

Promoting the Adoption of New Rice Varieties

Addressing the Costs of Early Adoption



In brief

- Whether subsidies should be granted for agricultural inputs is a large policy debate. Malawi and India have heavily subsidized fertilizer and thus received mass takeup. However, some are concerned that subsidization leads to an expectation of continued subsidies which may undermine long run takeup at market prices.
- This study will attempt to examine the cost-effectiveness and long-term implications of one-time adoption subsidies. The cost-effectiveness will also be assessed vis-à-vis structured training programs.
- Given the limited budgets available to Sub-Saharan African governments, it is vital that they get value for money. Thus, it is crucial to understand whether short term subsidies work and whether training (extension) services are a complement or substitute to this.
- Extension services are expensive and often account for a large part of a government's budget. Thus it is important to understand the cost-benefit trade-off of extension services as well as potential substitutes for such services.
- This proposed study will be of interest to the Sierra Leonean Ministry of Agriculture and its' affiliated NERICA project, as well as post-conflict agencies such as the International Rescue Committee (IRC).
- The authors aim to provide evidence on how to make the dissemination of improved rice varieties scalable and sustainable for public as well as private seed multipliers.

Policy Motivation

“We will provide evidence on the cost-effectiveness and long-term implications of one-time adoption subsidies”

The role of subsidies for agricultural inputs is at the center of a large policy debate. There are influential examples of mass take up of agricultural technologies through heavy subsidization— fertilizer is heavily subsidized in Malawi and India. Others are concerned that initial subsidization leads to an expectation of continued subsidies which may undermine long run take up at market prices.

Our project will contribute to this debate in two main ways. We will provide evidence on the cost-effectiveness and long-term implications of one-time adoption subsidies. To the extent that initial take-up is correlated with price, we will also be able to study the dynamic spread of new rice varieties over time and the return to farmers of these new rice varieties looking not just at yield but also labor and input use.

The relative cost-effectiveness of the proposed subsidy scheme will also be assessed vis-à-vis structured training programs. There is dearth of empirical studies that carefully evaluate the impact of extension programs. As this type of programs take a significant portion of aid money, we believe that providing evidence of their impact is a policy relevant priority.

Policy Impact and Audience

Our study has a number of different target end users, including humanitarian relief and post-conflict agencies such as the International Rescue Committee (IRC), agricultural agencies and donors, and private seed multipliers seeking to promote sustainable markets for improved seeds.

The IRC is interested in using the results of this research to inform their programming in Sierra Leone and other countries. In particular, IRC is frequently working in situations where new seeds and fertilizer can provide a short term boost to output but are constantly faced with the dilemma of whether their short term support may undermine longer term adoption by creating expectations of give aways. Their involvement in this research is driven by their desire to have good evidence on which to make this decision in future.

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Policy-makers such as the NERICA project at Sierra Leonean Ministry of Agriculture (MAFFS) have also expressed interest in the results of the proposed intervention. The government is currently focused on multiplying seeds so that it has sufficient NERICA seeds available to sell across the country in 2011-2012. They have said this project would help inform how they promote the adoption of NERICA once they have put in place good seed multiplications systems.

Lastly, we are aiming to provide evidence on how to make the dissemination of improved rice varieties scalable and sustainable for public as well as private seed multipliers. Our project relies on a collaboration with one of the few agricultural entrepreneurs operating in Sierra Leone, Genesis Farms Ltd. Throughout this partnership, we will help commercial farmers develop the optimal pricing and

marketing strategy to reach a large number of smallholders, and thereby how to encourage commercial farmers to look into market opportunities (rather than public procurement) for improved seeds.

Policy Implications

“It is crucial to understand whether short term subsidies work and whether training (extension services) are a complement or substitute to this”

The most important policy implications that will come from this research relates to the optimal way to structure policies and incentives to encourage adoption of new improved agricultural technologies. Given the limited budgets available to governments in Sub-Saharan Africa, it is crucial for them to spend the money where they will get the biggest bang for the buck. Therefore, it is crucial to understand whether short term subsidies work and whether training (extension services) are a complement or substitute to this. Extension services are expensive and often account for a large part of a government’s budget. It is important to therefore understand the cost- benefit trade off to such extension services as well as potential substitutes for such services. This project will be able to provide answers to these questions. In addition, the project will better understand the returns to NERICA and ROK varieties over other locally used traditional varieties.

Implementation and Dissemination

Once the final results are completed and reports have been submitted, we plan to present widely in Sierra Leone as part of the dissemination efforts. Given one of our partners on the research is the Sierra Leone Agricultural Institute, we would present the results to this part of the government. In addition, the findings have implications for other similar countries in West Africa, which provide opportunities for more dissemination. Finally, the CGIAR system across the world would be another natural place to disseminate these results to.

About the authors

Rachel Glennerster is Lead Academic for the IGC's Sierra Leone programme. She is also Executive Director of the Abdul Latif Jameel Poverty Action Lab (J-PAL), and sits on the UK government's DFID Independent Advisory Committee on Development Impact. Before joining the IGC, Rachel Glennerster worked on debt relief and the reform of the international monetary system at the IMF, and financial regulation at the Harvard Institute for International Development and the UK Treasury. In the mid-1990s she was part of the UK delegation to the IMF and World Bank. She has a PhD in economics from Birkbeck College, University of London.

Tavneet Suri is the Maurice F. Strong Career Development Professor and an Associate Professor of Applied Economics at the MIT Sloan School of Management. Suri is a development economist, with a regional focus on sub-Saharan Africa. Her research centers on agriculture, household financial access and informal risk sharing, and, more recently, governance and political participation. A large body of her work focuses on the constraints to technology adoption in agriculture. Her most recent work has focused on governance issues in the Kibera slum in Nairobi and a large scale field experiment she conducted in Kenya during the 2013 general election. She is the Scientific Director for Africa for J-PAL; a Faculty Research Fellow at the National Bureau of Economic Research; an affiliate of BREAD and CEPR; and co-director of the Agriculture Research Program at the International Growth Center. Suri holds a BA in economics from Trinity College, Cambridge University, as well as an MA in international and development economics, an MPhil in economics, and a PhD from Yale University.

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International Growth Centre,
London School of Economic
and Political Science,
Houghton Street,
London WC2A 2AE



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