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**Timeline**

2013-2020

**Sample Size**

475 collective land titles

**Data Repository**

<https://dataverse.harvard.edu/dataset.xhtml?persistentId=doi%3A10.7910/DVN/2LYW...>

**Research Implemented by IPA**

Yes

# The Impact of Strengthening Individual Property Rights on Agricultural Investment and Intra-Household Bargaining in the Philippines

## Abstract

When people have formal rights to their land, are they more likely to invest in it? Do changes in land tenure affect gender equality in the household? In the Philippines, researchers partnered with the Philippines Department of Agrarian Reform (DAR) to evaluate the impact of subdividing collective land titles into individual titles on agricultural investment and output and the channels—namely tenure security and land transfers to more productive farmers—through which these impacts may materialize. They also investigated whether changes to land titles affected intra-household bargaining and decision-making on land. At the time of the follow-up survey, only four percent of farmers had received their formal individual titles, while 58 percent had completed the land title subdivision and demarcation

phase. Overall, this phase did not affect agricultural output, but it reduced farmers' tenure security, trust in local officials, certain types of agricultural investment, psychological welfare, and women's decision-making power in households with male beneficiaries.

## Policy Issue

Private property rights are generally considered one of the key pillars of economic growth and development. Property rights over agricultural land in particular are central to policymaking given their potentially important role for agricultural productivity and investment. There is a large body of theoretical literature on the potential effects of private property rights on agricultural productivity, generally through tenure security, access to credit, and gains from trade. There is also increasing interest in the effects of these rights on gender equality within and outside the household, women's economic empowerment, and bargaining power. However, limited experimental evidence exists on how property rights impact outcomes such as agricultural investment and intra-household decision-making and the channels through which this may occur. This study contributes to research on how changes in property rights impact the agricultural investment of male and female farmers and whether changes to land titles affect intra-household bargaining and decision-making on land.

## Context of the Evaluation

In 1988, the Philippine government launched the Comprehensive Agrarian Reform Program (CARP), which continues to this day. The program has redistributed approximately 4.9 million hectares of land from private landowners and government properties to small-scale farmers and landless people who live in rural areas throughout the country. Under political pressure to redistribute land more quickly, the Department of Agrarian Reform (DAR) began giving out land in bundles to groups of farmers. These "collective" land titles accelerated the pace of land redistribution but were recognized to have numerous issues relating to tenure security and the efficient functioning of land markets: farmers receiving collective titles had unclear boundaries, lacked individual property rights, and were unable to legally sell their land. Although the land is owned collectively under these titles, the separate parcels were managed individually by farmers.

Recognizing the many problems with collective titles, the DAR has begun subdividing these titles and awarding farmers with individual titles. The study is designed to take advantage of this unique opportunity to study the effects of providing formal individual property rights in an agricultural context. However, the results presented below represent the impact of an intermediate stage of the process, documenting the impacts while beneficiaries' land rights are in transition. As such, the lessons learned relate to the process of parcelization and cannot be generalized to the impacts of individual property rights or of the parcelization program.

## Details of the Intervention

The parcelization process broadly consists of two main milestones: 1) the subdivision and demarcation of individual agricultural parcels within the collectively titled landholding, and 2) the registration and distribution of individual title documents. Partnering with the DAR, researchers aimed to study the impact of the subdivision of collective titles and provision of individual titles on the agricultural investment of male and female farmers and whether changes to land titles affected intra-household bargaining and decision-making on land. Researchers randomly assigned 475 collective land titles to one of two groups:

1. The treatment group, where collective land titles were subdivided and farmers will receive individual land titles; and
2. The comparison group, where collective land titles were not parcelized and land remained under collective land titles for the duration of the study.

Researchers also stratified the randomization to ensure balance between farmers who were members of Agrarian Reform Communities (ARCs) that receive complementary support services to improve their productivity and those outside of them. They also stratified the randomization by whether the landholding was “compensable” or not. The CARP is a market-based program whereby landowners are compensated for privately owned land that is acquired by the government and redistributed to farmers. These lands are defined as “compensable” because beneficiaries must pay the government-owned Land Bank of the Philippines under a 30-year payment schedule once they receive individual titles. “Non-compensable” lands, largely lands previously held by the government, are awarded at no cost to the farmer.

Researchers conducted an initial survey between July 2015 through May 2018 and a follow-up survey between November 2019 and February 2020. They measured the impact of the subdivision of collective titles on agricultural output and investment, feelings of tenure security, gains from trade, welfare, migration, and aspirations. They also interviewed farmers and their spouses separately to measure impacts on intra-household bargaining, perceptions of spousal ownership, participation in decision-making, and agency.

## Results and Policy Lessons

This study measures impacts of an intermediate stage of the parcelization process—the subdivision and demarcation of individual agricultural parcels—and does not estimate impacts of parcelization or of formalized, individual property rights. Although the study’s initial plan was to evaluate the impacts of the provision of individual land titles, only 4 percent of farmers received their individual title documents at the time of the follow-up survey due to long processing delays. It is plausible to expect impacts before individuals received their individual title documents, given the subdivision already provides clarity on the precise area owned by each farmer and resolves disputes among farmers holding collective titles. However, these impacts may also be different from the impacts after the completion of the process because transitions can create anxiety and uncertainty. This study looks at

impacts approximately 20 months after the DAR conducted subdivision surveys.

*Agricultural output and investment:* There were no statistically significant impacts on the agricultural output of the subdivided parcels or most types of investment. However, researchers find suggestive evidence that farmers were less likely to leave their land fallow for productivity reasons (i.e. land normally used for farming that is left inactive to recover) and a reduction in plans to make large investments like barns or granaries.

*Land transfers:* Farmers who had their land subdivided were twice as likely to lease out their awarded land parcel and less likely to till the land themselves. Researchers find suggestive evidence that female farmers, who have fewer assets, are more likely to lease out their land than men. The increase in leasing may be linked with increased clarity in rights and boundaries of the parcel. Moreover, the DAR requires that the parcel is tilled during the parcelization process. Farmers may also lease the land to engage in more off-farm work activities while still meeting the tilling requirement, especially female farmers who have more education and less farming experience than their male counterparts. However, off-farm activity was not measured during the follow-up survey. Leasing may also be related to pawning the land to access credit to meet household needs, which is aligned with commonly reported reasons for leasing. Farmers may also lease to more productive farmers in order to prepare to make the amortization payments.

*Feelings of tenure security and psychological welfare:* Farmers' perceptions of tenure security and perceptions of the local government's ability to effectively enforce their property rights declined after the subdivision survey. It also increased farmers' anxiety levels by 9 percent and decreased their life satisfaction by 26 percent. The declines in the perceived effectiveness of local officials to enforce property rights were larger for female farmers. These impacts may be due to delays in the process, breeding uncertainty and eroding trust in government officials, as it had been 20 months since the subdivision survey without receiving a title. Compounding this uncertainty, during the parcelization process, farmers relinquish their collective land title documents, so these documents can be canceled and the individual title document issued. Lack of participation and information may also be contributing factors as a quarter of farmers reportedly did not engage in the process at all and only 37 percent believed they could easily obtain more information on the process if they wanted.

*Intra-household bargaining and decision-making:* Researchers found that intra-household bargaining and decision-making changed as a result of the subdivision process, in particular in households where men were the initial Agrarian Reform Beneficiary (ARB). Wives of male ARBs reported lower levels of decision-making on the land, in particular in the ability to have their opinion prevail in the case of a disagreement with their spouse on a land-related decision. This decline in decision-making authority may be linked to decreased perceptions of spousal ownership, as fewer wives of male farmers reported their names on the title. The shift in decision-making is also aligned with a shift in gender norms among male farmers, who were less likely to believe that women should be decision-makers on land they own. Researchers did not observe a similar trend in the households of female ARBs, and if anything, there was a shift towards more gender-equal decision-making on the land.

*Agrarian Reform Communities (ARCs):* Land title subdivision affected farmers in ARCs differently than those outside them, likely due to the greater access to information and to complementary support services within these communities. Increases in leasing and decreases in perceived tenure security and effectiveness of local officials to enforce land rights were concentrated in areas outside of ARCs that have more limited access to support services. Within ARCs, there were no statistically significant impacts on tenure security, and farmers increased their attempts to invest in sheds and irrigation. However, declines in psychological well-being and in women's decision-making authority were concentrated within ARCs, suggesting that the average impacts of land title subdivision were spread across different segments of the population.

*Compensable lands:* Farmers on compensable lands were 25 percentage points more likely to lease their land and experience declines in tenure security and increased anxiety that farmers on non-compensable lands do not. These farmers may be leasing their parcels to diversify their income and engage in off-farm work to ensure they can maintain the anticipated payment schedule and avoid foreclosure. At the same time, leasing may reduce their tenure security because their absence on the land may reduce their ability to stake their claim on the parcel during a key transition where doing so is important. Coinciding with a decline in tenure security, farmers on compensable land draw back on plans to make large infrastructure investments like barns and granaries while farmers on non-compensable land were more likely to attempt these investments. Declines in trust in government were greater for those on compensable lands than those on non-compensable lands.

Although impacts of an intermediate stage of the process cannot be used to draw conclusions about the potential benefits of parcelization or of individual property rights more broadly, results demonstrate the importance of evaluating not just the final outcomes of a program but the impacts of intermediate stages of a program that can span several years. Doing so can help identify implementation challenges and can provide course correction to improve the experiences of the beneficiaries. Further research is needed to provide evidence on the impacts of the registration and distribution of individual land titles.

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