The Migration Consequences of Input Subsidies

Full Paper Coming Soon: Click Here for Most Recent Version

Binta Zahra Diop*†
University of Oxford

October 20, 2022

Abstract

Input subsidy programs (ISP) aim to increase agricultural productivity. For many farmers, however, outmigration may be preferred and more profitable. Using reduced-form and structural estimations, I exploit variations in the roll-out of an ISP in Zambia to understand the determinants of internal migration for credit-constrained farmers. First, I use a difference-in-differences strategy to show that the ISP increases fertilizer adoption but also doubles the rates of individual outmigration. Consistent with farmers being credit constrained, I find that 30% of the variance in total outmigration can be explained by farmers monetizing the subsidy in resale markets. Second, I estimate a structural model to compare the ISP to alternative policy counterfactuals. Working with a model that incorporates a network externality related to fertilizer adoption and use, I find that the ISP with resale markets fosters specialization. I find that an alternative program of cash transfers targeted to the same households would generate 18% lower outmigration and no change in fertilizer adoption relative to the ISP. In contrast, a revenue-neutral non-targeted cash transfer program would substantially increase outmigration, while in-kind transfers would lead to substantial losses in efficiency, reducing both migration (-15%) and fertilizer adoption (-75%).

Keywords: Input Subsidies, Migration, Agricultural Productivity, Sorting

JEL Codes: R23, O33, Q12

*Department of Economics, University of Oxford, bintazahra.diop@economics.ox.ac.uk

†I am grateful to D. Gollin, M. J. Williams, and I. Ruiz for their continued support, guidance, patience, and advice. I thank J. Labonne, A. Teytelboym, G. Ulyssea, C. McIntosh, H. Low for their detailed comments and discussions on various versions of this manuscript. To N. Moneke, V. Pouliquen, and V. Khandelwal, for their invaluable advice and wisdom. I am indebted to my fellow PhD students G. Schinaia, S. Hou, L. Milsom, H. Zillessen, S. Mukherjee, J. Pougué-Biyong, C. Pougué-Biyong, S. Altmann, and P. Hadunka for numerous conversations and comments. Finally, I thank M. Ngom, S. Quinn, Y. Zylberberg, T. S. Jayne, A. B. Diop, Aysatou Ndiaye, J. Gignoux, R. Lajaaj, F. Schillbach, and numerous seminar participants and discussants.