



# AN ANALYSIS OF PUBLIC INVESTMENT ON HIGHER EDUCATION IN INDIA

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## ABSTRACT

Higher education is the integral part of social infrastructure which determines the destiny of any nation. Public policy on education is one of the most significant areas of contemporary development strategy and in a developing country like India, investment on education assumes most important place in such a policy. The higher education sector in India has witnessed a paradigm shift in recent years, in order to shape the future social and economic progress it is necessary to expand, restructure and raising the quality of education in the country. Development of human resources is one of the main purposes of Higher Education, which will play a critical role in preparing the workforce to be constructively utilized. Therefore, India needs to show more concern over higher education in terms of quantity and quality. In this background, the paper presents a bird's eye view of the public expenditure by the centre and the state on higher education along with sector wise allocation in the country. An attempt has been made to analyze the growth and trends in public investment with the help of statistical tools like correlation and regression analysis.

**KEY WORDS:** Higher Education, Public Investment, Sector-wise Allocation, Gross Domestic Product.

## I. INTRODUCTION

*There is no Better Investment for the Future of Society than High Quality Education of our Young People*

-National Education Policy – 2020

Education is the basic foundation for the creation of good society. Higher education is the integral part of social infrastructure which determines the destiny of nation, Higher education plays a crucial role in the economic and social development of any country. Public investment on higher education is one of the most dignified ways for achieving socio-economic equity as higher education promotes social mobility. Health and education are the major variable which determines the human development in the nation. Education is an essential input for the process of human development and it is considered as one of the basic necessities of life next to food, clothing and shelter, it has also been made a fundamental human right with the introduction of Right to Education Bill. Education is a process of character building, strengthening mind and expand the intelligence of the young people. Education transforms human beings from ignorance to enlightenment. Higher education governs country's economic and technological progress in this globalised era, which is the necessary and sufficient condition for progress of the nation.

India has the 3<sup>rd</sup> largest higher education system in the world after China and United States in terms of enrolment in higher educational institutions (<https://en.wikipedia.org>, 2022). Higher Education is crucial for economic and social development of any country as it affects the entire education system, on the one hand and the entire stock of human resources and profile of the work force on the other. Higher education is the most effective instrument to meet the challenges of the society. The contribution and role of higher education to the development and peaceful existence of humanity is praiseworthy in modern times. A country's economic and technological progress largely depends on the level and quality of higher education. By 2030, India is set to have the largest working-age population in the world. Not only do they need literacy but they need both job and life skills<sup>2</sup>. An attempt has been made in this

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<sup>2</sup> Annual Report of the Department of Higher Education, 2020-21



paper, to know whether there is significant relationship between GDP and public investment on higher education in India.

**Table - 1: Importance of Higher Education**

	<b>Economical Importance</b>	<b>Social Importance</b>
<b>Public Benefits</b>	<ul style="list-style-type: none"> <li>• Creation of human capital</li> <li>• Increase in productivity</li> <li>• Qualitative workforce</li> <li>• Economic prosperity</li> <li>• Technical growth</li> <li>• Creation of intellectual capital</li> </ul>	<ul style="list-style-type: none"> <li>• Creates knowledge-based society</li> <li>• Lowers the crime rate in the society</li> <li>• Smooth functioning of governance</li> <li>• Support for business and industry</li> <li>• Develops values among people</li> <li>• Less burden on government</li> </ul>
<b>Private Benefits</b>	<ul style="list-style-type: none"> <li>• Better employment opportunities</li> <li>• Improved efficiency of labour</li> <li>• Improves per capita income</li> <li>• Improves standard of living</li> <li>• Develops character and values among the people</li> <li>• Updates knowledge and skills</li> </ul>	<ul style="list-style-type: none"> <li>• Higher level of life expectancy</li> <li>• Higher level of status</li> <li>• Healthier lifestyle</li> <li>• Social progress and prosperity</li> <li>• Improved research and development</li> <li>• Support for trade and commerce</li> </ul>

## **II. SOURCES OF FINANCING HIGHER EDUCATION IN INDIA**

There are different sources for financing higher education in India; these sources can be broadly divided into two groups, one is internal (domestic) sources and another is external sources. External or foreign sources do not constitute considerable share in total funding for higher education in the country. Again, domestic sources can be divided into two parts; they are public and private investment. Public investment constitutes funding from central government and state governments along with contribution of local bodies; it is one of the major sources for financing higher education in the country. Apart from this, private investment constitutes financing done by Non-Governmental Agencies, fees and expenditure made by household sector or direct beneficiaries of higher education. In India, higher education is basically funded by public sector; it is the major responsibility of every government to make investment on higher education for the progress of country. An optimal level of funding is essential for maintaining the expected standards in higher education sector. NITI Aayog, the think tank of Indian Government, in its report<sup>3</sup> has highlighted that our country is spending less on education, and recommended that spending on education should be increased to at least Six per cent of GDP.

## **III. ROLE OF CENTRE AND STATE IN FINANCING HIGHER EDUCATION IN INDIA**

Centre-state relationship in financing higher education is one of the major aspects in a federal system like India. Higher education is primarily funded by government – center or state government and households in the country. Before independence, access to higher education was very limited but since independence, growth has been very impressive. During the time of post-independence, higher education became a concurrent subject of both central and state governments. As higher education comes under the responsibility of both central and state government, higher education has been funded by both governments. Central universities and institutes of national importance receive grants from central government, state universities are primarily funded by state government but central government also contributes financial assistance for the development of state universities. Broadly speaking, even though, education has left to the jurisdiction of state, center also assumes some power for certain aspects in higher education. Advising the state governments for their educational programs and to help them for evolving national policy on education is one of the important responsibilities of the Central Government.

UGC grants for the development of colleges in state level and generally these funds are of two types, first one is academic grants and another is infrastructure development grants. UGC grants fund to start few academic programs at state level for certain period of time usually five years, beyond this period state government should take the responsibility of funding for continuing these programs. In case of infrastructure development program, UGC contributes 50-75 percent of the total cost and remaining has to be financed by the state government. In order to

<sup>3</sup> Strategy for New India @ 75'. November, 2018.



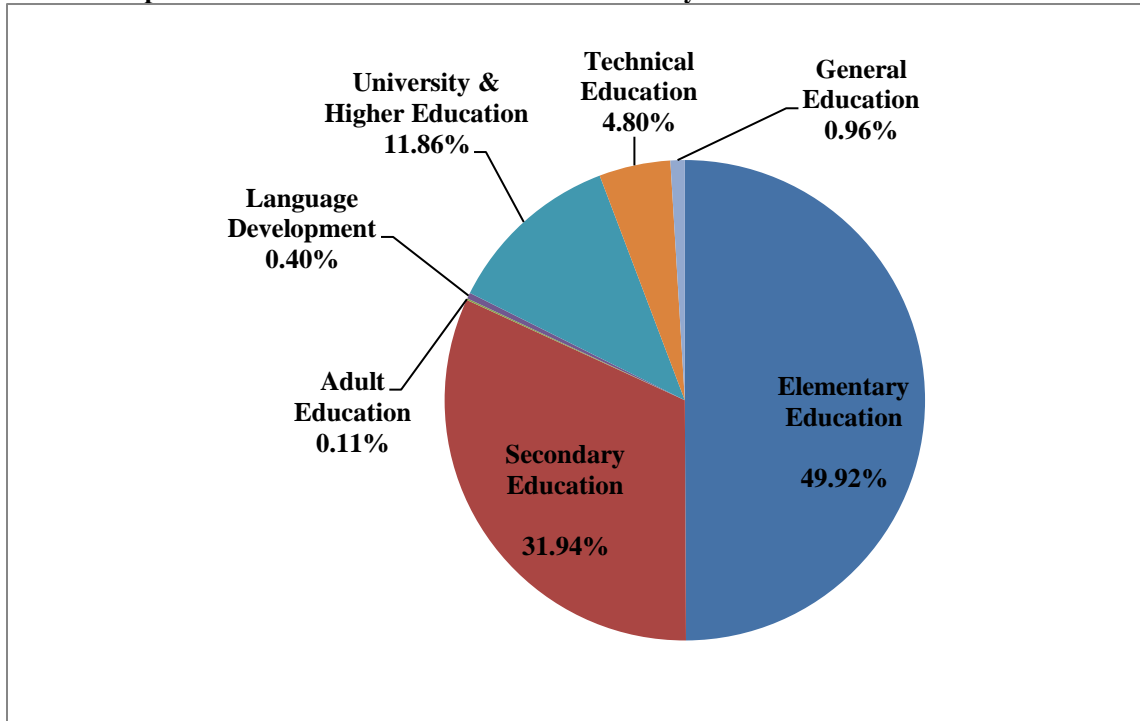
maintain standard in higher education government follows grant-in-aid policy, in which government provides grants to private aided institutions for specific purpose example; salary grants, maintenance grants, development grants, and grants for promotion of teaching and science activities. These aided institutions are managed by private organizations but comes under the supervision of government, which provides grants to the institution. Sector-wise expenditure on education by centre and state governments shows the relative priority given to each sector within education sector. Intra-sectoral allocation of public expenditure on different levels of education for the year 2020-21 is presented in the Table -2.

**Table-2: Expenditure across Various Levels of Education by Centre and States/UTs - 2020-21**  
 (Rs. in Crore)

Levels	States / UTs Expenditure	Percentage Share by State	Centre Expenditure	Percentage Share by Centre	Total Expenditure	Total Percentage Share
Elementary Education	262215.98	49.63	50000.80	51.51	312216.78	49.92
Secondary Education	189917.51	35.95	9810.30	10.11	199727.81	31.94
Adult Education	637.73	0.12	23.80	0.02	661.53	0.11
Language Development	1984.86	0.38	535.93	0.55	2520.79	0.40
University & Higher Education	53615.15	10.15	20569.31	21.19	74184.46	11.86
Technical Education	14500.58	2.74	15532.80	16.00	30033.38	4.80
General Education	5428.13	1.03	601.08	0.62	6029.21	0.96
Total Education	528299.93	100.00	97074.02	100.00	625373.95	100.00

Source: GOI. (2020-21). Analysis of Budgeted Expenditure on Education. Ministry of HRD. New Delhi.

**Chart-1: Expenditure across Various Levels of Education by Centre and States/UTs**



Source: As in Table -2.

Sector-wise expenditure on education by the centre and state governments for the year 2020-21 is presented in the Table-2. Public expenditure on different level of education shows that how resources have been distributed



among different levels of education. As shown in the table, a major share of Rs. 3,12,216.78 crore or 49.92 percent of the total budget is provided for elementary education. The second priority is given to Secondary education which is Rs. 1,99,727.81 crore or 31.94 percent. The Third priority is given to university and higher education which is Rs. 74,184.46 crore or 11.86 percent; followed by Rs. 30,033.38 crore or 4.80 percent for technical education and Rs. 6,029.21 crore or 0.96 for general education and Rs. 2,520.79 crore or 0.40 percent for the Language Development Program and Rs. 661.53 crores constituting 0.11 percent for adult education. Primary education has always been given priority due to its greater benefits followed by secondary education, lower share of university and higher education indicates public resource constraints for higher education sector in the country. For more clarity chart- 1 is given.

**IV. PUBLIC EXPENDITURE ON HIGHER EDUCATION AS A PERCENTAGE OF GDP**

Public investment is necessary for ensuring equity in access to higher education. Public spending on education indicates the commitment of government to the education; the priority level is commonly measured by the expenditure on education as a share of GDP. The percentage share of higher education sector in GDP is most widely used indicator for measuring the priority given by the government to higher education sector. Higher share of GSDP denotes high level attention for education and vice versa. Investment on higher education has been increasing considerably during the post independence period. Recent budget documents shows that India spends around Three to 4.6 per cent of its total GDP on education. As presented in the Table-3 Public investment on higher education as a percentage of GDP shows an increasing trend during the period from 2005-06 to 2009-10, after that there is decreasing trend up to 2017-18, Again there is little increase in public investment on higher education from the period from 2017-18 to 2020-21.

The total budget expenditure on higher education as percentage of GDP by the centre and state is depicted in Table -3. As shown in the table, there is considerable increase in the expenditure made by the centre and state governments on university and higher education over the period of time. Total GDP of the nation shows positive growth over the past 15 years, and, expenditure on higher education as percentage of GDP by the centre increased from 0.16 in the year 2005-06 to 0.33 in the year 2010-11, during the period from 2011-12 to 2020-21 this expenditure ranges between 0.16 to 0.22 percent of GDP. Public Expenditure on higher education as percentage of GDP by the state governments ranges between 0.33 to 0.61 percent and state spending is always higher than the central government expenditure on higher education. decrease in the share of public investment on higher education leads to increasing share of private participation in higher education in recent years.

**Table-3: Public Investment on University & Higher Education as Percentage of GDP (Rs. in Crore)**

Year	Expenditure on University & Higher Education (Rs. In Crore)			Expenditure as percentage of GDP			Total GDP
	States/Uts	Centre	Total	States/Uts	Centre	Total	
2005-06	16594.54	5277.41	21871.95	0.51	0.16	0.67	3390503.00
2006-07	18519.82	7996.55	26516.37	0.49	0.21	0.70	3953276.00
2007-08	24373.34	13761.93	38135.27	0.53	0.30	0.83	4582086.00
2008-09	29642.37	16303.84	45946.20	0.56	0.31	0.87	5303567.00
2009-10	37148.93	20077.03	57225.97	0.61	0.33	0.94	6108903.00
2010-11	38489.77	24164.40	62654.18	0.53	0.33	0.86	7248860.00
2011-12	34845.17	19055.81	53900.98	0.40	0.22	0.62	8736329.00
2012-13	43637.18	18810.58	62447.76	0.44	0.19	0.63	9944013.00
2013-14	48957.90	26254.15	75212.05	0.44	0.23	0.67	11233522.00
2014-15	47657.49	22943.96	70601.45	0.38	0.18	0.57	12467959.00
2015-16	55367.36	26129.12	81496.48	0.40	0.19	0.59	13771874.00
2016-17	58967.24	28184.73	87151.97	0.38	0.18	0.57	15391669.00
2017-18	57127.36	27449.11	84576.47	0.33	0.16	0.49	17090042.00
2018-19 (Actual)	67169.44	31641.50	98810.94	0.36	0.17	0.52	18899668.44
2019-20 (RE)	85179.76	37257.86	122437.62	0.42	0.19	0.61	20074855.79
2020-21 (BE)	83769.20	38780.70	122549.90	0.42	0.20	0.62	19800913.82



**Source:** GOI. (2020-21). Analysis of Budgeted Expenditure on Education. Ministry of HRD. New Delhi.

**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the estimate	Durbin-Watson
1	.960 <sup>a</sup>	.922	.917	8604.24213	1.025

- a. Predictors: (Constant), GDP
- b. Dependent Variable: Investment on Higher Education

**ANOVA**

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	12301119655.006	1	12301119655.006	166.157	.000 <sup>b</sup>
Residual	1036461755.741	14	74032982.553		
Total	13337581410.747	15			

- a. Dependent Variable: Investment on higher education
- b. Predictors: (Constant), GDP

**Coefficients**

Model	Un-standardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	15029.806	4739.686		3.171	.007
GDP	.005	.000	.960	12.890	.000

- a. Dependent Variable: Investment on higher education

The estimated value of ‘F’ statistic 166.157 is statistically significant at one percent level of significance. There is a significant difference in Variance between GDP and Investment on higher education. Hence, the value of t-statistic 12.890 is statistically significant at one percent level of significance. Therefore, based on this statistical analysis we reject the null hypothesis and accept the alternative hypothesis which states that there is significant relationship between GDP and public investment on higher education in India. Result of simple regression test proves that, one percent increase in the GDP will leads to 0.05 percent of increase in investment on higher education. Moreover, the R<sup>2</sup> value 0.922 indicates the strong correlation between gross domestic product and investment on higher education in India.

**V. CONCLUSION**

The focus of this paper is basically on public expenditure on higher education as the percentage of GDP by the centre and the states. It can be noticed from the analysis that higher education sector has got comparatively low priority in the share of sectoral allocation of resources, because, lion share of public spending on education has been allocating to primary education. There is huge expansion in the higher education system of India since independence. But, this expansion is not accompanied by sufficient allocation of funds by the government. Though, there is an increasing trend in the public expenditure on higher education in India, this growth is not been satisfactory. Many experts and NITI Ayog suggested for increasing the public expenditure on education to six percent of GDP, but the country is not spending more than 5 percent of the gross domestic product for education, and even from this low level of spending only 1/10<sup>th</sup> of the proportion is allocating towards higher education, due to this, achieving equity and quality in higher education is not possible till the day. The study shows that in terms of relative priority, higher education suffered a lot and statistical analysis proves that there is significant and positive relationship between GDP and public investment on higher education in India. Even though higher education is important for the progress of nation, it is not given much importance; therefore, government needs to take necessary measures for raising the resources for financing the higher education in the country.



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