The paper suggests that typical estimates of returns to primary education are overestimated, because import costs to individuals are excluded. In calculations with Honduran data, private returns are found to drop significantly when private costs are included. It is suggested that lower private rates of return are consistent with low educational attainment in many developing countries.

I. INTRODUCTION

A large literature is devoted to calculating social and private rates of return to education in developing countries. Authors consistently find returns to primary education to be high, relative to a discount rate and to returns to higher levels of education.

In a representative study, Psacharopoulos and Ng (1994) analyse 18 household surveys in Latin American countries. They apply a standard methodology, calculating the internal rate of return which equalizes the discounted stream of benefits and costs to additional primary education. Social and private benefits include the income accruing to additional years of education, derived from age-earnings profiles. Social and private costs include the income foregone while pursuing that education. Social costs also include government expenditures on education.

While not criticizing the conceptual underpinnings of their methodology, this paper does criticize its principal ingredients. It suggests that their conclusions are sensitive to two critical assumptions: (1) that there are no private direct costs to education (e.g., uniforms and school materials); and (2) that primary school students forego only two years of income. They acknowledge the restrictiveness of these assumptions, suggesting that findings should be considered indicative regarding educational investment priorities in the region, pending more detailed country-specific work (Psacharopoulos and Ng, 1994:188). Nevertheless, it is likely that returns are consistently overstated across countries, which inevitably affects judgements on spending priorities.

The paper first reviews some studies of private education costs in developing countries. It then replicates the analysis of Psacharopoulos and Ng in one country, Honduras, and derives estimates under alternative cost assumptions.

II. PRIVATE COSTS IN PRIMARY EDUCATION

Families with children in public primary schools of developing countries face direct and indirect costs. Direct costs include uniforms, school supplies, books, transportation, contribution to parent groups, and even tuition. Indirect costs include the foregone income of the child's work in the labour market, the foregone contribution of the child to home or farm production, and the value of parents' time contributed to school activities (Tsang, 1988).

Bray (1996) surveys educational cost studies in nine East Asian countries. He finds that direct private costs as a percentage of total costs in public primary schools range from less than 10% in Lao PDR to over 70% in Cambodia. Most hover around 20%. Carnoy and Tores (1994) find that parents assume about 30% of the total cost of public primary education in Costa Rica. Carnoy and McEwan (1997) carry out a similar study in Honduras. Restricting their attention to uniforms, school supplies, and matricula-

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1 See Psacharopoulos (1994) for a comprehensive survey.
tion fees, they find that direct costs account for 43.5% of total costs; under more conservative assumptions, the figure is still 27.4% (see Table 1).

There are also indirect costs, which may be substantial, though difficult to measure. In Honduras, for example, parents volunteered time as school watchmen, as cooks for school meals, or in agricultural work to produce food for such meals (Carnoy and McEwan, 1997). Some donated arable land or use of a well; many attended parent meetings. Rural children participated extensively in family agricultural activities, doing so as young as age eight.

III. NEW ESTIMATES OF RETURNS IN HONDURAS

Psacharopoulos and Ng (1994) derive estimates of the private and social return to primary education of 20.8 and 18.2%, respectively, in 1989. Again, they assume no direct private costs and two years of income foregone for schoolchildren. That is, the time of children is only considered valuable at ages 11 and 12. Using the 1990 household survey and a simulir methodology, this study finds private and social returns of 22.5 and 15.1%, respectively.

Returns are calculated under alternative scenarios, utilizing the high and low estimates of private direct costs from Table 1, as well as the addition of another year of income foregone at age 10. With the addition of another year of income foregone and the high estimate of direct costs, social returns drop three percentage points to 12.1% and private returns drop 7.9 points to 14.6%. Though returns, especially private, decline with the addition of these costs, the new estimates are probably an upper bound. They still exclude, for example, a valuation of parents' time or the home or farm production of children. In rural areas, high mortality rates may lower rates further by reducing the benefit stream.

In Honduras and other developing countries of Latin America, educational attainment is low, while drop-out and repetition rates in primary school are high. This seems at odds with high private returns to primary education, and indicates that merely constructing new primary schools will not increase educational attainment. Some authors (Jacoby, 1994) have attributed poor attainment to the existence of borrowing constraints. Evidence is suggestive that the answer may be simpler. Typical rates of return exclude important costs and therefore overestimate the attractiveness to families of sending their children to primary schools.

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REFERENCES


2 The household survey collects employment data for ages 10 and above. As much child labour, especially on farms, does not receive monetary remuneration, and because of underreporting, these estimates are lower bounds to the true opportunity cost of time.