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In India, Returns to Education: A Review

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ABSTRACT- In this article, a critical assessment of some of the most significant studies on rates of return to education in India is presented, emphasizing the differences in calculation techniques, assumptions, and modifications used, as well as the conclusions reached. the human investment revolution in economic thought has yet to take root in the minds of Indian educational policymakers. India invests about 3% of its GNP in its massive formal educational enterprise, which has over 200 million students on rolls and about 3 million teachers spread across 124 universities, over 5,000 colleges, and 750 thousand schools. The ramifications of their findings are also considered. Conclusions on the efficacy of investment in education in India are made based on this review. Theoretical and empirical issues that emerge in this setting are discussed, and the potential for future study in this field is also considered.

KEYWORDS- Children Education, Engineering Education, Five Year Plan, Indian Education, Third World Country

I. INTRODUCTION

Total government education spending rose from Rs. 710 million in 1950-51 to Rs. 26,580 million estimated in 1978-79, representing a compound annual growth rate of 13.8 percent. Despite this, two out of every three people in India are illiterate, and just 10% of the lab o u r force has any formal education. Approximately 5 million educated individuals are jobless at the same time. Surprisingly, demand for education at all levels has increased [1]. Some people believe that investing in education in India is uneconomic and irrational because of the country's complicated educational situation. One of the first studies on investment in education, published in 1965, recommended that less resources should be spent in education[2]. Planners in the nation give little attention to the educational sector, which is not always backed by such a perspective. Education spending as a percentage of total spending had been declining over the Five Year Plans, falling from 7.86 percent in the First Five Year Plan to 2.59 percent in the Sixth Five Year Plan (1980-85), and as a percentage of GNP, it has remained fairly constant at around 3 percent over the last 15 years[3].

Allocating resources to education, particularly in third-world countries, is a difficult task due to several unique characteristics that education possesses, such as I the resources allocated to education cannot be treated entirely as investment outlays; and (ii) the growing economy can hardly afford to wait for a long gestation period of 15-20 years that the education. Education cannot continue to demand a rapidly growing proportion of available resources without causing significant strains and distortions in the whole community and economy," Coombs noted. It's not a matter of philosophy or point of view; it's a matter of basic arithmetic." Nonetheless, it is generally thought that educational resources in India are woefully insufficient[4]. The Kothari Commission, for example, advocated for spending 6% of GNP on children's education. While allocating resources to the educational sector as a whole is challenging, allocating resources intra-sectorally within education is much more complex[5]. The foundation of learning was not only reading books and memorizing facts, but a child's well-rounded, holistic growth. Their mental, cognitive, physical, and spiritual well-being were all considered. Religion, sacred texts, medicine, philosophy, warfare, statecraft, astrology, and other topics were covered.

The Gurukul education system's ultimate goal was to comprehend Brahma (God) and the realm beyond sensual pleasures in order to achieve immortality[6]. The student acquired will-power, which is a prerequisite for excellent character, as a result of their study of the Vedas (old writings), allowing them to have a more positive attitude and perspective on life. The optimum technique for full life was thought to be learning to withdraw the senses within and practicing introversion. While doing different tasks at the Gurukul, pupils were able to become aware of the inner workings of the mind, as well as their responses and reactions[7]. The learner was motivated to exclusively speak truth and abstain from deception and untruth by training his body, mind, and heart. This was regarded as the pinnacle of human goodness. They were also taught to believe in charitable giving, which made them more socially responsible. The amount of the educational budget, as well as its distribution throughout various levels of education, is heavily affected by political considerations and trends in cross-sectoral educational resource allocation. Over the six five-year plans, resources allotted for primary education as a percentage of overall resources allocated for education decreased, from 56 percent in the first plan to 36 percent in the sixth. The tertiary sector, on the other hand, got a growing proportion of overall educational resources in the programs. During this time, its market share increased from 9% to 19%. In the area of economics of educational planning, there has been a significant quantity of study work done in India and elsewhere. However, the number of research papers on Indian education is limited[8].

The rate of return to education is defined as the discount rate, which equals the total of the discounted value of benefits to the sum of the discounted value of education expenses. Regressing the natural logarithm of wages on schooling is an alternate way of calculating rate of return to education. The rate of return is calculated using the resultant coefficient of education. The remaining pages of the paper are divided into four parts. A brief overview of the technique. All of the important research on rates of return to Indian schooling are briefly discussed in section 3, together with a critical evaluation of these studies, highlighting the discrepancies in their methods and findings produced. Private rates of return are calculated using post-tax earnings as the benefits of education and private costs of education, which include I expenditure on books, stationery, hostel, fee, and other items, (ii) public subsidies such as scholarships, stipends, and fee concessions, and (ii) foregone earnings of the students. On the other hand, social rates of return are calculated using pre-tax wages and the total of private and institutional education expenses[9].

Furthermore, marginal rates of return on education, also known as incremental rates of return, are calculated by comparing the cumula of costs and incomes between two consecutive levels of education, while average or total rates of return are calculated by comparing the cumula. Several research on rates of return to Indian schooling did not provide consistent findings, despite some broad general generalizations being drawn. Variations in the findings may be explained by variances in each study's coverage, the reference period, the number of participants, and, most significantly, differences in the methodological elements. The NCAER's Urban Income Survey of 4,640 wage workers and the CSIR's survey of 4,000 engineers. He was also required to make certain assumptions in order to distinguish between earned and unearned income. In addition, he anticipated that all family members, regardless of their educational degrees, would get an equal share of the family income from self-employment[10].

II. DISCUSSION ON RETURNS OF INDIAN EDUACTION

In contrast to steeper profiles and reached peak earnings later in life. Like the impact of business and commercial operations on individual earnings, using data from the City Survey of Greater Bombay, which included 19,301 wage workers. He deducted the total wages of all male earners in each educational level from the total earnings of all male earners. He also made assumptions about the form of the profiles and the age at which peak profits occurred. data from the Ministry of Education and the Directorate General of Employment and Training Surveys T h e d a ta included Ludhiana matriculate and post-graduate earners from an all-India sample of 6,148 earners. She assumed that the average wages at each educational level were the same as the average earnings in the seventh year following graduation. Following that, increased wages were believed to be attributable to experience rather than education. The students' foregone wages were calculated using age-earning characteristics derived from the several polls mentioned above. Harberger's calculations were based on Sahota's estimates of direct educational expenses. Harberger's estimations of educational expenses, on the other hand, were dismissed as merely hypothetical. On the basis of the limited data given by a sample survey performed by the Education Commission. Since only a small portion of an individual's earnings can be attributed solely to education, a significant portion of an individual's earnings can be attributed to a variety of other factors, such as ability, motivation, social background, and so on, which are grouped together in the literature and dubbed the "ability factor." the term coefficient to describe the percentage of difference wages attributable to education when ability is taken into account.

The coefficient is calculated using regression analysis or is assumed arbitrarily to be between 60 and 70 percent, as suggested by Denison. Data on lifetime earnings of people by age and educational level are required in order to determine rates of return to education. Even in industrialized nations, however, time-series data on age-education earnings profiles is scarce. As a result, the majority of research on educational returns are based on cross-sectional data collected via national or regional censuses or sample surveys. The cross section age-earnings profiles, on the other hand, do not accurately reflect life-time earnings profiles. The life-time earnings profiles are produced by inflating the cross-section data by the rate of increase of in d iv id u al in arrives, a process known as adjustment for economic growth. It is not guaranteed that all of the money spent on education will pay off. While there is no way to avoid unforeseen uncertainty, uncertainty that can be predicted with some degree of certainty should be included into your cost-benefit analysis. Waste and stagnation, unemployment, non-participation in the labor force, and death are all examples of predictable uncertainty. With the exception of, all of the main studies addressed waste and stagnation in education. Others modified the cost-stream for this element, whereas the profits stream. If only employed people are included in the age-earnings profiles created using cross-section data, they must be modified for unemployment. I When correcting for unemployment, assumed a 6% unemployment rate for primary school graduates and a 100% employment rate for everyone else, which isn't quite realistic. Husain assumed a 13 percent unemployment rate for matriculates and graduates, 7 percent for post-graduates, and zero for professional graduates based on D GE T (Directorate General of Employment and Training) surveys.

A 16-month waiting time for matriculates and a 6-month waiting term for graduates. On the contrary. Its jobless duration estimates based on the National Sample Survey data were 12 months for primary, M months for matriculates, and 11 months for those with a high school diploma. However, unlike, it assumed that this time of unemployment was distributed across the working lives of the labor force, which is an assumption that cannot be made without concerns. Despite the fact that they recognized the issue of unemployment, neither Nallagoundan nor Kothari took it into account. The last adjustment that is usually done is for mortality, since the premature death of the educated results in a loss of the educational advantages. The mortality issue was not taken into account by others. For this, Kothari utilized general life tables and modified the rates of return for graduates, resulting in a 2 percent reduction in the rate, which he anticipated would be the same for other levels of

education. For this reason, the standard life-tables accessible for men. However, it is thought that the use of general rates rather than rates defined by educational levels, which may result in lower rates in the general tables, created a significant error in the estimations. All of the researchers compared their estimates against one or more other rates of return. What is the alternate rate of return to use as a benchmark?

It may be defined as the best (or average) rate of return on an investment made in a sector other than the current one. Choosing the right alternative rate of return is both important and challenging. The interest rate is sometimes regarded as a return alternative. However, the interest rate often fluctuates widely, particularly in an economy like India, where the unorganized money market is very big. Interest rates on savings accounts at post offices, commercial banks, government bonds, equities, and other financial institutions may range from 4 to 8%. It may also be levied at a rate of 12-20 percent on loans provided by commercial banks, and it may vary from 20 percent to 200 percent on loans provided by private lenders. The social alternative rat e of retu rn is similarly difficult to choose. It is often calculated on the basis of yield in the industrial sector.

There is no reason why it should not be based on investment-output linkages in the agricultural sector, especially in an agrarian country like India. Furthermore, can the same alternative rate of return be used to evaluate educational investment as it is in the context of assessing physical capital? To these questions, we have no acceptable answers. However, the alternative rate of return is a very important parameter since it indicates the attractiveness of investing in a certain degree of education at the margin. As with the rate of discount, the higher the alternative rate of return, the weaker the case for the project, since if the projected rate of return on a project in education is lower than the alternative rate of return, one argues for reallocating resources away from that level of education. The ultimate choice on whether or not to invest in education is largely dependent on the alternative rate of return. However, there is little agreement among economists on what the alternative rate of return should be.

One of the researchers whose work has been published here, and he calculated different rates of return. He calculated rates of return on investment in physical capital that ranged from 13 to 26 percent depending on the assumptions employed, based on 1,001 firms in the modern industrial sector in Indiana from 1955 to 1959.

Despite the fact that many studies on the productivity of physical capital in India have come up with a broad range of results. Assuming a social time preference rate of 5%, the private and social alternative rates of retu rn are 12.5 percent and 12.5 percent, respectively. All of the other studies compared their estimates of the rate of return on investment in education to one of these two sets of alternative rates, and their findings have previously been explored in depth. Rural education was studied in Punjab and Haryana, and very high rates of retu rn were discovered. Using data from 1038 households in 19 villages in Punjab and Haryana collected by the University of Delhi's Agricultural Economics Research Centre (AERC) through its continuous village surveys, as well as costs of education estimated by others the direct, indirect, and innovative effects of education. His estimates for private and societal rates of return to elementary education were 435 percent and 90 percent, respectively, using just direct and indirect advantages. He made no attempt to account for any other variables, but he did take into account the mortality factor when determining the duration of his working life.

III. CONCLUSION AND IMPLICATION

Rates of return to education were compared to estimates of physical capital's marginal productivity in various sectors, and it was determined that investment in education in India was not as productive as it was in the contemporary industrial sector. However, he did not recommend reallocating investment resources in favor of physical capital, but instead advocated for measures to increase the productivity of education investment. In fact, he saw his research as guesting future research rather than as suggesting particular changes of current investment patterns. His research came up with a number of recommendations for educational reform. However, unlike for reallocating resources in favor of physical capital, arguing that greater investment in education may not contribute to economic development. Kothari's estimations were primarily utilized to explain the large number of applicants for engineering degrees. According to engineering education, the rate of retu rn was very attractive, at 22%. Because of the negative relationship between projected rates of retu rn and degrees of education, and his colleagues recommended allocating resources within the educational sector in favor of lower levels of schooling and higher levels of professional education. They were opposed to any redistribution of resources away from education and toward the development of physical capital. In reality, the primary goal of their research was to explain why educated people have difficulty finding work. It came to the same conclusions as well. He discovered that, from a social standpoint, investment in elementary and secondary education was completely justified, and that poor outcomes in higher education indicated the need to cut prices, improve quality, and connect education to on-the-job training. He, too, did not advocate diverting resources away from education since many externalities associated with education could not be quantified. The estimations are not comparable since the various studies are based on separate surveys and used different calculation methods with varied assumptions and modifications.

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