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EDITORIAL ANALYSIS



JUNE 24



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1. Elon Musk, the robot revolution and a dominant China: Will India be left behind in the embodied AI race? (THE INDIAN EXPRESS)
2. Ties built on shared history and culture (HINDUSTAN TIMES)
3. India doesn't just need start-ups, but scale-ups that become global giants (THE INDIAN EXPRESS)
4. Let us not confuse seats and seat share with parliamentary power (MINT)





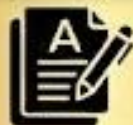
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Why industry can't afford to wait for the state to drive the robotics revolution



RAJA MANDALA
BY C RAJA MOHAN

E LON MUSK'S vision of "amazing abundance" imagines a world in which goods and services become plentiful and inexpensive, thanks to the unfolding technological revolution. The idea sounds fanciful, but it has a long lineage. Civilisations have long dreamt of magical sources of plenty — the alkahestry of Indian mythology, the cornucopia of the ancient Greeks. Karl Marx, too, believed that advancing productive forces could eventually liberate humanity from drudgery, but the obstacle was in the exploitative structure of social relations.

Musk's bet is narrower than Marx's. He is convinced that the tech revolution at hand could produce societies of "universal high income". Whether this seductive vision is real or not, the tech transformation is here and is called "embodied intelligence" or "physical AI".

Digital AI generates answers to questions and is moving towards the simulation of reality, but it remains locked inside your computer. "Embodied intelligence" — robots, often built in vaguely human form and known as humanoid robots, that can sense their surroundings, make decisions and use mechanical limbs to act on them — promises to step into the factory, the hospital ward and the battlefield. Musk's bet is that such humanoid robots could become the most consequential product ever made, doing for production what the computer did for information.

This is not fantastical futurism. Industrial robots have populated factories for decades. The new ambition is to make them adaptable enough, by empowering them with AI, to work in spaces designed for humans rather than machines. That ambition is fast becoming one of the defining strategic contests of this century, and it increasingly runs



ILLUSTRATION: C R RAJAMOHAN

through Washington and Beijing.

America still leads in frontier artificial intelligence, advanced chip design and the software architecture that will eventually serve as the brain of any humanoid robot. China has built something different: An industrial ecosystem to mass-produce the body. According to the International Federation of Robotics, China accounted for 54 per cent of all industrial robot installations worldwide in 2024 — some 295,000 units, the highest annual total ever recorded by any single country — and its operational stock crossed 2 million, by far the largest in the world. China is fast becoming for robotics what it already is for solar panels, batteries and rare-earth processing: The world's dominant manufacturing platform.

In robotics, then, as in several other frontier technologies, America increasingly supplies the brains while China supplies the bodies. Neither side is content to stay in its lane. Beijing is pouring resources into closing the gap in AI models; meanwhile, Washington is rediscovering industrial policy to rebuild ad-

Unlike China, India cannot isolate its robotics ambitions from the world; its near-term task is to combine international collaboration with the patient building of domestic research, design and manufacturing capability

vanced manufacturing at home.

For now, China dominates the global humanoid robot market, producing roughly 85 per cent of all humanoids worldwide. According to *The New York Times*, Chinese firms like Unitree and Agilité have begun mass production, and US companies are determined to catch up. Musk plans to begin pilot production of the Optimus humanoid robot soon. He hopes to scale to high-volume manufacturing in the coming years, eventually expanding to a 10-million-unit-per-year production line at a Texas gigafactory.

India's place in this race remains modest. The country installed 6,100 industrial robots in 2024, a 7 per cent rise on the previous year, but that places it only sixth in the world by annual installations — well behind not just the United States, Japan and China but also South Korea and Germany. India's overall robot density of around 30 continues to trail the global average of 132 robots per 10,000 manufacturing workers. It is a fraction of South Korea's extraordinary 1,200. If America and China are contesting leadership in embodied intelligence, India is a mere spectator.

But the stakes for India could hardly be higher. For three decades, the country's comparative advantage has rested on an abundance of cheap labour. (It is a different matter if we have actually leveraged it for collective benefit.) The age of embodied intelligence puts a big question mark over that asset. The very resource that once seemed to favour India risks becoming a constraint in a world where manufacturing competitiveness depends increasingly on robotics rather than on wage differentials.

Self-reliance rhetoric is no substitute for strategy here. Unlike China, India cannot isolate its robotics ambitions from the world: its near-term task is to combine international collaboration with the patient building of domestic research, design and manufacturing capability. There are grounds for some optimism. SSI Mantra, India's first indigenous surgical robotic system, has already conducted telesurgeries across thousands of kilometres, demonstrating that Indian engineers can compete at the technological frontier when talent, demand and regulation align. Several other companies, like GreyOrange, are pressing ahead with robotics development. The challenge lies in building industrial-scale robotics.

The Indian government can and should set incentives, fund research and shape regulation. But policy cannot substitute for actions at the firm level. The GoI's Draft National Robotics Strategy has been around since 2023 and could eventually turn into a robotics mission. But if Indian industry waits for a state-led mission to drive the robotics revolution, it may find, as it has with other technologies before, that the revolution has already happened elsewhere.

Musk's "amazing abundance" may remain a distant horizon or be realised only in part. The race to build the machines that might get the world there, however, has already begun. India's place in it will be decided mainly by the appetite of Indian capital to invest, innovate and take risks at the scale the moment demands.

The writer is contributing editor on international affairs for *The Indian Express*. He is also associated with the Manuvarma Jodha Institute of American Studies, Jindal Global University and the Council on Strategic and Defence Research, Delhi.

- **Key Terms and Explanations**

- **Embodied Intelligence (Physical AI):** Unlike traditional digital AI, which exists entirely as software inside screens and servers (such as large language models generating text or code), embodied intelligence infuses AI into a physical form. These machines possess sensors to perceive their environment, processing units to make real-time decisions, and mechanical limbs or actuators to manipulate the physical world.

- *Example:* A digital AI can draft a hospital management plan; an embodied AI is a autonomous humanoid assistant that physically navigates a ward to deliver medicine and monitor patient vitals.

- **Robot Density:** A critical metric used by the International Federation of Robotics (IFR) to measure a country's level of industrial automation. It is calculated as the number of operational industrial robots per 10,000 manufacturing workers.

- *Context:* While global frontrunners like South Korea boast a robot density of over 1,200, and the global average sits around 132, India's density remains close to 10, indicating a highly manual manufacturing base.

- **Universal High Income (Post-Scarcity Economy):** A socio-economic hypothesis where advanced automation reduces the marginal cost of producing goods and services to near zero. In this state, the traditional link between human manual labor and income is broken, theoretically creating a society of universal abundance where citizens have access to highly inexpensive necessities and automated wealth distribution.

- **Comparative Advantage:** An economic principle stating that economies should specialize in producing goods and services where they hold a lower relative opportunity cost. Historically, India's comparative advantage has been its demographic dividend—an abundance of low-cost, young manual and service labor.

- **Telesurgery:** Performing a surgical procedure from a remote location using a robotic system connected via high-speed, low-latency communication networks. The local surgeon manipulates robotic arms that mimic their precise movements inside a patient thousands of kilometers away.

- **Industrial Policy 2.0:** A modern governance strategy where states move away from free-market laissez-faire approaches to actively fund, subsidize, and structurally protect critical domestic technology and manufacturing sectors. This is driven by national security and strategic autonomy goals rather than pure market economics.

- **Main Arguments and Substantive Parts**
- **The "Brain vs. Body" Geopolitical Bipolarity**
- The global development of embodied intelligence has split into a distinct bilateral division of labor between the world's two largest economies:
 - **The American Edge ("The Brain"):** The United States maintains a clear lead in the software stack of physical AI. This includes frontier foundation models, neural network architectures, and advanced logic chip design (such as GPUs and custom AI accelerators) that serve as the cognitive engine for complex machines.
 - **The Chinese Hegemony ("The Body"):** China has established an unrivaled manufacturing ecosystem capable of mass-producing the physical components of robotics—actuators, sensors, chassis, and power units. By capturing roughly 85% of the global humanoid robot market and installing over half of the world's industrial robots, Beijing is positioning itself as the foundational factory floor for the automation age.
- **The Existential Threat to the Demographic Dividend**
- For decades, developing economies, particularly India, have relied on a massive pool of young, relatively inexpensive labor to attract investment and drive growth. Embodied AI alters this economic calculation. When highly adaptable, AI-powered humanoid robots can operate 24/7 in human-designed spaces without shift changes, benefits, or wage inflation, the economic value of cheap manual labor drops sharply. This risks triggering a wave of "reshoring," where Western and East Asian nations pull manufacturing facilities back home because automated labor eliminates the need to outsource.
- **Rhetoric vs. Strategic Reality in India**
- India's current position is primarily that of a consumer rather than a creator in this ecosystem. With annual robot installations hovering around 9,100 units—a small fraction of China's annual deployment—the gap is widening. While state frameworks like the Draft National Robotics Strategy exist, a top-down, state-led mission cannot succeed on its own.
- The core challenge is a deficit in industrial-scale capital investment. India boasts pockets of technological success, such as the *SSI Mantra* surgical system or *GreyOrange* in logistics automation. However, scaling these into mass production requires deep private capital investment, international research partnerships, and an active pivot away from defensive self-reliance toward competitive global integration.

- **Historical Evolution of the Issue**

- **Phase 1: Post-Independence to 1980s (Embryonic Industrialization)**

- Following independence, India pursued a state-directed, import-substitution industrial model. Manufacturing focused on heavy primary sectors like steel, chemicals, and heavy machinery via Public Sector Undertakings (PSUs). Automation during this period was purely mechanical and analog. The state prioritised mass job creation, which created a policy environment cautious of labor-displacing technologies. Consequently, early industrial robotics bypassed the Indian manufacturing ecosystem entirely.

- **Phase 2: 1990s to 2010s (The Service Sector Leapfrog)**

- The economic liberalization of 1991 coincided with the global microprocessor and internet revolution. India famously bypassed the traditional development path of transitioning from agriculture to mass manufacturing, leapfrogging straight into software and services.

- While this turned India into a global IT hub, it left the domestic hardware, precision electronics, and component manufacturing ecosystems underdeveloped. Industrial automation remained confined to a few advanced sectors, primarily the automotive assembly lines of multinational corporations.

- **Phase 3: 2014 to 2022 (Industry 4.0 and Manufacturing Ambitions)**

- With the launch of the *Make in India* initiative in 2014, policy focus returned to expanding manufacturing's share of GDP to 25%. This period saw the gradual introduction of Industry 4.0 concepts—Internet of Things (IoT), cloud computing, and basic data analytics—into Indian logistics and smart factories.

- The global supply chain shocks of 2020 further highlighted the need for domestic supply chain resilience. This led to the creation of Production Linked Incentive (PLI) schemes and the initial drafting of the National Robotics Strategy in 2023 to address India's low robot density.

- **Phase 4: 2023-Present (The Embodied AI Epoch)**

- The current era is defined by the convergence of advanced cognitive AI with physical robotic forms. Humanoid prototypes have shifted from highly scripted research projects into mass-producible industrial assets. As the US and China invest heavily in this space to secure technological dominance, India faces a new challenge: ensuring it does not become permanently dependent on foreign tech for its physical infrastructure.

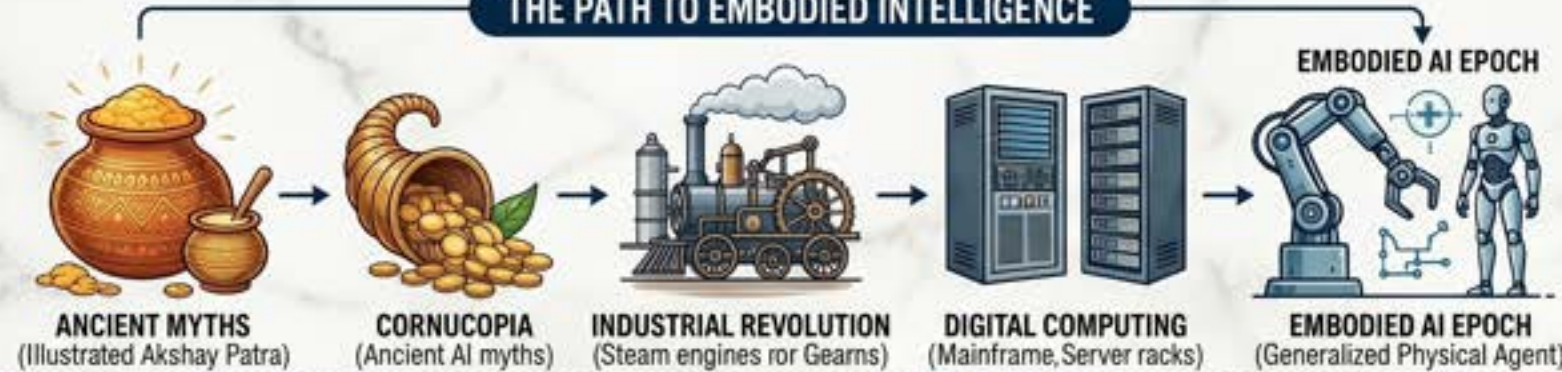
THE EMBODIED AI RACE: A UPSC STRATEGIC ANALYSIS FOR INDIA



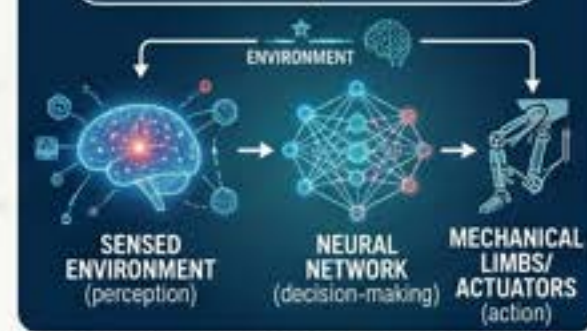
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LINKAGES WITH UPSC SYLLABUS
GS 2, 3, Essay, GS 4, GS 4, Ethics

THE PATH TO EMBODIED INTELLIGENCE



EMBODIED AI (PHYSICAL AI)



GLOBAL STRATEGIC BIPOLARITY

USA: THE COGNITIVE BRAIN



Frontier AI Models



Semiconductor Design

CHINA: THE INDUSTRIAL BODY



54%
of Industrial
Robot Installs

Mass-Production Ecosystems

Global Robot Installs 2024



54% of Industrial Robot Installs

COMPARATIVE ADVANTAGE EROSION

Indian Labor Pool



No overshadowing
Traditional labor

Robot Cost per Hour



Labor Value
Devaluation

MULTIDIMENSIONAL IMPACT



INDIA'S STRATEGIC PIVOT (WAY FORWARD)



GOVERNMENT-PRIVATE CO-INVESTMENT FUND

UPGRADE SKILLS
(MECHATRONICS)

INDIGENOUS SUCCESS: SSI MANTRA



KEY TERMS & CONCEPTS

- Robot Density
- Universal High Income
- Telesurgery

SAMPLE PYQ & PRELIMS BOOSTER

GS 3 Mains Question: Assess India's readiness for physical automation amidst demographic realities.
Prelims: What is Industry 4.0? Define embodied AI vs digital AI.

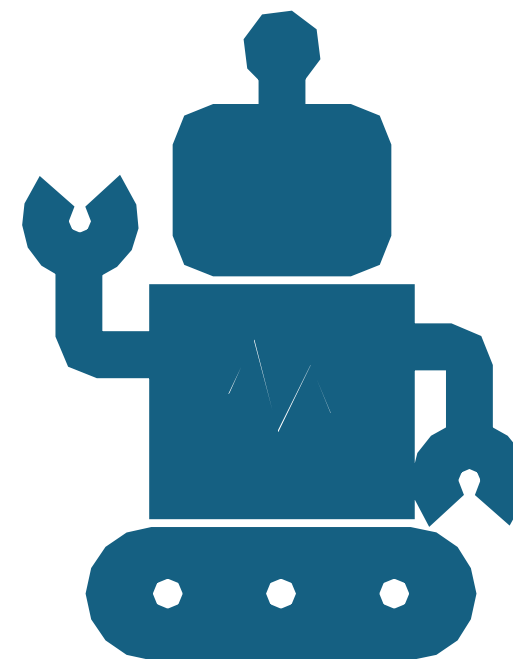
- **Logical and Philosophical Base**
 - The debates surrounding automated production systems rest on deep philosophical and ideological foundations that have shaped human thought for centuries.
 - **The Paradox of Abundance:** Civilizations have long dreamt of magical sources of plenty—found in the *Akshay Patra* of Indian epic tradition or the *Cornucopia* of Greek mythology. The core philosophical question of the modern era is whether technology alone can realize this post-scarcity vision, or if the outcome is ultimately decided by socio-economic structures.
- **Techno-Optimism and Technological Determinism**
 - This perspective assumes that technological advancement is an independent force that naturally dictates the direction of human society. The logic holds that creating autonomous, physical labor assets will lead to a universal high-income world by removing human physical limitations from the production loop. It operates on the premise that increasing total production capability will automatically resolve issues of distribution and poverty.
- **The Historical Materialist Critique**
 - In contrast, political economy frameworks, particularly Marxist analysis, argue that technology cannot be evaluated separately from the social and property relations of its time. From this viewpoint, advancing the forces of production does not inherently liberate humanity from labor.
 - If the ownership of these advanced physical AI assets remains highly concentrated within a small corporate or national oligopoly, automation could instead devalue human labor, depress wages, and widen the wealth gap between capital owners and displaced workers.
- **The Strategy of Realism vs. Isolation**
 - From a policy standpoint, the choice between isolationist self-reliance (*Atmanirbhar*) and global integration presents a clear strategic trade-off. Attempting to build an entire robotics supply chain in total isolation often leads to duplicating existing technology at a slower pace, leaving an economy trailing behind the global frontier.
 - A realist approach accepts global interdependencies. It recognizes that international collaboration is necessary to secure high-value components (the "brains") while steadily building domestic manufacturing and design capabilities over time.



- **Multidimensional Analysis**
- **Economic Dimension**
- **The Devaluation of Low-Cost Labor:** As the operating cost per hour of a humanoid robot falls below the minimum wage of manual labor in developing countries, India's traditional labor cost advantage risks erosion.
- **Capital Polarization:** Developing embodied AI requires heavy, long-term capital investment. This could concentrate high-margin manufacturing within tech-dominant nations, leaving developing economies dependent on importing expensive automated equipment.
- **The MSME Tech Gap:** India's industrial backbone relies on Micro, Small, and Medium Enterprises (MSMEs). These units rarely have the financial capability to adopt high-cost robotic systems, risking a dual economy where a few automated firms outcompete a vast, technologically lagging informal sector.
- **Social Dimension**
- **Threat of Structural Unemployment:** Unlike previous technological shifts that primarily automated repetitive cognitive tasks, physical AI directly targets manual jobs in logistics, construction, retail, and basic assembly—sectors that absorb large amounts of semi-skilled Indian labor.
- **The Gender Divide in Labor:** Sectors like electronic assembly, textiles, and agricultural sorting employ a high proportion of women. As these roles are prioritized for robotic automation, the impact could disproportionately affect female labor force participation.
- **Opportunities in Care and Healthcare:** On the positive side, India faces regional imbalances in healthcare access and a long-term aging trend in certain states. Specialized physical AI systems, like surgical assistants and automated eldercare aids, could help fill these critical service gaps.
- **Political & Geopolitical Dimension**
- **Techno-Nationalism and Bipolar Realities:** Embodied AI is becoming a core national security issue. The US-China tech rivalry means both nations are likely to limit the export of critical components, forcing non-aligned nations like India to navigate complex export controls.
- **The Risk of Digital Dependency:** If India relies entirely on American software models running on Chinese robotic bodies, it faces vulnerabilities in its digital sovereignty, leaving critical domestic supply chains exposed to foreign disruption.
- **Legal & Regulatory Dimension**
- **The Liability Vacuum:** Current Indian civil law does not clearly define fault for accidents involving autonomous physical machines. If an AI-driven industrial robot causes injury on a factory floor, determining liability between the software developer, the hardware manufacturer, and the local owner remains a complex legal challenge.
- **Labor Law Evolution:** India's complex web of labor regulations (now consolidated into four Labor Codes) will need updates to address hybrid human-machine workplaces, shifting definitions of workplace safety, and structural worker displacement.
- **Ethical Dimension**
- **Human Dignity and Machine Autonomy:** Using autonomous humanoids in sensitive environments like eldercare, childcare, or emergency medical response raises fundamental ethical questions about human dignity, empathy, and our relationship with technology.
- **Kinetic Risks and Bias:** AI models can carry algorithmic biases. When these models control physical machines, those biases can translate into physical actions, creating real-world safety risks for specific groups or environments.

- **Linkages with UPSC CSE Syllabus**
- **GS Paper 3: Science & Technology and Economic Development**
- **Science and Technology- Developments and their Applications:** The evolution of physical AI, edge computing, and mechatronics, alongside their real-world impact on industry and daily life.
- **Indigenization of Technology:** Evaluating India's progress from basic assembly to independent design and production of advanced systems (e.g., *SSI Mantra*).
- **Effects of Liberalization on Industrial Growth:** Analyzing how current trade policies, tariff structures, and incentives affect high-tech manufacturing inside India.
- **Employment and Growth:** Addressing the core challenge of maintaining job creation and leveraging India's demographic dividend in an increasingly automated world.
- **GS Paper 2: Governance and International Relations**
- **Effect of Policies of Developed Countries on India:** Understanding how US-China tech controls, semiconductor policies, and automation strategies impact India's strategic autonomy.
- **Government Policies for Development:** Critical analysis of the Draft National Robotics Strategy, the IndiaAI Mission, and the effectiveness of current PLI schemes.
- **GS Paper 4: Ethics and Human Interface**
- **Cyber Ethics and Technology:** The moral responsibilities of developers, accountability structures for autonomous decisions, and the ethical use of kinetic AI systems in public spaces.
- **Essay Paper & Optional Subjects**
- **Essay Themes:** Future of work, technology as a driver of inequality or abundance, and balancing self-reliance with global integration.
- **Relevant Optionals:** Public Administration (managing technological transitions), Sociology (the sociology of work and globalization), and Political Science & International Relations (the geopolitics of technology and corporate power).

- **Way Forward**
- **1. Shift toward Strategic Plurilateralism**
 - India should avoid trying to build an isolated, end-to-end domestic robotics supply chain from scratch. Instead, the country can leverage international initiatives like the US-India Initiative on Critical and Emerging Technology (iCET) and partnerships with advanced automation economies like Japan and South Korea. This allows India to secure critical component access while steadily scaling its own domestic capabilities.
- **2. De-Risk Private Venture Capital**
 - The state needs to co-invest with private capital to encourage deep-tech development. By launching targeted venture funds where the government shares early-stage risk, Indian conglomerates can be incentivized to invest beyond traditional, lower-risk software services and move into hardware design, precision mechatronics, and physical AI systems.
- **3. Implement Sector-Specific Niche Focus Areas**
 - Rather than trying to compete directly with China on mass-produced, low-margin humanoid parts, India can focus on specialized high-value applications where its engineering talent and local demand align.
- **4. Upgrade Skills for the Automation Age**
 - Educational curricula at India's ITIs, polytechnics, and engineering institutions need an overhaul. Training programs should shift from basic software coding and manual assembly skills toward mechatronics, robotic maintenance, edge computing integration, and human-machine collaboration models.
- **5. Create an Agile Regulatory Sandbox**
 - The government should quickly formalize the National Robotics Strategy into a fully funded mission. This must include establishing clear regulatory sandboxes that simplify safety certifications, clarify legal liability, and lower testing barriers for domestic robotics startups.



Civil Services Preliminary Examination

1. With reference to 'Industry 4.0', which of the following statements is/are correct? (UPSC CSE)

- 1. It is aimed at integrating cyber-physical systems with manufacturing processes.
- 2. It is expected to significantly reduce the need for human resource intervention in data analysis.
- 3. It relies heavily on technologies like the Internet of Things (IoT) and Cloud Computing. *Select the correct answer using the code given below:*
- 4. (a) 1 and 2 only
- 5. (b) 3 only
- 6. (c) 1 and 3 only
- 7. (d) 1, 2 and 3

2. The term 'Edge Computing', sometimes seen in the news, is best described as: (Standard Tech Trend)

- 1. A system that processes data near the source of generation rather than relying entirely on a centralized cloud.
- 2. A secure computing architecture used exclusively for international blockchain transactions.
- 3. The manufacturing process of producing hyper-advanced silicon logic chips.
- 4. A method to network mainframe computers across continents without underwater cables.

Civil Services Mains Examination

GS Paper 3 (Science & Technology & Economy)

- "The convergence of Artificial Intelligence with physical automation promises to redefine global manufacturing paradigms. Assess India's readiness to adopt Embodied Intelligence in light of its low robot density and demographic realities." **(UPSC Theme-Based, 15 Marks, 250 Words)**
- "Demographic dividend without appropriate skill alignment can turn into a demographic disaster. Discuss this statement in the context of increasing industrial automation and the rise of smart factories in India." **(UPSC CSE, 10 Marks, 150 Words)**
- "What do you understand by the term 'Strategic Autonomy' in the context of critical and emerging technologies? How can India balance its 'Make in India' ambitions with the necessity of international tech collaborations?" **(APSC/UPSC Theme, 15 Marks, 250 Words)**

[INCIDENTALLY]

Gopalkrishna Gandhi



Ties built on shared history and culture

New Delhi's appointment of its new high commissioner in Dhaka upholds the tradition of recognising and nurturing the Bengal-Bangladesh connect

More fitting appointment than Dinesh Trivedi's could not have been made to our High Commission in Dhaka. I applaud it, for I have known Dinesh over the last 20 years, from the time (2004-2009) that I worked out of Kolkata's Raj Bhavan. And so I know it to be right. He was then a stalwart colleague of Opposition firebrand Mamata Banerjee. He came up to me at the city's Taj Hotel where I was attending a function, and introduced himself, saying, "Good evening, Sir, my name is Dinesh Trivedi. I have had the privilege of knowing your brother, Rajmohan." Shortly thereafter, when Mamata Banerjee came with a Trinamool delegation to talk about Nandigram, she brought Dinesh with her. "You can talk in Gujarati, both of you... *kere chho, kere chho*", she said. Neither switched to our shared language, staying with the language linking all present — English. But a language link is a language link, and it did connect me somewhat specially to Dinesh. I was sad when Mamata and Dinesh parted company — sad for her on losing a sharp-minded and objective colleague, and sad for him to be leaving the typification of floor-

crosser. But both Mamata and Dinesh have very tough skins and survived the break-up.

Dinesh, born to Gujarati parents, spent most of his student and professional life in Kolkata and is, therefore, a Bengali-speaking non-Bengali — a condition that made his presence in Parliament and in the Union council of ministers a very Bengal presence and now makes him linguistically and culturally gifted for his office in Dhaka.

To recapitulate, briefly, Prime Minister (PM) Indira Gandhi very aptly appointed Subimal Dutt of the Indian Civil Service, and India's longest serving foreign secretary and a former secretary to the President, as India's first high commissioner to Bangladesh (1972-1974). Dutt was a Bengali born in Chittagong, once part of undivided Bengal and now in Bangladesh. Such was the warmth in India-Bangladesh ties in the first months of the latter's life that no one thought India selecting a Bengali Hindu born in what was now Bangladesh inappropriate or even anomalous. Dutt was so altogether outstanding a diplomat that his appointment to Dhaka was seen there as felicitous. Dutt was succeeded by Samar Sen, who was a Bengali born in Dhaka.

In the distinguished scroll of India's high commissioners to Bangladesh, there figures more than one "proper" Bengali, including the extraordinary diplomat, mountaineer, and photographer, Deb Mukharji.

Three other Indian high commissioners in Dhaka who were not Bengali but, like Trivedi, had Bengali connections are Muchand Dubey, the Bihar-

Jharkhand born scholar-diplomat who spoke Bengali as to the manner born, Krishnan Srinivasan, the Madras-born diplomat-author married to Brinda, the grand-daughter of the great Deshbandhu Chittaranjan Das, and Vikram Domaiswami, the Tamil-speaking Stephanian whose father, an officer with the Indian Air Force who fought in the Bangladesh war.

So, if the majority of India's selections of its chief representative in Dhaka have been standard in the way of diplomatic postings, some of them have also been Bengal- or Bengali-related appointments, strengthening the unique linkages between the two countries. Bengali knowing and Bengali-speaking Dinesh Trivedi, the first non-career or "political" appointee to that position, thus, continues a prized tradition. Therefore, when he said after reaching Dhaka that the 1.4 billion people of India and the 200 million people of Bangladesh should "achieve great things together" and that they "share the same sky, the same air, the same pain", adding "whatever we do, we have to do it together; we cannot be powerful in isolation." I thought to myself, "Well said".

To be sure, Dinesh's core being is political, not literary or aesthetic (he plays the *sitar* though, it is said, quite classily). But his reference to the sky, air and pain came straight out of Bharadwaj's imagination of the famine-hit and pain-stung Bengal of Tagore's poems and music, Satyajit Ray's plaintive films, and Amartya Sen's explorations of poverty's roots. All three, incidentally, have Bangladesh roots — Tagore's ancestral estate being in



In the distinguished scroll of India's high commissioners to Bangladesh, there figures more than one "proper" Bengali.

Shilaidaha in Kushtia, Ray's father and grandfather having been born in Kishoreganj, and Shantiniketan-born Sen having roots in Dhaka and Manikganj. Dinesh's comment also was embedded in the Bengal that master photographer Sunil Janah captured in his shots of the 1943 famine and that Somnath Hore drew in his sketches of the Tebhaga struggle and the trauma of the 1946-47 riots.

The sharp reaction to Dinesh's statement from Shafiqur Rahman, chief of the Bangladesh Jamaat-e-Islami and leader of the Opposition in parliament, was to be expected but is completely misconceived. For anyone in Dhaka to imagine that Dinesh's statement reflected an inherent vision of India absorbing Bangladesh is not just politically off the mark but also crissolatically erroneous. He was expressing a sentiment that is as old as the Partition of India. Not a few thought and suggested in India — as well as the partitioned portions to our east and west — that while the Radcliffe Line had come to stay, while Pakistan was a fact forever, and by extension, Bangladesh is too, there is much that could be done together for mutual good.

KC Neogy — who had studied in Dhaka and was minister for rehabilitation and, later, commerce, in PM Jawaharlal Nehru's first cabinet — said in Parliament on March 11, 1949, that as sovereign nations, India and Pakistan could yet have a joint economic vision

for development, including an economic and customs union. In times like the present, where there are active blocs such as the European Union, the Eurasian Economic Union, and the African Union, the kind of hope Dinesh expressed was not only unexceptionable but pragmatic and progressive. High Commissioner Trivedi will do great good if, as he strengthens old bridges and builds new ones, he helps reduce if not eliminate mistrust and hate speech in our joint discourse.

I close with an anecdote which many in Bangladesh today may not want to because it has to do with Sheikh Mujibur Rahman. But I hope they will appreciate its anthropological and ecological verity. When, on January 10, 1972, Rahman was on his way from London to Dhaka to assume the leadership of the newly liberated country, he stopped in Delhi. PM Indira Gandhi gave him a rousing welcome. He spoke in Bangla at a rally, upon popular urging. As the two leaders exited the stage, one man held up a placard that read, "India-Bangladesh same blood, Ganga Padma same flood." This is the sovereign truth of our two nations. May that truth preserve and help us progress in friendship.

Gopalkrishna Gandhi is a student of modern Indian history and the author of *The Undying Light: A Personal History of Independent India*. The views expressed are personal.

- **Key Terms and Explanations**

- **Radcliffe Line:** The boundary line commissioned in 1947 to divide India into two independent nations, India and Pakistan. Named after its architect, Sir Cyril Radcliffe, it created West Pakistan (modern Pakistan) and East Pakistan (modern Bangladesh).

- *Example:* This line converted porous cultural zones into strict international borders overnight, creating decades of border disputes like the enclaves issue, which was resolved only through the 100th Constitutional Amendment Act in 2015.

- **Bhadralok:** A Bengali term literally translating to "gentleman" or "well-mannered person." Historically, it refers to the educated, cultured, upper- and middle-class intelligentsia of Bengal that emerged during the colonial era. They shaped the Bengal Renaissance, literature, arts, and political thought.

- **Floor-Crosser / Anti-Defection:** A political term for a legislator who changes their party allegiance, moving from the treasury benches to the opposition or vice-versa. In India, this practice led to the creation of the Tenth Schedule (Anti-Defection Law) via the 52nd Constitutional Amendment Act of 1985 to preserve legislative stability.

- **Customs Union:** A deeper form of economic integration where a group of sovereign nations agree to eliminate internal trade barriers (like tariffs) and adopt a common external tariff policy toward non-member countries.

- *Example:* The European Union functions as a highly integrated customs union, a model that regional groupings in South Asia, like SAARC, have struggled to successfully implement due to geopolitical friction.

- **Tebhaga Movement (1946–1947):** A significant peasant agitation led by the All India Kisan Sabha in undivided Bengal. Sharecroppers (*bargadars*) demanded that they keep two-thirds (*tebhaga*) of the harvest for themselves, reducing the exploitative share given to landlords (*jotedars*) to one-third.

- **Main Arguments and Substantive Parts**

- The geopolitical dynamic between India and Bangladesh offers a template for how cultural diplomacy can bridge the gaps left by political partitions.

- **The Core Thesis**

- Traditional diplomacy relies heavily on formal, career diplomats. However, when dealing with nations carved out of a shared civilization, non-career or "political" appointments equipped with regional linguistic fluency and cultural empathy can unlock deeper diplomatic trust. Regional connection acts as an organic catalyst for bilateral cooperation.

- **Key Supporting Arguments**

- **The Power of Native Fluency:** The choice of envoys with local connections—such as a Bengali-speaking non-Bengali or historical figures born in undivided Bengal—creates immediate rapport. This reduces the institutional rigidity often found in foreign ministries.
- **Sovereignty Matched with Integration:** Civilizational kinship does not threaten a neighbor's sovereignty. Proponents of regional unity point to global entities like the African Union or European Union to demonstrate that independent nations can share resources, market access, and ecological spaces without losing their national identities.
- **Ecological and Geographical Inseparability:** The environmental reality of the subcontinent ignores political cartography. The common river systems, such as the Ganga and the Padma, tie the economic fortunes, disaster vulnerabilities, and agricultural survival of India and Bangladesh together in an unbroken cycle.
- **Counterarguments and Challenges**
- **The Threat of Over-Familiarity:** Detractors and opposition factions within neighboring states often view statements emphasizing "shared blood" or "unified destinies" with deep suspicion. Hardline nationalist groups can misinterpret cultural kinship as a cover for geopolitical expansionism or an attempt to undermine their hard-won independence.
- **The Weight of Modern Political Friction:** While shared cultural touchstones like the poetry of Rabindranath Tagore are powerful, they cannot entirely erase modern bilateral friction. Contentious issues like the equitable sharing of Teesta river waters, cross-border migration, and border security management require hard nose-to-tail negotiations that culture alone cannot settle.

- **Historical Evolution of the Issue**

- The relationship between the regions comprising modern India and Bangladesh has moved through distinct historical phases, shifting from shared anti-colonial struggles to the realities of a fractured subcontinent.
- **1947: Partition and Fracture:** The partition of Bengal along religious lines fractured a culturally unified region. East Bengal became East Pakistan, separating families, disrupting traditional trade routes, and cutting off jute mills in West Bengal from raw material producers in the East.
- **1971–1974: Liberation and Early Warmth:** India played a pivotal role in the 1971 Bangladesh Liberation War, providing shelter to millions of refugees and offering direct military support. The immediate post-independence era, led by Prime Ministers Indira Gandhi and Sheikh Mujibur Rahman, saw immense diplomatic warmth. India consciously sent highly accomplished diplomats with deep roots in East Bengal to build foundational state-to-state ties.
- **1975–1990s: Assassination and Geopolitical Cool:** Following the tragic assassination of Sheikh Mujibur Rahman in 1975, Bangladesh experienced periods of military rule. Bilateral ties chilled as successive regimes leaned toward a more polarized, anti-India foreign policy, weaponizing water disputes and border skirmishes for domestic political gains.
- **1996–Present: Economic Pivot and Strategic Partnership:** The signing of the historic 30-year Ganga Water Sharing Treaty in 1996 marked a return to pragmatism. Over the last two decades, the relationship has evolved into a "Model of Neighborhood Diplomacy," characterized by multi-modal connectivity projects, grid integration, bilateral trade crossing billions of dollars, and the definitive settlement of long-standing land and maritime boundaries.

INDIA-BANGLADESH RELATIONS: CIVILIZATIONAL LINKS & PRAGMATIC COOPERATION



KEY TERMS



MAIN ARGUMENTS



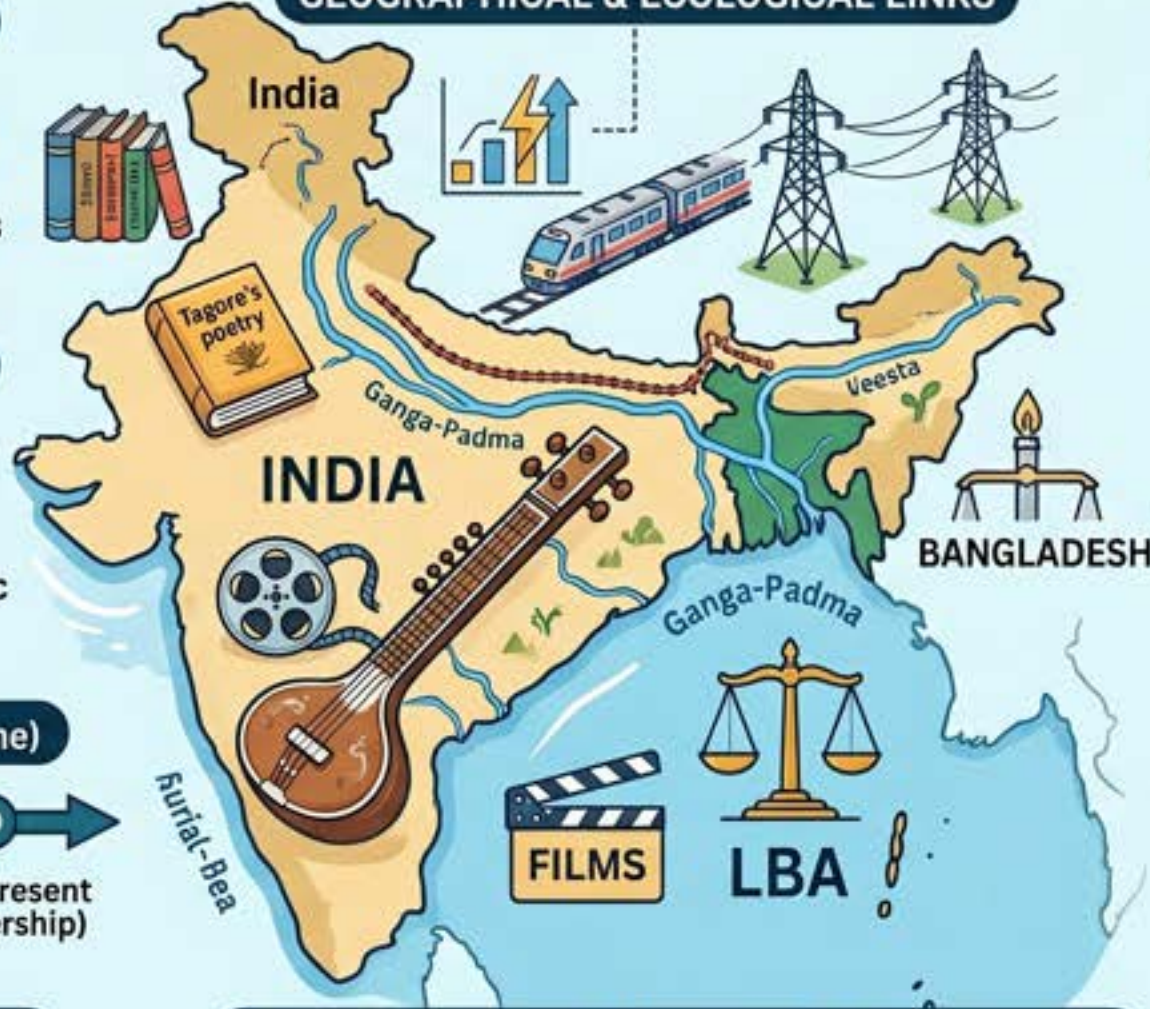
HISTORICAL EVOLUTION (Timeline)



UPSC/APSC SYLLABUS LINKAGES

- UPSC/IndiC, Radcliffe - Agreement
- Bangladesh - Customs Union

GEOGRAPHICAL & ECOLOGICAL LINKS



MULTIDIMENSIONAL ANALYSIS



WAY FORWARD (Policy Directions)



PREVIOUS YEARS' QUESTIONS (Prelims & Mains)

1. PRevious Yearrrs' Questions (Prelims & Mains)
2. PRevious Years' Questions-II (Prelims & Mains)



- **Logical and Philosophical Base**

- The philosophical foundations governing India-Bangladesh relations oscillate between realism and a form of civilizational constructivism.

- **The Philosophical Intersection:** Cartographic lines can redefine citizenship and sovereignty, but they cannot erase centuries of shared language, ecology, and cultural memory.

- **The Constructivist View of Shared Identity**

- This school of thought argues that international relations are shaped by shared ideas, identities, and histories rather than raw military power alone. The argument relies on the premise that a shared intellectual lineage—represented by icons like Satyajit Ray or Amartya Sen—creates an underlying layer of social trust. This "soft power" provides a buffer that absorbs the shocks of political misunderstandings.

- **The Pragmatic Realist Assumption**

- From a realist standpoint, the logic shifts toward mutual economic self-interest and geographical necessity. The fundamental assumption here is that "neighbors cannot be chosen." True national security and economic prosperity cannot be achieved in isolation.

- Therefore, a joint economic vision, modeled after modern regional trade blocs, is not driven by mere sentimentality; it is a cold, pragmatic requirement for survival in an interconnected global economy.

- **Multidimensional Analysis**

- **Social Dimension**

- The human element is defined by shared language, kinship ties across borders, and a mutual vulnerability to natural disasters. Millions of people on both sides of the border share the same dialect, culinary traditions, and religious festivities.

- However, this proximity also brings friction, as cross-border migration remains a highly sensitive social and electoral topic within India's northeastern states, complicating local demographic dynamics.

- **Political Dimension**

- Bilateral stability depends heavily on the political alignment of the ruling regimes. While the political leadership in both New Delhi and Dhaka has actively championed a "Neighbourhood First" policy, domestic political compulsions often interfere.

- Opposition parties in Bangladesh frequently tap into anti-India sentiments to rally nationalist bases, interpreting gestures of cultural proximity as a threat to their sovereign identity.

- **Legal Dimension**

- The legal architecture has grown stronger over time, anchored by landmark agreements. The resolution of the Land Boundary Agreement (LBA) through India's 100th Constitutional Amendment Act stands as a global example of peaceful border dispute resolution.

- Similarly, both nations accepted the 2014 international maritime boundary arbitration award by the Permanent Court of Arbitration (PCA), demonstrating a shared commitment to international legal frameworks.

- **Ethical Dimension**

- The ethical imperative rests on historical gratitude, human rights, and shared suffering. India's intervention in 1971 was driven by an ethical responsibility to stop the humanitarian atrocities committed by the Pakistani military in East Pakistan.

- In the modern context, the ethical challenge lies in managing borders humanely, reducing border casualties to zero, and working together to address the climate change crisis facing the vulnerable populations of the Sundarbans.

- **International Dimension**

- Regionally, Bangladesh is the vital anchor of India's "Act East" policy and a crucial partner in sub-regional forums like BIMSTEC (Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation).

- In the broader global theater, Bangladesh's strategic position in the Bay of Bengal makes it a focal point of the Indo-Pacific construct, balancing relations between New Delhi's security concerns and Beijing's economic infrastructure investments.

- **Economic Dimension**

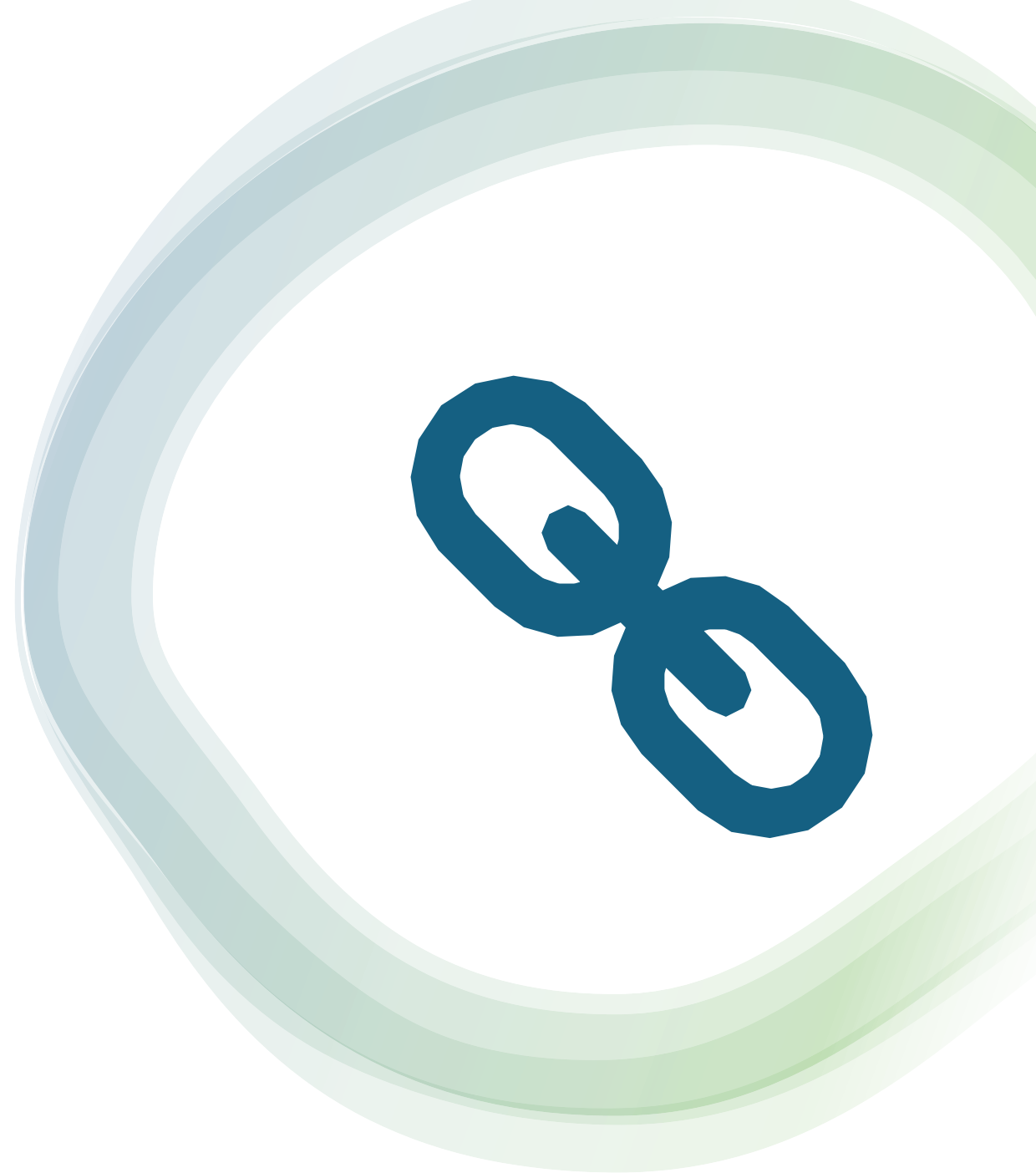
- Bangladesh is India's largest trading partner in South Asia, and India is one of the top export destinations for Bangladeshi goods. The economic relationship has evolved from simple cross-border trade to deep structural integration, featuring:

- Cross-border electricity transmission lines.

- The operationalization of the India-Bangladesh Friendship Pipeline for fuel transit.

- Coastal shipping agreements that use Bangladeshi ports (Chittagong and Mongla) to connect India's landlocked Northeast to the sea.

- **Linkages with NCERTs**
- **Contemporary World Politics (Class XII) – Chapter 5: South Asia and the Contemporary World:** This chapter provides a structural overview of the political systems in South Asia and explicitly details the conflict and cooperation between India and Bangladesh, tracking issues from water-sharing to security cooperation.
- **India: Physical Environment (Class XI) – Chapter 3: Drainage System:** Essential for understanding the hydrological linkages, transboundary river systems (Ganga, Brahmaputra, Teesta), and the ecological compulsions of the deltaic region that dictate bilateral treaties.
- **Themes in Indian History (Class XII) – Part III:** Relevant for contextualizing the socio-political movements of the mid-20th century, the socio-economic impact of the 1943 Bengal Famine, and the deep-seated trauma of the 1947 Partition.



- **Linkages with UPSC CSE Syllabus**
 - **GS Paper II: International Relations**
 - **India and its Neighborhood- Relations:** Direct coverage of bilateral ties, institutional mechanisms, historical treaties, and border management issues between India and Bangladesh.
 - **Bilateral, Regional, and Global Groupings involving India:** Analysis of sub-regional cooperation frameworks like BIMSTEC, BBIN (Bangladesh, Bhutan, India, Nepal) Motor Vehicles Agreement, and the security architectures of the Indian Ocean Region.
 - **GS Paper I: Indian History and Society**
 - **Post-Independence Consolidation:** The 1971 Liberation War, the refugee crisis, and its impact on Indian domestic policy and state boundaries.
 - **Social Empowerment and Communalism:** The legacy of Partition, regional identity vs. religious nationalism, and the cultural synthesis of the Bengal region.
 - **GS Paper III: Internal Security and Environment**
 - **Security Challenges and their Management in Border Areas:** Managing the porous 4,096 km international border, checking cattle smuggling, fake currency circulation, and transnational insurgent networks.
 - **Environment & Biodiversity:** Climate change adaptation strategies for the shared deltaic ecosystem of the Sundarbans.
 - **Essay & Optional Subjects**
 - **Essay:** High relevance for themes centered around *"Culture as an instrument of foreign policy," "Geopolitics vs. Geoeconomics in South Asia,"* or *"Borders: Dividers or Bridges?"*
 - **Political Science & International Relations (PSIR):** Directly maps to Paper II (India and the World), specifically the section on India's relations with neighboring South Asian states.
-

- **Way Forward**

- **Finalize the Teesta Water-Sharing Agreement:** New Delhi needs to build a domestic political consensus with the state government of West Bengal to finalize a equitable water-sharing formula for the Teesta river. This will remove a primary source of political irritation in Dhaka.
- **Transition from SAARC to BIMSTEC and BBIN:** Recognizing that SAARC remains stalled by geopolitical deadlocks, both nations should channel their diplomatic capital into sub-regional arrangements like the BBIN initiative to accelerate energy grids, digital connectivity, and transport corridors.
- **Implement a Zero-Casualty Border Policy:** To counter anti-India narratives, India's Border Security Force (BSF) and the Border Guard Bangladesh (BGB) must institutionalize the strict use of non-lethal weapons. This will prevent deaths at the border and shift focus toward tracking organized crime and smuggling rings.
- **Establish Comprehensive Economic Partnership Agreements (CEPA):** As Bangladesh graduates from Least Developed Country (LDC) status, the preferential tariff treatments it enjoys will shift. Both nations must proactively negotiate a CEPA to protect bilateral trade volumes, remove non-tariff barriers, and secure mutual supply chains.



UPSC Civil Services Examination

Civil Services Mains (GS Paper II)

- 2024:** "The relationship between India and Bangladesh is anchored in deep historical, cultural, and economic ties, yet it faces persistent challenges. Evaluate the strategic importance of Bangladesh for India and discuss the major areas of cooperation and friction between the two nations."
- 2017:** "The concept of BIMSTEC is a parallel organization to SAARC. To what extent has the former substituted the latter? Discuss the similarities and differences between the two organizations and their implications for India's foreign policy."
- 2014:** "With respect to the South Asian Association for Regional Cooperation (SAARC), evaluate the reasons for its low performance and discuss how sub-regional groupings like BBIN can offer a more viable alternative for regional integration."

Civil Services Prelims (Sample Theme-Based Questions)

- 2020:** Consider the following pairs of international agreements and their core focus:
 - Tsangpo-Brahmaputra Basin Treaty — India and China
 - Ganga Water Sharing Treaty — India and BangladeshWhich of the pairs given above is/are correctly matched? (Answer: 2 only)
- 2016:** The 100th Constitutional Amendment Act of India pertains to which of the following? (a) Introduction of the Goods and Services Tax (GST) (b) National Judicial Appointments Commission (c) Exchange of enclaves and land boundary settlement with Bangladesh (d) Granting constitutional status to the National Commission for Backward Classes (Answer: c)

India doesn't just need start-ups, but scale-ups that become global giants



SACHCHIDANAND SHUKLA

A STATISTIC doing the rounds is that, at the current rate of profit growth, the taxes paid by Samsung and SK Hynix will be around \$4.30 billion over the next three years, almost equal to half of South Korea's national debt. Back home, amid the doom and gloom, two news items sparked hopes for our ability to build globally competitive giants. In early April, it was reported that Amul had become India's first FMCG firm to hit a turnover of Rs 1 trillion. Then came news that RIL had become the first Indian company to cross \$10 billion in profits. India had 35 companies with a turnover of over Rs 1 trillion in FY25. However, only one has crossed \$10 billion in profits, a watershed moment for the Indian corporate sector. The US and China boast of dozens of such firms, and Japan has multiple companies consistently above this threshold.

A few questions come to the fore. How important is it to have large firms with big profit pools? Does this divergence between topline and bottom line in terms of scale point to any structural issue? Is there an issue of "economic populism" or anti-big-business sentiment that views profits negatively?

The history of economic development suggests large, well-governed companies have been among the most reliable engines of productivity and innovation, creating the economies of scale necessary to compete on

the global stage and raise living standards.

Let us start with productivity. Large firms spread fixed costs, such as those of R&D, compliance and digital infrastructure, across vast output, driving down unit costs and raising efficiency. Innovation, too, is often scale-dependent. Breakthroughs require patient capital, tolerance for failure and multidisciplinary talent — attributes concentrated in large enterprises. The US technology sector illustrates this vividly. Global competitiveness follows from this capacity to invest and integrate. Large firms build brands, control distribution, and orchestrate cross-border supply chains. They shape standards and capture value in global markets. They are significant direct employers and their larger contribution is often indirect: Dense supplier ecosystems, service providers and downstream distribution channels. They also contribute with higher wages.

As for the structural issue, India's corporate story should not be viewed only through the lens of scale via revenues. By that measure, India has made real progress. A growing cohort of firms now cross the Rs 1 trillion revenue mark and balance sheets are in their best-ever shape after years of deleveraging. Yet beneath this success lies an asymmetry that deserves closer attention. India has built large companies. But not enough that are globally dominant, innovation-led and embedded in the highest-margin segments of the world economy.

Three features define this gap.

First, Indian firms tend to scale domestically rather than globally. The home market is large and has been a powerful growth engine. Many firms have leveraged this demand to build formidable positions

across sectors. But global revenue exposure remains limited outside a narrow band of sectors, notably IT services, pharma and to an extent auto and oil products. Even here, the model is largely export-oriented services, assembly or re-exports rather than ownership of products, platforms or patents. In contrast, the world's most valuable companies, from Apple to Toyota, derive strength from global market share, cross-border supply chains and pricing power built on brand and intellectual property.

Second, India's corporate profit pool is still unusually concentrated in finance and commodities finance. Financials and commodity majors account for a disproportionate share of aggregate profits with profit after tax contributions at 41 percent and 19 percent respectively. This is not unique to India, but the skew is more pronounced. These sectors are capital-intensive and often cyclical, with returns shaped by global price movements or credit cycles rather than sustained innovation. In advanced economies, a larger share of profits accrues to technology, pharmaceuticals and advanced manufacturing, sectors where firms command durable margins through intellectual property and network effects.

Third, India's presence in high-margin, innovation-driven sectors remains negligible. There are few domestic equivalents of frontier firms like NVIDIA that dominate critical nodes of the global technology stack. India's digital economy has produced successful platforms, but most are domestically focussed and operate in intensely competitive, low-margin environments. Global rents in software, semiconductors and advanced industrials continue to ac-

cure to firms headquartered elsewhere.

This divergence is not simply a matter of top-down policies or corporate strategy; it also reflects fundamental conditions. India's R&D spending, at sub-1 per cent of GDP, lags far behind that of peers. Access to patient risk capital, particularly for deep-tech ventures, remains constrained. Regulatory uncertainty and fragmented factor markets raise the cost of scaling across states and sectors. And while India has integrated into global trade, it is yet to fully embed itself in the most lucrative segments of global value chains.

India's development journey is entering a new phase amid a fast-changing global backdrop. The next leap, jobs creation at scale and flow of investments, will come not from incremental growth but from creating many profitable firms. Hopefully, we have travelled some distance from the Economic Survey 2017-18 — which observed that the country had shifted "from crony socialism to stigmatised capitalism" — so that profit isn't a dirty word and businesses are not perpetually viewed with suspicion that hinders reforms and erodes investment sentiment.

To power India's transition to a high-income economy, we need dozens more such domestic champions with the scale, ambition, and execution depth that earn more than \$10 billion in profits. The Korean examples above or the US Magnificent 7 are cases in point. India doesn't just need start-ups, it needs "scale-ups" that become global giants with large profit pools. The real question that needs answering by policymakers and corporates is then: Are we optimising for scale (only via revenues) or global competitiveness (profits plus pricing power)?

The writer is group chief economist, I&T. Views are personal

India has built large companies. But not enough that are globally dominant, innovation-led and embedded in the highest-margin segments of the world economy

- **Key Economic Concepts & Core Terminology**

- **Start-ups vs. Scale-ups:** A *start-up* is a temporary organization designed to search for a repeatable and scalable business model under conditions of extreme uncertainty. A *scale-up*, by contrast, has validated its business model, achieved product-market fit, and is focused on exponential growth, expanding market share, and generating sustainable, high-volume revenue and profitability.
 - **Topline vs. Bottom-line Divergence:** The *topline* refers to a company's gross revenues or total sales, indicating market reach and demand volume. The *bottom-line* is the net profit after all operational expenses, taxes, interest, and depreciation are deducted. A divergence occurs when a firm achieves massive revenue scale but suffers from thin, fragile profit margins due to high operational friction, lack of pricing power, or low-value addition.
 - **Global Rents:** These are economic super-profits earned by firms that command unique, non-replicable assets, such as advanced technology, proprietary patents, or massive network effects. Unlike standard competitive profits, global rents accrue to market leaders (e.g., tier-one semiconductor designers or advanced pharmaceutical innovators) who dictate global industry standards.
 - **Patient Risk Capital:** Long-term equity investment that backs deep-tech or highly uncertain research and development (R&D) ventures. Unlike traditional venture capital looking for an exit within 5 to 7 years, patient capital tolerates extended gestation periods (often 10 to 15 years) before realizing commercial returns.
 - **Deep-Tech & Frontier Technologies:** Technologies rooted in substantial scientific advances and high-engineering innovation (such as quantum computing, advanced materials, genomics, and neuromorphic chip architectures). They stand in contrast to "shallow tech," which primarily repurposes existing digital frameworks for local delivery or e-commerce aggregation.
 - **Stigmatised Capitalism:** A socio-political environment in which wealth creation, large-scale corporate accumulation, and high profit margins are viewed with institutional and public suspicion, often conflated with rent-seeking or cronyism rather than recognized as rewards for innovation and efficiency.
-

- **Central Thesis & Structural Arguments**

- The core structural challenge facing the economy is not a lack of entrepreneurial intent or domestic market volume, but a critical deficit in building globally dominant, innovation-led corporate giants capable of capturing high-margin segments of the global value chain. While domestic revenue expansion has been robust, it masks an asymmetric reality where net corporate profit pools remain intensely concentrated and highly insulated from global competition.

- **The Asymmetry of Scale**

- The landscape presents a stark contrast between top-line expansion and global bottom-line dominance. While dozens of domestic firms have successfully crossed the landmark threshold of **Rs 1 trillion** in annual turnover, only a solitary entity has breached the benchmark of **\$10 billion** in net annual profits. In advanced industrial economies like the United States, China, and Japan, dozens of corporations regularly cross this threshold. This gap demonstrates that domestic market capitalization does not automatically translate into global economic clout or pricing power.

- **The Triple Corporate Gap**

- This structural divergence is driven by three distinct characteristics of the domestic corporate architecture:

- **Domestic Insulation over Global Exposure:** Most domestic champions scale horizontally within the borders, leveraging a massive, consumption-heavy domestic market. Outside of IT services, generic pharmaceuticals, and specific refined petroleum products, global revenue exposure is limited. Furthermore, even within export-heavy sectors, the underlying model relies heavily on labor arbitrage, contract assembly, or downstream service provisioning rather than the ownership of core products, foundational platforms, or global patents.

- **Extreme Profit Pool Concentration:** The aggregate corporate profit pool is heavily skewed toward capital-intensive, highly cyclical, or tightly regulated sectors. Financial services and commodity majors account for roughly **41%** and **19%** of aggregate corporate profits respectively. These sectors do not derive their margins from continuous, frontier-level technological innovation, but rather from credit cycles, macro-monetary conditions, and global commodity price movements.

- **Absence from High-Margin Frontier Nodes:** There is a noticeable absence of domestic equivalents to frontier technology firms that anchor critical global nodes, such as semiconductor lithography, advanced industrials, or foundational software architecture. The digital economy has successfully scaled platform plays (such as logistics, payments, and delivery aggregators), but these function primarily as domestic intermediaries operating in low-margin, high-burn competitive landscapes.

- **Historical Evolution of Indian Corporate Scale**

- Understanding why the corporate structure is optimized for domestic revenue rather than global profitability requires examining the policy shifts that shaped industrial evolution.

- **The License-Permit-Quota Raj (1951–1991)**

- Following independence, industrial policy was anchored in the *Industries (Development and Regulation) Act of 1951* and the subsequent *Monopolies and Restrictive Trade Practices (MRTP) Act of 1969*. Under this regime, corporate scale was viewed with explicit policy skepticism.

- The state sought to prevent the concentration of economic power by imposing strict capacity caps, import substitution mandates, and rigid licensing protocols. Consequently, domestic firms became highly fragmented, technologically insulated, and structurally incapable of achieving economies of scale. Survival depended on navigating regulatory corridors rather than investing in R&D or global market expansion.

- **The Service-Led Liberalization Paradigm (1991–2010s)**

- The 1991 structural reforms dismantled the industrial licensing regime and broke open product markets. However, instead of transitioning into a high-margin manufacturing powerhouse, the economy leaped directly from agriculture into a booming services sector.

- Firms in IT services and business process outsourcing capitalized on global labor arbitrage and talent availability. While this built massive corporate institutions and generated substantial employment, it anchored the export profile in low-to-mid-margin service delivery. The intellectual property, core software platforms, and high-margin product designs remained firmly anchored in western and east Asian economies.

- **The Deleveraging and Platform Era (2010s–Present)**

- The decade following the 2008 Global Financial Crisis was defined by the *Twin Balance Sheet Crisis*, forcing massive corporate deleveraging across infrastructure and heavy industries.

- Concurrently, a massive wave of venture capital fueled a consumer technology startup boom. While this ecosystem birthed dozens of unicorns, these platforms primarily optimized for local consumer acquisition and logistics delivery, scaling revenues while deferring profitability.



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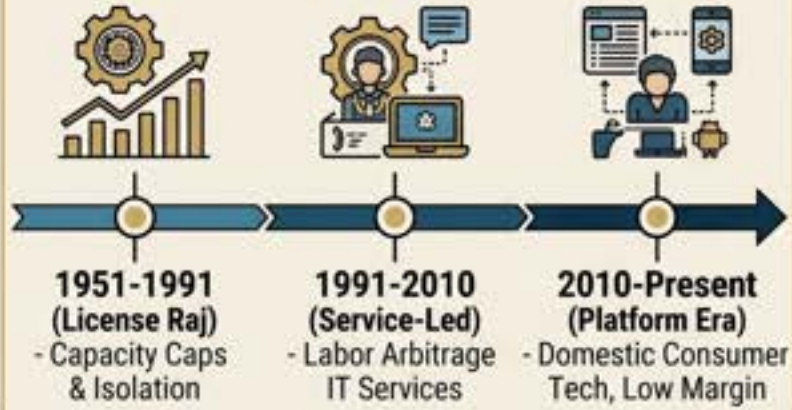
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“India doesn’t just need start-ups, but scale-ups that become global giants”

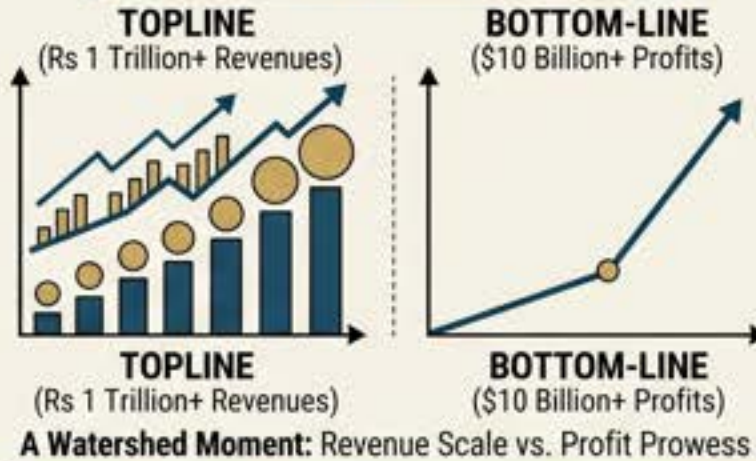
INDIA'S CORPORATE TRANSITION: BEYOND START-UPS, TO GLOBAL GIANT SCALE-UPS

UPSC CIVIL SERVICES ANALYSIS

HISTORICAL EVOLUTION



CORE ISSUE: THE GAP IN SCALE



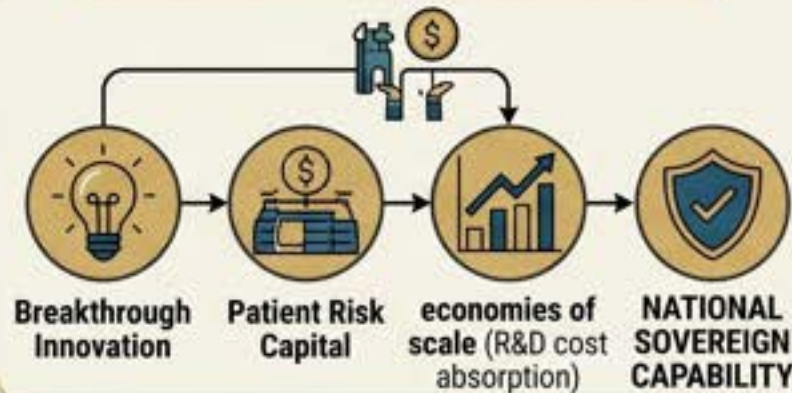
MULTIDIMENSIONAL IMPACT

Economic R&D underfunding	Geopolitical Strategic shield	Social Polarized labor market
Ethical Inclusive ecosystems	Legal Regulatory friction	Political Balancing populism

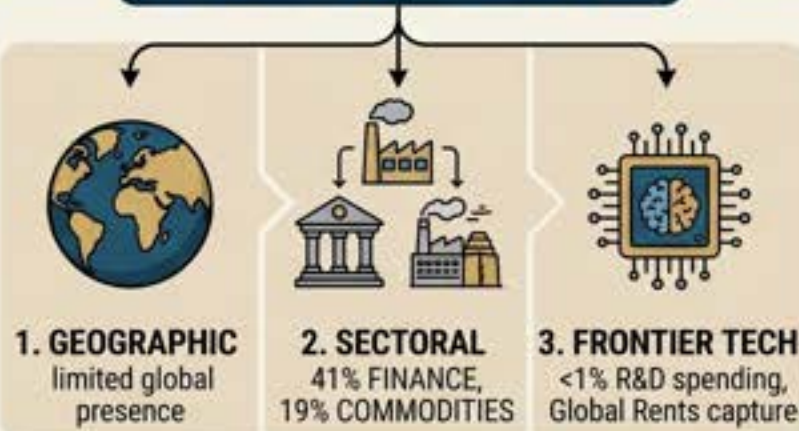
NCERT & UPSC SYLLABUS LINKAGES

- Class XI Indian Econ (ISI & MRTTP)
- GS Paper III (Economy, Tech)
- Essay (Wealth creation)

LOGICAL & PHILOSOPHICAL BASE



THE TRIPLE CORPORATE GAP



THE WAY FORWARD: POLICY ROADMAP

- 1. R&D Financing:**
Public-Private Matching Grants for Deep-Tech
- 2. Competition Policy:**
Global Competitiveness Lens for Mergers
- 3. IP System:**
Fast-Track Patents for IP Ownership
- 4. Value Chain Integration:**
PLI for Upstream Component Localization

PREVIOUS YEARS' UPSC/APSC QUESTIONS

- GS III (2023) - Mfg & MSMEs
- GS III (2019) - R&D spending
- GS III (2018) - Jobless Growth
- APSC

- **Logical and Philosophical Base**
- **Schumpeterian Innovation and the Scale Dependency of R&D**
 - The underlying economic logic of global competitiveness rests firmly on Joseph Schumpeter's theory of *Creative Destruction*. In modern techno-economic paradigms, breakthrough innovation is rarely the product of small, fragmented enterprises operating in perfectly competitive markets. It requires immense, patient capital pools, a high institutional tolerance for failure, and the ability to assemble interdisciplinary talent over long time horizons.
 - Large, highly profitable firms absorb these massive fixed costs by spreading them across global production volumes. High profits are not merely passive surpluses; they are the essential risk-premiums required to finance future uncertain technologies.
- **From Exploitative Surplus to National Sovereign Capability**
 - Philosophically, a high-income transition requires shifting away from old zero-sum paradigms that view corporate profit as a direct extraction from labor or the state. In a globalized economy, corporate profit pools function as core instruments of national sovereign capability.
- **The Sovereign Multiplier Effect** High-profit global champions act as reliable institutional anchors. They generate massive corporate tax revenues that de-risk public debt, fund national infrastructure, and establish self-sustaining R&D ecosystems that raise the broader standard of living.



- **Multidimensional Analysis**

- **Economic Dimension**

- The primary economic headwind is the persistent underfunding of research and development, which has stagnated at sub-1% of GDP (hovering around **0.6%** to **0.7%**), significantly lagging behind peers like South Korea (**4.8%**) or the United States (**3.4%**).
- Furthermore, the domestic venture ecosystem is heavily tilted toward short-term liquidity events rather than funding capital-intensive, deep-tech research. This lack of deep-tech funding traps the industrial base in the downstream, low-margin assembly segments of global value chains, leaving it exposed to structural shocks and cyclical downturns.

- **Geopolitical and International Dimension**

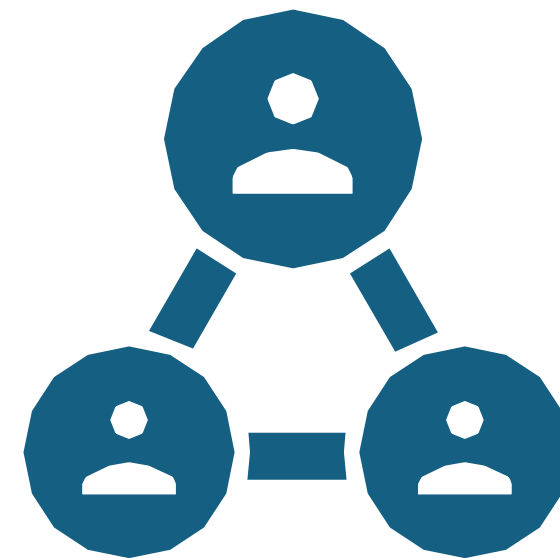
- In contemporary international relations, global corporate giants are key instruments of economic statecraft. The strategic autonomy of a nation is intimately tied to the global market share held by its domestic firms across critical tech stacks.
- Just as South Korea leverages its semiconductor conglomerates and Taiwan uses its advanced foundries as geopolitical shields, a nation requires global corporate champions to shape international technology standards, control cross-border supply chains, and resist external economic coercion.

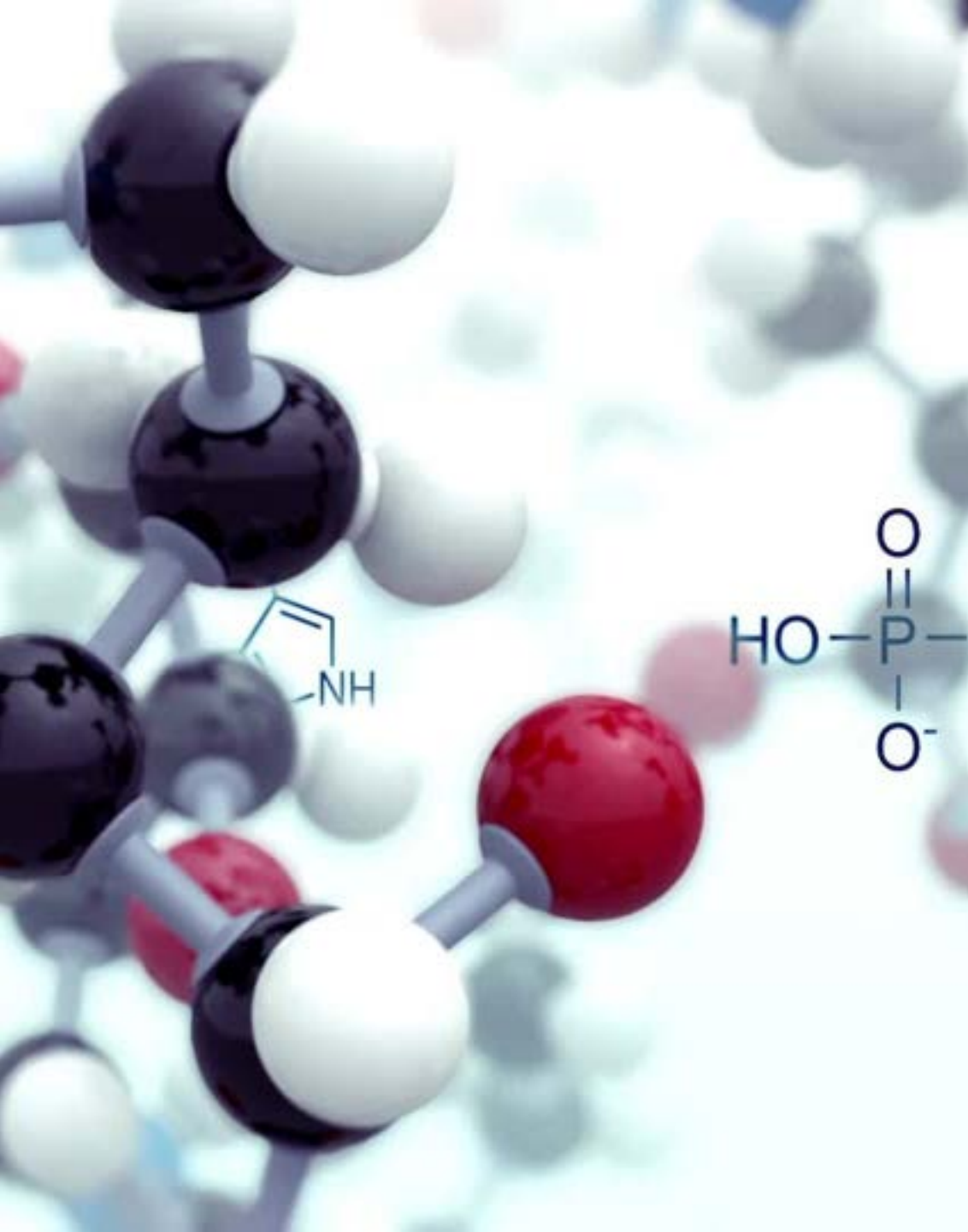
- **Social and Ethical Dimension**

- The structural profile of corporate scale has a direct impact on social equity and labor dynamics. When large corporate entities scale solely through domestic consumer consolidation or low-margin contract assembly, they create polarized labor markets. This results in a tiny layer of highly compensated managerial talent alongside a vast base of low-wage contractual or gig workers.
- Ethically, the transition to high-margin, innovation-led scale must prioritize corporate governance and inclusive supplier ecosystems. This ensures that global value capture flows down to MSMEs and raises formal wages across the broader workforce.

- **Political and Legal Dimension**

- The policy environment faces an ongoing challenge to balance economic populism with the strategic necessity of nurturing large firms. Stigmatizing corporate scale creates a cautious regulatory atmosphere, which slows down factor market reforms in land, labor, and capital allocation.
- Additionally, fragmented interstate regulations and compliance frictions increase the cost of doing business internally. This environment encourages domestic firms to focus on defensive market share retention within their home states rather than aiming for aggressive global expansion.





- **Linkages with NCERTs**
- **Indian Economic Development (Class XI)**
- **Chapter 2: Indian Economy (1950–1990):** Provides essential context on the historical origins of state-directed industrialization, the rationale behind the import-substitution industrialization (ISI) model, and the structural limitations imposed by the MRTP Act and licensing frameworks.
- **Chapter 3: Liberalisation, Privatisation and Globalisation - An Appraisal:** Directly relates to the post-1991 structural adjustment program. It outlines the successes in opening product markets and expanding the services sector, while highlighting the historical underperformance of high-margin, deep-tech domestic manufacturing.
- **Introductory Macroeconomics (Class XII)**
- **Chapter 5: Government Budget and the Economy:** Essential for understanding how corporate tax revenue pools function as non-debt capital receipts. This underpins the fiscal relationship between corporate profitability and the state's capacity to finance long-term public infrastructure.

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- **Linkages with UPSC CSE Syllabus**
 - **GS Paper II: Governance and Polity**
 - Government policies and interventions for development in various sectors and issues arising out of their design and implementation.
 - Statutory, regulatory, and various quasi-judicial bodies (specifically the role of the Competition Commission of India in balancing domestic consumer protection with global corporate scaling).
 - **GS Paper III: Technology and Economic Development**
 - Indian Economy and issues relating to planning, mobilization of resources, growth, development, and employment.
 - Effects of liberalization on the economy, changes in industrial policy, and their effects on industrial growth.
 - Science and Technology- developments and their applications and effects on everyday life; indigenization of technology and developing new technology (Deep-Tech and R&D paradigms).
 - **Essay and Optional Disciplines**
 - **Essay:** Thematic prompts focusing on wealth creation as a national imperative, the balance between economic equity and corporate scale, and technological sovereignty.
 - **Economics Optional:** Paper-I (Industrial structure, monopoly, and market forms) and Paper-II (Post-independence industrial growth trends, R&D financing, and trade policy).
 - **Political Science & International Relations (PSIR) Optional:** Paper-II (Global political economy, transnational corporations, and geoeconomic instruments of power).

Policy Pillar	Strategic Action Item	Expected Structural Outcome
R&D Financing	Transition from generic tax concessions to a 1:1 Public-Private Matching Grant Model specifically for frontier Deep-Tech research (semiconductors, synthetic biology, advanced materials).	Raises Gross Expenditure on R&D (GERD) toward 2% of GDP, shifting corporate focus from service delivery to IP ownership.
Competition Policy	Modernize the Competition Commission of India (CCI) frameworks to evaluate mergers through a Global Competitiveness Lens rather than an exclusively domestic market-share metric.	Permits strategic domestic consolidation, enabling national champions to build the scale required to face global giants.
Intellectual Property	Institutionalize a Fast-Track IP & Patent Monetization Pipeline , reducing patent examination timelines down to global benchmarks (under 12 months).	De-risks early-stage deep-tech deployment and attracts institutional patient risk capital into hardware and platform ventures.
Value Chain Integration	Restructure Production Linked Incentive (PLI) frameworks to prioritize Upstream Component Localization and design-led manufacturing over simple downstream SKD (Semi-Knocked Down) kit assembly.	Embeds domestic scale-ups into the highest-margin nodes of the global technology and hardware stack.

- **UPSC Civil Services Examination (Mains)**
- **GS Paper III (2023):** "Faster economic growth requires increased share of the manufacturing sector in GDP, particularly of MSMEs. Comment on the present policies of the Government in this regard." (*Relevance: Highlights the ongoing structural tension between supporting MSMEs and scaling up global corporate giants*).
- **GS Paper III (2019):** "What can be the mathematical reasons behind India's low expenditure on Research and Development (R&D) in comparison to advanced economies? Suggest measures to crowd-in private sector investment."
- **GS Paper III (2018):** "The nature of economic growth in India is described as jobless growth. Do you agree with this view? Give arguments in support of your answer." (*Relevance: Directly addresses the structural need for high-margin scale-ups to build deep supplier networks that generate high-wage, sustainable employment*).
- **UPSC Civil Services Examination (Prelims)**
- **1. With reference to the Indian economy after the 1991 economic liberalization, consider the following statements:**
 - Worker productivity per worker increased across all sectors, with the highest growth registered in the agricultural sector.
 - The share of direct taxes in total tax revenue registered a steady decline due to lowered corporate tax rates.
 - The growth in service sector exports consistently outpaced the growth of merchandise exports.
- **Which of the statements given above is/are correct?**
 - (a) 1 and 2 only
 - (b) 3 only
 - (c) 2 and 3 only
 - (d) 1, 2 and 3

Let us not confuse seats and seat share with parliamentary power

Delimitation would shift the relative political power of Indian states in a far more complex way



ROHIT PRASAD & NITIN SHARMA

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With Trinamool Congress legislators jumping ship, attention has returned to bills that the ruling National Democratic Alliance (NDA) has been unable to pass at the centre – including the Constitution (131st Amendment) Bill meant to let India's delimitation exercise use the Census of 2011 instead of 2027. The ostensible purpose of the amendment was to let the Women's Reservation Act take effect before the next general election.

But it has been vociferously opposed by the southern states, which argue that delimitation would reduce their proportion of parliamentary seats and hurt them for successful population control measures. On the other hand, the ruling party argues that their absolute number of seats would go up, given an increase in the size of Parliament.

However, both sides may be erring by focusing on a single metric: seats. Seat share and parliamentary power are not the same thing. Consider three political blocs with 45, 45 and 10 votes. The smallest controls only 10%, yet it holds the same power as the other two as neither has a majority without it. If the two larger blocs cannot unite, the smallest bloc turns out to be the most powerful, a frequent occurrence in Karnataka politics.

Unless single-bloc majorities are routine, power is not a function of how many votes you hold, but of how often you play a decisive role by tipping a coa-

lition from loss to victory. The Shapley-Shubik Power Index in game theory provides a scientific way of measuring power in a legislature. Applying it to the Lok Sabha with states as players shows how frequently each state could be a decisive pivot for crossing the 272-seat majority threshold before and after delimitation.

In the absence of official figures of the revised number of seats for each state after delimitation, our analysis is based on key assumptions. Seat reallocation is proportional to each state's share of India's population. States with only one or two Lok Sabha seats are protected from losing representation to preserve the voice of smaller regions. Every possible sequence of coalition formation is assumed to be equally likely. States are treated as independent actors pursuing their own interests, rather than being locked in existing political alliances or ideologies. To measure bargaining power, each state is assumed to act as a monolithic voting bloc. These assumptions allow the analysis to focus on a single question: How does structural bargaining power shift when parliamentary representation changes?

Under a 2011 Census reallocation, Uttar Pradesh gains 8 seats: its seat share rises by 1.5 percentage points (pp) from 14.7% while its power index rises by 1.9pp from 16.3% – almost a third larger gain in power than seats. Bihar gains 6 seats: seat share up 1.1pp from 7.4%, power index up 1.2pp from 7.4%. Tamil Nadu loses 8 seats: its seat share falls 1.5pp from 7.2% and power index falls 1.6pp from 7.2%. Kerala sheds 5 seats: its seat share falls 0.9pp from 3.7%, power index falls 0.9pp from 3.6%. The north's cumulative power rises by 4pp over a base of 34%, while the south's falls 4pp from 24%. The aggregate power of NDA-stronghold states rises from 75% to 78%. In the vast majority of cases, the power shift outweighs the seat shift. While the absolute percentage changes are not significant, changes as a proportion of existing

power are sizable. For instance, Tamil Nadu's power falls by 22pp.

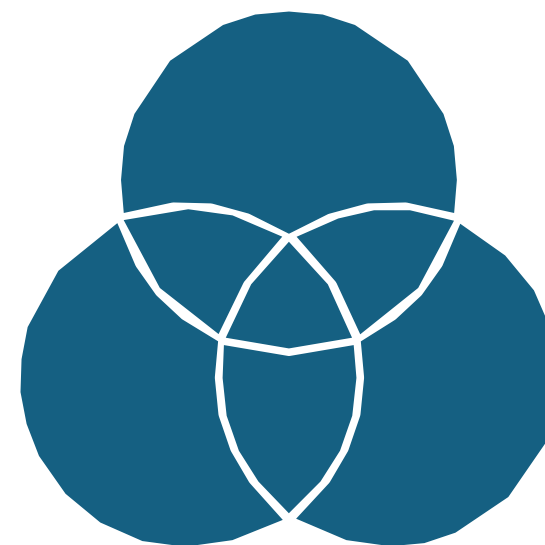
A 50% Lok Sabha expansion was the government's principal compromise offer during parliamentary negotiations. India has one member of Parliament for roughly 2.5 million citizens – one of the highest representation ratios among major democracies. An expanded house would improve this ratio. House expansion without changing existing seat ratios has no impact on power share going by the Shapley-Shubik Power Index. Parliamentary power is determined by the relative proportion of seats a state holds, not the absolute count. Thus, the government's offer was game-theoretically sound but not credible, given that the 106th Amendment effectively makes a census-based delimitation constitutionally necessary for women's reservation.

The demographic gap that motivated the debate continues to widen. The 84th Amendment requires delimitation on the first post-2026 Census. Population disparities have widened further since the 2011 Census. Under 2026 projections of population, Uttar Pradesh's power index reaches 18.8% while Tamil Nadu's falls to 5.3%. The north's cumulative power reaches 39%, while the south's falls to 19%. Thus, delimitation under post-2026 Census data would result in even starker power shifts across states.

By tying delimitation to the Women's Reservation Act, the government has made resistance politically costly: opposing the bills risks being seen as blocking women's representation in Parliament. No party could comfortably hold that position. However, the opposition has shown it is willing to risk being seen as anti-women rather than accept a rewiring of regional power. Unless the NDA government is able to exercise a two-thirds majority, the struggle over delimitation will continue inside and outside Parliament. This may partly explain the hectic political realignments currently underway.

- **Key Terms and Explanations**
- **Delimitation:** The statutory process of redrawing boundaries for territorial constituencies (both Lok Sabha and State Assemblies) to ensure that each seat represents roughly an equal number of citizens. Mandated by Articles 82 and 170 of the Indian Constitution, it seeks to align democratic representation with demographic shifts.
- **Shapley-Shubik Power Index:** A game-theoretic metric designed by Lloyd Shapley and Martin Shubik. It measures the structural power of a voting member in a legislature not by their raw seat count, but by their mathematical probability of acting as a **pivot**—the decisive actor whose vote turns a losing coalition into a winning one.
- **Seat Share vs. Power Share:** An essential distinction in political analysis. *Seat Share* is the nominal percentage of total legislative seats a group commands. *Power Share* is the actual capacity of that group to influence outcomes or cross majority thresholds. For instance, if three blocs hold 45, 45, and 10 seats respectively under a 51-seat majority rule, the smallest bloc holds only 10% of the seats but enjoys an identical 33.3% power share, because neither large bloc can form a government without it.
- **The Constitution (131st Amendment) Bill:** A legislative proposal aimed at bypassing the post-2026 delimitation freeze by utilizing the 2011 Census baseline. Its immediate political objective was to implement the 33% women's parliamentary quota before upcoming general elections, bypassing the long-standing demographic freeze.
- **The 106th Constitutional Amendment Act:** Popularly known as the Nari Shakti Vandan Adhiniyam, this landmark law reserves one-third of all seats in the Lok Sabha and State Legislative Assemblies for women. Crucially, its implementation is constitutionally linked to the completion of the first delimitation exercise conducted after a fresh census.

- **Main Arguments and Substantive Parts**
 - The core debate centers around an unspoken paradox: changing representation does not just alter numbers; it fundamentally re-wires the structural architecture of Indian federalism.
- **The Illusion of Absolute Seat Metrics**
 - The prevailing political discourse operates on a flawed assumption that a state's political influence is strictly linear to its total number of parliamentarians. This approach overlooks the strategic reality that legislative power is a relative game. Proposals to placate aggrieved states by expanding the absolute size of the Lok Sabha by 50% while preserving existing ratios are game-theoretically neutral. Because power is determined by the relative proportion of seats held rather than the absolute count, a larger house with identical ratios leaves the structural balance of power completely unchanged.
- **Asymmetric Power Disproportion**
 - When population-proportional metrics are applied to a updated census baseline, the resulting shift in structural bargaining power vastly outpaces the shift in raw seat percentages:
 - **The Gainers (Northern Blocs):** Under a 2011 population baseline, Uttar Pradesh's seat share increases by 1.5 percentage points, yet its structural power index surges by 1.9 percentage points. This represents a gain in actual political leverage nearly a third larger than its nominal seat gain.
 - **The Losers (Southern Blocs):** Conversely, Tamil Nadu experiences a 1.5 percentage point reduction in seat share, but its structural power plummets by 1.6 percentage points. When measured as a proportion of its existing power baseline, this represents a staggering 22% erosion of its federal bargaining position.
- **The Federal Penalty on Governance Success**
 - Southern states have vociferously resisted these changes, arguing that a population-proportional reallocation creates a perverse incentive structure. It penalizes regions that successfully implemented national socio-economic mandates—specifically family planning, replacement-level fertility rates, and human development programs—while handing a structural dividend to northern states that lagged in demographic stabilization.
- **Strategic Legislative Binding**
 - By explicitly tying the implementation of the widely supported Women's Reservation Act to the completion of a fresh delimitation, the central government has constructed a high-stakes political dilemma. Opposing the structural realignment of seat distribution forces regional parties into a position where they can be framed as obstructionists to women's empowerment—a political cost few are willing to bear.



- **Historical Evolution of the Issue**
- The tension between demographic representation and federal equilibrium has been developing within India's constitutional history for over half a century.
- Constitutional Inception & Equal Weight
- 1950
- Articles 81 and 82 of the newly enacted Constitution mandate that seat allocations across states be readjusted after every decennial census to ensure a perfectly uniform population-to-MP ratio across the entire Union.
- Early Readjustments
- 1952 - 1973
- Three successive Delimitation Commissions (1952, 1963, and 1973) successfully redraw boundaries and reallocate seats across states based on the 1951, 1961, and 1971 censuses without significant regional opposition.
- The Great Freeze (42nd Amendment)
- 1976
- Recognizing that southern states were beginning to stabilize their population growth ahead of the north, the government of Prime Minister Indira Gandhi passes the 42nd Amendment. This freezes the inter-state allocation of Lok Sabha seats based on the 1971 Census until the publication of the 2001 Census, decoupling parliamentary representation from immediate population growth to protect progressive states.
- The Freeze Extended (84th Amendment)
- 2001
- As the 2001 deadline arrives, the population growth divergence between regions has widened further. The government of Prime Minister Atal Bihari Vajpayee passes the 84th Constitutional Amendment, extending the freeze on altering inter-state seat ratios for another 25 years—specifically until the first census taken after the year 2026.
- The Gender-Demography Nexus
- 2023
- The 106th Amendment introduces 33% reservation for women but explicitly locks its implementation to the post-census delimitation exercise. This effectively guarantees that the demographic freeze cannot be extended again without delaying women's reservation.



- **Logical and Philosophical Base**
- **The Principle of Radical Democratic Equality**
 - This view rests on the classic utilitarian maxim of *one person, one vote, one value*. From this philosophical standpoint, any system that freezes seat allocations creates an unjustifiable disparity where an MP from Kerala represents roughly 1.5 million people, while an MP from Uttar Pradesh represents upwards of 2.5 million. This dilutes the individual voting power of citizens based purely on geography, violating the principle of citizen equality.
- **The Principle of the Federal Compact**
 - The counter-argument views India not as a singular mass of individuals, but as a *Union of States* bound by a foundational federal agreement. This perspective holds that the states surrendered portions of their sovereignty to the Union with the explicit understanding that their regional identity, voice, and political relevance would not be extinguished by majoritarian expansion. It argues that a democracy cannot be considered fair if it penalizes public policy success (demographic control) and rewards public policy failure (unregulated population growth).
- **Game-Theoretic Rationality**
 - The underlying logic of this analysis relies on the *Rational Actor Model*, isolating structural leverage from shifting political party lines. By treating states as independent, self-interested, monolithic voting units, game theory reveals the raw structural gravity of the Constitution. It demonstrates that regardless of which political party is in power, the underlying constitutional design dictates how easily a region can be ignored or embraced during national coalition building.

- **Multidimensional Analysis**

- **Social Dimension:** The regional population imbalance mirrors deep underlying differences in social development, female literacy, and healthcare infrastructure. Altering parliamentary power based on these metrics risks deepening a North-South cultural and linguistic alienation. It sends a troubling social message: that structural gains in human development can lead directly to regional political marginalization.

- **Political Dimension:** A significant shift in the Shapley-Shubik Power Index could fundamentally alter the strategies of national political parties. If the northern states command an absolute, self-sufficient majority in the Lok Sabha, national parties can completely bypass the southern peninsula when building coalitions. This reduces regional parties from vital stakeholders to permanent political bystanders.

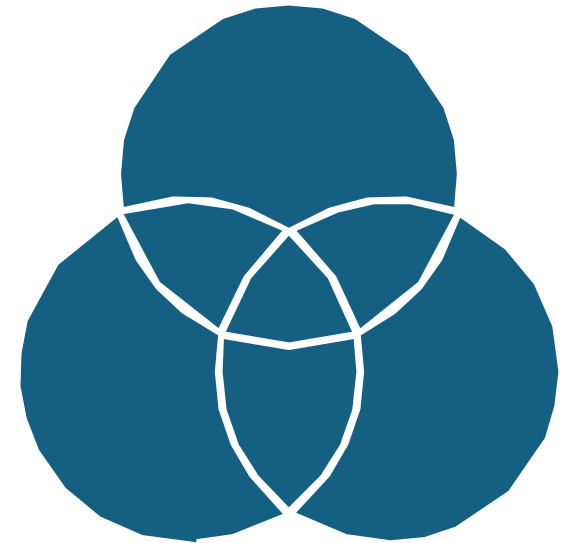
- **Legal & Constitutional Dimension:** This issue brings Article 14 (the right to equality and equal weight of votes) into direct conflict with the basic structure doctrine, which protects federalism. The Supreme Court may eventually face an unprecedented constitutional question: Does a demographically driven alteration of parliamentary representation destroy the structural balance necessary to sustain a federal Union?

- **Ethical Dimension:** The core ethical problem centers around a misaligned incentive structure. It raises fundamental questions of fairness when states that successfully advanced national goals like population control lose their voice to states that did not. It challenges the democratic principle of fairness by rewarding structural development delays with expanded legislative power.

- **International Dimension:** India's geopolitical strength relies on its internal stability and economic coherence. Severe internal friction between high-growth, high-tax-contributing southern states and politically dominant northern states can complicate long-term policy consistency, potentially affecting India's reputation as a stable destination for foreign direct investment.

- **Economic Dimension:** This political friction intensifies an existing financial divide. The 15th Finance Commission's use of 2011 Census data for tax devolution had already drawn criticism from southern states, which argued it reduced their share of central revenues despite their high tax contributions. Combining a reduced share of central funds with declining parliamentary influence leaves these states with fewer democratic tools to contest financial distributions.

- **Linkages with NCERTs**
- **Class XI: Indian Constitution at Work**
- **Chapter 3 (Election and Representation):** This chapter provides the essential framework for understanding the First-Past-The-Post (FPTP) system, territorial constituencies, and the constitutional role of the Delimitation Commission. It directly contextualizes how shifts in boundaries alter representative weights.
- **Chapter 7 (Federalism):** Essential for understanding the division of power between the Centre and States. It highlights the structural mechanisms designed to protect regional autonomy and why a balanced distribution of legislative seats is vital to maintaining a stable federal system.
- **Class XII: Human Geography**
- **Chapter on Population Dynamics:** Provides the demographic background to the debate, explaining why India's states are experiencing different stages of demographic transition, leading to the current regional population gap.



- **Linkages with UPSC CSE Syllabus**
- **GS Paper II: Governance, Constitution, and Polity**
 - *Salient features of the Representation of People's Act.* (Directly relates to the legal mechanics of updating territorial seats).
 - *Functions and responsibilities of the Union and the States, issues and challenges pertaining to the federal structure.* (The central axis of the entire delimitation and power-index debate).
 - *Parliament and State Legislatures—structure, functioning, conduct of business, powers & privileges and issues arising out of these.* (Directly addresses how house expansion impacts coalition math).
- **GS Paper I: Indian Society**
 - *Population and associated issues; poverty and developmental issues.* (Explains the underlying drivers of the regional demographic divergence).
- **GS Paper IV: Ethics and Human Interface**
 - *Ethical dilemmas in public administration and policy formulation.* (Deals with balancing mathematical equity for individual voters against historical fairness for states that successfully stabilized their populations).



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- **Way Forward**
 - **Structural Reform of the Rajya Sabha**
 - If the Lok Sabha must expand to accurately reflect population density and uphold individual voter equality, the federal balance can be preserved by reimagining the Upper House. The Rajya Sabha could be restructured to grant equal representation to all states regardless of size—similar to the United States Senate—or to give smaller states a constitutional veto over matters affecting federal relations, language, and fiscal devolution.
 - **Implementing Weighted Voting Matrix Formulas**
 - Instead of relying entirely on raw numbers, India could introduce a modified voting system for specific federal and constitutional issues. This could resemble the Council of the European Union's double-majority system, requiring a passing bill to win the support of both a percentage of total seats and a minimum number of distinct states. This would ensure that high-population states cannot pass major legislation without building a broad geographical consensus.
 - **De-linking Strategic Reforms from the Delimitation Clock**
 - Important social initiatives, such as the implementation of the Women's Reservation Act, should be legally uncoupled from the census and delimitation timeline. Delinking these priorities allows for a more measured, consensus-driven debate on regional seat allocation, free from the pressure of unrelated deadlines.
 - **Expanding Financial Autonomy to States**
 - To counter the loss of political leverage in the national capital, the central government could devolve greater economic and legislative autonomy to the states. Expanding the scope of the State List and ensuring more predictable, non-discretionary financial transfers would allow states to protect their regional development models, even if their direct influence over central coalition building declines.
 - **Activating the Inter-State Council**
 - The Inter-State Council, established under Article 263 of the Constitution, should be utilized as the primary forum for building consensus on this issue. Before any fresh delimitation bill is brought to Parliament, a binding consensus framework should be negotiated within the Council to protect the historical interests of all regions involved.

Civil Services Mains Examination

GS Paper II (2017)

"To what extent, in your view, has the character of federation in India been navigated by the political party system? Give reasons."

GS Paper II (2023)

"Explain the constitutional provisions regarding the Delimitation Commission and discuss its role in ensuring fair representation." (*Theme-aligned analog*)

Civil Services Prelims Examination

Question 1 (2012)

With reference to the Delimitation Commission, consider the following statements:

- 1.The orders of the Delimitation Commission cannot be challenged in a Court of Law.
- 2.When the orders of the Delimitation Commission are laid before the Lok Sabha or State Legislative Assembly, they cannot effect any modifications in the orders.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

Answer: (c) Both 1 and 2

Question 2 (2022)

Consider the following statements:

- 1.A constitutional amendment bill affecting the federal character of the Constitution requires ratification by the legislatures of not less than one-half of the States.
- 2.The allocation of seats in the Lok Sabha is based on the population data collected in the latest published census, unless expressly frozen by law.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

Answer: (c) Both 1 and 2



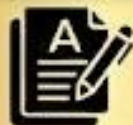
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