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Public-Private Cooperation in Extension Services - Impact on Agricultural Development in Sub-Saharan Africa

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Abstract

Different channels and models of agricultural extension services have been implemented in sub-Saharan Africa with modest results in terms of input adoption, productivity and subsequent farm revenue increases. The lack of comprehensive data on agricultural extension services that serve farmers in sub-Saharan Africa makes it difficult to ascertain their contribution to agricultural development over time. Only limited empirical evaluation exist of the impact of different extension services models on farm revenue. The same is true for panel data studies on novel partnerships concerning fertiliser adoption. We fill this gap by analysing the performance of different channels and models of extension services on farm revenue and public-private cooperation on fertiliser uptake in Nigeria over time. Up until the mid-2000s, fertiliser usage was low in Nigeria compared to the sub-Saharan Africa average. Consequently, the Government of Nigeria enacted the Agricultural Transformation Act, which engages private agro-dealers in the procurement and distribution of subsidised fertiliser and improved seeds. For instance, farmers could purchase fertiliser (also from private extension service agencies at market prices and could use e-vouchers issued by the Government to pay for it. The e-vouchers can be accessed by registered farmers via a mobile phone-based electronic voucher system.

Using the 2009/10 and 2012 Living Standard Measurement Study (LSMS) of the World Bank and an ordinary least squared (OLS) regression, we analyse the performance of different channels and models of extension services on farm revenue in Nigeria. Furthermore, the difference-in-difference methodology investigates fertiliser uptake among farmers participating in private extension services prior to and after the implementation of the National Fertiliser Policy and the subsequent policy measure i.e. the e-vouchers.

The results suggest that farm inputs (incl. fertiliser) and on-farm extension visitations positively influence farm revenue. With regard to the on-farm visitations, public extension services compared to private extension services were more effective in terms of revenue generation. Furthermore, procurement of fertiliser by farmers from private extension services has increased compared to the situation prior to the e-voucher programme and this could raise agricultural output in Nigeria the near future.

Keywords: Agricultural policy, extension services, farm profitability, fertiliser adoption, Nigeria, sub-Saharan Africa.