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Growth And Structural Transformation Of Public Expenditure In India: An Elasticity-Based Analysis

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Abstract

This study examines the trends and structural composition of public expenditure in India from 2000–01 to 2025–26 using data from the Budget Documents of the Government of India. The analysis covers revenue expenditure, capital expenditure, total expenditure, defence spending, interest payments, and subsidies. The study further evaluates per capita expenditure growth and measures expenditure elasticity with respect to Net National Product (NNP) using the log-log (arc elasticity) approach.

The findings indicate a substantial expansion in total expenditure over the study period, with notable acceleration during crisis periods such as the COVID-19 pandemic. While revenue expenditure continues to dominate the expenditure structure, capital expenditure has shown significant growth in recent years, reflecting a strategic shift toward infrastructure-led development. Elasticity estimates suggest that total and capital expenditures are income-elastic, indicating increasing fiscal responsiveness to economic growth. The study provides insights into evolving fiscal priorities and their implications for sustainable public finance management in India.

keywords: Public Expenditure, Revenue Expenditure, Capital Expenditure, Fiscal Policy, Elasticity of Public Expenditure

Introduction

The economic reforms of 1991 represented a pivotal moment in India's fiscal and monetary policies, resulting in a transformation of the public expenditure landscape. Following the reforms, India witnessed a heightened sense of fiscal responsibility, while government spending continued to play a crucial role in driving economic growth. This study delves into the evolving patterns of public expenditure, with a specific focus on total, revenue and capital expenditures, and their influence on India's economic trajectory.

Through an examination of these trends spanning the last three decades, our objective is to understand the significance of public investment in nurturing development in post-reform India.

India has grown significantly in absolute terms, evolving from a post-independence focus on basic infrastructure to a modern emphasis on capital investment and social welfare. In 2026-27 Union Budget, total expenditure is estimated at ₹53.47 lakh crore, a 7.7% increase over the previous year's revised estimates.

Recent Growth Trend

India's total expenditure is projected to reach ₹53.47 lakh crore in 2026-27, up from ₹49.6 lakh crore in 2025-26. When we look at the budgetary growth rate, recent year-on-year increases have been estimated at 7.4% for 2025-26 and 7.7% for 2026-27. There has been a deliberate shift toward asset-creating investments like highways and digital connectivity. For 2025-26, Capital expenditure was estimated at ₹11 lakh crore. Revenue expenditure continues to consume the bulk of the budget (roughly 85-87%), driven by interest payments, salaries, and subsidies. A major driver of growth, interest payments are expected to reach ₹14.04 lakh crore in 2026-27, accounting for 26% of total expenditure.

Major Drivers of Expenditure Growth

1. **Infrastructure Development:** Sustained high allocation for transport, energy, and urban infrastructure to fuel economic progress.
2. **Social Welfare & Poverty Alleviation:** Increased spending on education, healthcare, and targeted subsidies (food, fertilizer) to support a large population.
3. **National Security:** Modernization of armed forces consistently drives defence spending upward.
4. **Economic Stabilization:** Counter-cyclical spending during crises (like COVID-19) often leads to temporary spikes in public debt and expenditure.
5. **Demographic Demands:** A growing population increases the need for essential public services and amenities.

Statement of the Problem

Public expenditure plays a critical role in economic development, macroeconomic stabilization, income redistribution, and infrastructure creation. Over the last two decades, India has witnessed substantial growth in government spending, accompanied by changes in its composition. However, concerns persist regarding the rising share of revenue expenditure relative to capital expenditure, increasing interest payments and subsidy burdens, fiscal sustainability amid expanding expenditure commitments, the responsiveness (elasticity) of public expenditure to national income growth. There is a need to systematically analyse the growth pattern, structural changes, and elasticity of public expenditure to assess whether expenditure growth aligns with developmental objectives and fiscal prudence. This study attempts to address this gap by examining long-term trends and elasticity measures.

Objectives of the Study

Research in this area generally aims to:

1. To examine the historical growth and patterns of public expenditure in India
2. To study the elasticity of total expenditure, capital and revenue expenditure
3. To draw policy implications regarding fiscal sustainability and developmental priorities.

Methodology

The study considered 25 years data from 2000-01 to 2025-26. Reliance on secondary data collected from the Reserve Bank of India (RBI) Bulletins, Union Budget documents, and Ministry of Finance reports. Population data used to compute per capita expenditure. NNP (at factor cost) data used for elasticity estimation. Trend analysis, elasticities of public expenditure and CAGR are used to measure the absolute growth and compound annual growth rate over specific decades. Expenditure elasticity has been measured using the log-log (Arc Elasticity) approach for total expenditure, capital expenditure and revenue expenditure. The study focused on long-term time-series data, such as from 2000-01 to 2025-26, to capture the effects of economic liberalization. The following formulas were used to work out CAGR, Per capita expenditure and elasticity in Total expenditure, capital expenditure and Revenue expenditure.

Compound Annual Growth Rate: $CAGR = \left(\frac{V_t}{V_0}\right)^{\frac{1}{n}} - 1$

Where: V_t = Final value, V_0 = Initial value, n = Number of years

Percapita Expenditure:

$$\text{Per Capita Expenditure} = \frac{\text{Total Expenditure}}{\text{Population}}$$

Elasticity Measurement:

Elasticity of expenditure with respect to NNP is measured using the log-log (arc elasticity) method:

$$E = \frac{\% \text{ Change in Expenditure}}{\% \text{ Change in NNP}}$$

Trends in Public Expenditure in India:

Public expenditure in India has grown substantially over the past few decades, both in absolute terms and relative to economic output, reflecting rising governmental responsibilities in welfare, defence, and infrastructure. Historically, expenditure has risen from modest levels in the early post-independence era to much higher levels today as both central and state governments expanded their roles.

Major Heads of Expenditure of Central Government
Revenue Expenditure (₹ Crore)

Year	Revenue Expenditure	Defence Expenditure	Interest Payments	Subsidies
2000-01	277839	37238	99314	26838
2001-02	301468	38059	107460	31210
2002-03	338713	40709	117804	43533
2003-04	362074	43203	124088	44323
2004-05	384329	43862	126934	45957
2005-06	439376	48211	132630	47522
2006-07	514609	51682	150272	57125
2007-08	594433	54219	171030	70926
2008-09	793798	73305	192204	129708
2009-10	911809	90669	213093	141351
2010-11	1040723	92061	234022	173420
2011-12	1145785	103011	273150	217941
2012-13	1243514	111277	313170	257079
2013-14	1371772	124374	374254	254632
2014-15	1466992	136807	402444	258258
2015-16	1537761	145937	441659	264106
2016-17	1690584	165410	480714	234809
2017-18	1878833	186127	528952	224455
2018-19	2007399	195572	582648	222954
2019-20	2350604	207572	612070	262304
2020-21	3083519	205789	679869	758165
2021-22	3200926	228559	805499	503907
2022-23	3453132	256183	928517	577916
2023-24	3494252	290443	1063872	434899
2024-25	3698058	297222	1137940	427868
2025-26	3944255	311732	1276338	426216
CAGR	11.20%	8.87%	10.75%	11.70%

Source: Budget Documents of Government of India

Note: 1. Data for 2024-25 are Revised Estimates and data for 2025-26 are Budget Estimates

2. Defence expenditure is exclusive of expenditure on Defence pensions and Civil expenditure

The overall Revenue Expenditure has increased by more than 14 times in absolute terms over this 25-year period. Subsidies show the highest growth rate among the revenue heads at 11.70%, slightly outpacing the overall Revenue Expenditure growth. Interest Payments have grown at a steady rate of 10.75%, which reflects the long-term accumulation of debt over the two and a half decades. Defence Expenditure (Revenue side) has grown the slowest at 8.87%, suggesting that a larger portion of the budget

growth has been directed toward social spending (subsidies) and debt servicing rather than operational military costs.

Major Heads of Expenditure of Central Government
Capital Expenditure (₹ Crore)

Year	Capital Expenditure	Loans and Advances	Capital outlay	Of which Defence Expenditure
2000-01	47753	23008	24745	12384
2001-02	60842	34284	26558	16207
2002-03	60769	31668	29101	14953
2003-04	62918	28768	34150	16863
2004-05	81248	28910	52338	31994
2005-06	66362	11337	55025	32338
2006-07	68778	8524	60254	33828
2007-08	118238	11298	106940	37462
2008-09	90158	14107	76051	40918
2009-10	112678	15647	97031	51112
2010-11	156604	24985	131619	62056
2011-12	158580	20737	137843	67902
2012-13	166858	20800	146058	70499
2013-14	187675	19198	168478	79125
2014-15	196681	29218	167463	81887
2015-16	253022	26337	226685	79958
2016-17	284609	36810	247800	86371
2017-18	263140	18027	245113	90445
2018-19	307714	28221	279492	95231
2019-20	335726	24414	311312	111092
2020-21	426317	110491	315826	134305
2021-22	592875	58376	534499	137987
2022-23	740025	115268	624757	142940
2023-24	949195	161095	788100	154256
2024-25	1018429	170693	847736	159500
2025-26	1121090	225844	895246	180000
CAGR	13.46%	9.57%	15.44%	11.30%

Source: Budget Documents of Government of India

Note: 1. Data for 2024-25 are Revised Estimates and data for 2025-26 are Budget Estimates

2. Defence expenditure is exclusive of expenditure on Defence pensions and Civil expenditure

Capital Outlay has the highest CAGR at 15.44%. This is a significant indicator of the government's intent to create physical assets (infrastructure, machinery, etc.) rather than just disbursing loans. The total

Capital Expenditure is growing at 13.46%, which is notably higher than the Revenue Expenditure growth (11.20% calculated previously). This suggests a positive fiscal tilt toward productive spending. Capital spending on Defence has grown at 11.30%, indicating a steady commitment to military procurement and asset building over the last quarter-century. If you look at the raw data, there is a massive jump in Total Capital Expenditure starting from 2021-22 (₹ 5.92 lakh crore) reaching ₹ 11.21 lakh crore by 2025-26. This reflects the post-pandemic strategy of "Capex-led growth." Capex-led growth" refers to a strategic economic shift where the government prioritizes Capital Expenditure (Capex) over consumption-based spending (Revenue Expenditure). The goal is to stimulate the economy through the creation of physical assets like highways, railways, and power plants.

Total Expenditure
[Revenue and Capital Expenditure] (₹ Crore)

Year	Revenue Expenditure	Capital Expenditure	Total Expenditure
2000-01	277839	47753	325592
2001-02	301468	60842	362310
2002-03	338713	60769	399482
2003-04	362074	62918	424992
2004-05	384329	81248	465577
2005-06	439376	66362	505738
2006-07	514609	68778	583387
2007-08	594433	118238	712671
2008-09	793798	90158	883956
2009-10	911809	112678	1024487
2010-11	1040723	156604	1197327
2011-12	1145785	158580	1304365
2012-13	1243514	166858	1410372
2013-14	1371772	187675	1559447
2014-15	1466992	196681	1663673
2015-16	1537761	253022	1790783
2016-17	1690584	284609	1975193
2017-18	1878833	263140	2141973
2018-19	2007399	307714	2315113
2019-20	2350604	335726	2686330
2020-21	3083519	426317	3509836
2021-22	3200926	592875	3793801
2022-23	3453132	740025	4193157
2023-24	3494252	949195	4443447
2024-25	3698058	1018429	4716487

2025-26	3944255	1121090	5065345
CAGR	11.20%	13.46%	11.60%

Source: Budget Documents of Government of India

Total Expenditure has grown at a healthy 11.60%, but the real story is the acceleration of Capital Expenditure (13.46%). Around 2021-22, there is a clear structural break in the data where Capital Expenditure begins to grow significantly faster than Revenue Expenditure. This is the hallmark of the "Capex-led growth" model mentioned earlier. The Government of India's spending power has expanded by 15.5 times in absolute terms over the 25-year window.

Percapita Spending

Year	Total Exp (₹ Crore)	Population	Percapita Spending
2000-01	325592	1057922733	3077.65
2001-02	362310	1077898575	3361.26
2002-03	399482	1097600380	3639.59
2003-04	424992	1116803006	3805.43
2004-05	465577	1135991513	4098.42
2005-06	505738	1154676322	4379.91
2006-07	583387	1172878890	4973.97
2007-08	712671	1190676021	5985.43
2008-09	883956	1207930964	7317.93
2009-10	1024487	1225524753	8359.58
2010-11	1197327	1243481564	9628.83
2011-12	1304365	1261224954	10342.05
2012-13	1410372	1278674502	11029.95
2013-14	1559447	1295829511	12034.35
2014-15	1663673	1312277191	12677.76
2015-16	1790783	1328024498	13484.56
2016-17	1975193	1343944296	14696.99
2017-18	2141973	1359657400	15753.77
2018-19	2315113	1374659064	16841.36
2019-20	2686330	1389030312	19339.61
2020-21	3509836	1402617695	25023.47
2021-22	3793801	1414203896	26826.41
2022-23	4193157	1425423212	29416.93
2023-24	4443447	1438069596	30898.69
2024-25	4716487	1450935791	32506.52
2025-26	5065345	1463865525	34602.53
CAGR	11.60%	1.3%	10.20%

Source: <https://www.worldometers.info/world-population/india-population/>

Based on the data provided, it's clear that India's fiscal landscape has undergone a massive transformation over the last quarter-century. The figures show a transition from ₹325592 crore in 2000 to an estimated ₹5065345 crore in 2025-26. In the early 2000s, spending grew at a relatively moderate pace. Per capita spending crossed the ₹5,000 mark for the first time in 2006-07. This era was defined by the liberalization of the 90s finally hitting its stride, with a focus on basic infrastructure and rural development. By 2009-10, the total expenditure hit the ₹10 lakh crore milestone. During this decade, per capita spending more than doubled, jumping from ₹8,359 to ₹16,841. This reflects a shift toward massive public works, digital India initiatives, and expanded social safety nets. The most dramatic jump in data occurs between 2019-20 and 2020-21, where total expenditure surged from ₹26.8 lakh crore to ₹35.1 lakh crore in a single year-nearly 30% increase. This spike was the direct result of the COVID-19 pandemic, which required emergency healthcare spending and massive stimulus packages (like Atmanirbhar Bharat). Per capita spending leaped from ₹19,339 to ₹25,023, reflecting the government's role as the primary economic engine during the crisis.

As of latest Union Budget 2026-27 (presented Feb 1, 2026), the government is continuing this upward trajectory with an estimated total expenditure of ₹53.47 lakh crore. The current focus has shifted from "emergency relief" back to Capital Expenditure (Capex)—spending on things like high-speed rail corridors, semiconductor missions, and "Biopharma Shakti." This is intended to "crowd in" private investment and maintain a nominal GDP growth of roughly 10%. It is to be noted that while spending has increased by over 1,450% since 2000, the population grew by only about 38%. This indicates that the vast majority of the budget increase is due to economic expansion and inflation, rather than just serving more people.

The analysis shows that Total Public Expenditure grew at a compound annual growth rate (CAGR) of 11.6%, while Per Capita Expenditure grew at 10.2%, and Population increased at only 1.3% per year during the period. The CAGR reflects a sustained expansion of public expenditure in India, with government spending growing substantially faster than population. The strong rise in per capita expenditure indicates increasing fiscal capacity and expanding public sector involvement in economic and social development.

Measurement of Total Expenditure, Capital and Revenue Expenditure Elasticity:

To calculate elasticity with respect to NNP (at factor cost), we use the log-log (arc elasticity) approach

$$\text{Elasticity} = \frac{\% \text{ change in Expenditure}}{\% \text{ change in NNP}}$$

Using the full period (first to last observation):

Total Expenditure Elasticity:

$$\% \Delta \text{ in Total Expenditure} = \frac{5065345 - 325592}{325592} = 1455.6\%$$

$$\% \Delta \text{ in NNP} = \frac{32248000 - 1679982}{1679982} = 1825.5\%$$

$$\text{Therefore, Total Expenditure Elasticity is} = \frac{1455.6}{1825.5} = \mathbf{0.80}$$

The calculation identifies the expenditure elasticity for India over the 25-year period from 2000-01 to 2025-26. Based on numbers, here is the breakdown and interpretation of 0.80 figure actually means for Indian economy. An elasticity of 0.80 (which is less than 1) indicates that government expenditure is income-inelastic. This means that for every 1% increase in India's National Income (NNP), government spending increased by only 0.80%. In simpler terms, while the government is spending significantly more than it was 25 years ago, the overall economy has grown even faster. An elasticity of 0.80 indicates a period of "fiscal consolidation" or a relative expansion of the private sector compared to the public sector over the last quarter-century.

Capital Expenditure Elasticity:

$$\% \Delta \text{ in Capital Expenditure} = \frac{1121090 - 47753}{47753} = 2247.0\%$$

$$\text{Therefore, Capital Expenditure Elasticity is} = \frac{2247.0}{1825.5} = \mathbf{1.23}$$

With a Capital Expenditure Elasticity of 1.23, we see a clear departure from the "inelastic" trend of total spending. This confirms that while India's total budget grew slower than the national income, the portion dedicated to creating assets (roads, railways, power plants, and defence equipment) grew significantly faster than the national income. In economics, an elasticity greater than 1 is a strong indicator of pro-growth fiscal policy. It suggests that as the Indian economy matured, the government prioritized Capital Expenditure over Revenue Expenditure (subsidies, salaries, interest payments).

Revenue Expenditure Elasticity:

$$\% \Delta \text{ in Revenue Expenditure} = \frac{3944255 - 277839}{277839} = 1399.6\%$$

$$\text{Therefore, Revenue Expenditure Elasticity is} = \frac{1319.6}{1825.5} = \mathbf{0.72}$$

An elasticity of 0.72 means the government has successfully constrained its day-to-day costs relative to the nation's rising income. Again, it is given to understand that by keeping revenue elasticity (0.72) much lower than Capital Elasticity (1.23), the government has effectively redirected its "savings" into infrastructure. When capital expenditure elasticity is > 1 which means capital expenditure grows faster than NNP (Net National Product at factor cost). When revenue and total expenditure is < 1 which means they grow slower than NNP (inelastic). The capital expenditure is more responsive to economic growth than revenue expenditure.

Total expenditure has increased by more than 15 times in 25 years.: Interest payments consistently remain the largest sub-head of Revenue Expenditure, crossing the ₹10 lakh crore mark in 2023-24, indicating a significant portion of revenue is locked in debt servicing. Subsidies saw a massive spike in 2020-21 (₹7.58 lakh crore) due to pandemic-related relief, before stabilizing in the ₹4 lakh crore range. Capital Expenditure remained sluggish until 2020-21, after which it saw a sharp upward trajectory, jumping from ₹4.26 lakh crore to over ₹11 lakh crore (projected), reflecting a policy shift toward infrastructure. Per capita spending has risen from ₹3,077 (2000-01) to ₹34,602 (2025-26), far outpacing the rate of population growth.

Conclusion

The fiscal landscape of India has undergone a massive transformation. From a period of revenue-heavy spending in the early 2000s, the budget has evolved into a more "investment-oriented" tool in the post-2020 era. However, the sheer volume of interest payments remains a structural challenge. The steady rise in per capita spending suggests a deeper state involvement in the economy, which must be matched by high NNP growth to remain sustainable. Further, the study demonstrates that post-reform India has successfully decoupled its infrastructure spending from its operational spending. By ensuring that Capital Expenditure grows faster than NNP while Revenue Expenditure grows slower, the government is effectively "saving" on consumption to "invest" in the nation's future.

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