

# Rationale for Public Investments in Primary Education in Developing Countries

This paper reviews the literature on the rationale for public investments in primary education, particularly in light of recent international initiatives such as Education for All (EFA) and the education Millennium Development Goals (MDGs). The paper examines economic, social, and political arguments in support such investments.

## Economic Arguments for Public Investments

With respect to the economic arguments, the paper begins by exploring the theory of human capital development and related concepts as a basis for public investment in primary education. It makes a distinction between private and public rates of return. It then surveys the micro-economic and macro-economic evidence in support of a strong focus on primary education.

### **Theoretical Justification**

Human capital theory holds that investment in human resources results in improved productivity, and that both the costs of the investments and the benefits of improved productivity can be used to calculate an economic rate of return. Human capital investments generally take the form of education or training and may include health care as well. An important distinction is made between private and social rates of return. Private rates of return accrue to families from human capital investments. Social rates of return include private returns, but also consider positive externalities such as improved public health, diffusion of democratic values and practices, and more freedoms for individuals in society.

The existence of social returns provides a rationale for public investment in primary education. The World Bank Policy Paper on Primary Education (1990) and subsequent education policy papers (1995, 1999) embraced human capital theory, observing that education, particularly at the primary level increases the productivity of the work force through improved literacy, numeracy, and health status. Other international public agencies, governments, and academics have substantially agreed with the general interpretation of the human capital justification for public investment in primary education.

### **Microeconomic Evidence**

A review of earnings function research in developing countries done by Glewwe (2002) lends support to the human capital interpretation of the education and earnings association. Glewwe's review focuses on earnings functions, which include measures of both ability and cognitive skills based upon administering tests to the household members or workers in sample surveys from six developing countries (Ghana, Kenya, and Tanzania in single study, Morocco, Pakistan, and South Africa).

Another, more ambitious attempt to use rate of return analysis for education policy purposes has been the series of worldwide compilations made by

**Table 1: Social Versus Private Rates of Return for Primary Education**

<i>Region</i>	<i>Social Return</i>	<i>Private Return</i>	<i>Ratio Private/Social</i>
Asia	16.2	20.0	1.23
MENA	15.6	13.8	0.88
LAC	17.4	26.6	1.53
SSA	25.4	37.6	1.48
OECD	8.5	13.4	1.57
World	18.9	26.6	1.41

*Source: Extracted from Psacharopoulos and Patrinos (2002).*

Psacharopoulos et al. since the 1970s (1973, 1980, 1985, 1994, 2002). The latest update in the series uses studies done in 98 countries employing data sets from different years (see Psacharopoulos and Patrinos 2002). The authors present a number of tabulations that confirm the classic pattern of declining rates of return to primary education as the level of development rises. The pattern of private rates exceeding public ones (by roughly 40 percent) is based upon earnings functions. But these are likely to be underestimates if they miss the positive externalities resulting from public investment in education. Unfortunately, social costs are generally measured more accurately than social benefits so it is difficult to precisely estimate social rates of return (see Psacharopoulos and Patrinos 2002).

In addition, wage employment involves only a small proportion of the labor force in countries where most primary school graduates still work in agriculture or the informal sector. A growing number of studies (in Thailand, Pakistan, Mexico, Uganda, and elsewhere) suggests that primary education can enhance the productivity of farmers in developing countries.

Given high social rates of return to primary education, there is an economic rationale for addressing the problem of low access to credit for poor families. An inability to borrow to cover educational costs creates a financial barrier to educational attainment, which governments typically choose to overcome by reducing or eliminating fees for primary education.

### **Macroeconomic Evidence**

Robert Solow's model (1956 and 1957) of economic growth left a large unexplained residual term not accounted for by growth of capital and labor. It was generally theorized that education and technological progress could account for this residual. Yet, attempts to measure the contribution of human capital, as embodied in education, to economic growth have often been disappointing, as exemplified by a study by Pritchett (2001). After constructing measures of educational attainment of the labor force for many countries and doing cross-country growth regressions of the sort that had become widespread in the literature in the 1990s, Pritchett failed to find statistical corroboration that education contributes much to economic growth.

There are various theories attempting to reconcile the apparent inconsistency between the microeconomic and macroeconomic studies. The assumptions of standard coefficients across countries and the linearity of the growth-education relationship may be inconsistent with reality. There may also be long time lags before primary education becomes universal and can contribute strongly to growth. Finally, there may be measurement errors in the education variable, which mainstream human capital researchers conceptualize in terms of level reached or national enrollment ratios at various levels. If education attainment is measured in terms of the knowledge or skills obtained (e.g., literacy), the macro-economic findings become more robust (Coulombe et al., 2004). Such findings are strikingly similar to those emerging from micro-economic research that show high returns to the attainment of basic skills from primary education and not simply from having spent years in school.

### **Distribution Effects**

Another major rationale for public investment in primary education has to do with the reduction of poverty and inequality. Countries that have grown fastest have also achieved the most poverty reduction, while those that stagnated economically experienced the greatest growth in poverty. However, economic growth is all the more powerful in reducing poverty when coupled with good policies for human capital development, which promote more equal income distribution. From a

policy perspective, this means placing more stress on investments in people through providing access to education, health, social protection, and more direct participation in decisions affecting them.

Since the 1970s and early 1980s there has been a large literature on education and health, especially on the impact of primary education. The World Development Report (1984), which focused on the theme of Population Change and Development, covered much of this earlier literature concerning the impact of education on lowering fertility and improving maternal health. Behrman (1990), in a review of human resources and poverty, found strong evidence for the impact of maternal years of schooling on child health. Since 1990 this literature has continued to confirm in more detailed ways the positive impact of primary education on the health of households across the generations.

### **Social and Political Arguments**

The non-economic arguments for public investment revolve around the social benefits from investing in primary education, such as greater social cohesion and a strengthened foundation for democracy. These benefits are generally not thought of as economic ones, but they may serve as background for social stability that would allow economic benefits to bear fruit. However, it must be noted that these social benefits of primary education are not automatic and depend upon the nature of the primary education system. It must also be noted that social cohesion, democracy, and political stability are not synonymous, as can be shown from the recent history of many troubled countries. Health benefits are sometimes also cited among the social arguments for public investment in primary education, but this paper considers them mainly under the economic arguments, for reasons that will be elaborated in the next section.

The humanitarian and political arguments reviewed are rooted in the human rights movements of the 20th and early 21st centuries (e.g., Universal Declaration of Human Rights, Convention on the Rights of the Child). Widespread agreement on these basic rights has been translated into growing political support for the achievement of Education for All at the national and international level. Thus, humanitarian arguments have become political ones. The key question is whether or not such arguments can be translated into political consensus that can in turn be transformed into sustainable financial and management strategies on the part of development countries and their development agency partners.

#### **Social Cohesion and Welfare**

Going beyond the economics rationale, many of the arguments for the social benefits of education are reminiscent of those made by 19<sup>th</sup> century industrial country reformers during their push for UPE. Some arguments put forward the hypothesis that primary education can promote social cohesion and democratic development. The idea that social cohesion can help reduce social conflicts and reduce poverty has been taken up in recent years by the World Bank, especially after it became involved in reconstruction efforts after the Balkan wars. The real question is whether educating children about social cohesion can actually help prevent social conflict. Hallak (1999) cites two interesting examples of curriculum changes in Israel, where new textbooks attempt to promote empathy between Israelis and Palestinians, and in South Africa, where history and geography textbooks are being re-written to promote post-apartheid values. Proponents have high hopes for such interventions, but until evaluation results are in, it is unclear whether they and like measures can lead to significant social change.

## **Basic Human Rights and Democracy**

The EFA documents prepared at Jomtien in 1990 and Dakar in 2000 place more emphasis on the human rights rationale than upon the economic and human capital rationale. These declarations cite ethical and humanistic rationales going back to the UN Basic Declaration on Human Rights (1948) as one of the primary bases for EFA. This approach argues that all children have a basic human right of access to primary education of adequate quality so as to acquire lasting literacy and numeracy.

## **Conditions of Realizing EFA Benefits**

The benefits of UPE are not automatic or universal, but are applicable only under certain conditions within the education sector, in the labor market, and also in the wider economy. The most obvious condition of realizing the benefits of EFA is that students actually learn enough in primary school to complete the cycle with real literacy and numeracy. The experience of the high-performance East Asian economies indicates that labor market flexibility is also a condition for reaping the benefits from more schooling and cognitive skills of the labor force. For returns to primary education to be high in agricultural economies, it appears that school leavers must at least have access to improved technologies (Joliffe 1998). Finally, providing the necessary macroeconomic environment for growth (such as social services and investments in research and development) is essential for reaping the returns on investment in basic education.

## **Education for All versus Alternative Education Strategies**

Although some people have expressed skepticism about the realism of the EFA goals and believe that many countries may not meet them, there appear to be no real dissenters in terms of the essential economic or social validity of the goals. Broadly speaking, there appear to be two alternative strategies to achieving universal primary education: a “big bang” expansion of primary education characterized by rapid expansion of access followed by gradual quality improvements that raise the average and improve the distribution of skill acquisition; or improved skill acquisition of those already enrolled in primary education and gradual expansion of good quality primary schools to the entire population. There is already evidence from Uganda and Kenya that learning outcomes declined as a result of the dramatic rise in gross and net enrollment rates (Association of Universities and Colleges of Canada, et al. 2003). Unfortunately, the literature does not offer detailed evidence to support either strategy, but it is worthwhile to consider the recent emphasis on the importance of cognitive skills as opposed to years of schooling.

## **Conclusions**

This paper started by reviewing the literature for the rationale, theoretical and empirical, that supports public investments in primary education. Economic arguments were given priority here, although social and political rationales were also explored. A strong empirical case has been made that increased earnings from education result from increased individual productivity that comes from literacy and numeracy. It is widely accepted that there are positive externalities accruing from primary education. There is still only mixed evidence at the macroeconomic level that education is a strong factor in economic growth. However, the social and political rationales, combined with

the economic argument that focuses on poverty reduction and equity impacts of primary education, appear to tip the scales in the literature in favor of support for public investments for EFA. At the country level it appears many national leaders are taking up the challenge, and some donor countries are beginning to respond, though still not nearly enough. The real challenge lies in formulating realistic financial and management strategies to achieve the EFA goal by 2015 for most countries, and to do so in a way that produces the learning outcomes needed for economic growth and the wider social benefits.