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TRENDS AND GROWTH OF PUBLIC EXPENDITURE ON EDUCATION IN KARNATAKA: AN ANALYSIS

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Abstract

The role of education in nation building is not merely a question of social equity and equipping people to secure employment, it is much more than that, and this is universally recognized. The human resource development revolution has also placed investment in education on the priority list of governments across nations. Objective of the study is to know the status of education expenditure in Karnataka and analyze the deterministic relation between Gross Domestic Income and Public Education Expenditure. The study is based on secondary data, and basic statistics and OLS regression analysis are used for analysis and inference. The ratio of public spending on education to GDP is higher than 4.28%[1]. Spending was almost double in 2017–18 as compared to 2010–11 in absolute terms, but the relative shares between categories hardly changed. The share of public expenditure on education was continuously increasing at an increasing level of education, followed by primary and secondary, art and culture, library, general and mass education. Karnataka's regional domestic revenue is displaying a good trend, giving the government the ability to increase spending on education and related fields.

Keywords: *Education, Public Expenditure, Gross Domestic Income.*

1 CAG Report 2019-20

Introduction:

Due to the enormous knowledge base of the community and the substantial accomplishments and changes in the education sector, Karnataka has experienced rapid economic growth.[2] One of the most significant socioeconomic indices of a nation's development is education. Through the consuming, saving, investment, and distribution aspects, education supports economic growth. By increasing lifetime wages, it improves the quality of life for the nation's citizens. India still falls under the label of an underdeveloped nation, as is well known. Since independence, the Indian economy has been plagued by challenges like poverty, unemployment, inequality, and price increases, among others. Unemployment and poverty are persistent issues in our economy.[3]

The overall literacy rate in Karnataka, which was 66.64% in 2001, increased to 75.60% in 2011, with male and female literacy rates in the State above those at the national level. In Karnataka, the urban male literacy rate in 2011 was above 90%, whilst the rural female literacy rate was just under 60%. The State has established fundamental infrastructure in all levels of schools and stressed the importance of education in general. Class I to V in Lower Primary Schools (LPS), Class I to VII or VIII in Higher Primary Schools (HPS), and Class I in High Schools (VIII to X). The State had 17265 high schools, 24153 lower primary (LPS), 30876 higher primary (HPS), and 55029 elementary schools in total in 2021–22. Since 2010–11, there has been a steady rise in the number of schools, with secondary schools seeing the fastest growth. Both the class VI to VIII higher primary level and the class I to V primary stage have seen a rise in enrollment. In lower primary for 2021–2022, the gross enrollment (GER) and net enrollment ratios (NER) were respectively 103.73 and 99.16, while in higher primary, the GER and NER were respectively 102.26 and 87.55.[4]

Review of Literature:

There have been numerous studies on public education spending in recent years, but the majority has focused on trends and patterns rather than outcomes. However, because all of these researches are crucial for further investigation, we have examined a few older investigations in this section.

Adolph Wagner (1883), the late 19th-century German economist conducted a thorough investigation into government spending. He developed a law known as "The Law of Increasing State Activity" in light of the study. According to Wagner's law, "the activities and functions of the government increase with time as the economy develops."

Musgrave (1969) expressed the opinion that the pattern of societal economic growth and development may be tied to the expansion of public spending. Social overhead capital requires a sizeable amount of public spending, as private investment is insufficient to cover this unavoidable expense.

2 Karnataka economic survey 2020-21
3Sanjay Kumar 2020, SSN: 2581-9925, Volume 02, No. 03, pp, 1
4 Karnataka economic survey 2021-22

Gunwant Gadbade and Chandrakant Kokate (2021) in this paper, "Public Expenditure on Education: An Interstate Analysis of India," this topic is covered. This study reveals the recent pattern and make-up of public education spending by both the federal government and state governments. The analysis indicated that while the percentage share of the central government has gradually climbed and the percentage share of the state government has decreased, on average 77% of the spending in the education sector has come from the state government. The study discovered that during the second phase of the study period (2000-01 to 2018-19), education spending as a percentage of SGDP decreased in the majority of Indian states.

Venkatanarayana Motkuri and Revathi (2020) the present study on Public Expenditure on Education in India: Contributions of Centre and State Governments during the last three Decades. The study explore India is public expenditure around 4 percent of GDP on education but it is also evident from the analysis that only one percent is borne by the Centre while three percent is borne by States together. The found that long pending raise in the education spending to six percent of GDP, also proposed by the NEP 2020 needs to be equally shared by both Centre and States lest the development of education remains a lofty idea. The study revealed that total public expenditure on education the states are spending more than 20 percent and Centre's contribution is only 20 to 25 percent on education.

Plabita Bhattacharyya (2019) Public Expenditure on Education and Economic Growth: A State-Level Analysis in India is the study's full title. According to the study, public spending on education and economic growth are linked over the long term. Additionally, it was shown that there was a long-term, unidirectional causal relationship between GSDP and public spending on education. The implication is that as the Indian states grow, the government is forced to expand its operations, which sparks an increase in public spending.

Objectives of the study:

1) To analyze the districts-wise trends and growth in public expenditure on education.

2) To know the status of Public Education Expenditure in Karnataka.

Research Methodology & Data Sources:

The current study is based on secondary data sources that were obtained from the Planning, Programme Monitoring and Statistics Department, the Economic Survey of the Government of Karnataka, and the Analysis of Budget Expenditures on Education, among other issues, from the Ministry of Human Resource Development of the Government of India. The aforementioned data sources, which are represented in the form of straightforward tables, descriptive analysis, and regression, were used to compile and analyze the study in further detail. Conclusions have been formed using the statistical tools utilized for the analytical investigation over time, such as percentage and growth rate year-over-year.

Results and Discussion:

Table 1: Trends and Patterns of Public Expenditure on Education in Karnataka (in Lakhs)

Years/Major Heads	Art Culture and Library	General Education	Mass Education	Primary & Secondary
2010-2011	66.079	179832.334	322.580	300252.944
2011-2012	1122.624 (15.989)	186687.193 (0.038)	340.782 (0.056)	311042.747 (0.036)
2012-2013	1474.004 (0.313)	200746.855 (0.075)	365.716 (0.073)	320441.246 (0.030)
2013-2014	691058.310 (467.831)	203430.154 (0.013)	284.400 (-0.222)	225586.767 (-0.296)
2014-2015	490992.030 (-0.290)	217180.203 (0.068)	378.780 (0.332)	279050.662 (0.237)
2015-2016	414350.940 (-0.156)	227449.025 (0.047)	322.300 (-0.149)	305059.217 (0.093)
2016-2017	337677.320 (-0.185)	246074.401 (0.082)	747.240 (1.318)	508946.472 (0.668)
2017-2018	361030.160 (0.069)	238185.502 (-0.032)	789.081 (0.056)	376392.647 (-0.260)
Mean	287221.43	212448.21	443.86	328346.59
Std.	260418.46	23863.35	202.52	84183.37
CV	0.91	0.11	0.46	0.26

Source: Author's Calculations from PPMSD, planning.karnatak.gov.in
Note: Values in the parentheses indicates that the growth rate.

This table analysis compromises Trends and Patterns of Public Expenditure on Education in Karnataka over a period 2010-11 to 2017-18. As observed, Government spent more expenditure on primary and secondary education and it is clear that during 2016-2017 it's spending is highest is of 508946.472 lakh rupees. Similarly lowest is of 225586.767 lakh rupees in 2013-14. The average mean value is decline for Mass education (443.86 lakhs). Its shows the budget allocation on Mass education sector in various years is not satisfactory. The standard deviation value is highest at 260418.46 in Art, culture and library sector and lost at 202.52 in mass education sector. The co-efficient of variation measures the frequency value is almost absolute to zero.

Table 2: Districts-Wise Trends and Growth in Public Expenditure on Education in Karnataka

District	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	2017-2018
Bengaluru Division							
Bengaluru	0.469	0.174	-0.118	0.150	0.123	0.373	0.122
Bengaluru ®	0.005	-0.706	3.498	0.151	-0.315	1.388	-0.108
Chickballapur	0.026	0.117	730.40	-0.999	0.078	0.071	0.067
Chitradurga	0.077	0.104	0.608	0.108	0.109	0.401	-0.498
Davanagere	0.060	0.137	0.843	0.024	0.138	0.585	0.045
Kolar	-0.023	0.048	0.324	0.106	0.081	0.520	0.054
Ramnagara	-0.003	0.102	-0.112	0.107	0.124	0.428	0.069

Shivamogga	0.034	0.031	-0.995	0.091	0.088	0.528	0.051
Tumkuru	-0.068	0.101	18.663	-0.295	-0.430	-0.653	0.067
Belagavi Division							
Bagalkot	0.093	0.140	-0.057	0.105	0.118	-0.068	0.156
Belagavi	0.014	0.097	-0.053	0.140	0.072	0.196	-0.335
Dharwad	0.078	0.130	0.204	0.165	0.120	0.029	0.170
Gadag	0.588	0.126	0.270	0.255	0.045	0.310	-0.545
Haveri	0.003	0.099	19.673	-0.914	-0.004	0.288	0.086
Uttara Kannada	-0.008	0.020	0.685	0.089	0.064	0.263	0.054
Vijayapura	0.106	0.073	-0.096	0.283	-0.017	0.273	0.017
Kalaburagi Division							
Ballari	0.034	0.105	-0.051	0.264	0.101	0.363	117.12
Bidar	0.085	0.138	-0.079	0.129	0.087	0.673	0.117
Kalaburagi	0.080	0.009	1.579	0.140	0.053	0.605	0.052
Koppal	0.054	0.080	0.597	0.100	0.158	0.410	0.076
Raichur	0.015	0.086	33.651	0.121	0.084	0.095	0.079
Yadgir	0.065	-1.348	-3.899	0.055	0.074	0.494	0.039
Mysuru Division							
Chamarajanagar	0.013	-0.041	7.141	-0.868	0.120	0.502	0.034
Chikkamagaluru	-0.009	0.088	0.854	0.091	0.076	0.519	0.145
Dakshina Kannada	-0.019	0.083	0.298	0.108	0.055	0.358	0.053
Hassan	-0.017	0.052	0.848	0.219	-0.022	0.681	0.048
Kodagu	0.034	0.101	-0.096	0.096	-0.007	2.181	0.013
Mandya	0.063	0.092	0.357	0.110	0.014	0.698	0.033
Mysuru	-0.039	0.088	0.549	0.160	0.212	0.442	0.100
Udupi	-0.023	0.077	0.175	0.016	0.039	0.809	0.015
Mean	109952	113566	244645	32920	31573	36448	145464
Std.	542912	559930	1109688	65563	61663	63604	594564
CV	4.94	4.93	4.54	1.99	1.95	1.75	4.09

Source: Author's Calculations from PPMSD, planning.karnatak.gov.in

Note: Values in the parentheses indicates that the growth rate.

The given table reveals the districts wise trends and growth in public expenditure on education in Karnataka for given period. If look in to the table highest budget allocation received by Bangalore Division as of lowest allocation received by Kalaburgi Division. Here notice that standard deviation value is increased from 2011-12 to 2013-14 (549212-1109688) and there is a fluctuation in its value over a period 2014-18. Similarly average mean values also increase from 109952 lakh rupees in 2011-12 to 145464 lakh rupees in 2017-18. By considering the division wise analysis in Bangalore division government made more expenditure in Bangalore district. And Chickballapur highly budget allocated district in 2013-14 is of 730.40 lakh rupees. In the same way Mysore division Kodagu district make least expenditure on education is -0.007 in 2015-16. This shows the negative growth rate towards the education co-efficient of variation indicates the overall positive progress for a given period.

Result Table -3

Method: Least squares.

Included observation: 238 after adjustments

Dependent variable: Public expenditure

Independent variable: Gross domestic product

Equation

$$PExp_t=\alpha_0+\beta_1 KSGDP \ldots\ldots\ldots\ldots\ldots\ldots (1)$$

$PExp_t$ *refers to public expenditure*

α_0 *refers to intercept*

β_1 *refers to slope*

$KSGDP$ *refers to Karnataka state Gross domestic product*

Regression Statistics	
Multiple R	0.928683026
R Square	**0.862452164**
Adjusted R Square	0.719595021
Standard Error	0.023423165

	Coefficients	***Std. Error***	***t-ratio***	***P-value***	
Intercept	0.076964	0.002247388	34.245991	4.129E-08	**
PExp	0.0234418	0.038041302	0.6162191	0.560386	***

According to the model coefficient, for every unit rise in the independent variable, the dependent variable grows by 0.23 percent or from Rs. 1 crore to Rs. 10 lakhs if the SGDP increases. However, the link cannot be determined by the coefficient value alone. R2, P-values, and t stat combined together provide a better explanation of the relationship between the independent and dependent variables. The regression analysis's results are shown in Table 1; R2 is 0.862, which indicates that 82.69% of the variation in K-PExp is explained by SGDP. The resulting p-values are statistically significant, indicating that SGDP and K-PExp have a positive connection. At a 1% level of significance, the independent variable K-SGDP looks significant. At a 5% level of significance, the intercept is likewise significant.

Conclusion:

The budgetary provisions for public education expenditure are on the rise, according to the current study, which focuses on education spending in Karnataka. However, it is inadequate to compare the gross domestic product of its own region. Public spending on education as a share of SGDP was less than 0.3% for the first half of the decade; this number rose to 12% in 2022–2023; however, when compared to other sectors today, education spending is an acceptable indicator and is thought to be important for the growth of human capital in this state. The study revealed that public expenditure on education is increasing at an increasing rate continuously. Budgetary provisions for public education spending must be enhanced in order to guarantee the right to obtain information as a state of life because this state is notorious for illiteracy, low knowledge, and a high dropout rate. The analysis indicates a rising trend in state domestic income, giving the government the ability to increase spending on the sector of education, which is always in need.

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