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# SCIENCE COUNCIL BRIEF

## STANDING PANEL ON IMPACT ASSESSMENT

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## Impacts of a 'Food for Education' Program in Bangladesh

A 'Food for Education' program, which rewarded poorer families in Bangladesh with food in return for regular attendance of their children at school, has been judged an outstanding success by analysts from IFPRI – the International Food Policy Research Institute (IFPRI), based in Washington, DC.<sup>1</sup> The program led to 20–30 per cent increases in school participation rates, and resulted in students staying on at school 0.4–1.4 years longer than they otherwise might have done. By 2000, 7 years after the start of the program, more than one-quarter of all primary schools in Bangladesh were covered by the scheme, and 13 per cent (more than 2 million) of all primary school students.

Economic analyses by IFPRI showed that, as a result of improved school attendance and duration, boys taking part in the Food for Education (FFE) program could expect to increase their lifetime earnings by 11–18 per cent, and girls by 33–35 per cent. In each case, the higher figures are based on the student obtaining urban rather than rural employment. These increases would mean a return to investment in the program by the Government of Bangladesh and the United States Agency for International Development (USAID) of between 18 and 26 per cent. If the cost to the families involved is taken to be the opportunity costs of foregoing wages from child labor as a result of sending their children to school, then private economic returns would be at least double these national returns. The estimates of national and private returns were particularly high for girls. The return to the original investment of US\$151,000 in IFPRI's involvement in the FFE program, particularly as a result of its role in the inception of the pilot program, and the way that IFPRI's positive evaluation of this phase led to the program's early expansion, was conservatively estimated at 64–96 per cent. This estimate was based on an assumption, supported by interviews with policy-makers and collaborators in Bangladesh, that the FFE program began a year earlier than it would have done had IFPRI not been involved.

Quite apart from the economic returns to the FFE program, there are all the other benefits that additional schooling brings, such as improved health and nutrition, and increased empowerment and political involvement. Not to be overlooked in this case are the benefits to the 50 or so Bangladeshi people who were trained by IFPRI to do the survey work and analysis involved in evaluating the program. That training was so successful that three of the original analysts and field supervisors went on to set up their own data analysis company, whose clients now include international bodies such as the European Union and the World Bank. Taken overall, the benefits suggest that the FFE program has been a sound economic investment and a powerful tool for poverty alleviation, especially among rural women.

## Background to the program

The aim of the FFE program was to encourage poor families in rural areas to enroll children in primary school and to keep them there, in line with the Government of Bangladesh's policy at the time, which gave top priority to improving primary school attendance. The hope was that this would reduce long-term poverty, improve nutrition, and improve the targeting of government food subsidies towards the most needy. To qualify for the program, families had to meet at least one of four criteria:

- Be landless or nearly landless (own less than 0.5 hectares)
- Derive their main source of income from day labor
- Have a female head of the household
- Derive their livelihood from low-income occupations.

If selected to take part, families qualified for a monthly free food ration (which they could choose to eat or sell) provided at least one of their children had been to primary school that month and had attended at least 85 per cent of the classes. School management committees and teachers were responsible for selecting the eligible families and for keeping the attendance records. The school management committees arranged with the Ministry of Food the monthly deliveries of food to local warehouses for the families to collect.

The FFE program began in Bangladesh on a small scale in 1993, was expanded between 1994 and 2000 until it covered 27 per cent of the country's primary schools,

and was eventually wound up in 2002 in favor of a Cash for Education (CFE) program. The origins of the FFE program, and its eventual demise, were much influenced by concerns on the part of the government and donors about 'leakages' – the diversion of subsidized food rations away from the intended recipients. Leakages from the rural food rationing scheme that preceded FFE and that was managed by grain dealers were estimated to be as high as 70 per cent. In the early years of the FFE program, when it was managed by teachers, leakages were as low as 7 per cent, reflecting the program's success in terms of reaching its intended beneficiaries. Eventually, however, this very success, and the resulting increase in class size, meant that teachers were too busy to oversee the scheme and in 1999 management of the food rations had to be handed back to private grain dealers. As a result, once again, some estimates showed a worrying increase in leakages to more than 75 per cent, leading the government to end the FFE scheme, even though later estimates by IFPRI suggested leakages had only reached 14–17 per cent.

## IFPRI's role

IFPRI's contribution to the FFE program was fourfold. IFPRI staff were involved in the program's original conception, in an evaluation of the pilot program that led to its expansion, in improving the targeting of food rations, and in training and strengthening the capacity of local staff to carry out surveys and conduct economic analyses.

IFPRI research in Bangladesh in the late 1980s provided evidence to support government and donor concerns about the high level of leakages from the existing rural food rationing system. In response, the government abolished that system and set up a working group, chaired by an IFPRI staff member, to think of alternatives. It was that working group that came up with the idea of a scheme based on delivering a food ration to families in return for their children's school attendance. The working group's recommendation was accepted by the government and IFPRI was then asked by the government to evaluate the pilot FFE program. Its findings of much reduced leakages, increased student enrollment and attendance, and reduced drop-out rate were widely acknowledged to have influenced the government's subsequent decision to support a rapid expansion of the FFE program.

Between 1997 and 2001, IFPRI once again became involved in Bangladesh, with support from the government and USAID. This time its role was mainly to provide policy advice, but it also conducted a further, more detailed evaluation of the FFE program.

## IFPRI's evaluation

IFPRI's impact evaluation of the long-term effects of the FFE program focused on the effect of education on potential earnings. Using data from a survey of household income and expenditure in Bangladesh in 2000 by the Bangladesh Bureau of Statistics, IFPRI's scientists derived an equation relating an individual's hourly earnings to their attendance at school and the duration of that schooling. The scientists estimated potential earnings for males and females, and for rural and urban employment, separately.

The estimates showed that individuals who attended school could expect to earn on average 20–46 per cent more than illiterate individuals, the lower figure being for rural employment and the higher figure for urban employment (Table 1 row 1, columns 1 and 4). The difference was particularly marked for girls, who if they attended school could expect to earn 69 per cent more than their illiterate female counterparts. For each additional year of schooling, individuals

could expect a further 5–6 per cent increase in their hourly earnings (Table 1 row 4, columns 1 and 4).

Applying these estimates to the figures for increased school enrollment and duration brought about by the FFE program allowed IFPRI to estimate the impact of the program on the potential earnings of those who had taken part. Using a 15 per cent increase in school attendance as a low estimate of the impact of the FFE program (Table 1 row 2), and a 29 per cent increase as a high estimate (Table 1 row 3), IFPRI calculated that increased earnings as a result of the increased school attendance brought about by the FFE program could be expected to amount to 3–13 per cent. Using a 0.37 year increase in the duration of schooling as a low estimate of the impact of the FFE program (Table 1 row 5) and a 1.40 year increase as a high estimate (Table 1 row 6), IFPRI calculated that increased earnings as a result of the increased duration of schooling brought about by the FFE program could be expected to amount to 2–8 per cent. The total increase in expected earnings as a result of the FFE program's impact on both school attendance and duration was estimated to be 5–13 per cent for jobs in the rural sector (Table 1 rows 7 and 8, column 1) and 9–21 per cent if students managed to find work in the urban sector (Table 1 rows 7 and 8, column 4). In all cases, the expected increase was especially large for girls.

**Table 1.**  
**Estimated percentage increases in potential long-term hourly earnings as a result of participation in the FFE program**

Effect of:	Rural jobs			Urban jobs		
	Total	M	F	Total	M	F
1. Attending school	20	16	69	46	38	69
2. 15% (low) increase in school attendance	3	2	10	7	6	10
3. 29% (high) increase in school attendance	6	5	20	13	11	20
4. Extra year of schooling	5	5	9	6	5	11
5. 0.37 year (low) increase in schooling	2	2	3	2	2	4
6. 1.40 year (high) increase in schooling	7	6	13	8	7	15
7. Total increase in hourly earnings (low)	5	4	13	9	8	14
8. Total increase in hourly earnings (high)	13	11	33	21	18	35

Source: Adapted from Ryan and Meng (2004)<sup>1</sup> (M= male; F=female).

## Lessons learned and conclusions

The main lessons for IFPRI stem from the Government of Bangladesh's decision to end the FFE program in 2002 and replace it with a Cash for Education (CFE) program. Given IFPRI's evaluation of the FFE program as an outstandingly successful investment, and given the influence of its previous research on the initial adoption and subsequent expansion of the program, why did IFPRI fail to convince the Government of Bangladesh of the merits of continuing the program?

IFPRI suggests an important reason may have been the gaps in funding for its work in Bangladesh in the mid-1990s and after 2001, leading to loss of momentum and influence. Another reason may be that key staff did not live full-time in Bangladesh during the second phase of IFPRI's funding, so that opportunities for influencing policy may have been missed. Both these factors may have contributed to

delays in publicizing politically significant results that might have helped counter government and donor concerns about escalating food leakages from the FFE program. With hindsight, IFPRI recognizes that it could have taken a lead in organizing seminars to compare policy-relevant research findings such as those on leakages. It recognizes that its close collaboration with one ministry (Food) may have been at the expense of fostering relationships with others (such as Education, Agriculture, and the Treasury). IFPRI suggests that in future it might usefully pay more attention to the proponents of alternative programs, and to comparative evaluations of those programs (such as CFE) with the ones IFPRI favors.

None of those shortcomings can detract from the outstanding success of the FFE program, which generated attractive returns to its research investments, and the significant role that IFPRI played in this success.

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### Notes

- 1 The full version of the study on which this brief is based is: Ryan, J.G. and Meng, X. 2004. The contribution of IFPRI research and the impact of the Food for Education program in Bangladesh on school outcomes and earnings. Impact Assessment Discussion Paper No. 22. International Food Policy Research Institute: Washington, DC. The study is available at <http://impact.cgiar.org/>

