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Assessing the Impact of Agricultural Research on Poverty Using the Sustainable Livelihoods Framework

Michelle Adato and Ruth Meinzen-Dick

Many studies simplify the linkages between agricultural research and poverty and measure only one or two aspects of those linkages. This approach may miss important aspects of poor people's lives, including the diverse ways in which technology affects their livelihoods. This paper presents an alternative approach that is being employed in a study of the impact of agricultural research on poverty. This study, led by the International Food Policy Research Institute (IFPRI) on behalf of the Consultative Group on International Agricultural Research's (CGIAR) Standing Panel on Impact Assessment (SPIA), currently includes five case studies. The common thread in these case studies is the use of the sustainable livelihoods framework as the starting point for the analysis. The framework is more complex than those used in many approaches and calls for interdisciplinary research methods. Experience to date suggests that the approach is not only manageable, but provides important additional insights that would not otherwise be obtained from conventional research approaches.

The Sustainable Livelihoods Conceptual Framework

The sustainable livelihoods framework offers a conceptual framework for understanding causes of poverty, analyzing relationships between relevant factors at micro, intermediate, and macro levels, and prioritizing interventions. This framework is gaining currency with those trying to understand the multiple and interacting causes of poverty, and designing or evaluating interventions. Key aspects of this framework, as applied in this study of the impact of agricultural research on poverty, include

- expanded understanding of the dimensions of poverty and how to measure it;
- emphasis on vulnerability to natural phenomenon, market shocks and trends, and social conflict and how this shapes livelihood strategies and choices in technology;
- examination of physical, natural, financial, human, and social capital assets (and the constraints on access to assets) and how people combine these in their livelihood strategies;
- study of the varied range of livelihood activities and strategies that people pursue, recognizing that many different activities are pursued simultaneously, including on and off-farm work;
- understanding how the institutional environment at the

micro and macro levels influences livelihood strategies and outcomes and impacts of interventions;

- looking beyond aggregated household or head counts to consider the significance of social differentiation by class, ethnic group, gender, and other factors.

Policies, institutions, and processes interact to shape the choice of livelihood strategies. These, in turn, shape the livelihood outcomes, which are often the types of impact we are interested in. However, those outcomes are not necessarily the end point, as they feed back into the future asset base.

Experience with the IFPRI/SPIA project has shown that, although use of the sustainable livelihoods framework can appear daunting, its use in assessing the impact of agricultural research is both manageable and helpful in suggesting relationships to examine. Use of a common conceptual framework facilitates comparison of results across the SPIA case studies. These case studies were originally developed with a variety of different research questions, conceptual frameworks, and research designs. When the sustainable livelihoods framework was adopted, the first step was to look at how the original questions "mapped" into this framework. Many issues that had been identified related to either aspects of vulnerability, assets, intervening institutions, livelihood strategies, or outcomes. After this mapping exercise, other critical questions that arose were prioritized according to their importance and their linkage to the impact of the agricultural technologies under consideration. The result was a set of key questions and hypotheses. In the analysis phase, the sustainable livelihoods framework will structure the analysis, synthesize the information gathered, and make comparisons across case studies.

Limitations of the Sustainable Livelihoods Framework

Although it is still early for taking stock of the framework and its analytical potential, certain limitations have emerged in applying it at the study design phase. One objective of the SPIA project is to test the framework in the context of agricultural research and adapt it

to increase its usefulness. In designing the SPIA case studies, we identified factors that are not captured in the framework and yet are important to explaining people's decisions and consequent livelihood outcomes. One aspect is the notion of "culture," e.g., beliefs, traditions, status, and identity. Culture may not have direct economic value but it is centrally important in people's lives, choices, and well-being. Culture

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can have economic value as well, such as where assets are transformed into tourism or handicraft production. Power relationships, politics, and historical experience are other concepts that do not easily fit into the framework but which shape people's livelihood options and strategies, including their technology choices. These limitations can be addressed by using the framework in conjunction with concepts drawn from other conceptual frameworks or fields of study.

Another aspect of the framework is that it does not explicitly address the differential conditions, assets, and strategies of socially differentiated groups. Therefore, additional explicit attention must be given to the implications of gender, ethnicity, class, or other types of social differentiation. It is likely that in a given community, livelihoods analyses will need to be conducted for different social groups, and sometimes even at the level of the individual rather than the household.

Research Methods

Although neither surveys nor qualitative data collection alone can cover all the questions raised by the sustainable livelihoods framework, by piecing together data from a variety of sources, it is possible to cover key aspects of the framework. Such a combined approach can actually provide a more convincing analysis than any single method. This is because people respond differently to quantitative and qualitative information. Numbers are required to convince some audiences, while others will be unimpressed by numbers but relate more to in-depth and contextual information. Triangulation and crosschecks on the results of different methods can improve confidence in the overall study. Use of quantitative and qualitative methods provides a richer base for analysis, where data from each method help to interpret the other.

In the IFPRI/SPIA studies, the major data-collection methods used include surveys, focus groups, key informant interviews, in-depth household case studies, and secondary data. The studies combine social and economic (as well as some biophysical), qualitative and quantitative, participatory

and conventional (or extractive) data. Although there is often a tendency to equate social, qualitative, and participatory data collection on the one hand, and economic, quantitative, and extractive data on the other, the studies also collect quantitative social information, qualitative economic information, and use both participatory and extractive methods for each.

Conclusions

The sustainable livelihoods framework is gaining popularity as an approach for addressing poverty among a wide range of development organizations. The framework introduces many factors and relationships that are often missing from conventional reductionist approaches. This can provide important insights about the reality that rural households, especially the poor, face. Households and even individuals are not regarded as only "farmers," "laborers," or "business operators." Instead, a wide range of livelihood strategies is recognized. The outcomes include much more than just income levels or food security. There are important dimensions of people's lives that the framework does not explicitly address. These must be integrated into the framework or addressed through the inclusion of other types of analysis in the study.

Agricultural research and technologies may not play a central role when we take into account the full picture of people's livelihoods. But understanding the full picture can help develop technologies that better fit in with the complex livelihood strategies, especially of the poor.

Conducting impact studies using the sustainable livelihoods framework requires interdisciplinary teams with different skills in data collection and analysis, but with a shared commitment to the research and interest in each other's contributions. The framework can then provide a basis for overcoming disciplinary boundaries, help build a more complete analysis of the impact of agricultural research, and point to how technologies could further improve the livelihoods of the poor.

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2033 K Street, N.W.
Washington, D.C. 20006 U.S.A.

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