Quality of Public Expenditure and its Socio-economic Impact in India

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In India, the post-liberalisation period has been marked by dynamic shifts in fiscal priorities, balancing the imperatives of macroeconomic stabilisation with investments in critical sectors such as infrastructure, healthcare, and education. Against the backdrop of capex push by the Centre and States, this article examines India's public expenditure trajectory from 1991-92 onwards, analysing the role of policy reforms, structural transformations, and policy initiatives. The study elucidates the interplay between expenditure composition, economic outcomes, and developmental progress by computing a quality of public expenditure (QPE) index.

I. Introduction

Government spending and its structural composition play an important role in shaping economic growth. Reorienting the spending profile toward investment, particularly by directing public borrowings to finance capital formation, has positive impact on GDP (Sever *et al,* 2011). Public expenditure, such as those that enhance essential public goods – education, healthcare, and infrastructure – are generally more productive. These expenditures can not only complement private investments but also foster an enabling environment for sustainable economic growth. Targeted spending on strengthening social safety nets, promoting entrepreneurship, and improving public expenditure management is increasingly recognised as a cornerstone of long-term development (Misra *et al.,* 2021). Moreover, ensuring optimal allocation of resources within these critical domains further reinforces the role of public spending in promoting inclusive and sustainable growth (Padhi *et al.,* 2023).

Public expenditure and its quality thus assume critical importance in balancing growth imperatives with the maintenance of macroeconomic stability. Prudent fiscal policy can create room for private spending, and when coupled with sustainable public outlays, they yield definite economic benefits (GoI, 2017). However, high public spending, even if growth-oriented, can pose significant risks. Sustained high budgetary deficits can undermine national savings, elevate interest rates, and adversely affect national income in both the short and long term. Persistent deficits erode government credibility and investor confidence while exacerbating external vulnerabilities, such as current account deficits, stemming from prolonged fiscal imbalances (Gale and Orzag, 2003). These dynamics highlight the need to continuously evaluate and refine the composition of public expenditure to ensure responsible fiscal management and sustainable growth.

Against this backdrop of balancing fiscal prudence with growth imperatives, an analysis of the composition of public spending assumes criticality. This article examines the trajectory of public expenditure in India over the past three decades, focusing on the factors influencing its quality and composition. By exploring linkages of expenditure composition to macroeconomic outcomes, the study offers insights to optimise fiscal strategies. The article is organised into six sections: Section II explores the measures of composition of public expenditure; Section III provides a phase-wise analysis of expenditure trends from 1991 to 2025; Section IV outlines the methodology used to construct an innovative quality of public expenditure (QPE) index; Section V discusses the key findings; and

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Section VI concludes by summarising key insights and highlighting policy priorities for promoting sustainable growth and fiscal stability.

II. Measuring Quality of Public Expenditure

The composition of public expenditure is a critical indicator of its quality, reflecting how effectively government spending fosters sustainable growth and development. Maintaining a balance between expenditure on final consumption and on investments in both physical and human capital formation generates long-term benefits for present and future generations. A higher share of spending devoted to capital formation thus indicates a strategic focus on long-term gains (Misra *et al.,* 2021). Hence, understanding the balance between consumption-based and investment-oriented outlays is essential for gauging the sustainability of the spending patterns of the government.

Among the various metrics used to evaluate expenditure efficiency, the quantum of capital spending by the government and the ratio of revenue expenditure to capital outlay (RECO) have emerged as particularly significant. These measures provide insights into how public funds are allocated, enabling policymakers to assess the potential advantages of prioritising capital expenditure over revenue expenditure. By emphasising capital outlays, governments can advance long-term economic growth and development outcomes. An increase in capital expenditure often yields a more than proportional expansion in investment, thereby exerting a stronger impact on overall economic performance. Public investment, in particular, tends to "crowd in" private investment by spurring demand and expanding productive capacity (Bose and Bhanumurthy, 2015).

Moreover, the fiscal multiplier associated with capital outlay not only surpasses that of revenue spending but remains higher for a longer duration, underscoring its robust growth-promoting potential (Jain and Kumar, 2013; RBI, 2024). Aligning the composition of public expenditure with activities that generate positive externalities, augment capacity creation, and reinforce fiscal consolidation further strengthens the synergy between fiscal and monetary policies (Goyal and Sharma, 2018). Key metrics, such as the share of capital outlay (CO) in GDP and its proportion in total expenditure, capture the government's commitment to growth-oriented public spending.

Furthermore, certain categories of public expenditure are intended to stimulate economic growth by enhancing the economy's stock of production factors (labour and capital) or by improving their productivity. The most frequently cited categories include education and training, public infrastructure investments, R&D (which drives technological advancement and innovation), and healthcare (which boosts both the size and productivity of the labour force by extending the span of healthy life) [European Commission, 2002; 2004]. These outlays are captured as "development spending" in Central and States' expenditure budgets. In some contexts, subsidies - particularly those aimed at improving nutrition, such as food subsidies - are also considered part of development expenditure, as well-targeted subsidies can address specific developmental bottlenecks like undernutrition and rural distress, thereby conferring longer-term welfare gains (Fan and Brzeska, 2012). Higher developmental spending by governments, owing to its positive impact on human capital formation, can foster economic growth while simultaneously promoting equity and reducing poverty (IMF, 1998). Development expenditure encompasses a broad spectrum of social and economic services. On the social side, it includes spending on health, water supply, housing, urban development, welfare of weaker sections, nutrition, and labour welfare. On the economic side, resources are allocated to agriculture, rural development, irrigation, energy,

industry, transport and communication, science, technology, and environment.

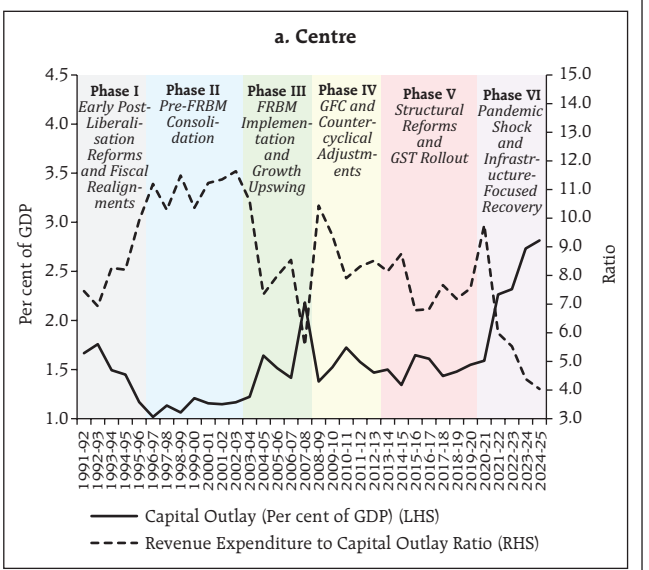
However, scaling up allocations for capital formation and social sector development is often constrained by limits on revenue mobilisation and borrowings. Consequently, governments need to reconcile spending imperatives with financing constraints. Persistent high deficits can accumulate into higher public debt, which then elevates the interest burden in subsequent budgets. Hence, the share of interest payments in total expenditure can serve as a useful indicator of the quality of past spending and the effectiveness of debt management. A lower proportion of interest payments in total expenditure preserves scarce fiscal resources for capital and developmental needs. This ratio is also analysed as a key measure of spending quality. The following section applies this analytical framework to India's historical expenditure data, offering a phase-wise perspective to better understand and evaluate the shifts in public spending over time.

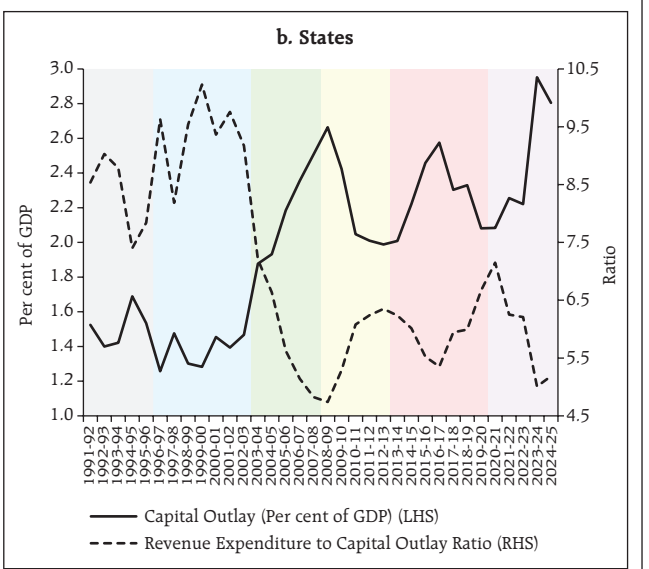
III. Public Expenditure in India during 1991-2025[1]: A Phase-wise Analysis

A historical examination of India's public expenditure - encompassing both the Centre and the States from 1991–92 to 2024–25 reveals distinct phases shaped by significant macroeconomic shifts, policy reforms, and associated fiscal developments. Segmenting this period into intervals can provide a coherent framework for analysing broad trajectories and turning points. Accordingly, this section identifies *six* phases, illustrating how structural forces have shaped the quality of public expenditure at both levels of government.

This periodisation, therefore, underscores the close interplay between macroeconomic cycles, policy reforms, and public expenditure patterns. By linking discernible shifts in the three key indicators - capital outlay, development expenditure, and interest payments - to well-known events such as the 1991 economic crisis, the introduction of the FRBM framework, the global financial crisis of 2008, the subsequent stimulus measures, the rollout of GST in 2017, and the fiscal implications of pandemic post-2020, the "quality of expenditure" has evolved over more than three decades of India's economic reform and development (Charts 1, 2 and 3).

Chart 1: Capital Outlay

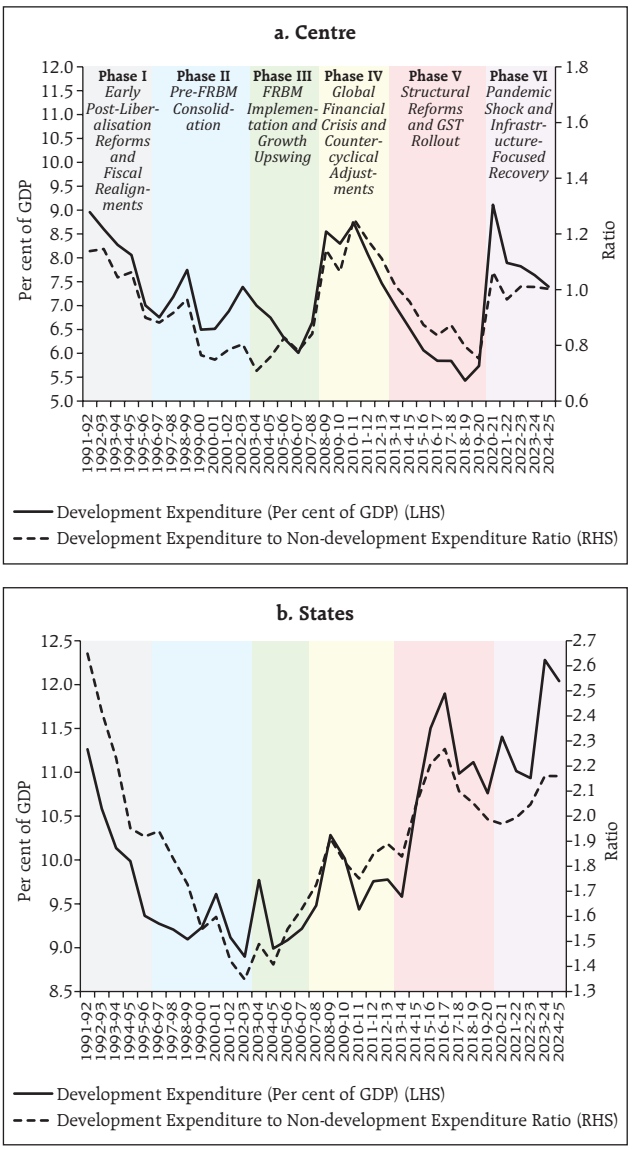




Source: DBIE, RBI; and State Finances: A Study of Budgets.

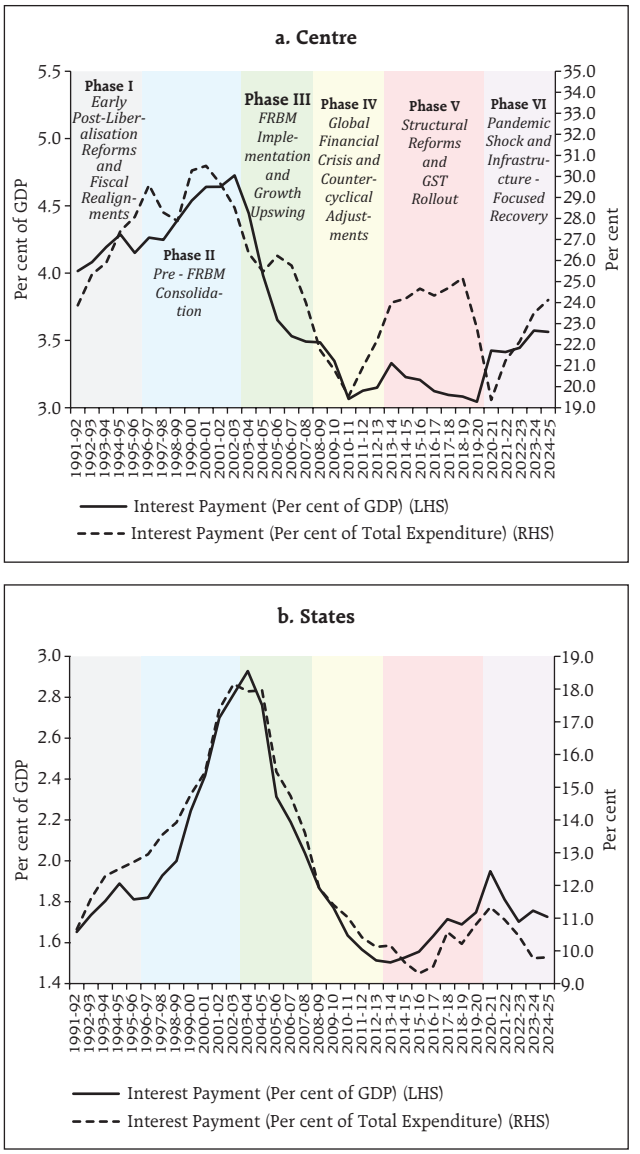
[1] Data pertaining to the Centre and States for 2023-24 and 2024-25 are revised estimates (RE) and budget estimates (BE), respectively.

Chart 2: Development Expenditure



Source: DBIE, RBI; and State Finances: A Study of Budgets.

Chart 3: Interest Payment



Source: DBIE, RBI; and State Finances: A Study of Budgets.

The analysis indicates that the Centre's capital outlay experienced notable troughs in the late 1990s and around the global financial crisis but underwent a significant boost in the mid-2000s and again in the post-COVID period. State-level capital outlay has generally trended upward over the long run, reflecting the growing imperative for States to invest in infrastructure and public goods complimented by improved revenue flows (especially following higher tax devolution). Development expenditure, for both Centre and States, after initially declining in the 1990s, has gradually stabilised or increased over time, influenced by both policy priorities and macro-fiscal environment. Interest payments, initially high due to the debt burdens of the 1980s and early 1990s, gradually eased for both Centre and States during periods of sustained growth and fiscal consolidation, although the Centre's interest payments remain

structurally more significant than those of the States, especially relative to total expenditure. With this backdrop, the key features of each phase are analysed in greater detail.

Phase I (1991-92 to 1995-96): Early Post-Liberalisation Reforms and Fiscal Realignments

This phase coincided with India's transition from the balance-of-payments crisis to a liberalised economic framework. The Centre dismantled industrial licensing, relaxed import controls, and promoted greater global integration. While these measures boosted economic stabilisation, pressure on public finances remained.

Centre's capital outlay declined from 1.7 per cent of GDP in 1991-92 to 1.2 per cent in 1995–96. Meanwhile, the revenue expenditure-to-capital outlay (RECO) ratio rose from 7.5 to 9.9, indicating increased current spending relative to capital investments. Similarly, development expenditure (DE) fell by 2.0 per cent of GDP, amidst efforts on controlling discretionary outlays during the stabilisation process. Despite these spending curbs, interest payments (IP) remained high, at around 4.0 - 4.2 per cent of GDP, with their share in total expenditure climbing from 23.9 per cent to 28.1 per cent.

State finances exhibited similar pattern, though with some variation. Capital outlay hovered around 1.5 per cent of GDP, supported by a modest improvement in the RECO ratio, which declined slightly from 8.5 to 7.8. Nonetheless, development expenditure dropped from 11.3 to 9.4 per cent of GDP; transfers from the Centre fell during this period. Interest payments also trended upward, rising as a share of total expenditure from 10.7 to 12.7 per cent, reflecting accumulating debt-servicing obligations and signalling a gradual stress in State-level fiscal positions during the early post-reform years.

Phase II (1996-97 to 2002-03): Pre-FRBM Consolidation

During this period, governments grappled with rising wage bills - spurred by the Fifth Pay Commission award at the Centre and parallel revisions in several States - against a backdrop of sluggish revenue growth. These pressures constrained the capacity to invest in longer-term priorities, reflected in persistently low capital outlays at both levels. Although the Centre's capital spending occasionally inched above 1 per cent of GDP, the RECO ratio regularly exceeded 10, on account of higher expenditures on salaries, subsidies, interest, and administrative expenses overshadowing development outlays. States, too, found it increasingly difficult to protect capital spending.

Furthermore, interest payments assumed a larger slice of total spending, highlighting structural imbalances in public debt management. For the Centre, interest constituted close to or above 30 per cent of total expenditure in certain years, while for many States, this share jumped from being slightly above 10 per cent to nearly one-fifth by the end of the phase. This intensified the crowding out of governments' development expenditures, with the ratio of development to non-development spending falling further. This environment of heavy debt-servicing costs and limited fiscal space prompted renewed debates on institutional mechanisms for consolidation, culminating in the introduction of the Fiscal Responsibility and Budget Management (FRBM) Bill in 2000. Although formal enactment occurred in 2003, the legislative groundwork laid during this phase signalled a growing recognition of the need for rules-based fiscal discipline.

Phase III (2003-04 to 2007-08): FRBM Implementation and Growth Upswing

This phase marked a turning point in India's fiscal landscape, driven by the implementation of the FRBM Act of 2003 at the Centre and the adoption of similar fiscal responsibility legislations (FRLs) by

most States. These reforms coincided with a period of robust GDP growth, spurred by global economic expansion, growing trade integration, and the private sector's rising dynamism. The resulting revenue buoyancy enabled both the Centre and the States to strengthen public investment, improve expenditure composition, and reduce debt-related burdens.

At the Centre, fiscal responsibility reforms facilitated a structural rebalancing of expenditure priorities. Capital outlay almost doubled, rising from 1.2 per cent of GDP in 2003-04 to 2.2 per cent in 2007-08 supporting critical infrastructure development and long-term growth-enabling projects. The RECO ratio fell sharply from 10.6 to 5.6 during this period, reflecting enhanced fiscal space for productive investment. Development expenditure, while steady at 6-7 per cent of GDP, saw qualitative improvements, with a greater focus on social and economic infrastructure. Additionally, the Centre's interest payment burden eased, declining from 4.4 per cent of GDP in 2003-04 to 3.5 per cent in 2007-08, and its share in total expenditure fell from 26.3 per cent to 24.0 per cent, indicating improved debt management.

States fiscal consolidation and revenue buoyancy were bolstered by improved tax devolution and grants, following the recommendations of the 12th Finance Commission. Capital spending increased significantly, with capital outlay rising from 1.9 per cent to 2.5 per cent of GDP, underscoring States' ability to support infrastructure development despite fiscal constraints. The RECO ratio improved steadily, reflecting better budgetary management and expenditure efficiency. Development expenditure, averaging around 9.5 per cent of GDP, showed resilience and modest growth in several States, driven by increased allocations toward education, health, and rural development. Furthermore, interest payments as a share of GDP declined, while their proportion in total expenditure fell from 17.9 per cent to 13.6 per cent.

These improvements, supported by fiscal reforms and high economic growth, created the fiscal room necessary for expanded public investment and higher spending quality at both levels of government.

Phase IV (2008-09 to 2012-13): Global Financial Crisis and Countercyclical Adjustments

The onset of the global financial crisis (GFC) prompted India, like other countries, to recalibrate its fiscal priorities, balancing countercyclical stimulus with medium-term consolidation goals. Although domestic banks and markets were relatively insulated compared to advanced economies, a contraction in global demand and credit flows created a short-lived growth slowdown. The Centre introduced stimulus measures - primarily tax reductions and targeted spending - to shore up domestic consumption, sustain investment in critical sectors, and mitigate spillovers from external shocks. These policy choices widened fiscal deficits and temporarily tilted expenditure profiles toward support measures. Centre's capital outlay initially dipped below its pre-crisis level and recovered only gradually. Meanwhile, development expenditure absorbed a growing share of resources, enabling social and sectoral initiatives but also placing pressure on overall fiscal space. Although interest payments, as a share of GDP, declined marginally relative to the pre-crisis trajectory - partly owing to gains from earlier debt management reforms - this reduction did not substantially alter the share of interest payments in total expenditure, which settled around the low twenties.

States also deployed countercyclical strategies - such as scaled-up welfare programmes - while contending with revenue shortfalls. Capital outlay moderated from its pre-crisis peak. Nonetheless, the subnational shift toward greater revenue spending did not derail ongoing fiscal reforms. Debt restructuring initiatives and the institutionalisation of FRBM-like frameworks in many States helped

temper interest payments, freeing some fiscal space for social programmes. Consequently, even though public investment plans did not fully recover to pre-crisis levels, the emphasis on coordinated stimulus measures and prudent debt management enabled States to contain the long-term erosion of their fiscal health.

Phase V (2013-14 to 2019-20): Structural Reforms and GST Rollout

During this period, India navigated a series of transformative policy initiatives - including the 14th Finance Commission's significant hike in devolution (from 32 per cent to 42 per cent of divisible pool), and the rollout of the goods and services tax (GST) in 2017. These reforms aimed to strengthen fiscal federalism, streamline indirect taxation, and reinforce financial transparency. However, in the interim, there were some transitional uncertainties, particularly for States adapting to new revenue-sharing arrangements and compensation frameworks.

At the Central level, capital outlay generally stayed between 1.3 and 1.6 per cent of GDP, reflecting a measured commitment to infrastructure and asset creation. Despite incremental improvements in the RECO ratio, the Centre's development expenditure drifted lower, as transfers to States rose. While interest payments hovered around 3.0 to 3.3 per cent of GDP, they continued to absorb a sizeable portion of total expenditure, constraining the space for developmental outlays. The divergence in development expenditure between the Centre and the States widened, driven by shifts in resource allocation following the 14th Finance Commission's recommendations. States with higher devolved funds prioritised social sector expenditure and capital outlay. The additional devolved resources, alongside a policy focus on core infrastructure and social programs, helped maintain development expenditure near 10 to 12 per cent of GDP. Interest payments remained largely contained, suggesting prudent borrowing practices and relatively stable debt profiles.

Phase VI (2020-21 to 2024-25): Pandemic Shock and Infrastructure-Focused Recovery

This period encompasses the profound economic disruptions triggered by the COVID-19 pandemic and the subsequent shift toward infrastructure-led revival. The Centre responded to the crisis with large-scale fiscal interventions - direct cash transfers, emergency health allocations, liquidity measures for stressed sectors - while pivoting toward higher capital outlays to stimulate growth. This policy choice is reflected in the rising share of capital outlay in GDP (from 1.6 per cent in 2020-21 to 2.8 per cent by 2024-25 (BE)) and the concurrent fall in the RECO ratio. It may be noted that the Centre's effective capital expenditure (*i.e.*, including outlays on grants-in-aid for creation of capital assets) was placed higher at 4.6 per cent of GDP in 2024-25 (BE). Fiscal composition has, thus, became more investment-focused, aiming to harness infrastructure's multiplier effects on employment and industrial revival. Although pandemic-related borrowing increased, higher debt-servicing costs remained manageable.

At the State level, expanded borrowing limits and revenue shortfalls shaped fiscal decisions. Many States channelled additional resources into healthcare, social protection, and capital works, effectively bolstering both pandemic mitigation and medium-term developmental objectives. As a result, State-level capital expenditure grew, reducing the RECO ratio and sustaining developmental outlays in sectors essential for recovery. Despite accumulating debt stocks, most States maintained stable interest burdens, reflecting prudent debt management practices and the relatively benign interest-rate environment. Overall, this period underscores a strategic shift toward targeted infrastructure investments as a cornerstone of fiscal policy, supported by carefully balanced borrowing strategies at both Central and State levels.

The preceding analysis provides insights into the evolving nature of public spending in India. However, the multiplicity of indicators and their varied trajectories makes it challenging to gauge the effectiveness of public resources in fostering long-term growth and stability. Composite indices are frequently used to combine and summarize multiple, interlinked factors into a single, streamlined measure, facilitating meaningful comparisons and trend assessments across various periods (Chen *et al*, 2021). By unifying these indicators into a single quantitative benchmark, such an index can offer a clear, objective framework to track shifts over time (Badullahewage & Attygalle, 2021). The following sections outline the construction of a quality of public expenditure (QPE) index and analyse its performance, shedding light on how effectively it captures the multidimensional nature of the quality of public spending.

IV. Quality of Public Expenditure Index: Data and Methodology

Annual fiscal data from 1991- 92 to 2022 - 23 has been used to construct and analyse the quality of public expenditure (QPE) index for both Centre and States. The dataset encompasses key variables that represent the quality of public spending. The data are sourced from the Reserve Bank's database on Indian economy (DBIE) and the e-States database published alongside the Reserve Bank's annual publication "State Finances: A Study of Budgets". The variables include (i) capital outlay to GDP (COGDP) ratio, (ii) revenue expenditure to capital outlay (RECO) ratio, (iii) development expenditure to GDP (DEGDP) ratio, (iv) development expenditure to total expenditure (DETE) ratio, and (v) interest payments to total expenditure (IPTE) ratio. As lower RECO and a lower interest payment share are both desirable, the inverse of RECO ratio and the ratio of non-interest payments in total expenditure are used when constructing the index. The inverse of RECO captures the lingering impact of past borrowings on current fiscal space. A high IPTE ratio may result either from elevated interest payments or from a reduced total expenditure base (or both). In either scenario, a higher IPTE reflects diminished fiscal headroom for capital and developmental spending. To ensure comparability across years and variables, the data have been standardised using a z-score transformation:

$$z_{it} = \frac{x_{it} - \mu_i}{\sigma_i}$$

where z_{it} is the standardised value of variable i in year t, μ_i and σ_i are the mean and standard deviation of variable i.

To aggregate these variables into a single measure of expenditure quality, a dynamic factor model (DFM) was employed. DFMs are particularly suited for combining multiple observed variables into a single latent factor that captures the underlying dynamics of expenditure quality. They assume that a small number of unobserved factors can explain the common patterns in a large set of observed time series (Stock and Watson, 2016). In this study, the composite index derived from the DFM provides a way to measure and track the overall quality of public spending. The model reduces the complexity of multivariate time series by expressing the observed variables as linear combinations of external variables and hidden factors. Mathematically, the DFM extracts a latent factor (f_t) capturing shared trends across the standardised variables:

$$y_t = \lambda_i f_t + \epsilon_t$$

$$f_t = \emptyset_i f_{t-1} + \mu_t$$

Where y_t is a vector of indicators of quality of expenditure, λ_i and $\emptyset_i$ are parameters and ϵ_t and μ_t are error terms. These hidden factors follow a vector autoregressive process. Following Stock and Watson (1989, 1991), the parameters of DFMs are estimated using the Kalman filter, to derive and implement the log likelihood approach. Separate indices were constructed for Centre and the States, employing the same methodology to maintain consistency.

The estimated factor loadings (Annex Table 1) highlight the association of different expenditure components with the underlying quality of public expenditure. Notably, capital and development spending exhibit significant loadings, reflecting their central role in shaping expenditure patterns. The persistence of the latent factor indicates a stable underlying structure in expenditure quality, reinforcing the consistency of the index over time.

Regression model

In addition to the index at both Central and overall States' level, the index is also computed for individual States to assess its relationship with the outcome variables. Human development index (HDI) on education and health, at the sub-national level, available from the Global Data Lab, are considered as outcome variables. Two regression equations are separately estimated for HDI health index and HDI education index. Fixed Effects model in panel framework is used to estimate regression equations. Due to data availability and consistency, data for 16 major States[2] are considered during the period 2001-02 to 2022-23. Apart from the quality of expenditure index, the main regression equation includes per capita income and share of agriculture in Gross State Domestic Product (GSDP) are taken as control variables as structure of the economy and income levels of the States are expected to impact the social outcomes.

$$y_{it} = \alpha + \beta_1 QPE_{it} + \beta_2\, Per\ capita\ income_{it} + \beta_3 Agriculture\ share_{it} + \mu_{it}$$

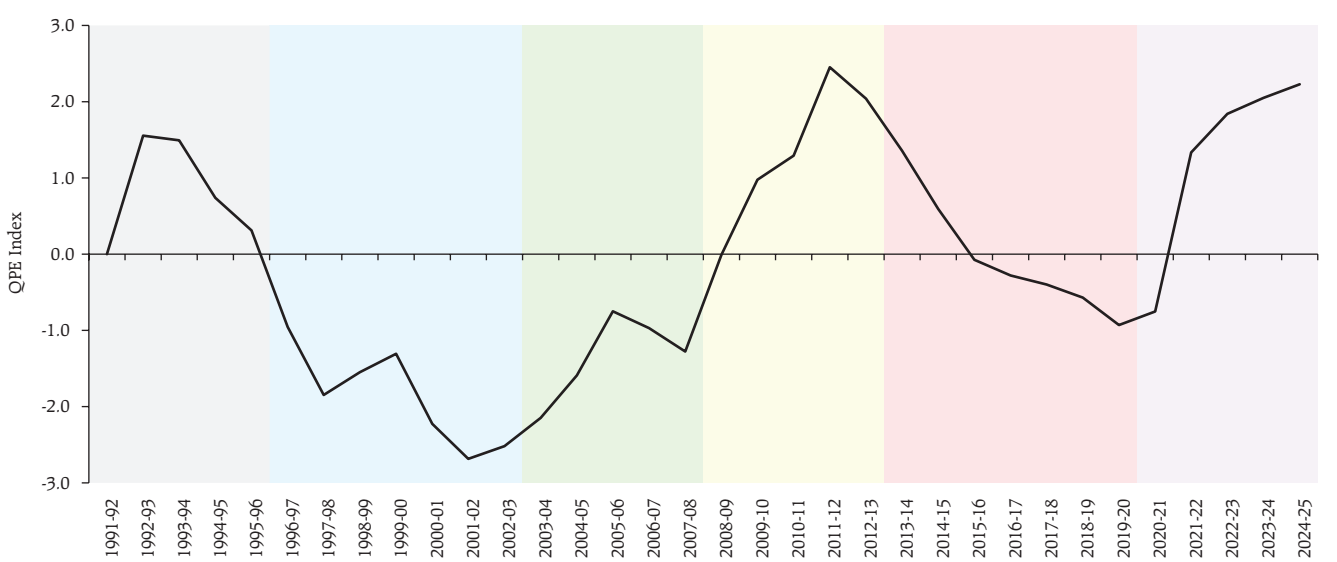
Where y_{it} is human development index of health or education for State 'i' at time 't', QPE_{it} is the index of quality of public expenditure for State 'i' at time 't', $Per\ capita\ income_{it}$ and $Agriculture\ share_{it}$ capture the income levels and structure of the States' economy, respectively, for State 'i' at time 't'. β refers to regression coefficients and μ_{it} refers to the error term.

V. Empirical Findings

QPE Index Trends for Centre and States

The evolution of the QPE index aligns with the historical patterns of the variables discussed in the

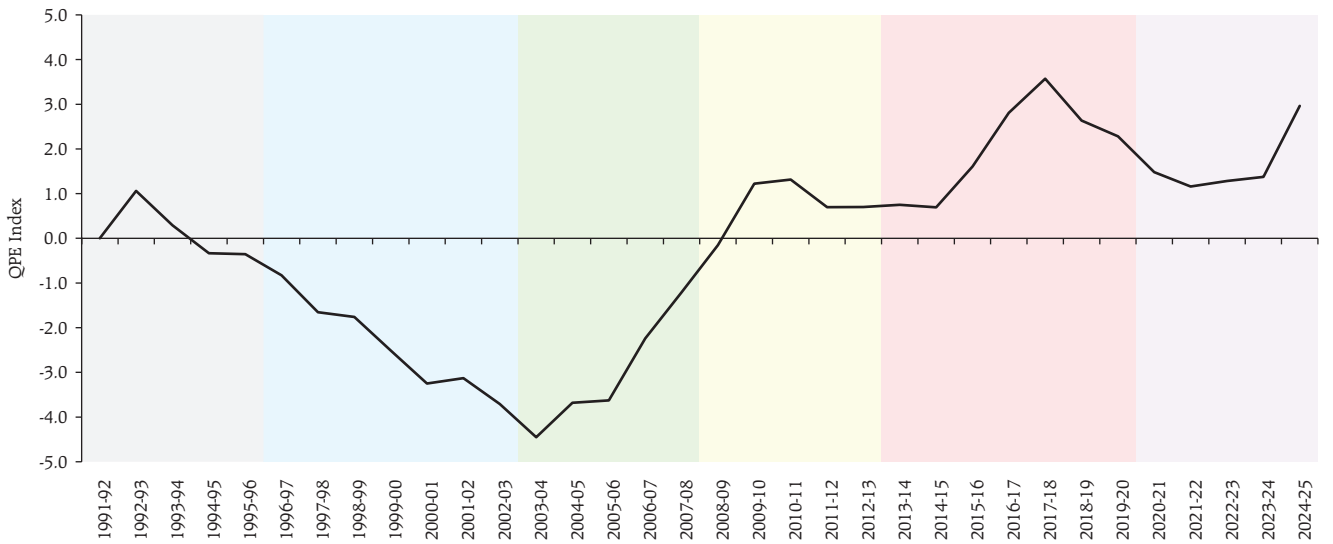
Chart 4: Quality of Public Expenditure Index for Centre



Sources: RBI staff estimates.

[2] Assam, Bihar, Chhattisgarh, Gujarat, Haryana, Jharkhand, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Odisha, Punjab, Rajasthan, Tamil Nadu, Uttar Pradesh, and West Bengal.

Chart 5: Quality of Public Expenditure Index for States



Sources: RBI staff estimates.

earlier section. During the initial phase, the Centre's index (Chart 4) showed a slight improvement, while the States' index (Chart 5) declined modestly, amidst fiscal pressures faced by both levels of government. Public investment fell as fiscal consolidation took precedence. In the subsequent phase, both indices experienced a sharp decline, reflecting the combined impact of the Fifth Pay Commission implementation, rising interest payments, and the persistent dominance of revenue expenditure over capital outlay.

Fiscal responsibility reforms and economic growth in the years leading up to the 2008 global financial crisis significantly improved both indices during the third phase. States benefited from greater fiscal devolution and increased tax buoyancy, leading to better fiscal outcomes. This phase reflects the advantages of fiscal prudence and economic buoyancy. However, the 2008 global financial crisis prompted the Centre to adopt countercyclical fiscal measures, including stimulus packages, which temporarily raised deficits. In subsequent years, consolidation efforts moderated the indices. For States, capital outlay eased from its pre-crisis peak, although rising revenue expenditure - particularly due to subsidies - remained a concern.

The next phase witnessed an improvement in the States' index, driven by the 14th Finance Commission's recommendations, which significantly increased resource devolution to States. This augmented development expenditure at the State level but led to a concurrent decline in the Centre's expenditure share. During this period, the introduction of the goods and services tax (GST) in 2017 fundamentally altered the revenue-sharing framework. While these developments initially benefited States, the Centre faced growing fiscal challenges from revenue shortfalls and subsidy pressures.

The COVID-19 pandemic triggered unprecedented fiscal stimulus measures, leading initially to wider deficits. However, the subsequent recovery was supported by a renewed emphasis

on public investment and a heightened focus on capital expenditure in Union Budgets from 2021-22 onwards. States demonstrated resilience, especially post-2010, aided by increased devolution and the introduction of GST. Major reforms - such as the Fiscal Responsibility and Budget Management (FRBM) Act and GST - have played pivotal roles in shaping fiscal outcomes, highlighting the importance of structural measures for sustainable public finances.

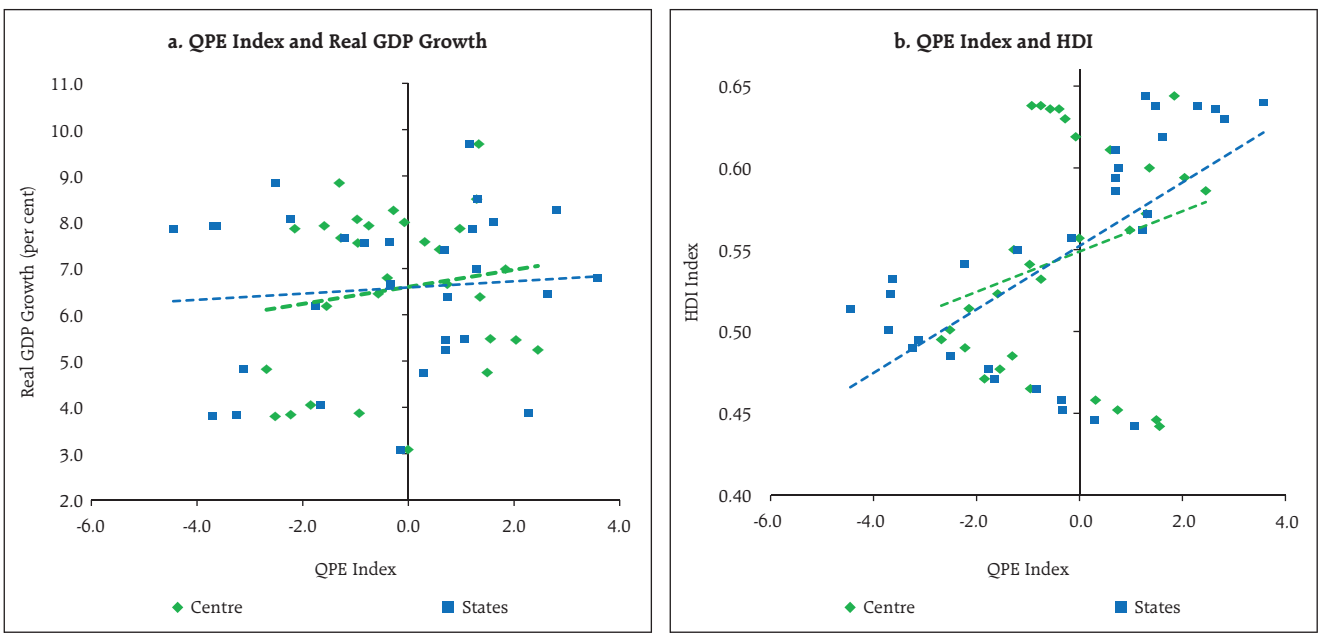
QPE Index and Human Development Outcomes

The QPE index shows a positive association with stronger economic and developmental outcomes. Periods of a rising QPE index for both the Centre and States overlap with eras of higher GDP growth and improved performance of human development index (HDI) (Charts 6a and 6b). Moreover, States exhibit a closer alignment between their QPE index and improvements in HDI, indicating an effective allocation of resources toward development expenditure. The positive correlation between the QPE index and key outcome indicators underscores the crucial link between quality of public expenditure and holistic macroeconomic and developmental progress.

As States' QPE index has a stronger relationship with HDI, a State-wise index of quality of public expenditure is computed to check the relationship with education and health as outcome variables. As HDI index comprises of three sub-indices of health, education and income, we use education and health indices to measure State-level outcome variables. The relationship between State-wise QPE index and outcome indicators (health and education indices) is positive (Chart 7).

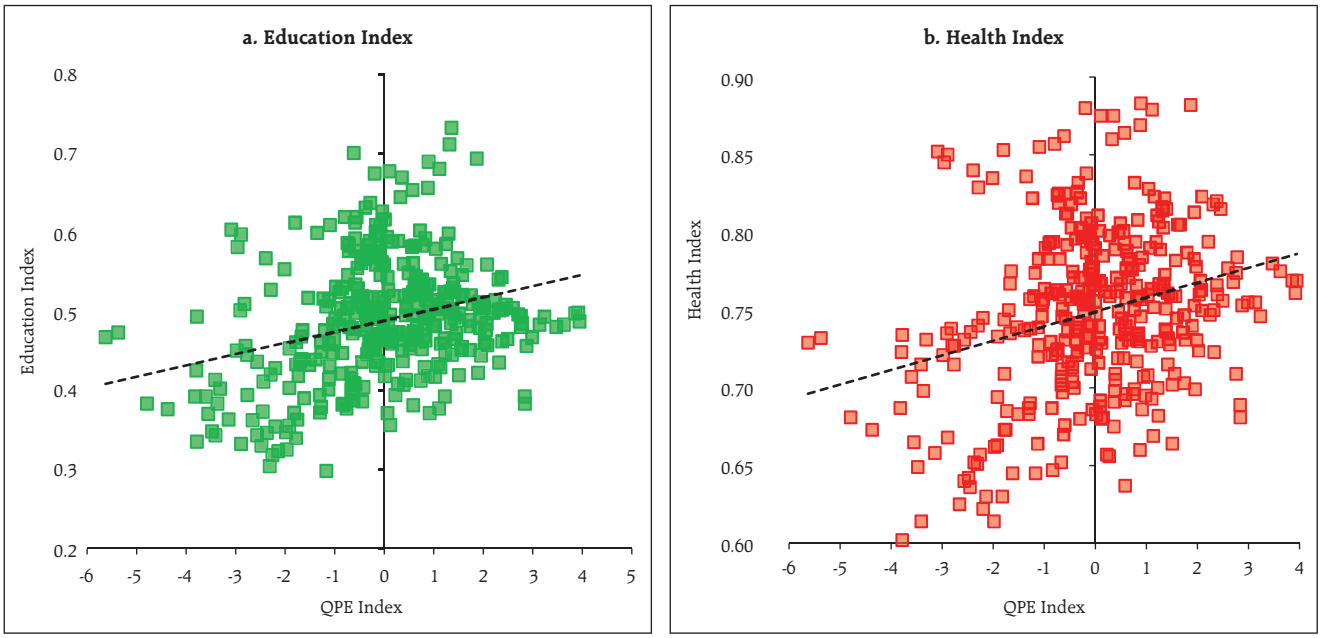
To empirically establish the relationship, two separate regression models are estimated each for education and health indices. All the variables are taken in logarithmic form except share of agriculture

Chart 6: Association of QPE Index with GDP Growth and HDI Index



Source: RBI staff estimates.

Chart 7: QPE Index of States and HDI Health and Education Indices



Source: RBI staff estimates.

in GSDP. Two control variables have been considered in the regressions - per capita income and the share of agriculture in GSDP, capturing the level of economic development and the structure of a State's economy, respectively. Controlling for these two variables, we find that that the quality of expenditure index has a positive effect on outcome indicators (proxied by health and education index) (Table 1).

Table 1: Regression results

Variables	Education index	Health index
QPE (log)	0.01* (0.00)	0.01* (0.00)
Per capita GSDP (log)	0.09* (0.01)	0.02* (0.00)
Share of Agriculture	-0.003* (0.00)	-0.00* (0.00)
Constant	-1.28* (0.07)	-0.42* (0.05)
Observations	336	336

Note: (i) Standard errors are given in parentheses.
(ii) * indicate significance of the regression coefficient at one per cent level.
Source: RBI staff estimates.

VI. Conclusion

The analysis undertaken in this study aimed to evaluate the trajectory and quality of public expenditure in India since 1991-92, with a focus on understanding how policy reforms, macroeconomic shifts, and crisis responses influenced expenditure composition and its implications for growth, fiscal stability, and developmental outcomes. By constructing a quality of public expenditure (QPE) index, the study attempted an assessment of expenditure efficiency, capturing the interplay between capital outlay, revenue expenditure, development spending, and debt-servicing burdens across distinct phases of India's fiscal evolution.

The analysis reveals that India's expenditure composition has undergone significant transformations, shaped by structural reforms and external shocks. The post-liberalisation phase (1991-95) witnessed fiscal consolidation at the cost of capital and developmental spending, while the pre-FRBM

years (1996-2003) were marked by rising debt burdens and stagnant public investment. The implementation of fiscal responsibility frameworks (2003-08) coincided with higher capital outlays, improved RECO ratios, and reduced interest payments, underscoring the benefits of rules-based discipline. Subsequent phases highlighted the challenges of balancing countercyclical measures during the global financial crisis (2008-13) and the transitional impacts of GST and enhanced fiscal devolution (2013-20). The pandemic-induced phase (2020–25) demonstrated a strategic pivot toward infrastructure-led recovery, with both Centre and States prioritising capital expenditure to stimulate growth despite elevated borrowing. The QPE index underscores a positive correlation between expenditure quality and socio-economic outcomes. Periods of higher QPE align with stronger GDP growth and improvements in the human development index. However, the external shocks temporarily reversed gains, while subsidy pressures and interest burdens constrained fiscal space. Additionally, quality of expenditure at individual State level has a positive impact on education and health outcomes.

To sum up, the study reaffirms that prudent expenditure composition - prioritising capital formation and developmental outlays - remains pivotal for sustaining growth and equity. The recent emphasis on infrastructure investment and fiscal discipline has bolstered resilience, and achieving long-term sustainability necessitates balancing immediate spending needs with strategic investments. Institutional reforms, such as the FRBM Act and GST, have proven instrumental in strengthening fiscal outcomes.

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Annex Table 1: Factor Loadings for QPE Index for Centre and States

Variable	Factor Loading	
	Centre	States
Capital Outlay-to-GDP Ratio	0.28	0.25
Inverse of Revenue Expenditure-to-Capital Outlay Ratio	0.27	0.26
Development Expenditure-to-GDP Ratio	0.33	0.26
Development Expenditure-to-Non-Development Expenditure Ratio	0.44	0.23
Non-interest Payment Expenditure-to-Total Expenditure Ratio	0.47	0.34

Note: All factor loadings are statistically significant at one per cent level.
Source: RBI staff estimates.