Efficiency of expenditure on indian education system economics essay

Economics

Abstract

This paper deals with efficiency of the big bucks which is spent on the Indian education system. This paper investigates the public spending done on education in three stages of education: primary, secondary and higher education. India has made commitment to millennium developmental goal (MDGs) to universalize its primary education system. It checks the controlling factors such as per capita income, student teacher ratio. We find that primary educational spending has a negligible impact on enrollment rates, primary school transition rates, and performance of students on exams. Instead, states with greater proportions of private primary schools are found to have consistently better outcomes. Higher per capita income is also correlated with some improved performance measures. Reducing the student-teacher ratio has no effect, a phenomenon possibly explained by rampant teacher absenteeism and lack of teacher motivation. Evidence from this study indicates that policymakers should determine how to achieve a more efficient and equitable allocation of educational funds and seek alternatives to improve the quality of primary education,. KeywordsMDG, Education System, per capita income, student teacher ratio

Introduction

Education is the cornerstone of economic growth and social development. It creates greater social cohesion and a strengthened foundation for democracy. At the aggregate level, a better-educated workforce enhances a nation’s stock of human capital, which is crucial for increased productivity and economic development [1, 2, 3]. From an economic point, education is

associated with high rates of return, both private and social. Indian Constitution made a commitment to make primary and middle education free to children (age 6-14) in 1960 which is still to be implemented fully owing to scarce allocation of resources, political and social reasons. India has over a third of the world’s children(6–11 year olds) out of school—around 40 million(UNESCO, 2003). Six states of India account for three-fourths of its children out of school (Andhra Pradesh, Bihar, Madhya Pradesh, Rajasthan, Uttar Pradesh and West Bengal). A concerted effort to mobilize global efforts and resources to help developing countries was formalized through the endorsement of the Millennium Development Goals (MDGs) by 189 countries of the United Nations [4]. MDG specifically incorporates primary education by stating the following: " Ensure that, by 2015, children everywhere, boys and girls alike, will be able to complete a full course of primary schooling."[5] Achieving this goal will be an enormously challenging task—given the fiscal crisis of the state. Education has always been regarded as one of the leading determinants of economic growth. By promoting basic literacy and numeracy, primary education provides the foundation for secondary and tertiary education, allowing for a more knowledgeable and productive force. According to World Bank studies, primary education also has a direct and positive impact on future earnings and farmer productivity, and bestows significant health and poverty alleviation benefits (IEG, 2006). India has an average literacy level of just 61% and the largest absolute number of primary school age children out of school [6]. The country is also home to more than a third of the global poor [7]. Poor people facing credit market constraints incur higher private costs of sending their children to school.

They can’t afford to educate their children unless schooling is subsidized (IEG, 2006). Thus, government funding of primary education is crucial and necessary for greater nationwide enrolment. As universal primary education was made a fundamental right in 2003, the Indian government provides free primary schooling through its flagship program for the universalization of primary education, Sarva Shiksha Abhiyan. In a cross-sectional study of 50 developing countries [8], use OLS and Two Stage Least Squares (2SLS) to determine the overall level of public spending and intra-sectorial allocation. They use educational attainment measures like enrolment rates in primary and secondary school, persistence through Grade 4, and primary school drop-out rates. The 2SLS technique is used primarily to address the problem of reverse causality. For instance, higher spending on primary education may have a positive effect on enrolment, but a higher demand for primary education, reflected in higher enrolment rates, may also provide a push for higher spending. Most spending and other data are for 1993-1994; the expenditure data, in general, exclude local government spending. Overall, the literature on public expenditure on education shows a mixed bag of results on educational spending and outcomes both within and across countries. Theoretically, there are several reasons why analysis may fail to detect a relationship between spending on primary education and improved outcomes. Parental investments of time or money, and a child’s intrinsic motivation may be more influential than the effect of public expenditure [9]. Also, higher expenditures may not translate into better educational outcomes in the absence of good governance or if the expenditures are used ineffectively [10]. For increased spending to improve primary school

attainment, it must be accompanied by good governance, detailed monitoring and evaluation projects, and supply-side interventions such as building new schools and classrooms within easy walking distance. Shifting educational responsibilities to lower and more localized levels, such as district level school-based management, can also improve educational outcomes. Activating community support and involving parent in primary school management can be advantageous as well.

Indian Education Programs and Progress

Educational provision in India, especially at the primary, intermediate and secondary levels, is largely determined by the extent and quality of targeted governmental spending. The central government and individual state governments share the responsibility of funding public education. State governments further pass down most of the educational planning and expenditure to the district-level; the extent of locally transferred responsibility differs by states. The three stages of school-based education are primary, intermediate (middle school), and secondary (high school). Primary school deals with children of ages six to eleven, categorized into grades one to five. Intermediate students of age group eleven to fourteen are categorized into classes six to eight, and high school students between age group fourteen to seventeen are enrolled from class nine to twelve. Higher education includes colleges, universities and technical schools. Table 1 shows that state governments contribute more than three fourths of the total revenue expenditure on education in the country.

Table 1: Expenditure on education [11]

Center States / UT (Union Territories) Total

Expenditure 311. 7 1012. 8 1324. 5

(Rs. in billions)

Share with respect to

total (%) 23. 5 76. 5 100Source: Government of India, Ministry of Human Resource DevelopmentDespite the evident political commitment to education, we can see that public expenditure on different education sub-sectors varies significantly between states. This phenomenon occurs because the states have diverse social and political environments, and are at different levels of development. Also, since decentralization affects each state in a different way, they accordingly allocate their budgets to the level of education that they deem the most important for overall development. A striking similarity is that most states spend more on primary education than secondary or tertiary education. This suggests that there is a shared understanding that there are increased social rates of return associated with primary education, which in turn is aligned to the MDG of providing universal primary education. However, there are still wide inter-state disparities in the gross enrolment rate (GER), which is defined as the total number of students registered in an education level belonging in the specific age group, as a percentage of the population in that age group. An important goal of the National Policy of Education is to reduce the gap in GER across states. C: UsersinsightDesktoppaperindia-outline-map. pngThe above map shows the wide geographic variation in GER in India. It shows very significant variation across regions. In Bihar it is 5. 7 whereas it is 15. 1 in Uttaranchal. In the

union territories it ranges from a low of 1. 9 in Daman Diu to a high of 33. 2 in DelhiThis map shows how some states lack a efficient education policy and is the main reason behind their backwardness.

India and World

India’s educational achievements have had mixed success. On the down side, India has 46 per cent of the world’s illiterates, and is home to a high proportion of the world’s out-of-school children and youth. Absenteeism and low accountability of teachers is also perceived as a major problem across the country [12]. On a more positive note, it has made encouraging recent progress in raising schooling participation. Table 2 presents India’s adult male and female literacy rates alongside equivalent figures for its regional neighbours, as well as for countries in the BRIC grouping (Brazil, Russian Federation, India and China) – countries with which India is increasingly compared. While India does well compared to Bangladesh and Pakistan, it falls substantially behind all the other BRIC countries and Sri Lanka, and is also behind the average for developing countries. Indeed, it is striking that its overall adult literacy rate is similar to – and female adult literacy rate lower than – that of Sub- Saharan Africa. India’s male and female adult literacy rates are around 22 percent and 36. 5 percent lower than those of China, another emerging " superpower". Further, India lags behind the average global literacy rate by a little more than 21%.

Table 2: Adult and youth literacy rates around the world

Adult literacy rates (15+ years old)

Total Male Female

Bangladesh 42. 6 51. 7 33. 1Pakistan 49. 9 63. 0 36. 0Sri Lanka 90. 7 92. 3 89. 1India 61. 0 73. 4 47. 8China 90. 9 95. 1 86. 5Brazil 88. 6 88. 4 88. 8Russian Federation 99. 4 99. 7 99. 2World 82. 2 87. 2 77. 3Developing Countries 76. 8 83. 5 70. 1Sub-Saharan Africa 61. 2 69. 5 53. 3Source: Global Monitoring Report (UNESCO, 2006)

Theoretical Framework

Two different modelscan be used to access the efficiency of expenditure on education. One method [13] examines the impact of public expenditure across countries, while the [14] analyzes the impact of public expenditure across states in India. One can use the following model to evaluate the effectiveness of government spending on education and healthcare in a cross-sectional study across developing and transition countries: Yi = f (X1i, X2i, Zi) whereYi is a social indicator reflecting education attainment or health status for a country i, X1i the aggregate public spending on education or health care as a share of GDPX2i is allocations to different programs within the sector (i. e., primary education and primary health care) as a share of total sectorial spendingZi is a vector of socioeconomic variables. Four measures of education attainment are used: gross enrolment in primary and upper-primary education, gross enrolment in secondary education, persistence through Grade IV, and primary school drop-out rates. The gross enrolment rate (GER) represents the number of students registered in an education level as a percentage of total number of students of proper age for

that specific level. The GER measure includes under-age and over-age children, as well as grade repeaters. The other method uses a similar model to evaluate the impact of public expenditure across states in India: Yit = f (Eit, GSDPit, Xit) whereY is a social indicator, E denotes social sector spending, GSDP is defined in per capita terms, X is the vector of other control variables. i denotes states in the sample and t denotes time period. The model is estimated for two measures of education attainment:(a) gross enrolment in primary and secondary education and(b) gross enrolment in secondary education. Citations1. Barro, R. (1996). Health, human capital, and economic growth. Washington, DC: PanAmerican Health Organization. 2. Lucas, R. E. (1988): On the mechanics of economic development. Journal of MonetaryEconomics, 22(1), 3-42. 3. Romer, P. (1986). Increasing returns and long-run growth. Journal of Political Economy, 94(5), 1002-1037. 4. The MDGs set targets to be achieved by 2015 for developing countries in eight areas: eradicating poverty, achieving universal primary education, promoting gender equality, reducing child mortality, improvingmaternal health, combating diseases like HIV/AIDS and malaria, ensuring environmental sustainability, and building a global partnership for development. 5. http://devdata. worldbank. org/gmis/mdg/list_of_goals. htm6. http://www. uis. unesco. org/template/pdf/educgeneral/OOSC_EN_WEB_FINAL. pdf7. Around 460 million people, a little more than 40% of India’s population, live below the internationalpoverty line of $1. 25 per day. 8, 13. Gupta, S., Verhoeven, M. and Tiongson, E. (2002). The effectiveness of governmentspending on education and health care in developing and economies. EuropeanJournal of Political Economy, 18(4), 717-37. 9. Appleton, S., Hoddinott, J. and

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