Financing Policy and Management of Technical Education –An Analysis

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Introduction

Education system plays a key role in economic development. It has been proved empirically as a vital factor of socio-economic development and expenditure on education has been considered as an investment on human resource development (Natarajan, 1993). Education is one of the dominant sectors of the Indian economy in terms of enrollment of children, employment of adults and investment of financial resources (Varghese, 2000). The economy would become more productive if the education system is good. The education system in India has made significant expansion in terms of students enrollment and number of institutions.

In the present era, education is under major change in response to various factors like development in information technology, communication, privatization, globalization, etc. Technical education is one of the important component of higher education. In India technical education contributes a major share to the overall education system and plays a vital role in the social and economic development of the country. The process of globalization and IT revolution makes major impact on technical education. During the post independence, technical education in India has expanded at a very fast rate in terms of the number of institutions and students' enrollment. Technical education contributes a major share to the overall education system and plays a vital role in the social and economic development of our nation. Today's scenario, technology is touching every aspect of life. India is witnessing the age of science and technology and there is a huge demand of technical education in the modern age. Hence expenditure on technical education considered as an investment in human resource development.

Expenditure on technical education plays an important role in promoting economic development. But at present, the Centre and the states are facing a major resource crunch. In India, technical education sector shows that there are two major financial problems; 1) shortage of funds; and (2) insufficiency in the

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allocation of resources. The financial burden of technical education is borne by both state and central government, but the amount of expenditure spent on the technical education sector by the government has been reducing over the years. It creates the investment gap between the resources required and resources available. As we know, technical education receives a negligible share of total public expenditure on education, so this aspect needs to be critically examined. The present study analyzed the pattern and trend of public expenditure on technical education in India.

Literature Review

A large number of studies have been conducted on the growth and trends of public expenditure on various levels of education. Bhalla (2000) investigated the pattern and trends of income and expenditure of selected universities in Punjab. The Study found that the share of the state domestic product provided to higher education varied from state to state and trends of expenditure incurred on higher education helps to understand the relative significance attached to financing of education in different states of India. Varghese (2000) analyzed the changing pattern of government expenditure on higher education and found that the share of higher education in the total public education expenditure had declined and student fee and endowment as a share of total resources for higher education had also declined. Nair and Kumar (2004) analyzed the development of higher education in India and addressed possible means of financing it. The authors examined that the financing of higher education in the country by the state was a drain on its exchequer and that more methods had to be found to move the financial obligation outside the state coffers. Researchers discussed various funding models to the higher education used by different countries. The researcher suggested that there was a need to have an independent regulatory body, which oversees the operations. Subbiah (2004) analyzed the difference in the growth rates of budget expenditure on education to the primary, secondary, technical and higher education in India. The researcher concluded that there was no significant difference in the growth rates of budget expenditure on primary, secondary, technical and higher education during the period under study. The government gave more importance to the primary education. Prakash (2007) discussed the trends in growth and financing of higher education in India. The researcher suggested that there is a need to raise public funding and to involve educational management and information system in higher education. Ahmad (2008) analyzed and compared the finances of central universities of India in general and central universities of Delhi (University of Delhi, Jawaharlal Nehru University and Jamia Millia Islamia University) in particular by the UGC during the 10th plan. Study found that there was remarkable increase in the funding of central universities in India during the study period. The Study also found that the UGC provided remarkable financial support to the central universities of Delhi, but the requirements of funds increased every year due to increase in students enrollment. The author suggested that there was a need to develop information and communication technologies (ICT) in university administration so that expenses of non-academic activities are reduced and efficiency is increased. Anbalagan (2011) examined the variations of public expenditure on education in 14 major states of India. The study found that Maharashtra, Kerala and Gujarat performed well in education and

Madhya Pradesh, Orissa and Bihar were low in the performance of education. The study showed that there were extensive disparities among the Indian states due to variations in the size of investment in education. Emad al-sheikh (2012) Reviewed the financing and management methods used in private higher education in Jordan. Results showed that the system of higher education worldwide differs in terms of financing and managing of universities, because there was a consistent movement towards minimizing state funding for universities and increasing students' participation in the cost of their education. Anand (2014) analyzed the trends and pattern of public expenditure on higher and technical education amongst the 14 major states of India. Results showed that the states like Karnataka, Kerala ,Maharashtra and Tamil Nadu were spending a relatively higher proportion of their GSDP on higher, technical and total education amongst major states of the country, but the country is still far away from the limit prescribed by Kothari commission and New Education Policy.

From the above, study of review of literature it has been found that Resource crunch, multiple objectives of education, multidimensional role of education at various level makes the study on education quite meaningful. The government grants on technical education have reduced during a span of around one decade or so. So, there is a need to study the pattern and trend of public expenditure on technical education in India.

Research Methodology

This study is basically based on secondary data. Data were gathered from reports of the Ministry of Human Resource Development (MHRD), Reports of the All India Survey on Higher Education (AISHE), Reports of the University Grants Commission (UGC) and Economic Survey of India (Various Years). The present study relates to a period of 10 years, i.e. 2005-06 to 2014-15. The study analyze the composition of expenditure on technical education over the years. The growth rates of different variables of interest have been calculated by using exponential growth rate where,

$$Y=a.b^{t}$$

$$\text{Log } y = (\text{Log } a + \log b)^{t}$$

Where, Log y = Variable for which we want to estimate the growth rate, Log b= regression coefficient, a=constant, t=time

$$\text{CAGR\%} = \text{Antilog}(\log b) - 1 * 100$$

Descriptive statistics and Percentages were also used to analyze the data.

Results and Discussions

Expenditure on higher education, being an important form of investment in human capital formation, plays an important role in the process of capital accumulation (Joshphine, 1999). It is a very well known fact that investment in higher education is critically important for future economic growth. Higher education financing is the joint responsibility of the central and state governments, but, about 80 percent of expenditure on education is met by the respective state governments and only a small portion is met by union government (Tilak 2008). The total public expenditure on higher education by the central and state governments shows a steady upward trend (Graph 1).

Table 1 shows the total expenditure on higher education has increased from ` 1087.65 crore in 2005-06 to ` 5065.13 crore in 2014-15 at a growth rate of 18.64 percent. Public

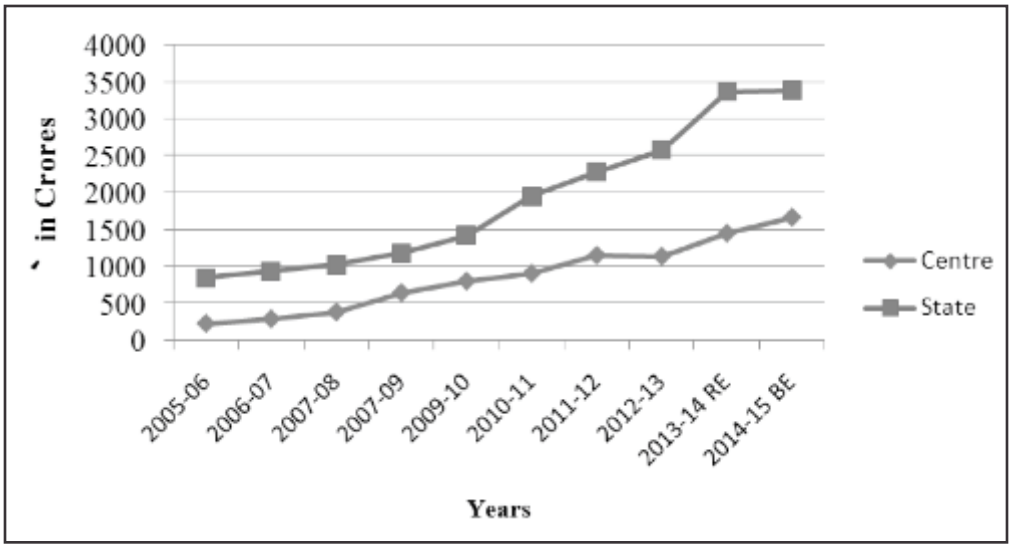
Table 1: Total Expenditure on Higher Education

(`` in crores)

Year	Centre	% Share	State	% of total Expenditure	Total	As a Percentage of GDP
2005-06	233.14	21.44	854.51	78.56	1087.65	0.67
2006-07	295.56	23.89	941.68	76.11	1237.24	0.7
2007-08	389.54	27.58	1022.66	72.42	1412.19	0.64
2008-09	650.64	35.42	1186.50	64.58	1837.14	0.57
2009-10	807.76	36.14	1427.19	63.86	2234.95	0.86
2010-11	912.39	31.80	1956.68	68.20	2869.07	0.82
2011-12	1158.30	33.59	2290.33	66.41	3448.63	0.89
2012-13	1144.64	30.66	2588.33	69.34	3732.97	0.63
2013-14 RE	1457.57	30.16	3374.96	69.84	4832.53	0.69
2014-15 RE	1672.43	33.02	3392.71	66.98	5065.13	0.65
CAGR%	18.64		24.48		20.20	

Source: Analysis of Budgeted Expenditure on Education, MHRD, GOI (Various Years)
Note: RE Revised estimates, BE Budget estimates

Figure 1: Public Expenditure on Higher Education



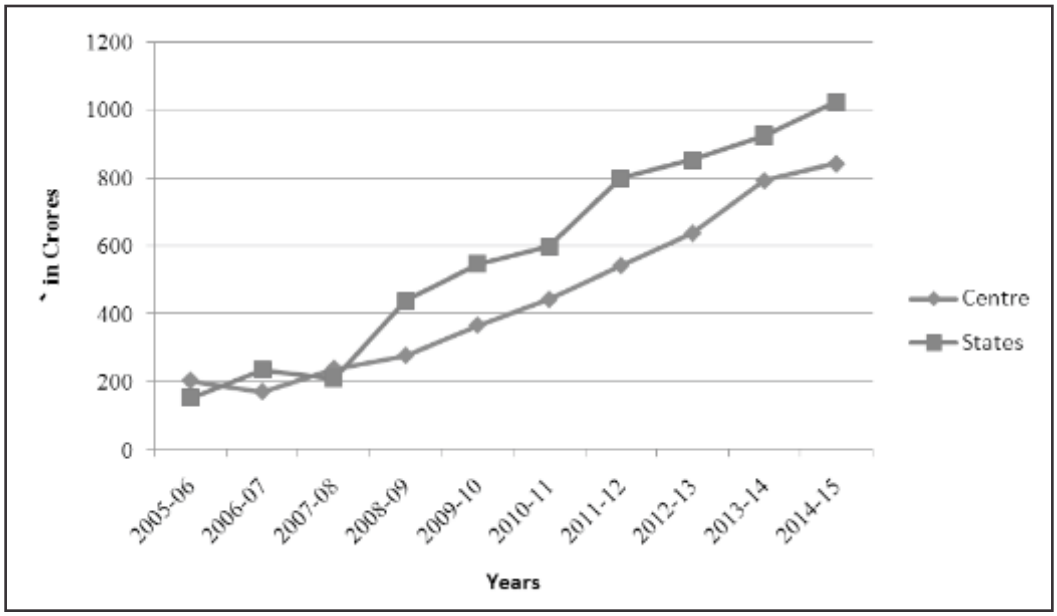
expenditure on higher education by central government and state governments has increased remarkably. The share of central government in total higher education expenditure has been rising from 21.44% to 33.02% during 2005-06 to 2014-15 but the share of state governments in total education expenditure has been declining from 78.56% to 66.98%. The total public expenditure on higher education has increased by 4.6 times during 2005-06 to 2014-15 but the rate of increase not necessarily kept pace with Gross Domestic Product (GDP). Very low percentage of Gross Domestic Product is spent on higher

Table 2: Total Public Expenditure on Technical Education *(`` in crores)*

Year	Centre	State	Total	As a Percentage of GDP	As a Percentage of total Expenditure on education
2005-06	202.6809	152.37417	355.05509	0.28	3.87
2006-07	169.8625	234.31328	404.17577	0.44	3.66
2007-08	238.4405	208.20618	446.64666	0.45	3.71
2008-09	276.6039	437.14838	713.75229	0.31	4.73
2009-10	366.2373	545.095	911.33228	0.3	4.91
2010-11	442.0288	597.03756	1039.0664	0.48	4.57
2011-12	542.0327	797.33728	1339.37	0.46	5.06
2012-13	637.5949	850.924	1488.5189	0.56	5.08
2013-14	792.8139	924.346	1717.1599	0.57	4.91
2014-15	842.3631	1021.735	1864.0981	0.57	4.79
CAGR%	20.44	24.11	22.26		

Source: Analysis of Budgeted Expenditure on Education, MHRD, GOI (Various Years)

Figure 2: Public Expenditure on Technical Education



education. The Kothari commission suggested 6% of GDP should be spent on education by 1986 and it is the appropriate amount for funding of education but even after so many years the central government and state governments have not been able to reach anywhere near the 6% goal.

Technical education plays an important role in

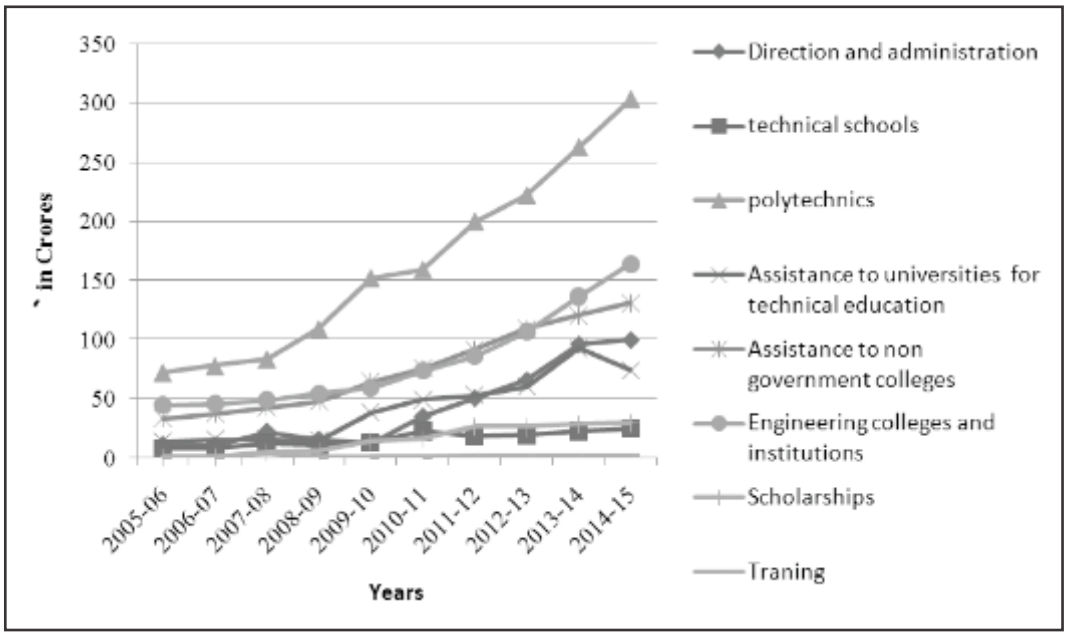
Table 3: Public Expenditure on Technical Education (Head wise)

(`` in crores)

Year	Direction and Administration	Technical Schools	Polytechnics	Assistance to universities for technical education	Assistance to non government colleges	Engineering colleges and institutions	Scholarships	Training	Other
2005-06	10.86	7.80	71.72	13.56	32.94	44.62	0.84	0.64	31.35
2006-07	10.34	7.87	77.43	15.35	37.23	46.04	0.52	0.52	33.16
2007-08	22.08	12.51	83.09	16.07	42.20	49.11	5.09	3.71	23.69
2008-09	15.41	10.70	108.67	14.97	47.82	54.37	5.44	0.87	31.25
2009-10	12.81	12.56	151.81	38.66	64.22	59.19	13.94	0.69	33.81
2010-11	34.91	22.50	158.95	49.32	75.40	73.24	15.96	0.78	39.25
2011-12	50.31	18.12	199.61	52.99	91.58	85.66	26.19	1.30	43.40
2012-13	65.62	19.07	221.56	59.87	109.29	106.45	25.94	1.46	59.21
2013-14 RE	96.14	22.26	262.33	92.45	120.56	136.27	28.64	1.27	55.41
2014-15 RE	99.90	24.70	302.70	73.59	130.80	163.67	29.55	1.35	68.20
CAGR%	31.78	14.22	18.64	26.23	18.05	16.18	55.73	5.97	10.29

Source: Analysis of Budgeted Expenditure on Education, MHRD, GOI (Various Years)

Figure 3: Public Expenditure on Technical Education (Head Wise)



society and the quality of technical education highly dependent on financing. Therefore, the public spending on technical education has great value. The public expenditure on technical education has been shown in table 2.

The public expenditure on technical education has increased 5.25 times during 2005-06 to 2014-15. Public expenditure on technical education has been less than 1% of GDP (Gross Domestic Product). In 2005-06, only 0.28% of GDP was spent on technical education. After that the share of educational expenditure as a percentage of GDP has been increasing at a very low rate. Very low percentage of total education budget is spent on technical education. More than 50% of total education expenditure spends on primary education. Technical education receives less than 10% of total public expenditure on education. The total public expenditure on technical education increased at a Growth of 22.26%.

Study found that public expenditure on technical education increased remarkably but government couldn't achieve the target allocation of 6% of GDP on education. It was also found that, as a percentage of Gross Domestic Product (GDP) very less amount of expenditure is spent on technical education. So, spending pattern needs to be changed to increase optimum utilization of resources. To improve technical education financing and make it grow manifolds, there is a need to improved budget planning, transparency and accountability and innovation in education investment.

Table 3 shows the expenditure on different heads of technical education by government from 2005-06 to 2014-15. The above table shows that public expenditure on direction and administration increased at a growth rate of 31.78 percent. Expenditure on technical schools and polytechnics increased at a growth rate of 14.22 percent and 18.64 percent respectively. Assistance to universities for technical education and assistance to non government colleges increased at a growth

rate of 26.23 percent and 18.05 percent respectively. Public expenditure on engineering colleges and institutions, scholarships, training and other expenditure has been also increased due to increasing number of technical institutions.

Conclusion

Since independence, the government of India has been providing full policy support and public funds to create one of the worlds' largest system of education but the public funds not necessarily kept pace with inflation rate and increasing demand for education. The expansion and quality of education depends on financial resources, but, at present resource crunch in education is being felt as a serious matter. Technical education is one of the important part of whole education system. But, the expenditure on technical education is too small which makes an adverse effect on quality of education. Very low percentage of GDP (Gross Domestic Product) is spent on technical education. There is no uniformity in the pattern of allocation of funds to technical education. Financing policy of the state government is not properly framed and managed too. There is an acute shortage of resources in the technical education. Technical education receives less than 1% of GDP. Annual growth rate of public expenditure on technical education is very low as compare to number of students' enrolment. So there is a need to stress upon the central government, state government and planning commission to revise their thinking while making allocation of resources to technical education. The Central governments' share of financing State technical education is very low, so there is a need to restructure Centre –State relation for financing education. Spending pattern need to be altered to increase quality of education and improve learning outcomes. To improve education financing, need to focus on increasing efficiency, equity and improved budget planning, transparency and accountability innovations.

References

Anand, S. (2014). Inter state variations in public spending on higher education in India. International Journal of Humanities and Social Science Invention, 31(9), 23-31

Anbalagan, P., (2011). Public Expenditure on Education: A study of inter-state variations in India", International Journal of Business Economics and Management Research, 2(1),19-31.

Ahmad, S., (2008). Finances of Central University of Delhi: A comparative study. University News, 46(33), AIU, New Delhi, 10-20.

Bhalla, G.S. (2000): Financing of Universities: Sharma publications.

Economic Survey, India (Various years)

El-Sheikh, E., Mah'd, O., Nassar, M., & Al-Khadash, H. A. (2012). Financing and management

of higher education: Evidence from Jordan. International Business Research, 5(5), 71-87.

Natarajan, V. (1993). Financial Administration in Central Universities of India: A study with special reference to Pondicherry University. PhD Thesis, Pondicherry University, Pondicherry.

Nair, P., & Kumar, D. (2004) .The Financing of Higher Education–A Broader View. Available (online) at http://128.118.178.162/eps/fin/papers/0505/0505015.pdf, Accessed on 11 may 2014.

Prakash, V., (2007). Trends in Growth and

Financing of Higher Education in India. Economic and Political Weekly, 3249-3258.

Subbiah, A. (2004), "Budget Expenditure on Education in India", University News, 42(52),70-72.

Varghese, N. V. (2000):"Reforming education financing", Seminar October.

Reports

Annual Reports of University Grants Commission (Various years)

Reports of Ministry of Human resource development (Various years)