

EVIDENCE-INSIGHTS-POLICY

DO LARGE FARM ESTABLISHMENTS CREATE BENEFITS FOR NEIGHBORING SMALLHOLDERS?

CONTEXT

The growing global demand for agricultural produce following the 2007/08 food price spike, triggered an increase in private sector demand for agricultural land. This establishment of large commercial farms prompted a policy debate on local “spillover” effects of such investments on host communities, in addition to questions more in general around land governance. Quantifying the direction and magnitude of these spillover effects is essential for policy surrounding for policy on large-scale land-based investments and maximizing benefits for smallholder farming and local communities.

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METHODOLOGICAL INNOVATION

A study by Ali, Deininger and Harris (2019) set out to develop an empirical methodology that would allow for systematically quantifying the effects of

commercial agriculture expansion on smallholder farmers and farm workers. Using existing multi-year survey data on commercial farms and smallholder farmers, the study quantified spillovers of large farm establishments in Ethiopia by exploiting the role of spatial proximity as the main channel of transmission.

DATA SOURCES AND ANALYSIS

The analysis uses georeferenced data from the annual smallholder agricultural production survey collected by Ethiopia's Central Statistical Agency (CSA) between 2003/4 and 2013/14. This was combined with data on the evolution of all opera-

tional farms above 50 ha from the CSA's 2014 large farm census. The mean effects of establishing new large farms on key agricultural indicators for neighboring smallholders are estimated for four major crops (maize, wheat, sorghum and teff) cultivated by both types of farms, using variation in large farm establishment over time and space is used to identify causal impacts. Data on individual labor supply collected in the 2011/12 and 2013/14 LSMS-ISA panel is also used to estimate local labor market effects from large farm establishment.

Quantifying the direction and magnitude of local spillover effects of commercial farms on smallholders and host communities is essential for policy design.

Spillovers effects can be calculated by exploiting variations of large farm establishment over time and space, while exploiting proximity with smallholders as the main channel of transmission.

RESULTS

Density functions for changes in distance over time between smallholders and the next large farm, illustrate the rapid expansion of large farms over the study period, and a clear decrease in distance between smallholders to the next commercial farm. As a result, the scope for interaction between large and small farms, which was very limited in 2004, expanded.

Two types of spillover effects are estimated, namely crop specific spillovers, where transmission occurs between smallholders and large farms growing the same crop, and generic

spillovers arising between smallholders and large farms regardless of crops.

The main transmission channels are assumed to be transfer of knowledge, provision of access to markets for inputs and outputs, or implicit credit and insurance services provided by large farms. Specifically, the study tests if and to what extent large farm formation in Ethiopia benefited or harmed neighboring smallholders by affecting (i) their use of inputs (in particular fertilizer); (ii) labor demand and job creation; and (iii) crop yields.

The study finds that between 2004 and 2014 new formation of commercial farms did not contribute to job creation and provided, at best, modest benefits for neighboring smallholders in terms of technology, input market access, and resilience to crop shocks.

POLICY IMPLICATIONS AND FOLLOW UP

For Ethiopia, the results indicated that a more strategic approach was required to maximize smallholder benefits from large farm formation. The findings were used by the Ethiopian investment center to improve the developmental impact of commercial agriculture.

This study also contributed to finetuning the instruments and methodology of the

The study finds that commercial farms have at best modest benefits for productivity of neighboring farms and do not create new jobs, requiring a more strategic approach to maximizing benefits.

medium and large commercial farm survey implemented by the Central Statistical Agency (CSA) further strengthening the ability of policy makers to monitor and analyze the performance of commercial agriculture. The approach developed for calculating spillover effects was applied successfully elsewhere, such as in Mozambique (Deininger and Xia, 2016).



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