

Land Tenure Security and Rural Livelihoods under SDG 2 in Indonesia

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Abstract

This study examines the impact of land tenure security on rural livelihoods in Indonesia within the framework of Sustainable Development Goal 2 (Zero Hunger). Drawing on verified international and national sources, the study employs a qualitative approach to explore how secure land rights influence agricultural productivity, food security, and community resilience. The findings indicate that tenure security leads to higher farm investment, improved household income, and better access to food and services. However, institutional fragmentation, legal ambiguity, and exclusion of customary systems remain significant barriers to equitable land reform. By integrating theories of property rights, sustainable livelihoods, and access, the research highlights both conceptual and practical pathways for reform. The study concludes that effective land governance—grounded in legal clarity and inclusive policy—is critical for achieving rural development objectives and fulfilling SDG 2 commitments in Indonesia.

Keywords

land tenure security; rural development; SDG 2; agrarian reform

INTRODUCTION

Land tenure security plays a critical role in shaping the socio-economic landscape of rural Indonesia, particularly in the context of agrarian reform and food security initiatives. In countries where agriculture forms the backbone of rural livelihoods, the assurance of land rights is fundamental to economic stability, investment in land, and environmental stewardship (de Janvry et al., 2001). The Indonesian agrarian structure has long been characterized by inequitable access, overlapping claims, and informal ownership, which hinder rural development (Badan Pusat Statistik [BPS], 2016). Recognizing this, Indonesia's alignment with the Sustainable Development Goals (SDGs), especially SDG 2 (Zero Hunger), positions land tenure reform as a pivotal strategy for combating rural poverty and enhancing food sovereignty (United Nations, 2015). Addressing land tenure insecurity is not merely a legal challenge but a

multidimensional issue tied to economic justice, ecological sustainability, and national development goals.

The significance of this research is rooted in both theoretical and empirical considerations. Theoretically, secure land tenure enhances an individual's perception of ownership, which promotes productive investments and conservation behaviors (Place, 2009). Empirically, numerous studies across Southeast Asia affirm that land security encourages long-term cultivation strategies and access to formal credit systems (Holden et al., 2011). In Indonesia, however, land disputes, overlapping land-use claims, and weak enforcement of land registration laws continue to undermine these potential gains (Tania, 2016). These issues often disproportionately affect marginalized rural groups, including indigenous communities and women, thereby entrenching systemic inequalities (Lindsey, 2012, pp. 88–90). Consequently, understanding the dynamics of land tenure security offers a pathway to inclusive rural development aligned with international development frameworks.

Despite ongoing reforms, there remains a significant gap in understanding how land tenure security directly and indirectly impacts rural livelihoods in Indonesia. While some studies focus on the economic benefits of land certification (World Bank, 2016), fewer works investigate its intersection with multidimensional rural wellbeing indicators, such as food security, community resilience, and gender equity (Zoomers & Gekker, 2010). Moreover, there is limited integration of land tenure analysis within the broader agenda of SDG implementation, particularly SDG 2. This gap suggests a need for contextualized studies that explore the mediating and enabling roles of land policy within rural development frameworks.

This study contributes to closing this research gap by adopting an interdisciplinary approach that combines land governance theory, rural sociology, and development economics. It draws upon verified data sources including official statistics, academic journals, and field-based empirical studies to map the relationships between land tenure arrangements and livelihood outcomes. The research is theoretically anchored in property rights theory and sustainable livelihoods frameworks, offering a comprehensive lens for analysis (Meinzen-Dick et al., 2009). By situating the inquiry within the Indonesian rural context, the study aims to inform both national and international discourse on equitable land access and sustainable development planning.

Accordingly, this research seeks to answer three interrelated questions: (1) How does land tenure security affect agricultural productivity and rural income in Indonesia? (2) What role does land tenure play in enhancing food security and household resilience within rural communities? (3) What institutional and policy barriers hinder the implementation of equitable land tenure reforms under the framework of SDG 2? These questions will be addressed thematically in the Results and Discussion section,

guided by a strong theoretical foundation and contextual relevance. The study's objective is to assess the transformative potential of land tenure security as a development catalyst, contributing both conceptual clarity and practical guidance for sustainable rural advancement.

LITERATURE REVIEW

The relationship between land tenure security and rural development has been a subject of extensive scholarly inquiry, particularly in the Global South where agrarian structures often underpin socioeconomic systems. Secure land tenure, broadly defined as the assurance that land rights will be recognized and upheld by society and legal systems, has been linked to increased agricultural productivity, investment, and food security (Besley & Ghatak, 2010). Within the Indonesian context, where customary (*adat*) and formal land systems coexist, scholars have highlighted the complexity of tenure arrangements and their implications for land governance and development (Larson, 2012). According to Firman (2011, pp. 104–106), fragmented regulatory frameworks and overlapping administrative jurisdictions contribute to legal uncertainty, discouraging long-term agricultural investment and sustainable land use. These challenges have prompted policy shifts aimed at land reform and registration, albeit with mixed results in implementation.

Key theoretical frameworks have been employed to analyze these dynamics. The property rights theory posits that clearly defined and enforceable property rights encourage landholders to invest in their land and improve productivity due to perceived long-term benefits (Deininger & Feder, 2009). Complementing this, the sustainable livelihoods framework emphasizes access to assets—including land—as critical to rural households' ability to pursue and sustain various livelihood strategies (Ellis, 2000). Empirical studies from Southeast Asia and Sub-Saharan Africa support these models, showing that land tenure security reduces vulnerability and facilitates access to credit and agricultural support services (Holden & Ghebru, 2016). However, researchers like Hall et al. (2011) argue that formalization processes must be accompanied by institutional reforms to avoid reinforcing existing inequalities.

Recent literature has increasingly situated land tenure within global development agendas such as the SDGs, underscoring its role in achieving food security, reducing poverty, and fostering environmental sustainability. The United Nations (2015) recognizes land access as integral to SDG 1 (No Poverty) and SDG 2 (Zero Hunger), highlighting its transformative potential. In Indonesia, however, studies reveal inconsistencies in land distribution and governance, particularly in rural and forest-adjacent areas where competing claims often result in conflicts and displacement (Colchester et al., 2013). The National Land Agency's (BPN) programs such as the

Pendaftaran Tanah Sistematis Lengkap (PTSL) have attempted to address these challenges, but critiques point to limited outreach and institutional inefficiencies (Saragih, 2016, pp. 118–120). Thus, while theoretical frameworks offer clarity, the empirical application remains fraught with socio-political complexity.

Theoretical Framework

The conceptual foundation of this study is rooted in property rights theory, which asserts that clearly defined, enforceable, and transferable rights to property, including land, are essential to fostering economic development and investment (Alchian & Demsetz, 1973). According to Deininger and Feder (2009), when individuals possess secure land rights, they are more likely to make productive investments and adopt sustainable land management practices due to reduced risk of expropriation. This framework is particularly relevant in Indonesia, where legal pluralism creates uncertainty over land ownership and undermines long-term planning by smallholder farmers (Lindsey, 2012, pp. 102–104). Moreover, in contexts with weak formal institutions, property rights theory highlights the necessity of both formal and informal tenure recognition to legitimize ownership and encourage economic participation.

Another critical theoretical lens applied in this study is the sustainable livelihoods framework, which emphasizes the importance of access to key assets—natural, financial, social, human, and physical capital—for improving rural wellbeing (Ellis, 2000). Secure land tenure intersects with several of these capitals, particularly natural and financial, by enabling the use of land as collateral for credit and facilitating access to government agricultural support programs (Scoones, 1998). In Indonesia's rural regions, access to certified land titles can increase farmers' bargaining power in the market and contribute to household resilience against economic shocks (Saragih, 2016, pp. 122–123). This framework allows for an integrated assessment of how land tenure security influences broader dimensions of rural life beyond mere economic returns.

Institutional theory also underpins the analysis by examining how formal structures and informal norms shape land administration systems and affect tenure outcomes. North (1990) posits that institutions—defined as human-devised constraints—determine economic performance by influencing incentives and reducing transaction costs. In Indonesia, overlapping mandates among land-related institutions such as the Ministry of Agrarian Affairs and Spatial Planning (ATR/BPN) and local governments often result in conflicting regulations, creating ambiguity and inefficiencies in tenure recognition (Firman, 2011, pp. 108–109). Institutional theory helps explain why policy reforms aimed at enhancing land security often fail to produce expected outcomes without coordinated governance and accountability mechanisms.

A fourth framework employed in this study is the theory of access, which distinguishes between legal ownership and the actual ability to benefit from resources (Ribot & Peluso, 2003). This is especially pertinent in rural Indonesia, where individuals may hold formal land titles yet remain unable to access markets, technology, or financial services necessary for effective land use. The theory reveals how structural inequalities—such as gender bias, ethnic marginalization, or political patronage—can inhibit meaningful land access even in legally secure environments (Colchester et al., 2013). By integrating this theory, the study addresses not only *de jure* rights but also *de facto* access, making the analysis more comprehensive and grounded in the lived realities of rural communities.

These theoretical frameworks collectively provide a multidimensional foundation for the study, enabling a robust analysis of how land tenure security influences rural livelihoods. While property rights theory highlights the economic rationale for land reform, the sustainable livelihoods and institutional perspectives offer insights into social and governance dynamics. The access theory ensures attention is paid to equity and justice considerations. Together, these perspectives will guide the interpretation of findings in the Results and Discussion section, linking theory to evidence in a coherent analytical structure.

Previous Research

Research on land tenure security has evolved significantly over the past few decades, demonstrating its importance in rural development, particularly in contexts of poverty alleviation, agricultural productivity, and sustainable land use. Early foundational studies by Place and Hazell (1993) utilized cross-country data from Sub-Saharan Africa and found a strong association between secure tenure and increased farm productivity. Their work laid the groundwork for examining tenure security as a determinant of household welfare. Deininger and Feder (1999) expanded this by using global datasets to show that formalized property rights enhance access to credit and encourage land-related investments. Their findings underscore the universality of land security benefits across diverse agrarian economies, including those undergoing transitions in land administration systems.

In Southeast Asia, Do and Iyer (2008) focused specifically on Vietnam's land titling reform and found that households with formal titles experienced higher land values and greater agricultural output. These results reinforced the applicability of property rights theory to socialist-market contexts and offered comparative insights for neighboring Indonesia. Similarly, Holden et al. (2011) analyzed data from Ethiopia and Uganda and found that gender and intra-household dynamics influence the impact of tenure security, pointing to the importance of equitable land policies. These studies

emphasized the need for context-specific solutions that consider both socio-economic and cultural dimensions of land access.

Zoomers and Gekker (2010) conducted qualitative studies across Indonesia, Myanmar, and Laos and highlighted the role of international development agencies in promoting land titling without adequate local adaptation. Their research revealed that formal titling programs often marginalize customary users and indigenous populations. Meanwhile, Colchester et al. (2013) documented numerous land conflicts arising from large-scale agricultural investments in Indonesia, particularly in forest zones, where local communities lacked formal recognition. Their findings revealed that tenure security must be integrated with environmental and indigenous rights protections to be effective.

More recent studies have investigated the link between tenure and SDG indicators. The World Bank (2016) reported that Indonesia's PTSL program contributed to a 19% increase in household investments in farming infrastructure among beneficiaries. However, Saragih (2016, pp. 125–128) found disparities in access and administrative inefficiencies that weakened program outcomes, especially in remote and conflict-prone areas. These studies collectively point to the dual challenge of institutional reform and local participation in achieving tenure-related development goals.

Despite these contributions, a notable research gap persists in analyzing how tenure security specifically influences multidimensional livelihood outcomes within the SDG 2 framework. Few studies bridge the conceptual frameworks of property rights, sustainable livelihoods, and institutional governance in the Indonesian context. Furthermore, existing literature often treats land tenure reform as a stand-alone issue, rather than integrating it with broader rural development strategies such as food sovereignty, environmental sustainability, and social equity. This study addresses this gap by offering a comprehensive, interdisciplinary analysis that links tenure security to rural livelihoods in the context of SDG 2 implementation in Indonesia.

RESEARCH METHODS

This study is grounded in qualitative textual data, drawing from a diverse range of sources to explore the impact of land tenure security on rural livelihoods within the context of SDG 2 in Indonesia. The data consists of scholarly journal articles, government publications, development agency reports, and relevant academic theses. These textual materials are appropriate for examining policies, institutional dynamics, and lived experiences related to land tenure and rural wellbeing. Qualitative data enables deep thematic exploration and contextual understanding, which are essential

for investigating complex socio-political issues embedded within land governance and rural development (Patton, 2002, pp. 57–58).

The primary data sources include international academic journals, Indonesian Sinta-Garuda indexed publications, official reports from BPS–Statistics Indonesia, World Bank studies, and legal documents on agrarian reform. These sources were selected based on credibility, relevance, and publication date (not later than 2016), ensuring alignment with academic standards and national development priorities. In particular, documents such as the Indonesian Basic Agrarian Law (Undang-Undang Pokok Agraria No. 5 Tahun 1960), the National Medium-Term Development Plan (RPJMN), and the SDG progress reports by the UN provide contextual and policy-based grounding for the analysis (Bappenas, 2016). These sources allow for triangulation and validation of findings from multiple perspectives.

Data were collected using a systematic literature review strategy, emphasizing thematic coherence and conceptual consistency. Documents were selected through a keyword-based search process focused on terms such as "land tenure security," "rural livelihoods," "agrarian reform," and "SDG 2 Indonesia." Inclusion criteria required that sources offer empirical insights or conceptual contributions to the understanding of land tenure and its socio-economic impacts. Exclusion criteria removed sources lacking methodological transparency or contextual relevance. This rigorous approach ensured the inclusion of only high-quality and thematically pertinent literature (Booth et al., 2016).

Thematic analysis was employed to interpret the data, allowing the identification of recurring patterns and linkages between land tenure security and various livelihood indicators such as income stability, food security, and access to services. This approach facilitated the construction of conceptual categories aligned with the study's theoretical framework—namely, property rights theory, sustainable livelihoods framework, institutional theory, and access theory. The interpretive process involved coding, categorization, and thematic synthesis, ensuring analytical depth and the emergence of grounded insights (Braun & Clarke, 2006).

Findings were synthesized through a multi-step conclusion-drawing process. First, themes were interpreted in light of the research questions and theoretical lenses. Next, the implications of each theme were critically assessed in terms of their relevance to SDG 2 implementation. Finally, the insights were integrated into a coherent narrative that links tenure security with rural wellbeing, policy outcomes, and institutional reforms. This approach ensures that the study offers actionable insights and bridges theoretical analysis with practical relevance, a necessity in the context of policy-oriented rural development research (Maxwell, 2013, pp. 112–114).

RESULTS AND DISCUSSION

The role of land tenure security in shaping rural livelihoods in Indonesia must be examined through an integrated lens that connects theoretical insights with empirical realities. Building upon the foundational theories of property rights, sustainable livelihoods, institutional governance, and access, this section articulates the thematic findings of the study in light of existing research and contextual dynamics. In doing so, it addresses the analytical gap between land policy rhetoric and its actual impact on rural communities. Empirical evidence reveals that land tenure security contributes to multidimensional development outcomes, including food security, increased agricultural productivity, household resilience, and social inclusion (Deininger & Feder, 2009; Holden & Ghebru, 2016). However, implementation barriers persist due to bureaucratic fragmentation, social inequality, and regional disparities (Firman, 2011, pp. 108–109).

This study contributes to the discourse by offering nuanced insights derived from the Indonesian context, particularly regarding the alignment of tenure reforms with SDG 2 implementation. While previous studies have addressed land titling from an economic standpoint, this research incorporates social, institutional, and political dimensions, highlighting the role of local governance structures and participatory planning. The integration of land tenure into the SDG agenda necessitates an expanded conceptualization of security—beyond formal ownership—encompassing issues of access, equity, and sustainability (Ribot & Peluso, 2003; Colchester et al., 2013). These findings emphasize the importance of intersectoral coordination and local empowerment in the design and execution of land governance reforms.

1. Land Tenure Security and Agricultural Productivity in Rural Indonesia

A central inquiry of this study is how land tenure security influences agricultural productivity and rural income in Indonesia. Empirical findings affirm that secure land rights incentivize farmers to invest in land improvements, adopt sustainable farming practices, and engage in long-term agricultural planning. For example, World Bank (2016) data show that land certification programs such as PTSL (Pendaftaran Tanah Sistematis Lengkap) have led to measurable increases in farm investments, including irrigation systems and crop diversification. These findings align with property rights theory, which posits that individuals are more likely to invest in land when their ownership is legally recognized and protected from expropriation (Alchian & Demsetz, 1973; Deininger & Feder, 2009).

In regions such as Java and South Sumatra, land registration has enabled access to formal credit systems, empowering farmers to purchase inputs and expand cultivation (Saragih, 2016, pp. 125–127). This has resulted in increased yields, higher farm incomes, and greater market integration. However, disparities persist, especially in remote areas where administrative capacity is weak and customary systems prevail. Firman (2011, pp. 110–112) notes that inconsistent land databases and overlapping jurisdictional claims hinder equitable implementation, particularly for smallholders and indigenous populations.

Beyond economic returns, secure tenure fosters non-economic benefits such as community cohesion and intergenerational transfer of agricultural knowledge. Holden et al. (2011) argue that tenure stability reduces the incidence of land disputes, allowing for collective investments in shared resources such as irrigation channels and roads. In Indonesia, such communal efforts have contributed to village-scale agricultural resilience, reinforcing the role of social capital in rural development (Ellis, 2000). These dynamics illustrate how land security supports not only individual productivity but also collective rural welfare.

Nevertheless, challenges remain. The process of obtaining land certificates can be costly and bureaucratically opaque, often deterring marginalized groups from participating. Larson (2012) emphasizes the importance of simplifying administrative processes and ensuring legal aid for vulnerable populations. In areas where titling has occurred without adequate community consultation, conflicts have emerged between formal and customary landholders, complicating land use and productivity (Colchester et al., 2013).

In summary, secure land tenure has a demonstrably positive effect on agricultural productivity and rural income in Indonesia, particularly where supportive institutions and infrastructure are present. However, the benefits are unevenly distributed, and institutional barriers continue to limit the transformative potential of land reform. These findings underscore the need for targeted policy interventions that address both structural and procedural dimensions of tenure reform, ensuring that productivity gains are inclusive and sustainable.

2. Land Tenure Security, Food Security, and Household Resilience

This section addresses the second research question: What role does land tenure play in enhancing food security and household resilience within rural communities in Indonesia? Findings from this study demonstrate that secure

land rights are closely linked to increased food availability, dietary diversity, and the capacity of households to absorb economic or climatic shocks. Within the sustainable livelihoods framework, land serves as both a productive asset and a safety net, enabling self-provisioning and reducing reliance on volatile food markets (Ellis, 2000). Households with legally recognized tenure are more likely to invest in food crops and home gardens, supporting both nutrition and economic stability (Scoones, 1998).

Research by Place (2009) indicates that tenure security increases long-term cultivation of food crops, as farmers have greater confidence that they will benefit from their labor. In Indonesia, this pattern is observed in certified rural areas where households have diversified into staple crops like rice and cassava, as well as protein-rich produce such as legumes and fish farming. The World Bank (2016) noted that land title holders in East Java experienced a 15–20% increase in household food availability and improved resilience during dry seasons. These findings are corroborated by Saragih (2016, pp. 122–124), who observed that secure land tenure enabled farmers to access government support programs such as subsidized seeds and disaster mitigation training, further enhancing food security outcomes.

Moreover, secure tenure supports resilience not just through production, but also through social stability. Families with land security are less likely to migrate under stress, maintain stronger community ties, and are better positioned to engage in adaptive livelihood strategies such as crop rotation, livestock integration, and agroforestry. Holden and Ghebru (2016) emphasize that land tenure enhances the predictability needed for adopting such practices, thereby improving long-term sustainability. In Indonesia, customary communities with recognized land rights have preserved traditional knowledge systems related to food production and ecosystem management, contributing to biocultural resilience (Colchester et al., 2013).

However, the data also highlight that tenure security alone does not guarantee food security. Structural barriers such as poor market access, inadequate infrastructure, and limited extension services can offset the benefits of land ownership. Firman (2011, pp. 114–115) points out that in some rural districts, certified farmers still face challenges in transporting goods or storing surplus food, reducing the efficiency of land-based livelihoods. Additionally, land titling programs often focus on individual ownership, overlooking the collective nature of resource management in many indigenous and adat communities. This oversight can fragment traditional support systems and inadvertently reduce household resilience (Larson, 2012).

Gender disparities further complicate the tenure–food security nexus. Women, who often serve as primary food providers, are less likely to hold land titles, even though they manage household gardens and small-scale farms. According to Lindsey (2012, pp. 88–90), gender-biased inheritance norms and administrative processes exclude women from legal recognition, thereby limiting their access to agricultural resources and support services. Addressing these disparities requires legal reforms that prioritize inclusive titling and ensure women's participation in land governance.

In conclusion, land tenure security plays a pivotal role in enhancing food security and household resilience in rural Indonesia. It facilitates food production, enables participation in support programs, and strengthens social networks that underpin adaptive capacity. Yet, its effectiveness is mediated by access to complementary resources and equitable governance. Therefore, future land reform strategies must adopt a holistic, gender-responsive, and community-based approach to maximize developmental outcomes in alignment with SDG 2.

3. Institutional and Policy Barriers to Equitable Land Tenure Reform

This subsection addresses the third research question: What institutional and policy barriers hinder the implementation of equitable land tenure reforms under the framework of SDG 2 in Indonesia? Despite legislative and administrative reforms, multiple institutional challenges continue to obstruct the realization of land tenure security as a development tool. Chief among these are fragmented governance structures, inconsistent policy enforcement, and limited community engagement in land reform processes (Firman, 2011, pp. 108–110). These systemic issues result in gaps between formal rights and actual access, disproportionately affecting smallholders, women, and indigenous groups.

At the national level, Indonesia's land governance involves overlapping mandates between the Ministry of Agrarian Affairs and Spatial Planning (ATR/BPN), local governments, and sectoral ministries. This institutional fragmentation leads to conflicting land classifications, delayed registrations, and bureaucratic inefficiency (Larson, 2012). According to the World Bank (2016), over 60% of rural land in Indonesia remains undocumented or informally held, undermining national efforts to promote equitable development. Furthermore, existing policies such as the Basic Agrarian Law and the Forestry Law often contradict one another, creating legal ambiguity that discourages

investment and fosters tenure insecurity, particularly in forest-adjacent regions (Colchester et al., 2013).

The implementation of the PTSL (Systematic Land Registration Program) has attempted to address these gaps by accelerating land titling. However, studies show that its effectiveness is hindered by administrative bottlenecks, underfunded land offices, and weak monitoring systems (Saragih, 2016, pp. 126–128). Moreover, political interference and elite capture in land certification processes have been reported, allowing powerful actors to appropriate communal or marginal lands under the guise of legal reform (Zoomers & Gekker, 2010). These dynamics highlight how institutional weaknesses not only reduce program effectiveness but may exacerbate inequality.

Another barrier is the lack of legal recognition for customary (adat) land systems, despite constitutional provisions and the 2012 Constitutional Court ruling affirming indigenous land rights. In practice, many adat communities still lack formal recognition, making their lands vulnerable to appropriation for commercial or infrastructure projects (Colchester et al., 2013). The theory of access, which distinguishes between legal ownership and the ability to derive benefits from land, underscores this disconnect (Ribot & Peluso, 2003). Even where formal titles exist, socio-political barriers may prevent meaningful use of land, such as limited access to credit, agricultural extension services, or market networks.

Capacity constraints within local governments further impede equitable land governance. In many districts, officials lack adequate training, technology, and resources to implement tenure reform in a participatory and transparent manner. Firman (2011, pp. 114–116) argues that decentralization has transferred responsibilities without commensurate resources or accountability mechanisms. This has resulted in wide variations in land reform outcomes across provinces, with rural areas and outer islands generally lagging behind Java and Bali.

Finally, policy discourse often emphasizes economic growth over social justice, marginalizing equity considerations in land reform. National development plans frequently prioritize agribusiness, mining, or infrastructure over smallholder agriculture, leading to land conversion and displacement of rural communities (Larson, 2012). These tendencies reflect a narrow application of property rights theory that privileges individual ownership and market integration while neglecting the communal and cultural dimensions of land tenure.

In summary, institutional and policy barriers significantly constrain the potential of land tenure reforms to advance SDG 2 in Indonesia. Overlapping jurisdictions,

weak implementation, lack of recognition for customary systems, and policy biases toward commercial interests undermine equity and inclusivity. Addressing these challenges requires a multi-scalar strategy that strengthens institutional coordination, empowers local governments, and mainstreams social justice into land governance frameworks. Only through such integrative reform can land tenure security truly support sustainable and equitable rural development.

This study has examined the critical role of land tenure security in enhancing rural livelihoods within the context of SDG 2 implementation in Indonesia. Each of the three research questions has been addressed thematically, revealing the complex and multi-dimensional ways in which land rights influence agricultural productivity, food security, and institutional equity. The first question explored the link between land tenure and agricultural productivity, demonstrating that secure land rights foster long-term investment, improved farm yields, and increased household income, particularly when legal recognition is paired with access to credit and support services. The second question examined how land tenure security contributes to food security and household resilience. Findings indicate that secure tenure supports diversified food production, household stability, and community-based coping mechanisms, while also revealing gaps due to gender disparities and inadequate infrastructure. The third question investigated institutional and policy barriers, identifying fragmentation, legal contradictions, and exclusion of customary systems as significant obstacles to equitable land reform.

These findings build a strong logical bridge between the problem outlined in the Introduction and the conceptual tools established in the Theoretical Framework. By integrating property rights theory, the sustainable livelihoods framework, institutional theory, and the theory of access, the study advances a holistic understanding of tenure dynamics in rural Indonesia. The research contributes original insights by situating land tenure within the SDG 2 framework, offering a more integrated analysis than prior literature. Conceptually, it refines the understanding of tenure as not only legal but also relational, shaped by institutional performance and socio-political inclusion. Methodologically, the study's interdisciplinary approach bridges empirical evidence with theoretical rigor, contributing a comprehensive model for evaluating tenure reforms in developing contexts.

The study's theoretical implications include an expanded application of access theory to the SDG agenda, emphasizing the difference between legal ownership and functional benefit. It also critiques narrow interpretations of property rights that ignore communal and cultural dimensions. Practically, the research suggests that performance-based land reform should incorporate participatory planning, capacity

building at the local level, and legal pluralism to recognize both statutory and customary systems. For policymakers, the findings underscore the need to link land programs with food security strategies and social protection schemes, thereby positioning tenure reform as a tool for inclusive development. These insights are especially valuable for government agencies, NGOs, and international donors working on rural transformation in Indonesia and similar agrarian economies.

CONCLUSION

This study has demonstrated that land tenure security is a foundational pillar for advancing rural livelihoods and achieving Sustainable Development Goal 2 in Indonesia. By exploring the intersections between land rights, agricultural productivity, food security, and institutional governance, the research has established a clear link between secure tenure and multidimensional rural wellbeing. Findings reveal that when land rights are clearly defined, accessible, and equitably distributed, they not only increase farm output and household income but also enhance community resilience and food sovereignty. These outcomes affirm the theoretical proposition that property security is central to development and validate the practical significance of sustainable livelihoods and access-based frameworks in evaluating tenure outcomes.

Theoretically, this study has contributed to a more nuanced understanding of tenure by integrating formal and informal systems within a unified analytical model. It affirms that legal recognition alone is insufficient; equitable access and institutional support are equally vital. This reinforces the need to move beyond rigid property rights paradigms toward a more dynamic understanding of tenure as a socio-political and economic construct. The research has also expanded the discourse on tenure reform by framing it as both a legal and development issue embedded within broader global agendas such as the SDGs.

Practically, the findings underscore the urgency of reforming Indonesia's land governance structures. Effective tenure reform must address administrative fragmentation, strengthen local capacity, and include marginalized groups—particularly women and indigenous communities. Policies should promote integrated planning that links land security with rural infrastructure, agricultural innovation, and market access. Furthermore, land reform strategies should adopt a participatory approach that respects adat institutions and aligns with principles of social justice. Future research may build on this study by examining the long-term impacts of tenure reforms on intergenerational rural wellbeing or exploring digital innovations in land administration.

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