

# Private and Public Expenditure on Education in India: Trend over last Seven Decades and impact on Economy

Venkatanarayana Motkuri

E. Revathi\*

---

## Abstract

This paper examined the trends in private and public expenditure on education in India during the last seven decades. The analysis is based on public expenditure on education compiled by Ministry of Education, Government of India, that includes expenditure incurred by education department as well as by all other departments on education and training-related programmes and activities. The private final consumption expenditure (PFCE) on education as estimated by the national accounts and statistics (NAS) is the base for private expenditure on education. It is observed from the analysis that India's spending on education reached its peak in the recent past. Public and private expenditure on education are respectively equivalent to 3.9% and 2.7% of its GDP in 2018-19. Together, the country's spending on education is equivalent to 6.6% of GDP. A notable trend over the past three decades is that private expenditure on education is growing faster than that of the public. The ratio of public to private in terms of expenditure on education has declined during this period. This reflects increasing privatisation of education in India, and has far reaching policy implications.

**Keywords:** Public Expenditure on Education, Private Expenditure on Education, Financing Education, Privatisation of Education

**Publication Date:** 06 Feb 2024

---

---

\* Venkatanarayana Motkuri is Associate Professor and Coordinator, Research Cell on Education (RSEPPG) at Centre for Economic and Social Studies (CESS) and E. Revathi is Professor and Director, CESS, Hyderabad.

## I Introduction

Progress in educational development in India during the last three decades is remarkable, owing to growing demand and initiatives for school education such as DPEP, SSA, RMSA and now the Samagra Shiksha. According to authors' estimates based on the fourth annual Periodic Labour Force Survey (PLFS-6) 2022-23, more than 98% of 6-14 years-age children in the country are attending schools (private or public). Universalisation of school attendance among the 6-14 years-age children is a constitutional mandate in India. The global norm for the same is among children ages 6-17 years; correspondingly, the attendance rate among 6-17-years-children is around 95%.

The country's performance on higher education is also remarkable during the same period. GER in higher education was less than one percent in 1950, and it increased to just 8% at the end of 1990s, but thereafter it has tripled during the last two decades. According to AISHE report estimates, GER in higher education in India is 28.5% in 2021-22. This remarkable progress in the landscape of Indian education system is associated with growing private sector involvement in the field (Desai *et al.*, 2008; Agarwal, 2004). Private educational institutions (non-state sector) account for nearly half (46%) of the total school enrolment and 70% of enrolment in higher education in the country (GoI, 2022a&b). Further to such a trend, not only the base (consisting of percentage of households spending private expenditure on education) is expanding, but also the per capita private expenditure on education is increasing over a period (Motkuri and Revathi, 2023a). Such a growth in private expenditure on education is more so among the lower economic classes.

Growing demand for education in India coupled with inadequacy of public expenditure on education has been resulting in growing private expenditure on education which in turn has far reaching implications for affordability and access to education (Tilak, 1983; 1991; 1997; 2003; Motkuri and Revathi, 2023a&b). With the expanding infrastructure, transportation and communication facilities leading to mobility of people and penetration of markets; expanding base of the middle class and emerging neo-middle classes; structural changes in labour market, and urbanisation have contributed to rise in perceived values of education and to the growing demand for education (Motkuri, 2016). The non-fulfilment of public education system due to inadequate state funding, strained the private pockets in meeting the growing demand (Tilak, 1997; Motkuri and Revathi, 2023a). The recent National Education Policy 2020 which is third in series, intends to curb the commercialisation of education but not privatisation.

Against this backdrop, the present paper examines and analyses the trend in and relationship between private and public expenditure on education in India for the seven-decade period since independence. The analysis is based on public expenditure on education compiled by Ministry of Education, Govt. of India, that includes expenditure incurred by education department as well as all other departments on education and training-related programmes and activities. Data on private expenditure on education, is based on the private final consumption expenditure (PFCE) on education as estimated by the National Accounts Statistics (NAS). A detailed methodology is discussed in the section three.

## II Financing Education - Public Vs Private Expenditure: A Review of Certain Theoretical Underpinning

Social philosophy and economic framework of human capital theory justifies the public investment in education (Motkuri, 2016). Empirical evidence has shown that along with private returns to education there are social returns as well (Psacharopoulos, 1994&2006 Psacharopoulos and Patrinos, 2004). Research in endogenous growth model exercises has also shown that long-run growth outcomes are associated with public expenditure on education (Lucas, 1988; Glomm and Ravikumar, 1997; Blankenau and Simpson, 2004; Dissou *et al.*, 2016). Public investment in education is justified not only on social returns, but also the redistribution effects, i.e. reducing economic inequality (Stiglitz, 1974; Magalhaes and Turchick, 2022). However, while the experience of developed countries also indicate that their educational development is catered largely by public institutions and public expenditure on education, the developing countries have to rely on educational institutions of private sector actors and household private expenditure (UNESCO, 2022).

Extensive research has been conducted on public expenditure/investment on education in India (GoI, 1966; Mazumdar, 1983; Panchamukhi, 1989; Tilak, 1993; 1997; 2002; 2006; 2007; Mukherji, 2013; Bhakta, 2014; De and Endow, 2018). Most of the studies on public expenditure on education in India inferred that education is a public good, and hence public investment in education is necessary, but such expenditure was found to be insufficient and short of the requirement in achieving the educational goals of the country.

Further, there is also an emerging research on private expenditure on education in India. Various aspects, including determinants of private expenditure on education, are explored (Sarkar, 2017; Chandrasekhar *et al.*, 2019; Geetharani, 2021; Rashmi *et al.*, 2022; Motkuri and Revathi, 2023b). In a study of time series cointegration and Granger causality analysis of Indian data, it is observed that a rise in public expenditure on education has a positive effect on growth of national income, which in turn has a positive effect on a rise in private expenditure on education (Motkuri, 2020). Growing private expenditure on education is a cause of concern. In this context, one needs an understanding of the process of privatisation, and thereby growing private expenditure on education.

### Privatisation and Private Expenditure on Education

Privatisation in education is a process that indicates the direction of change in three dimensions: *ownership*, *financing*, and *control* (Bray, 1998). The private, otherwise meaning non-government, encompasses variety of operators/entities, including commercial entrepreneurs, non-profit organisations, trusts, and communities (*ibid*). The process of privatisation is possible in four different scenarios (or strategies) or a combination of them:

- a. change in ownership of institutions (public to private);

- b. relatively faster growth of private over that of public in expanding base of the education system, or else slower rate of decline of private in the scenario of education system contraction;
- c. increasing government financial support for institutions under private control (not necessarily financing the private institution, but financing the students through vouchers); or
- d. the increasing private financing of institutions under government control (Bray, 1998).

Among the private sector, philanthropy of non-profit or not-for-profit organisations (NPOs) have a long history of delivering public services including education (Weisbrod, 1975; 1977; James, 1986; 1987; 1993a&b; Bray, 1998; Valentinov, 2006). One is not sure whether, in the emerging private education sector in India, the motto of it is in line with the philosophy of philanthropy and social service.

### Private Serving Excess and/or Differentiated Demand

Privatisation in education can be explained through neoclassical economics framework of *excess demand* and/or *differentiated demand* (James, 1993a&b; Bray, 1998). Burton A. Weisbrod was the earliest one to formulate *excess demand hypothesis*. It is so especially in the context of public goods wherein the effective demand for the same exceeding the limited public supply is referred to as excess demand, which is served by emerging voluntary non-profit private organisations (Weisbrod, 1975; 1977). Public good nature of education requires the government supply of such services, but the effective demand for the same is over and above the limited public supply, and so private comes in to serve such *excess demand*. Public is superior but paradoxically limited in supply, inescapably excluding the demand of some aspirants. Although parents of eligible students prefer the public institutions for their children's education, but they could not get a place due to limited supply of public (in terms of number of institutions and their intake capacities) that is constrained by public financing. Therefore, they are involuntarily pushed out of public and hence resorting to private, which is there to provide similar services (James, 1987; 1993a&b).

As mentioned above the non-government or private service-providing entities encompassed commercial enterprises, donative non-profit organisations including philanthropy-based trusts and communities along with religious organisations, associations, or institutions. Private provision of education in fact initially began with the voluntary non-profit organisations which are financed by donations of concerned citizens. Some of the institutions of such nature are supplemented with public funds (government aided) in case of education. Extent of subsidised service provision or cost-recovery of these non-profit organisations however depend on their donations base and service motto. Willingness and ability to pay for education is what matters in cost recovery and for commercial entities.

Again, rise in private sector is also due to *differentiated demand* for private education (James, 1987). Parents of eligible students prefer private system due to real or perceived quality differentiation

in private and public education and placement opportunities after completion of education. Product differentiation is a rationale behind the increasing returns and downward sloping demand curve, among two important elements of Pierra Sraffa's contribution to the theory of imperfect competition in 1926 (Sraffa, 1926).

The concept was further elaborated by Harold Hotelling in 1929 and Edward Chamberlin in 1933 (Hotelling, 1929; Chamberlin, 1933). Hotelling's spatial competition or linear model consists of two types of product/service differentiation: vertical, based on the quality, and horizontal, based on the variety (Hotelling, 1929). Chamberlin's differentiation<sup>1</sup> in his monopolistic competition model relaxes the assumptions of product homogeneity and perfect substitutability of products. Non-price factor, consisting of various characteristics of a general class of products produced or sold by different producers/agents, creates a preference of one over the other. Consumer preferences and perceptions are a key to such product differentiation especially according to theory of Chamberlin.

In line with above theoretical underpinnings, education hitherto predominantly provided by government across countries, now witness a significant presence of private sector in the field. The predominant private sector presence caters to excess demand, and also (partly) to differentiated demand (James, 1993; 1987). Quality and variety features of education provided/delivered in private institutions might be different from those of public ones, differentiating the educational services provided in institutions under these two different forms of management. Given the diverse tastes and preferences of parents for their children's education, the delivery of the same in institutions of two different (private and public) managements would lose their perfect substitutability (James, 1993).

### **Non-Profit Vs For-Profit Organisations: Producing and Supplying Public Good**

Within the private sector for educational services, non-profit or not-for-profit organisations (NPOs) are the most preferred form across the globe in delivering such services. Non-profit organisations are reliable in contract failures and market failures due to information asymmetry, given the *non-distribution constraint* (NDC) factor in these organisations (Weisbrod, 1975; Hansmann, 1980; Valentinov, 2006). In other words, non-profit organisation does not have space for distributing its profits or dividends to its members, and it cannot sell-off its stocks for capital gains (James, 1993; 1987). The non-distribution constraint (NDC) of not-for-profit organisation is such that even if makes profits, these are not to be distributed (Hansmann, 1980). If any profits, they are to be ploughed back to expand the services, or to improve the quality of the service. While giving tax exemptions, in many countries, a legal requirement of being a non-profit entity is typical for educational institutions. Many times, governments have been providing certain financial assistance as well as certain other benefits for such institutions as required.

### **Interlocking of Managements: Abuse of Non-Profit and Philanthropy**

Although most of the private educational institutions, especially in India, are under the category of NPOs, there is space for misuse of such social service platform. An opportunity for abuse is presented with *interlocking of management* of non-profit and for-profit organisations, hence Weisbrod recommends prohibition of such entities and motives (Weisbrod, 1975). Steering the business from non-profit activity to for-profit activity, along with accounting manipulations, are two important abuses of interlocking management in this regard.

All the above theoretical underpinnings indicate that growth of private sector is either largely meeting the excess demand or differentiated demand. This in turn indicates the deficiency in the public investment. Societal demand for education is over and above that accommodated in educational institutions under public management. Further, as parental perceptions regarding quality and variety of education delivered in such institutions are not too positive, there is a rising preference for educational programmes in institutions under private management.

Growing private sector in education has implications in the sense of increase in private costs and hence the problem of affordability. Further, although most of the private educational institutions are registered as non-profit or not-for-profit organisations (NPOs), there is enough space for possible interlocking of management and thereby abuse of philosophy and intention. In this context the welfare state objectives and obligations and distributional aspects would be better served with substantial public investment in education, rather than leaving the larger space to private sector.

### **III Data Sources and Methodological Issues**

The main sources of public expenditure on education are budget documents where the *budget major head* (BMH) representing education (codes: 2202, 2203, 2205, 4202 and 6202) presents the budget expenditure on education. Reserve Bank of India has been compiling and building a time-series of all the state Governments' expenditure by major heads that includes education.

The *Ministry of Education* (MoE), *Government of India* also compiles expenditure on education which comprehensively covers the expenditure on education, not only by Education Departments but also all the other Ministries and Departments incurred for education and training-related programmes and activities. It is reported in annual series of report on Analysis of Budget Expenditure on Education (ABEE).

For the current analysis, public expenditure on education as compiled by MoE, Govt of India and presented in ABEE is used. The MoE, Govt of India made available such statistics for the period since 1951-52 to 2020-21. *The definition and coverage of expenditure on education has been largely intact throughout the period.* Hence, the time series data regarding expenditure on education is more or less consistent and thereby comparable. MoE compilation in the latest report of ABEE presents actual expenditure on education till 2018-19. It is revised expenditure for the year 2019-20 and budget

expenditure for 2020-21. We also attempted a projection/extrapolation (forward) based on the past growth for the years 2021-22 and 2022-23.

One must note that Covid pandemic has an adverse impact on all the economic activities and social services during 2020-21. Therefore, though there is an increase in public and private expenditure on education for the year 2020-21 over the previous year, rate of growth in the same is far lower during the period. Though, the public expenditure on education picked-up in the subsequent year (2021-22), private expenditure on education was affected in this year as well,

For the private expenditure on education, one of the sources could be the *private final consumption expenditure* (PFCE) on education as estimated by the *National Accounts Statistics* (NAS). In estimating the national income following methods of national accounting system, PFCE comprises an important component of GDP at market prices following the expenditure method. As defined in *national accounts statistics* (NAS), *private final consumption expenditure* (PFCE) is the expenditure incurred by the *resident households* as well as the *non-profit institutions serving the households* (NPISH) on final consumption of goods and services. Such an estimate of total final consumption expenditure is derived using *commodity flow* approach. Expenditure on education is one of the major components within the PFCE. However, one of the shortcomings of the PFCE estimate of NAS is that such an estimate is made possible at the national level only, there is no such estimate available at sub-national level.

The other major source of information for the *private expenditure on education* is the national-level household survey based estimates (Motkuri and Revathi, 2023). They are National Sample Survey Office's (NSSO) different rounds of *Consumer Expenditure Surveys* (CES) and *Surveys on Household Social Consumption on Education*. As we know NSSO has been conducting larger sample quinquennial CESs since 1970s, and the latest survey for which estimates are available is 2011-12. Although there was a very recent survey in 2017-18, it was withdrawn from public domain for unknown reasons. Education is one of the *household consumption expenditure* (HCE) items and hence expenditure on it is captured in these surveys. Also, since mid-1980s the NSSO has been carrying surveys focused on household social consumption of education along with health. There are five such surveys so far: 1987-88, 1995-96, 2006-07, 2013-14, and 2017-18. These surveys have captured households' private expenditure on education.

One must however note the differences between NAS (for PFCE) and NSSO (for CES-based HCE) in their estimates of private consumption expenditure in general and that of education in particular (Motkuri and Revathi, 2023a). Ideally both should match with each other, but in practice they do not. The divergence between these two estimates, particularly in terms of the total private consumption expenditure, has been increasing over the period of study. The PFCE estimates have always been higher than the estimates of CES.

One of the reasons for the differences could be that PFCE of NAS covers consumption expenditure of, as mentioned above, both the resident households and the *non-profit institutions serving the households* (NPISH) whereas CES of NSSO covers only the resident households

(Motkuri and Revathi, 2023a). Besides, CES of NSSO also suffers with *non-sampling errors* of *under-reporting* especially the economically better-off and/or rich households, along with relapses in longer recall. However, one of the advantage with the CES of NSSO estimate is that estimates are made not only for the national level but also sub-national (state and region) levels. Similar shortcomings and advantages of CES are applicable for the NSSO's Surveys on *Household Social Consumption on Education*.

One similarity between PFCE of NAS and CES of NSSO is that both capture education expenditure across all age-groups, and hence have broader coverage reflecting the perspective of life-long learning, whereas the *Social Consumption on Education* survey captures only school or college age-groups and those attending formal or informal education institutions below 35 years of age (Motkuri and Revathi, 2023a).

The following analysis on private and public expenditure on education is based on two sources: ABEE of Ministry of Education, Government of India for public expenditure, and PFCE of NAS for private expenditure. Both sources have broader and more comprehensive coverage of expenditure on education. Since the present analysis is limited to trends at the national level only, the PFCE estimate is used for private expenditure on education. Unless and otherwise specified, per capita is per person. We have not made it per school-age or college-age population, and also not per-student.

#### **IV Private and Public Expenditure on Education: Trends**

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 mentioned above (Table-1). All the figures are in current prices.

In terms of the per capita expenditure on education (per person), private expenditure had increased from Rs. 2.4 in 1951-52 to Rs.3805.7 in 2018-19, and to Rs. 5221.9 in 2022-23, whereas the per capita public expenditure on education had increased from Rs. 1.8 to Rs. 5555.8, and to Rs. 7954.9 during the same period (Table-2).

At the time of independence, private expenditure on education was higher; subsequently, public expenditure outpaced the private. While the total private expenditure on education in India had increased by nearly 5900 times, during the last seven decades since independence (i.e. between 1951-52 and 2018-19), the public expenditure on education had increased by 11400 times during the same period. In other words, 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-1: Total Private and Public Expenditure on Education in India**

Year	GDP	PFCE	TBE	<i>Expenditure on Education</i>	
				Public	Private
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>
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

**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.

**Sources:** 1. National Accounts Statistics (NAS); 2. Reserve Bank of India (RBI); 3. Ministry of Education (MoE), Government of India (GoI).

Similarly, the per capita private expenditure on education (per person) in India had increased by nearly 1670 times during these seven decades, whereas the per capita public expenditure on education had increased by 3100 times during the same period. In other words, the *rate of growth* in *per capita private expenditure on education* during the last seven decades in *current prices* is 11% per annum, whereas the *per capita public expenditure on education* is 12.6% per annum.

**Table-2: Per Capita (per person) Expenditure (Rs.) on Education in India: Private and Public**

Year	GDP	PFCE	TBE	Expenditure on Education		Ratio of Public to Private
				Public	Private	
1	2	3	4	5	6	7
1951-52	303.1	282.6	22.3	1.8	2.4	0.7
1961-62	428.0	374.1	50.1	5.9	4.8	1.2
1971-72	920.1	748.7	191.4	18.2	11.2	1.6
1981-82	2545.2	1964.3	603.9	62.2	33.8	1.8
1991-92	7883.9	5355.2	1993.2	262.0	113.1	2.3
2001-02	22716.4	14769.3	5975.6	770.1	393.2	2.0
2011-12	71680.2	40289.4	18457.0	2739.8	1496.4	1.8
2018-19	142554.1	83621.0	35039.5	5555.8	3805.7	1.5
2022-23	197738.5	114125.6	55351.2	7954.9	5221.9	1.5

**Notes:** 1. Values are in Rupees (Rs.) and in Current Prices; 2. **GDP** – Gross Domestic Product of India; **PFCE** – Private Final Consumption Expenditure; **TBE** – Total Budget Expenditure of all sectors and combined of all states and 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. Per capita is per person; 6. Till 2018-19 figures are actuals and for the year 2022-23 figures are projected/extrapolated (forward) based on the past growth.

**Sources:** Authors' calculations based on: 1. National Accounts Statistics (NAS); 2. Reserve Bank of India (RBI); 3. Ministry of Education (MoE), Government of India (GoI); 4. RGI and Census of India.

Higher volume of private expenditure on education as compared to that of public during the early years of post-independence period was a reflection of the situation in British Colonial regime. Although the British introduced the modern and mass education system in India and provisions for educational grants were made, significantly larger part of the educational services were privately financed (parents, village/town communities, philanthropies, charities etc.) (Nurullah and Naik, 1951). Post-War Educational Development Plan (1944) intended for a multi-fold rise in the public investment (expenditure) on education.

Post-independence, the Kher Committee (1949) recommendations along with the state-led development and planning initiatives, more particularly from the Second Five-Year-Plan onwards made efforts in the direction (Govinda and Mathew, 2018). Further, recommendations of the Kothari Commission (1966) that translated into the first National Education Policy 1968, followed by the second National Education Policy 1986, laid more emphasis on public investment on education (Govinda and Mathew, 2018). Thus, since the mid-1950s the public expenditure on education had outpaced the private, and that trend continued till 1980s. But during the last three decades since 1990s, the growth in private expenditure on education outpaced the public. It coincides with the economic reforms and liberalisation policy introduced during the early 1990s.

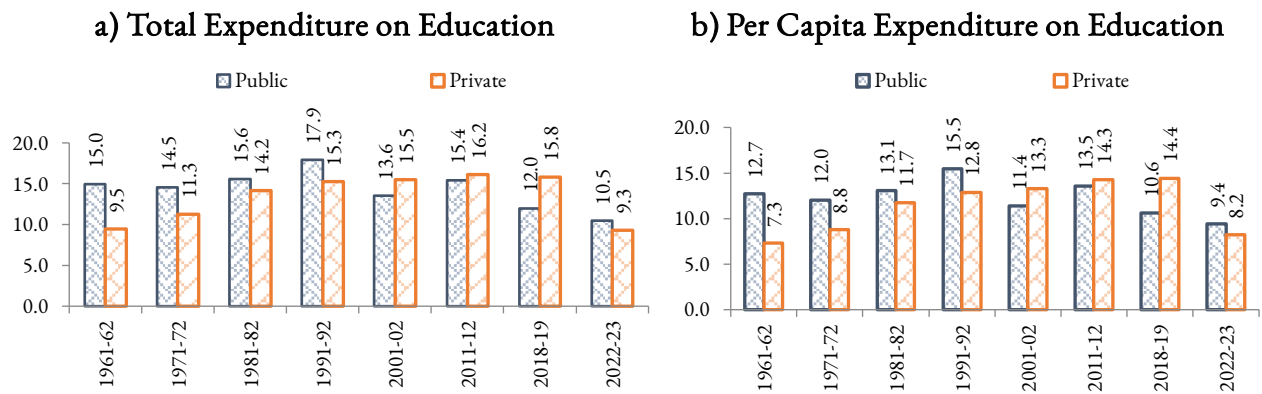
An increase in both the private and public expenditure on education, reflecting the expanding base of education system, during the last seven decades is several times higher than the increase in GDP, total PFCE and total budget expenditure (TBE). Such a mammoth increase (in values of current

prices) in expenditure on education (public and private) might have been partly due to inflationary tendencies of the economy, but it must be largely due to the expanding base of education system in terms of both number of educational institutions and the enrolment in both the private and public sector institutions in the country.

In 1950-51, the number of schools in India was around 2.3 lakhs, number of colleges and universities were around 600, enrolment in schools was 238 lakh, and in colleges and universities it was just 4 lakhs; teachers in schools were 7 lakhs, and a few thousands in colleges. They increased manifold during the last seven decades: around 15 lakh schools and 50 thousand higher education institutions (HEIs) in the recent past, with the enrolment more than 600 lakh in schools and 410 lakh in HEIs, and more than 36 lakh teachers in schools and 14 lakh in HEIs.

The overall annual growth (CAGR or semi-log trend) for the last seven decades indicates that the public expenditure on education has grown more rapidly than that of private. But the annual growth in public expenditure on education separately for each decade indicates such supremacy has not continued. Growth in public expenditure on education was higher than that of private during the first four decades (from 1950s through 1980s), but thereafter (1990s through the present decade) it is the opposite (see Figure-1a&b). In other words, the growth in private expenditure on education is higher than that of public expenditure since 1990s. As a result the ratio of public to private had increased continuously for the first four decades, and it began decelerating during the last three decades especially since 1990s (Table-2).

The trend is in fact reflecting the increasing privatisation of education since 1990s. The per capita public expenditure on education was 0.7 times that of the private and the ratio increased to 2.3 in early 1990s. Such a ratio is gradually declining since 1990s, and it is 1.5 at present. It would further decline in the next decade, as the rate of growth in private expenditure on education is outpacing that of public one (Table-2). Although Covid-19 affected the growth in both the private and public expenditure on education, its adverse impact is more on the private one (Figure-1a&b). In fact UDISE+ data on school education has shown that the enrolment in government schools increased faster than private ones during the post-Covid period.

**Figure-1: Annual Growth (%) in Expenditure on Education in India: Private and Public**

**Notes:** 1. Compound Annual Growth Rate (CAGR in %); 2. Growth of Expenditure in current prices; 3. Till 2018-19 figures are actuals, revised estimates for 2019-20, budget estimates for 2020-21 and for the years 2021-22 and 2022-23 figures are projected/extrapolated (forward) based on the past growth.

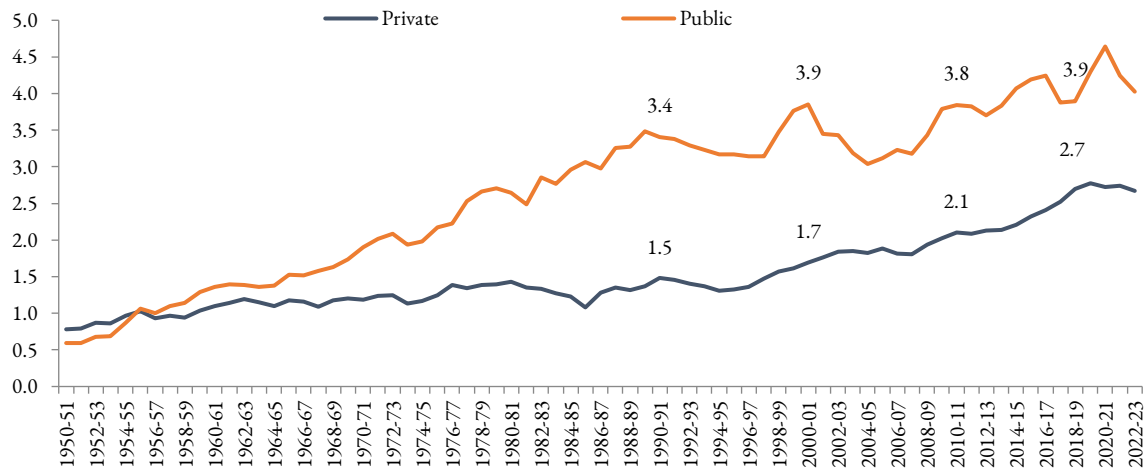
**Source:** Authors' calculations based on sources: 1. PFCEE, National Accounts Statistics (NAS); 2. ABEE, Ministry of Education (MoE), Government of India (GoI).

The increase in per capita private expenditure on education would be not only due to rapid growth of education in private sector (the base expansion of private), but also the increase in per capita expenditure per student owing to increase in fee and other charges over a period (Motkuri and Revathi, 2023). As the estimates based on NSSO's recent 75<sup>th</sup> round survey on *Social Consumption: Education* (2017-18) show, nearly 41% among the children of 3-35 years age who are currently attending educational institutions (pre-schools, schools and colleges) are attending such institutions under private management<sup>2</sup>. In higher education, more than 75% of institutions and 65% of enrolment is under private management in 2021-22<sup>3</sup> (AISHE, 2024). Besides, public (Government) institutions as well have introduced various self-financed courses or programmes, and there is a considerable enrolment in the same.

In terms of expenditure on education as a percentage of GDP, in 2018-19 India's public expenditure is 3.9%, while that of the private expenditure is 2.7% (Figure-2). Together, an amount equivalent to nearly 6.6 percent of GDP is spent on education in the country in 2018-19. The revised estimates in 2019-20 and the budget estimates in 2020-21 indicate the percentage of public expenditure on education is a little higher, at 4.6%, while the private expenditure remains the same.

The expenditure on education by public and private sources was equivalent to 0.6% and 0.8% of GDP respectively in 1950-51, and together it was merely 1.4%. The public expenditure on education as a percentage of GDP had increased by seven times, whereas the percentage of private increased three times during the last seven decades. The trend shows that expenditure on education as percentage of GDP is increasing, for both the sources: private and public<sup>4</sup>.

**Figure-2: Private and Public Expenditure on Education in India as a Percentage of its GDP**



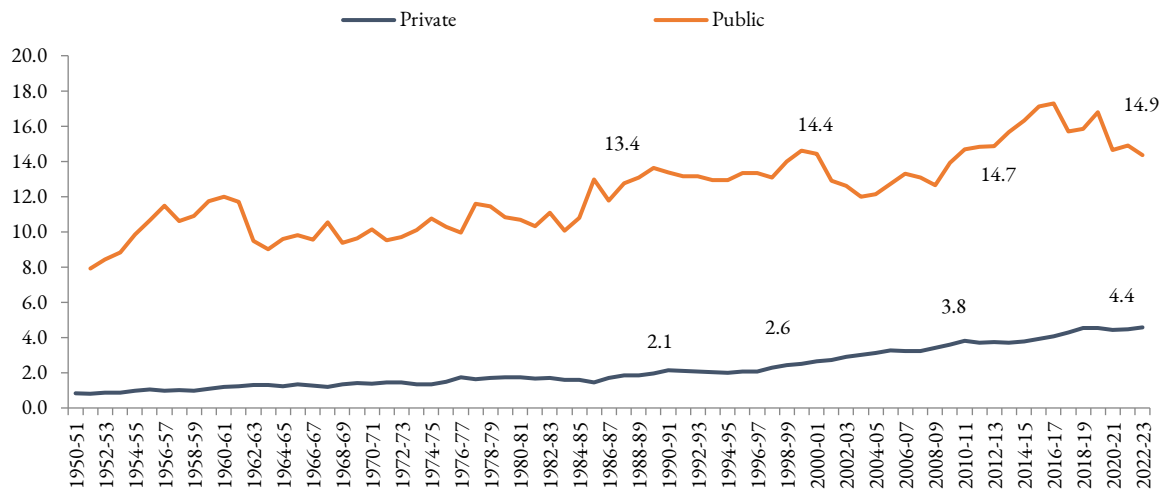
**Notes:** 1. **Public** – Budget Expenditure on Education by both the Centre and State Governments, as is compiled by Min of Education, GoI; **Private** – PFCE on Education (i.e. private/households’ expenditure, excluding the Government/public expenditure); 2. Till 2018-19 figures are actuals, revised estimates for 2019-20, budget estimates for 2020-21 and for the years 2021-22 and 2022-23 figures are projected/extrapolated (forward) based on the past growth.

**Source:** Authors’ calculations based on 1. National Accounts Statistics (NAS) for PCEE and GDP, and Ministry of Education, Govt of India for ABEE.

The private and public expenditure on education as a percentage of total public and private consumption expenditure respectively, during the last seven decades, is showing an increasing trend (Figure-3). This is because of the higher growth of private expenditure on education vis-à-vis growth in total private expenditure (PFCE), and similarly higher growth in case of public expenditure on education compared to that of total (Centre and States) budget expenditure.

The percentage of education expenditure (private) in total PFCE had increased five times from less than one percent (0.8%) in 1951-52 to 4.6% in 2018-19, while the increase in the public expenditure domain was doubled from 7.9% to 15.9% during the same period. Though the level of private expenditure is lower than that of public expenditure, the rise in its share as percentage of PFCE was almost five times during the period. Moreover, the increase in education expenditure share in total private consumption expenditure domain is continuous and more consistent than that of public.

**Figure-3: Public and Private Expenditure on Education respectively as % of Total Private and Public Expenditure - All India**

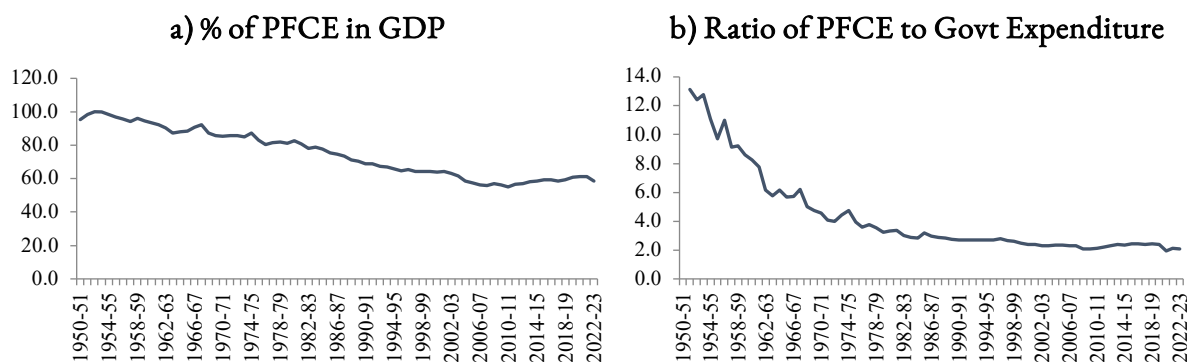


**Notes:** 1. **Private** – Private expenditure on education as a percentage of total PFCE; 2. **Public** – Public expenditure on education as a percentage of total budget expenditure (TBE); 3. Till 2018-19 figures are actuals, revised estimates for 2019-20, budget estimates for 2020-21 and for the years 2021-22 and 2022-23 figures are projected/extrapolated (forward) based on the past growth.

**Source:** Authors’ calculations based on 1. National Accounts Statistics (NAS) for PCE, and Ministry of Education, Govt of India for ABEE.

Private final consumption expenditure holds a major share in the Gross Domestic Product<sup>5</sup> (GDP) at market prices of a country. In India, although there was gradual decline in share of PFCE in GDP at market prices (95% in 1950-51, to around 60% in the recent past), it is still a major contributing component of GDP (Figure-4a). It also means that, correspondingly, the share of government expenditure is rising. This is reflected in the declining trend in ratio of Private (PFCE) to Government expenditure. The total private consumption expenditure (PFCE) was almost twelve times higher than that of public (Government) in 1951-52, but it is just twice that of public expenditure at present (see Figure-4b).

**Figure-4: Private Final Consumption Expenditure (PFCE) in GDP: India**



**Source:** Authors’ calculation based on National Accounts Statistics (NAS), Government of India.

Finally, the real growth (i.e. in constant prices) in private and public expenditure on education gives the true picture, and highlights the following patterns. Firstly, the growth in private expenditure on education (either total or per capita) is higher than the total private expenditure (PFCE). Secondly, growth in private expenditure on education is higher than that of public (Table-3). Thirdly, while an accelerated rate of growth since 1970s is observed for private expenditure on education, there is a decelerated rate of growth for public expenditure on education throughout.

**Table-3: Real Rate of Growth (Constant Prices) in Private and Public Expenditure on Education in India**

Decade	<i>Growth in Total Value</i>					<i>Growth in Per Capita</i>				
				<i>on Education</i>					<i>on Education</i>	
	GDP	PFCE	TBE	Public	Private	GDP	PFCE	TBE	Public	Private
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>	<i>7</i>	<i>8</i>	<i>9</i>	<i>10</i>	<i>11</i>
1950s	4.0	3.4	8.6	13.9	6.8	2.0	1.6	6.6	12.0	5.1
1960s	3.5	2.9	7.8	11.0	8.7	1.3	0.7	5.6	8.8	6.5
1970s	3.3	3.0	6.2	5.4	3.4	1.1	0.8	4.0	3.1	1.2
1980s	5.2	4.0	5.7	8.0	4.4	3.1	1.8	3.6	5.9	2.3
1990s	5.8	4.8	5.3	5.6	6.1	3.9	2.8	3.3	3.7	4.1
2000s	6.6	5.3	6.7	4.3	5.9	5.0	3.6	5.0	2.7	4.3
2010-11 to										
2018-19	6.7	6.7	5.2	5.3	7.9	5.5	5.5	3.9	4.3	6.8
2019-20 to										
2022-23	3.8	3.9	7.3	2.0	5.7	2.3	3.0	6.3	1.0	4.8

**Notes:** 1. Values are Rate of Growth (%) in Constant (2011-12) Prices; 2. Growth is based on **semi-log model** for each of the decade; 3. **GDP** – Gross Domestic Product of India; **PFCE** – Private Final Consumption Expenditure - Total; **TBE** – Total Budget Expenditure of all sectors and combined of all State governments and Centre; 4. **Public** – Budget Expenditure on Education by both the Centre and State Governments, as is compiled by Min of Education, GoI; 5. **Private** – PFCE on Education (i.e. households excluding the Government expenditure).

**Sources:** Authors' calculation based on: 1. National Accounts Statistics (NAS); 2. Reserve Bank of India (RBI); 3. Ministry of Education (MoE), Government of India (GoI).

Above illustrations indicate that although the share of total PFCE in the GDP and ratio of PFCE to total Government (budget) expenditure is declining, the share of private expenditure on education in total PFCE is increasing. It indicates increasing prioritisation of education in the private domain, reflecting growing importance of education among the households across economic and social classes.

In the scenario of increasing demand for education, the inadequacy of Government expenditure, thereby limited capacity of public institutions (public supply is short of demand) would result in an excess demand scenario – which is catered to by private institutions. Inadequacy of public expenditure also affects the resource (human, financial, and physical infrastructure) availability in instructions under public management, and thereby the quality of education delivered and post-completion

services like placement. Private institutions serve such differentiated demand. Thus, excess as well as differentiated demand have been leading to growing private expenditure on education.

All the above trends reflect the growing burden on private pockets. The increasing share of education in the total PFCE has a burdening effect on the household consumption expenditure. Higher growth in private expenditure on education vis-à-vis public expenditure has a substituting or complementing effect due to inadequacy of public expenditure. The burden falling on private pockets has implications for affordability and thereby access to education for the poor and the marginalised. The longstanding recommendation of the first National Education Commission headed by Kothari, (also endorsed by all subsequent National Education Policies), that 'public spending on education to be raised to 6% of GDP', could find place in manifestos and common minimum programmes, however is yet to be realised.

The recent third National Education Policy (NEP) 2020, while endorsing the 6% norm, intends to curb commercialisation of education, especially post-secondary education. However, certain other provisions made in the NEP-2020 may encourage the private sector participation in education, and they may lead to furthering of commercialisation of the private education. Along with setting uniform standards and common guidelines to public and private institutions, the policy also provides autonomy to private institutions to set fee for their programmes. They are to be transparently and fully disclosed along with flexibility in required conditions for establishing private education institutions especially in the higher education segment. Given the ground realities, eventually it may lead to furthering of commercialisation.

## **V Cointegration and Causality Analysis**

In addition to the above descriptive analysis, this section examines whether there exist a long-run equilibrium relationship between public and private expenditure on education on the one hand and if they both contribute to the economy (GDP). This analysis is based on the time-series econometric tools, such as cointegration, causality tests, and VAR-based error correction modelling. In this section we present our preliminary results, while a systematic analysis of the same is being made in a separate paper. The observations made in this analysis would well connect with findings of the existing literature to a certain extent as discussed below.

A stream of endogenous growth models research has been focussing on investment in education for human capital formation fostering economic growth, reducing inequality, and promoting individual well-being (Annabi, 2017). One strand within the stream focusses on public and private investments in education and their impact (see Bräuning, and Vidal, 2000; Arclean and Schiopu, 2010; Magalhães and Turchick, 2022). The focus of the research in this strand has been the impact of education on either growth or inequality or both. Further, such impact is analysed through combinations of private and public expenditure on two different stages of education: school (k-12)



and post-secondary or higher education (see Bräuning, and Vidal, 2000; Arcalean and Schiopu, 2010; Annabi *et al.*, 2011; Magalhães and Turchick, 2022).

Such an analysis in the literature shows that public expenditure on education is a key factor fostering growth and reducing inequalities. Developed countries have witnessed the same (UNESCO, 2022). Developing countries like India, are witnessing the opposite – predominance of private expenditure. For instance in USA, school education is more or less public funded and higher education is left to private sector, but still economically poor are supported with public funding through vouchers, scholarships, and fellowships. In India, private sector is continuing to occupy major part of school as well as higher education in the country.

An analysis of *cointegration* shows the long-run equilibrium relationship while checking the stationarity of the time series. Such time series analysis is systematically dealt with and reported elsewhere (Motkuri, 2020). It is observed that non-stationary level series of GDP and expenditure on education by both the sources (private and public) is found to be stationary on their first-differenced series. Hence, the series are individually first-order integrated processes. A *cointegration* testing (both the Engel-Granger and Johansen procedures) has shown that there is a long-run equilibrium relationship between the investment in education (public and private) and the country's GDP (Motkuri, 2020). Further to cointegration testing, a *Granger Causality* test is performed for three time series (GDP, PFCE on Education, and Public Expenditure on Education). Results are as presented below in Table-4. Granger causality test statistics for decision is derived for six combinations of three times series.

**Table-4: Granger Causality Test Results and Decision**

Sl.no	Causality (H0)	F	p	Decision
1	PFCE does not cause GDP	0.7582	0.522	Do not reject
2	PEE does not cause GDP	4.6479	0.005	Reject
3	GDP does not cause PFCE	3.3940	0.023	Reject
4	GDP does not cause PEE	2.3041	0.859	Do not reject
5	PFCE does not cause PEE	1.3689	0.261	Do not reject
6	PEE does not cause PFCE	1.1259	0.346	Do not reject

**Note:** 1. PFCE – Private Final Consumption Expenditure on Education; PEE – Public Expenditure on Education; GDP – Gross Domestic Product; 2. Both the direct Granger Causality test and the VAR based test for the same is performed and both have shown same results.

**Source:** Author's estimation

A key takeaway of the *Granger Causality* is that while public expenditure on education causes GDP, the causality is opposite for private investment (expenditure) in education (Table-4). There is no Granger causality found, in either direction, between private and public investment. These observations in direction of causality provide an insight for the *path analysis*. While the change

(increase) in public expenditure on education influences the change (increase) in country's GDP, this in turn influences the change (increase) in private expenditure on education.

**Table-5: Results of Simple VAR based Vector Error-Correction (VEC) Model**

Relationship	Variable	Coefficient	SE	Z	Significance
1	2	3	4	5	6
Model-1: IPCGDP on IPCPEE					
Long-Run	IPCPEE ( $\beta$ )	1.763	0.301	5.870	0.000***
Short-Run	ECT( $\alpha$ )	(-)0.032	0.015	-2.120	0.034**
Model-2: PCPFCEE on PCGDP					
Long-Run	PCGDP( $\beta$ )	0.019	0.009	2.120	0.034**
Short-Run	ECT( $\alpha$ )	(-)0.027	0.015	4.39	0.086*

**Notes:** 1. IPCGDP – log of Per Capita Gross Domestic Product; IPCPEE – log of Per Capita Public Expenditure on Education; IPCPFCEE – log of Per Capita Private (Final Consumption) Expenditure on Education; ECT – Error-Correction Term (Short-Run Adjustment factor); 2. All the time series are in per capita terms (per person) and in constant (2011-12) prices; 3. Short-run parameters are avoided in reporting; 4. Significance: \*\*\* at 1%, \*\* at 5% and \* at 10%.

**Source:** Authors' estimates using STATA.

Further, the estimates of a very basic version of the Vector Error-Correction (VEC) model based on Vector Auto-Regression (*VAR*) procedure for cointegrated time series, are fairly in line with the long-run equilibrium relationship; represented by coefficient of long-run ( $\beta$ ) and error correction term (ECT) as a short-run adjustment parameter ( $\alpha$ ) in the VEC model (Table-5). Beta ( $\beta$ ) is cointegration equation parameter indicating the long-run equilibrium relationships. As expected, the sign of the long-run equilibrium factor coefficient ( $\beta$ ) is positive, and that of ECT ( $\alpha$ ) is negative. Both are found to be significant. The VEC model estimates fairly confirm the insights of Granger causality directions and the long-run equilibrium relationships.

## VI Concluding Remarks

Inadequacy of public investment on education, especially in the context of growing demand for education, resulted in growth in private expenditure on education. This has far-reaching implications for affordability and access to education. The present paper has examined the private and public expenditure on education in India. It is observed from the analysis that India is spending around 3.9% of GDP as public expenditure on education, and around 2.7% of GDP as private expenditure; together, it is spending around 6.6% of GDP on education.

Private expenditure on education as a share in private final consumption expenditure has risen five times since the 1950s, indicating the priority placed by households on education. Another notable trend is that growth in private expenditure on education is higher than that of public expenditure during the last three decades. The ratio of public to private in terms of expenditure on education is

declining during this period. This reflects increasing privatisation of education in India. This trend has far-reaching policy implications, especially in higher education.

The Covid pandemic has affected the growth in expenditure on education, both the private and public. An econometric analysis has indicated that there is no causality between private and public expenditure on education. They have a long-run equilibrium relationship with GDP, although direction of causality is different. While public expenditure on education causes the country's GDP, which in turn causes the private expenditure on education. In other words, high growth in economy is a positive factor for growth in private expenditure on education.

## References

- Annabi, Nabil (2017). Investment in Education: What are the Productivity Gains?, *Journal of Policy Modelling*, Vol. 39(3).
- Annabi, Nabil; S. Harvey and Y. Lan (2011). Public Expenditures on Education, Human Capital and Growth in Canada: An OLG Model Analysis, *Journal of Policy Modelling*, Vol. 33 (6), pp: 852–865.
- Arcalean, Calin and Ioana Schiopu (2010). Public versus Private Investment and Growth in a Hierarchical Education System, *Journal of Economic Dynamics and Control*, Vol. 13(4), pp.604-622.
- Arrow, Kenneth (1973). Higher Education as a Filter, *Journal of Public Economics*, Vol. ().
- Bain & Company. (2012). *India philanthropy report 2012*. Bain & Company. Retrieved from: <http://www.bain.com/Images/REPORT India Philanthropy Report 2012.pdf>
- Bhakta, Runu (2014). Impact of Public Spending on Health and Education of Children in India: A Panel Data Simultaneous Equation Model, *Working Paper 2014-049*, 1-21, Indira Gandhi Institute of Development Research, Goregaon, Mumbai.
- Blankenau, William F. and Nicole B. Simpson (2004). Public Education Expenditure and Growth, *Journal of Development Economics*, Vol. 73(2).
- Bräuning, Michael and Jean-Pierre Vidal (2000). Private versus Public Financing of Education and Endogenous Growth, *Journal of Population Economics*, Vol. 13(3), September, pp. 387-401.
- Bray, Mark (1998). *Privatisation of Secondary Education: Issues and Policy Implications*, In *Education for the Twenty-first Century: Issues and Prospect*, UNESCO, Paris
- Chamberlin, E. H. (1933), *The Theory of Monopolistic Competition*. Cambridge, MA: Harvard University Press.
- Chandrasekhar, S; P Geetha Rani and Soham Sahoo (2019). Household Expenditure on Higher Education in India: What do we know & What do recent data have to say? *Economic and Political Weekly*, Vol. 54 (20), 18 May, pp.52-60.
- De, Anuradha and Tanuka Endow (2018). Public Expenditure on Education in India: Recent Trends and Outcomes, *Working Paper No.18*, Research Consortium on Educational Outcomes and Poverty 1-50.
- Desai, Sonalde; Amresh Dubey; R. Vanneman, and R. Banerji (2008). Private schooling in India: a New Educational Landscape, 5(1):1–58
- Dissou, Yazid; Selma Didic and Tatsiana Yakautsava (2016). Government Spending on Education, Human Capital Accumulation and Growth, *Economic Modelling*, Vol. 58, November, pp. 9-21.
- Geetharani, P. (2021). *Family Spending on Education in India Pattern and Determinants*, Occasional Paper #55, NIEPA, New Delhi. Available from: [https://www.researchgate.net/publication/358604319\\_Family\\_Spending\\_on\\_Education\\_in\\_India\\_Pattern\\_and\\_Determinants](https://www.researchgate.net/publication/358604319_Family_Spending_on_Education_in_India_Pattern_and_Determinants) [accessed Feb 23 2022].
- Glomm, Gerhard and B. Ravikumar (1997). Productive Government Expenditures and Long-run Growth, *Journal of Economic Dynamics and Control*, Vol. 21(1).
- GoI (2022a). Report of Unified District Information on School Education Plus (UDISE+) 2021-22, Department of School Education and Literacy (DSEL), Ministry of Education (MoE), Government of India, New Delhi.
- GoI (2022b). Report on All India Survey on Higher Education (AISHE) 2021-22, Department of Higher Education (DSEL), Ministry of Education (MoE), Government of India, New Delhi.

- Govinda, R. and A. Mathew (2018). Universalisation of Elementary Education: A Story of Missed Targets and Unkept Promises, Working Paper #1/2018, Council for Social Development (CSD), New Delhi.
- Hansmann, H. B. (1980). The Role of Non-profit Enterprise, *The Yale Law Journal*, Vol. 5, 835.
- James, Estelle (1986). The Private Non-profit Provision of Education: A Theoretical Model and Application to Japan, *Journal of Comparative Economics*, Vol. 10 (3), pp.255-276.
- James, Estelle (1987). Political Economy of Private Education in Developed and Developing Countries, *Education and Training Series Discussion Paper Report No. EDT81*, The World Bank.
- James, Estelle (1993a). *Why is there proportionately more Enrolment in Private Schools in some Countries?*, Policy Research Working Paper No. 1069, Public Sector Management and Private Sector Development Division, Country Economics Department, The World Bank, Washington D.C. Accessed on 20/11/2020 at: <http://documents1.worldbank.org/curated/en/889111468764400039/pdf/multi-page.pdf>
- James, Estelle (1993b). Why Do Different Countries Choose a Different Public-private Mix of Educational Services, *Journal of Human Resources*, Vol. 28, No.3, pp.571-592.
- Jenkins, Glenn P.; Hope Amala Anyabolu and Pejman Bahramian (2019). Family Decision-making for Educational Expenditure: New Evidence from Survey Data for Nigeria, *Applied Economics*, 51:52, 5663-5673.
- Locatelli, Rita (2018). Education as a Public and Common Good: Reframing the Governance of Education in a Changing Context, ED-2018/WP-2, UNESCO, Paris.
- Lucas, R. (1988). On the Mechanics of Economic Development, *Journal of Monetary Economics*, Vol. ().
- Magalhães, Graziella and David Turchick (2022). Growth and Inequality under different Hierarchical Education Regimes, *Economic Modelling*, Vol. 116.
- Majumdar, Tapas (1983). *Investment in Education and Social Choice*, Cambridge University Press, Cambridge.
- Motkuri (2016). Socio-Economic Transformation and Educational Deprivation of Children in Andhra Pradesh, Unpublished Thesis, Centre for Development Studies (Jawaharlal Nehru University), Trivandrum.
- Motkuri, V (2020). Investment (Expenditure on) in Education and National Income (GDP) in India: Time Series Analysis of Cointegration and Causality, CESS-RSEPPG Research Brief (RB) Series #5, Research Cell on Education (RSEPPG), Centre for Economic and Social Studies (CESS), Hyderabad.
- Motkuri, V. and E. Revathi (2023a). Private Expenditure on Education in India: National Level Analysis Exploring NSSO Survey (CES and SCE) Estimates, *Indian Journal of Human Development*, Vol. 17(1).
- Motkuri, V. and E. Revathi (2023b). Public Expenditure on Education in India: Centre-State Allocations, *Journal of Development Policy and Practice*, Vol. 8(2), 2023.
- Mukherjee, Anit N. (2013). Public Expenditure on Education: A Review of Selected Issues and Evidence, National Institute of Public Finance and Policy (NIPFA), New Delhi. Accessed at: [https://www.nipfp.org.in/media/medialibrary/2013/04/wp\\_2007\\_hd\\_51.pdf](https://www.nipfp.org.in/media/medialibrary/2013/04/wp_2007_hd_51.pdf)
- Nurullah S. and J.P. Naik (1951). *A History of Education in India during the British Period*, Macmillan.
- Panchamukhi, PR (1989). *Economics of Educational Finances*, Himalaya, Bombay.

- Rashmi, R.; Bijay Kumar Malik; Sanjay K. Mohanty; Udaya Shankar Mishra; and S. V. Subramanian (2022). Predictors of the gender gap in household educational spending among school and college-going children in India, *Humanities and Social Sciences Communications*, Vol. 9:329.
- Sarkar, N. (2017). Determinants of Household Expenditure on Higher Education in India, *International Education and Research Journal*, Vol. 3 (6), pp.12-14
- Schultz, T.W. (1981). *Investing in People*, University of California Press, Berkeley.
- Spence, Michel (1973). Job Market Signalling, *Quarterly Journal of Economics*, Vol. ().
- Sraffa, Piero (1926). The Laws of Returns under Competitive Conditions, *Economic Journal*, Vol. 36(144), pp.535-550.
- Srivastava, P. (2014). Under-financing education and the rise of the private sector: The 597 case of India, *Revue internationale d'éducation de Sèvres* (Online), Education in Asia in 2014: what global issues? Accessed 12 August 2023 at <http://journals.openedition.org/ries/3863>
- Stiglitz, J.E. (1974). The Demand for Education in Public and Private School Systems, *Journal of Public Economics*, Vol. 3(4).
- Stiglitz, J.E. (1974). The Theory of 'screening' education and the distribution of income, *American Economic Review*, Vol. ().
- Tilak, J.B.G. (1991). Family and Government Investments in Education, *International Journal of Educational Development*, Vol. 11(2), pp.91-106.
- Tilak, J.B.G. (1997). Five Decades of Underinvestment in Education, *Economic and Political Weekly*, Vol. 32(36), 6 September.
- Tilak, J.B.G. (2002). Elasticity of Household Expenditure on Education in Rural India, *South Asia Economic Journal*, Vol. 3 (2), September, pp. 217-226.
- Tilak, J.B.G. (2003). Public Expenditure on Education in India: A Review of Trends and Emerging Issues, Chapter in J.B.G. Tilak (Ed.) *Financing Education in India: Current Issues and Challenges*, NIEPA, New Delhi.
- Tilak, J.B.G. (2006a). On Allocating 6 percent of GDP Education, *Economic and Political Weekly*, Vol. 41(7), 18 February.
- Tilak, J.B.G. (2006b). Cess-driven Allocations to Education, *Economic and Political Weekly*, Vol. 41(14), 8 April.
- Tilak, J.B.G. (2007). The Kothari Commission and Financing of Education, *Economic and Political Weekly*, Vol. 42(10), 10 March.
- Tilak, J.B.G. (1983). Voluntary Contributions to Education in India, *Journal of PSE Economic Analyst*, Vol. 4(2), December.
- United Nations Educational, Scientific and Cultural Organization. (2022). *Education for all global monitoring report 2021–22: Non-state actors*.
- Valentinov, Vladislav (2006). Philanthropy: Toward an Economic Interpretation of the Non-distribution Constraint, *The International Journal of Not-for-Profit Law*, Vol. 9(1), December. Accessed at: <https://www.icnl.org/resources/research/ijnl/toward-an-economic-interpretation-of-the-nondistribution-constraint>
- Weisbrod, B. (1975). *Toward a Theory of the Voluntary Non-profit Sector in a Three-sector Economy*, in E. Phelps (ed.) *Altruism, Morality and Economic Theory*, Russell Sage Foundation, New York, pp.171-191.

Weisbrod, B. (1977). *The Voluntary Non-profit Sector*, D.C. Heath, Lexington Books, Lexington (Mass.).  
Working, H. (1943). Statistical Laws of Family Expenditure, *Journal of the American Statistical Association*, Vol. 38, pp. 43-56.

## Notes

---

<sup>1</sup> According to Chamberlin “A general class of product is differentiated if any significant basis exists for distinguishing the goods (or service) of one seller from those of another. Such a basis may be real or fancied, as long as it is of any importance whatever to buyers, and leads to a preference for one variety of the product over another. Where such differentiation exists, even though it may be slight, buyers will be paired with sellers, not by chance and at random (as under pure competition), but according to their preferences. Differentiation may be based upon certain characteristics of the product itself, such as exclusive patented features; trade-marks, trade names; peculiarities of the package or container, if any; or singularity in quality, design, colour, or style. It may also exist with respect to the conditions surrounding its sale” (Chamberlin, 1933:56)

<sup>2</sup> NSS KI (75/25.2): Key Indicators of Household Social Consumption on Education in India.

<sup>3</sup> All-India Survey on Higher Education (AISHE) 2021-22, Ministry of Education, Govt. of India.

<sup>4</sup> However, the trend in expenditure on education (as percentage of GDP) for the entire period indicates that the post reform period (during 2000 to 2008-09, witnessed a lower trend. This was the time when the pace of economic reforms picked up which had adversely affected the public expenditure in general, social sector and in particular expenditure on education. It is well known that this phase was characterised by, downsizing the state and reducing the fiscal deficits of the Centre and State Governments along with privatisation including the education sector.

<sup>5</sup> The Gross Domestic Product (GDP) at market prices of a country consists of Private as well as public (Government) final consumption expenditure along with investment that consisting of Gross Fixed Capital Formation (GFCE), change in stocks and valuables, and net imports (exports-imports). Usual national income accounting equation is  $GDP_{MP} = C+I+G+(X-I)$ .