

博士論文審査結果報告
Report on Ph.D. / Doctoral Dissertation Defense

National Graduate Institute for Policy Studies (GRIPS)

政策研究大学院大学

Professor KIJIMA Yoko

教授 木島 陽子

審査委員会を代表し、以下のとおり博士論文審査に合格したことを報告します。

On behalf of the Doctoral Dissertation Review Committee, I would like to report the pass result of the Doctoral Dissertation Defense as follows.

プログラム名 Program	政策分析プログラム Policy Analysis Program	
学位申請者氏名 (ID) Ph.D. Candidate (ID)	Solomon Haddis Teklehaymanot (PHD16103)	
Dissertation Title 論文タイトル (タイトル和訳)	Essays on Impact Evaluations of Land Registration and Certification Program in East Africa 東アフリカにおける土地登記証明書プログラムのインパクト評価	
学位名 Degree Title	博士 (開発経済学) Ph.D. in Development Economics	
論文提出日/ Submission Date of the Draft Dissertation	2022年5月19日/ May 19, 2022	
論文発表・審査会開催日/ Date of the Defense and the Doctoral Dissertation Review Committee	2022年6月16日/ June 16, 2022	
論文最終版提出日/ Submission Date of the Final Dissertation	2022年8月24日/ August 24, 2022	
審査委員会/ Doctoral Dissertation Review Committee	主査 Main referee	木島 陽子 KIJIMA Yoko
	審査委員 Referee	LITSCHIG Stephan
	審査委員 Referee	WIE Dainn
	審査委員 Referee	松本 朋哉 小樽商科大学 MATSUMOTO Tomoya Otaru University of Commerce
	審査委員 (博士課程委員会) Referee (Doctoral Programs Committee)	城所 幸弘 KIDOKORO Yukihiro

※ タイトルが英文の場合、文部科学省に報告するため、和訳を付してください

Please add a Japanese title that will be reported to MEXT.

1. Summary of Defense and Evaluation

This thesis includes two main chapters and both chapters provide rigorous impact evaluations of the land certification program implemented in Ethiopia. In many African countries, land tenure is not secure mainly due to a lack of formal land rights. In the case of Ethiopia, the land is owned by the government, and the use right is given to the people. Before the program, the land had been reallocated occasionally to accommodate increased population growth. Such insecurity deters long-term investment in land, which causes low agricultural productivity. The economic transformation to industrialization in the developed countries was experienced by increased agricultural productivity, which releases excess labor from rural to urban areas and supplies labor for the manufacturing sector. In Ethiopia where about 80% of the population is engaged in small-scale low productivity agriculture and the government has implemented to foster industries, it is critical to strengthen land security. The Ethiopian government introduced a land registration and certification program in the mid-2000s, one of the largest land administration programs in Africa. Existing studies found that land certification programs increased agricultural productivity by encouraging land-related investment. However, it has not been studied whether the program that enhanced tenure security activated labor market participation and access to credit.

Chapter 2 examines the impacts of land certification on migration. By using a 10-year panel dataset and difference-in-differences approach, the candidate finds not precisely estimated zero impacts of the land certification program that activated the labor market on average while those who had an expectation of land redistribution in the near future tend to have a lower probability of seasonal migration than those who did not have the such expectation. Thus, the results suggest the importance of de facto tenure security.

Chapter 3 examines the effects of weather shocks on household consumption in Ethiopia and how the household responses to weather shocks differ depending on whether they receive land certification. Without access to irrigation and weather insurance, farm households tend to suffer from weather-related shocks.

Existing studies suggest that the effect of shock mainly depends on the capacity of individuals to protect against it and the strength of their social network. As the land certificate is expected to make households to have better access to credit, it can play a role in mitigating the negative weather shock on household consumption. Using the difference-in-differences (DID) approach, it is found that though weather shocks negatively affected household consumption expenditure, households with land certification can smoothen consumption expenditure mainly by obtaining formal and informal credit.

The dissertation defense was held on June 16, 2022. Evaluation by an external reviewer and sub-advisors was positive that the study covers important research topics and this dissertation has academic contribution and policy implications, which deserves a Ph.D. degree. The revised draft was submitted two months after the defense and reviewed by the referees. Except for a few comments that cannot be dealt with due to data limitations, the candidate made revisions following the comments. It was accepted one week later. The doctoral dissertation review committee recommends that GRIPS award the degree of Ph.D. in Development Economics to Mr. Solomon Haddis Teklehaymanot.

2. Dissertation overview and summary of the presentation.

This thesis includes two main chapters and both chapters provide rigorous impact evaluations of the land certification program implemented in Ethiopia. In many African countries, land tenure is not secure mainly due to a lack of formal land rights. In the case of Ethiopia, the land is owned by the government, and the use right is given to the people. Before the program, the land had been reallocated occasionally to accommodate increased population growth. Such insecurity deters long-term investment in land, which causes low agricultural productivity. The economic transformation to industrialization in the developed countries was experienced by increased agricultural productivity, which releases excess labor from rural to urban areas and supplies labor for the manufacturing sector. In Ethiopia where about 80% of the population is engaged in small-scale low productivity agriculture and the government has implemented to foster industries, it is critical to strengthen land security. The Ethiopian government introduced a land registration and certification

program in the mid-2000s, one of the largest land administration programs in Africa. Existing studies found that land certification programs increased agricultural productivity by encouraging land-related investment. However, it has not been studied whether the program that enhanced tenure security activated labor market participation and access to credit.

Chapter 2 examines the impacts of land certification on migration and participation in the land rental market. The candidate uses 3 rounds (2004, 2006, and 2014) of the panel data called Research on Poverty, Environment, and Agricultural Technology (RePEAT). By exploiting the different implementation timing of the land certification program, he estimates the causal impact of the program on migration by applying a difference-in-differences approach. The candidate finds not precisely estimated zero impacts of the land certification program that activated the labor market on average while those who had the expectation of land redistribution in the near future tend to have a lower probability of seasonal migration than those who did not have the such expectation. Thus, the results suggest the importance of de facto tenure security. Based on the finding that labor mobility is not facilitated by land certification, he explores if land certification changes participation in the land rental market. This is because the land certification can decrease the possibility of conflicts between landowners and tenants, which may increase the land rented out. However, landowners who obtain land certificates may intensify farming practices by increasing land-related investment in their plots, suggesting that the certification program does not affect the probability of renting land. Estimation results show that there is no significant effect of the program even on land rental markets. Finally, he tests and finds that land certification increases agricultural production and household welfare. Therefore, the land certification has limited impact on activating the land rental and labor markets but led to higher agricultural productivity and welfare.

Chapter 3 examines the effects of weather shocks on household consumption in Ethiopia and how the responses to weather shocks differ by land certification. Without access to irrigation and weather insurance, farm households in African countries in general and Ethiopia, in particular, tend to suffer from weather-related shocks. Existing studies suggest that the effect of shocks depends on the capacity of individuals to

protect against it and the strength of their social network. As the land certification is expected to make households to have better access to credit by using the certificate as collateral, it can play a role in mitigating the negative weather shock on household consumption. The role of land certification on consumption smoothing is, however, understudied. Using two waves (2011 and 2015) of nationally representative panel household data from the Ethiopia Living Standards Measurement Study (LSMS) and the difference-in-differences approach with household fixed effects, it is found that though weather shocks negatively affected household consumption expenditure, households with land certification can smoothen consumption expenditure. Further analyses show that households with the land certification program are more likely to obtain credit when facing natural shocks. The findings, however, do not indicate that households borrow money from banks. Rather the credit is obtained informally from others such as relatives and friends. This finding suggests that the land certification helps farm households in extreme conditions by providing some sort of collateral.

3. Evaluation Notes from the Doctoral Dissertation Review Committee (including changes required to the dissertation by the referees)

Overall, the candidate has done careful analyses given the available data and nicely deals with important policy-related questions with a novel contribution to the literature. The committee members agreed that the presentation was clear and the dissertation was good enough for awarding the degree. Nevertheless, there were recommendations for the papers to be made stronger by addressing several points for future journal publications.

First, the timing of the land certification program in each village should be shown in the graph to indicate if the impact of the program is long-term or not (chapter 2).

Second, the conceptual framework of how the land certification program affects migration needs to be clarified (chapter 2).

Third, the self-reported weather shock variable and the land certification rates should be checked and changed to a village-level variable (chapter 3).

Fourth, the village-level land certification rates can measure the social capital in the village and if so, the estimated weather-shock mitigation effect of the land certification can be explained by other factors, not the land certification. This possibility should be tested and verified the robustness of the results (chapter 3).

4. Confirmation by the Main Referee that changes have been done to the satisfaction of the referees and final recommendations

About two months after the defense, the candidate submitted the revised manuscript to the committee members along with a note that described changes in response to the comments and questions at the defense.

They checked the new version and found that the revisions were made appropriately. On August 24, 2022, the final version was submitted, and the main adviser found it satisfactory.

The doctoral dissertation review committee recommends that GRIPS award the degree of Ph.D. in Development Economics to Mr. Solomon Haddis Teklehaymanot.