Is This Budget a Reset for Infrastructure?

PARTHA MUKHOPADHYAY

The Union Budget 2026–27 has three broad infrastructure objectives. First, ramp up investment; second, increase market financing of this investment; and third, create a manufacturing ecosystem complementary to infrastructure. Each of these requires examination to see whether the proposed investments are warranted, the push for market financing is appropriate, and what the prospects are for the emergence of a manufacturing ecosystem.

The author would like to thank Anmol Kumari Patlan for her assistance with the article. All views in this article are entirely of the author and not that of any organisation with which he may be affiliated.

Partha Mukhopadhyay (*partha@cprindia.org*) is with the Centre for Policy Research, New Delhi.

What is infrastructure? It is an odd, but important question, especially in the context of the Indian budget. Broadly, one can think of it across three concepts, which are: (i) physical capital, like roads, railways, and power lines; (ii) maintenance of physical capital; and (iii) human capital, that is, health and education.

In traditional fiscal accounting, physical capital is about capital expenditure, and this is understood as infrastructure. Asset maintenance and importantly human capital are seen as revenue expenditure and, thus, not infrastructure. The finance minister, in her budget speech, made the case for "a powerful push to Infrastructure" in order "to accelerate and sustain economic growth."[1] How do these three fare on this metric?

BUDGET 2026

As Aghion et al (2025: 70) conclude, without a certain level of human capital, "adoption of technologies with the capacity to initiate a virtuous cycle of growth and investment—both human and physical—cannot take place." It is thus necessary, but not sufficient, because growth also needs entrepreneurship, physical capital, and political stability. Gethin (2025) estimates that "education can account for about 45% of global economic growth," with skill-based technical change increasing the returns to education. A recent report from the World Bank also states that "differences in human capital account for roughly two-thirds of the gap in per capita income between rich and poor countries" (Holla et al 2026: ix). In the Human Capital Index of the World Bank, India is in the bottom third, at rank 116, while China is at rank 45 (World Bank 2024). Poorer countries like Kenya and Kyrgyzstan have a higher rank than India. It is unclear how artificial intelligence (AI) will affect this link. The finance minister has recognised this fluid situation by proposing a "High-level Education-to-employment and Enterprise Standing Committee," where four of the nine indicative terms of reference relate to AI. But, is it being prioritised in the budget?

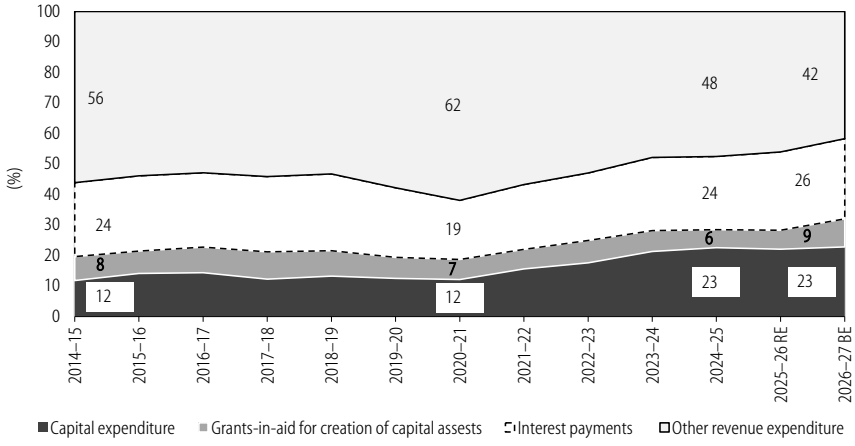
Similarly, maintenance too has high economic returns, perhaps more than new construction (World Bank 1981; Rioja 2013). Gonzalez and Dekyi (2026) emphasise that if climate resilience of infrastructure is a priority, maintenance, it needs to be viewed as a primary investment pillar. In a similar spirit, the Parliamentary Standing Committee on Transport, Tourism, and Culture recently suggested the creation of a quality index to "push the State PWDs [public works departments] to make efforts to improve the quality of their Highways … to motivate the low performing States for higher allocation of funds for Maintenance & Repairs of Highways."[2] Nevertheless, maintenance is still seen as a recurring revenue expense rather than a value-preserving investment, and during fiscal stress, the government is tempted to cut maintenance and preserve "capital expenditure."

This is not idle speculation. Following the budget, the new gross domestic product (GDP) estimate (2022–23 base year) is now lower than budget projections; that is, the debt-to-GDP ratio would increase, affecting the target of "reaching a debt-to-GDP ratio of 50±1 percent by 2030–31" (Government of India 2026: 18, para 92). Further, the conflict in Iran has already increased the price of crude oil (Indian basket) from an average in April to February of $66.8 to $147.24 per barrel, as on 24 March 2026. Excise duty on fuel has already been cut by ₹10 per litre (Mishra 2026). The budget deficit and inflation may increase and growth may slow down, needing fiscal sails to be trimmed. If so, the axe is likely to fall on "revenue expenditure," including health and education.

Increased Investment in Infrastructure

This budget continues the government's post-COVID-19 focus on capital expenditure (Figure 1, p 45). Its share has almost doubled since 2020–21, with the level

Figure 1: Share of Capital Expenditure as a Share of Total Government Expenditure



Source: Various years of Budget at a Glance, https://www.indiabudget.gov.in/.

Figure 2a: Freight Volume and Unit Revenue

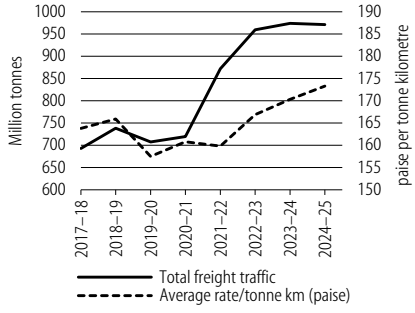
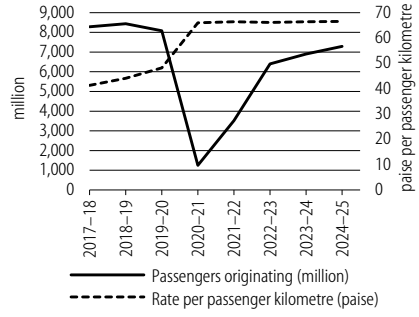


Figure 2b: Passenger Volume and Unit Revenue



Source: Economic survey.

Table 1: Capital Expenditure in Railways

	2009–14 (average)	2014–19 (average)	2019–20	2020–21	2021–22	2022–23	2023–24	2024–25	2025–26 (RE)	2026–27 (BE)
Total capital expenditure (₹ crore)	45,980	99,178	1,48,064	1,55,181	1,90,267	1,59,256	2,42,578	2,51,946	2,52,000	2,77,830

Source: Economic Survey and Budget, Demand for Grants.

rising sixfold since 2014–15, from under ₹2 lakh crore to over ₹2 lakh crore. Expenditure on capital assets in states through centrally sponsored schemes has also risen almost fourfold, and together, it is a third of total expenditure, with railways, highways, and urban infrastructure being three major sectors.[3]

The budget also has other worthwhile initiatives, such as the revival of legacy industrial clusters, 20 new national waterways, a ship repair ecosystem, and promotion of coastal cargo. It also plans to develop Amrit Sarovars to encourage pisciculture and create livestock farmer producers' organisations, as also Bharat-VISTAAR—a multilingual AI tool to integrate AgriStack portals and Indian Council of Agricultural Research (ICAR) packages on agricultural practices with AI systems—which will provide customised advice, to enhance agricultural productivity and reduce risk. Finally, there is a 20-year tax holiday to foreign firms that provide cloud services to customers globally, by using data centre services from India and an initiative on carbon capture, utilisation and storage. All these, despite possible significance, are not discussed here.

Also, while a more climate-friendly power sector is emerging,[4] this is not discussed here, since it is off-budget and investment is funded by internal and extra budgetary resources (IEBR), for example, retained earnings and external borrowings of firms like NTPC and Powergrid, and not direct budgetary support.[5] Let us now turn to the three sectors.

Investment in railways: Since 2014, as seen in Table 1, nearly ₹22 lakh crore has been invested in Indian Railways, that is, $240 billion at current exchange rates. It only recovers operating costs (including pensions) and the capital investment is from budgetary support. Is this good enough?

While the amount of route kilometres (km) has barely changed, the network is now entirely electrified, from only 44% in 2017–18. A higher proportion is now multitrack and 80% of the network is now capable of supporting higher speeds (PIB 2026a). Diesel expenditure has reduced from 18% of non-personnel working expenses to 8%, and that of electricity has increased from 10% to 15%. But has this resulted in better performance?

While freight traffic increased sharply after COVID-19, it has since stagnated (Figure 2a). Further, the share of containers has risen only a little, from over 4% to a little under 6%, perhaps largely due to container movement on the Western Dedicated Freight Corridor (DFC). Even though it has set itself a target of 45% modal share by 2030, Indian Railways is not underpinning the logistics network of India, beyond bulk goods like coal, steel, fertiliser, cement, and petroleum (PIB 2022). The target looks distant, given current performance.

Even passenger levels continue to be less than they were pre-COVID-19 (Figure 2b). Indian Railways may actually be trying to filter out some passengers. Average passenger earnings went up sharply, by around 50% compared to 2018–19, and have stayed relatively high. This suggests that it has discontinued certain less remunerative train services, while introducing premium services like Vande Bharat and dynamic ticket pricing.[6] This reduction in passenger trains and the addition of two DFCs should have increased capacity on the core network.

This does not seem to be the case. It is possible that signalling is an issue. Despite increased speed and high-speed rail, the network is still not ready for cab signalling. Improving signalling could increase track capacity without the need to add additional tracks, but investment in signalling has historically been low, compared to investment in multitracking and electrification. Even in this budget, the allocation to signalling is

less than 3% of the capital expenditure, inexplicable in a country that touts its success in digital infrastructure. Neither is much attention paid to suburban trains, which, where they exist, are a critical component of transportation for city economic regions.

To be a logistics solutions provider, Indian Railways needs to change its character from a bulk goods carrier to a container transporter, with more customer interface. Beyond some scattered initiatives, it has not introduced timetabled freight trains or private container trains. Their expansion seems constrained by its current structure and governance. If so, it is worth considering whether this scale of investment, depriving other sectors of resources, is justified, without undertaking fundamental governance reform. Why build a new east-west DFC, and continue investing in the Railways? Is the Indian Railways fit for this purpose?

Highway network: In highways, about ₹18 lakh crore has been invested since 2014. Thus, highways and railways have absorbed around half a trillion dollars in the last decade. This scale of investment makes the paltry allocations for maintenance referred to earlier even more striking.

In highways, the route kilometres have increased from around 57,000 km in 2000 to around 1,46,000 km now, some due to reclassification. Of this, about 43,000 km are four lane or wider and about 3,000 km are access-controlled expressways. The thrust now seems to be on developing greenfield roads, made relatively more feasible by the Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013, which enables the government to acquire land more easily, albeit at much higher costs.

Indeed, the cost of building a highway has increased almost tenfold in the last 20 years (fourfold in dollar terms). While partly attributable to the increased land acquisition costs and higher specifications, a closer inquiry may be warranted. Current modes of implementation of highways are either through a works/engineering, procurement, and construction (EPC) contract or a hybrid annuity model (HAM), both of which take away the traffic risk from the implementing agency. While good in principle, because traffic is not a controllable risk, and therefore transferring it is not efficient, it also means that the due diligence of determining whether a particular road is necessary or not falls on the awarding agency, like the National Highways Authority of India (NHAI) or the Ministry of Road Transport and Highways. It is not apparent that it is being done appropriately.

Questions of implementation aside, are these expressways desirable and what economic function do they provide, in a world where one is trying to shift freight and passenger traffic towards rail and reduce the carbon footprint? Is the Indian Railways' goal of 45% modal share divorced from the budget support for the highway sector? These questions are not addressed.

Urban infrastructure: The other major thrust area in this budget is its focus on city economic regions—urban infrastructure—which has received a very different treatment. Support for urban infrastructure is not counted as capital expenditure, with the exception of support to metro projects. Even in the case of the ₹28,695 crore for such projects, three-fourths is Pass Through Assistance, that is, financing from external agencies.

Last year's Urban Challenge Fund (UCF) was finally given approval this year, after the budget was presented. For UCF, projects

> will be selected through a challenge-based framework including transformative impact, sustainability and reform orientation. Funding will be linked to reforms, milestones and clearly defined outcomes. Continuation of reforms will be a prerequisite for further fund release. (PIB 2026b)

All this conditionality for ₹10,000 crore (about 2% of the allocation to railways and highways) across all metros, capitals and sundry major industrial cities. Separately, the Sixteenth Finance Commission (2026: 222–23) has recommended ₹56,100 crore over five years for

> a Special Infrastructure Component for selected ULBs be tied to the development of a comprehensive wastewater management system in cities with populations less than 40 lakh but more than 10 lakh, as per the 2011 Census, limited to two per State.

This indicates that while investment in urban areas is important, it is first important to get the governance of urban areas right, in contrast to railways and highways.

Some infrastructure needs of ULBs need to be met if they are to function effectively as cities; for example, the supply of water and the disposal of waste water (credit to the finance commission for focusing on this aspect) and the provision of public transport. Urban residents in India are making do with privately provided band-aid solutions. Private water supply networks and individual bore wells supply water. For sanitation, there are private septic tanks, cleaned by private service providers, and of course individualised transport, especially two-wheelers. However, in smaller cities, and even in certain areas of metro cities, public transport is provided by private service providers, using shared modes such as electric rickshaws.

Should we wait for city governance to be reformed before we address these issues or should we move, like we have done in the case of highways and railways, to address these basic infrastructure needs, while concomitantly trying to reform governance?

In summation, the budget has an unbalanced approach to infrastructure. It is overinvesting in sectors like the railways and highways, which have already received a lot of investment, where the focus should now be on governance reforms to benefit from previous investment. These governance reforms are not difficult, relatively speaking, and do not involve federal negotiations. On the other hand, it is using conditionality for investment in sectors like urban infrastructure, where governance reforms will take time and involve significant amounts of political negotiation to convince states to move in appropriate directions. Instead, the government should move aggressively, using existing models

Box 1: Urban Infrastructure Needs to be Built Now

Water supply and waste water treatment infrastructure can be rapidly developed using models like HAM, already used by Namami Gange. The Finance Commission has recognised this need, but given its limited resources, the budget should supplement it.

Urban transport needs two critical interventions. First, models that integrate intermediate public transport such as e-rickshaws that are providing transport services in our small towns and metros, for example, the three-wheeler system in Kolkata, where 70% of households are within 500 metres of the network (Arora et al 2015). We need to stop trying to suppress the mode, deeming it unsuited for the image of a modern city. The reality is exactly the opposite, because it provides a clean, high-frequency high-occupancy, mode of transport with assured seating at an affordable cost. Second, on buses, the PM-e-bus SEWA scheme needs to be scaled up manyfold and linked to an initiative to manufacture electric buses in India. The ambition should be to design a scheme to make free buses, running on electricity and funded by taxes on individual vehicles, available across many of our cities.

(Box 1), to first address the investment deficit in the urban sector.

The Push to Market Financing

The second thrust is to finance this ramp-up by using more market financing, for example, through vehicles like Infrastructure Investment Trusts (InvITs), establishing an "Infrastructure Risk Guarantee Fund to provide prudently calibrated partial credit guarantees to lenders" (Government of India 2026: 7), etc. But are the financial instruments matched to implementation models, private or public?

The highway sector is the front runner. With the use of electronic toll collection methods, like FasTag, toll revenues have increased significantly to ₹75,000 crore annually, almost thrice of what they were before COVID-19. This makes monetisation models more feasible. NHAI has already generated around ₹1,70,385 crore,[8] through sales to large infrastructure firms like Macquarie, using the toll, operate, and transfer (TOT) model, creating a special purpose vehicle like DMEDL for the Delhi Mumbai Expressway, which borrows based on its toll revenues (and has a AAA rating from CRISIL) or using InvITs, which tap more into institutional investors and now individual investors (Box 2). This is a healthy development. Such assets are suitable for domestic pension and insurance funds (the core investors in the National Highways Infra Trust are international pension funds) and are a way of capitalising toll revenues that does not add to NHAI's debt. More stretches must now be monetised in this manner, not just in highways but also in sectors like electricity transmission.

In addition to monetising assets, NHAI also uses the HAM, which is a model under which the government (NHAI) provides 40% of the project cost during the construction period, based on physical progress. The balance 60% is paid through indexed semi-annual instalments over, typically, 15 years. This amount is delinked from traffic, that is, the developer does not bear traffic risk; instead, the NHAI collects the toll. In the Bharatmala project, of the 26,425 km awarded, about 43% or 11,269 km was under HAM contracts.[9]

Railways generates its own operating expenses (barely), and uses market financing to lease rolling stock through IRFC (Indian Railways Finance Corporation). However, its engagement with the private sector has been limited, apart from a few old public–private partnership (PPP) concessions for port connectivity like Pipavav and Hasan Mangalore, and manufacturing facilities for engines. Recently, a few station terminals like Bhopal and Gandhinagar have been developed using PPP, but for the most part, Indian Railway operations are insulated from private participation.

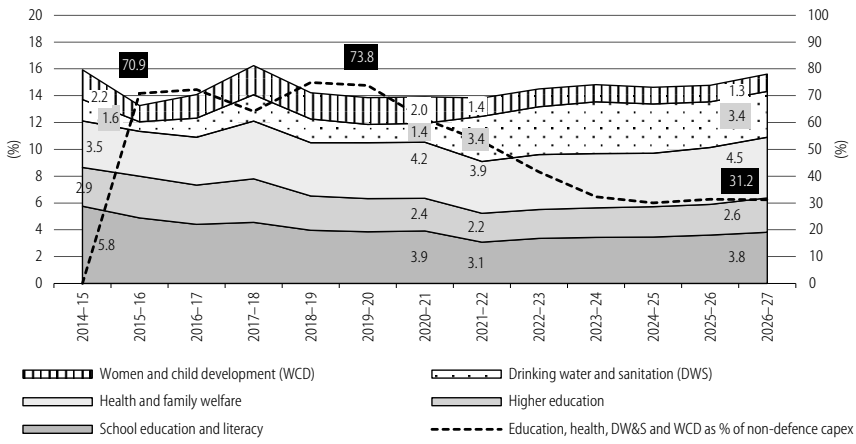
This is because first, the Indian Railways is neither willing nor perhaps able to use models like that of highways. Unlike highways, which are a natural platform model where service providers (transporters) are separate from infrastructure (highways), Indian Railways is currently an integrated system. But, while it may be an efficient train operator, it appears to have no intent or capacity to become a logistics service provider, which is necessary if it is to meet its own goal of 45% modal share. To get there, the initial step would be to start moving to a platform structure (separate track and train), start running timetabled freight trains, not only on the DFC but also on the core network, and then offer these trains to private operators. Absent a firm push to move in this direction, both in infrastructure and operations, Indian Railways may continue to guzzle resources, as it has done over the past decade, with little to show for it.

Finally, financing of urban infrastructure, like city roads, water, waste water systems, and increasingly metro rails, among others, is still largely public, but not on the union budget. But, even in key sectors that impact human health, like water and waste water, the union government's approach is that cities should first increase their own source revenue—such as property taxes—and undertake other governance reforms, as seen in conditionality of the UCF and before it, AMRUT. If cities want to capitalise it—for example, through the use of municipal bonds, which this budget tries to incentivise—they will have to demonstrate a stable history of own source revenue. This will take time and so, till date, few cities have issued municipal bonds of any consequence. Indeed, NHAI's capacity itself was built over many years.

Box 2: NHAI Goes Retail

With the listing of the Raajmarg Infra Investment Trust (RIIT), the first public InvIT sponsored by the NHAI, on 24 March 2026, NHAI is turning to the retail investor.[7] RIIT will acquire five toll road projects, Gorhar to Barwa Adda, Chilakaluripet to Vijayawada, Chennai Bypass, Chennai to Tada, and Neelmangla to Tumkur, a total of 260 km of toll roads forming part of the original Golden Quadrilateral project, with a concession period of 15 years. RIIT will receive toll revenues from these projects and it will be responsible for the operation and maintenance of these roads. In return, RIIT is required to pay a concession fee to the NHAI, a process through which NHAI "monetises" its road assets. The core investors, apart from NHAI, include EPFO, SBI Life, LIC, ICICI Prudential Life Insurance, Kotak Mahindra Life Insurance, and Bajaj Life Insurance. RIIT's issue was oversubscribed over 19 times, with the retail investor segment being oversubscribed over seven times, indicating interest in such assets.

Figure 3: Budgeted Expenditures on 'Human Capital' Sectors



Source: Various years of Summary of Budget Provisions, https://www.indiabudget.gov.in/.

But, if the big picture is that the deficit in urban infrastructure is yawning and the government wants to push for city economic regions, as a key component of its growth strategy, it may be more sensible not to condition the development of infrastructure on urban governance reforms. Instead, a process where investment in urban infrastructure proceeds apace should be evolved, while an incentive-driven scheme is established to improve governance.

Recognising the Ecosystem Opportunity

At last, the budget is trying to build manufacturing ecosystems, for example, containers and earthmoving machinery that are complementary to infrastructure. The finance minister announced schemes to strengthen domestic manufacturing of "lifts in a multi-story apartment … to tunnel-boring equipment for building metros and high-altitude roads" (Government of India 2026: 5). A scheme to create a globally competitive container manufacturing ecosystem has been followed by a memorandum of understanding to establish Bharat Container Shipping Line, signed among the Shipping Corporation of India, Container Corporation of India, Jawaharlal Nehru Port Authority, V O Chidambaranar Port Authority in Thoothukudi, Chennai Port Authority, and Sagarmala Finance Corporation Limited.

But, why not first pluck the low-hanging fruit? The PM-e-bus SEWA scheme provides electric buses to a wide range of cities, using a gross cost contract, first pioneered in India, in Delhi's cluster bus scheme.[10] But, this scheme, which was allocated ₹1,310 crore in the last budget, barely utilised ₹300 crore. In principle, this has the ability to revolutionise public transport and indeed wean India away from using cars for commuting, before it becomes addicted like other developed countries. But there is no push to build a domestic electric bus industry, though we have leading manufacturers like Tata and Ashok Leyland and a few interesting start-ups.

Contrast this with China. Shenzhen had zero electric buses in 2011, but by 2017, it had fully electrified its fleet of over 16,000 buses (Jaeger 2025). This, and the development of the electric bus industry, was due to the "Ten Cities, One Thousand Vehicles" project, jointly launched by five ministries in January 2009, not dissimilar to our PM-e-bus SEWA scheme (Song et al 2020). They expanded the scheme exponentially and leveraged similar schemes to build a manufacturing ecosystem (Box 3).

The finance minister should ask why such an ecosystem has not developed in India so far and what can be done to fix it. Not just buses, given our new focus on high-speed trains, we should learn from this and plan to make our own train sets, in partnership with global firms.

Box 3: China's High Speed Rail Industry

Not just electric buses, China now also builds its own high-speed trains. As Chan (2025) notes, when China's high-speed rail programme started, it persuaded firms like Siemens, Kawasaki, Bombardier, and Alstom to form joint venture partnerships with Chinese firms like Changchun Railway Vehicles and Qingdao Sifang. China has since merged its train makers into a single China Railway Rolling Stock Corporation (CRRC), which now competes with foreign firms, producing "indigenously designed" and manufactured high-speed train sets. It helps that the high-speed rail network in China alone is more than that of all other countries combined. Since 2008, China has built more than 50,000 km of high-speed rail network and now accounts for about two-thirds of the global network. Almost all Chinese cities with populations above 5,00,000 are now served by high-speed services (Cech 2025).

Conclusions

Let us return to where this article started, to human capital and expenditure on education and health, including drinking water and sanitation.[11] Figure 3 shows the budget estimates (as a measure of intent, distinct from implementation) of revenue expenditure in five ministries as a share of non-interest, non-defence revenue expenditure. While the overall aggregate has been stable, there has been a decline in the budgeted share of education, especially school education and a rise in the budgeted share of drinking water and sanitation and health.[12] Given the high returns to early childhood investment,[13] the decline in the share of expenditure, from around 2% to 1.2% in 2026, on integrated childhood development services, is disappointing.

However, as a proportion of the non-defence capital expenditure, as shown by the dotted line, the total revenue expenditure on these ministries has dropped sharply, from 71% to 31%. This is also because budgeted non-interest, non-defence revenue expenditure as a ratio of non-defence capital expenditure has dropped from over seven (7.2) in 2014–15 to little more than double (2.2) in 2026–27. So, the expenditure on "human capital" has declined substantially as a share of expenditure on physical capital; that is, the human capital side of capital accumulation is being relatively neglected.

In the budget trimming that is now almost certain to take place, as a result

of disruptions to global energy markets, and the Gulf region in particular, the first priority thus should be to protect expenditures related to human capital. Cutting these is a short-sighted way to not invest in our future. AI should not be conjuring up images of data centres, but instead, classrooms.

The second priority relates to the misplaced conditioning of urban infrastructure on governance reform, while mega-ticket sectors like railways and highways get a free pass. While the National Logistics Plan and Pradhan Mantri Gati Shakti appear to be the outcome of a climate-informed coordination process, at another level, there seems to be little focus on outcomes like the modal shift needed to achieve these targets. It is time to consolidate past investments in sectors like highways and railways (but not inland waterways and coastal shipping) and ensure future investments support the overall objective. If the expected fiscal stress does materialise, it is this "capital expenditure," not "revenue expenditure" that needs pruning.

Like the measure "effective capital expenditure," which captures capital created via centrally sponsored schemes, it is time to develop a measure that includes appropriate expenditures on health, education, and early childhood interventions that build human capital, and put it on the same footing as highways and railways. This is also true for productivity-preserving maintenance expenditure, which is often subordinated to new, possibly redundant, projects. A highway without maintenance is a wasting asset; a hospital without staff is an empty shell.

Conceptually, this is not difficult. According to our accounting standards, private firms can capitalise maintenance expenditures, that is, treat it as an asset on the balance sheet rather than an expense on the income statement. In our national accounts statistics, the value of intellectual property products is almost equal to that of buildings in the capital formation of private non-financial corporations. If the private sector can do it, why not the government?

In sum, this budget indeed allocates more money to capital expenditure, but it is not focusing on governance improvements in sectors with substantial past investment, and focuses too much on governance where most assets are yet to be built. It pays attention to physical capital, but pays lip service to human capital, a risky strategy, as we enter an age of technological disruption. This budget is not a reset for infrastructure, but a reset is sorely needed. We need to stop only asking if we are doing things right and start asking if we are doing the right things.

NOTES

1 Five other areas of intervention are: (i) scaling up manufacturing in seven strategic and frontier sectors; (ii) rejuvenating legacy industrial sectors; (iii) creating "Champion MSMEs;" (iv) ensuring long-term energy security and stability; and (v) developing city economic regions.

2 In 2018–19 and 2019–20, maintenance outlays were less than one-third of the "Estimated Fund Requirement as per Maintenance and Repair Norms" (Standing Committee on Transport, Tourism and Culture 2021: 11).

3 Along with telecom, they account for 60% of the non-defence capital expenditure. Telecom's allocation is largely to recapitalise BSNL and MTNL and support Vodafone.

4 Non-fossil fuels are now more than half the capacity. Of the 520 GW capacity, coal now accounts for 48%, nuclear for 2%, large hydro for 10%, solar for 27%, and wind and other renewables for the remaining 13%. However, coal still accounted for 70% of the 1540 BU generated during April–January 2026 (solar was 9%).

5 The IEBR by power sector enterprises in this budget is over ₹1,00,000 crore, and around ₹3,20,000 crore in the previous five years, while the entire ministry's capital expenditure in this period appears to be only ₹2,100 crore.

6 The average Vande Bharat speed is not very high; rather, it is much lower than what can be supported by the tracks.

7 There are currently five other such trusts, being the Cube Highways Trust, Vertis Infrastructure Trust, Interise Trust, National Highways Infra Trust, and IRB Invit Fund.

8 Till November 2025, it raised ₹70,622 from Toll, Operate and Transfer (TOT), ₹49,638 from InVITs and ₹50,125 from DMEDL (Delhi Mumbai Expressway) (PIB 2024). Since then, in November 2025 and January 2026, ₹12,357 crore was raised from TOT and in March, ₹6,000 crore, by listing RIIT.

9 Of the remaining, 56% or 14,748 km was under works (EPC) contracts, with BOT-Toll accounting for 408 km. The average cost per km was ₹28 crore for EPC and ₹39 crore for HAM, but the latter includes operation and maintenance costs over the life of the project, as well as debt servicing costs.

10 The Comptroller and Auditor General of India (CAG 2024: 23) noted that "cluster buses performance was much better than that of the Corporation in almost every Operational Parameter even though both were performing in similar circumstances."

11 In the Jal Jeevan Mission Water Quality Management Information System, only about 1.5% (1,67,175 out of 68,00,374) of tested samples were contaminated. But the rate for West Bengal is 16.9%. It is unclear whether these point to more contamination in West Bengal or better testing.

12 In health, the government wants to upgrade the training of Allied Health Professionals and train more caregivers, who can combine core care and allied skills, such as wellness, yoga, and operation of medical and assistive devices. This is in addition to Hubs for Medical Value Tourism and the Biopharma SHAKTI strategy for biologic medicines.

13 For a recent survey, see Schaer (2025).

REFERENCES

Aghion, Philippe, Ingvild Almas and Costas Meghir (2025): "Human Capital and Development," NBER Working Paper, 34602, https://doi.org/10.3386/w34602.

Arora, Anvita, Anmol Anand, Sanghamitra Banerjee-Ghosh, Dev Baraya, Jayati Chakrabarty, Mahalya Chatterjee, Sagnik Das, Prasenjit Ghosh, Sudakshina Gupta, Preksha Jain, Sarani Khatua, Manish, Anusha Matham, Shilpi Mukherjee, Partha Mukhopadhyay, Mukta Naik, Shamindra Nath Roy, Parvesh Sherawat, Pranav Sidhwani and Persis Taraporevala (2015): *Integrating Intermediate Public Transport Within Transport Regulation in a Megacity: A Kolkata Case Study,* Research Report, Centre for Policy Research, New Delhi, https://cprindia.org/briefsreports/integrating-intermediate-public-transport-within-transport-regulation-in-a-megacity-a-kolkata-case-study/.

CAG (2024): "Report of the Comptroller and Auditor General of India on Functioning of Delhi Transport Corporation for the Year Ended 31 March 2022," Report No 4, New Delhi: Government of National Capital Territory of Delhi, https://cag.gov.in/en/audit-report/details/121774.

Cech, Lubomir (2025): "China's High-speed Rail Network Exceeds 50,000 km with New Xi'an–Yan'an Line," *Railmarket News,* 31 December, https://railmarket.com/news/infrastructure/45532-china-s-high-speed-rail-network-exceeds-50-000-km-with-new-xi-an-yan-an-line.

Chan, Kyle (2025): "Made in China 2025—Who Is Winning?" Testimony before the US–China Economic and Security Review Commission Hearing, 6 February, https://www.uscc.gov/sites/default/files/2025-02/Kyle_Chan_Testimony.pdf.

Gethin, Amory (2025): "Distributional Growth Accounting: Education and the Reduction of Global Poverty, 1980–2019," *Quarterly Journal of Economics*, Vol 140, No 4, pp 2571–2618, https://doi.org/10.1093/qje/qjaf033.

González, S and T Dekyi (2026): "Management of Assets Throughout Their Life Cycle: Evidence from the Infrastructure Governance Indicators," OECD Working Papers on Public Governance, No 89, Paris: OECD Publishing, https://doi.org/10.1787/86ce92d8-en.

Government of India (2026): "Budget 2026–27: Speech of Nirmala Sitharaman, Minister of Finance," 1 February, https://www.indiabudget.gov.in/doc/budget_speech.pdf.

Holla, Alaka, Norbert Schady and Joana Silva (eds) (2026): *Building Human Capital Where It Matters: Homes, Neighborhoods, and Workplaces,* World Bank, https://doi.org/10.1596/978-1-4648-2277-3.

Jaeger, Joel (2025): "These Countries Are Electrifying Their Bus Fleets the Fastest," *WRI,* 25 June, https://www.wri.org/insights/countries-electrifying-bus-fleets-fastest.

Mishra, Himanshu Shekhar (2026): "Excise Duty on Petrol Cut to Rs 3, Diesel to Zero: Will Fuel Prices Reduce?" NDTV, 27 March, https://www.ndtv.com/india-news/excise-duty-on-petrol-cut-to-rs-3-from-rs-13-diesel-to-zero-from-rs-10-11272403.

PIB (2022): "National Rail Plan Aims to Increase Share of Freight Traffic from Current Percentage

of 27 to 45 by 2030," 14 December, https://www.pib.gov.in/PressReleaseIframePage.aspx?PRID=1883514&reg=3&lang=2.

— (2024): "Shri Manohar Lal Addresses Brainstorming Session on the Indian Power Sector Scenario 2047," 14 October, https://www.pib.gov.in/PressReleaseIframePage.aspx?PRID=2064702&reg=3&lang=2.

— (2026a): "Indian Railways Makes Major Strides in Track Modernisation and Safety," 18 January, https://www.pib.gov.in/PressReleseDetailm.aspx?PRID=2215807&reg=3&lang=2.

— (2026b): "Cabinet Approves Rs One Lakh Crore Urban Challenge Fund to Drive Market-led Urban Transformation," 14 February, https://www.pib.gov.in/PressReleasePage.aspx?PRID=2227986&reg=3&lang=2.

Rioja, F (2013): "What Is the Value of Infrastructure Maintenance? A Survey," *Infrastructure and Land Policies*, G K Ingram and K L Brandt (eds), Cambridge, Massachusetts: Lincoln Institute of Land Policy, pp 347–65.

Schaer, Bettina (2025): "Human Capital in New Zealand," New Zealand Treasury Working Paper 25/02, https://www.treasury.govt.nz/sites/default/files/2025-10/twp25-02.pdf.

Sixteenth Finance Commission (2026): "Report of Sixteenth Finance Commission for 2026–2031," Vol I, New Delhi: Government of India.

Song, Z, Y Liu, H Gao and S Li (2020): "The Underlying Reasons Behind the Development of Public Electric Buses in China: The Beijing Case," *Sustainability*, Vol 12, No 2, Article No 688, https://doi.org/10.3390/su12020688.

Standing Committee on Transport, Tourism and Culture (2021): "Action Taken by the Government on the Recommendations/Observations of the Committee Contained in Its Two Hundred and Seventy Eighth Report on Demands for Grants (2020–21) of Ministry of Road Transport and Highways," Report No 285, 3 February, https://rajyasabha.nic.in/rsnew/Committee_site/Committee_File/ReportFile/20/148/285_2021_7_12.pdf.

World Bank (2024): "Human Capital Index," 8 October, https://datacatalog.worldbank.org/search/dataset/0038030/human-capital-index.

— (1981): *The Road Maintenance Problem and International Assistance*, Washington: Transportation, Water, and Telecommunications Department, World Bank.