculture	9.2%	16.8%	79.3%

Source: BPS-Statistics Indonesia

In rural areas, employment opportunities outside the agricultural sector are also limited, leading households to resort to migration as one of the strategies to enhance their welfare. These conditions seem to be a common factor motivating migration in rural areas. Rural areas predominantly characterized by paddy fields and limited employment opportunities within the village prompt migration. Many farmer households lack arable land and experience low wages (Sinuraya & Saptana, 2007). Conversely, in dryland agricultural areas, migration is driven by limited job opportunities in villages and the availability of free time after planting (Sinuraya & Saptana, 2007; Sunarto, 1991; Tamtiari, 1999).

The characteristics of the livelihood system are not only defined by the economic system but are also significantly influenced by the local socio-cultural system, according to Sajogyo in 1982 (Dharmawan, 2007). Three crucial elements of the social system determine the form of livelihood strategies developed by small farmers and their households:

- 1) Social infrastructure (institutional setting and prevailing social norms).
- 2) Social structure (social layer setting, agrarian structure, demographic structure, local ecosystem use relationship pattern, local knowledge).
- 3) Social supra-structure (ideological setting, economic ethics, and the prevailing value system).

The agricultural transformation on Java island has disrupted socio-ecological systems in rural regions. The consequences of agricultural transformation in rural areas are associated with structural issues, such as the increasingly widening gap in land tenure. Additionally, the loss of traditional income streams has led to new livelihoods that do not always benefit farmers or those in poverty, according to Sajogyo in 1982 (Dharmawan, 2007).

Furthermore, the Green Revolution significantly changed agricultural activities (Kurnia, 1999). One of these changes was patron and client relations deterioration, leading to broader social relations in rural areas. The shift in the form of people's lives based on rational considerations and impersonal elements has become a new symptom in rural community life (Padmo, 1999). Agricultural technology introduced during the Green Revolution also resulted in the marginalization of wage workers or agricultural laborers, including female workers. Some jobs, such as weeding and pounding rice, are no longer needed because machines have replaced their positions (Bremen & Wiradi, 2004). On the other hand, increased economic activity in urban areas is a pull factor for some rural residents to move to urban areas (Tirtosudarmo, 1984).

Modernization erodes traditional values, social institutions, and ties, marginalizing the social security mechanism. Social security based on genuine interactional-social networks, such

as cooperation and partnership schemes between actors of different social strata a la patron-client, is considered to be fading away and being replaced by a work-wage system, contracts, and other values acceptable by the economic rationality of income (Dharmawan, 2007; Mardiyarningsih et al., 2010; Sajogyo, 1974). Sajogyo explains that social ties in the farming community function as a safety net for the livelihood system (Dharmawan, 2007). Original livelihood institutions in the form of patron-client relationships are the most crucial part of the social network mechanism in rural areas. This rural production-consumption network has long been proven to guarantee the continuity of the rural household system of life collectively, even in extreme conditions such as famine and economic crises.

The transformation process has the following impacts: 1) the degree of insecurity of the source of income and 2) the paralysis of the established structures of the original livelihoods. The development of the socio-economic system in the countryside encourages the evolution of rural livelihood systems and livelihoods. The process of economic and ecological adaptation formed by farmers (individual level), households (group level), and the local community (social system level) as an effort to adapt to the flow of social change produces several dynamic pictures of rural livelihood systems and livelihoods (Dharmawan, 2007).

The strategy for rural livelihoods always refers to the agricultural sector broadly. In this context, the farmer household's income base comprises agricultural and non-agricultural economic activities (Dharmawan, 2007). Based on research results in several villages in Java, there was an increase in the sources of livelihood for rural residents in Java (Collier et al., 1996). The current income of villagers is no longer limited to the agricultural sector and can be made outside the village. The strategies rural households adopt to achieve sustainable livelihoods could be in the form of agricultural intensification, diversification of livelihoods, and migration (Ellis, 1999). Households can combine different strategies, and it is possible that these strategies can influence each other (McDowell & de Haan, 1997).

Poor farmers, representing most rural communities, tend to develop a double-income strategy to meet their needs that the agricultural sector can no longer fulfill. The income base of the non-agricultural sector is an important alternative for poor rural farmer households. In general, this income base is outside the village, so many members or all members of the farmer household migrate (Dharmawan, 2007). Sending a household member to work outside the agricultural sector, either inside the village or outside the village through international migration, is a strategy to maximize household income (Stark & Bloom, 1985) and also as an effort to reduce the risk of reduced income due to failure in the agricultural sector (Davis & Lopez-Carr, 2014; Massey, 2013).

## **4.2. Migration and Farmer Household Life in Indonesia**

The analysis of various migration cases in Indonesia provides an empirical overview of the background and impact of migration, particularly regarding the allocation of remittances to agriculture (Table 3). The description of the factors driving migration aligns closely with findings from previous studies in various countries. Whether local or international, migration undertaken by residents in rural areas illustrates the strategies, households employ to cope with limited income from the agricultural sector and restricted employment opportunities within their villages outside the agricultural sector. Table 3 also reveals that migration is prevalent in both highland and lowland areas, with a noticeable dominance in lowland rice communities and dryland regions.

In examining the driving factors for migration, social networks play a supportive role in rural areas. Social networks for migration involve ties with family or relatives who have

migrated previously. These networks enable potential migrants to gather necessary information and aid migrants in adapting to their destinations. Various migration cases in Indonesia highlight the significant role of migration networks in influencing migration decisions (Table 3). The concept of social networks in migration is associated with social capital. Migrants establish interpersonal relationships that eventually form a network. Migration networks represent social relationships influencing a person's decision to migrate and choose a destination (Massey, 2013). These networks serve as social capital, providing access to migration (Castles et al., 2005; Massey, 2013).

The outlined description aligns with Lee's conceptualization of push and pull factors influencing migration to origin and destination areas (Lee, 1966). Factors such as land ownership status, limited employment opportunities in rural areas, and conditions in both the agricultural and non-agricultural sectors act as driving forces or centrifugal factors, prompting a portion of the population to move beyond the village (Mantra, 1981).

Table 3. Overview of Migration Cases in Indonesia

Sources	Migration Type	Topography & Land Type	Agri-dependence	Land Ownership	Non-farm Work	Migration Network	Impact of Migration on Agriculture
(Tamtiari, 1999)	International	Highland - Dryland	Yes	Landless	A little	Yes	Purchasing of land/field
(Hamidah, 2013)	International	Lowland - Paddy fields	Yes	N/A	N/A	Yes	Purchasing of land/field
(Sunarto, 1991)	Rural-urban	Lowland - Dryland	Yes	Narrow	A little	Yes	Purchasing of land, knowledge & skills in farming management, courage in taking farm credit
(Septianto et al., 2018)	International	Coastal	N/A	N/A	N/A	Yes	Purchasing of land
(Yuniarto, 2015)	International	N/A	Yes	N/A	N/A	Yes	Purchasing of land
(Setiadi, 2001)	International	N/A	Yes	Narrow	N/A	N/A	Purchasing of land
(Romdiati, 2012)	International	Lowland - Dryland/Moor	Yes	Narrow	A little	Yes	Purchasing of land
(Sinuraya & Saptana, 2007)	Rural-urban	Dryland	Yes	Narrow	A little	N/A	Purchasing of land, labor is reduced, yields are decreasing
(Sinuraya & Saptana, 2007)	Rural-urban	Paddy fields	Yes	Narrow	Agroindustry is developing	N/A	Purchasing of field
(Jafar et al., 2018)	Rural-urban	N/A	Yes	Narrow	A little	Yes	Purchasing of land
(Primawati, 2011)	International	Coastal	N/A	N/A	A little	Yes	Purchasing of field
(Zid et al., 2012)	International	Lowland	Yes	Narrow, Landless	A little	Yes	Purchasing of land
(Susilo, 2016)	International	Paddy fields	Yes	N/A	A little	N/A	Purchasing of land, Buying cattle



Limited land tenure results in minimal income for farmers, making it challenging to meet their household's basic needs. Conversely, non-agricultural work is also limited within villages as an alternative to augment household income. Additionally, land ownership is a "deterrent" factor in migration, providing economic and employment security. Possessing land will likely decrease the probability of residents relocating outside the village. Various "barriers" hinder people from moving, even if they decide to migrate. These constraining factors encompass high transportation costs, uncertainty about job opportunities outside the village, and a lack of experience and knowledge about situations beyond the village (Mantra, 1981).

Hugo, in his research on "Population Mobility in West Java," characterizes job opportunities in villages as a source of "stress" for residents in rural areas (Hugo, 1975). Population pressure on limited local resources and the perception that big cities offer more job opportunities are major driving factors for population movement. Hugo's research indicates that, although lowland rice farming can absorb labor in rural areas, it does not provide all villagers with sufficient employment opportunities in the agricultural sector. Concurrently, employment outside the agricultural sector does not significantly contribute to providing a decent income for most villagers. Consequently, villagers have no choice but to migrate to Jakarta or other major cities to meet their needs.

Table 3 illustrates that migrants from rural areas maintain a strong attachment to agricultural activities (agri dependence). This phenomenon aligns with the utilization of remittances, where a portion of the earned remittances is allocated for agricultural investment, including land acquisition (gardens or rice fields). In rural communities, land symbolizes social status, emphasizing its indispensable role in farmers' lives. The study underscored the significance of land values in Mayan culture (Davis & Lopez-Carr, 2014). In agrarian societies, land is considered the source of life. However, in reality, some farmers lack access to land. Agricultural Census Data in Indonesia (Table 4) reveals an increasing number of farmers without land ownership, accompanied by a reduced average land ownership area. The prevalence of landlessness among farmers contributes to poverty in rural areas. To cope with these conditions, many small farmer households resort to migration. An increased percentage of international migrants can reduce poverty and depth (Adams & Page, 2005).

**Table 4. Land Ownership Data in Indonesia**

Description	Census Year						
	1963	1973	1983	1993	2003	2013	2018
Percentage of Landless Farmers	N/A	33%	21%	30%	36%	N/A	N/A
Average Land Ownership (Ha)	1.05	0.99	0.89	0.81	0.89	0.89	0.78
Percentage of Smallholder	44%	46%	45%	49%	51%	55%	58%

Source: BPS-Statistics Indonesia (1963, 1973, 1983, 1993, 2003, 2013, 2018)

### 4.3. Migration, Remittances, and Agricultural Change

Land ownership is also a symbol of successful migration. The resulting remittances could prevent the occurrence of pawning agricultural land (Sunarto, 1991). Further, migrant workers who manage to buy agricultural land in their villages generally come from the lower strata in their village, and by owning the land, they can improve their family's socio-economic status (Sinuraya & Saptana, 2007; Zid et al., 2012). Occasionally, land purchased from remittances is more prestigious than productive investment. The purchase of additional land by migrant

workers causes more land to be released from production, indirectly encouraging out-migration (Septianto et al., 2018).

In addition to money or goods of economic value, remittances generated can be in the form of new ideas, knowledge, or experiences utilized in the area of origin. Experience as a migrant worker increases farmers' courage to take farm credit (Septianto et al., 2018). Various research results in Table 4 show that the resulting remittances can improve the ability to invest in agriculture, one of which is seen from changes in land tenure and knowledge to access farm credit. This shows that migration brings positive changes in the context of social remittances (Levitt, 1996). The ideas, knowledge, experience, and social networks gained during migration are brought and can be applied in current farming practices.

Besides its positive impact, becoming a migrant worker has also changed my perspective on livelihoods in rural areas. Most migrant workers who return to the village do not want to return even though they own or buy agricultural land (Sinuraya & Saptana, 2007). As a result, it is challenging to find agricultural labor in the village, and land productivity also decreases. This phenomenon shows that economically returning migrants are incapable of reintegrating into the economy of their home region. Many migrant workers choose to be unemployed and wait for the opportunity to go to work abroad again instead of having to work on agricultural land.

## 5. Conclusion

The meta-analysis results reveal a strong connection between migration and agricultural change, emphasizing that in most cases, remittances are directed toward purchasing land. This underscores the profound significance of land for rural communities in Indonesia, serving as a critical production factor and a symbol of socio-economic status.

The nexus between migration, remittances, and livelihoods is intricate, necessitating a thorough investigation to comprehend the socio-cultural context of rural communities. To understand the determining factors for remittance utilization, it is crucial to contextualize them within the motives for migration. Economic conditions do not solely dictate the flow and usage patterns of remittances but are also intertwined with factors like family authority, beliefs, and local culture.

Despite the wealth of research on migration in Indonesia, there remains a scarcity of literature elucidating the connections between migration and other household livelihood strategies, such as agricultural intensification and livelihood diversification. Therefore, it is imperative to undertake research that delves into the complexity of the migration process within the local context, providing a comprehensive understanding of the diverse patterns and forms of migration in Indonesia. This understanding of the migration phenomenon can serve as a valuable material for optimizing the potential of migrants through well-crafted reintegration strategies, enabling returning migrants to sustainably enhance their standard of living and contribute to economic and social development in their areas of origin. This research can offer policymakers insights into poverty reduction initiatives in rural areas.

## 6. Acknowledgment

The authors express their utmost gratitude to all parties contributing to this research.

## 7. Declaration of Conflicting Interests

The authors have declared no potential conflicts of interest concerning this article's research, authorship, and/or publication.

## References

- Adams, R. H., & Page, J. (2005). Do international migration and remittances reduce poverty in developing countries? *World Development*, 33(10), 1645–1669. <https://doi.org/10.1016/j.worlddev.2005.05.004>
- Bachtiar, P. P. (2011). Migration Outflow and Remittance Patterns in Indonesia: National as well as Subnational Perspectives. *Philippine Journal of Development*, 38(1/2), 27–55.
- Bhandari, P., & Ghimire, D. (2016). Rural Agricultural Change and Individual Out-migration. *Rural Sociology*, 81(4). <https://doi.org/10.1111/ruso.12106>
- Bilsborrow, R. E. (1992). Rural Poverty , Migration , and the Environment in Developing Countries Three Case Studies. In *World Development Reports: Working Paper*.
- Breman, J., & Wiradi, G. (2004). *Masa Cerah dan Masa Suram di Pedesaan Jawa*. LP3ES.
- Brown, S. S. (2006). Can remittances spur development? A critical survey. *International Studies Review*, 8(1), 55–76. <https://doi.org/10.1111/j.1468-2486.2006.00553.x>
- Buchori, C., & Amalia, M. (2005). Migrasi, remitansi dan pekerja migran perempuan. *The World Bank*, 1–11.
- Castles, S., Miller, M. J., & Ammendola, G. (2005). The age of migration: International population movements in the modern World. *American Foreign Policy Interest*, 27(6), 537–542. <https://doi.org/10.1080/10803920500434037>
- Caulfield, M., Bouniol, J., Fonte, S. J., & Kessler, A. (2019). How rural out-migrations drive changes to farm and land management: A case study from the rural Andes. *Land Use Policy*, 81, 594–603. <https://doi.org/10.1016/j.landusepol.2018.11.030>
- Chambers, R., & Conway, G. R. (1992). Sustainable rural livelihoods: practical concepts for the 21st century. *IDS Discussion Paper*, 296(September).
- Chen, C., & Zhao, M. (2017). The undermining of rural labor out-migration by household strategies in China's migrant-sending areas: The case of Nanyang, Henan Province. *Cities*. <https://doi.org/10.1016/j.cities.2016.04.009>
- Collier, W., Santoso, K., Soetoro, & Wibowo, R. (1996). *Pendekatan Baru Dalam Pembangunan Pedesaan di Jawa: Kajian Pedesaan Selama Dua Puluh Lima Tahun*. Yayasan Obor Indonesia.
- Connell, J. (1987). Migration , Rural Development and Policy Formation in the South Pacific. *Journal of Rural Studies*, 3(2), 105–121.
- Davis, J., & Lopez-Carr, D. (2014). Migration, remittances and smallholder decision-making: Implications for land use and livelihood change in Central America. *Land Use Policy*, 36, 319–329. <https://doi.org/10.1016/j.landusepol.2013.09.001>
- de Haas, H. (2006). Migration, remittances and regional development in Southern Morocco. *Geoforum*, 37(4), 565–580. <https://doi.org/10.1016/j.geoforum.2005.11.007>
- Dharmawan, A. . (2007). Sistem Penghidupan dan Nafkah Pedesaan: Pandangan Sosiologi Nafkah (Livelihood Sociology) Mazhab Barat dan Mazhab Bogor. *Sodality*, 01(02), 169–192.
- Ellis, F. (1999). Rural livelihood diversities in developing countries. *Natural Resources Perspectives*, 40(April 1999), 1–10.
- Gamso, J., & Yuldashev, F. (2018). Does rural development aid reduce international migration? *World Development*. <https://doi.org/10.1016/j.worlddev.2018.05.035>
- Gautam, Y., & Andersen, P. (2016). Rural livelihood diversification and household well-being. *Journal of Rural Studies*, 44, 239–249. <https://doi.org/10.1016/j.jrurstud.2016.02.001>
- Gilbert, A., & Gugler, J. (1996). *Urbanisasi dan kemiskinan di negara dunia ketiga*. PT. Tiara Wacana Yogya.
- Gray, C. L. (2009). Rural out-migration and smallholder agriculture in the southern Ecuadorian

- Andes. *Population Environment*, 30(1), 193–217. <https://doi.org/10.1007/s11111-009-0081-5>
- Hamidah, C. (2013). Dampak Remitansi Tenaga Kerja Indonesia (TKI) Luar Negeri Pada Peningkatan Investasi Daerah Asal. *Ekuilibrium*, 11(2), 1–14.
- Hugo, G. (1975). *Population Mobility in West Java, Indonesia* [Australian National University]. <https://doi.org/DOI:10.1007/BF02389711>
- Hugo, G. (1988). Population Movement in Indonesia Since 1971. *Tijdschrift Voor Economische En Sociale Geografie*, 79(4), 242–256. <https://doi.org/10.1111/j.1467-9663.1988.tb01310.x>
- Hull, J. R. (2007). Migration , Remittances and Monetization of Farm Labor in Subsistence Sending Areas. *Asian and Pacific Migration Journal*, 16(4), 451–484.
- Islam, M. S., Abubakar, H., & Keramat, S. A. (2012). Remittance Inflow Into Rural Economy of Bangladesh. *Manpower Journal*, XLVII(2), 16–30.
- Jafar, R., Laming, R. F., & Meilvidiri, W. (2018). Penyebab dan Dampak Ekonomi-Sosial Temporary Migration Sektor Pertanian Pada Saat Lean Season di Kota Makassar. *Ecosystem*, 18(3), 1228–1241.
- Kelly, P. (2011). Migration, Agrarian Transition and Rural Change in Southeast Asia. *Critical Asian Studies*, 43(4), 479–506. <https://doi.org/10.1080/14672715.2011.623516>
- Kurnia, G. (1999). Modernisasi dan Penguatan Ekonomi Rakyat di Pedesaan. In H. Basri (Ed.), *Modernisasi dan Penguatan Ekonomi Rakyat di Pedesaan Sebagai Strategi Penanggulangan Kemiskinan* (pp. 41–69). Bina Rena Pariwara.
- Lee, E. S. (1966). A Theory of Migration. *Demography*, 3 (1), 47–57.
- Levitt, P. (1996). Social Remittances: A Conceptual Tool for Understanding Migration and Development. In *Working Paper Series* (Vol. 96, Issue 04).
- Mantra, I. B. (1981). *Population Movement in Wet Rice Communities*. Gadjah Mada University Press.
- Mardiyaningsih, D. I., Dharmawan, A. H., & Tonny, F. (2010). The dynamics of the traditional and modern farmer community livelihoods in West Java. *Sodality*, 04(01), 115–145.
- Massey, D. S. (2013). Social Structure, Household Strategies, and the Cumulative Causation of Migration. *Population Index*, 56(1), 3–26.
- McDowell, C., & de Haan, A. (1997). *Migration and Sustainable Livelihoods : A Critical Review of The Literature*: (IDS Working Paper 65).
- Mukbar, D. (2009). *Perdesaan, migrasi dan perubahan penghidupan : sebuah kajian literatur*.
- Nelson, P. B. (2001). Rural restructuring in the American West : land use , family and class discourses. *Journal of Rural Studies*, 17, 395–407.
- Padmo, S. (1999). Perpindahan penduduk dan ekonomi rakyat Jawa, 1900-1980. *Humaniora*, 12(1), 56–66.
- Pratama, A. (2014). *Peran remitan buruh migran internasional bagi rumah tangga di pedesaan*.
- Primawati, A. (2011). Remitan Sebagai Dampak Migrasi Pekerja ke Malaysia. *Sosiokonsepia*, 16(2), 209–222.
- Pritchard, B., Rammohan, A., & Vicol, M. (2019). The importance of non-farm livelihoods for household food security and dietary diversity in rural Myanmar. *Journal of Rural Studies*, 67(1), 89–100. <https://doi.org/10.1016/j.jrurstud.2019.02.017>
- Qin, H., & Grigsby, M. E. (2016). A systematic review and “meta-Study” of meta-analytical approaches to the human dimensions of environmental change. *Human Ecology Review*, 22(2), 109–136. <https://doi.org/10.22459/HER.22.02.2016.05>
- Qin, H., & Liao, T. F. (2016). Labor Out-Migration and Agricultural Change in Rural China : A Systematic Review and Meta-Analysis. *Journal of Rural Studies*, 47, 533–541.



<https://doi.org/10.1016/j.jrurstud.2016.06.020>

- Redehegn, M. A., Sun, D., Eshete, A. M., & Gichuki, C. N. (2019). Development Impacts of Migration and Remittances on Migrant-Sending Communities : Evidence from Ethiopia. *Plos One*, 6, 1–21. <https://doi.org/10.1371/journal.pone.0210034>
- Romdiati, H. (2012). Migrasi Tenaga Kerja Indonesia dari Kabupaten Tulungagung : Kecenderungan dan Arah Migrasi, serta Remitansi. *Jurnal Kependudukan Indonesia*, VII(2), 27–53.
- Rudel, T. K. (2008). Meta-analyses of case studies: A method for studying regional and global environmental change. *Global Environmental Change*, 18(1), 18–25. <https://doi.org/10.1016/j.gloenvcha.2007.06.001>
- Rudel, T. K., Coomes, O. T., Moran, E., Achard, F., Angelsen, A., Xu, J., & Lambin, E. (2005). Forest transitions: Towards a global understanding of land use change. *Global Environmental Change*, 15(1), 23–31. <https://doi.org/10.1016/j.gloenvcha.2004.11.001>
- Sajogyo. (1974). *Modernization Without Development in Rural Java. (A Paper Contributed to the Study on Changes in Agrarian Structure, FAO of UN, 1972-1973)* (pp. 1–75). Bogor Agricultural University.
- Septianto, M., Kolopaking, L. M., & Adiwibowo, S. (2018). Penguasaan Tanah Timbul oleh Rumah Tangga Buruh Migran Indonesia Control over Coastal Sedimentation Land by the Indonesian Household Migrant Workers. *Sodality*, 6(2), 175–183.
- Setiadi. (2001). Masalah reingrasi sosial dan ekonomi migran kembali. *Populasi*, 12(1), 21–35.
- Sinuraya, J. F., & Saptana. (2007). Migrasi Tenaga Kerja Pedesaan dan Pola Pemanfaatannya. *SOCA*, 7(3), 1–23.
- Stark, & Bloom. (1985). The New Economics of Labor Migration. *The American Economic Review*, 75(2), 173–178.
- Sunam, R. K., & McCarthy, J. F. (2016). Reconsidering the links between poverty , international labour migration , and agrarian change : critical insights from Nepal. *The Journal of Peasant Studies*, 43 (1)(January), 39–63. <https://doi.org/10.1080/03066150.2015.1041520>
- Sunarto. (1991). Dampak Migrasi Sirkuler Terhadap Desa Asal Migran. *Populasi*, 2(2), 37–44.
- Susilo, S. (2016). Remittance in phenomenology perspective: A study of Indonesian Migran Worker (TKI) in Tulungagung, Indonesia. In *Social Sciences (Pakistan)* (Vol. 11, Issue 19, pp. 4730–4733). <https://doi.org/10.3923/sscience.2016.4730.4733>
- Suyanto. (2018). Pemanfaatan Remitan Ekonomi dan Ketergantungan Migran Kembali Bekerja di Luar Negeri. *Endogami: Jurnal Ilmiah Kajian Antropologi*, 2(1), 30. <https://doi.org/10.14710/endogami.2.1.30-37>
- Tamtiari, W. (1999). Dampak sosial migrasi tenaga kerja ke malaysia. *Populasi*, 10(2), 39–56.
- Tanle, A., & Awabuso-Asare, K. (2012). Livelihood activities of migrants from Ghana ' s northern regions resident in the Obuasi and Techiman municipalities. *Journal of Social Development in Africa*, 27(2), 113–138.
- Taylor, J. E. (1999). The New Economics of Labour Migration and the Role of Remittances in the Migration Process. *International Migration*, 37(1), 64–88.
- Tirtosudarmo, R. (1984). *Migration decision making : the case of East Java* (Issue March). The Australian National University.
- Tirtosudarmo, R. (2009). Mobility and Human Development in Indonesia. In *Human Development Reports Research Paper* (Vol. 19, Issue 19201).
- Tirtosudarmo, R. (2020). *Migration and Social Transformation in Indonesia*. Manuscript submitted for publication.
- Xiao, W., & Zhao, G. (2018). Agricultural land and rural-urban migration in China: A new

- pattern. *Land Use Policy*, 74, 142–150. <https://doi.org/10.1016/j.landusepol.2017.05.013>
- Xu, D. de, Cao, S., Wang, X. xi, & Liu, S. quan. (2018). Influences of labor migration on rural household land transfer: A case study of Sichuan Province, China. *Journal of Mountain Science*, 15(9). <https://doi.org/10.1007/s11629-018-4973-7>
- Yuniarto, P. R. (2015). Siasat Bertahan, Model Pengelolaan Remitansi, dan Usaha Mikro Keluarga Buruh Migran. *Populasi*, 23, 71–87.
- Zid, M., Wahyuni, E. S., Kolopaking, L. M., & Soetarto, E. (2012). Migrasi Internasional Perempuan dan Penguasaan Lahan Pedesaan di Jawa Barat. *Mimbar Demokrasi*, 11(2), 1–18.

---

### About the Authors

1. **Rani Andriani Budi Kusumo**, obtained her Master's degree in Family and Child Development Sciences from IPB University, Indonesia, in 2009. The author is an Assistant Professor at the Department of Agricultural Socio-Economics, Faculty of Agriculture, Universitas Padjadjaran, Indonesia.  
E-Mail: [rani.andriani@unpad.ac.id](mailto:rani.andriani@unpad.ac.id)
2. **Ganjar Kurnia**, obtained his Doctoral degree in Rural Sociology from Universitatea din București, Romania, in 1987. The author is a Professor at the Department of Agricultural Socio-Economics, Faculty of Agriculture, Universitas Padjadjaran, Indonesia.  
E-Mail: [ganjark@unpad.ac.id](mailto:ganjark@unpad.ac.id)
3. **Iwan Setiawan**, obtained his Doctoral degree in Development Extension Sciences from IPB University, Indonesia, in 2015. The author is an Associate Professor at the Department of Agricultural Socio-Economics, Faculty of Agriculture, Universitas Padjadjaran, Indonesia.  
E-Mail: [iwan.setiawan@unpad.ac.id](mailto:iwan.setiawan@unpad.ac.id)
4. **Riwanto Tirtosudarmo**, obtained his Doctoral degree from Australian National University. The author is a socio-cultural researcher and political demographer at Indonesia's National Research and Innovation Agency.  
E-Mail: [tirtosudarmo@yahoo.com](mailto:tirtosudarmo@yahoo.com)