Review

Revisiting the Impact of Land Policies Reforms on Agricultural Productivity in Sub Saharan Africa: Focus on Land Ownership

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Revisiting the Impact of Land Policies Reforms on Agricultural Productivity in Sub Saharan Africa: Focus on Land Ownership

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Abstract: The purpose of this research is to assess the impact of land ownership on agricultural productivity and suggest suitable actions that may enhance agricultural productivity, and contribute to economic growth in sub Saharan Africa. For so doing, the paper reviews literature discussing the impacts of recent land policies reforms on land tenure security and agricultural productivity in sub Saharan Africa. By reviewing fifty-five studies, the paper focuses on the assumption that recent land policies reforms lead to land tenure security and enhance investment in a more productive agriculture. The review shows that this assumption is controversial for at least four reasons. First, most available studies do not show empirical evidence to support the above-mentioned effect. Second, there are suggestions that recent land policies reforms can actually threaten 'de facto' tenure security or even lead to the loss of tenure security. Third, customary land tenure systems continue to influence farmers' incentives, and forth, number of farmers remain vulnerable to issues despite land reforms. The review also emphasizes that the effects of land policies reforms on agricultural productivity remain complex and not fully understood. The findings suggest a suitable mix of adaptive land and agriculture policies that enhance agricultural productivity and contribute to economic growth in Africa.

Keywords: tenure security; agricultural productivity; policies reforms; land ownership; Sub Saharan Africa

1. Introduction

Land tenure and agricultural productivity remain critical issues in Africa, where low-income farmers face significant challenges in accessing land, investing in agricultural inputs, and improving productivity. To cope with the issue, land reform has been a pivotal strategy for enhancing agricultural productivity and addressing historical inequalities. Despite policy strategies and reforms that aim to address the challenges and promote sustainable agricultural development, their effects on agricultural productivity remain challenging and the ways in which the existing land tenure systems affect farmer incentives still need clarification. Moreover, low-income farmers remain highly vulnerable to land tenure problems.

A collection of case studies examines recent land reforms in Gambia [58], Burkina-Faso [24,70], Benin [122,126], Ghana [11,17,26], Ethiopia [33,34], Kenya [102], Rwanda [99], Zambia [119], Madagascar [16], Zimbabwe [93] and South Africa [21,23]. It provides insights into the processes and impacts of land redistribution and land administration reforms. The following controversial and diverging hypotheses sustain this research.

Benin [121,126], Burkina Faso [13] and Ghana [9] have a long history of land tenure insecurity, with many farmers relying on customary systems and informal land rights. The farmers' low investment in agriculture over years has led to low agricultural productivity. However, while recent

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land reform has secured land tenure and improved incentive of some farmers, it has threatened 'de facto' tenure security or even lead to the loss of tenure security for others.

Conversely, Zimbabwe's experience with land reform has been more challenging [93]. The country's Fast Track Land Reform Program led to a significant decline in agricultural output, particularly in export crops like tobacco. This decline is due to the redistribution of land to individuals lacking farming experience and resources.

Research comparing land reforms in Zambia and Zimbabwe indicates that Zambia's 1995 land reform led to significant improvements in agricultural productivity and economic growth, while Zimbabwe faced challenges due to the implementation strategies of its land reform policies [119].

In Kenya, the Swynnerton Plan, implemented in 1954, which aimed to intensify agricultural development by consolidating land holdings and promoting cash crop production showed significant implications for land tenure and agricultural productivity [102].

The above illustration and many more provide a comprehensive overview of the multifaceted relationship between land reform and agricultural productivity in Africa, encompassing historical initiatives, policy analyses, and contemporary debates. It prompts the assumption that recent land policies reforms may lead to land tenure security and enhance investment in a more productive agriculture. Therefore, the present research aims to assess the impact of land ownership on agricultural productivity.

2. Materials and Methods

A systematic literature review among fifty-five studies highlights the impact of recent policy strategies and reforms on farmers in general and low-income farmers in particular, either while discussing the presumptions that are stated or implied in the majority of the literature. Because this work is a review, we took inspiration for our review techniques from [115,118] research paper.

To emphasize existing assumptions and research findings on those theories, a thorough search of the literature was undertaken. Subsequently, we used the same literature to determine gaps of investigation on the subjects. The review followed four stages: (1) literature search, (2) data quality assessment, (3) result analysis and interpretation, and (4) discussion. Table 1 below shows the assessment criteria of the evidence on the impact of land policies reforms on land tenure security and agricultural productivity while **Table 2** presents inclusion criteria of the reviewed studies.

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Table 1. Selection criteria of the reviewed studies (1st screening of 160 studies selected on title base)

Description of the initial criteria	Number of concerned studies	Corresponding percentage (%)	Reviewed studies category
Correlation between land policy reforms , land ownership and agricultural productivity sustained by sufficient data and panel information (before and after land reforms) about: • Sub Saharan Africa • Cases of conflicts over land; • Access to loans used to invest in agricultural activities; • Investment amount in agriculture ; • Farm harvest amount; • Improvements in legal land (rights) transactions.	95	59.4	Strong Evidence (eligible to the 2nd screening)
• There is possibility of correlation between land policy reforms , land ownership and agricultural productivity but there is no empirical evidence to sustain the assumption ; • Sudden changes in the agricultural productivity occurred after land reforms happened but it is difficult to certify the origin of such changes; • Occurrence of indirect effects of land reforms such as taxation, land use plan, land consolidation, agricultural transformation. • Studies not directly related to sub Saharan Africa	50	31.3	Weak Evidence (studies kept as references)
This category contains the studies clearly claiming that land policies reforms threatens land ownership which may compromise sustainable agricultural productivity	15	9.3	Rejected studies

Table 2. Selection criteria of the reviewed studies (2nd screening)

Description of the criteria	Number of concerned studies	Corresponding percentage (%)	Reviewed studies category
2nd screening (based on 95 studies)			
Study with an emphasis on the effects of land policies reforms on land ownership processes (which include : land registration, land certification, land titling, land reform, land tenure regulation, and land governance) and agricultural productivity.	85	89.5	Strong Evidence (eligible to the 3rd screening)
Study published between 1980 and 2020 with data gathered during that time frame from sub Saharan Africa; Prior research review should have been carried out within the time frame as well.			
Peer reviewed journal articles, books and technical reports			
Study which does not meet at least 2 of the above criteria	10	10.5	Rejected studies

2.1. Methodology for Searching the Literature

The following search query was created utilizing a list of key phrases that were used in the computer-based literature search approach: *'' Land Policies Reforms'' ''Land Tenure''; 'Tenure security''; ''Land Ownership''; ''Agricultural Productivity''.* Several possible permutations of the search query's composing keywords were applied to various search databases. Databases including SCOPUS, Web of Science, and Elsevier, GOOGLE SCHOLAR were included in the search as well as data from libraries to which the authors are subscribed. Many materials were produced by the initial search efforts, but not all of them were helpful.

Next, we establish the parameters for this review. For the review, three categories of papers were taken into consideration: (1) Books, (2) peer-reviewed journal articles, and (3) technical reports (also known as grey literature) issued by global organizations. For the review, only English-language

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materials that dealt with land reforms, land tenure, land tenure security, and agricultural productivity were taken into consideration.

Studies whose methodological quality was challenging to evaluate systematically (mostly national reports and conference papers) were excluded using a priori methodological quality judgment criteria [22]. The evaluation period was set from 1980 to 2020 since 160 studies seem to be related to the recent history and evolution of evolutionary theory of property rights [23–25]. Indeed, in many developing nations, contentious discussions about land reform began in the period.

The following data was methodically entered into a data extraction form: (1) Document type, (2) title, (3) research field, (4) nation, sub-region, or region; (5) definition, significance, or opinions regarding the impacts of land reforms on agricultural productivity (6) the online library from which the document was obtained, (7) the citation, and (8) the date of the search. After exploring 160 studies, we considered fifty-five for this paper (Tables 1, 2 and 3). Among these, 52 are journal articles, one technical report and two books (Figures 1 and 2). Tables 1–3 show the selection criteria of the reviewed studies from the first to third screening while **Figures 1** and **2** describe the selection process, selection results, and the distribution of the fifty-five reviewed studies.

Table 3. Selection criteria of the reviewed studies (3rd screening)

Description of the criteria	Number of concerned studies	Corresponding percentage (%)	Reviewed studies category
3rd screening (based on 85 studies)			
The abstract of the study provides a clear avenue for investigating how land reforms affect land ownership and agricultural productivity in one or more sub Saharan African country.	55	64.7	Selected for review
The abstract of the study does not provide enough information that assure a clear evaluation of the technique and appropriately interpret the findings.	30	35.3	Weak Evidence (studies kept as references)

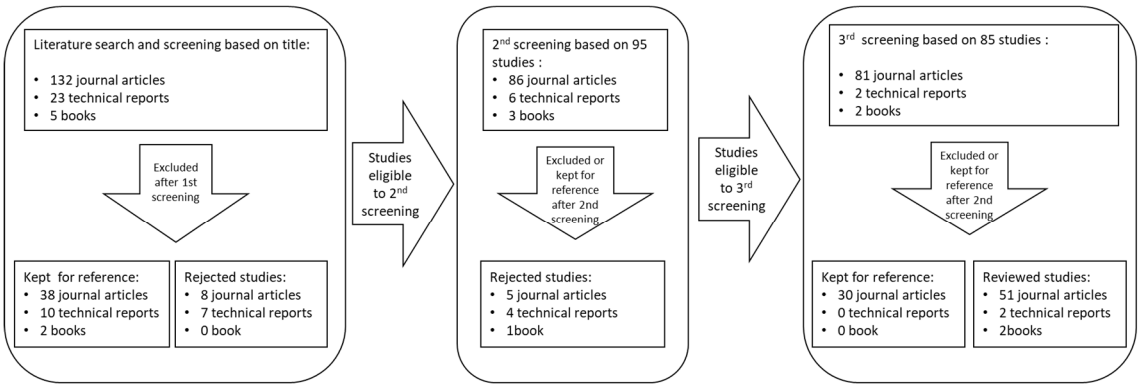

Figure 1. Flowchart of selection process, selection results, and studies inclusion and exclusion.

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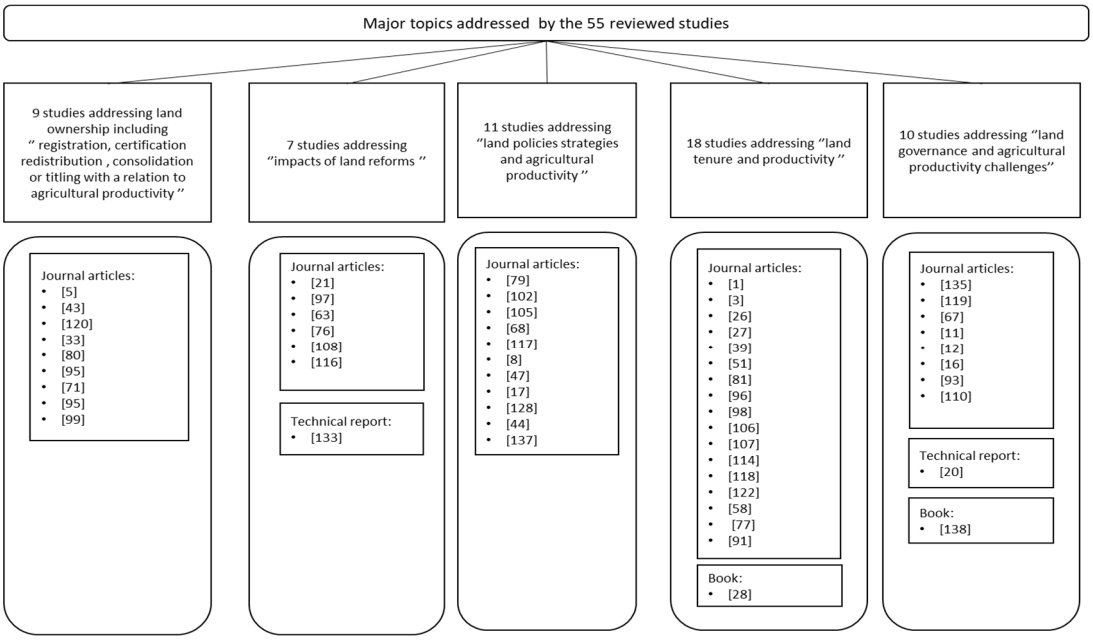

Figure 2. Distribution and classification of the 55 reviewed studies

2.2. Evaluation of the Assessed Studies' Content

For the review, we used a narrative synthesis methodology to assess a wide range of subjects pertaining to land registration, land reform, land ownership, land tenure activities, and consequences, and agricultural productivity covered by the fifty-five studies that are the subject of this article.

At first, we confirmed inclusion criteria of the fifty-five studies to emphasize the effects of land policies reforms on agricultural productivity. In so doing, we examined the trend of agricultural productivity in the countries concerned by this research over the last 3 decades. At this stage, it appeared that securing land ownership (through land redistribution, land tenure reforms and land restitution) played an important role throughout the land policies reforms process.

Then, we determined and evaluated in details the presumptions of how land ownership have affected agricultural productivity. More specifically, for the fifty-five studies concerned by this research, we methodically checked the evidence of the following key factors which trend might have increased or decreased after the occurrence of land reforms processes and particularly after acquiring land ownership in the last three decades:

- Number of conflicts over land in the last three decades;
- Significance of having access to finance for agricultural investment;
- Importance of the investment amount in agriculture;
- Importance of farm harvest amount;
- Improvements in land transactions system.

The assessment based on the key factors allowed setting remarks on the assumption. The following sections discuss the controversial correlation between land ownership and agricultural productivity as the major outcome of this research.

3. Results

3.1. State of Agricultural Productivity in the Reviewed Studies Areas over the Last Decades

Land reform and agricultural productivity are critical issues in Africa, where low-income farmers face significant challenges in accessing land, investing in agricultural inputs, and improving productivity. The continent's agricultural sector is a vital component of its economy, providing food security and income for millions of people. However, the sector is also plagued by inefficiencies,

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including land tenure insecurity, limited access to credit and markets, and inadequate investment in agricultural infrastructure.

In particular, land reform has been a contentious issue with many countries struggling to address the legacy of colonial-era land ownership patterns and the resulting inequalities in land access and ownership. In many cases, small elite hold land, while the majority of farmers lack secure tenure and are unable to invest in their land or access credit and markets. In many African countries, colonial-era land policies resulted in unequal land distribution, where colonial settlers owned large tracts of fertile land while indigenous communities were left with limited access to productive land. Even after independence, these inequalities persisted, often fueling social unrest and limiting economic growth.

Agricultural productivity is also a significant challenge in Africa, with many farmers struggling to produce enough food to meet the demands of a growing population. This is due in part to limited access to inputs such as seeds, fertilizers, and irrigation, as well as inadequate agricultural infrastructure and limited investment in research and development. Recent policy strategies and reforms aimed to address these challenges and promote sustainable agricultural development. These reforms include initiatives to improve land tenure security, increase access to credit and markets, and invest in agricultural infrastructure and research and development.

Recent initiatives highlight ongoing efforts to address land reform and agricultural productivity in Africa. The following examples underscore the importance of integrated approaches that combine land reform with technological support, infrastructure development, and policy coordination to enhance agricultural productivity in Africa.

A comparative analysis of land reform efforts in South Africa and Zimbabwe [93] highlights the challenges and outcomes of redistributive policies. The study emphasizes the importance of context-specific approaches to land reform.

Research comparing land reforms in Zambia and Zimbabwe indicates that Zambia's 1995 land reform led to significant improvements in agricultural productivity and economic growth, while Zimbabwe faced challenges due to the implementation strategies of its land reform policies.

The Swynnerton Plan, implemented in 1954, aimed to intensify agricultural development in Kenya by consolidating land holdings and promoting cash crop production among African farmers [91,102]. This policy had significant implications for land tenure and agricultural productivity.

In the late 1990s, Ethiopia started a land tenure reform program that was first implemented in Tigray, the country's northernmost region. The process of land certification and registration brought about by the reform is anticipated to improve farm households' incentives to make long-term land-related investments by strengthening their tenure security [33,39]. Nearly 50% of the nation's GDP came from the agricultural sector at the time of the reform, up from 70% in 2021 [39]. The agricultural industry was almost entirely dependent on small-scale farmers, who were extremely sensitive to unfavorable climatic and weather occurrences because they relied on rainfall and operated in regions with sloping and frequently damaged terrain.

The current study, conducted thirty years later, demonstrates the program's beneficial and long-lasting benefits on agricultural productivity and climate change mitigation. With a population growth rate of almost three percent each year, Burkina Faso is one of the nations with the fastest rates of population increase in the world. Given that Burkina Faso's agricultural productivity is still very low, this trend has implications for food security. The World Bank's report "Securing Africa's Land for Shared Prosperity" outlines ten steps for improving land governance. These recommendations aim to revolutionize agricultural production and reduce poverty by addressing issues such as land tenure security and administrative reforms. Across Africa, there is a growing movement against industrial-scale agriculture, promoting agro ecology and small-scale farming. This approach emphasizes biodiversity, traditional methods, and environmental sustainability, with farmers in countries like Ethiopia, South Africa, Lesotho, Uganda, and others leading the way.

Benin's land reform and agricultural productivity are closely linked. The country's agricultural sector is a vital component of its economy, providing food security and income for millions of people.

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However, the sector is also plagued by inefficiencies, including land tenure insecurity, limited access to credit and markets, and inadequate investment in agricultural infrastructure. To understand the impact of Benin's land reform and agricultural productivity, a case study of the country's agricultural sector was published in 2023 [122]. The study focused on the following areas: the impact of land reform on agricultural productivity; the role of land ownership security in promoting agricultural investment; the relationship between land tenure insecurity and poverty. The study found that land reform has had a positive impact on agricultural productivity. The formalization of land ownership through the creation of a land registry has improved the security of land ownership and provided farmers with access to credit and markets.

The above references provide a comprehensive overview of the multifaceted relationship between land reform and agricultural productivity in Africa, encompassing historical initiatives, policy analyses, and contemporary debates. They highlight that securing land ownership (through land redistribution, land tenure reforms and land restitution) played an important role throughout the land policies reforms process.

The review of the **fifty-five studies** sustaining the present research shows that based on their historical contexts, African countries have adopted varying approaches to land reforms policies, and socio-economic conditions that can be classified into three major land ownership process groups: (a) land redistribution, (b) land tenure reforms, and (c) land restitution. The trend of agricultural productivity in the reviewed studies areas over the last 3 decades is described in Table 4 while Table 5 presents the major land ownership process groups.

Table 4. Trend of agricultural productivity in the reviewed studies areas over the last 3 decades

Countries	Increase	Decrease	Mitigated	Remarks	Evidence
Zimbabwe		✓		• Consolidation of land ownerships • A sharp decline in agricultural production. • Economic collapse and hyperinflation. • Food insecurity and reliance on food imports.	[93] , [129]
South Africa	✓			• While some gains in productivity have been seen, large commercial farms still dominate production.	[8], [21], [23] [28],[37], [67]
Kenya	✓			• The promulgation of the 2010 constitution alongside the adoption and implementation of the Kenya National land policy has helped in solving most of the issues that surround the purchase and ownership of property.	[91] , [102]
Ethiopia	✓			• At the time of the reform, the agricultural sector contributed to almost 50% of the country's GDP, compared to 70% in 2021.	[1] , [12] [33], [34]
Rwanda	✓			The reviewed studies emphasized positive outcomes including: • Increase of agricultural investment. • Productivity improvement and food security. • Reduction of land conflicts.	[4-6] , [29], [99] , [98]
Madagascar			✓	• The reviewed study focused on the number of households (300,000) who have been able to secure land , which is approximately 1.5 million individuals out of a population of 28 million. The review emphasized inclusive approaches and new technologies, that reduced the cost for a land document. However it revealed a mitigated increase of agricultural productivity due to recent land reforms.	[16]
Burkina-Faso			✓	• The reviewed studies mentioned that over the last decades the country has been struggling to achieve an acceptable level of agricultural productivity.	[13] , [24], [70], [81]
Benin	✓			• The formalization of land ownership has improved the security of land ownership and provided farmers with access to credit and markets. • The more access to credit and land market has promoted incentive to invest more in agriculture • In Benin and Ghana in particular , the reviewed studies mentioned a significant increase in agricultural productivity • In Burkina-faso an increase of agricultural productivity is perceptible even though it did not reach the predictions • In Gambia and Zambia, agricultural productivity has been slowly increasing in the last decades	[9] , [11] ,[12], [17],[26],[51], [58],[119], [122],[124]
Ghana	✓				
Gambia	✓				
Zambia	✓				

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Table 5. Summary of the major land ownership approaches developed in the reviewed studies area in the recent decades

Land ownership approaches	Number of reviewed studies	Description
Land Redistribution	14	Land redistribution involves transferring land from large-scale landowners to small-scale farmers or landless people.
Land Tenure Reforms	30	• Reforms focusing on securing land rights by providing formal titles to landholders. • Approach aiming to increase investment in agriculture; improve access to credit by using land as collateral; enhance productivity by giving farmers long-term land security.
Land Restitution	11	Land previously taken under colonial or apartheid regimes is returned to its original owners or their descendants.

3.2. Evidence of the Correlation Between Land Ownership and Agricultural Productivity in the Reviewed Studies Areas

The nature and degree of the relationship between ownership and agricultural performance have been formally evaluated in a number of studies conducted in African settings during the 1990s (e.g., [58] in Gambia; [11,17,26] in Ghana, [12] in Uganda, Ghana and Ethiopia, [91] in Kenya and [99] in Rwanda). With very few exceptions, it was discovered that land rights had no discernible impact on whether farmers invested in land improvement, applied inputs that increased yield, obtained credit, or increased land productivity. As illustration, studies involving Ghana [11], Kenya [102], and Rwanda [98] found "no connection between cross-sectional disparities in land rights and productivity". The authors contend that in Rwanda, where the right to bequeath was a major factor in determining some forms of land improvements, the links were the most noticeable. Short-term agreements were typically used to rent or borrow Rwandese plots that could not be bequeathed. The renter had no reason to invest as a result. Furthermore, there did not seem to be a strong connection between land rights and the usage of formal loans. In addition, there was no discernible correlation between land rights and crop productivity in Kenya. The study discovered that yields were not significantly impacted by the existence of land titles. These findings run counter to the commonly accepted belief that titling and tenure security increase yields and raised doubts about the power of land registration and titling initiatives.

Controversially, although there is little evidence to support the connections between land ownership and income, productivity, or access to credit, there is compelling evidence that land ownership has a positive impact on agricultural investments according to a recent literature analysis [122]. According to Li and Zhang [82], land policy reforms have typically improved agricultural output in Africa and can offer a practical long-term answer to food security.

On the other side, in sub-Saharan Africa, where customary tenure is prevalent, land titling remains important challenge and titling are best suited for people who can meet requirements, like collateral and deposits or down payments, as well as the market-based interest rates required to obtain formal credit. This has happened in Uganda, where Kamusiime and Rugadya [65] assert that instead of giving farm households a chance to escape poverty, the change in customary tenure represented by systematic delineation increased tenure instability.

Tenure insecurity would also adversely affect the relationship between the right to lease out land and agricultural productivity, according to [39,81,110]. According to these empirical findings, informal land rights—that is, landowners' subjective opinions about what they may and cannot do with their plots—have varying effects on production, while formal land rights—that is, land titles—have no effect at all. The auhors argue that a successful land reform program is predicated on a feasible land administration that is based on excellent governance, suitable resources, equity, quality,

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commitment, and cultural sensitivity.This suggests that land tenure systems are safe, free from corruption, adaptable, and inclusive. The existence of a systematic relationship between land ownership and productivity in small-scale agriculture is also questioned by other studies [93].

Overall, the relationship discussed in this paper is controversial and indicates that there is still much to learn and more evidence regarding land ownership and agricultural productivity needs to be produced (Table 6).

Table 6. The controversial relation between land ownership and agricultural productivity from the reviewed studies

Controversial factors affecting agricultural productivity despite land reforms		Related studies	Remarks on the review of each category of study	Implication for agricultural productivity	Final Remarks and suggestions from the review
The reviewed studies in some extend acknowledge the overall positive effects of land reforms, but the lack of sufficient empirical evidence to support the above-mentioned effect and other factors may compromise the result for agricultural productivity.	Challenges for investing in agricultural inputs, and improving productivity.	[135] [119], [20] [67],[11]	Land policies reforms can threaten 'de facto' tenure security or even lead to insecurity of tenure.	The insecurity of land tenure may threaten agricultural productivity.	• The relation between land policies reforms and agricultural productivity remains ambiguous despite the many literature produced on the subject. • There is still much to learn and more evidence regarding land ownership and agricultural productivity needs to be produced. • Adaptive policies that promote sustainable land governance and enhance agricultural productivity may contribute to economic growth in Africa.
	Challenges in accessing to a secured land.	[12],[16] [93], [110] [138], [122]			
	Vulnerability of land owned under customary systems.	[13], [16] [122],[28]		The farmers' vulnerability to issues related to land tenure may affect their incentives to invest on agriculture.	

4. Discussion

4.1. The lack of Sufficient Empirical Evidence to Support the Principal Assumption

Land reforms has become more significant in the research on agricultural productivity during the past forty years. According to the fundamental argument explored by this research, farmers make investments to increase the productivity of their agricultural system while being legally protected by a secured ownership (through land redistribution, land tenure reforms, land restitution) (tabkle 5). Indeed, [15] argue that land transactions supported by land registration and land restitution serve as the foundation for land tenure reforms. The data acquired through registration is a component of a system that may be accessible to buyers, sellers, and renters, hence increasing market transparency. Moreover, confidence may be ensured when obtaining bank loans through land registration and the ensuing legal structure. Since land and agriculture are the primary sources of income in many sub saharan african countries, the loans could be used to fund related companies and agricultural endeavors. According to early research, land ownership is enhanced by the guarantee provided by a tenure-registration document. Farmers without secured ownership are likely to have poorer investments and land improvements, [58–60]. The ability of land tenure reforms to increase perceived tenure security is another consequence that has been highlighted and debated in the literature [48,54], fifty-five and 57]. More recent studies examine the advantages of land registration initiatives –leading to land ownership - over a longer period of time, attempting to show a connection between agricultural productivity and the security of land tenure [60,61,65]. According to studies in Ethiopia [33,34] and Benin [122] land certification has increased agricultural investment and enhanced tenure security. The studies came to the conclusion that enhancing tenure security can have a favorable impact on investment choices, particularly in the early phases of formalization. The authors claim that households are choosing to invest in long-term and perennial cash crops rather than subsistence crops because of increased tenure security brought about by program demarcation operations [33,34,122]. Overall, the paper focuses on the assumption that recent land policies reforms lead to land tenure security and enhance investment in a more productive agriculture. However, the review shows that the lack of sufficient empirical evidence to support the above-mentioned effect and other factors may compromise the result for agricultural productivity.

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4.2. Challenges for Investing in Agricultural Inputs, and Improving Productivity

According to [46,51], it is unclear, whether or not legally recognized land tenure affects agricultural output, or even how much that type of tenure promotes more productive agriculture. Despite the recentely occurred land reforms in designated sub saharan African countries, 5 of the reviewed studies emphasized challenges for investing in agricultural inputs, and improving productivity. More specifically, some studies revealed that the high illiteracy and population migrations have disfavorable effects on land investment, indicating that enhancing agricultural production involves more than just land tenure. It is suggested that combining land tenure and sustainable investment methods which involve sociological constraints may result in resolving the challenges.

4.3. Challenges in Accessing to a Secured Land

The majority of the reviewed literature mentions how recent land reforms have affected the security of land tenure, but there are no studies that specifically address the connections between agricultural productivity and land ownership. Moreover, six of the reviewed studies emphasized challenges in accessing to a secured land. Through this research, we discovered that there is a dearth of research on how land ownership itself affects agricultural productivity and the security of land tenure. Although it may have a significant influence on farmers' decisions and, consequently, agricultural output, the process of land ownership—including the procedures and strategies employed for land registraton, land titling, land redistribution, and land certification—is therefore poorly understood. For instance, some scholars emphasize that a more thorough definition of the term "tenure security" itself is required before it is possible to make a legitimate claim about whether land registration will increase investment and production. It is necessary to identify the factors that affect such security in addition to property titles. Land registration is, in fact, a complicated social intervention rather than merely a technical issue. Therefore, to get the desired outcomes from land titling, historically developed social relations and situations must be taken into account.

4.4. Vulnerability of Land Owned Under Customary Systems

Several research on tenure and its effects on agricultural productivity have indicated that tenure can encourage agricultural investment. However, a growing body of recent data indicates that the contrary might also be true. At least three of the reviewed studies emphasized vulnerability of landowners under customary systems. In rural Burkina Faso for example, [13] demonstrate that stronger land rights has a good impact on agricultural investment while weaker land rights have a negative impact. In addition, the availability of multiple land system approaches contributes to the complexity. Therefore, understanding land policies impact on farmer incentives in a diverse population where formal and informal land rights coexist is very challenging. Indeed, it is quite difficult to understand how a group of farmers with formal and/or informal rights to lands are affected by land tenure concerns in terms of their incentives. The main problem, from the above remain latent rights, with great insecurity and increased conflict levels. Despite the rapid economic development occurred in many countries in the last decades, significant land redistribution pressure due to unresolved land concerns, a weak agricultural framework, and widespread societal conflicts, have seriously compromised agricultural productivity.Important elements to address ownership issues are overlooked by the research methodologies we discovered during our review. It is suggested that academics should give more attention to significant elements that affect tenure security, such as the significance of specific local customs like customary land rights and developmental initiatives like land taxation and land consolidation.

5. Conclusions

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This paper reviews and points out challenges and opportunities of land ownership for agricultural productivity and show that there is a reasonable need for more study on the topic. These claim that land policy reforms would provide land tenure security, resulting in land ownership, which would enable farmers to use their land parcels to obtain bank loans and make investments in modern farming technologies and systems to boost yields at a reduced production costs. In other words, farmers are more inclined to invest in agriculture that is more productive when they own a secured land. The review emphasizes that while land ownership can encourage investment and improve yields, the overall impact varies depending on implementation and local contexts.

The number of studies that specifically address the relationships between land ownership and agricultural productivity are limited, despite the fact that land tenure systems are frequently discussed in the literature as affecting agricultural productivity. Thus, the impact of the land ownership on agricultural productivity is in many cases studied not enough documented. In addition to that, the problematic on the real correlation between land ownership and agricultural productivity remain at high controversies.

Even though the study advances knowledge of how land policies reforms influences land tenure security - leading to agricultural productivity -, the intricacy of how land ownership affects the connections between land tenure security and agricultural productivity, is beyond the scope of the methodologies employed in the majority of the studies in our evaluation. The findings are relevant for suggesting adaptive policies that promote sustainable land governance, ultimately aiming to design interventions that enhance agricultural productivity and contribute to economic growth in Africa. According to these, a mixed methods approach is required, combining growing fluxes of spatial and time-series data from various sources with trials and, when practical, randomization. When paired with simulations, household-farm panel data gathered over an extended period can also yield important insights into the relationships.

Author Contributions: S.G.N.E. conducted the literature search, developed the methodology, analyzed the results, drafted the manuscript, and finalized it. H.N. supervised the entire study, provided suggestions on the draft manuscript, and conducted proofreading. All authors have read and agreed to the published version of the manuscript

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