

Economics of Education: Exploring the Indian Scenario

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ABSTRACT

Economics is a branch of social science that studies how society allocates its limited resources whereas education plays a crucial role in shaping individuals and societies, providing them with knowledge, skills, and values necessary for personal growth and societal progress. Education entails the transmission of knowledge, values, and skills from one generation to another, ensuring the continuity and advancement of civilizations. The economics of education studies return rates to education that's both social and private, human capital and signaling theories of education, non-financial benefits of education, education and economic development, the contribution of education to the economy, measuring educational expenditure, manpower planning, educational planning and human resource development, educational cost, educational production, educational effectiveness and efficiency, costs-efficiency and cost-effectiveness, cost-benefit analysis. The present study focuses on the Indian scenario of demand and supply of education, quality of education and economic development with enhancement of education in India. The study is primarily based on the existing secondary data. The investment on education should be increased by the government to impart quality education.

Keywords: Education, Economics, Demand, Supply, Human Capital, Knowledge

Introduction:

Economics is a branch of social science that focuses on how society allocates its limited resources, which have alternative uses, to provide goods and services for present and future consumption. On the other hand, education plays a crucial role in shaping individuals and societies, providing them with knowledge, skills, and values necessary for personal growth and societal progress. Education incorporates a wide range of processes and endeavors that encourage learning and enhance intellectual, social, emotional, and physical development. Primarily, education entails the transmission of knowledge, values, and skills from one generation to another, ensuring the continuity and advancement of civilizations. Apart from the formal schooling, it incorporates informal learning experiences. Beyond only imparting knowledge, it also involves developing critical thinking, creative thinking, problem-solving skills, and ethical decision-making.

The economics of education studies return rates to education that's both social and private, human capital and signaling theories of education, non-financial benefits of education, education and economic development, the contribution of education to the economy, measuring educational expenditure, manpower planning, educational planning and human resource development, educational cost, educational production, educational effectiveness and efficiency, costs-efficiency and cost-effectiveness, cost-benefit analysis. The origin of the economics of education as a significant field within economics probably dates back to the theoretical and empirical developments in the 1960s. Schultz (1961) delivered a lecture on 'investment in human capital' to the American Economic Association. The development of the human capital approach by Becker (1964) in his classic work 'Human Capital' is fundamental to understanding of the economics of education. He proposed a theoretical structure to illustrate the reason behind the investment of individuals in education and training akin to investments in physical capital. Multiple novel concepts have been emerged in the field, such as theoretical works that challenged the human capital approach (Spence 1973, 1974, and Stiglitz 1975), appraisals of the development of human capital theory (Blaug 1972, 1976), and in-depth empirical studies on areas such as over-education (Freeman 1976) or rates of return on education in the private and social spheres (Layard and Psacharopoulos 1974; Psacharopoulos et al 1973). Nevertheless, there

was a dramatic downturn following the heyday of the 1960s and 1970s, notably outside of the United States. However, in more recent times, there has been a sharp increase in interest and a reversal of this drop. The present study explores the Indian scenario of demand and supply of education, quality of education and economic development with enhancement of education in India.

Methodology:

The present study is both explanatory as well as descriptive in nature. The present study is mainly based on the secondary data. The data for this study has been collected from various genuine secondary sources including research papers, journals, books, different websites, censuses, government official reports and so on.

Discussion:

1. Demand for Education

Education as the production of basic skills: Education makes us capable of accurately doing and performing the basic things in life. It helps us to acquire the bare minimum capabilities so that we can improve the organization of social life. A person has the ownership of multiple economic resources but to increase its utility by transforming the resources to behaviors for functioning adequately, they have to meet the demand for education.

Education as investment in human capital: Investing in education is the same as investing in human resources. A substantial investment in human capital, education has definite advantages for the person, the economy, and society as a whole. Higher wages, more tax revenues, greater engagement in the arts, lower expenditures for social services, and a decline in the number of difficulties associated with delivery all follow from higher levels of education. A nation's labor force is expected to be more productive the more human capital it possesses. Thus, Faster economic growth, reduced unemployment, and more earnings can result from this.

Private and Social Demand for goods: Education being consumption good provides immediate satisfaction to the consumers by enabling them to acquire basic skills, whereas as an investment good, it helps them in raising their earnings in the near future. Besides viewing demand for education from the lenses of consumption and investment frameworks, educational demand can be divided into two categories: individual or private demand and aggregate or social demand. Enrolment in the educational system refers as the private demand for education, whereas the total number of people enrolled in an educational system constitutes the societal demand that is the aggregate of the private or individual demand. Therefore, the societal demand for education is ascertained by considering the aggregate data at a state or national level, whereas the private demand for education is assessed using the data gathered at the household level. The aggregate demand or the total enrolment in school and higher education in India are as highlighted below:

Table 1: School Gross Enrolment Ratio and Student's Enrolment in Higher Education in India

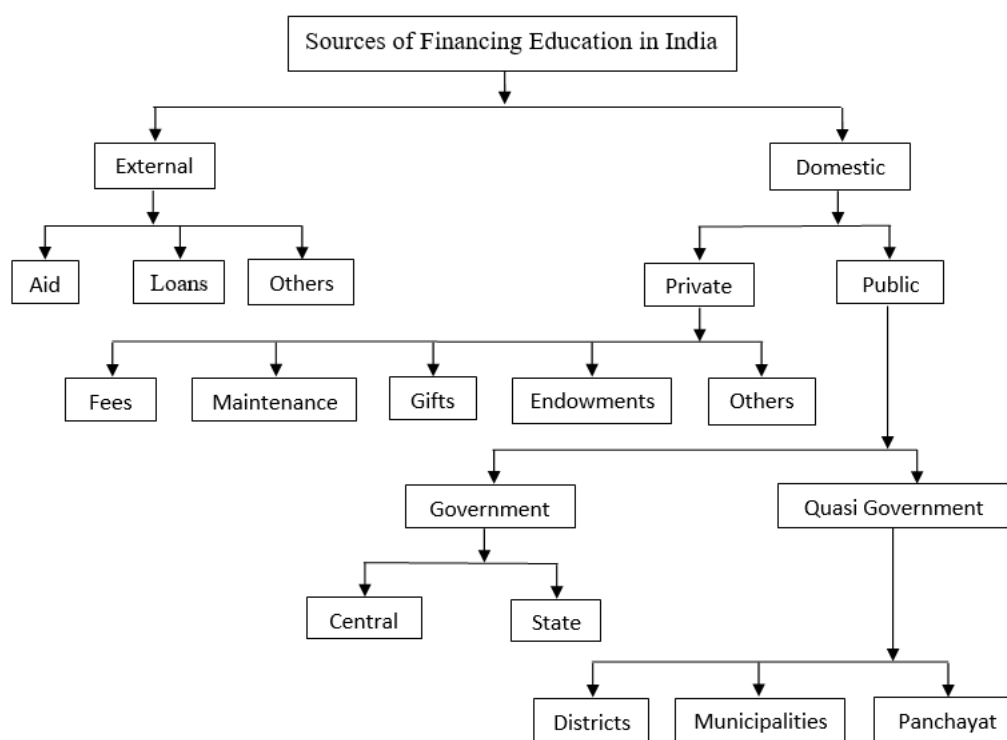
Years	School Gross Enrolment Ratio (%)			Students' Enrolment in Higher Education (in crore)
	Primary	Upper Primary	Secondary	
2019-2020	102.7	89.7	77.9	3.9
2020-2021	103.3	92.2	79.8	4.1
2021-2022	103.4	94.7	79.6	4.3

Source: Unified District Information System for Education (UDSI+), AISHE Report, 2021-22, Report from Ministry of Education

2. Supply of education in India

Education has evolved a process of multiple-source- finances in India over the years. The different sources for financing in India are the government (both centre and states), local bodies and the non-government sectors viz. fee income from students and parents, community contribution in the form of endowment and donations etc. Since the first plan in India, the reliance on government for resources has nearly doubled. The needs of the higher education system have been growing rapidly. Higher education has been largely a state funded activity with about three-quarters of the total expenditure being borne by government.

The sources of finance for education in India can be broadly classified into external and internal or domestic sources which are explained in the following figure.



Private and Public Expenditure on Education:

Expenditure on education in India over the seven decades since independence reveals a remarkable growth in both private and public expenditure. The private expenditure (PFCE) on education increased from Rs. 86.5 crores in 1951-52 to Rs. 509961.6 crores in 2018-19 and the same is expected to be Rs. 728197.6 crores by 2022-23. Public expenditure on education increased from Rs. 64.5 crores to Rs. 736581 crores, and further to Rs. 1098589.4 crores for the years. All the figures are in current prices. The rate of growth during the last seven decades in current prices is 13.4% per annum in case of private expenditure on education, whereas for the public expenditure on education it is 14.67% per annum.

Table 2: Total Private and Public Expenditure on Education in India

Year	GDP	PECE	TBE	Public	Private
1951-52	11054.0	10307.0	814.1	64.5	86.3
1961-62	19010.0	16617.0	2225.4	260.3	213.2
1971-72	50999.0	41496.0	10610.9	1011.1	619.3
1981-82	175805.0	135676.0	41715.7	4298.3	2334.1
1991-92	673875.0	457735.0	170370.4	22393.7	9667.1
2001-02	2355845.0	1531672.0	619713.1	79865.7	40777.4
2011-12	8736329.0	4910447.0	2249526.5	333930.4	182378.0
2018-19	18899668.4	11205296.4	4645521.3	736581.3	509961.6
2022-23	27240712.2	15914796.3	7644017.5	1098580.4	728197.6

Sources: National Accounts Statistics (NAS), Reserve Bank of India (RBI), Ministry of Education (MoE), Government of India (GoI).

Notes: 1. Values are Rs. in Crores and in Current Prices; 2. GDP – Gross Domestic Product of India; PFCE – Private Final Consumption Expenditure - Total; TBE – Total Budget Expenditure of all sectors and combined of all the State governments and the Centre; 3. Public – Budget Expenditure on Education by both the Centre and State Governments, as is compiled by Min of Education, GoI; 4. Private – PFCE on Education (i.e. households excluding the Government expenditure); 5. GDP is 2011-12 Series; 6. Till 2018-19 figures are actuals and for the year 2022-23 figures are projected/extrapolated (forward) based on the past growth.

3. Quality Education

School Education: Government VS Private: A good's eligibility for public funding will depend not only on its unique characteristics but also on its political and social dimensions. In case of education in India, the political dimension could involve permitting educational institutions to operate as "corporate institutions"

that is, by permitting them to make a profit and foster competition. But the social dimension of education could involve either allowing them to operate as "minority institutions" or enacting legislation requiring reservations based on socioeconomic considerations for admission to both publicly and privately funded institutions. Being a developing country, India should be highly motivated to strengthen their public education system to ensure equal access and opportunity for all people, irrespective of their socioeconomic status. But it is seen that private schools frequently offer better facilities and a higher standard of instruction than public schools, despite public schools usually being more reasonably priced. But because private school can be very expensive, many families might not be able to afford the quality difference. This gap between public and private education has the potential to worsen social and economic inequality while also having a substantial influence on student results. According to a National Sample Survey Organization (NSSO) study, private school students in India outperform government school students in terms of learning results. According to the report, pupils in private schools received higher average exam scores than students in government schools at all educational levels. When it comes to facilities like playgrounds, computer labs, and libraries, private schools in India typically have superior infrastructure than public ones. The percentage of government schools with a functioning library was 55.4%, whereas the percentage for private schools was 80.4%, according to the DISE 2019–20. Moreover private schools frequently employ teachers with greater training and experience than public ones. The percentage of graduate-degree holding instructors in government schools was 59.5%, whereas it was 80.6% in private schools, according to the DISE 2019–20.

Higher Education in India: With respect to the size of the higher education network, India is ranked second globally for having one of the biggest systems. But by international standards, status of India's higher education is falling short in several areas. At present, there are a total of 1,113 universities across the country, out of which 36% of them are public universities. Rajasthan has the highest number of universities followed by Uttar Pradesh. As a whole, India has 46,007 colleges in total, of which 92% are affiliated, 4% are constituent/university institutions, 3% are recognized centers, and around 0.45% (206 colleges) are postgraduate/off-campus centers. Despite having a large population, a recent data from the HRD ministry states that currently only 12.4 percent of students in the nation pursue higher education. In the following ten years, India would require additional 800–1,000 universities and more than 40,000 colleges if it were to raise that percentage from 12.4% to 30%.

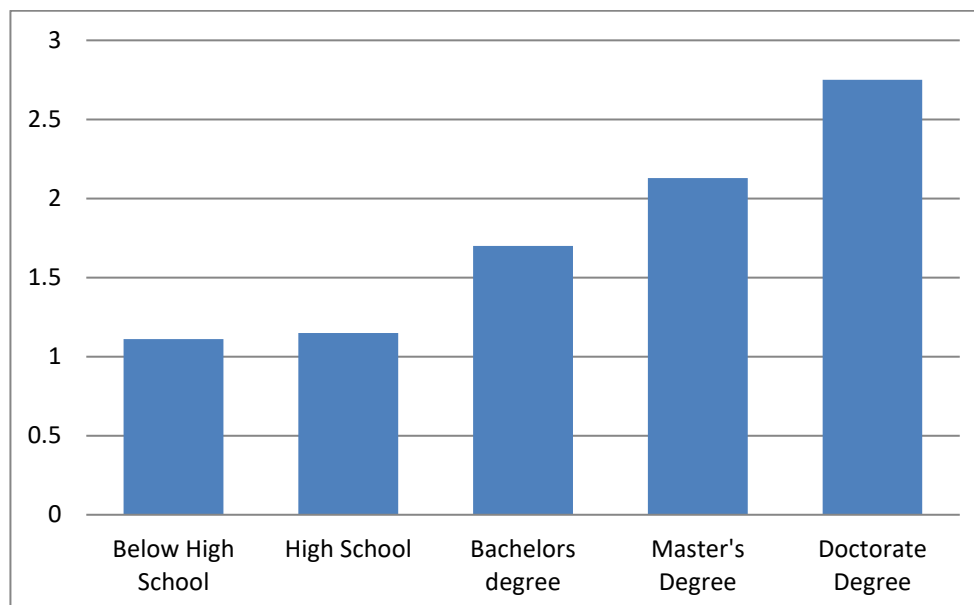
Use of ICT in Education: Since the COVID era, educators and students have had a thorough understanding of the significance of ICTs. Many people were able to complete their education with the aid of ICT tools during a period when there was a severe pandemic in India and the educational system was completely in decline. ICT adoption began years before, but following COVID, ICT offered a fresh alternative to the Indian educational system, allowing online education to start reaching individuals at the local level. At present ICT has become a crucial component of nearly every area and sector of the educational landscape; whether it is used for teaching, learning, or evaluation, ICT is influencing how education will develop in India in the future. When we talk about quality education, we can bring ICT based education, which has an encouraging effect on uplifting the quality the education system. When integrated with a positive teaching approach, ICT enables pupils to focus on more advanced subjects instead of unimportant tasks. It has been proved that developing critical thinking skills and using ICT for study were statistically significantly correlated. Above all, ICT fosters autonomy by enabling teachers to create their own resources, which gives them more authority over the curriculum than they would have in a conventional classroom.

4. Education and Economic Development in India

One of the key pillars of progress is education. It significantly affects how prosperous an economy is in a nation. Long-term economic success is impossible for any nation without significant expenditures in human capital. Because of this, education is now a crucial part of all governmental initiatives. Numerous emerging nations have made significant progress in the area of education to make their economic growth and development faster.

Education is essential and key to increase productivity of human capital which leads to increased income, employment, overall production and trade with other nations. It is itself an investment in the economy. Through the creation of competent labor and the proper attitude toward work and development, education helps to reduce poverty. It establishes the pay scale and ensures individuals' financial stability. People who receive an education are able to think more clearly and make more intelligent decisions. A nation's educated populace is more likely to embrace modernization and its methods. Education increases people's productivity and ability to learn new technology.

Literature shows a positive relation between educational levels and average monthly income of a person, thus production and standard of living. Thus, the higher level of education, higher the returns on investments.

Figure 1: Average annual salary in India in 2024, by education level (*in million Indian rupees*)

Source: National Sample Survey

The highest yearly wage among other educational qualifications was 2.75 million Indian rupees, earned by employees with doctorates as of 2024. The average annual salary for employees with a high school education or less was slightly over one million rupees.

5. Indian Education Policy- NEP 2020

Since in 1947, the government of India undertook multiple initiatives to combat the issue of illiteracy in both rural and urban areas of the country. The National Education Policy (NEP) is a policy formulated by the Government of India to foster and regulate education system in India. The policy incorporates from elementary education to higher education in the country. The first NEP was promulgated by the Government of India in 1968, the second in 1986, and the third one came in 2020. The NEP 2020 has brought a massive transformation in education through an equitable and vibrant knowledge society, by providing high-quality education to all, thereby making India a global knowledge superpower. The policy is based on the five guiding principles - Access, Equity, Quality, Affordability and Accountability. It recommends “5+3+3+4” curricular structure covering children in the age group 3-18 years.

In school education, NEP, 2020 emphasizes on the core values and principle that education must develop not only the cognitive skills - both ‘foundational skills’ of literacy and numeracy and ‘higher-order’ skills such as critical thinking and problem solving but also social and emotional skills. The policy stresses to increase the gross enrollment ratio (GER) in school education to 100% by 2030. In higher education, the policy offers insightful recommendations on various aspects of education that include moving towards multidisciplinary and holistic education, institutional autonomy, promotion of quality research through establishment of National Research Foundation, integration of technology, internationalization of higher education, restructuring of governance and regulatory architecture, multidisciplinary curricula. The policy aims at increasing GER in higher education to 50% by 2035.

Concluding Remarks

The general conclusions of the this study regarding the productivity of Indian education are that education enhances individual productivity, the quality of the labor force, and the expansion of the national economy; more precisely, only higher technical education can be classified as an investment. Return on education is slower than that of other investments, but once made, it offers benefits to people directly and indirectly for the whole of their lives.

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