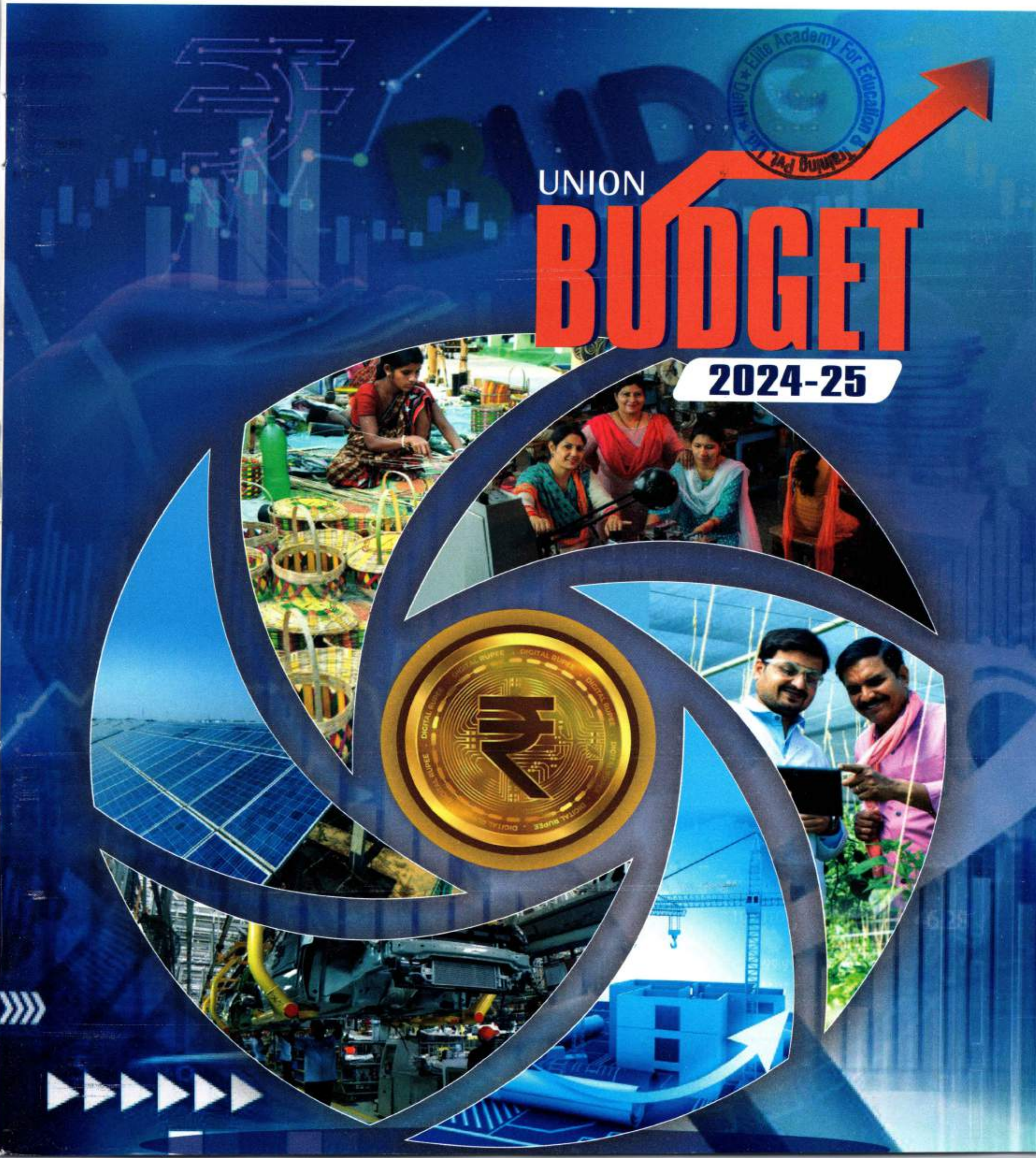
YOJANA

SEPTEMBER 2024 A DEVELOPMENT MONTHLY ₹ 22



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YOJANA

Since 1957 A DEVELOPMENT MONTHLY

Let noble thoughts come to us from all sides.
Rig Veda

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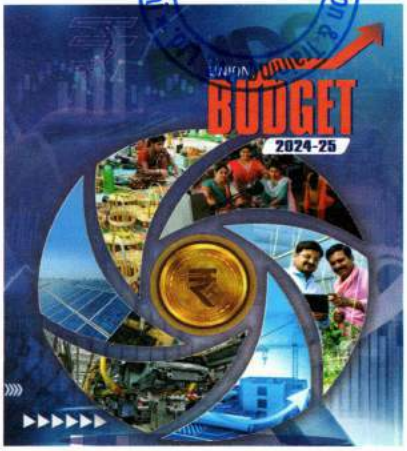
Towards a Viksit Bharat

As India embarks on its journey towards becoming a '*Viksit Bharat*' by 2047, the Golden Era – *Kartavya Kaal* signifies a period of responsibility and action. The Union Budget 2024-25 lays out a comprehensive roadmap for the growth and development of the manufacturing and services sectors, recognising their pivotal role in driving economic growth and employment. The budget is focused on four major groups: *Garib* (poor), *Mahilaayen* (women), *Yuva* (youth) and *Annadata* (farmers).



Initiatives like *SAMARTH Udyog Bharat 4.0* and the Production Linked Incentive (PLI) scheme aim to boost the manufacturing sector's competitiveness and increase its share of GDP to 25 per cent by 2025. The shift towards automated and process-driven manufacturing is a step in the right direction, enabling India to become a global manufacturing hub. A comprehensive skill development initiative aims to empower approximately 2 million youth over a five-year period. This endeavour involves the upgrading of 1,000 Industrial Training Institutes (ITIs) through a hub-and-spoke model, prioritising outcome-based training to enhance employability and industry readiness. Course content and design are aligned with the skill needs of the industry.

The services sector contributes over 50 per cent to India's GDP and is poised for growth. Focussing on digital technologies and institutional frameworks has created an environment conducive to the sector's expansion. Initiatives like Smart Cities, Clean India and Digital India have fostered a culture of innovation, enabling the services sector to experience double-digit growth in recent years.

The Union Budget 2024-25 reinforces the commitment to the growth of these sectors, with a focus on nine priority areas, including manufacturing and services. The budget aims to stimulate rural economic development and promote Micro, Small, and Medium Enterprises (MSMEs). A comprehensive package has been introduced to support MSMEs, including financing, regulatory changes, and technology support.

The synergy between manufacturing and services will be crucial as India navigates its journey towards becoming a developed nation. Integrating logistics, financial services, and a robust startup ecosystem will create a dynamic and resilient economy. The emphasis on digital infrastructure, digital literacy, and the integration of manufacturing and services aims to build a dynamic economy that fosters innovation, growth, and prosperity for all citizens.

The Union Budget 2024-25 charts a promising course for India's economic growth, emphasising manufacturing, services, and digital technologies. While the initiatives hold potential for driving growth and employment, their success hinges on effective implementation and navigating potential headwinds. As we embark on this journey, it's crucial to remain vigilant and adapt to emerging challenges, ensuring that the benefits of growth are equitably shared and the digital divide is bridged. By doing so, we can harness the opportunities presented by this budget and pave the way for a resilient and inclusive growth trajectory, illuminating a brighter future for all Indians.

In the current issue of Yojana, we delve into the intricacies of the Union Budget 2024-25, presenting a compendium of erudite articles from distinguished subject-matter experts, academics, and specialists in their respective fields of work. Through their insightful analyses and nuanced perspectives, we aim to provide readers with a comprehensive understanding of the budget's implications and potential impact on the nation's socio-economic landscape. ❑

Public Finance and Development: Evaluation of India's Budgetary Priorities

DR SAJJAN SINGH YADAV | The author is the Additional Secretary in the Department of Expenditure, Ministry of Finance, GoI. Email: authorsajjan@gmail.com

Finance Minister's seventh consecutive Union Budget emphasises support for the poor, women, youth, and farmers. It targets employment generation, skilling, MSME support, and balanced regional development. Key initiatives include transforming agriculture for climate resilience, promoting natural farming, and achieving self-sufficiency in pulses and oilseeds. The budget also focuses on urban development, energy security, infrastructure investment, and next-generation reforms to drive inclusive economic growth.

On 23 July 2024, Finance Minister Smt Nirmala Sitharaman made history by presenting her seventh consecutive Union Budget in Parliament. The core of the 2024-25 budget focusses on the *'Garib'* (poor), *'Mahilaayen'* (women), *'Yuva'* (youth), and *'Annadata'* (farmer). Key areas of emphasis include employment generation, skilling, Micro, Small, and Medium Enterprises (MSMEs), and the middle class. The budget proposals aim to create a virtuous cycle of economic growth and employment, provide ample opportunities for all, facilitate balanced regional development, and benefit the most vulnerable sections of society.

To achieve these objectives, the Finance Minister highlighted nine priority areas in her speech: productivity and resilience in agriculture; employment and skilling; inclusive human resource development and social justice; manufacturing and services; urban development; energy

security; infrastructure; innovation, research and development; and next generation reforms. Let's discuss and evaluate these nine priorities.

Priority 1: Productivity and Resilience in Agriculture

Agriculture plays a pivotal role in the Indian economy, providing livelihood support to 42.3 per cent of the population and contributing 18.2 per cent to the country's GDP. Recognising its critical importance, the budget rightly focusses on transforming India's agricultural sector to ensure food security, enhance farmers' income, and make agriculture more productive, sustainable, and resilient to climate change. The agriculture and allied sectors have received a generous allocation of Rs 1.52 lakh crore in the budget. Key initiatives announced to enhance productivity and resilience in agriculture are as follows:

i. **Transforming Agricultural Research**: Achieving a quantum leap in agricultural productivity requires transforming research to enhance productivity and develop climate-resilient varieties. The government has decided to comprehensively revamp the country's agricultural research setup. The budget also proposes to provide funds for agricultural research in a challenge mode for both the public and private sectors. Additionally, it aims to provide 109 new, high-yielding, and climate-resilient varieties of 32 field and horticultural crops to farmers.

ii. **Promotion of Natural Farming**: Natural farming, or *Bhartiya Prakratik Krishi Paddhati*, is rooted in Indian tradition and relies on desi-cows and locally available resources, avoiding chemical fertilisers and pesticides. It is climate-resilient, cost-effective, rejuvenates soil health, reduces water requirements, and produces safe and healthy food. The budget proposes to initiate and support one crore farmers across the country in natural farming over the next two years, setting up 10,000 need-based bio-input resource centres and supporting farmers through certification and branding.

iii. **Self-Sufficiency in Pulses and Oilseeds Production**: Pulses are environmentally friendly crops that put minimal pressure on natural resources and fix atmospheric nitrogen in the soil. They are also crucial for nutrition and health. Currently, there is a gap of 4.4 million tonnes between the demand and supply of pulses, met by imports. Similarly, India heavily depends on imports to meet its edible oil requirements. The budget emphasises achieving self-sufficiency in the production of pulses and oilseeds by strengthening their production, storage, and marketing.

iv. **Vegetable Production and Supply Chains**: India, with a production of 256 MT (Metric Tonnes), is the second-largest producer of fruits and vegetables globally. However, significant post-harvest losses occur due to inefficient supply chains, inadequate infrastructure, transportation issues, and poor market linkages. To address these challenges, the Finance Minister announced plans to develop large-scale clusters for vegetable production near major consumption centres and promote Farmer Producer Organisations (FPOs), cooperatives, and startups for vegetable supply chains.

v. **Digital Public Infrastructure for Agriculture**: Digital Public Infrastructure (DPI) will enable the development of innovative, farmer-centric solutions and services to improve agricultural productivity and profitability. It will assist in providing relevant information services on crop planning and health, improve access to farm inputs, credit, and insurance, aid in crop estimation and market intelligence, and support the growth of the Agri-Tech industry and startups. The budget proposes that the central government implement DPI in agriculture in partnership with states, with a digital crop survey for Kharif to be conducted in 400 districts in the current fiscal year. Additionally, the details of 6 crore farmers and their lands will be included in the farmer and land registries.

Besides these measures, the Finance Minister announced the government's thrust on shrimp production and export. To facilitate this, a network of nucleus breeding centres for shrimp broodstock will be set up, and financing will be provided for shrimp farming, processing, and export. The government will also introduce the National Cooperation Policy to ensure systematic, orderly, and all-round development of the cooperative sector, fast-tracking rural economic growth and generating large-scale employment opportunities.

Thus, the budget aims to transform the agricultural landscape of the country, making it more resilient to climate change and market fluctuations. Comprehensive support for farmers to achieve this objective is outlined in the budget too.

Priority 2: Employment and Skilling

India's demographic dividend offers a significant advantage, but challenges like skill mismatches, regional disparities in job opportunities, underemployment, and unemployment must be addressed to realise this potential. Employment and skilling are thus central objectives of the budget.

To harness the demographic dividend and build an inclusive economy, the Finance Minister announced the Prime Minister's Package of five schemes and initiatives with an allocation of Rs 2 lakh crore, aiming to benefit 4.1 crore youth over five years. Here's a closer look at the ambitious package:

i. Employment Linked Incentive Scheme-A (for First Timers):

This scheme targets 2.1 crore youth entering the workforce with salaries up to Rs 1 lakh per month. The government will pay one month's salary, up to Rs 15,000, directly to the employee's bank account in three instalments. All formal sectors are covered, but employers must refund the subsidy if employment ends within 12 months of recruitment.

ii. Employment Linked Incentive Scheme-B (Job Creation in Manufacturing):

Benefiting 30 lakh youth, this scheme promotes the substantial hiring of first-time employees in manufacturing. Incentives are provided if employers hire at least 25 per cent more EPFO employees compared to the previous year or at least 50 previously non-EPFO workers. The government will pay 24 per cent of the wage or salary for the first two years, 16 per cent in the third year, and 8 per cent in the fourth year. The scheme covers employees with salaries up to Rs 1 lakh per month, but incentives for those earning over

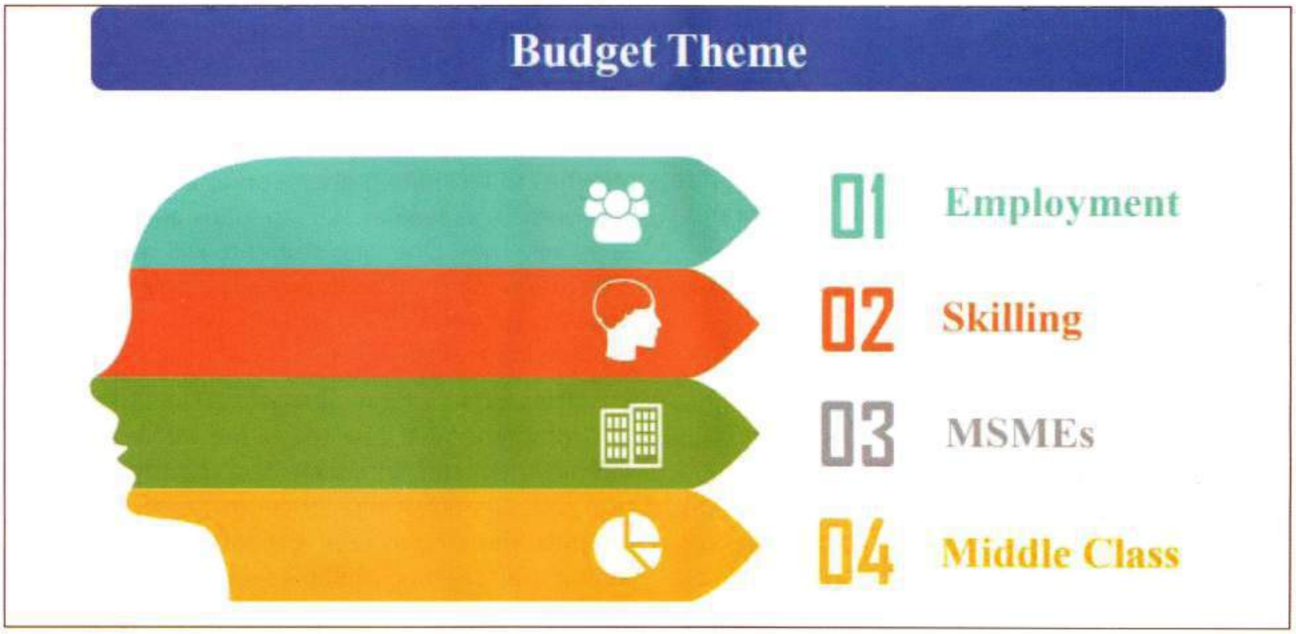


Table-1 Prime Minister's Package for Employment and Skilling Coverage and Estimated Central Outlay		
Schemes	**Beneficiaries (in lakh)**	**Central Outlay (Rs in crore)**
Employment Linked Incentive Scheme A (First Timers)	210	23,000
Employment Linked Incentive Scheme B (bulk hiring of first-timers in manufacturing)	30	52,000
Employment Linked Incentive Scheme C (job creation)	50	32,000
Internship Programme (Phase-1)	30	19,000
Internship Programme (Phase-2)	70	44,000
Upgradation of ITIs	20	30,000
Total	**410**	**2,00,000**

Rs 25,000 are capped at Rs 25,000/month. This subsidy is in addition to Scheme-A benefits.

iii. Employment Linked Incentive Scheme-C (Support to Employers):

This scheme is expected to incentivise the employment of 50 lakh people and cover additional employment in all sectors. Employers with fewer than 50 employees who increase their EPFO employees by at least two, and other employers who increase EPFO employees by five are eligible for incentives. The government will reimburse up to Rs 3,000 per month for two years towards EPFO contributions for each additional employee. This subsidy is in addition to Scheme-A but is not available for employees under Scheme-B.

Skilling

Enhancing employability is another focus of the budget. For this, the government plans to introduce advanced skill training programs and upgrade Industrial Training Institutes (ITIs) in collaboration with the industry. Key skilling schemes include:

i. New Scheme for Skilling and Upgradation of ITIs:

Under the Prime Minister's package, a new Centrally Sponsored Scheme (CSS) with an outlay of Rs 60,000 crore will be launched to skill 20 lakh youth over five years. The central government, state governments, and industry will contribute Rs 30,000 crore, Rs 20,000 crore, and Rs 10,000 crore, respectively. The scheme will upgrade 1,000 ITIs in a hub-and-spoke model with industry collaboration, aligning course content with industry needs and introducing new courses for emerging demands. Capacity at five national institutes for training trainers will also be augmented.

ii. Internship at Top Companies

The Prime Minister's Internship Scheme will skill one crore youth, aged 21-24, over five years through internships at India's top companies. Interns will receive a Rs 5,000 monthly allowance for one year, with the government covering Rs 54,000 annually towards the allowance and Rs 6,000 for incidentals. Companies will contribute Rs 6,000 monthly and bear training costs through CSR funds.

The coverage and estimated central outlay of the schemes in the Prime Minister's package for employment and skilling are summarised in Table-1.

Additionally, the Finance Minister announced the construction of working women hostels and creches to facilitate higher workforce participation by women, as well as skilling loans and education loan schemes. One lakh students will benefit from education loans up to Rs 10 lakh with a 3 per cent interest subvention, and 25,000 youth will receive skilling loans annually.

Thus, the Union Budget 2024-25 presents a comprehensive strategy to address India's employment challenges, create a robust framework for job creation, and drive inclusive economic growth. The employment generation initiatives are ambitious, targeting multiple sectors and addressing diverse aspects of the employment landscape.

Priority 3: Inclusive Human Resource Development and Social Justice

The budget for fiscal 2024-25 underscores the government's commitment to comprehensive and inclusive development, particularly for farmers, youth, women, and the poor. Human capital development and social justice ensure growth that benefits all sections of society. Key initiatives in this direction include:

i. **Saturation Approach to Promote Social Justice**: The government will ensure all eligible people are covered in various programs for education, health, and other sectors. Accelerated implementation of schemes will support economic activities for craftsmen, artisans, self help groups, scheduled castes, scheduled tribes, women entrepreneurs, and street vendors.

ii. **Purvodaya**: The eastern part of India, rich in cultural traditions and resources, will see comprehensive development under the *'Purvodaya'* plan. This initiative aims to develop human resources, infrastructure, and economic opportunities, transforming the region into an engine for a *Viksit Bharat*.

iii. **Women-Led Development:** The budget allocates over Rs 3 lakh crore for schemes benefiting women and girls, emphasising their role in economic development. Enhanced funding targets their health, nutrition, and education.

iv. **Pradhan Mantri Janjatiya Unnat Gram Abhiyan***:* To improve the socio-economic conditions of tribal communities, the government will launch this initiative, covering tribal families in tribal-majority villages and aspirational districts. Over five crore tribal people in 63,000 villages will benefit.

v. **Enhanced Coverage of India Post Payment Bank**: To expand banking services and spur economic growth in the North East, more than 100 branches of India Post Payment Bank will be opened in the region.

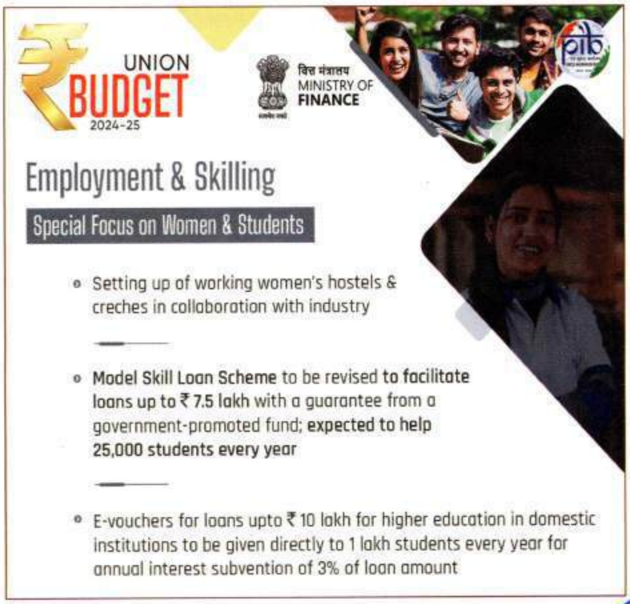
vi. **Increased Funding for Education, Healthcare, and Housing**: The budget raises the allocation for education by 12 per cent to Rs 1.2 lakh crore, aiming to improve quality and expand access to digital learning tools. Healthcare funding has increased by 15 per cent to Rs 3.8 lakh crore. To address housing needs, the central government will support constructing three crore additional houses under the PM Awas Yojana.

The government's focus on human capital development and social justice in the budget is a welcome move, promoting inclusive growth and ensuring that development benefits all sections of society.

Priority 4: Manufacturing and Service

Revitalising the manufacturing and service sectors to boost economic growth and create jobs is a key priority of the budget. Special attention has been paid to promoting MSMEs and labour-intensive manufacturing. MSMEs, the backbone of the Indian economy, are crucial for employment generation. The budget earmarks Rs 1.5 lakh crore for the MSME sector, including measures to enhance credit availability, reduce compliance burdens, and provide technical support. Key initiatives include:

i. **Credit Guarantee Scheme for MSMEs**: The government will introduce a credit guarantee scheme to facilitate term loans for MSMEs to purchase machinery and equipment without collateral or third-party guarantees. An amount of Rs 9,812 crore is allocated in the budget for the scheme. This will enable small businesses to expand, improve credibility, and create more jobs.



ii. **New Assessment Model for MSME Credit:** Public sector banks will develop a credit assessment model based on the digital footprints of MSMEs rather than traditional asset or turnover criteria, improving credit eligibility assessment.

iii. **Credit Support to MSMEs During Stress Periods:** For MSMEs in the 'special mention account' (SMA) stage, a new mechanism will facilitate the continuation of bank credit through a government-promoted fund guarantee, helping them avoid NPA (Non Performing Asset) status.

iv. **Enhanced Scope for Mandatory Onboarding in TReDS:** The budget reduces the turnover threshold for mandatory onboarding on the TReDS (Trade Receivables Discounting System) platform from Rs 500 crore to Rs 250 crore, unlocking working capital for MSMEs by converting trade receivables into cash. This measure will bring 7,000 more companies onto the platform.

Additionally, new branches of SIDBI will expand their reach to MSME clusters, providing direct credit. The government will support the setup of 50 multi-product food irradiation units in the MSME sector and establish e-commerce export hubs in PPP mode to help MSMEs and traditional artisans sell internationally.

Other schemes to promote manufacturing: Besides boosting MSMEs, the budget includes initiatives to promote manufacturing and services:

i. **Industrial Parks**: The government will develop investment-ready 'plug and play' industrial parks with complete infrastructure in 100 cities in partnership with states and the private sector. Twelve industrial parks will also be sanctioned under the National Industrial Corridor Development Programme.

ii. **Rental Housing for Industrial Workers**: The government will facilitate rental housing with dormitory-type accommodation for industrial workers in PPP mode with Viability Gap Funding (VGF) support and commitments from anchor industries.

iii. **Digital Public Infrastructure (DPI) Applications**: DPI applications will be developed at a population scale to enhance productivity, business opportunities, and innovation in areas such as credit, e-commerce, education, health, law, logistics, MSME, service delivery, and urban governance.

iv. **Production Linked Incentive (PLI) Scheme**: The budget allocates Rs 2 lakh crore for the PLI scheme, aiming to boost domestic manufacturing, attract investment, and generate jobs in key industries such as electronics, automobiles, textiles, and pharmaceuticals.

v. **Bolstering Startups**: To spur investments in startups and promote ease of doing business, the budget proposes abolishing the 'Angel Tax' on all classes of investors.

These initiatives will stimulate industrial growth and enhance the global competitiveness of Indian manufacturers, paving a new path for small traders and MSMEs. The focus on the service sector leverages India's strengths in IT and digital services, driving inclusive economic growth.

Priority 5: Urban Development

Urban development is a key priority of the budget, with a range of initiatives proposed to revitalise cities, including creative redevelopment, transit-orientated development, and incentives for urban renewal projects.

i. **Cities as Growth Hubs**: The Union government will collaborate with state governments to develop cities as growth hubs through economic and transit planning and the orderly development of peri-urban areas using town planning schemes.

ii. **Creative Redevelopment of Cities**: The government will design a framework for enabling policies, market-based mechanisms, and regulations to facilitate the creative brownfield redevelopment of existing cities with transformative impacts.

iii. **Transit-Orientated Development**: Development plans, implementation, and financing strategies for transit-orientated development will be formulated for 14 large cities with populations over 30 lakh.

iv. **Urban Housing**: The government will invest Rs 10 lakh crore to build 1 crore houses for urban poor and middle-class families over the next five years, addressing housing needs. The scheme also envisages a provision of interest subsidies to facilitate loans at affordable rates. An efficient and transparent rental housing market with enhanced availability will also be put in place through enabling policies and regulations.

v. **Water Supply and Sanitation**: Through bankable projects, the government will promote water supply, sewage treatment, and solid waste management services in 100 large cities, partnering with state governments and multilateral development banks.

Urban development is crucial for accommodating the growing population and ensuring sustainable cities. The government's proposed initiatives aim to develop cities as growth hubs, create jobs, enhance urban sustainability, and improve the quality of urban life.

Priority 6: Energy Security

Ensuring energy security is crucial for sustaining economic growth and reducing dependence on fossil fuels. The budget underscores the government's commitment to high, resource-efficient economic growth and energy security. Key initiatives announced are:

i. **Energy Transition**: The government will introduce a policy on energy transition pathways, balancing employment, growth, and environmental sustainability. Rs 1.5 lakh crore has been allocated for renewable energy projects, including solar, wind, and green hydrogen.

ii. **PM Surya Ghar Muft Bijli Yojana**: This scheme aims to install rooftop solar plants, providing 1 crore households with free electricity up to 300 units per month. The Finance Minister earmarked Rs 6,250 crore for it in the current fiscal year due to its remarkable response.

iii. **Pumped Storage Policy**: A policy will be introduced to promote pumped storage projects for electricity storage, facilitating the integration of renewable energy with its variable and intermittent nature.

iv. **R&D of Small and Modular Nuclear Reactors**: Nuclear energy is set to play a significant role in the energy mix for *Viksit Bharat*. The government will partner with the private sector, providing R&D funding for Bharat Small Reactors and Bharat Small Modular Reactors, along with new nuclear technologies.

v. **Advanced Ultra Super Critical Thermal Power Plants**: India has developed indigenous technology for Advanced Ultra Super Critical (AUSC) thermal power plants. Fiscal support will be provided for setting up an 800 MW

will create jobs, stimulate investments, and unlock economic opportunities for other sectors.

A substantial allocation for infrastructure development is a cornerstone of the budget for 2024-25. It will drive industrial development, economic growth, job creation, and improved connectivity.

commercial plant using AUSC technology as a joint venture between NTPC and BHEL.

The measures announced in the budget align with global climate goals, potentially reducing India's carbon footprint and positioning the country as a leader in clean energy.

Priority 7: Infrastructure

Infrastructure investment has a high employment multiplier effect, improves productivity, and boosts the economy. The budget highlights the government's commitment to robust fiscal support for infrastructure over the next five years, with the following initiatives for the current year:

i. **Government Infrastructure Investment**: Rs 11,11,111 crore, roughly 3.4 per cent of GDP, has been allocated for capital expenditure by the central government. State governments will also be encouraged to increase capital investment by Rs 1.5 lakh crore under the Scheme for Special Assistance to States for Capital Investment 2024-25.

ii. **Private Infrastructure Investment**: The government will promote private sector investment in infrastructure through viability gap funding, enabling policies, and a market-based financing framework.

iii. **Pradhan Mantri Gram Sadak Yojana (PMGSY)**: Phase IV of PMGSY will be launched to provide all-weather connectivity to an additional 25,000 rural habitations.

iv. **Tourism Infrastructure**: The central government will support state governments in developing iconic tourist destinations. Tourism development

Priority 8: Innovation, Research and Development

Research and Development (R&D) and innovation are crucial for driving economic growth and maintaining global competitiveness. To enhance R&D, the government will operationalise the *'Anusandhan National Research Fund'*. Additionally, the budget *proposes* creating a Rs 1 lakh crore financing pool and establishing a mechanism to spur private sector-driven research and innovation on a commercial scale. Moreover, a venture capital fund of Rs 1,000 crore will be set up to expand the space economy fivefold in the next 10 years. The government's focus on research and innovation will drive technological advancements and create high-tech jobs.

Priority 9: Next Generation Reforms

Next-generation reforms aim to create a more efficient and competitive economy. The government will formulate an economic policy framework to define the approach to economic development and scope out the next wave of reforms. These will enhance productivity and facilitate more efficient markets and sectors. State governments play a crucial role in these reforms. To incentivise states for faster implementation, the budget proposes allocating part of the 50-year interest-free loan to states for land-related reforms in both rural and urban areas.

The budget also proposes simplifying rules and regulations for Foreign Direct Investment (FDI) and overseas investments to attract more foreign capital, prioritise investments, and promote the use of the Indian Rupee for overseas transactions.

Epilogue

As India navigates a rapidly changing global economic landscape, the budget for 2024-25 sets the course for a resilient and sustainable future. The success of these initiatives will depend on effective implementation, continuous monitoring, and adaptability to evolving circumstances. ❑

Inclusive Human Resource Development and Social Justice

SANJIB POHIT The author is a Professor at the National Council of Applied Economic Research, New Delhi. Email: spohit@ncaer.org

SOURYABRATA MOHAPATRA The co-author is an Associate Fellow at the National Council of Applied Economic Research, New Delhi.

The 2024 Union Budget of India, presented by the Finance Minister, articulates a grand vision for *'Viksit Bharat'* (Developed India). At the heart of this vision lies the third priority of the budget: Inclusive Human Resource Development and Social Justice. The budget adopts a saturation approach, aiming to cover all eligible individuals under various government schemes. This approach ensures comprehensive coverage and eliminates exclusion errors, which have historically hindered the effectiveness of welfare programmes. The proposed measures under Priority 3 have the potential to drive significant socio-economic transformation in India. Ensuring that allocated funds are utilised efficiently and reach the intended beneficiaries is crucial. Transparency and accountability mechanisms must be strengthened to prevent leakages and corruption. Success hinges on robust governance, effective coordination and private-sector participation.

The Economic Survey 2023-24 provides an in-depth analysis linking *Viksit Bharat* and Priority 3 of Budget 2024. It emphasises the need for robust social infrastructure to support economic growth. The survey highlights that sustained economic growth must be accompanied by social progress, including health, education and digital empowerment.

The survey also projects that India's employment landscape is transforming with rising formalisation and skill development. For example, EPFO membership grew by an impressive 8.4 per cent CAGR between FY15 and FY24, reflecting increased formal employment. Moreover, initiatives like the Production Linked Incentive (PLI) scheme are expected to create millions of jobs in manufacturing, further boosting employment.

Looking ahead, the Economic Survey projects that India's GDP could grow at an annual rate of 7 per cent or more, provided that structural reforms continue. This growth is expected to lift millions out of poverty and improve the standard of living across the country. However, achieving this requires a steadfast commitment to inclusive policies and social justice.

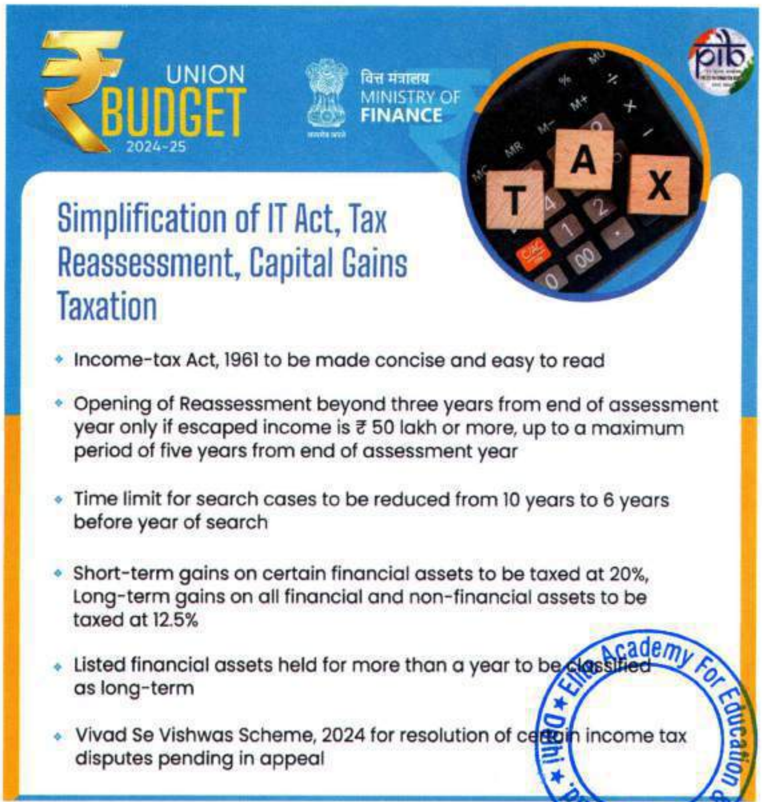
The 2024 Union Budget of India, presented by the Finance Minister, articulates a grand vision for '*Viksit Bharat*' (Developed India). At the heart of this vision lies the third priority of the budget: Inclusive Human Resource Development and Social Justice. This essay delves into this priority, exploring its significance, the strategies proposed and their potential impact on India's journey towards becoming a developed nation. How can a nation truly become developed if segments of its population are left behind? What role do education, skilling and social justice play in this transformative journey?

Inclusive Human Resource Development

Inclusive human resource development aims to equip every citizen with the skills and opportunities needed to contribute to and benefit from economic growth. The 2024 budget allocates a substantial Rs 1.48 lakh crore to education, employment and skilling initiatives. This significant allocation underscores the Government's commitment to enhancing the capabilities of its workforce, particularly among the disadvantaged segments of society.

Education and Skilling Initiatives

One of the most transformative announcements in the budget is the provision of Rs 60,000 crore over five years for upgrading 1,000 Industrial Training Institutes (ITIs) into hub-and-spoke arrangements. These upgraded ITIs will align their curricula with industry needs, ensuring that 20 lakh youth are



skilled with relevant and employable skills. This initiative addresses the skills gap in India's workforce, a critical impediment to economic productivity and competitiveness. By modernising these ITIs, the Government is creating a robust infrastructure for vocational training that aligns with the demands of a rapidly evolving job market.

The budget also introduces a revised Model Skill Loan Scheme, providing loans up to Rs 7.5 lakh with government guarantees. This measure aims to support 25,000 students annually, enabling them to pursue vocational training without the financial burden. Moreover, education loans of up to Rs 10 lakh will be offered with an annual interest subvention of 3 per cent, benefiting 1 lakh students each year. These financial support mechanisms are designed to democratise access to quality education and training, fostering an inclusive growth environment where economic opportunities are within reach for all.

Employment-Linked Incentives

The budget outlines three employment-linked incentive schemes with a central outlay of Rs 2 lakh crore over five years. These schemes target different aspects of employment creation, each addressing specific needs within the labour market:

- **Scheme A: First Timers**: This scheme provides a one-month wage subsidy of up to Rs 15,000 for first-time employees. Expected to benefit 2.1 crore youth, this initiative aims to ease the entry of new workers into the formal sector, providing a crucial bridge between education and employment.
- **Scheme B: Job Creation in Manufacturing**: This scheme incentivises employers to hire first-time employees in the manufacturing sector by covering a portion of their EPFO contributions. It targets the employment of 30 lakh youth, encouraging robust job creation in a sector crucial for economic growth. By focussing on manufacturing, the Government is bolstering a sector that has the potential to drive large-scale employment and spur industrial development.
- **Scheme C: Support to Employers**: This scheme reimburses up to Rs 3,000 per month of EPFO contributions for new hires earning less than Rs 1 lakh per month. It aims to incentivise the creation of 50 lakh new jobs across various sectors, supporting broad-based employment growth and reducing barriers for employers to expand their workforce.

Social Justice

Social justice is an integral part of human resource development. The budget's focus on social justice aims to ensure that economic growth benefits all sections of society, particularly the marginalised and disadvantaged. But how can we measure the true impact of social justice initiatives?

Saturation Approach

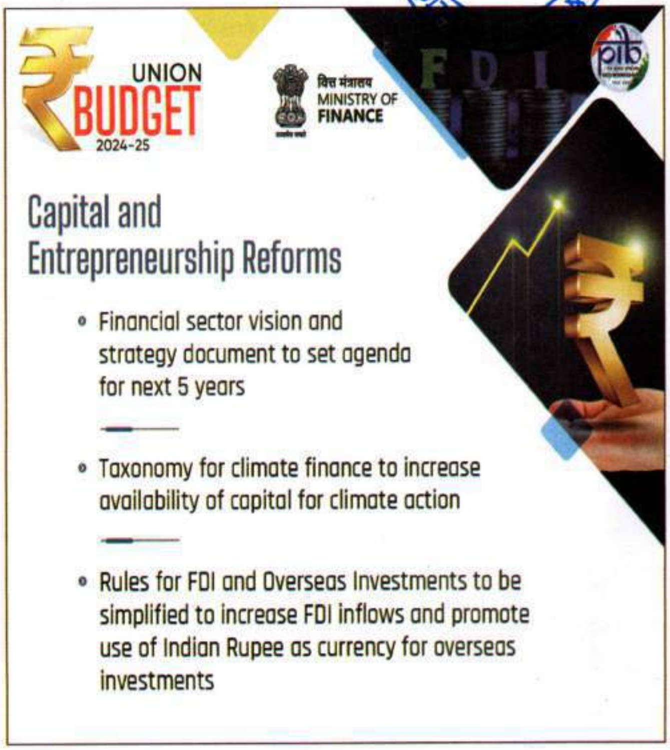
The budget adopts a saturation approach, aiming to cover all eligible individuals under various government schemes. This approach ensures comprehensive coverage and eliminates exclusion errors, which have historically hindered the effectiveness of welfare programmes. The *Pradhan Mantri Garib Kalyan Anna Yojana*, which provides free food grains to over 80 crore people, is a prime example of this approach. Its extension for five more years demonstrates the Government's commitment to food security for the poor. By ensuring that no eligible individual is left out, the saturation approach aims to create a more equitable society where the benefits of development are shared widely.

Women-Led Development

Women's empowerment is a cornerstone of social justice. The budget allocates over Rs 3 lakh crore for schemes benefiting women and girls. This substantial investment highlights the Government's recognition of the critical role women play in economic development. Initiatives such as working women hostels, crèches, and women-specific skilling programmes aim to enhance women's participation in the workforce. The establishment of market access channels for women Self-Help Groups (SHGs) further supports women entrepreneurs, promoting inclusive economic growth. By removing barriers to women's participation in the economy, the Government is fostering a more inclusive and dynamic workforce.

Tribal Welfare

The *Pradhan Mantri Janjatiya Unnat Gram Abhiyan* aims to improve the socio-economic conditions of tribal communities. With an allocation to cover 63,000 villages and benefit five crore tribal people, this initiative adopts a saturation approach to ensure comprehensive development. The programme focusses on education, healthcare, infrastructure, and economic opportunities, addressing the unique challenges faced by tribal populations. By providing targeted support to tribal communities, the Government aims to uplift some of the most marginalised groups in society, ensuring that they, too, can benefit from India's development.



Potential Impact

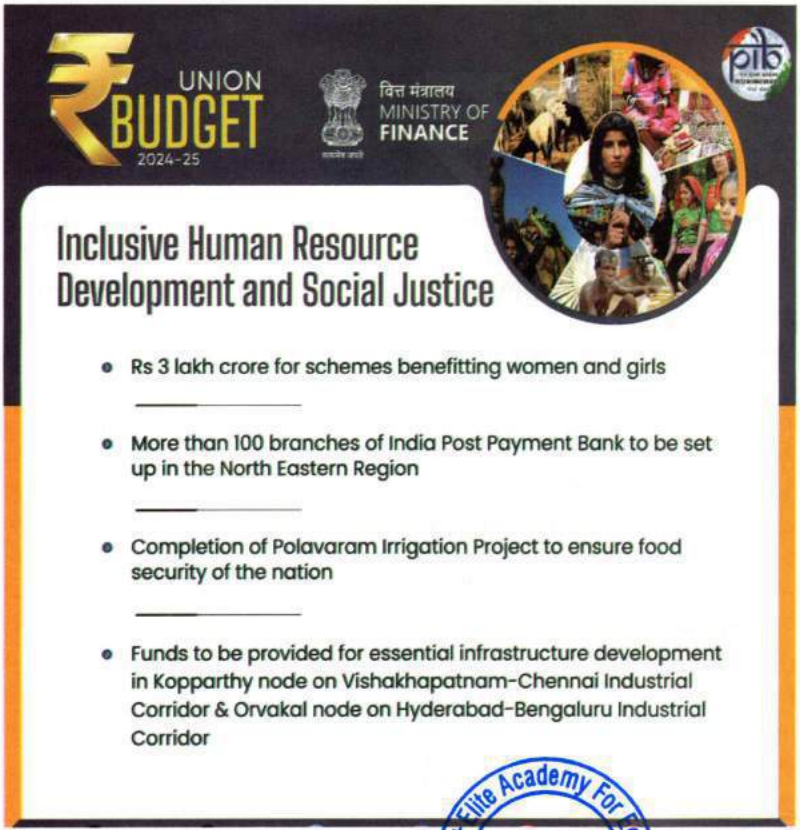
The proposed measures under Priority 3 have the potential to drive significant socio-economic transformation in India. By investing in education, skilling, and employment, the Government aims to create a more capable and competitive workforce. This, in turn, will enhance productivity, spur innovation, and attract investment, contributing to sustained economic growth.

The focus on social justice ensures that the benefits of growth are equitably distributed. Initiatives targeting women, tribal communities, and the eastern states address historical inequalities and regional disparities. By promoting inclusive development, these measures foster social cohesion and stability, which are essential for long-term prosperity.

Challenges and Considerations

While the budget's proposals are ambitious and well-intentioned, their successful implementation will require robust governance and effective coordination between the central and state governments. Ensuring that allocated funds are utilised efficiently and reach the intended beneficiaries is crucial. Transparency and accountability mechanisms must be strengthened to prevent leakages and corruption.

Additionally, the success of skilling and employment initiatives hinges on the active participation of the private sector. Industry collaboration in designing curricula, providing internships, and creating job opportunities is essential. The Government must foster an enabling environment for public-private partnerships, incentivising businesses to invest



in human resource development.

Furthermore, addressing structural issues such as labour market rigidities and inadequate infrastructure is vital. Reforms to improve labour market flexibility, enhance the ease of doing business, and invest in physical and digital infrastructure will complement the budget's initiatives and create a conducive environment for sustainable development.

Conclusion and anticipations

Looking ahead, the ambitious goals and comprehensive strategies outlined in the 2024 Union Budget signal a transformative trajectory for India's socio-economic landscape. Projected GDP growth of 7 per cent annually could lift millions out of poverty, enhancing living standards nationwide. The Rs 1.48 lakh crore allocation for education, employment, and skills, including the Rs 60,000 crore upgrade of 1,000 ITIs, aims to bridge workforce skills gaps, fostering economic productivity.

Employment-linked incentives, with a Rs 2 lakh crore outlay, are set to catalyse job creation. Scheme A offers a Rs 15,000 wage subsidy for first-time employees, benefiting 2.1 crore youth. Scheme B targets manufacturing, aiming to employ 30 lakh youth, while Scheme C supports employers, incentivising 50 lakh new jobs. These initiatives are expected to reduce unemployment and formalise employment.

Social justice measures, like the *Pradhan Mantri Garib Kalyan Anna Yojana*, ensure comprehensive coverage for 80 crore people, while Rs 3 lakh crore for women-focused schemes promote empowerment. The *Pradhan Mantri Janjatiya Unnat Gram Abhiyan*, targeting 63,000 villages and benefiting five crore tribal people, addresses unique community challenges.

Success hinges on robust governance, effective coordination, and private-sector participation. Ensuring efficient fund utilisation and strengthening transparency are crucial. Structural reforms to improve labour market flexibility and infrastructure will complement these initiatives, fostering a more equitable and inclusive society where all can thrive.

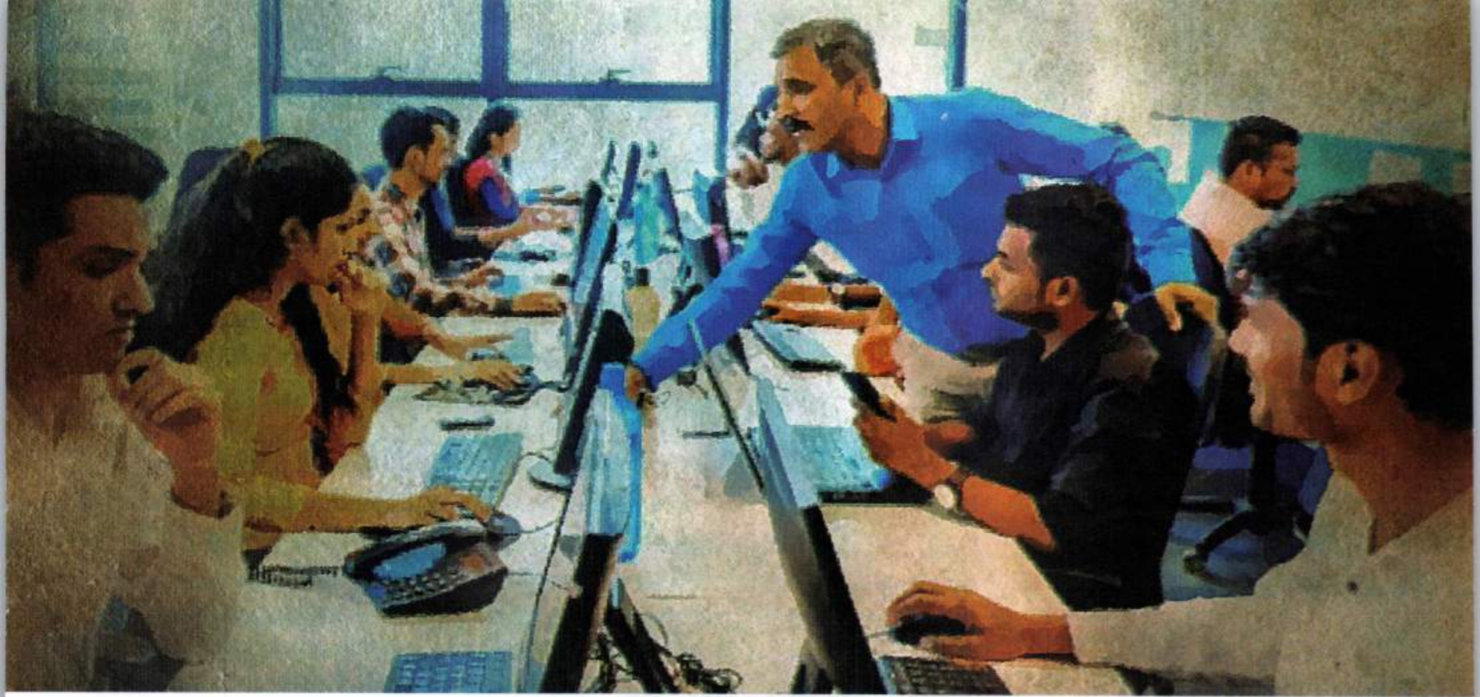
But as we move forward, we must continually ask ourselves: Are we doing enough to ensure that every Indian, regardless of their background, has the opportunity to thrive in a *Viksit Bharat*? Are the financial commitments and policy frameworks adequate to overcome deep-rooted social and economic challenges? How can we harness the potential of these initiatives to create a truly inclusive and prosperous India? The answers to these questions will determine the success of our journey towards a developed nation. ❑

(Views are personal)

Corrigendum

Title of Publication: India's Food Regulatory Landscape: Transitioning Towards a Robust and Contemporary System
Publication Details: Yojana, July, 2024 edition
This corrigendum is being issued at the request of Dr. Alka Rao, Advisor, FSSAI, whose name was listed as contributing author of the publication mentioned above. It is stated that while Dr. Alka Rao encouraged and facilitated this work as a reporting officer to the authors, she did not contribute to the research or writing. Hence, the correct authorship list is Dr. Heena Yadav, Technical Officer, FSSAI and Dr. Amit Sharma, Director, FSSAI. Yojana and Publications division bear no responsibility in this inadvertent error by the authors.

Dr. Amit Sharma
Director, FSSAI



A New Chapter in India's Employment Story

RAMESH KRISHNAMURTHY | The author is the Director General of Employment and Additional Secretary at the Ministry of Labour and Employment, GoI. Email: as-labour@nic.in

The Finance Minister's Budget Speech unveiled the Government's priorities with a focus on employment, skilling, and MSMEs. Key initiatives include a Rs 2 lakh crore package to benefit 4.1 crore youth and the introduction of the First Timers Scheme, offering financial support to new workers. The revamped National Career Services (NCS2.0) and Shram Suvidha portals aim to bridge gaps between job seekers and employers, while new schemes will boost job creation in manufacturing and support for SMEs. These measures represent a comprehensive approach to addressing labour market challenges and fostering economic growth.

Ushering Enhanced Employment Opportunities through Employment Linked Incentive

The Finance Minister in her Budget Speech laid down the Government's priorities to focus on employment, skilling, MSMEs and the middle class with the announcement of the Prime Minister's package of 5 schemes and initiatives to facilitate employment, skilling and other opportunities for 4.1 crore youth over a 5-year period with a central outlay of Rs 2 lakh crore. The Ministry of Labour and Employment has been tasked with the creation of an environment through Employment Linked Incentive (ELI) to foster employment in the country. A series of innovative schemes focused on job creation and youth employment while ensuring that the informal sector also benefits from the various Government Schemes. The next generation job portal, National Career Services

(NCS2.0), will significantly aid in bridging the gap between employers and job seekers. The revival of the *Shram Suvidha* and *Samadhan* portals will facilitate ease of doing business for employers and lead to faster resolution of labour disputes.

As we get into the specifics of these announcements, it is clear that they are designed to address challenges for preparing our labour market today and in the future.

First Timers: A Lifeline for Youth Entering the Workforce

India's demographic dividend can be fully realised if our youth are successfully integrated into the workforce. Whether it's a lack of relevant skills, insufficient work experience, or simply the challenge of finding a job in a competitive market, the process of transitionining from education to employment for youth can be daunting.

The First Timers Scheme is a direct response to these challenges. By offering a one-month wage to all individuals newly entering the formal sector, the Government is providing a crucial financial cushion to help young workers get started. This support will be disbursed through direct benefit transfers, with up to Rs 15,000 provided in three instalments to first-time employees registered with the Employees' Provident Fund Organisation (EPFO). With an eligibility limit of a salary of Rs 1 lakh per month, this scheme is expected to benefit 210 lakh youth across the country.

The importance of this initiative cannot be overstated. By easing the financial burden of starting a new job, the First Timers Scheme helps kickstart the journey of young workers, many of whom come from economically disadvantaged backgrounds. It encourages them to take up formal employment, where they can benefit from job security, social security and opportunities for career growth. Moreover, by incentivising young people to enter the formal workforce, the scheme also contributes to the broader goal of formalising India's labour market.

Job Creation in Manufacturing: Revitalising a Critical Sector

While the services sector has been the dominant driver of India's economic growth in recent decades, the manufacturing sector remains a critical pillar of the economy. It is not only a major contributor to GDP but also a key source of employment, particularly for semi-skilled and unskilled workers.

In recognition of these challenges, the government has introduced a new scheme to incentivise job creation in the manufacturing sector, with a specific focus on first-time employees. This initiative ties incentives to the employment of these workers, providing direct benefits to both employees and employers in relation to their EPFO contributions during the first four years of employment. The scheme is expected to benefit approximately 30 lakh youth entering the workforce in the manufacturing sector while at the same time incentivising their employers.

This is a strategic move that addresses multiple objectives. First, it encourages manufacturers to hire more workers, thereby helping to reduce unemployment and underemployment in the economy. Second, it supports the development of a skilled workforce in the manufacturing sector, which is essential for enhancing productivity and competitiveness. And third, it aligns with the Government's broader push to make India a global manufacturing hub, particularly in key industries such as electronics, textiles, and automotive.

The potential impact of this initiative in the manufacturing sector is significant, along with related announcements including the credit guarantee scheme for MSMEs and internships at top companies, coupled with infrastructure investment by the Central Government. The new centrally sponsored scheme for skilling will also help bridge a critical gap felt by employers and will benefit 20 lakh youth who will be skilled over a 5-year period. By boosting employment in the manufacturing sector, the government is not only creating jobs but also laying the groundwork for long-term economic growth. A vibrant manufacturing sector can drive exports, attract foreign investment, and create a ripple effect of economic benefits across the supply chain. Moreover, by linking incentives to EPFO contributions, the scheme also promotes greater social security coverage for workers, which is a crucial aspect of building a more inclusive economy.

Support for Employers: Easing the Path to Expansion

For any economy to thrive, it is essential that businesses, particularly small and medium enterprises (SMEs), have the support they need to grow and expand. SMEs are the backbone of the Indian economy, accounting for a significant share of employment and economic activity. However, they often face significant challenges when it comes to scaling up, including financial constraints, regulatory burdens, and a lack of access to skilled labour.

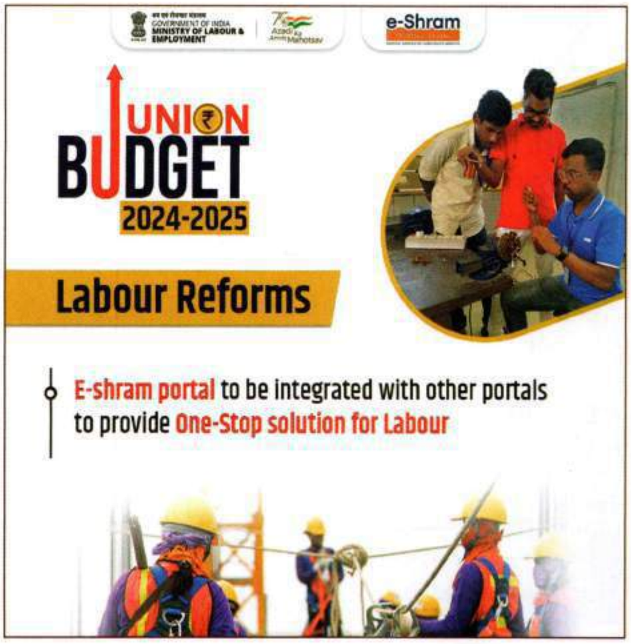
To support employers, a scheme has been designed to address these challenges by providing targeted financial assistance to businesses that are expanding their workforce. Under this scheme, the Government will reimburse employers up to Rs 3,000 per month for two years towards their EPFO contribution for every additional employee hired with a salary of up to Rs 1 lakh per month. This initiative is expected to incentivise the additional employment of 50 lakh people across the country.

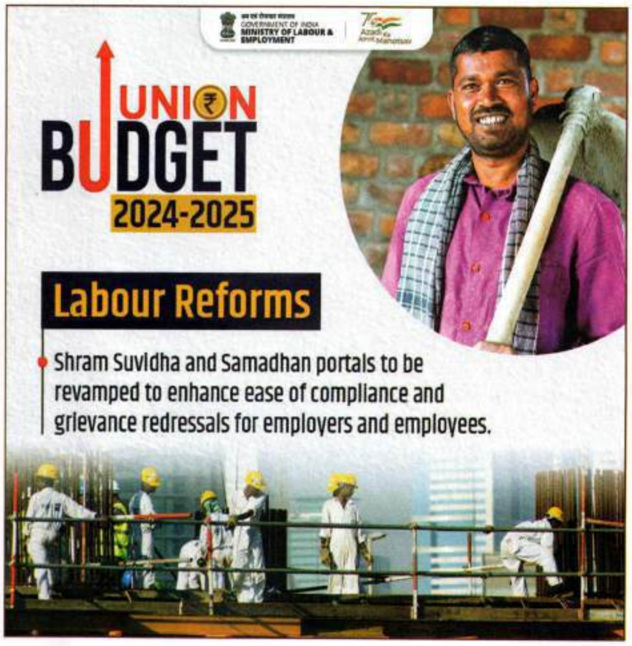
This scheme is a win-win for both employers and employees. For employers, it reduces the cost of hiring new workers, making it easier for them to expand their operations and increase production. For employees, it creates more job opportunities and enhances their access to formal employment, with all the associated benefits such as job security, social security, and career development.

Services to Labour

The Budget envisages *eShram* portal as 'one-stop-solution' for unorganised workers by integrating a wide array of services to labour through integration of the *e-Shram* portal with other existing platforms, creating a one-stop solution for workers seeking employment, skills training, and career guidance, besides facilitating access to various government schemes.

The next generation National Career Services (NCS2.0), set to be developed on Open Network principles, will enable faster job searches and provide end-to-end services by opening up the job market. This data-driven approach will help workers stay ahead of the curve by identifying





emerging trends and matching their skills with the demands of the market. It will also enable policymakers to make more informed decisions about workforce development, ensuring that our education and training systems are aligned with the needs of the economy.

Shram Suvidha and Samadhan Portal: Streamlining Compliance for Businesses

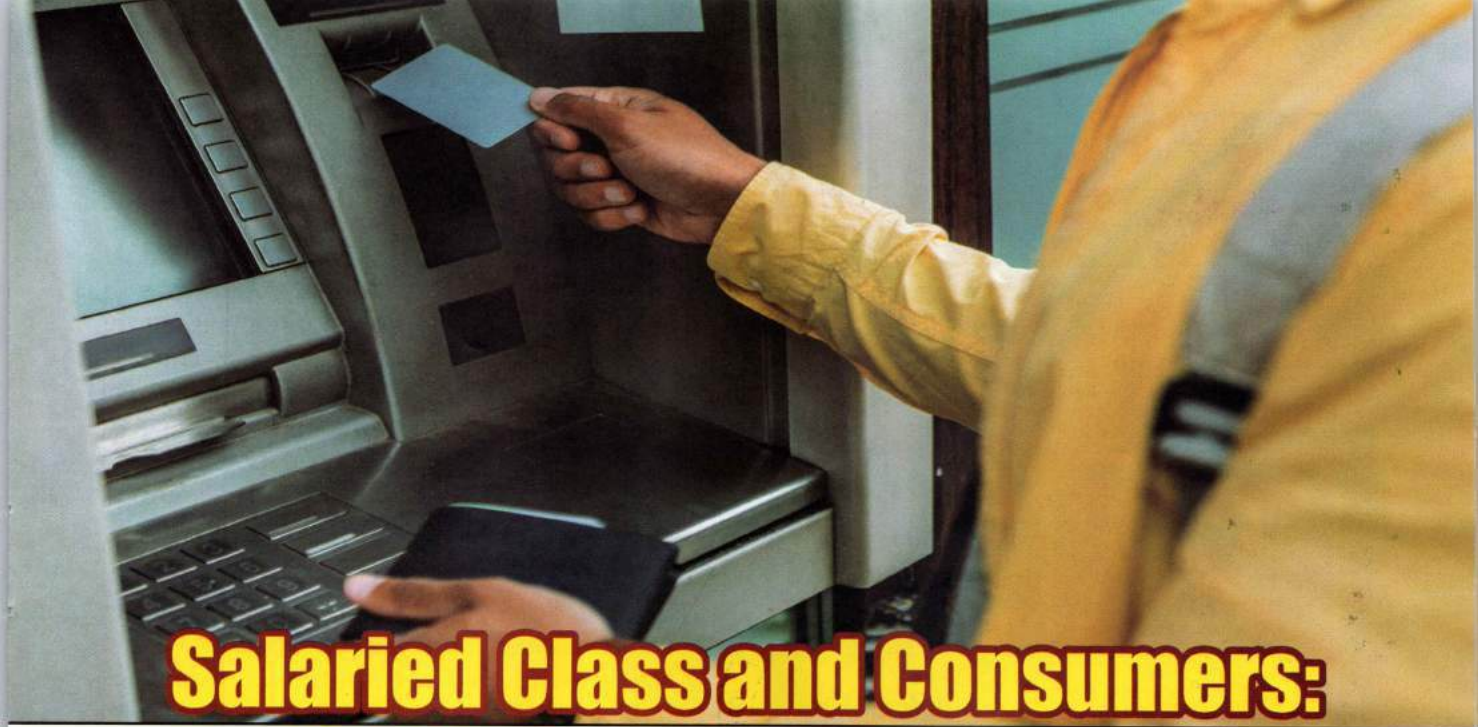
The *Shram Suvidha* and *Samadhan* portals, two key platforms that have been instrumental in enhancing ease of compliance for industry and trade, will be revamped. These portals have played a crucial role in simplifying labour law compliance, particularly for small and medium-sized businesses that often lack the resources to navigate complex regulatory requirements.

The revamped portals will offer improved features and functionalities, making it even easier for businesses to comply with labour regulations. By streamlining these processes, the Government is reducing the administrative burden on businesses, freeing them up to focus on what they do best—creating jobs and driving economic growth.

This initiative is part of a broader effort to create a business-friendly environment in India. By making it easier for businesses to operate, the Government is encouraging investment, innovation, and job creation. It also aligns with the Government's vision of making India a more attractive destination for both domestic and foreign investors by ensuring that the regulatory environment is transparent, efficient, and conducive to growth.

Conclusion

The budget announcements made for the Ministry of Labour and Employment mark the beginning of a new chapter in India's employment story. The whole-of-government approach is clearly reflected in the budget announcements. They reflect a deep understanding of the challenges facing our labour market and address them in a holistic and comprehensive manner. By focussing on job creation, youth employment, support for employers, and the empowerment of workers, these initiatives are laying the foundation for a more prosperous and equitable economy. ❑



Salaried Class and Consumers: Key to Viksit Bharat

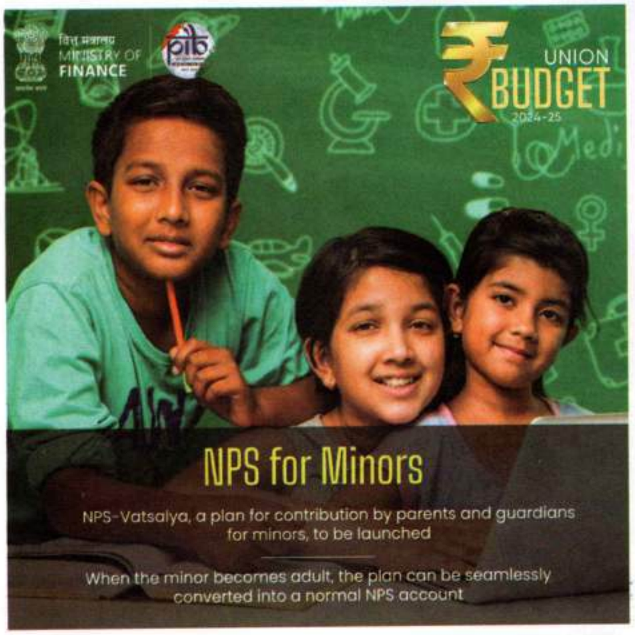
The Union Budget 2024-25 focuses on achieving a $10 trillion GDP by 2033 and a 'developed country' status by 2047 through a virtuous cycle involving salaried individuals and consumers. Key measures include raising the standard deduction, changing tax slabs, introducing the Employment Linked Incentive (ELI) Scheme, and a Paid Internships Scheme. For consumers, the budget aims to increase disposable income and reduce prices, with actions such as reduced customs duties and plans for GST rate rationalisation. The budget emphasises enhancing regular income and consumption to support economic growth.

SHISHIR SINHA | The author is a senior business journalist. Email: hblshishir@gmail.com

"To become a developed nation, we need to strive to be a US$ 30 trillion economy by 2047 with a per capita income of US$ 18,000 per annum. The GDP would have to grow 9 times from today's US$ 3.36 trillion, and the per capita income would need to rise 8 times from today's US$ 2,392 per annum."

– Vision for Viksit Bharat@2047: An Approach Paper by NITI Aayog, released on 27 July 2024

When a nation aims to become the third-largest economy in the world with a GDP of $5 trillion in the next three years, $7 trillion by 2030, $10 trillion by 2033, and set a higher goal of becoming a 'developed country' by 2047, then it needs a strong virtuous cycle. This is the cycle where one positive leads to another positive, and the process continues for betterment, first at the micro-level and then at the macro-level. In this entire cycle, there are two important categories of people: salaried and consumers. Are these two different? The answer is that all salaried people could be consumers, but not all consumers need to be salaried.



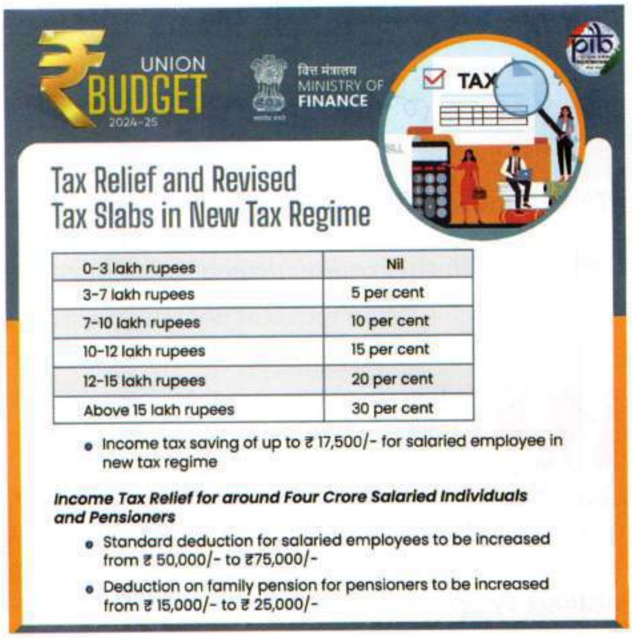
Both of these categories get special mention in the budget analysis. One reason for that is the sheer size of these two categories. Although there is not one complete set of government data for salaried people in India, there are two sources for getting an estimate of this class. First, income tax data for Assessment Year 2023-24 shows around 3.8 crore out of 7.97 crore returns declared salary income in their returns between more than Rs 91,000 and Rs 177.5 crore. Second, the Annual Periodic Labour Force Survey of 2022-23 found the share of regular wage or salaried employees among workers in usual status at 47.1 per cent and 50.8 per cent for male and female, respectively, in urban areas. The corresponding figures in rural areas are 14.3 per cent and 8 per cent respectively.

There is one more reason for the importance of the salaried class. The Union Budget for FY 2024-25 estimates getting Rs 11.87 lakh crore from Personal Income Tax (PIT) as compared to Rs 10.20 lakh crore from Corporate Income Tax (CIT). Needless to mention here that a good chunk of PIT comes from salaried assessees, hence, there will be close scrutiny of the Union Budget to determine what measures are for the salaried class in the income tax. Based on the announcements, there are two measures for salaried employees, with one having pensioners too. There are some other measures that can either help in increasing the number of salaried persons in the formal sector or boost the employability of educated youths:

1. **Standard Deduction:** The Budget proposed raising the standard deduction by 50 per cent to Rs 75,000 from Rs 50,000. After a gap of 13 years, this deduction was re-introduced by then Finance Minister Late Arun Jaitley in the budget of Fiscal Year 2018-19 and the amount was Rs 40,000 in lieu of the exemption in respect of transport allowance (Rs 19,200 per annum), and reimbursement of miscellaneous medical expenses (Rs 15,000 per annum) which means a net gain of Rs 5,800, but most importantly, this resulted in reducing paper work and compliance.

   In the Interim Budget for Fiscal Year 2019-20, this deduction was raised to Rs 50,000, and now, from the current fiscal, it would be Rs 75,000, but with the caveat that only salaried persons will get the benefit of a higher deduction, provided they opt for the New Income Tax regime. Along with salaried persons, deductions have been raised on family pensions to Rs 25,000 from Rs 15,000 for pensioners too, opting for the New Income Tax Regime. The new provision will provide relief to about four crore salaried individuals and pensioners.

2. **Change in New Income Tax Regime:** Neither there is any change in the number of slabs nor in the rates. However, three slabs have been expanded. The previous slab of Rs 3 lakhs to Rs 6 lakhs will now be Rs 3 lakhs to Rs 7 lakhs, while the rate remains at 5 per cent. Similarly, the slab of Rs 6 lakh to Rs 9 lakh will now be Rs 7 lakh



to Rs 10 lakh, with a rate of 10 per cent. Slab of Rs 9 lakh to Rs 12 lakh is now contracted to Rs 10 lakh to Rs 12 lakh at a rate of 15 per cent.

"With these changes (hiking standard deducting and restructuring slabs), a salaried employee in the new tax regime stands to save up to Rs 17,500 in income tax," said Finance Minister Smt Nirmala Sitharaman in her budget speech.

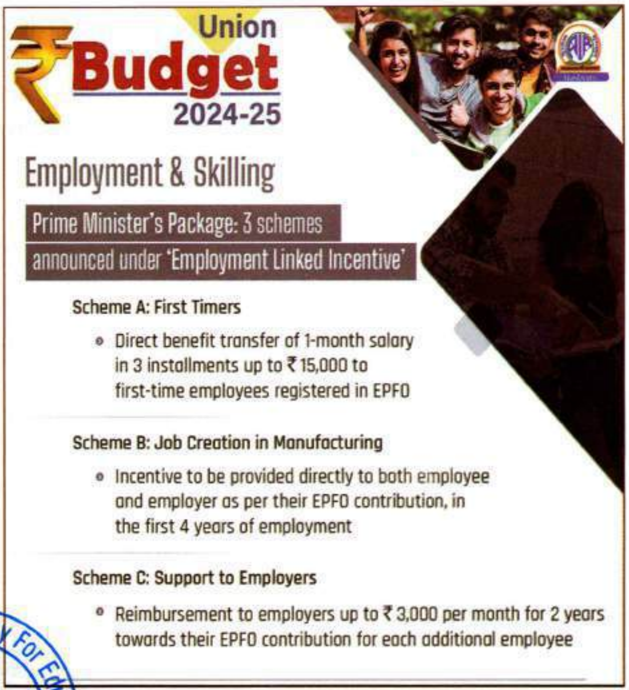
3. **Employment Linked Incentive (ELI) Scheme:** In order to add more and more employed persons to the category of salaried persons, a three-tiered ELI scheme has been proposed:

i. **Scheme A:** Under this, a one-month wage up to Rs 15,000 will be given to all persons newly entering the workforce in all formal sectors. The amount will be given in 3 instalments through the direct benefit transfer. The eligibility limit will be a salary of Rs 1 lakh per month. The scheme is expected to benefit 2.1 crore youth.

ii. **Scheme B:** This aims to incentivise additional employment in the manufacturing sector, linked to the employment of first-time employees. An incentive will be provided at a specified scale directly to the employee and the employer with respect to their EPFO contribution in the first 4 years of employment. The scheme is expected to benefit 30 lakh youth entering employment and their employers.

iii. **Scheme C:** This will cover additional employment in all sectors. All additional employment within a salary range of Rs 1 lakh per month will be counted. The government will reimburse employers up to Rs 3,000 per month for 2 years towards their EPFO contribution for each additional employee. The scheme is expected to incentivise additional employment for 50 lakh people.

4. **Paid Internships Scheme:** This could help in temporary addition in persons getting fixed income every month. It aims to provide paid internship opportunities in 500 top companies to 1 crore youth in 5 years. They will gain exposure for 12 months to the real-life business environment, varied professions and employment opportunities. The participant will get a monthly stipend of Rs 5,000, along with one-time assistance of Rs 6,000. Companies will be expected to bear the training cost and 10 per cent of the internship cost from their CSR funds.



All these, combined with skilling through the upgradation of ITI (Industrial Training Institutes) under the Prime Minister's Package for Employment and Skilling involve an outlay of Rs 2 lakh crore and aim to benefit 4.1 crore youth.

Budget for Consumers

From the salaried class and job seekers, let's move to another important category called 'consumers' and find out what is in store for them. However, before that, it is important to know who is a consumer and what are the new trends in consumption. Normally, all salaried people are categorised as consumers. Also, it is believed that anyone who buys a good or avails of a service and pays a consideration, can be termed a consumer. Combining these, India can have 100 crore or more consumers. However, the same cannot be said if one takes a look at global benchmarks. According to World Data Lab (WDL), an Austria-based well-recognised data enterprise, spending more than $12 a day in 2017 PPP (Purchasing Power Parity) puts an individual in 'Consumer Class'.

Using this, the Washington-based Brookings Institution highlighted that the size of the consumer class in India is 47.3 crore out of a population of over Rs 140 crore. In 2023, it grew by 3.1 crore. The average consumer in India is 30 years old, and growth will be among young people. By 2030, India will be home to 35.7 crore young consumers under 30 years old, the largest 'young consumer market' in the world. India's consumer class is much more dispersed. Only around half of its consumer class lives in urban areas. By 2030, India will be home to one-fifth of the world's youth consumer market. India's consumer class boasts a young, geographically dispersed population with significant potential for growth in consumer spending, the study said.

Leading global consultancy firm Deloitte has observed a notable trend among Indian consumers stating that, "Indian consumers are becoming aspirational". In a report on the Indian economy, the firm said that the rapid growth of the middle-income class has led to rising purchasing power and even created demand for premium luxury products and services. India's per capita income has steadily increased from US$1,673.95 in 2014 to US$2,341.10 in 2022.

In its latest edition of the bi-monthly 'Consumer Confidence Survey' by the Reserve Bank of India, it has been said that for the year ahead, consumer confidence remained at an elevated level in the optimistic terrain, though it declined, albeit marginally, due to relatively tempered sentiments on the general economic situation and employment prospects. Consumers expect a higher rise in overall spending over the next year vis-à-vis the previous survey round. Also, more respondents expect an increase in both essential and non-essential spending.

Meanwhile, an important indicator of consumption trend in India, Private Final Consumption Expenditure (PFCE), published along with GDP estimates, is not very encouraging. As per the provisional estimates of gross domestic product for 2023-24, released by the National Statistical Office, the growth rate of PFCE at constant prices in 2022-23 and 2023-24 is 6.8 per cent and 4.0 per cent, respectively. The growth rate of PFCE at current prices in 2022-23 and 2023-24 is 14.2 per cent and 8.5 per cent, respectively. These data necessitate measures of consumption boosts through budget and also through the GST Council.

Keeping all these in mind, a twin strategy can be used: providing more money in the hands of people and making the goods and services cheaper. It is required accordingly. Here, are the measures expected to boost consumption:

a. On account of changes in standard deduction and slabs under the new tax regime, taking into account average spending of Rs 10,000 per person for 4 crore estimated beneficiaries, the consumer market is likely to get a boost of Rs 40,000 crore during the current fiscal.

b. A new scheme to offer internships to 1 crore youths in the country's top 500 companies. The scheme is likely to expand the formal job market, which in turn has the potential to expand the consumer market.

c. The push on urban and rural growth will help boost rural consumption and also increase discretionary spending.

d. An import duty exemption for 25 critical minerals, including lithium. India has been exploring ways to secure supplies of lithium, a critical raw material used to make electric vehicle batteries. This is expected to boost the sale of EVs.

e. Custom duty on gold and silver has been reduced, which is expected to boost the sale of jewellery and also bring down the cost of manufacturing where these are used as input.

f. Custom duty on mobile phones and mobile chargers reduced, which means the prices of imported mobile phones will come down. This will prompt domestic companies to also reduce prices.

g. An intention to expedite GST rate rationalisation has been shown in the budget. Although a final call will be taken by the GST Council, the hope is that there will be some action soon that will have an impact on the overall consumer market.

Conclusion

The journey to achieve *'Viksit Bharat'* is not just about higher allocation in the budget, but also to ensure enhancing regular income along with a gradual increase in consumption over a period of time. These two acts play a key role in the virtuous cycle. The Union Budget 2024-25 appears to have understood this philosophy and acted upon it. ❑

(Views are personal)

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Productivity and Resilience in Agriculture

DR JAGDEEP SAXENA
The author is the former Chief Editor, Indian Council of Agricultural Research, New Delhi. Email: jagdeepsaxena@yahoo.com

Time and again, scientific research has proven its critical importance in agriculture development through the 3Is (Intervention, Invention and Innovation). The nation is proud of having one of the world's largest agricultural research, extension and education networks. But now it needs to be fine-tuned to tackle new and emerging challenges. Hence, the Government proposed 'a comprehensive review of the agricultural research setup to bring focus to raising productivity and developing climate resilient varieties'. The Government has committed to building DPI for agriculture as an open source, open standard and interoperable public good. It will be a multifaceted architecture that will enable inclusive and farmer-centric solutions through relevant information services on various aspects of farming. Budget allocations and provisions for agriculture and allied sectors have a visionary approach to making India a self-reliant and developed nation by 2047.

The Government of India has made a strong commitment and initiated a string of transformative steps to make India a developed nation by 2047. Agriculture is one of the key drivers of change in this pursuit due to its critical role in the national economy. Currently, the agriculture sector provides livelihood to about 42.3 per cent of the population and contributes 18.2 per cent in the national GDP at current prices. The Union Budget (2024-25) has echoed the sentiments of the Government towards agriculture by designating it as one of the priority sectors in the strategic roadmap for '*Viksit Bharat*'. In her budget speech, the Finance Minister identified nine priority areas in which 'Productivity and Resilience in Agriculture' occupied the top slot. An allocation of Rs 1.52 lakh crore has been made for agriculture and allied sectors to support ongoing schemes and new programmes for agricultural development and farmers' welfare. Several initiatives, schemes and measures have helped the agriculture sector to register an average annual growth of 4.18 per cent at constant prices over the last five years.

Due to the furtherance of agriculture along its many verticals, foodgrain production recorded an all-time high of 329.7 million tonnes in 2022-23. However, in 2023-24, a mild slump hit it (328.8 million tonnes), mainly because of poor and delayed monsoons. Horticulture and other allied sectors, such as animal husbandry, dairying and fisheries, are also registering impressive growth, boosting overall agricultural production. But agriculture is fraught with many challenges that primarily include climate change, degradation of natural resources, low productivity and a significant deficit in infrastructure. The Union Budget, through its various provisions and allocations, is endeavouring to address such challenges in a holistic way with a future vision.

Research and Roadmap

Time and again, scientific research has proven its critical importance in agriculture development through the 3Is (Intervention, Invention and Innovation). The nation is proud of having one of the world's largest agricultural research, extension and education networks. But now it needs to be fine-tuned to tackle new and emerging challenges. Hence, the Government proposed 'a comprehensive review of the agricultural research setup to bring the focus to raising productivity and developing climate resilient varieties'. Government funding will be provided to develop appropriate interventions to address specific challenges. To make the effort more widespread, the private sector will also be involved in research and oversee the conduct of research. The Government has also set a target to release 109 high-yielding and climate-resilient varieties of 32 field and horticultural crops. Such varieties are generally resistant or tolerant to various biotic and abiotic stresses such as high temperatures, droughts, water logging, etc.

The Department of Agricultural Research and Education, a wing of the Ministry of

Digital Empowerment of Farmers – Digital Public Infrastructure for Agriculture

The Government is vigorously pursuing the integration of digital technologies in the agriculture sector to digitally empower farmers and improve outreach and delivery of services. The concept of 'Digital Agriculture' is fast evolving in India to improve efficiency, enhance productivity and ensure sustainability in agriculture. To further strengthen it, the Finance Minister stated in her budget speech, "Buoyed by the success of the pilot project, our Government, in partnership with the states, will facilitate the implementation of the Digital Public Infrastructure (DPI) in agriculture." During this year, a digital crop survey for ongoing Kharif season, using the DPI, will be taken up in 400 districts. Additionally, farmers across the country and their lands are to be covered in three years. The details of six crore farmers and their lands will be brought into the farmer and land registries. Last year, the Union Government asked states and union territories to automate or digitise the process of area enumeration/Girdawari of crops at field level by adopting a digital crop survey. A pilot project was also rolled out across 12 states with success.

The Government has committed to building DPI for agriculture as an open source, open standard and interoperable public good. It will be a multifaceted architecture that will enable inclusive and farmer-centric solutions through relevant information services on various aspects of farming. DPI for agriculture comprises mainly three components: the Agri Stack, Krishi-DSS, and Krishi Mapper (KM). Agri Stack has three major foundation registries (databases), which register farmers, village maps and crops in fields. This will enable administration to access farmer IDs, geo-tagged farm plots and crop-sown data in digital format. Krishi Decision Support System is designed to integrate and store data, such as remote sensing data, weather data, soil data etc. It also stores data on government schemes pertaining to agriculture and farmers' welfare, along with its beneficiaries. KM is a geospatial mobile application for all the land-based schemes and provides comprehensive soil fertility and profile mapping for suitable soil health-related interventions. KM acts as a digital tool for crop estimation surveys by accurately measuring crop yields through crop cutting experiments on randomly selected plots. The evolution of digital agriculture in India is supported by a robust ecosystem, which visualises the support of over 1,000 agri-tech startups, including women-led startups. Agriculture is embracing the digital domain very fast.

Agriculture and Farmers Welfare responsible for the development of technologies and human resources, has been allocated Rs 9941.09 crore, which was Rs 9876.60 crore in the revised budget of the last fiscal. A study estimated that for every rupee invested in agricultural research (including education), there is a payoff of Rs 13.85. In 2022-23, Rs 19.65 thousand crore was spent on agricultural research, which yielded promising results. During this period, the Indian Council of Agricultural Research (ICAR), the apex national organisation for agricultural research, education and extension, released 347 new varieties and hybrids of 44 field crops for cultivation across India. In addition, 99 varieties of horticultural crops were notified for commercial cultivation. The Government is eyeing a rich dividend for farmers and the nation by strengthening the agricultural research ecosystem with human and financial resources.

Nature and Nurture

Moving from research to nature, the Government proposed to rope in one crore farmers across the country into natural farming in the next two years. They will be supported by certification and branding services to scale up the marketing of their produce with the best profit margins. Further, 10,000 need-based bio-input resource centres will be established to facilitate the supply of specific inputs directly to farmers. Scientific institutions and Gram Panchayats will be involved to get the best results in the interest of farmers. At national level, natural farming gained prominence when Finance Minister mentioned it in her 2019 budget speech as a means of doubling farmers' income. Natural farming, often intertwined with organic farming, is a non-chemical system of farming with no use of external inputs. It integrates crops, trees, livestock and traditional indigenous practices with the concepts of resource recycling and on-farm resource optimisation. The Government has shown its commitment to promote natural farming due to its cost-effectiveness and scope for increasing employment and rural development. A 'National Mission on Natural Farming' is already underway as a separate and independent scheme from 2023-24. It was formulated by upscaling a previous scheme, the *'Bhartiya Prakritik Krishi Paddhati'.* With the current emphasis on natural farming, the Government aims to create awareness and provide training, handholding and capacity building for farmers. The ICAR has developed impactful natural farming models and an appropriate package of practices specific to different agroclimatic zones of the country.

Aiming for nutritional security, enhancement in the income of farmers and employment generation, the Government has proposed to develop large-scale clusters for vegetable production closer to major consumption centres. Increasing public awareness of health and nutrition issues has pushed up market demand for vegetables, mainly in urban areas. Currently, with enabling policies and financial support, India is the second-largest producer of vegetables in the world. During 2022-23 (final estimate), the nation produced 212.55 million tonnes of vegetables, which included a vast variety of vegetables grown in different agroclimatic zones. Being highly perishable (mostly vegetables) in nature, it needs quick transportation to consumption centres and otherwise requires long-term storage and processing facilities.

So, the Government has decided to promote Farmer Producer Organisations, cooperatives and start-ups for vegetable supply chains including collection, storage and marketing. The development of infrastructure and services for vegetable processing will help ensure a reduction in the wastage of perishable vegetables and an enhancement in value addition. The Government has taken several initiatives to improve supply chain management, from farm gates to retail outlets. An ambitious scheme, 'Operation Green', was launched in 2018-19 to developing value chain for tomatoes, onions and potatoes (TOP). But now its coverage has been expanded from only three crops to 22 perishable crops, which include 10 fruits, 11 vegetables and one marine product, i.e, shrimp. 'Operation Green' is working with twin objectives—price stabilisation in case of glut situations and supporting integrated value chain development projects.

Despite impressive self-sufficiency in foodgrains, milk and other major commodities, the production of pulses and oilseeds is still struggling with many challenges. To meet increasing domestic demand for both of these essential commodities, the Government relies on imports, causing a dent on exchequer. The Government has already taken several initiatives to increase production and productivity of pulses and oilseeds and has now again emphasised it in its budget presentation. The Finance Minister said, "For achieving self-sufficiency in pulses and oilseeds, we will strengthen their production, storage and marketing." At the same time, a strategy is being put in place to achieve 'atmanirbharta' for oilseeds such as mustard, groundnut, sesame, soybean and sunflower. The National Food Security Mission—Pulses, operational in 28 states and two Union Territories, aims for area expansion and productivity-enhancement through various interventions such as cluster demonstrations on improved packages of practices, cropping systems, seed production, etc. In addition, the certified seeds of high-yielding varieties of pulses are provided in the form of seed minkits at no cost to the farmers. The Minimum Support Price (MSP) for pulses has also been increased over the years to encourage farmers to grow more pulses by ensuring remunerative prices. In an almost similar pattern, the National Food Security Mission-Oilseeds is encouraging farmers to take up cultivation of oilseeds by providing incentives.

Such measures have resulted in an impressive increase in total pulse and oilseed production by 43 per cent and 44 per cent respectively during the last ten years (2014-15 to 2023-24).

Fisheries and Forex

Allied sectors of Indian agriculture, that is, animal husbandry, dairying and fisheries are significant growth drivers of the agricultural economy. The Government is eyeing these enterprises as a primary source for enhancing farm incomes. In the current budget, the Finance Minister has allocated Rs 4521 crore to Department of Animal Husbandry and Dairying (DAHD) for funding ongoing schemes and the creation of new research facilities. Provisions have been made for the establishment of the Animal Health Institute, Small Livestock Institute, the Breed Improvement Centre and a Centre of Excellence for Animal Husbandry. Other than specific budget allocations to DAHD, the Government proposed a new credit guarantee scheme for MSMEs, easier access to working capital and a network of quality testing labs to empower MSMEs for success. DAHD said, 'These initiatives will provide immense support to the dairy and livestock processing industries, fostering growth and innovation.' Such measures will enhance productivity, ensure animal health and facilitate infrastructure development.

The fisheries sector, often referred to as a 'sunrise sector', has emerged as a significant contributor to the national economy, and also supports the livelihood of approximately 30 million people, mainly belonging to marginalised and vulnerable communities. The Government is consistently taking steps to accelerate development in this sector, which is also beaming with ample export opportunities. Last year (2022-23), India recorded fish production of 17.54 million tonnes, making it the third largest producer globally. In the current budget, the Department of Fisheries has been earmarked Rs 2616 crore, a jump of 54 per cent over Rs 1701 crore in last fiscal. A major chunk of Rs 2352 crore is allocated to boost activities under the flagship scheme *'PM Matsya Sampada Yojana'* (PMMSY). While presenting the interim budget, the Finance Minister said PMMSY is being stepped up to enhance aquaculture productivity from the existing 3 to 5 tonnes per hectare, doubling exports to Rs 1 lakh crore and generating 55 lakh employment opportunities. Five integrated aquaparks will be established along with the launch of Blue Revolution 2.0 to bolster the sustainable and holistic development of the fisheries sector in India. Aiming for large-scale exports from fisheries sector, the Government has proposed several initiatives and measures in the current budget. Now, financing for shrimp farming, processing and export will be facilitated through the National Bank for Agriculture and Rural Development (NABARD). Further, financial support for setting up a network of Nucleus Breeding Centres (NBC) for shrimp brood stocks will be provided. Thus, the availability of quality brood fish for quality seed production will be ensured. NBCs will improve the genetic quality of aquaculture species for higher quality and significantly reduce the country's dependence on import of shrimp broodstock. To support this activity further, the Finance Minister announced a reduction in Basic Customs Duty (BCD) on certain broodstock, polychelate worms, shrimp and fish feed to five per cent. Customs duty on various inputs for the manufacture of shrimp and fish feed now stands exempt. During the last fiscal, India's seafood exports hit an all-time high of over Rs 60,000 crore, of which frozen shrimp had a major share, nearly two-thirds, of the total. Shrimp exports have increased significantly to Rs 40,013 crore in 2023-24 from Rs 8,175 crore in 2011.

Budget allocations and provisions for agriculture and allied sectors have a visionary approach to making India a self-reliant and developed nation by 2047. Further, welfare and financial empowerment of poor and small farmers are at the core. ❑

Innovation, Research and Development

The Economic Survey 2023-24 notes that despite being one of the fastest-growing economies in the world, India's annual per capita carbon emission is only about one-third of the global average. India has successfully decoupled its economic growth from greenhouse gas emissions, reducing the emission intensity of its GDP. It is envisioned to develop technology for domestic production, recycling and overseas acquisition of critical minerals, to abate the challenges posed by dependency on other countries for critical minerals. Apart from the renewable sources of energy, the Budget also recognises the importance of nuclear energy for the energy mix for *Viksit Bharat*. Idea of *Viksit Bharat* requires a major push for mainstreaming of technology diffusion across various strata and state-based entities. This would need greater focus on peoples' participation and engagement of STI with current challenges.

SACHIN CHATURVEDI | The author is the Director General, RIS (Research and Information System for Developing Countries), New Delhi. Email: dg@ris.org.in

The Budget 2024-25 in the realm of science, technology and innovation (STI) has launched several initiatives reinforcing national commitment for *Viksit Bharat* 2047. The budgetary allocations for STI are supplemented by additional efforts for the institutionalisation of new initiatives and ensuring private sector participation. As the numbers indicate, the Ministry of Science and Technology has got an additional allocation of 31 per cent over that of last year. The Budget now stands at Rs 16628.12 crore, which was Rs 12701.63 crore in 2023-24.There has been a substantial 64 per cent increase in allocation for the Department of Science and Technology (DST), followed by a 42 per cent rise in the Budget of the Department of Biotechnology (DBT), and also that of the Department of Scientific and Industrial Research (DSIR).

The allocation for STI is spread across several Ministries and Departments such as the Department of Space, Department of Atomic Energy, Ministry of Earth Sciences, Ministry of Electronics and Information Technology, Ministry of Environment, Forests and Climate Change, Ministry of New and Renewable Energy, Ministry of Health and Family Welfare, Ministry of Agriculture and Farmers Welfare, and Ministry of AYUSH. Budget allocations across key STI-related ministries and departments are presented in Table 1.

Institutionalisation of R&D initiatives has got a new direction with the Anusandhan National Research Foundation (ANRF), which was launched in the last Budget. The ANRF was announced with an allocation of Rs 50,000 crore during 2023-28. In line with this, the allocation for NRF (including ANRF) in the Budget 2024-25 has gone up from Rs 258.60 crore to Rs 2000 crore. This jump of 673 per cent is likely to help in achieving major tasks assigned to address the pressing need for a professional and comprehensive research framework that directs human and material resources towards carrying out well-coordinated research across disciplines and all types of institutions. The overarching goal of the NRF is to seed, grow and promote research and development and foster a culture of research and innovation throughout Indian universities, colleges, and research institutions. This will augment the efforts of the Atal Innovation Mission, which is the flagship initiative of the Government of India to create and promote a culture of innovation and entrepreneurship across the country.

In addition, Budget 2024-25 has also launched several initiatives such as the Critical Mineral Mission, India AI Mission and PM Surya Ghar Muft Bijli Yojana, largely dedicated for ensuring the competitiveness of the Indian economy, its future resilience and sustainability.The Budget 2024-25 has given a major boost to some of the existing schemes and programmes such as the National Quantum Mission, National Mission on Interdisciplinary Cyber-Physical System, Deep Ocean Mission, Cyber Security, Modified Programme for Development of Semiconductors and Display Manufacturing Ecosystem in India, Solar Energy, National Green Hydrogen Mission, Pradhan Mantri Ayushman Bharat Health Infrastructure Mission, and Krishionnati Yojana (including Digital Agriculture & Seed/Planting Material). The Budget has also proposed a thorough assessment of the agriculture R&D system and its future priorities.

New Missions New Initiatives

The Economic Survey 2023-24 notes that despite being one of the fastest-growing economies in the world, India's annual per capita carbon emission is only about one-third of the global average. India has successfully decoupled its economic growth from greenhouse gas emissions, reducing the emission intensity of its GDP. In this context, the Budget 2024-25 has furthered India's effort towards a cleaner and greener future which may be seen in the newly launched solar power initiatives like PM Surya Ghar Muft Bijli Yojana which enabled the promotion of subsidised installation of

Table 1: Budget Allocation for Select STI-related Ministries/Departments (in Rs Cr)

	2021-22 (Actual)	2022-23 (Actual)	2023-24 (Revised)	2024-25 (Estimate)
Ministry of Science & Technology	13113.98	12333.14	12701.63	16628.12
Ministry of Earth Sciences	2184.43	1568.86	2879.02	3064.80
Department of Space	12473.84	10139.43	11070.07	13042.75
Department of Atomic Energy	22613.26	24641.61	26799.78	24968.98
Ministry of Electronics and Information Technology	8118.65	8199.25	14421.25	21936.90
Total	58,504.16	56,882.29	67,871.75	79,641.55
Share in Total Budget	1.54	1.36	1.51	1.65

***Source**: Budget papers of the relevant years.*

rooftop solar panels for 1 crore households along with free electricity up to 300 units every month. The budget underlined the need for a roadmap for moving away from the 'hard to abate' industries from 'energy efficiency' targets to 'emission targets'. Additionally, the Finance Minister announced the setting up of the Critical Mineral Mission during the Union Budget. It is envisioned to develop technology for domestic production, recycling and overseas acquisition of critical minerals, to abate the challenges posed by dependency on other countries for critical minerals.

The Artificial Intelligence has been viewed as a significant futuristic technology to realise the vision of 'Make AI in India and Make AI work for India'. The Government has envisioned the India AI programme as a mission-centric approach for leveraging transformative technologies to boost inclusion, innovation, and adoption for social impact. The India AI Mission was launched in June 2024, aiming to position India as a leading AI R&D and deployment country, harnessing the AI's transformative potential to drive economic growth, improve public services and address societal challenges. In line with this vision, and recognising the significance of emerging technologies like AI, the Union budget has allocated Rs 551.75 crore to the IndiaAI Mission to advance artificial intelligence R&D.

Role of Private Sector

The Budget 2024-25 has allocated Rs 1 lakh crore to support private sector-driven research and innovation to build a more robust national S&T ecosystem and accelerate the development of new technologies and products, through a dedicated corpus fund and capital expenditure (CAPEX). The proposed capital expenditure of Rs 11,11,111 lakh crore, almost 3.4 per cent of GDP, would continue to play a catalytic role in India's journey for a dollar 5 trillion economy. As pointed out by the Economic Survey, the spill-over effect of rising CAPEX is now evident across the private sector as well. According to the Survey, private CAPEX grew by 19.8 per cent to 18.7 lakh crore, as the combined CAPEX of central and state government has grown by 22.9 per cent. The private CAPEX include not only dwellings but also IPR and machinery equipment. These efforts together would incentivise the private sector to invest in innovative technologies, advanced R&D projects which are crucial for driving technological advancement, and enhancing global competitiveness in the high-tech sector and economic growth. The investments in R&D infrastructure are critical for strengthening the national STI ecosystem for which enhanced collaboration between public and private sectors is necessary.

The government aims to create a vibrant space economy, making India a significant player in the global space economy by expanding the commercial potential of the space sector, encouraging private sector participation and fostering innovation. In this context, the Budget announced the setting up of a venture capital fund of Rs 1,000 crore to support start-ups and projects in the space sector, in line with the vision and strategy formulated by the Indian Space Policy 2023. The Department of Space has seen a 18 per cent increase in its allocation.

Future Resilience and Sustainability

In line with PM's priority of digitalising citizen centric services and delivery mechanisms,

BUDGET
2024 - 2025

Powering Innovation, Research & Development

Anusandhan National Research Fund to be set up for basic research and prototype development

Financing pool of **₹ 1 lakh crore** to spur private sector-driven research and innovation at commercial scale

the Budget proposed greater allocation for modernisation of land record both in rural and in urban areas. This would give fillip to the on-going programme of unique identification numbers for land in rural and urban areas called '*Bhu-Aadhaar*'. This is part of a larger effort to improve land administration, planning and management. The Budget earmarks funding allocation for the digitalisation of land records and GIS mapping as well as support to States for modernising their land record system, together with strengthening technological infrastructure and integrating *Bhu-Aadhaar* with other digital initiatives. The unique identity for citizens particularly farmers in rural areas, would provide a greater integration of various streams of benefits and services being delivered, which would sharpen focus on beneficiaries and would also help in minimising exclusions.

In terms of future preparedness, energy security and green energy transition was another key priority of this year's Budget. The budgetary allocation for the Ministry of Environment, Forests and Climate Change has increased (Rs. 3330.37 crore) with enhanced funding proposed for the Environment, Education, Awareness, Research and Skill Development (launched last year). Recognising the growing concerns of pollution, allocation has also increased for the control of pollution. Additionally, the Ministry of New and Renewable Energy has seen a 143 per cent increase in their allocation from Rs 7848 crore to Rs 19,100 crore. The budget saw significant allocation for renewable energy projects, particularly grid solar energy – solar power to reduce carbon emissions and promote sustainable development. Incentives for electric vehicle have been introduced, including for manufacturer and consumers. As may be recalled during the G20 Presidency India launched the Global Biofuel Alliance (GBA). The priority has continued in this Budget, as allocation for Bio-energy programme has gone up from Rs 75 crore to Rs 300 crore.

Apart from the renewable sources of energy, the Budget also recognises the importance of nuclear energy for the energy mix for *Viksit Bharat*.The budget has announced the setting up of small and modular nuclear reactors as well as R&D of newer technologies for nuclear energy.The substantial higher allocation of Rs 600 crore towards the National Green Hydrogen Mission, which was launched in January 2023, reflects commitment towards scaling the mission and accelerating the development of green hydrogen infrastructure and technologies for India's energy transition and climate goals as well as positioning India as a global leader in green hydrogen production and technology.

The Ministry of Electronics and Information Technology has seen a substantial 52 per cent increase in its budgetary allocation in this Budget (Rs. 21936.90 crore). Higher allocation is proposed for its Central Sector Schemes vis-a-vis R&D in IT/ Electronics, capacity building and skill development (launched last year). Significant allocation has also made towards cyber security projects (Rs 759 crore), PLI for Large Scale Electronics and IT Hardware Manufacturing (Rs 6200 crore), as well as the Modified Programme for Development of Semiconductors and Display Manufacturing Ecosystem in India (Rs 6903 crore). The increased funding is in line with the India Semiconductor Mission launched by the Prime Minister in 2021 to further India's efforts towards developing domestic semiconductor industry and manufacturing capabilities.

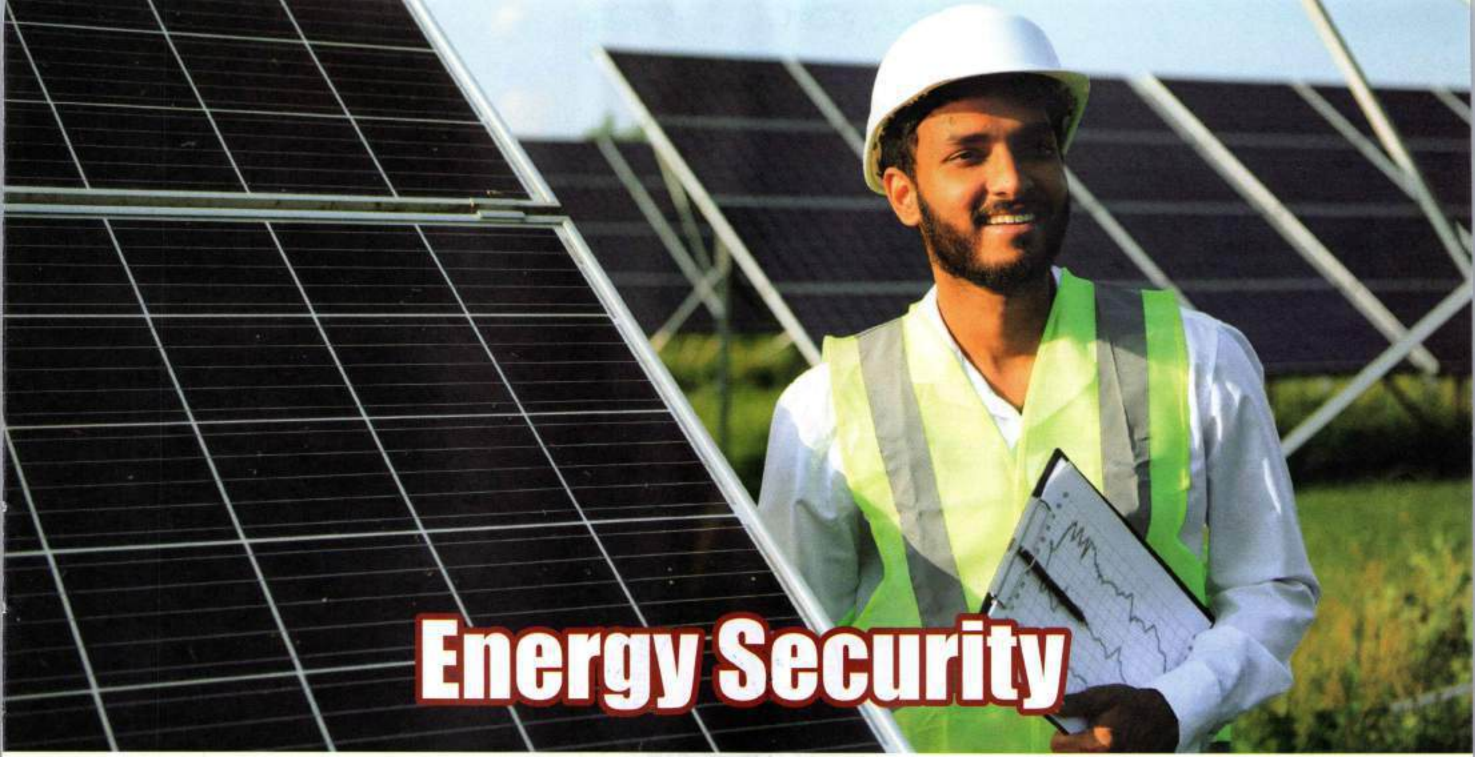
The innovation focus is also there in several line ministries, including health and agriculture. With an increase in allocation for the Ministry of Health and Family Welfare, the funding for National Institute for Research in Digital Health and Data Science (NIRDHDS) has increased from Rs 2295 crore to Rs 2732 crore. In order to ensure an inclusive and comprehensive health infrastructure for the country, a substantial 23 per cent increase is seen in the allocation for the Ministry of Ayush (Rs 3712.49 crore), with an enhanced budget proposed for AYURGYAN and Ayurswasthay Yojana. Greater funding is proposed for the promotion of international cooperation as well as the National Ayush Mission.

At the same time, productivity and resilience in agriculture was another key priority of the Budget. The Budget underlined the focus on agriculture research to raise productivity and develop climate-resilient varieties as well as the government's commitment to facilitate implementation of the Digital Public Infrastructure in agriculture. It also announced that new 109 high-yielding and climate-resilient varieties of 32 field and horticulture crops will be released for cultivation by farmers. There is an increase in budgetary allocation for agriculture R&D in schemes relating to agriculture mechanisation, natural resource management, crop sciences, horticultural sciences, livestock sciences, and fisheries sciences from Rs 1945 crore to Rs 2145 crore.

Idea of *Viksit Bharat* requires a major push for mainstreaming of technology diffusion across various strata and state-based entities. This would need greater focus on peoples' participation and engagement of STI with current challenges. The proposed Budget has strived at this delicate balance between the Budgetary allocation for future preparedness and current and contemporary challenges. The Budget also made an effort to focus on those sectors which would augment total factor productivity and inclusion through access and equity. The focus on ANRF is an important step towards institutionalisation of long-term objectives and inter-ministerial coordination for science, technology and innovation advancement. ❑

(Views are personal)

The research support provided by Dr Amit Kumar, Dr Sneha Sinha and Mr Syed Arslan Ali are duly acknowledged.



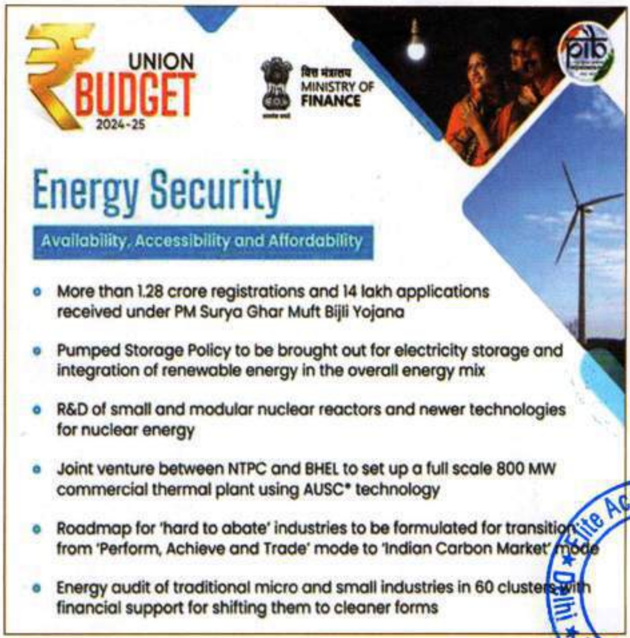
Energy Security

As per Economic Survey 2023-24, India's energy needs are expected to grow 2 to 2.5 times by 2047 to meet a growing economy's developmental priorities and aspirations. Energy security would be enhanced through diversification of the sources of imports and increased domestic production while reducing energy demand. According to Ministry of Power, 54.5 per cent of India's power came from thermal sources (like coal, gas and diesel), while 45.5 per cent came from non-fossil fuel sources, which includes 1.8 per cent nuclear power in June 2024. Adopting gasification technology in India can revolutionise the coal sector, reducing reliance on imports of natural gas, ammonia, methanol and other essential products while reducing emission. High dependency on imports mainly for petroleum for its energy needs shifts to high import dependency for Solar PV panels and critical minerals whose supply chain is heavily skewed. India needs to target diversified energy sources. Such diversification will help minimise risk associated with energy system while pursuing with low emission path.

DR S C LAHIRY

The author is a former Adviser to the Government of Jharkhand (on deputation) and the Planning Commission. He served for 25 years in the Planning Commission, Government of India, in various capacities across the Industry and Minerals, Agriculture, and allied sectors. Email: sclahiry@gmail.com

The International Energy Agency (IEA) defines energy security as the uninterrupted availability of energy sources at an affordable price. Energy security concerns are key driving force of energy policy, considering that resources are limited, the pace of energy transition would need to factor in alternative demands on the resources for improving resilience to climate change and for sustained social and economic development. Energy security refers to a country's ability to ensure a reliable, sustainable and uninterrupted supply of energy to meet its economic, social and political needs. The four key objectives of the new energy policy of our country



are: access at affordable prices, improved energy security and independence, greater sustainability and economic growth.

Today, India is heavily dependent on oil and gas imports while also importing coal. As per Economic Survey 2023-24, India's energy needs are expected to grow 2 to 2.5 times by 2047 to meet a growing economy's developmental priorities and aspirations. Energy security would be enhanced through diversification of the sources of imports and increased domestic production while reducing energy demand. Our fossil fuel requirement which comprise 90 per cent of our commercial primary energy supply are increasingly being met by imports which means that reducing fossil fuel consumption would promote the twin goals of sustainability and security. NITI Aayog's India Energy Security Scenarios 2047 estimates that India will need to invest US$250 billion annually until 2047 to prepare its energy systems for net-zero pathways.

Budget 2024-25

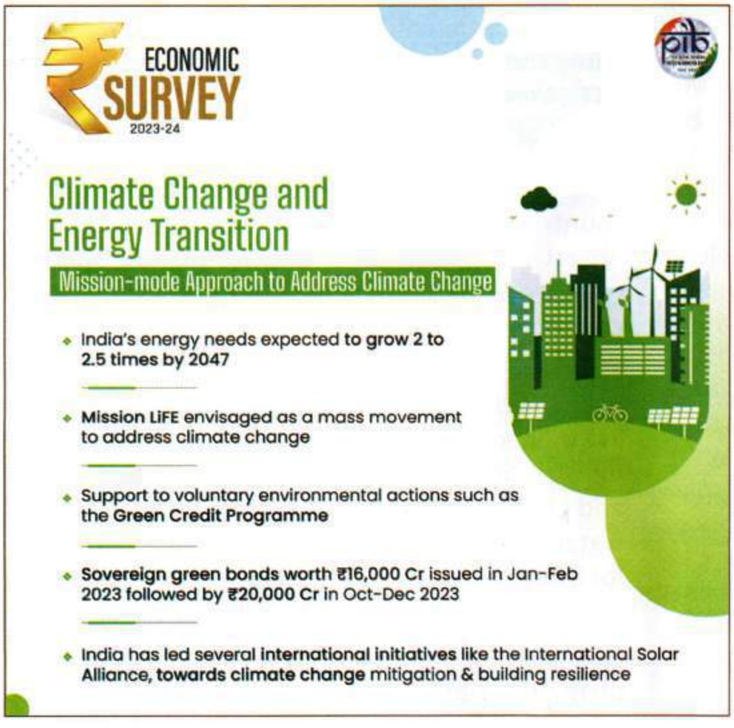
As part of the Union Budget 2024-25, the Finance Minister announced following key measures to enhance energy security:

- The Government will collaborate with the private sector on research and development for Bharat Small Modular Reactors and new nuclear energy technologies, and establish Bharat Small Reactors.
- A policy document titled 'Energy Transition Pathways' will be released to balance employment, growth and environmental sustainability.
- A policy to promote pumped storage projects for electricity storage will be introduced which will facilitate smooth integration of growing share of renewable power with its variable and intermittent nature in the overall energy mix.
- A joint venture between NTPC Limited and Bharat Heavy Electricals Limited will be established to create an 800 MW commercial plant using advanced ultra super critical technology.
- A roadmap for moving the 'hard to abate' industries from 'energy efficiency' targets to 'emission targets' will be formulated. Appropriate regulations for transition of these industries from the current 'perform, achieve and trade' mode to 'Indian carbon market' mode will be put in place.
- *PM Suraj Ghar Muft Bijli Yojana* has been launched to install rooftop solar plants to enable 1 crore households obtain free electricity upto 300 units every month. The scheme has generated remarkable response with more than 1.28 crore household registrations besides 14 lakh applications.
- As support to traditional micro and small enterprises, an investment-grade energy audit of traditional micro and small industries in 60 clusters including brass and ceramic will be facilitated. Financial support will be provided for shifting them to cleaner forms of energy and implementation of energy efficiency measures. The scheme will be replicated in another 100 clusters in the next phase.

Budgetary Allocations FY 24-25

Apart from estimates and revenue, the annual budget exercise provides directions to the economic policy measures and articulate major initiatives of the Government. In 2024-25, the Ministry of Non Renewal Energy (MNRE) has been allocated Rs 19100 crore which is an annual increase of 86.7 per cent over the budget allocation (Rs 10222.00 crore) in 2023-24. The budgetary allocation for the Ministry of Power has been pegged at Rs 20502 crore (as against Rs 20671 crore budgeted in 2023-24) which is 0.81 per cent lower than the allocation in the previous year. The Ministry of Coal has been allotted Rs 192.58 crore (as against Rs 192.32 crore budgeted in 2023-24) whereas budgetary allocation has been slashed with respect to Ministry of Petroleum and Natural Gas at Rs 15930.26 crore (as against Rs 41007.72 crore budgeted for the year 2023-24).

Amongst the major MNRE schemes, Solar power off Grid is allotted a significant hike i.e., Rs 10000.35 crore as against budgeted allocation of Rs 4970 crore in 2023-24. This covers installation of 3 lakh solar street lights, distribution of solar study lamps and installation of solar power packs under Phase 3 implementation. The allocation under KUSUM (*Kisan Urja Suraksha evam Utthan Mahabhiyan*), launched by the Government to increase the income of farmers and provide sources for irrigation and de-dieselisation of agri-sector, is passed at Rs 1496 crore as against Rs 1996.46 crore budgeted in 2023-24. The existing Solar Power (GRID) scheme (which is having budgeted allocation of Rs 4000 crore in 2023-24) is proposed to be subsumed under *PM Surya Ghar Muft Bijli* scheme announced in Feb'24 alongwith remaining financial outlay and liabilities. Rs 8250 crore is allotted in the scheme. Rs 600 crore is allotted in 2024-25 as against Rs 500 crore budgeted in 2023-24 for the Green Energy Corridor scheme. The provision will be utilised for capacity addition of 6000 ckm (circuit kilometres) transmission infrastructure under intra state Green Energy Corridor project. Higher allocation for the year 2024-25 (Rs 600 crore against Rs 297 crore in 2023-24) is made in respect of National Green Hydrogen Mission. The provision is to make India the global hub for production, usage and export of green hydrogen and its derivatives and to achieve self-sufficieny through clean energy and move in the direction towards global clean energy transition. Among the major schemes of Ministry of Power, a) Strengthening of power system in North Eastern states allotted Rs 2416 crore as against budgeted Rs 2902.62 crore in 2023-24, b) Rs 12585 crore earmarked for Reform linked distribution scheme against Rs 12071 crore budgeted in 2023-24, c) Rs 3021 crore allotted to the scheme –Assistance to CPSUs against budgeted Rs 3931.34 crore in 2023-24. The Ministry of Power is implementing some important schemes, eg Energy conservation with a budget provision of Rs 25 crore (Rs 30.90 crore provided for 23-24), Manufacturing zones under Atmanirbhar Bharat package allotted Rs 80 crore against budgeted Rs 100 crore in 23-24, Promoting energy efficiency in the economy with budget allocation of Rs 40 crore against budget of Rs 103.80 crore in 23-24. The Ministry of Power is entrusted with the development of battery energy storage system and a budget allocation of Rs 96 crore is made in 24-25 (as viability gap funding). The allocations for Ministry of Coal and Ministry of Petroleum and Natural Gas are made primarily for enhancing domestic production, exploration/drilling, identification of new mining block, etc and adoption of clean technologies, etc.



Present Status

There are three typical features characterised in India's energy use- high use of bio-mass as a share of the total primary energy supply, predominance of imports of petroleum and use of domestic coal for electric power generation. Petroleum (over 85 per cent imported) has a diversified presence across transport, industrial sector, residential and commercial sector which poses a significant challenge given the volatility in oil prices and limited access to natural gas. Coal accounts for about 70 per cent of the total electric power generation.

Coal is critical input material to industries eg steel, iron, cement, paper, etc. According to Ministry of Power, 54.5 per cent of India's power came from thermal sources (like coal, gas and diesel), while 45.5 per cent came from non-fossil fuel sources, which includes 1.8 per cent nuclear power in June 2024. The composition in the electricity sector has significantly changed due to the phasing in renewable energy (RE) with non-fossil power capacity being 45.5 per cent (as of June 2024) from around 32 per cent in April 2014. Incidentally, India pledged in Paris (Paris Agreement for Climate Change) to generate 40 per cent of India's power capacity from non-fossil fuel sources and create an additional carbon sink of 2.5 to 3 billion tonnes of CO_2 equivalent by 2030. India has overachieved the target set for installed power capacity from non-fossil fuel sources.

Policy Initiatives

Recent initiatives for enhancing the production of RE are a) *PM-Surya Ghar Muft Bijli Yojana* launched in February 2024 with a total outlay of Rs 75,021 crore is expected to add 30GW of solar capacity and reduce 720 million tonnes of CO_2 equivalent across the solar value chain, b) the Government has notified the national offshore wind energy policy and offshore wind energy lease rules 2023. Several offshore zones have been identified for harnessing this potential and c) underscoring the importance of green hydrogen in reducing carbon emissions in the hard-to-abate sectors. Indian Green Hydrogen Mission targets 5MMT (million metric tonnes) of green hydrogen by 2030. The scheme offers financial incentives to boost electrolyser manufacturing and production. Additionally, the budget 2024-25 promotes the development of small and modular nuclear reactors in partnership with the private sector and emphasises renewable energy storage solutions and advanced ultra-supercritical thermal power plants. These initiatives will bolster energy security by diversifying energy sources and reducing reliance on fossil fuels, while also mitigating climate change by lowering greenhouse gas emissions. Enhancing the storage and integration of renewable energy, the government is set to introduce a robust Pumped Storage Policy (PSP). This initiative aims to provide a large-scale solution for storing excess electricity, facilitating smoother integration of renewable sources into India's energy mix and ensuring continuous power supplies while helping moderate prices. A roadmap will be formulated to transition 'hard to abate' industries from energy efficiency targets to emission targets. This shift will move from the 'Perform, Achieve and Trade' mode to the 'Indian Carbon Market' mode, setting a new regulatory framework for these sectors. The government intends to set up a Critical Mineral Mission for domestic production, recycling of critical minerals and overseas acquisition of critical mineral assets. There is a proposal to fully exempt customs duty from 25 critical minerals, such as lithium, copper, cobalt and rare earth elements, which are critical for sustainable technologies such as electric vehicles and renewable energy systems. The Government has launched several clean coal initiatives including coal gasification mission aiming to gasify 100 million Tonnes of coal by 2030. Adopting gasification technology in India can revolutionise the coal sector, reducing reliance on imports of natural gas, ammonia, methanol and other essential products while reducing emission. Initiatives like extracting coal based methane gas (CBM), coal beneficiation, carbon capture and storage (CCS), etc mitigate emissions and enhance environmental sustainability. Adoption of super critical and ultra super critical technologies for thermal power plants has led to lower emission and higher efficiency. Further, it is proposed that 800 MW commercial plant using advanced ultra super critical technology in a Joint Venture (JV) between NTPC Limited and BHEL will be established.

Challenges

Energy demand is expected to increase as the country develops in line with the goal of Viksit Bharat and a concommitant rise in RE capacity may lead to baseline efficiency as the supply composition changes.

Large scale phasing in of RE poses several risks associated with intermittency and dispatchability in the energy system. Addressing the issue is critical for significant deployment of RE. Expanding RE and clean fuels will increase demand for land and water. The availability of land is a major challenge for India.

Critical minerals/metals are required for RE and battery storage technologies. The sources of minerals are geographically concentrated eg graphite (China 79 per cent), cobalt (DRC 70 per cent), rare earths (China 60 per cent) and Lithium (Aus 55 per cent). The concentration level is even higher for processing with China dominating across the board. India's initiative to build domestic capacity should be seen in the backdrop of the current supply chain for RE which is heavily skewed. Shifting India's high import dependency from petroleum to solar panels and critical minerals, which have complex supply chains and are currently subject to geopolitical issues, would be a challenge.

Solar PV waste recycling is a challenge. SPV panels have lifetime of 25-30 years. SPV waste recycled as scrap poses risks to environment and human life due to toxic metals.

Conclusion

For India's ensuring energy security, RE should be expanded as much as possible in the short to medium term, the focus should also be actively adopting clean technologies. The Government initiatives for cleaner coal eg coal gasification, CBM, CCS and coal beneficiation, etc to mitigate emissions and enhance environmental sustainability needs to be promoted. Solar power installed capacity has increased significantly. However, risks are associated with the large scale phasing in of renewable eg intermittency, grid integration, back up power generation, storage, etc. It is important to supplement with other non-fossil fuel resources eg nuclear, biofuel and hydrogen. High dependency on imports mainly for petroleum for its energy needs shifts to high import dependency for Solar PV panels and critical minerals whose supply chain is heavily skewed. India needs to target diversified energy sources. Such diversification will help minimise risk associated with energy system while pursuing with low emission path. It is suggested to integrate RE with nuclear power, bio-fuels and green hydrogen to address the risks associated with large-scale RE adoption. Financial support proposed for traditional micro and small scale sector to transition to cleaner energy forms will bring in positive change. ❑

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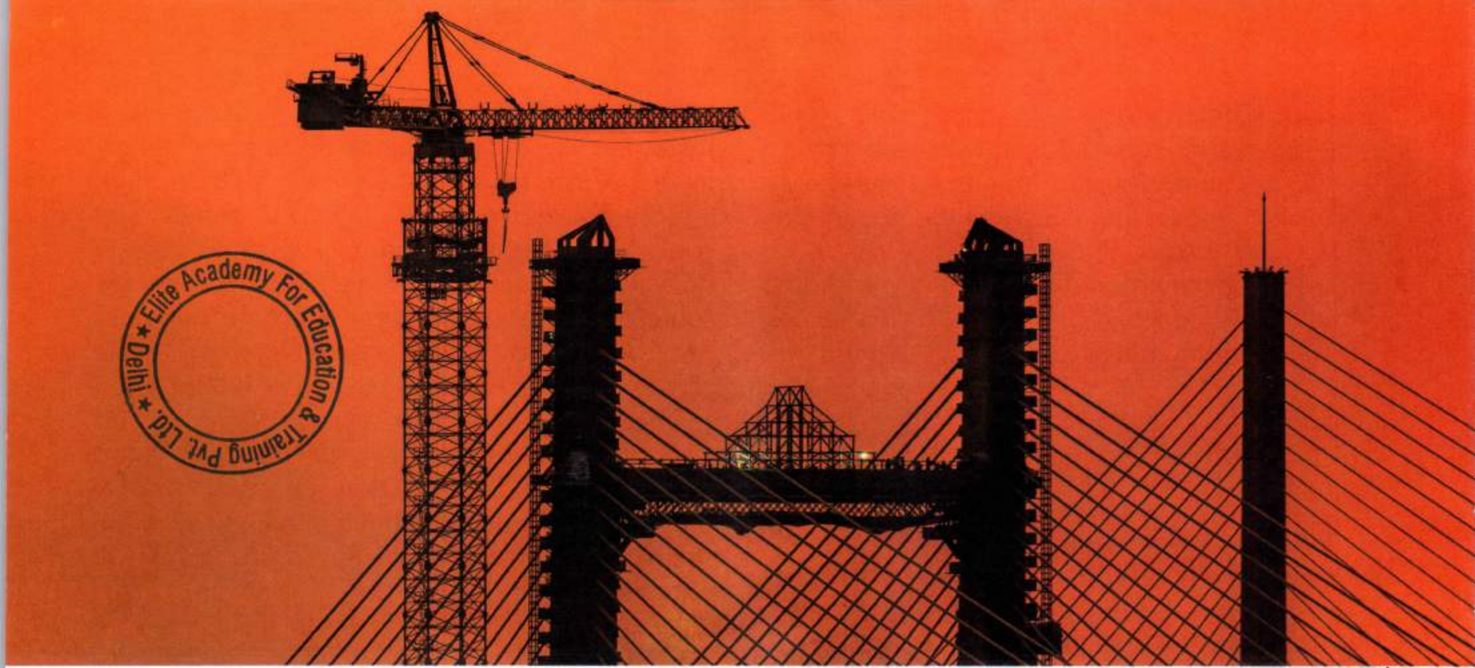


Fostering Infrastructure Development in India Through Fiscal Interventions

DR AMIYA KUMAR MOHAPATRA

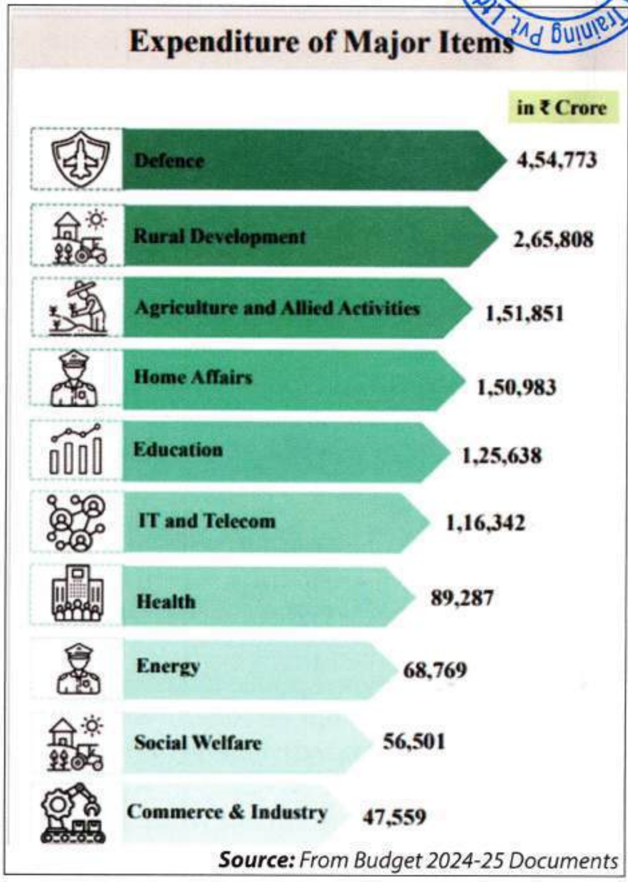
The author is the Professor and Dean of Research at Jaipuria Institute of Management, Indore.
Email: amiyacademics@gmail.com.

India is uniquely placed in terms of demographic dividends, with about 40 per cent of youth (18-35 years) and over 62 per cent of the population falling under the age group of 15-59 years, which is expected to rise up to 65 per cent by 2035. This demographic dividend of India can be leveraged with the help of adequate strategic measures for integrated development and transformation of population into a treasure house of productivity and prosperity in general and with the help self-sustaining infrastructure development in particular. Infrastructure plays a significantly critical role, in economic development and acts as a key driver in sustaining the growth and development process amidst uncertain and challenging environments. The ripple effects of infrastructure investments include boosting the economy, improving the quality of life, fostering regional and balanced development, enhancing positive social impact, and fostering all-encompassing economic and societal progress through innovation and technology integration. It is a fact that the inherently rapid growth of infrastructure will cause some environmental impacts and is likely to create challenges for the nation. Hence, green and sustainable infrastructure projects are the need of the hour, considering the well-being of people, society and the planet.

The creation of resilient world-class and state-of-the-art infrastructure, viz., physical, social, financial and digital domains, is vital to the planned development of India's policy strategy to become *'Viksit Bharat@2047'— India as a 'developed nation'.* It was found from various studies that a 1 per cent increase in investment spending can boost the GDP by 1.0 to 1.5 per cent in India, which has direct impact on employment creation and sustainable development. Furthermore, it is found that investments in transportation, energy, and urban infrastructure foster systematic and fast-track development due to their greater multiplier effects. Evidently, the current budget for FY2024-25 has allocated funds for these sectors and other strategic sectors, considering their long-term effects on economic development and societal progress.

Key Infrastructure Initiatives and Allocations 2024-25

The provision for total capital expenditure is kept at Rs 11,11,111 crores out of the total budgeted expenditure of Rs 48,20,512 crores, which reflects an increase of 16.9 per cent in comparison to the previous year budget. This budget provision accounts to 3.4 per cent of GDP, which is the highest ever in the last few decades. An increase in CAPEX (capital expenditure) has been recorded in the last five years through strong fiscal support and allocations. The effective capital expenditure is Rs 15,01,889 crores, which ensures long-term socio-economic development and societal progress. This indicates the positive intent of the government in meeting the current needs and also to meet the future expectations of fast-developing India. The infrastructure investment of the past five years shows steady progression in the allocation; reflecting commitment and perseverance in boosting infrastructure across various sectors of the nation.



Source: *From Budget 2024-25 Documents*

Figure 1: Budget Expenditure of Various Sectors

Physical Connectivity Infrastructure

The budget provisions for enhancing physical connectivity and infrastructure development in India include investment in roadways, railways, airports, and ports, meant to build a robust, integrated and mutually supportive transportation system.

Roadways: The upgrade of the road network has led to resilient and efficient infrastructure that boosts economic opportunities, connectivity, tourism, and urbanisation. This sector remarkably attracted the highest private investment and asset monetisation. The use of new-age technology and sustainable raw materials has been incorporated into roadway development. Under *'Bharatmala Pariyojana',* the Government of India aims to build nationwide road networks to enhance connectivity and faster freight movement, which will help in reducing the logistic cost. Furthermore, the government plans to make roadways two-line with paved shoulders with minimal impact on the environment. To enhance and strengthen road connectivity, a special provisioning of Rs 26,000 crores is budgeted for the Patna-Purnea Expressway, Buxar-Bhagalpur Expressway, Bodhgaya-Darbhanga spurs, along with a 2-lane bridge over the Ganga. The roadways and highways have been allocated Rs 2.78 lakh crores to build robust road networks across the country.

Railways: India boasts the largest railway network in the world. Investment in the railway sector is on the horizon, as it unlocks various opportunities with the highest production for both locomotives and wagons. Multiple initiatives for

providing clean sanitation have been taken up by the government, including providing bio-toilets in and around stations and coaches. The principal focus on areas for enhancements like high-traffic corridors, energy corridors, mineral and cement corridors, and Rail Sagar corridors is to reduce carbon footprints by sourcing primarily through renewable energy. In this budget 2024-25, Rs 2.65 lakh crores of net capital expenditure is allocated for railway development, and this is expected to have a significant positive impact on growth.

Waterways: To enhance economic growth and achieve sustainable goals, investments in smart water technology and infrastructure help meet growing trade and increase India's maritime competitiveness in the global arena. An increased number of public-private partnership (PPP) projects have enhanced connectivity under the *PM Gati Shakti* National Master Plan and under the flagship of the *Sagarmala National Programme*. In addition, further development works are undertaken across port modernisation, connectivity, port-led industrialisation, the costal community, and inland water transport.

Airways: Investments in the aviation sector soar globally. The government has made a provision for capital expenditure of more than Rs 26,000 crores for the period FY20 to FY25 for the development, upgradation and modernisation of airports across India. Special provisions for leasing aircraft and the use of drones are seen that offer benefits in areas like education, agriculture, disaster management, and security.

Overall, *'PM Gati Shakti'* being a part of the infrastructure strategy, aims to create a more interconnected infrastructure system. In India, by streamlining various processes between different ministries and government bodies, concerted efforts are made to leverage technology and improve coordination, resulting in improved logistics efficiency, reduced costs and faster completion of infrastructure projects. The ultimate purpose is to increase efficiency in the infrastructure sector through unified infrastructure plan, effective and timely implementation.

Space Infrastructure

The Indian space sector has witnessed significant advancements, especially by ISRO (Indian Space Research Organisation), which has spearheaded the launch of fleets including the Polar Satellite Launch Vehicle (PSLV), Geosynchronous Satellite Launch Vehicle (GSLV), Launch Vehicle Mark-3 (LVM3), and the Small Satellite Launch Vehicle (SSLV). Considering the special provisions for space infrastructure, the Government of India is keen to make its presence in the global space arena on one hand and enhance national security and scientific programs after a successful string of missions on the other. Some of the significant milestones include the Mars Orbiter Mission (2014), ASTROSAT (2015), *Chandrayaan-2* Orbiter (2019) and subsequently, the *Chandrayaan-3* landing on the Moon (2023) and the Aditya – L1 mission (2023). In the budget 2024-25, the government has proposed a venture capital fund of Rs 1,000 crores to expand the space economy by 5 times in the next 10 years.

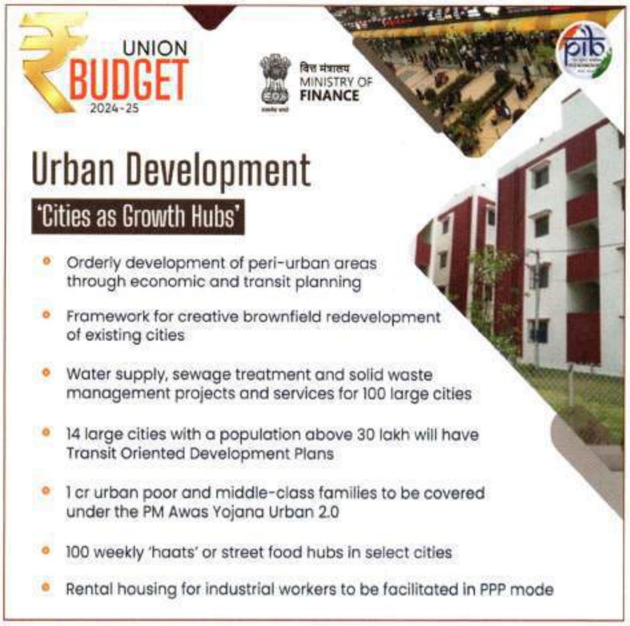
Digital Infrastrucure

A strong digital public infrastructure investment certainly opens up the gate to attaining the vision of India as 'Digital India', 'Fintech Nation,' and 'Startup India'. The investments in the creation and expansion of digital public infrastructure has opened up immense opportunities, which have ensured a better standard of living and the well-being of people. Special allocation for expansion of the broadband networks and strengthening of 'Digital India' initiative has improved digital connectivity, including access to technology for the common man, citizens, MSMEs, and corporations. In addition, the adoption of smart technologies has been found to be more efficient and sustainable in the areas of urban planning, energy management and transportation. Considering these multiplier effects, the Indian government has made special provision for these sectors in the budget and continues to strengthen integrated development though a policy framework as well. For instance, with a focus on digitalisation and improvement in the technology space, the IT and telecommunications sectors have a budget allocation of Rs 1.16 lakh crores.

The Government of India has launched various efficient infrastructure plans like *PM Gati Shakti, Bhuvan, Bharatmaps,* Single Window Systems, the *PARIVESH* portal, the National Data Analytics Platform, the Unified Logistics Interface Platform, Pro-Active Governance and Timely Implementation (*PRAGATI*), the India Investment Grid (IIG), etc. As a well-known fact, the timely and accurate communication network enabling digital infrastructure is the key success factor for the development of rural areas and reducing urban-rural migration, and these are undertaken under the flagship of the *BharatNet* project. In conjunction with the technology queue, the government is incorporating AI (Artificial Intelligence) to boost inclusion, innovation and social impact under *'AI in India and AI for India'.*

Energy Infrastructure

Power Sector: To build a sustainable ecosystem, there is an urgent need to push the Indian power sector portfolio through the enhancement of transmission grids and the generation of electricity by using maximum renewable energy resources. Revamped Distribution Sector Scheme (RDSS) with budget allocated is Rs 3.04 lakh crores (FY22-FY26) with an additional Rs 0.98 lakh crores government support, which aims to reduce aggregate technical and commercial losses by FY25. This sector saw a special provision to enhance grid supply with energy-efficient street lights and fans under programs like 'One Sun, One World, One Grid Initiative', the Street Lighting National Programme, the SAMARTH Mission, etc.



Renewable Sector: To mitigate the impact of carnivorous use of energy and its results, energy infrastructure has seen funding allocation to meet the Sustainable Development Goals of the United Nations-2030 Agenda and to meet its requirements. This infrastructure connects various other developments since it relies on them, thus creating a correlation where investing in this sector opens various opportunities for economic growth, enhancing the quality of life of people, improving living standards and promoting sustainable development. This sector is expected to attract Rs 30.5 lakh crores of investment in India between 2024 and 2030, with the aspiration of a gradual transition as a nation from conventional sources to non-fossil fuels.

Other Infrastructure Initiatives

The rural economy, which is the mainstay of the Indian economy, continues to get special thrust in the fund allocation of about Rs 2.66 lakh crores, which is around 12 per cent higher than the previous year budget. Under the *PM Awas Yojana,* three crore additional houses are announced for rural and urban areas. Rs 10 lakh crores of investment is proposed to meet the housing needs of 1 crore urban poor and middle-class families under *'Pradhan Mantri Awas Yojana'* (Urban 2.0). This includes central assistance of Rs 2.2 lakh crores covering the period of the next 5 years.

Pradhan Mantri Gram Sadak Yojana, Phase-IV, will be launched to provide all-weather connectivity to 25,000 rural habitations. Provision of financial support with a cost of Rs 11,500 crores is made for the accelerated irrigation benefit program, which includes *'Kosi-Mechi Intra-State Link'* and 20 other irrigation projects. The government has formulated a plan, *'Purvodaya'*, for the all-round development of the eastern region of the country, covering Bihar, Jharkhand, West Bengal, Odisha and Andhra Pradesh. This will cover human resource development, infrastructure, and open-up economic opportunities to make the region an engine to attain *'Viksit Bharat'*.

Social infrastructure, as usual, got special importance in the budget allocation as it improved the quality of life and societal progress. Education, health, drinking water, and sanitation facilities played crucial roles in overall well-being of the nation. The major initiatives that received budgetary support include *Ayushman Bharat*, the *National Health Mission*, the *AMRUT Scheme*, *Samagra Shiksha Abhiyan*, the *National Livelihood Mission*, etc. It is found from various research studies that investing in healthcare, education, and governance has a greater multiplier effect and has a positive impact on quality of life. It is noted that as social initiatives, Rs 38 lakh crores have been transferred since 2013, through the *'Jan Dhan Yojana-Aadhaar-Mobile (JAM)'* Trinity initiative.

To promote manufacturing, the government has recognised the need for industrial infrastructure in the right locations with appropriate facilities. A further proposal is made to create investment-ready 'plug and play' industrial parks with all sorts of infrastructure in or near 100 cities, through partnering with private sector and state governments. In addition, 12 new industrial parks are proposed under the National Industrial Corridors Development (NICD) programme. To encourage higher private participation in infrastructure investment to optimise the capital requirements in the budget, the government has proposed to implement viability gap funding and supports the policy and regulation. A market-based financial framework will be created to crowd in private finance, and promote private sector participation. An amount of Rs 1.5 lakh crores is provisioned as a long-term interest-free loan to support resource allocation for infrastructure development in the states. This is expected to contribute to balanced development across India.

Way Forward And 'Future of India@2047'

India's growth trajectory will take a new turn in boosting the economy, as a result of an increase in infrastructure spending; and will help in attaining *'Viksit Bharat@2047'- India as a 'developed nation'*, which promises overall holistic and sustainable development. The government has made adequate investment provisions for infrastructure development, since it is a vital engine for economic growth and societal progress. A positive correlation between infrastructure spending and GDP underscores the rise in infrastructure provisioning in the current budget FY2024-25, without compromising the fiscal consolidation objectives and targets.

Overall, the budget is predominantly focused on the development of 9 pillars of priorities, and infrastructure is one of them. Infrastructure has the major budgetary allocation, along with continued and strategic policymaking to intiate faster economic development and societal progress. Budgetary provision has opened up various opportunities for the youth, and social service provisions have been enhanced. To onboard the private sector and make them a part of infrastructure development, the government has started viability gap funding, tax reforms, and ease of market financing. These measures will not only attract private investments but also attract foreign direct investment (FDI) for fostering the holistic infrastructure development, which will have a multiplier effect on India's overall growth story.

It is a fact that the inherently rapid growth of infrastructure will cause some environmental impacts and is likely to create challenges for the nation. Hence, green and sustainable infrastructure projects are the need of the hour, considering the well-being of people, society and the planet. In addition, policymakers should ensure that the benefits of socio-economic development as a result of augmented infrastructure budgeting are percolated to the bottom of the pyramid; and reach the last-mile citizens. This can be ensured by strategic public policy interventions and good governance that keep the long-term national goals, which must be effective, inclusive, collaborative and sustainable. With these multiple yet growth-orientated interventions, India can forge ahead to emerge as a developed nation, as it gets aligned with global trends and particularly with a focus on a 'holistic and sustainable development agenda'. ❑

(Views are personal)

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Focus on the Manufacturing and Services Sectors

DR RANJEET MEHTA | The author is the Executive Director of PHD Chamber of Commerce & Industry (PHDCCI). Email: ranjeetmehta@phdcci.in

The Union Budget 2024-25 represents a monumental step towards achieving the vision of '*Viksit Bharat*' or Developed India. This vision is predicated on sustained efforts across nine priority areas like productivity and resilience in agriculture, employment and skilling, inclusive human resource development and social justice, manufacturing and services, urban development, energy security, infrastructure, innovation, research and development, and next-generation reforms with a particular focus on generating ample opportunities for all. Among these areas, the pillar of manufacturing and services is crucial, as it holds the potential to drive economic growth, create jobs, and foster innovation.

Manufacturing has historically been a cornerstone for the development of every economy. The Indian manufacturing industry generated 16-17 per cent of India's GDP pre-pandemic and is projected to be one of the fastest-growing sectors. By 2030, India will have the capacity to export goods worth US$ 1 trillion and is on the verge of becoming a major global manufacturing hub. The manufacturing sector, with 17 per cent of the nation's GDP and over 27.3 million workers, plays a significant role in the economy. Through the implementation of different programmes and policies, the government hopes to have 25 per cent of the economy's output come from manufacturing by 2025.

The Ministry for Heavy Industries & Public Enterprises, Government of India, has initiated *SAMARTH Udyog Bharat 4.0*, or *SAMARTH Advanced Manufacturing and Rapid Transformation Hubs*. The expectation is that this initiative will boost the manufacturing sector's competitiveness in the capital goods market. With an impetus on developing industrial corridors and smart cities, the Government aims to ensure the nation's holistic development. The corridors would further assist in integrating, monitoring, and developing a conducive environment for industrial development and will promote advanced practices in manufacturing.

India is gradually progressing on the road to Industry 4.0 through initiatives like the National Manufacturing Policy, which aims to increase the share of manufacturing in GDP to 25 per cent by 2025, and the PLI scheme for manufacturing, which was launched in 2022 to develop the core manufacturing sector at par with global manufacturing standards. The manufacturing sector in India is gradually shifting to more automated and process-driven manufacturing, which is expected to increase the efficiency and boost production of the manufacturing industry.

In the last five years, India has seen a rise in foreign technical collaborations, particularly in sectors like mobile phones, electronics, and food processing, with the US, Germany, and Japan being major technology transfer partners. Also, during the COVID-19 pandemic, India demonstrated its manufacturing prowess by rapidly producing pharmaceuticals and vaccines, changing perceptions about its manufacturing capabilities.

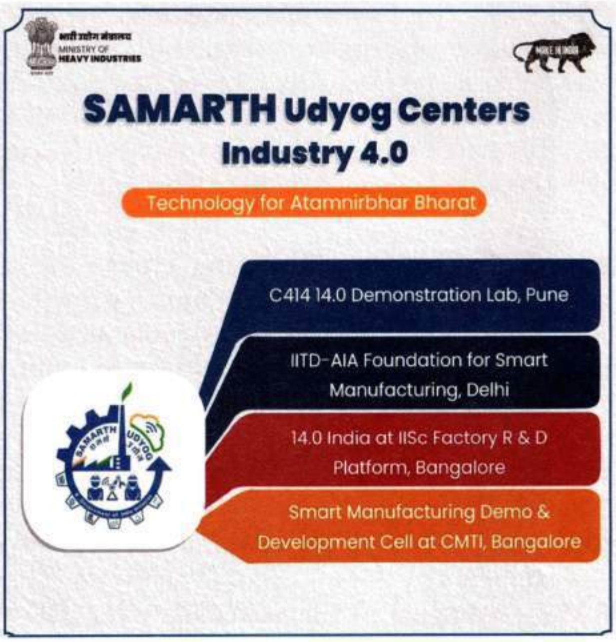
India now presents itself as a favorable destination for foreign companies due to streamlined regulatory processes, joint research and development opportunities, and capacity to manufacture and assemble high-quality products meeting international standards. As a result, major international companies are increasingly setting up in the country or exploring R&D partnerships.

In recent years, the Government has taken a structured approach to fostering growth across various sectors, including agriculture, infrastructure, digital platforms, skilling, and manufacturing. The Union Budget 2024-25 continues this trend by focusing on nine priority areas that benefit farmers, women, youth, and the economically disadvantaged. A key objective of the budget is to stimulate rural economic growth, thereby positively impacting the nation's overall development. It also maintains capital expenditure at the level set in the interim budget, ensuring sustained investment in critical areas.

The Union Budget 2024-25 places significant emphasis on the promotion and growth of micro, small, and medium enterprises (MSMEs), especially in the realm of labour-intensive manufacturing. Recognising the vital role of MSMEs in the economy, the budget has introduced a comprehensive package that includes financing, regulatory changes, and technology support to help these enterprises grow and compete globally.

To facilitate term loans for MSMEs for the purchase of machinery and equipment without requiring collateral or third-party guarantees, a new credit guarantee scheme will be introduced. This scheme will operate by pooling the credit risks of these MSMEs. A self-financing guarantee fund will be established to provide guarantee coverage of up to Rs 100 crore for each applicant, although the loan amount can be larger. Borrowers will be required to pay an upfront guarantee fee and an annual guarantee fee on the reducing loan balance.

Public sector banks will develop in-house capabilities to assess MSMEs for credit, moving away from reliance on external assessments. A new credit assessment model will be created based on the scoring of the digital footprints of MSMEs in the economy.



This model will offer a significant improvement over traditional credit eligibility assessments that rely solely on asset or turnover criteria, thereby also covering MSMEs without a formal accounting system.

A new mechanism will be introduced to ensure the continuation of bank credit to MSMEs during periods of stress. When MSMEs are in the 'special mention account' (SMA) stage due to factors beyond their control, they need credit to sustain their business and avoid falling into the non-performing asset (NPA) stage. Credit availability will be supported by a guarantee from a government-promoted fund.

The limit of Mudra loans (Micro Units Development & Refinance Agency Ltd.) will be increased from the current Rs 10 lakh to Rs 20 lakh for entrepreneurs who have previously availed and successfully repaid loans under the *'Tarun'* category. This enhancement aims to provide further support to growing businesses.

To help MSMEs unlock their working capital by converting trade receivables into cash, the turnover threshold of buyers for mandatory onboarding on the Trade Receivables Discounting System (TReDS) platform will be reduced from Rs 500 crore to Rs 250 crore. This measure will bring an additional 22 Central Public Sector Enterprises (CPSEs) and 7000 companies onto the platform, including medium enterprises within the scope of suppliers.

The Small Industries Development Bank of India (SIDBI) will open new branches to expand its reach and serve all major MSME clusters within three years. This year, 24 new branches will be opened, expanding the service coverage to 168 out of 242 major clusters.

Financial support will be provided for setting up 50 multi-product food irradiation units in the MSME sector. Additionally, the establishment of 100 food quality and safety testing labs with NABL accreditation will be facilitated.

To enable MSMEs and traditional artisans to sell their products in international markets, E-Commerce Export Hubs will be set up in a public-private partnership (PPP) mode. These hubs will provide trade and export-related services under a seamless regulatory and logistic framework, all under one roof.

These initiatives demonstrate the Government's commitment to fostering the growth and development of MSMEs in India, ensuring they have the support and resources needed to thrive in the global market. The Union Budget 2024-25 is a testament to the vital role that MSMEs play in driving economic growth and job creation in the country.

Micro, Small, and Medium Enterprises (MSMEs) are the backbone of India's manufacturing sector. Recognising their importance, the budget has introduced a comprehensive support package for MSMEs.

In line with global trends towards sustainability, the Union Budget 2024-25 has also placed a significant emphasis on green manufacturing. Key measures include subsidies for eco-friendly technologies, where industries adopting environmentally friendly technologies and practices are eligible for subsidies, reducing the financial burden associated with transitioning to greener methods. Moreover, additional tax incentives are offered to companies that demonstrate a commitment to reducing their carbon footprint through innovative solutions.

As mentioned above, India has the potential to become a global manufacturing hub, and by 2030, it can add more than US$ 500 billion annually to the global economy. For this, a robust infrastructure is vital.

The budget has earmarked substantial investments in infrastructure development, including the development of new industrial corridors and the enhancement of existing ones, which are expected to facilitate smoother logistics and supply chain management. The Smart Cities initiative aims to create urban environments conducive to industrial activity with state-of-the-art facilities and efficient public services. Investment in logistics parks will streamline the movement of goods, reducing transportation costs and improving delivery times.

The services sector is not only the dominant contributor to India's GDP but also a magnet for significant foreign investment, a major contributor to exports, and a provider of large-scale employment. In 2022-23, the sector accounted for over 50 per cent of India's GDP and witnessed a growth rate of 9.1 per cent. Of the 8.12 million jobs created in FY23, nearly half were generated by service sector companies in IT, banking, and finance. As the engine of growth for India's economy, the services sector contributed 55 per cent to India's Gross Value Added (GVA) at current prices in FY24, according to advance estimates. It also ranked first in FDI inflows, as per data from the Department for Promotion of Industry and Internal Trade (DPIIT).

India's services sector encompasses a diverse range of activities, including trade, hotels and restaurants, transport, storage and communication, finance, insurance, real estate, business services, community, social and personal services, and construction-related services. To boost India's

commercial services exports and increase its share in the global services market beyond the current 3.3 per cent, the Government is making concerted efforts to facilitate a multi-fold expansion in the GDP.

India's unique position as an emerging market is bolstered by its knowledge-based services, which create a competitive advantage. The Indian services industry benefits from numerous government initiatives like Smart Cities, Clean India and Digital India, fostering an environment that strengthens the sector. This environment has the potential

to unlock multi-trillion-dollar opportunities, stimulating symbiotic growth globally. Service providers in India have continued to see positive demand trends, leading to increased business volumes and job creation.

In December 2023, services exports grew by 1.3 per cent to USD 31.6 billion, driven by software, business and travel services, while imports declined by 1.2 per cent, resulting in record-high net earnings of USD 16.0 billion. During the October-December 2023 period, India experienced a 5.1 per cent year-on-year increase in services exports to USD 87.7 billion, with a trade surplus of USD 44.9 billion, largely driven by software, business and travel services.

Both domestic and global factors influence the growth of the services sector. An extensive range of service industries has experienced double-digit growth in recent years, supported by digital technologies and institutional frameworks made possible by the Government. The ease of doing business in India has significantly increased for domestic and foreign firms due to considerable advancements in culture and the government outlook.

The services sector in India boasts the highest employment elasticity among all sectors, signifying its potential for significant growth and the ability to create highly productive jobs, which in turn drive revenue generation. To tackle the challenge of job creation, the Skill India programme aims to skill and upskill 400 million people by 2022, primarily by fostering private sector initiatives in skill development and providing necessary funding.

Additionally, the Make in India programme, while focused on strengthening the manufacturing sector, will have a multiplier effect, enhancing the services sector's portfolio. In this context, the Startup India initiative serves as a crucial enabler for both the manufacturing and services industries in India by supporting innovative startups.

With the focused attention of the Government in the Union Budget 2024-25, the strategic measures outlined are designed to enhance the sector's capacity to drive economic growth and innovation. The services sector is rapidly evolving with the advent of digital technologies. The budget emphasises significant investments in upgrading digital infrastructure, including high-speed internet connectivity across urban and rural areas. Additionally, initiatives to improve digital literacy among the workforce ensure that employees can effectively leverage digital tools and platforms. The Union Budget 2024-25, with its comprehensive focus on manufacturing and services, marks a significant step towards realising the vision of 'Viksit Bharat'. The strategic measures outlined in the budget are expected to drive economic growth, create employment opportunities and enhance the overall standard of living for all citizens. The synergy between manufacturing and services, underpinned by integrated logistics, financial services and a robust startup ecosystem, will create a dynamic and resilient economy.

Finally, the Union Budget 2024-25 sets a robust framework for achieving *'Viksit Bharat'*. By emphasising digital infrastructure, workforce digital literacy and the integration of manufacturing and services, the budget aims to build a dynamic economy that fosters innovation, growth and prosperity for all citizens. The strategic measures outlined will not only drive economic growth and employment but also enhance the overall quality of life, ensuring a resilient and inclusive future for India. ❑

Reference

1. IBEF Report on Manufacturing May 2024 (Manufacturing Industries in India & its Growth | IBEF)

Industry Perspective on Manufacturing & Jobs Creation

JYOTI VIJ | The author is the Director General of FICCI (Federation of Indian Chambers of Commerce & Industry). Email: jyoti.vij@ficci.com

With one of the youngest populations and a median age of 28, India can harness its demographic dividend by nurturing a workforce equipped with employable skills that match industry needs. The revamping of the *Shram Suvidha* and *Samadhan* portals will lead to a more efficient, transparent and user-centric labour ecosystem, benefiting all stakeholders. Another inclusive initiative by the government is to enhance women's participation in the workforce by facilitating the establishment of working women's hostels and creches in collaboration with industry. A slew of measures announced in the budget for manufacturing, particularly for employment generation and skilling, bodes well for the country.

The Union Budget 2024-25 was a landmark in terms of its focus on employment and skilling. It lays a strong foundation for the *Viksit Bharat* inclusive agenda of growth with employment.

Employment is one of the biggest challenges faced by policymakers in India. The Indian economy needs to generate nearly 78.51 lakh jobs annually in the non-farm sector to cater to the rising workforce, as per the economic survey 2023-24. This budget has attempted to address this gargantuan challenge.

One of the most notable initiatives introduced in the budget is the Employment Linked Incentive Schemes. These schemes provide financial incentives to employers for hiring new workers, particularly in the manufacturing sector. By offering wage subsidies and other benefits, the government aims to encourage job creation in the formal sector, thereby helping to reduce unemployment and spur economic growth.

With one of the youngest populations and a median age of 28, India can harness its demographic dividend by nurturing a workforce equipped with employable skills that match industry needs. Offering internship opportunities to 1 crore youth in the top 500 companies, with a mix of government contributions and CSR spend by the industry, is a novel idea. These interns will acquire industry-specific knowledge and build professional networks that can lead to job and self-employment opportunities. More importantly, these interns will help in replicating the world class culture and systems of the top 500 companies in other entities, thereby helping them scale up.

Sixty-five per cent of India's fast-growing population is under 35, and many lack the skills needed for a modern economy. Estimates show that about 51.25 per cent of the youth are deemed employable. In other words, about one in two are not yet readily employable immediately after college. This initiative will help strengthen the connection between educational institutions and industry, ensuring that academic programs are better aligned with industry needs.

Another inclusive initiative by the government is to enhance women's participation in the workforce by facilitating the establishment of working women's hostels and creches in collaboration with industry. This initiative aims to reduce turnover rates among female employees by addressing the work-life balance challenges faced by women, thereby expanding the talent pool available to industries. We need to now ensure that these hostels are near the workplaces of women employees.

A key objective on our path to *Viksit Bharat* is to bring our vast unorganised sector into the organised fold. The *e-Shram* portal, India's first national database of unorganised workers, has already

registered over 29.79 crore workers. Designed to establish a National Database for Unorganised Workers, the portal aims to include approximately 38 crore workers from this sector. Progress has been steady, and we anticipate reaching the target soon. Integrating the *e-Shram* portal with other platforms, such as the National Career Service (NCS) portal and similar portals from various Ministries and Departments, will create a more responsive, efficient, and user-friendly labour ecosystem that benefits workers, employers, and policymakers alike. These integrated services will also help ensure that workers receive their entitlements and benefits promptly, thereby enhancing their overall welfare.

The revamping of the *Shram Suvidha* and *Samadhan* portals will lead to a more efficient, transparent, and user-centric labour ecosystem, benefiting all stakeholders. The unified *Shram Suvidha Portal* has been developed to facilitate inspection reporting and the submission of returns. The portal serves as a single point of contact between employers and enforcement agencies, promoting transparency in their daily interactions. Each inspectable unit under any labour law has been assigned a Labour Identification Number (LIN) through the portal, marking a significant step towards ease of doing business.

Another important aspect related to labour is productivity. In this budget, we have seen an announcement to lay out an economic policy framework for next generation reforms that will include reforms for improving the productivity of factors of production, namely land, labour, capital, entrepreneurship and technology, making markets and sectors more efficient. The world's living standards have climbed sharply over the past two decades, driven by strong productivity growth. However, there are signs that productivity growth is fading in many parts of the world. If India has to sustain its economic growth rate over a quarter century and do it sustainably, it is important that these reforms for factors of production, including labour, for improving their productivity and making markets efficient, are carried out now.

Further, the budget's focus on manufacturing, MSME, and employment is going to be a decisive factor in our growth journey. The budget has addressed the manufacturing sector in a very comprehensive manner by providing incentives for employment, strengthening support for MSMEs, and also addressing areas that would reduce costs for the sector.

The role of manufacturing in Viksit Bharat is imperative, and this came out loud and clear in the latest budget. A slew of measures announced in the budget for manufacturing, particularly for employment generation and skilling, bodes well for the country. Manufacturing is generally one of the most dynamic sectors in the global economy, both in terms of economic weight and its links with all other sectors. Structural change towards higher value-added manufacturing activities has therefore traditionally been considered the main path economies can take to achieve higher income levels and provide sustainable livelihoods for their population.

Attention to the future of work should be turned to — a topic that is becoming increasingly important in the context of rapid technological advancements, shifting demographics, and changing economic landscapes. This has implications for our employment scenario going forward. The future of work is characterised by automation, artificial intelligence, and the rise of the gig economy. While these changes bring about new opportunities, they also pose challenges that we must address proactively. According to the World Economic Forum's (WEF) Future of Jobs report, 2023, in the next five years, 23 per cent of the jobs are expected to change globally. This change is likely to consist of growth in 10.2 per cent of the jobs and a decline in 12.3 per cent of the jobs. Employers anticipate 69 million new jobs to be created and 83 million eliminated—a net decrease of 14 million jobs, or 2 per cent of current employment. So we need to ensure that our youth and existing workforce are future-ready. The announcements made in budget have also tried to address this challenge.

To conclude, the labour-related announcements in the Union Budget 2024-25 demonstrate a comprehensive strategy to bolster India's labour market. By prioritising job creation, enhancing women's workforce participation, advancing skill development, improving labour market efficiency, and focussing on manufacturing and MSMEs, the government is committed to driving inclusive and sustainable economic growth for *Viksit Bharat*. ❑