Input Subsidies with Heterogeneous Productivity: Allocative Efficiency, Sorting, and Migration in Zambia

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Abstract

Rural antipoverty programs often focus on increasing agricultural productivity by transferring resources to farmers. Yet, many farmers' most productive investment may be in another technology: migration. I explore the impacts of such programs on productivity and on migration. First, I use a difference-in-difference exploiting variations in the roll-out of a Zambian fertilizer input subsidy program (ISP). As expected, the ISP increases rates of fertilizer adoption, yields, and rural labor supply via inmigration. There is an additional two-fold increase in individual outmigration. I show that short-term outmigration (consistent with a relaxed credit constraint) and medium-term oumigration (consistent with structural transformation driven by agricultural productivity gains) account for respectively 30% and 45% of the total variance of outmigration. Household specializing in their comparative advantage can explain these dual results. Second, I generalize these findings with a structural general equilibrium framework accounting for an externality in adoption. When compared with cash and in-kind transfer policy scenarios, the ISP with resale markets fosters the highest levels of specialization.When farmers' types are costly to elicit, resale markets can improve the allocative efficiency of programs, turning voucher programs into cash-transfers to resellers and an in-kind transfers to net-buyers.

Keywords: Input Subsidies, Migration, Agricultural Productivity, Sorting

JEL Codes: R23, O33, Q12

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