

ForumIAS

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## Mains Marathon

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HISTORY  
ECONOMICS  
POLITY  
SCIENCE AND TECHNOLOGY  
GEOGRAPHY AND ENVIRONMENT

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**Analyze how proposed FTAs with the US, EU, and UK could impact India's agricultural trade surplus, considering the pressures for tariff reduction and market access. Discuss the challenges and opportunities for India's farm sector in navigating these global trade dynamics.**

## Introduction

India's agricultural trade has long been characterized by a healthy surplus. In 2024–25, India's farm exports stood at \$51.9 billion while imports were \$38.5 billion, yielding a surplus of \$13.4 billion. However, this surplus has been steadily shrinking—**down from \$27.7 billion in 2013–14—amid rising imports and trade liberalization pressures.** Proposed Free Trade Agreements (FTAs) with **the US, European Union (EU), and United Kingdom (UK)** may further accelerate this trend, with demands for tariff reductions and broader market access posing both challenges and opportunities for India's agricultural sector.

## Impact of FTAs on India's Agricultural Trade Surplus

1. **Tariff Reductions and Import Surge:** These Western economies are pushing for reduced tariffs on high-value agricultural exports such as dairy, poultry, wine, processed foods, and genetically modified crops like soy, maize, and cotton. India's historically high tariffs protect millions of smallholder farmers, but FTAs could lead to a surge in imports of items like:
  - **Dry fruits, wines, spirits** from EU and UK
  - **GM soybean, maize, and cotton** from the US
  - **Dairy and poultry products**, where the US and EU are globally competitiveSuch imports may undercut Indian producers, exacerbating the trade deficit in sensitive commodities.
2. **Non-Tariff Barriers (NTBs):** Western economies also seek the removal of NTBs such as **sanitary and phytosanitary (SPS)** standards and **restrictions on GMOs**, which India uses to safeguard public health and farmer livelihoods. Easing these may raise public health concerns and pose a threat to India's biosafety norms.
3. **Loss of Export Competitiveness:** Indian agri-exports like **marine products (shrimp), spices, and buffalo meat** may face retaliatory tariffs or market saturation. For instance, marine exports to the US, already facing 17.7% duties, could suffer if the Trump-era tariffs are increased to 26%.

## Challenges for India's Farm Sector

1. **Productivity Deficit:** India's low per-acre yields in oilseeds, pulses, cotton, and rubber make it dependent on imports. Pulses imports hit \$5.5 billion in 2024–25; vegetable oil imports have consistently exceeded \$14–15 billion annually.
2. **Inadequate Technological Adoption:** Stagnation in cotton production due to lack of GM innovations and limited research in pulses/oilseeds further weakens India's global competitiveness.
3. **Smallholder Vulnerability:** Nearly 85% of Indian farmers are small or marginal. An import influx without adequate support mechanisms—like **price compensation, MSP extension, and insurance**—could trigger rural distress.
4. **Compliance Costs:** Western FTAs often include **stringent sustainability, traceability, and labor standards**. Many Indian exporters may find compliance financially and logistically burdensome.

## Opportunities for India

1. **Export Diversification and Value Addition:** India can expand its export basket in **spices, processed food, organic products, and non-basmati rice**. Coffee, tea, fruits, and vegetables saw record exports in 2024–25, reflecting global supply shortages India can capitalize on.

2. **Market Access in Premium Segments:** If tariff parity is secured, India can increase its exports of **high-margin goods** like basmati rice, organic spices, ayurvedic herbs, and ready-to-eat foods in developed markets.
3. **Agri-Tech and Innovation Push:** FTAs can be leveraged to attract **investment in agri-tech, post-harvest infrastructure, and food processing**, critical to boosting exports and reducing wastage.

## Conclusion

The proposed FTAs with the US, EU, and UK present a double-edged sword for India's agricultural trade. While they open doors to newer markets and investments, they also bring the risk of import-led pressures on India's vulnerable farm sector. A calibrated approach—protecting sensitive sectors while enhancing export capabilities and farmer resilience—is essential to preserving the agricultural trade surplus and ensuring inclusive rural growth.

**Examine how a new India-Africa digital compact, built on mutual respect and co-development, can serve as a scalable framework for advancing digital inclusion across the continent, and its broader implications for bilateral relations.**

## Introduction

Africa's Digital Transformation Strategy (2020–2030) places digital inclusion at the core of the continent's development agenda. In parallel, India has evolved from a donor-recipient dynamic to a collaborative development partner rooted in mutual respect and shared growth. A new **India-Africa digital compact**, anchored in co-development and long-term institutional partnerships, offers a scalable model for digital transformation that is inclusive, adaptable, and sustainable.

## Digital Compact: India's Strengths and Africa's Aspirations

India's **Digital Public Infrastructure (DPI)**—Aadhaar, UPI, CoWIN, and DIKSHA—has demonstrated how open-source, population-scale digital platforms can transform governance, financial inclusion, and service delivery. This model is increasingly attractive to African nations that seek digital solutions without falling into dependency on proprietary or surveillance-oriented technologies.

Recent partnerships underscore this convergence:

- **Togo's MoU with IIIT-B** for digital ID systems,
- **Zambia's Smart Zambia Initiative** supported by India,
- **Namibia and Ghana** exploring UPI-like payment systems,
- The launch of **IIT Madras' Zanzibar campus** offering advanced degrees in AI and Data Science.

These initiatives reflect Africa's recognition of India's approach as **affordable, interoperable, and non-extractive**, focused on empowerment over control.

## Scalability and Localization: Core Pillars of the Compact

1. **Affordability and Open-Source Models:** India's DPI is offered as a **digital public good**, allowing African countries to adopt and modify systems like UPI and Aadhaar without incurring heavy licensing costs.

2. **Capacity-Building and Skilling:** The Zanzibar campus is a strategic model of **techno-educational diplomacy**, offering human capital development aligned with African digital goals. India's ITEC and e-ITEC programmes also continue to train thousands of African professionals in digital governance.
3. **State-Led Customization:** India's digital diplomacy promotes **local ownership**. African governments are encouraged to adapt Indian platforms based on their own legal, socio-cultural, and economic frameworks—ensuring contextual relevance.
4. **Sustainable Infrastructure:** The compact must also account for the **energy requirements of digital expansion**, advocating for coordinated investments in renewable energy and grid upgrades to address Africa's power deficits.

### Challenges

Despite promise, significant barriers remain:

- **High cost of devices and data,**
- **Rural-urban digital divide,**
- **Gender-based disparities** in digital access,
- **Energy constraints** that impede infrastructure deployment.

India and African nations must work collaboratively on holistic solutions, including public-private partnerships, concessional financing, and knowledge-sharing to bridge these divides.

### Implications for Bilateral Relations

1. **Strategic Partnership Beyond Aid:** The digital compact redefines the India-Africa relationship—from transactional to transformational—based on **shared sovereignty, not patronage**.
2. **Counterbalance to China and the West:** Unlike China's infrastructure-heavy, debt-financed digital presence, India's offer of **open-source, people-centric technology** presents a more sustainable and less extractive model.
3. **Soft Power and Global South Leadership:** By championing digital inclusion through South-South cooperation, India bolsters its global image as a **techno-developmental partner**, strengthening its leadership in forums like the G20, BRICS, and AU-G20.

### Conclusion

A new **India-Africa digital compact** has the potential to become a globally replicable model for inclusive digital transformation. Rooted in **mutual trust, co-creation, and sustainable development**, it can advance Africa's digital aspirations while deepening strategic and people-to-people ties between the two regions. Such a compact is not just a tool for digital access—it is a blueprint for a just and empowered digital future.

**Critically analyze the assertion that states deserve a greater share of central taxes in the post-GST era. Discuss its implications for India's fiscal federalism, state autonomy, and balanced regional development.**

### Introduction

India's fiscal federalism is anchored in the principles of cooperative federalism, wherein both the Centre and the States share responsibilities and resources. In the post-GST era, States have ceded significant taxation powers to the Centre. Against this backdrop, demands—such as Tamil Nadu's recent proposal to raise States' share in central taxes from 41% to 50%—have gained prominence. This reflects deeper tensions in Centre-



State fiscal relations, raising critical questions about revenue adequacy, state autonomy, and cooperative governance.

### Why States Deserve a Greater Share

1. **Loss of Tax Autonomy Post-GST:** With the introduction of the Goods and Services Tax (GST) in 2017, States gave up crucial revenue sources like VAT, entry tax, and octroi. Although the GST Council was envisaged as a cooperative platform, infrequent meetings and central dominance have diluted States' say in tax policy decisions.
2. **End of GST Compensation:** The constitutional guarantee of compensation for GST revenue shortfall ended in June 2022. While States' own tax revenue has improved modestly (from 6.6% of GSDP in 2017-18 to 7.2% in 2024-25), it still falls short of bridging the gap caused by GST subsumption.
3. **Vertical Fiscal Imbalance:** India's Constitution assigns more expenditure responsibilities to States (health, education, law and order), but greater revenue powers to the Centre. This imbalance necessitates a fairer vertical devolution. The current 41% share, recommended by the 15th Finance Commission, also includes special allocations like for Jammu and Kashmir, effectively reducing the divisible pool for other States.

### Implications for Fiscal Federalism and State Autonomy

1. **Strengthening Cooperative Federalism:** A larger share in central taxes can restore balance in fiscal arrangements and enhance mutual trust. It will allow States to plan long-term development without excessive reliance on centrally sponsored schemes (CSS), which often come with conditionalities and reduced flexibility.
2. **Preserving State Autonomy:** Centralization of revenue without commensurate devolution undermines the federal spirit. A more equitable tax sharing ratio empowers States to innovate policies suited to local needs, enhancing accountability and efficiency.
3. **Balanced Regional Development:** Enhanced fiscal space can help underdeveloped States invest more in infrastructure, human capital, and social welfare, reducing inter-state disparities. Without adequate funds, poorer States risk falling into a 'low-development-low-revenue' trap.

### Counterarguments and Concerns

1. **Centre's Commitments:** The Union government requires substantial funds for national security, disaster management, and strategic infrastructure. Raising the States' share could constrain its ability to meet these obligations.
2. **Need for Fiscal Discipline:** Greater devolution must be accompanied by improved fiscal prudence and accountability mechanisms at the State level. Without reforms in public finance management, increased funds may not translate into better outcomes.
3. **Horizontal Equity:** Higher vertical devolution must be balanced with equitable horizontal distribution to avoid favouring better-performing States disproportionately.

### Conclusion

While the assertion that States deserve a greater share of central taxes post-GST is valid and timely, it must be carefully implemented with safeguards. A reimagined fiscal federalism—characterized by autonomy, accountability, and collaboration—can be the cornerstone of India's inclusive development journey. Strengthening institutional platforms like the GST Council and the NITI Aayog Governing Council is equally crucial to making "Team India" a substantive rather than rhetorical goal.

**Operation Sindoor is seen as validating India's decade-long focus on economic and technological resilience, reflecting a self-reliant India. Analyze how such strategic initiatives underpin national self-reliance and enhance governance in security and development.**

### Introduction

Operation Sindoor symbolizes more than just a tactical military success—it embodies the fruition of India's long-term strategic vision towards self-reliance (Atmanirbharta) in defence, technology, and economic capability. The operation, executed using indigenously developed defence technologies, demonstrates how strategic initiatives over the past decade are maturing into real-time capabilities that directly enhance national security, governance efficiency, and developmental autonomy.

### Linking Operation Sindoor to Self-Reliance

1. **Indigenous Defence Capability:** Operation Sindoor was executed using technologies developed under initiatives such as *Make in India* and *Atmanirbhar Bharat Abhiyan*. Defence exports have surged to ₹23,622 crore in FY25 from a mere ₹1,940 crore in FY14, with nearly ₹15,000 crore from the private sector. This marks a transition from a historically import-dependent defence posture to one of indigenous capability and global competitiveness.
2. **Strategic Technology Leadership:** The mission showcased India's increasing ability to deploy advanced systems in real-time conflict scenarios. It underscores the effectiveness of the Defence Acquisition Procedure (DAP 2020), the Innovations for Defence Excellence (iDEX) programme, and private sector R&D in developing cutting-edge platforms like UAVs, smart munitions, and surveillance systems.
3. **Resilience in Global Disruptions:** India's emphasis on building resilient supply chains for semiconductors, electronics, and critical minerals—under missions such as the *Semicon India Programme* and *PLI schemes*—has reduced vulnerability to external shocks. Operation Sindoor thus reflects a self-reliant military and economy even amidst turbulent global geopolitics.

### Strategic Initiatives and Governance

1. **Strengthening Security Governance:** Self-reliance in defence ensures faster procurement, mission readiness, and confidentiality in technology. It enhances strategic autonomy—India's ability to act independently in international affairs—without relying excessively on foreign actors.
2. **Public-Private-Academic Synergy:** The success of Operation Sindoor also mirrors the collaborative model involving ISRO, DRDO, academia, and private industry. This strengthens the innovation ecosystem, drives job creation, and embeds R&D-led growth within governance structures.
3. **Digital and Cyber Governance:** Strategic initiatives have also built national capabilities in AI, quantum computing, and cybersecurity—essential for both governance and strategic defence. Programmes like *Bhashini* and *FutureSkills Prime* aim to create a digitally skilled workforce, thus ensuring technological resilience in both civilian and security domains.

### Broader Impacts on Development

1. **Economic Multiplier Effect:** Defence manufacturing and tech-led innovation spur ancillary industries, increase exports, and boost GDP. According to a SIPRI report, India has become one of the top 25 global arms exporters by 2024—helping reduce the trade deficit and enabling strategic soft power projection.
2. **Strategic Partnerships and Global Standing:** India's engagement in initiatives like the U.S.-India TRUST pact and India-France technological cooperation demonstrates how self-reliance enhances India's value as a strategic partner, thereby increasing diplomatic leverage and securing access to critical technologies.

3. **Regional Development and Capacity Building:** Defence corridors in Uttar Pradesh and Tamil Nadu, space-tech clusters, and semiconductor fabs contribute to balanced regional growth, employment, and upskilling, enhancing both national cohesion and development governance.

## Conclusion

Operation Sindoor is a powerful testament to India's successful pursuit of self-reliance across defence, economy, and technology. It reflects a maturing strategic doctrine that blends national security with development priorities. As India moves toward its *Viksit Bharat@2047* vision, such initiatives will remain pivotal in reinforcing sovereign capability, enhancing governance, and shaping India as a secure and innovation-driven global power.

**The silver jubilee of the India-Germany strategic partnership signifies its multifaceted evolution and future optimism. Analyze the key drivers of this partnership's growth and its potential to contribute to global governance and economic stability.**

## Introduction

The year **2025 marks 25 years of the India-Germany Strategic Partnership**, a relationship rooted in shared democratic values, economic complementarities, and global responsibilities. Over the decades, the partnership has matured into a dynamic and comprehensive engagement built on four key pillars — **peace, prosperity, people, and the planet**. The silver jubilee reflects not just past achievements but also growing optimism about the partnership's role in shaping global governance and economic stability.

## Key Drivers of Growth

1. **Strategic and Political Convergence:** Both nations advocate a **rules-based international order** and multilateralism. Their cooperation in the UN, G4 alliance for UNSC reforms, and joint support for Indo-Pacific stability demonstrate a growing strategic synergy. Military exercises such as *Tarang Shakti* and German naval deployments in the Indo-Pacific signal Berlin's increasing alignment with India's regional priorities.
2. **Economic Interdependence:** Germany is India's largest trading partner in the EU and a major source of **foreign direct investment (FDI)**. Over 2,000 German companies operate in India, generating 750,000+ jobs. The **India-EU Free Trade Agreement (FTA)** under negotiation, once concluded, can further institutionalize bilateral economic growth and contribute to global trade stabilization amid rising protectionism.
3. **Technological and Scientific Collaboration:** India and Germany collaborate on high-end research in AI, quantum technologies, green hydrogen, and Industry 4.0. Institutions such as the Max Planck Society and Fraunhofer Institutes host numerous Indian researchers, while initiatives like the **Indo-German Science and Technology Centre (IGSTC)** promote joint R&D and innovation.
4. **People-to-People Ties:** With over **50,000 Indian students in Germany**, India forms the largest cohort of foreign students in the country. Growing migration of Indian professionals and German interest in Indian languages and culture have created a vibrant cultural bridge, fostering mutual understanding and soft power diplomacy.
5. **Sustainable Development and Climate Cooperation:** The **Green and Sustainable Development Partnership (GSDP)** signed in 2022 is a €10 billion commitment by Germany towards India's green transition. Germany supports renewable energy, smart cities, and biodiversity projects in India. The



private sector also plays a role—German firms contribute to solar and wind energy infrastructure, strengthening global climate resilience.

### Potential Contributions to Global Governance and Stability

1. **Economic Stability Through Diversified Supply Chains:** Amid global trade disruptions, Indo-German industrial cooperation helps establish resilient, diversified, and high-tech supply chains. India's demographic dividend and Germany's manufacturing prowess offer a complementary ecosystem beneficial for global manufacturing realignment.
2. **Leadership in Green Transformation:** Both nations are positioned to lead the global **green transition**. India's ambitious renewable targets and Germany's technological edge can jointly catalyze sustainable solutions, aiding in meeting **UN SDGs** and the **Paris Agreement** goals.
3. **Shaping Global Multilateralism:** As advocates for **UN reforms**, **climate finance**, and inclusive globalization, India and Germany can collectively reshape global institutions to reflect 21st-century realities, ensuring equitable and effective global governance.

### Conclusion

The silver jubilee of the India-Germany strategic partnership is not just a diplomatic milestone, but a symbol of evolving bilateral synergy. **Rooted in mutual trust and forward-looking cooperation, this partnership is poised to address contemporary challenges**—from climate change to global supply chain disruptions—while anchoring regional and global stability. In the next 25 years, this partnership can be a beacon of responsible global leadership grounded in shared prosperity, peace, and sustainability.

**The recent debate surrounding India's global economic ranking underscores the critical importance of data accuracy and transparency in national discourse. Analyze how the precise presentation and interpretation of economic statistics are vital for policymaking, maintaining public trust, and shaping India's evolving international standing.**

### Introduction

The claim by the NITI Aayog CEO that India has overtaken Japan to become the fourth-largest economy, followed by conflicting interpretations of the same IMF data, reveals the deep importance of data accuracy and transparency. With India's economy rapidly expanding and global expectations rising, how economic data is measured, presented, and interpreted significantly impacts public trust, effective governance, and the nation's global reputation.

### Importance of Accurate Economic Data in Policymaking

1. **Evidence-Based Decision-Making:** Sound policymaking rests on credible, timely, and well-interpreted data. For instance, understanding GDP rankings — whether nominal or purchasing power parity (PPP)-based — guides government strategies in international negotiations, trade, foreign investments, and development assistance.
2. **Targeted Welfare Interventions:** Per capita income and income inequality data influence subsidy distribution, poverty alleviation programs, and sectoral investments. Misrepresenting economic progress can lead to misallocated resources and sub-optimal outcomes.
3. **Macroeconomic Management:** Inflation, fiscal deficit, and growth forecasts help shape monetary and fiscal policies. Misinterpreted or politically coloured data can hinder credible budget planning and disrupt investor confidence.

## Nominal vs PPP GDP: Why Interpretation Matters

The current controversy stems from different metrics:

- **Nominal GDP**, calculated using current exchange rates, is vulnerable to currency fluctuations. For instance, India's GDP ranking can change without actual economic output shifting, due to rupee-dollar exchange rate volatility.
- **PPP GDP** reflects actual purchasing power within a domestic economy, offering a more accurate measure of real economic well-being. India has been the **third-largest economy in PPP terms since 2009**, a fact often under-acknowledged for political reasons.
- However, **per capita metrics** tell a starkly different story. As of 2025, India's per capita nominal GDP is around \$2,879, significantly lower than the UK's \$54,949, underscoring that aggregate GDP growth does not equate to broad-based prosperity.

## Public Trust and Democratic Discourse

1. **Preventing Misinformation:** Oversimplifying economic progress through cherry-picked rankings can mislead the public. This undermines democratic accountability and reduces the scope for informed public discourse.
2. **Ensuring Institutional Credibility:** Institutions like the NITI Aayog, RBI, and the Ministry of Finance must maintain their non-partisan credibility. Data manipulation or selective presentation erodes institutional trust and global reputation.
3. **Guarding Against Politicization:** Economic statistics should not be used as political trophies. Instead, they must serve as tools for self-correction, fostering transparency and inclusion. Misuse can lead to a distorted policy narrative and complacency about structural challenges such as unemployment, inequality, and low human capital.

## Global Standing and Investment Climate

A transparent and rigorous statistical ecosystem strengthens India's **global investment appeal**, enhances **ratings credibility**, and ensures **alignment with global benchmarks** like those of the IMF, World Bank, and UNDP. Misreporting damages reputational capital, vital for bilateral and multilateral engagements.

## Conclusion

India's global economic ascent is a matter of genuine pride. Yet, meaningful progress lies not in headline rankings but in improving real incomes, enhancing productivity, and fostering equitable growth. As the world watches India with heightened expectations, **data accuracy and transparent interpretation** must underpin national discourse. Only then can economic statistics serve as true instruments of development, trust, and global leadership.

**The RBI's remittances survey indicating a shift towards higher-skilled migrant profiles and larger transaction sizes reflects evolving global economic trends. Analyze the socio-economic and policy implications of this changing remittance landscape for India's human capital development, skill migration strategies, and leveraging diaspora for national growth.**

## Introduction

The Reserve Bank of India's Sixth Round of the Remittances Survey (2023-24) reveals transformative shifts in India's remittance landscape — notably, a movement from Gulf-based low-skilled migration to advanced

economy (AE)-based high-skilled migration and increasing concentration of high-value remittance transactions. These changes signal broader global economic realignments and demand a recalibration of India's migration, skilling, and diaspora engagement policies.

### Key Trends from the RBI Survey

1. India received a record **\$118.7 billion in remittances** in 2023-24, exceeding foreign direct investment (FDI) inflows and financing over **50% of the merchandise trade deficit**.
2. **Advanced economies** like the U.S., U.K., Canada, and Australia now account for over 51% of India's inward remittances, overtaking the Gulf Cooperation Council (GCC) countries.
3. Large-value remittance transactions (₹5 lakh and above) comprise 29% of total value but only 1.4% of transactions — indicating concentration among high-income migrants.
4. **Digital remittances** now make up 73.5% of transactions, reducing costs and enhancing formal channel usage.

### Socio-Economic Implications

1. **Human Capital Stratification:** The transition to high-skilled migration mirrors India's success in producing globally competitive professionals, particularly in IT, healthcare, and education. However, it also exposes regional disparities. Southern and western states dominate outbound high-skilled migration, while northern states like Bihar and Uttar Pradesh lag due to limited access to quality education, language training, and migration-enabling infrastructure.
2. **Uneven Remittance Benefits:** States like Kerala, Tamil Nadu, and Maharashtra receive over half of remittances. This deepens intra-national inequality, with remittances reinforcing prosperity in already developed regions. Without tailored skilling and placement strategies in lagging states, migration opportunities and associated benefits remain concentrated.
3. **Changing Remittance Utilization Patterns:** The lack of current household-level data limits understanding of remittance use. Evidence from earlier NSSO rounds and World Bank studies suggests remittances are often used for consumption, education, and debt repayment. With higher-value remittances, there is potential for increased investment and asset-building — if supported by targeted financial literacy and investment instruments.

### Policy Implications

1. **Skill Migration Strategy:** India's evolving remittance profile underscores the need for a comprehensive **skill migration framework** — focusing on demand-matching, international credentialing, language training, and migration facilitation. Missions like **Skill India International** and **MEA's Pravasi Bharatiya initiatives** need robust implementation and sub-national customization.
2. **Digital Infrastructure and Formal Channels:** While fintech has reduced remittance costs (to 4.9%), disparities remain — e.g., only 40% of transactions from Canada are digital. Deepening **bilateral cross-border payment systems** (like UPI linkages with Singapore and UAE) can enhance efficiency and reduce leakages into informal channels.
3. **Diaspora as Development Partners:** High-skilled migrants represent not just remittance senders but potential **investors, mentors, and knowledge bridges**. Initiatives like the **VAJRA and GIAN schemes** must be expanded to engage Indian-origin professionals in national innovation and education missions.
4. **Financial Product Innovation:** Developing **remittance-linked investment schemes**, diaspora bonds, and state-level incentives (e.g., Kerala's NRI investment platforms) can enhance capital formation and deepen ties with migrants.

## Conclusion

India's remittance landscape is undergoing a structural transformation, shaped by global economic shifts and rising Indian human capital abroad. To harness this evolution for equitable national growth, India must address regional skilling disparities, streamline migration channels, and creatively engage its diaspora beyond remittances. The remittance corridor is not merely a flow of money — it is a conduit of aspirations, expertise, and enduring transnational connections.

**"India's financial sector reforms necessitate a 'shake-up' through harmonized regulations, a deep bond market, vibrant retirement finance, and reining in shadow banking." Analyze how these proposed reforms are critical for enhancing financial stability, fostering capital formation, and ensuring inclusive economic growth in India's evolving financial landscape.**

## Introduction

India's financial sector is undergoing transformation amid rapid economic growth, digitization, and expanding investor participation. However, legacy inefficiencies, fragmented regulations, and unregulated segments threaten the sector's ability to effectively mobilize capital, maintain financial stability, and foster inclusive growth. A comprehensive overhaul — not piecemeal tinkering — is now imperative.

**1. Harmonized Regulations across BFSI:** The lack of regulatory harmony, especially in nominee rules across banking, insurance, and mutual funds, has created legal ambiguities. Fragmented norms not only confuse consumers but also cause delays in asset transmission and open the door to litigation.

- **Implications:** Uniform nomination rules would increase legal certainty, reduce disputes, and enhance trust in formal financial systems — crucial for financial inclusion.
- **Policy Need:** A unified Financial Consumer Protection Framework under the Financial Stability and Development Council (FSDC) could streamline regulations and empower savers.

**2. Developing a Deep Corporate Bond Market:** India's bond market remains shallow, contributing just 17% to GDP (compared to over 70% in countries like South Korea). Most corporate financing still relies on banks, leading to asset-liability mismatches and credit concentration.

- **Benefits:** A vibrant bond market would reduce the cost of capital, diversify risk, and enable infrastructure funding via long-duration debt.
- **Key Reforms:**
  - Enhance secondary market liquidity through electronic platforms.
  - Mandate large corporates to meet part of their financing needs via bonds (as SEBI recommended).
  - Strengthen investor protection and transparency, especially in relation to Ultimate Beneficial Owners (UBOs), to align with FATF norms.

**3. Retirement Finance Innovation:** Current retirement products, especially annuities, are inefficient and costly due to high intermediation fees. With India's young population entering the workforce, there's an urgent need for low-cost, scalable instruments.

- **Reform Opportunity:** Promote long-dated, zero-coupon government securities for retirement saving — an option with sovereign backing and minimal costs.
- **Impact:** Enhances long-term financial security, increases domestic savings, and provides a stable source of government borrowing.



**4. Containing Shadow Banking Risks:** The rise of NBFCs, margin lenders, and unregulated fintech credit platforms poses a systemic threat. The 2018 IL&FS and 2021 DHFL crises illustrated how excessive risk-taking by shadow banks can destabilize the financial system.

- **Risks:**
  - Excessive leverage.
  - High-cost loans disguised as margin funding.
  - Poor disclosure norms.
- **Global Best Practice:** The EU's approach to mapping and regulating non-bank credit intermediaries offers a roadmap for India.
- **Policy Steps:**
  - Comprehensive data collection on off-balance-sheet lending.
  - Uniform prudential norms across NBFCs and banks under RBI oversight.

## Conclusion

India's ambition to become a \$5 trillion economy hinges on a robust financial system. Harmonized regulations would improve ease of doing business. A deep bond market would catalyze infrastructure finance. Innovative retirement products would secure the demographic dividend. And regulating shadow banking would safeguard financial stability.

**"The proposal for a U.S.-like Department of Government Efficiency (DOGE) in India aims to modernize administration and transform citizen-government interaction. Analyze the potential benefits and inherent challenges in establishing such a dedicated department to enhance governance, streamline public service delivery, and foster citizen-centric administration."**

## Introduction

In the face of growing developmental demands, digital opportunities, and constrained public resources, government efficiency has become a cornerstone of effective governance. Inspired by the U.S.'s Department of Government Efficiency (DOGE), the proposal to create a similar institution in India aims to reimagine governance through a citizen-centric and performance-driven approach. However, India's unique bureaucratic architecture, federal structure, and socio-political complexities necessitate a context-specific model of such reform.

## Potential Benefits

1. **Enhanced Service Delivery:** A dedicated government efficiency department could identify and eliminate non-value-adding activities within outdated Standard Operating Procedures (SOPs), thereby reducing delays and enhancing responsiveness. For instance, streamlining documentation requirements for government schemes can significantly ease citizen interaction and raise programme uptake.
2. **Cost Reduction and Resource Optimization:** With nearly 55% of India's Union Budget allocated to subsidies, pensions, and welfare schemes, minimizing inefficiencies and leakages—through digitization, data analytics, and real-time audits—can help redirect scarce resources to high-impact areas.
3. **Digital Transformation and Interoperability:** While initiatives like Aadhaar, DBT, and Passport Seva have improved delivery, they often function in silos. A centralized efficiency department could foster

cross-pollination of digital solutions, ensuring interoperability across ministries and scalable implementation of successful models.

4. **Institutionalizing Best Practices:** Drawing lessons from the private sector, which routinely employs Lean, Six Sigma, and continuous improvement strategies, such a department could institutionalize performance benchmarking and process re-engineering in public administration.
5. **Empowered DARPG Framework:** Rather than starting afresh, the Department of Administrative Reforms and Public Grievances (DARPG) could be restructured to function like a Centre of Excellence, fostering innovation, providing technical support, and acting as a repository of reusable frameworks.

### Inherent Challenges

1. **Bureaucratic Resistance to Change:** India's Weberian model of permanent civil services, while stable, is often resistant to structural change. Efficiency audits may be perceived as encroachments on departmental autonomy, leading to pushback from within the system.
2. **Federal Constraints:** Governance in India is divided across Union, State, and local levels. Any efficiency drive must be sensitive to federal boundaries, requiring collaboration with States while respecting their autonomy — in line with the spirit of cooperative federalism.
3. **Lack of Political Will and Continuity:** Long-term administrative reform demands sustained political backing across electoral cycles. Without consistent leadership commitment, such an initiative could lose momentum or be reduced to a symbolic gesture.
4. **Data and Capacity Gaps:** While India is advancing in digitization, many local government bodies still lack the digital infrastructure, technical expertise, and data-driven culture needed to implement efficiency reforms uniformly across the country.

### Conclusion

A Department of Government Efficiency in India could be transformative, enabling governance that is lean, accountable, and citizen-centric. However, its success will depend on a careful balance—leveraging existing institutions like DARPG, building trust with bureaucracy, fostering Centre-State cooperation, and embedding a culture of continuous improvement. As India aspires toward becoming a developed economy, such reforms are not optional—they are essential for inclusive, sustainable, and responsive governance.

**"The proposed three-year practice mandate for judicial service lacks democratic consultation, raising concerns about its practical implementation. Critically analyze the implications of such a measure for judicial independence, access to justice, and the principle of participatory governance in India."**

### Introduction

The Supreme Court's May 2024 decision to reinstate a mandatory three-year practice at the Bar for entry into judicial service has reignited debate over the balance between judicial competence and accessibility. While framed as a quality-control mechanism to ensure better-prepared judges, the decision raises critical ethical questions about participatory policymaking, judicial independence, and inclusivity.

### Implications

1. **Democratic Deficit and Participatory Governance:** The absence of broad-based stakeholder consultation — especially from legal educators, aspirants, High Courts, and marginalized communities — marks a deviation from democratic ethos. Article 234 of the Constitution entrusts State

governments and High Courts, in consultation with Public Service Commissions, to determine eligibility for subordinate judiciary. The Supreme Court's top-down intervention, devoid of public input, amounts to courtroom policymaking that bypasses constitutional procedure and undermines cooperative federalism.

2. **Access to Justice and Inclusion:** The mandate risks disproportionately affecting aspirants from economically disadvantaged and socially marginalized backgrounds. Fresh graduates, particularly from non-metropolitan areas and under-resourced law schools, often cannot sustain unpaid or low-paying litigation practice. For women, structural and familial barriers make litigation even less viable, potentially curtailing their representation in the judiciary. This regressive gatekeeping contradicts constitutional commitments to equality and social justice under Articles 14 and 16.
3. **Judicial Independence and Institutional Integrity:** Judicial independence is not merely about freedom from external pressures but also institutional diversity and legitimacy. Imposing rigid entry barriers without addressing systemic deficiencies — such as poor working conditions, inadequate training, and lack of mentorship — risks narrowing the recruitment pool to an elite few. Moreover, by prioritizing nominal experience over demonstrable aptitude, the measure could entrench mediocrity rather than elevate judicial standards.
4. **Lack of Evidentiary Basis and Policy Coherence:** While anecdotal inputs from High Courts and the Bar Council suggest that fresh recruits lack courtroom maturity, the ruling fails to offer empirical data correlating years of practice with judicial performance. In contrast, a study-based, evidence-driven policy could have examined alternative pathways, such as strengthening judicial academies, peer mentorship, and continuous legal education. As Bharat Chugh notes, lived experiences and maturity are indeed vital — but merely logging three years of adjournment-seeking or drafting work may not equate to meaningful preparedness.

### Broader Concerns and Alternatives

1. The **India Justice Report (2022)** emphasized that many States already struggle with judicial vacancies, low recruitment rates, and gender disparity. Adding more filters may exacerbate these issues without addressing root causes.
2. A more inclusive solution would involve **hybrid models**: mandatory apprenticeships, structured internships under senior judges, and integration of clinical legal education during law school.
3. Additionally, the **Department of Justice and Law Commission** should be involved in deliberating such structural reforms, ensuring alignment with broader goals like the **National Judicial Infrastructure Corporation** and **E-Courts Project**.

### Conclusion

The three-year practice mandate, while well-intentioned, reflects a narrow, technocratic view of judicial reform. Without participatory consultation, clear metrics, and socio-economic safeguards, it risks undermining the very principles it seeks to uphold — judicial quality, independence, and access to justice. For a robust and representative judiciary, reforms must be inclusive, data-driven, and rooted in constitutional propriety.

**A new study on air pollution toxicity beyond AQI in Indian cities necessitates re-evaluating existing measurement standards. Analyze the governance challenges and policy implications of this finding for ensuring public health, environmental justice, and developing more effective regulatory frameworks for urban air quality management.**

### Introduction

A groundbreaking study by the Bose Institute, Kolkata, has revealed that the *toxicity* of PM<sub>2.5</sub> pollutants — measured by their oxidative stress potential — increases steeply beyond a specific threshold, irrespective of concentration. This finding goes beyond conventional *Air Quality Index (AQI)* frameworks, which assess air pollution solely on concentration levels. It demands a paradigm shift in urban air quality governance and regulatory standards in India.

### Governance Challenges

1. **Concentration-centric Regulations:** India's current ambient air quality standards, governed by the *National Ambient Air Quality Standards (NAAQS)* under the Air (Prevention and Control of Pollution) Act, 1981, focus on annual and 24-hour mean concentrations (e.g., 60 µg/m<sup>3</sup> daily for PM<sub>2.5</sub>). This fails to account for *toxicological variability* in pollutant composition across cities.
2. **Lack of Chemical Composition Monitoring:** AQI, as managed by the *Central Pollution Control Board (CPCB)*, is based on six pollutants but does not include *oxidative potential* or chemical source apportionment in its real-time updates. Most monitoring stations are ill-equipped to detect the varying toxicity of emissions from sources like biomass burning, industrial pollutants, or vehicular emissions.
3. **Institutional Fragmentation:** Air quality governance is divided among multiple agencies — CPCB, State Pollution Control Boards, urban local bodies — without a unified, data-driven toxicity evaluation protocol. This fragmentation limits coordination, especially in megacities like Kolkata, Delhi, or Mumbai.
4. **Inadequate Emergency Response Frameworks:** Unlike the *Graded Response Action Plan (GRAP)* in Delhi, most Indian cities lack city-specific emergency protocols based on pollution spikes. Even GRAP does not consider toxicity thresholds as triggers for action.

### Policy Implications

1. **Toxicity-Based Standards and Thresholds:** The study identifies a *toxicity threshold* of ~70 µg/m<sup>3</sup> in Kolkata, beyond which oxidative stress on the human body increases sharply. This necessitates evolving toxicity-weighted AQI indices and *city-specific toxicological baselines*, enabling more accurate public health risk assessments.
2. **Targeted Pollution Source Control:** Toxicity is found to be higher from sources like biomass or solid waste burning, compared to vehicular emissions. This demands *localized pollution control policies*, focusing on chemical-specific emission curbs — e.g., banning open garbage burning or promoting clean biomass technologies.
3. **Health-Centric Air Governance:** Existing standards must align with *health outcomes* rather than uniform concentration levels. Public health warnings, hospital preparedness, and urban planning must integrate toxicity thresholds to prevent respiratory or cardiovascular crises during toxic spikes.
4. **Environmental Justice Dimensions:** Vulnerable populations — urban poor, informal workers, children, and the elderly — face greater exposure and lower resilience to oxidative stress. Ignoring toxicity in AQI overlooks this inequality. Toxicity-sensitive planning can enable more *equitable environmental health policies*.
5. **Technological and Institutional Investments:** India needs to scale up *real-time chemical speciation* and *oxidative potential monitoring*. Investing in high-resolution sensors, urban toxicology labs, and integrating toxicity mapping into Smart Cities and AMRUT schemes can institutionalize data-led governance.

### Conclusion

The findings of this new study underscore the urgent need to evolve from a concentration-based AQI regime to a *toxicity-informed, health-prioritized air quality framework*. This shift is essential for protecting public health,



ensuring environmental justice, and enabling targeted interventions tailored to the diverse pollution profiles of Indian cities. Regulatory modernization, public awareness, and scientific capacity-building must converge to achieve breathable urban air in India's growth trajectory.

**India's reliance on foreign marine engine suppliers creates technological chokepoints, impacting its strategic autonomy. Analyze the economic and security imperatives of achieving indigenous production in this critical sector, and suggest key policy measures to foster self-reliance and bolster the 'Blue Economy'.**

### Introduction

India, with a vast 7,500 km coastline and strategic interests spanning the Indian Ocean Region (IOR), has ambitious maritime goals under the 'Blue Economy' and *Sagarmala* initiatives. However, the country's overdependence on foreign marine engine suppliers — with over 90% of >6 MW engines imported from five global players — has created a significant *technological chokepoint*. This undermines India's economic self-reliance and naval strategic autonomy.

### Economic and Strategic Imperatives

1. **Strategic Autonomy and National Security:** Marine engines are central to both commercial and naval vessels. India's dependence on a foreign oligopoly for engines embeds vulnerabilities into defence readiness. Licensing restrictions, software locks, and proprietary diagnostics expose naval assets to foreign control, violating the spirit of *Atmanirbhar Bharat*. Export control regimes like the US EAR or EU Dual-Use Regulation further tighten the risk.
2. **Supply Chain Disruption and Cost Vulnerability:** Any disruption in trade ties or global crises — such as during the COVID-19 pandemic — can stall ship production or maintenance cycles, leading to cost overruns and delays in both civilian and defence shipbuilding.
3. **Import Bill and Economic Leakage:** Marine engines contribute 15–20% of a ship's cost. As India seeks to become a top-five shipbuilding nation by 2047, continuing to import such a critical subsystem undermines domestic value capture, leading to long-term foreign exchange outflows.
4. **Blue Economy and Regional Leadership:** Under the *Blue Economy* vision, marine transport, fisheries, offshore renewables, and deep-sea exploration are key sectors. Indigenous marine engine capability will help India export complete ships and services to Indian Ocean nations, thus asserting maritime leadership.

### Challenges to Indigenous Capability

1. **Design Deficiency:** India lacks proprietary engine architecture meeting IMO Tier III standards and fuel-flexible needs (e.g., LNG, hydrogen, methanol).
2. **Material Science Limitations:** The absence of industrial capacity in nickel-based superalloys and thermal-stable composites hampers durability under marine conditions.
3. **Tribology and Precision Engineering Gaps:** Sophisticated tribological coatings and CNC machining tools are underdeveloped, impeding large-scale production.
4. **Training and R&D Disconnect:** Outdated curriculum and lack of industry-academic synergy prevent workforce readiness.

### Policy Measures for Self-Reliance

1. **Launch a Marine Engine Technology Mission (METM):** Similar to the DRDO-GTRE Kaveri project, a dedicated mission can focus on developing 6–30 MW marine engines, with targets for both military and commercial sectors.
2. **Public Procurement Guarantees:** Ministries of Defence and Shipping should mandate procurement of domestically developed engines once certified, ensuring demand for local players.
3. **R&D and Startup Incentivization:** Design-linked incentives (DLIs), a Marine Engine Innovation Fund, and testbed facilities (e.g., at IIT Madras or Cochin Shipyard) should be rolled out to support deep-tech startups in propulsion systems.
4. **Indigenous Metallurgy Development:** Collaboration with BARC, ARCI, and CSIR-NML can fast-track the development of high-performance marine alloys and thermal coatings.
5. **Maritime Skill Modernisation:** Modern marine engines (e.g., from Alang ship-breaking yards) should be retrofitted into technical institutes for training and reverse engineering.
6. **International Collaborations for Tech Transfer:** Strategic partnerships with friendly nations (e.g., South Korea) for co-development or licensing under 'Make in India' can bridge short-term gaps.

## Conclusion

Indigenous marine engine production is not just an economic necessity but a strategic imperative for a rising maritime power. To truly sail under its own command, India must develop a propulsion ecosystem that secures national security, enhances technological sovereignty, and anchors its ambitions in the Blue Economy. Without engines built in India, our ships risk drifting under foreign shadows, even if they fly the tricolour.