

## ECONOMIC AND SOCIAL RESEARCH COUNCIL END OF AWARD REPORT



### For awards ending on or after 1 November 2009

This End of Award Report should be completed and submitted using the **grant reference** as the email subject, to **reportsofficer@esrc.ac.uk** on or before the due date.

The final instalment of the grant will not be paid until an End of Award Report is completed in full and accepted by ESRC.

Grant holders whose End of Award Report is overdue or incomplete will not be eligible for further ESRC funding until the Report is accepted. ESRC reserves the right to recover a sum of the expenditure incurred on the grant if the End of Award Report is overdue. (Please see Section 5 of the ESRC Research Funding Guide for details.)

Please refer to the Guidance notes when completing this End of Award Report.

<b>Grant Reference</b>	RES-167-25-0361		
<b>Grant Title</b>	What Development Interventions Work? The long-term impact and cost-effectiveness of anti-poverty programs in Bangladesh		
<b>Grant Start Date</b>	01 March 2008	<b>Total Amount</b>	£247, 058.95
<b>Grant End Date</b>	30 September 2010	<b>Expended:</b>	
<b>Grant holding Institution</b>	International Food Policy Research Institute		
<b>Grant Holder</b>	Agnes R Quisumbing		
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<b>Co-Investigators (as per project application):</b>		<b>Institution</b>	
Bob Baulch (Co-ordinator/research fellow)		Chronic Poverty Research Centre	
Akhter Ahmed (Senior research fellow)		IFPRI	

## 1. NON-TECHNICAL SUMMARY

Please provide below a project summary written in non-technical language. The summary may be used by ESRC to publicise your work and should explain the aims and findings of the project. *[Max 250 words]*

While Government and NGOs in Bangladesh have undertaken many interventions designed to help individuals and households escape poverty, few studies have evaluated their long-term impact. Using a newly available longitudinal data set, this project attempted to: (1) assess the long-term impact of three antipoverty interventions in Bangladesh—microfinance, the introduction of new agricultural technologies, and educational transfers—on a range of monetary and non-monetary measures of well-being; (2) examine institutional and contextual factors underlying the performance of these interventions; and (3) compare their cost-effectiveness in attaining their development objectives. Differences between short- and long-term impacts of the agricultural technologies arose from dissemination and targeting mechanisms; divisibility of the technology; and intrahousehold resource allocation. Programs disseminated through women’s groups, while having smaller impacts on household per capita expenditures and household assets, improved women’s asset holdings and child nutritional status. Limited coverage, lack of geographical targeting, and the declining real value of the Primary Education Stipend were responsible for the remarkably small impact of this nationwide program. Microfinance emerged as an important cause of wellbeing improvement in the qualitative work, while the impact of the PES was limited by its low monetary value. The life-histories showed little long-term benefit from the agricultural technology programmes, possibly because they were bundled with microfinance and separate impacts were difficult to attribute. The project utilized an active user engagement strategy involving regular policy workshops and media coverage in Bangladesh to stimulate policy dialogue among key stakeholders and contribute to the design of future anti-poverty interventions.

## 2. PROJECT OVERVIEW

### a) Objectives

Please state the aims and objectives of your project as outlined in your proposal to the ESRC. *[Max 200 words]*

The purpose of this project was to understand the long-term impact of three anti-poverty interventions—microfinance, new agricultural technologies, and educational transfers —on poverty and well-being in Bangladesh and to compare the cost-effectiveness of these interventions. Specifically, it investigated:

- What are the long-term impacts of each of the interventions on per capita consumption and gender disaggregated measures of monetary and non-monetary well-being?
- What is the impact of each of the interventions on physical and human capital accumulation?
- What underlying processes, at the household, community, and national levels, have contributed to the success or failure of these interventions?
- Which of the three interventions is most cost effective?

## b) Project Changes

Please describe any changes made to the original aims and objectives, and confirm that these were agreed with the ESRC. Please also detail any changes to the grant holder's institutional affiliation, project staffing or funding. *[Max 200 words]*

No major changes were made to project objectives. While the original intent was to use both quantitative and qualitative methods to evaluate all three anti-poverty interventions, the diffusion of microfinance to all but the most isolated villages in Bangladesh made it impossible to maintain the treatment and control design for the microfinance interventions. Thus, the impact of the microfinance intervention was investigated using qualitative techniques (life histories) only. Both quantitative and qualitative methods were used to evaluate the other two interventions (agricultural technologies and educational transfers). There were no changes to the grantholder's institutional affiliation, project staffing, or funding.

## c) Methodology

Please describe the methodology that you employed in the project. Please also note any ethical issues that arose during the course of the work, the effects of this and any action taken. *[Max. 500 words]*

Research methods involved both quantitative and qualitative techniques, applied to a newly available longitudinal data set that resurveyed 1,787 core households in 102 villages in rural Bangladesh. The panel is based on evaluations previously conducted by the International Food Policy Research Institute on microfinance, the micronutrient and gender impact of new agricultural technologies, and food and cash transfers for education.

The quantitative evaluation took advantage of the treatment and comparison groups established in the original evaluation and maintained in the longitudinal study. Because randomised assignment to the treatment and comparison groups was not possible, we used nearest neighbour (covariate) matching to create statistical comparison groups that were as alike in all possible (observable) ways to the intervention group except for participation in the intervention. Unlike propensity score matching, nearest-neighbour covariate matching uses analytical standard errors and does not rely on bootstrapping. Difference-in-difference methods, which remove any unobserved differences between treatment and comparison groups that do not change through time, were then used to estimate the impact of the intervention over time on a wide range of monetary and nonmonetary measures of wellbeing.

The qualitative evaluation combined life history interviews with process tracing to identify the impact of reported events on the livelihood trajectories of a subsample of panel households. Semi-structured life-history interviews were conducted with one male and female adult from 161 households drawn from the larger panel studies, stratified both by intervention and poverty status. Counterfactual ideas were introduced in the life-history interviews by inviting the participants to consider the effect(s) of past events on present circumstances and well-being levels. When participants identified events or episodes that had made a significant difference to their present well-being, they were invited to consider the thought-experiment of how different their lives would have been if these had not taken place. Such thought experiments allowed the identification of linkages and causal mechanisms between events and outcomes, which might not have been possible using observed regularities in the panel data. The life history interviews also identified the most important causes of improvement and decline over the participants' life

trajectories. Post-coding of these causes was done using NVivo 8 (a qualitative data analysis software package) and the resulting frequency rankings helped to identify the main causes of improvement in people's lives.

The project also analysed the motivation and policy processes underlying changes in the administrative structure and the implementation mechanisms of the interventions through interviews with the major stakeholders and a review of the published and 'grey' literature within Bangladesh. The cost data provided by the implementation agencies (and other organisations) permitted an exploratory comparison of the various interventions according to their cost-effectiveness, which compared the per taka cost of achieving impact on various monetary and nonmonetary measures of wellbeing.

No unexpected ethical issues were encountered during the project, which relied on analysis of data that had already been collected. The anonymity of respondents was preserved by changing the names of individuals, households and their villages in all project outputs.

#### **d) Project Findings**

Please summarise the findings of the project, referring where appropriate to outputs recorded on *ESRC Society Today*. Any future research plans should also be identified. [Max 500 words]

The project examined a wide range of long-term outcome variables at the household and individual levels. Long-term impacts on household-level consumption expenditures and asset accumulation were insignificant in the improved vegetables sites, but were positive in the individually operated fishponds sites. At the individual level, early adoption had beneficial effects on nutrient intakes in all sites, but impacts on anthropometric measures of nutritional status were gender-differentiated. Among early adopters in the improved vegetables villages, women's Body Mass Index (BMI) increased while men's BMI decreased. The proportion of stunted girls and thin boys decreased substantially among early adopters in the improved vegetable villages, but stunting rates of girls were higher among early adopters in both individual and group fishponds villages. Differences between short- and long-term impacts of the agricultural technologies arose from dissemination and targeting mechanisms; divisibility of the technology; and intrahousehold resource allocation.

Women's assets were found to increase more when technologies were disseminated through women's groups. In the improved vegetables and group fishpond sites, dissemination through women's groups reduced gender asset inequality in the long-term but husband-wife asset disparities increased in the individual fishpond sites. These results suggest that social capital, as embodied through women's groups, substituted for physical assets in the short run and helped to build up women's asset portfolios in the long run.

The Primary Education Stipend (PES) program was shown to have negligible impacts on school enrollments, expenditures, calorie and protein consumption at the household level. At the individual level, the PES had a negative impact on grade progression, especially among boys from poor households who are ineligible to receive stipends at the secondary level. There were some improvements in height for age among girls and BMI among boys. Nonetheless, the impacts of the PES were remarkably small for a program of its size. Poor targeting, particularly limited coverage and lack of geographical targeting, plus the declining real value of the stipend were the most plausible reasons for this lack of impact.

The qualitative analysis found that educational transfers contributed positively for 29 percent of participants, but its impact was limited by low monetary value of benefits. More than half of respondents had used microfinance for some kind of income-generating activity in their lives. For almost a fifth microfinance was an important cause of wellbeing improvement, but about a third had used microcredit to cope in crises. The life-histories showed little long-term benefit from the agricultural technology programmes, possibly because the technologies were bundled with microfinance and difficult to attribute.

The mixed results of comparing impacts on monetary versus non-monetary measures of wellbeing illustrated the dilemmas of using cost-effectiveness to rank anti-poverty interventions with different objectives and measures of impact. While the PES and individual fishponds did increase per capita expenditures or assets, they did poorly in terms of improving nutritional status. Assessing the long-term impact and cost-effectiveness of competing development interventions therefore involves trade-offs between objectives, with all the difficulties of welfare ranking and weighting that such trade-offs imply.

#### **e) Contributions to wider ESRC initiatives (eg Research Programmes or Networks)**

If your project was part of a wider ESRC initiative, please describe your contributions to the initiative's objectives and activities and note any effect on your project resulting from participation. *[Max. 200 words]*

Not part of a bigger ESRC initiative.

### **3. EARLY AND ANTICIPATED IMPACTS**

#### **a) Summary of Impacts to date**

Please summarise any impacts of the project to date, referring where appropriate to associated outputs recorded on *ESRC Society Today*. This should include both scientific impacts (relevant to the academic community) and economic and societal impacts (relevant to broader society). The impact can be relevant to any organisation, community or individual. *[Max. 400 words]*

*Scientific impacts:* The series of papers produced by this project are among the few to estimate long-term impacts of anti-poverty interventions and compare them with earlier estimates of short-term impacts. The use of both quantitative and qualitative methods in this study also contributes to the growing acceptance of “q-squared” research for undertaking economic and social impact assessment. The papers produced under this project have been submitted for consideration in a special issue of the *Journal of Development Effectiveness*. While acceptance in this journal is not guaranteed, this body of work contributes to the literature documenting longer-term impacts of development interventions on a range of household- and individual-level outcomes.

*Economic and social impacts:* These findings were shared over the project period in Bangladesh through policy seminars, meetings with stakeholders, and coverage in major print and online dailies. Following a press briefing on the medium term impact of the Primary Education Stipend in October 2010, the recommendation that stipends needs to be increased and better targeted attracted considerable coverage in the major daily newspapers. Around six months later it was

announced that the level of the Primary Education Stipend would be increased, although it is difficult to attribute that policy decision specifically to this research.

The results of the long-term impact of the agricultural technologies (Kumar and Quisumbing 2010a, 2010b) have been used as inputs into discussions regarding Bangladesh's Food Security Investment Strategy. Working with the Government of Bangladesh, the US Agency for International Development and IFPRI, co-Investigator Ahmed organized a high-profile Food Security Investment Forum attended by the Prime Minister and selected Ministers in May 2010 for which policy papers were commissioned. The outputs from this study were cited in preparing these papers. Ahmed will be outposted to Dhaka in July 2011 to be Chief of Party of the Bangladesh Policy Support and Strategy Program.

Presentations and policy briefs from the project were distributed at the Chronic Poverty Research Centre's international conference in September 2010. Subsequently, these briefs were highlighted in the website of the Centre for Global Development, a Washington DC based think tank. These briefs are currently being translated into Bangla. Findings from the agricultural technology program were also presented in a video format in a TEDx Washington Circle event on "Igniting Change: The Gender Match."

#### **b) Anticipated/Potential Future Impacts**

Please outline any anticipated or potential impacts (scientific or economic and societal) that you believe your project might have in future. *[Max. 200 words]*

As the findings of this project continue to be disseminated through policy briefs (both in English and Bangla), scholarly journals and IFPRI and CPRC's ongoing policy engagement in Bangladesh, we expect that this project will encourage policymakers and donors to pay more attention to the long-term impacts of development projects. The results that demonstrate differences between household- and individual-level outcomes emphasize the need to pay attention to gender-differentiated impacts of development interventions, as well as potential tradeoffs among development objectives. We hope that the eventual publication of a special issue of the *Journal of Development Effectiveness* devoted to the project results, will further increase the attention paid to divergences between short and long term impacts in other developing countries and among donor organizations

You will be asked to complete an ESRC Impact Report 12 months after the end date of your award. The Impact Report will ask for details of any impacts that have arisen since the completion of the End of Award Report.

#### 4. DECLARATIONS

Please ensure that sections A, B and C below are completed and signed by the appropriate individuals. The End of Award Report will not be accepted unless all sections are signed.

Please note hard copies are NOT required; electronic signatures are accepted and should be used.

##### A: To be completed by Grant Holder

Please read the following statements. Tick ONE statement under ii) and iii), then sign with an electronic signature at the end of the section.

###### i) The Project

This Report is an accurate overview of the project, its findings and impacts. All co-investigators named in the proposal to ESRC or appointed subsequently have seen and approved the Report.	<input checked="" type="checkbox"/>
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###### ii) Submissions to *ESRC Society Today*

Output and impact information has been submitted to <i>ESRC Society Today</i> . Details of any future outputs and impacts will be submitted as soon as they become available.	<input checked="" type="checkbox"/>
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**OR**

This grant has not yet produced any outputs or impacts. Details of any future outputs and impacts will be submitted to <i>ESRC Society Today</i> as soon as they become available.	<input type="checkbox"/>
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**OR**

This grant is not listed on <i>ESRC Society Today</i> .	<input type="checkbox"/>
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###### iii) Submission of Datasets

Datasets arising from this grant have been offered for deposit with the Economic and Social Data Service.	<input type="checkbox"/>
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**OR**

Datasets that were anticipated in the grant proposal have not been produced and the Economic and Social Data Service has been notified.	<input type="checkbox"/>
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**OR**

No datasets were proposed or produced from this grant.	<input checked="" type="checkbox"/>
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