

ForumIAS

F

Mains Marathon

4th Week August, 2025

HISTORY
ECONOMICS
POLITY
SCIENCE AND TECHNOLOGY
GEOGRAPHY AND ENVIRONMENT

INDEX

The first 1,000 days of a child are critical for future cognition. Examine the policy and governance reforms needed to strengthen nutritional interventions and ensure a healthy foundation for India's children.	2
Excessive controls stifle the fertiliser industry, hurting farmers. Critically analyse the case for decontrol, balancing the need for market efficiency with ensuring farmer welfare and food security...	3
The online gaming act aims to regulate the sector. Critically analyze its provisions and their effectiveness in balancing industry growth with consumer protection and responsible gaming practices. (500 words)	4
The dysfunction of legislatures is linked to the concentration of power in the executive. Critically analyze how this trend challenges parliamentary democracy, accountability, and the principle of separation of powers.	6
A 'productive visit' and the SCO's internal contradictions highlight India's diplomatic balancing act. Examine India's strategic imperatives in engaging with a complex Asian geopolitical landscape.	7
India's economic vulnerabilities have a gender dimension. Examine how empowering women as economic agents can build resilience against external shocks and promote social empowerment and inclusive growth.....	9
A successful test of an indigenous air defence system shows a new model for defence research. Examine how collaboration with the private sector and foreign partners can accelerate technological indigenisation and enhance national security.	10
Combating online real-money gaming addiction requires more than a ban. Examine how a comprehensive strategy of thoughtful regulation and robust prevention programmes can create a safer digital environment for India's youth.	11
The proposed Goods and Services Tax (GST) reforms raise the issue of state compensation for revenue loss. Examine the challenges to fiscal federalism and the importance of ensuring state cooperation in major tax reforms.	13
India's demographic dividend is at risk of becoming a time bomb. Examine the policy and governance reforms needed to bridge the widening gap between education, skills, and youth employability.	14
Examine how India can "detoxify" its entrance examination system by transitioning from a toxic, high-stakes race to one based on fairness and equal opportunity.	15
Critically examine the statement "energy sovereignty is the new oil" in the context of India's current geopolitical and economic vulnerabilities, and evaluate the policy measures needed to achieve uninterrupted, affordable, and indigenous energy security.	17

The first 1,000 days of a child are critical for future cognition. Examine the policy and governance reforms needed to strengthen nutritional interventions and ensure a healthy foundation for India's children.

Introduction

The first 1,000 days, from conception to age two, are a “critical window” for brain and body development. Policy must integrate nutrition and cognition to break India's intergenerational deprivation cycle.

Why the First 1,000 Days Matter

1. **Science and brain development:** By age two, the brain attains ~80% of adult size. Synapse formation peaks, frontal lobe development accelerates, and lifelong learning capacity is largely determined.
2. **Irreversible consequences:** Nutritional deficiencies, particularly iron, iodine, folic acid, protein, and essential fatty acids, can cause stunting, anaemia, impaired cognition, poor school outcomes, and reduced productivity.
3. **Indian context:** NFHS-5 (2019-21) shows 35.5% of children under five stunted, 32% underweight, 67% anaemic. Without acceleration, stunting could drop to 10% only by 2075, missing demographic dividend.

Policy Landscape and Gaps

1. **Existing schemes:**
 - **ICDS (1975):** Food supplementation, growth monitoring, early learning.
 - **POSHAN Abhiyaan (2018):** Technology-driven nutrition mission.
 - **Poshan Bhi Padhai Bhi (2023):** Integrating nutrition and cognitive stimulation.
 - **Navchetna Framework:** 140 home-based stimulation activities for 0–3 years.
2. **Progress:** Expansion to 14 lakh Anganwadi centres; digitisation via POSHAN tracker; convergence with health and WASH.

Challenges:

1. Coverage gaps, especially in urban poor and tribal areas.
2. Variable service quality; frontline workers overburdened and undertrained.
3. Weak convergence among health, WCD, education, sanitation.
4. Low maternal literacy and awareness; poor dietary diversity.
5. Inadequate crèche and childcare support to enable maternal employment.

Reforms Needed to Maximise the 1,000-Day Window

1. Strengthen and saturate nutrition services: Ensure **universal, quality ICDS coverage** with real-time growth monitoring. Upgrade Anganwadi centres to “**nutrition-cum-early learning hubs**” with digital tools. Diversify take-home rations: millet, pulses, eggs; promote fortified foods. Mandatory preconception and antenatal counselling for adolescent girls and mothers.

2. Integrate stimulation with nutrition: Scale **home-based play-and-learn models**, building on Navchetna. Train Anganwadi workers and ASHAs in responsive caregiving. Include fathers and family caregivers in early stimulation awareness.

3. Address systemic and equity issues: Urban ICDS models: public-private partnerships, creches in industrial clusters. Tribal and conflict areas: mobile Anganwadis, culturally adapted diets. Gendered approach: empower women with cash transfers, SHG-linked kitchens, skill training.

4. Invest in data, capacity and evaluation: Use POSHAN Tracker for actionable data; link to health records. Regular **nutritional audits**; outcome-based budgeting. Third-party assessments of growth, learning, psychosocial health in under-six population.

5. Cross-sectoral convergence and governance reforms: Stronger **district-level convergence** of WCD, Health, Education, Rural Development. Water, sanitation, hygiene (WASH) and maternal mental health integrated. Expand crèche provision through **PPP models**; incentives for employers.

6. Leverage technology and innovation: Mobile apps for caregivers; tele-counselling. Biofortified crops, community kitchens, behavioural nudges (Jan Andolan).

Conclusion

India's demographic dividend rests on its youngest citizens. Nutrition plus stimulation in the first 1,000 days is a smart investment—stronger governance today secures healthier, more productive generations tomorrow.

Excessive controls stifle the fertiliser industry, hurting farmers. Critically analyse the case for decontrol, balancing the need for market efficiency with ensuring farmer welfare and food security.

Introduction

Fertiliser is the backbone of Indian agriculture, yet excessive price controls, import restrictions, and subsidies create inefficiencies. Balancing market freedom with farmer support is crucial for sustainable food security.

Why fertiliser controls are problematic

1. **Price rigidity:** Urea retail price fixed at ₹266.5/bag since 2012; DAP capped at ₹1,350/bag. Costs have risen, discouraging investment and innovation.
2. **Import dependency and vulnerability:** China supplied 22.9 lt DAP and 21.5 lt urea in 2023-24; in 2024-25 imports plunged, causing shortages. Over 30% of urea and 90% of phosphates are imported.
3. **Supply bottlenecks:** Imports are canalised through state trading enterprises, limiting private sourcing from West Asia, Russia, Nigeria, Morocco. Poor demand assessment worsened shortages in a good monsoon year.
4. **Leakages and misuse:** Cheap urea leads to diversion for non-agriculture use and black marketing; nutrient imbalance (urea overuse) depletes soil health.
5. **Fiscal burden:** Fertiliser subsidy bill exceeds ₹2.5 lakh crore (2023-24), crowding out public investment in irrigation and R&D.

The case for decontrol

1. **Market efficiency and availability:** Decontrol can incentivise companies to import, produce, and distribute more; free pricing ensures better allocation and prevents queues/shortages.

2. **Encouraging balanced use:** Higher urea price relative to phosphates/potash could reduce nitrogen overuse and promote balanced NPK application, improving yields and sustainability.
3. **Boosting domestic production and innovation:** Liberalisation may attract private and foreign investment in new plants, green ammonia, nano-fertilisers, and biofertilisers.
4. **Lessons from past reforms:** Decontrol of P&K fertilisers (nutrient-based subsidy, 2010) improved availability, though prices rose moderately.

Caveats and risks

1. **Farmer vulnerability:** Sudden price hikes could hurt small and marginal farmers, who constitute 86% of holdings.
2. **Food security concerns:** High fertiliser prices may reduce usage, affecting yields of rice, wheat, and maize.
3. **Global volatility:** Prices of phosphates, potash fluctuate with energy costs and geopolitics (Russia-Ukraine war, Chinese export curbs).

Balancing reforms with welfare

1. **Gradual decontrol:** Phase-wise price rationalisation with direct benefit transfer (DBT) to farmers' accounts, replacing blanket subsidies.
2. **Buffer stocks and market oversight:** Maintain strategic reserves of urea, DAP for market intervention.
3. **Diversification and sustainability:** Promote organic, nano, biofertilisers and soil health cards to reduce chemical dependence.
4. **Targeted support:** Protect vulnerable farmers through PM-Kisan-type cash support, rather than subsidising consumption.
5. **Digital tracking and reforms:** Revamp nutrient-based subsidy (NBS) to cover urea; allow private imports with transparency.

Conclusion

Fertiliser decontrol is inevitable for efficiency and innovation. But reforms must be calibrated with DBT, buffer stocks, and soil sustainability to ensure farmers thrive without compromising food security.

The online gaming act aims to regulate the sector. Critically analyze its provisions and their effectiveness in balancing industry growth with consumer protection and responsible gaming practices. (500 words)

Introduction

India's burgeoning online gaming industry, valued at ~\$3.5 billion, faces issues of addiction, financial fraud and tax evasion. The Online Gaming Act, 2025 attempts to regulate growth and consumer safety.

Context and Rationale

1. Online gaming users in India exceed 500 million, with a projected CAGR of 20%. The government cites losses of ₹15,000 crore annually in Real Money Games (RMGs), tax evasion (₹30,000 crore GST), and even terror funding via gaming portals.

2. WHO links RMGs to compulsive behaviour, psychological distress and suicides (32 cases in Karnataka in 31 months). Growing celebrity endorsements and offshore operators deepen regulatory urgency.

Key Provisions of the Act

1. **Categorisation of games** – Three segments: **E-sports**: Recognised under National Sports Governance Act, regulated and promoted. **Social Gaming**: Recreational/educational focus. **RMGs**: Broadly defined to include skill, chance or hybrid games involving money/stakes; banned alongside advertising.
2. **Penal provisions** – Offering RMGs or facilitating transactions attracts imprisonment up to 3 years and ₹1 crore fine; unlawful advertising up to 2 years/₹50 lakh. Offences are cognisable and non-bailable under BNSS, 2023.
3. **Regulatory structure** – Central authority to recognise/categorise/register games; CERT-IN empowered to block platforms; possible Interpol coordination for offshore operators.
4. **Consumer safeguards** – Self-regulation, KYC, parental controls, age rating envisaged (IT Rules, 2023 amendments). No penalties for players; focuses on operators.
5. **Fiscal support** – Allocation from Consolidated Fund to promote social gaming and e-sports.

Critical Analysis

Strengths

1. Addresses *consumer harm* and *public order*: Bans RMGs due to addiction and fraud; aligns with WHO concerns.
2. *Security and revenue focus*: Tackles tax evasion, money laundering, and offshore jurisdiction challenges.
3. *Promotes indigenous industry*: Recognises e-sports as legitimate; aligns with India's AVGC-XR sector policy (Animation, Visual Effects, Gaming, Comics, Extended Reality).

Concerns and Criticisms

1. **Overbroad definition**: No distinction between skill and chance undermines SC precedents (Rummy, Fantasy Sports recognised as skill-based). Article 19(1)(g) concerns likely.
2. **State vs Centre jurisdiction**: Betting/gambling is a State List subject (Entries 34, 62); Centre's ban may invite federal friction. Telangana, TN, AP already have diverse laws.
3. **Industry impact**: RMG firms employ ~2 lakh people; abrupt bans can hurt start-ups and investor sentiment.
4. **Implementation gaps**: Offshore operators, VPNs, crypto wallets make enforcement difficult.
5. **Lack of harm-reduction approach**: Does not focus on rehabilitation, awareness, or graded restrictions (like spending limits, cooling-off periods). No explicit minor-protection mechanisms for e-sports/social games.

Global comparison

1. UK, US and Singapore regulate via licensing, taxation, responsible gaming codes rather than outright bans.
2. WHO suggests awareness, limits, parental control rather than blanket prohibitions.

Way Forward

1. Narrower definition of RMGs distinguishing skill/chance; graded licensing and taxation instead of blanket bans.
2. Greater state-centre coordination; harmonise laws.
3. Focus on consumer welfare: spend limits, age verification, addiction counselling.
4. Encourage innovation: Promote e-sports and indigenous games through Digital India and Startup India frameworks.

Conclusion

The Act rightly recognises harms of unregulated gaming, but overreach risks stifling innovation. Balanced regulation, harm-reduction strategies and centre-state cooperation are crucial for sustainable industry growth and consumer protection.

The dysfunction of legislatures is linked to the concentration of power in the executive. Critically analyze how this trend challenges parliamentary democracy, accountability, and the principle of separation of powers.

Introduction

Effective legislatures are central to democracy. Yet, growing concentration of power in the executive, both Union and State, has weakened debate, oversight, and institutional balance, challenging parliamentary democracy's spirit.

Evidence of legislative dysfunction

1. **Decline in sittings:** According to PRS Legislative Research, the Lok Sabha worked only 29% and Rajya Sabha 34% of scheduled time in the 2025 monsoon session; Assemblies averaged 20 days in 2024 (down from 28 in 2017).
2. **Passing Bills without debate:** 15 Bills passed in 21 sittings; over 50% of State Bills passed the same day.
3. **Weak executive accountability:** Starred questions answered orally were only 8% in Lok Sabha and 5% in Rajya Sabha; Question Hour and Zero Hour frequently disrupted.
4. **Vacant constitutional posts:** No Deputy Speaker in Lok Sabha since 2019; 8 Assemblies without one, weakening bipartisan checks.

Causes and link with executive dominance

1. **Centralization of leadership:** Prime Minister and Chief Ministers dominate Cabinet and party structures; legislative party discipline ensures minimal dissent.
2. **Ordinance route and Money Bills:** Frequent ordinances (e.g., Farm Bills 2020) and use of Money Bill route sidestep Rajya Sabha scrutiny, eroding bicameralism.
3. **Committee system sidelined:** Fewer Bills referred to committees (just 13% in the 17th Lok Sabha vs 60% in 15th), reducing expert and Opposition input.

Impact on democracy and separation of powers

1. **Erosion of deliberative democracy:** Legislatures, envisioned as arenas for public debate, become "rubber stamps," weakening representation and policy legitimacy.

2. **Accountability deficit:** Executive policies escape scrutiny; governance decisions lack transparency, undermining citizens' trust.
3. **Judiciary burdened:** As legislatures underperform, courts become arenas for policy disputes (e.g., farm laws, Aadhaar), risking judicial overreach.
4. **Federal imbalance:** Strong Centre often bypasses State concerns (e.g., GST Council frictions, Article 356 misuse), straining cooperative federalism.

Comparative and constitutional perspective

1. **Ambedkar's caution:** While defending strong executives, he stressed the need for checks through questioning and debate.
2. **Global parallels:** In the U.K., executive dominance via majority party is balanced by robust committee culture and strong opposition traditions; India's weakening of these norms worsens concentration.
3. **Data point:** World Bank Governance Indicators highlight that nations with high executive control over legislatures often score low on Voice and Accountability.

Corrective measures

1. **Institutional strengthening:** Ensure election of Deputy Speaker by consensus; mandatory referral of major Bills to committees.
2. **Enhancing sittings:** Fix minimum sitting days (e.g., NCRWC recommended 120 for Parliament, 60 for Assemblies).
3. **Opposition engagement:** All-party meetings before sessions; restoring Question Hour integrity.
4. **Technology and transparency:** Live committee proceedings, public consultations on Bills.

Conclusion

A legislature subservient to the executive undermines democracy's checks and balances. Reviving deliberation, accountability, and institutional autonomy is essential to preserve constitutional separation of powers and citizen trust.

A 'productive visit' and the SCO's internal contradictions highlight India's diplomatic balancing act. Examine India's strategic imperatives in engaging with a complex Asian geopolitical landscape.

Introduction

India's **Asian diplomacy faces multi-vector pressures:** deep economic reliance on China, fraught Pakistan ties, Indo-Pacific turbulence, and emerging minilateralism. **SCO-Tokyo outreach** reflects Delhi's need for **strategic hedging and multi-alignment**.

What are India's Strategic Imperatives in Asia?

Managing China Challenge amid Economic Vulnerabilities

1. **Trade imbalance:** China-India trade **\$118B (2024)**; Indian exports \$15B, imports \$103B.
2. **Technology and supply chain dependence:** Rare earth magnets, tunnelling equipment, electronics—critical gaps exposed.
3. **Border tensions:** **Galwan 2020**, Depsang, Demchok; LAC standoffs undermine trust.

4. **Diplomatic need:** Tianjin meet provides space to negotiate “rules of the road” for stability and de-escalation, even as Beijing expands South Asia’s orbit via **Belt and Road Initiative (BRI)** and minilaterals.

SCO as a Contested Platform

1. **Contradictions:** Founded for **counterterrorism and Eurasian stability**, but China shields Pakistan; no censure for terror proxies.
2. **Pakistan factor:** Islamabad seeks visibility; allies Turkey, Azerbaijan present; India’s terror concerns remain unaddressed.
3. **Limited convergence:** India rejects BRI but uses SCO for connectivity (INSTC, Chabahar) and Central Asia outreach.
4. **Regional presence:** Almost all South Asian neighbours (Nepal, Maldives, Sri Lanka, Myanmar) tied to SCO, highlighting India’s need to **avoid marginalisation in continental forums**.

Balancing Continental and Maritime Orientations

1. **Geography limits:** Himalayan disputes constrain India’s continental projection.
2. **Maritime strengths:** Tokyo visit deepens India-Japan **Special Strategic and Global Partnership**; defence, technology, and supply chain cooperation.
3. **Indo-Pacific synergies:** QUAD, Supply Chain Resilience Initiative (SCRI), critical tech and rare earth collaboration; Tokyo provides **hedge against China**.

US Factor and Trade Pressures

1. **Current strains:** Tariffs, trade disputes with Washington; but **US still India’s top export market** (\$88B, 2024) and surplus.
2. **Energy ties:** Russian oil purchases useful but politically sensitive (Trump administration leverage).
3. **South Asia competition:** US and China intensifying regional influence; India risks losing primacy if not agile.

Strategic Autonomy and Multi-Alignment

1. India’s policy emphasises **issue-based partnerships, non-bloc politics**, leveraging contradictions for gain (**Russia ties, SCO membership, QUAD**).
2. **EAM Jaishankar:** “We will not join any alliance but will engage all for national interest.”

Way Forward

1. **Reduce vulnerabilities:** Diversify critical imports, promote **Atmanirbhar Bharat**, invest in **rare earths, semiconductors, tunnelling tech**.
2. **Regional outreach:** Strengthen BIMSTEC, revive SAARC selectively; deepen Central Asian energy ties.
3. **Counterbalance:** Expand QUAD, IPEF, Japan, ASEAN links.
4. **Diplomatic signalling:** Use SCO for dialogue, not endorsement; showcase India as **rule-shaper, not rule-taker**.

Conclusion

As **Henry Kissinger's World Order** notes, stable power equations need **"balance and flexibility."** India's Asian journey demands **strategic patience, multi-alignment, and resilient capabilities** to safeguard autonomy in a fluid geopolitical theatre.

India's economic vulnerabilities have a gender dimension. Examine how empowering women as economic agents can build resilience against external shocks and promote social empowerment and inclusive growth.

Introduction

India's \$4.19 trillion economy aspires to global leadership, yet its **female labour force participation rate (FLFPR)**—just **37–41% (PLFS 2023)**—limits growth. **IMF estimates gender parity could raise GDP by 27%.**

The Gendered Nature of India's Economic Vulnerabilities

1. Trade Shocks Hit Women-Centric Sectors: U.S. tariffs (**50% on \$40 billion exports**) risk a **1% GDP loss**, threatening **textiles, gems, leather, footwear—employing ~50 million, majority women**. India's export dependence (U.S. 18% share) vs. China's diversified base increases fragility.

2. Low Female Labour Force Participation and Informality: Women concentrated in **informal, low-wage work (70% without social security)**; first to exit during downturns. Rural women mostly in **unpaid family work**, urban stagnation due to **mobility, safety, sanitation deficits**.

3. Demographic Dividend at Risk: Window closes by **2045**; without women's economic integration, the dividend could become a **demographic burden**, as seen in **Italy, Greece**.

4. Structural Barriers Intensify Shocks: Care economy burden, women spend **~7.2 hours/day on unpaid work (OECD)**, limiting productivity. **Cultural and skill gaps** reinforce exclusion; gender digital divide persists (NFHS-5: only 33% women use mobile internet).

Why Women's Empowerment Builds Resilience and Inclusive Growth

1. Shock Absorption and Macro Gains: Higher incomes diversify household risk; women invest more in health and education (World Bank). **IMF, McKinsey:** Closing gender gaps boosts GDP by **20–30%**, expands tax base, strengthens consumption-led growth.

2. Enhancing Export Competitiveness and Innovation: Larger skilled female workforce increases production agility; critical for sectors competing with **Vietnam/Bangladesh**. **China's 60% FLFPR post-1978 reforms** supported rapid industrialisation.

3. Social Empowerment and Intergenerational Benefits: Paid work raises **agency, literacy, fertility choices, health outcomes**. **SHG revolution (DAY-NRLM):** 9 crore rural women linked to credit, entrepreneurship, and local governance.

Policy Innovations and Case Studies

- 1. Karnataka's Shakti Scheme (2023):** Free bus travel, **40% rise in female mobility**, better job access.

2. **Urban Company gig model:** 15,000 women earn ₹18–25k/month; insurance, maternity, skill benefits.
3. **Rajasthan's IGUEMS:** 65% women beneficiaries, neighbourhood jobs in sanitation and care work, many first-time earners.
4. **International lessons:** U.S. WWII equal pay, childcare; Japan's 7% FLFPR rise (2012–19) lifted GDP/capita; Netherlands' part-time model suits cultural preferences.

Way Forward

1. **Gender-responsive skilling:** STEM, digital literacy, entrepreneurship.
2. **Infrastructure & safety nets:** Childcare, transport, sanitation, social protection for gig/informal workers.
3. **Fiscal & trade policy:** Gender budgeting, tax incentives, export diversification.
4. **Behavioural change:** Public campaigns, male allyship, recognition of unpaid work in GDP (SDG 5.4).

Conclusion

As Amartya Sen's *Development as Freedom* argues, "agency is development's core". Empowering women converts vulnerability into strength, delivering **resilient growth, equity, and demographic dividends—India's truest pathway to inclusive prosperity.**

A successful test of an indigenous air defence system shows a new model for defence research. Examine how collaboration with the private sector and foreign partners can accelerate technological indigenisation and enhance national security.

Introduction

India's defence imports declined from **46% in 2016 to 36% in 2023 (SIPRI)**, but **\$60 billion of defence equipment is still imported annually**. DRDO's new **Integrated Air Defence Weapon System (IADWS)** signals a shift toward **indigenous capability and strategic autonomy**.

New Model of Defence Research: IADWS as a Case Study

1. Integrated Design Philosophy: Three-layered system: **Quick Reaction SAM (30 km), VSHORADS (6 km), and Directed Energy Weapon (2–4 km)**. **Centralised Command and Control Centre** ensures multi-domain synergy: aircraft, drones, missiles. Showcases **systems integration capability** across DRDO labs—DRDL, ASL, RCI, TBRL.

2. Legacy of IGMDP and Tech Synergy: **Integrated Guided Missile Development Programme (1983):** Agni, Prithvi, Nag, Akash, Trishul; now **ABM, ASAT, MIRV capabilities**. R&D clusters built **navigation, guidance, seekers, composite materials**. Young Scientists Lab explores **AI, quantum, asymmetric tech**—key for future warfare.

Private Sector Participation: Filling Capability Gaps

1. Defence Industrial Base Diversification: Public labs create IP; **private firms manufacture high-end components** (Carborundum Universal Ltd for ceramic radomes). **Licensing Agreements for Transfer of Technology (ToT)** broaden production.

2. Make-in-India and iDEX Model: Innovations for Defence Excellence (iDEX) has funded >400 startups, drones, AI-enabled sensors. Private firms contribute **cost competitiveness, innovation speed, flexible production**.

3. Reducing Technology Denial Risks: Civil-military fusion ensures resilience amid **sanctions and export controls**; indigenous supply chains reduce dependence on foreign OEMs.

Foreign Collaboration: Leveraging Strengths Without Dependence

1. Complementary Capabilities: BrahMos with Russia, Indian mission control & navigation; Russian propulsion. **LR-SAM with Israel,** India did rear integration; Israel provided seeker.

2. Benchmarking Global Systems: Lessons from **Iron Dome (Israel):** 160-km radar envelope, cost-optimised Tamir interceptors. **THAAD, David's Sling, Arrow-3** combined provide multi-layered defence model relevant to India's threat spectrum (Pakistan & China).

3. Technology Absorption & Co-Development: Policy should be collaborate only where **no off-the-shelf solution exists**, ensuring **IP sharing** and **sovereignty in integration**. Enhances **export potential** (Philippines' BrahMos deal \$375 million).

National Security and Strategic Significance

- 1. Geopolitical imperatives:** Two-front threat; UAV, cruise missile proliferation.
- 2. Economic logic:** Indigenous systems can lower per-unit cost; Tamir cost cut from **\$100k to \$50k** through mass production.
- 3. Doctrinal shift:** "Atmanirbhar Bharat" aligns with **Defence Acquisition Procedure (DAP) 2020** and **Strategic Partnership Model**.

Way Forward

- Expand **public-private R&D ecosystems**; incentivise **Tier-2/3 suppliers**.
- Strengthen **IPR and export frameworks**; integrate **AI, directed energy, hypersonics**.
- Foster **trusted foreign partnerships** for radar, seekers, propulsion; keep **core integration sovereign**.

Conclusion

As K. Subrahmanyam argued in *Indian Defence and Security*: "**Self-reliance is the foundation of strategic freedom**." IADWS demonstrates that **collaboration-driven indigenisation** is key to India's credible deterrence and national security.

Combating online real-money gaming addiction requires more than a ban. Examine how a comprehensive strategy of thoughtful regulation and robust prevention programmes can create a safer digital environment for India's youth.

Introduction

According to IMAI-Kantar 2024 report, India has over 650 million internet users, with 40% under 25. Real-money gaming's psychological hooks resemble gambling, creating addiction risks needing nuanced regulatory and preventive responses.

Why bans alone are insufficient

1. **Behavioral displacement:** Addiction often shifts to other risky behaviors (pornography, substance use).
2. **Evasion tactics:** VPNs and offshore platforms bypass bans (Tamil Nadu's 2023 ban challenged in courts; MeitY's advisory).
3. **Economic and skill dimensions:** Gaming also supports start-ups, e-sports; indiscriminate bans harm legitimate industry.

Understanding the nature of addiction

1. **Psychological mechanics:** Variable reward schedules, dopamine reinforcement, gamification loops.
2. **Impact on minors:** Cases of debt, theft, suicide; e.g., Karnataka and UP reported minors using family funds.
3. **WHO recognition:** Gaming Disorder included in ICD-11 (2019), underscoring public health risk.

Comprehensive strategy components

Thoughtful Regulation

1. **Age-gating and KYC norms:** Mandatory Aadhaar-based verification; graded access for minors (Singapore's parental locks).
2. **Spending limits and time caps:** RBI-style monetary thresholds; China's 3-hour weekly limit model.
3. **Classification and licensing:** Categorize skill vs. chance; regulate like UK Gambling Commission norms.
4. **Transparent grievance redressal:** Ombudsman for disputes; industry self-regulation under MeitY's IT Rules 2023 framework.

Robust Prevention and Mental Health Programmes

1. **Early detection:** Mental health screenings in schools; CBSE's 2024 mental wellness modules.
2. **Counselling and therapy:** State-funded digital addiction clinics (Kerala, Karnataka pilot projects).
3. **Awareness campaigns:** Media literacy for parents and children; involvement of NGOs (Childline India, NIMHANS).
4. **Community-based approaches:** Peer groups, gamified de-addiction tools; collaboration with tech companies for in-game nudges.

Balancing innovation and safety

1. **Economic stakes:** \$3.1 billion Indian gaming market (2023, KPMG); need to harness growth responsibly.
2. **Constitutional concerns:** Regulation must balance Article 19(1)(g) freedom to trade with Article 21 right to life and mental well-being.
3. **International best practices:** South Korea's "Shutdown Law," UK's Gambling Act amendments, Australia's youth digital safety codes.

Conclusion

As *Shoshana Zuboff's Surveillance Capitalism* reminds us, technology shapes behavior. India's youth need guardrails—integrating regulation, therapy, and awareness—to ensure digital growth aligns with mental well-being and public health.

The proposed Goods and Services Tax (GST) reforms raise the issue of state compensation for revenue loss. Examine the challenges to fiscal federalism and the importance of ensuring state cooperation in major tax reforms.

Introduction

India's GST, introduced in **2017 through the 101st Constitutional Amendment**, is hailed as the "One Nation, One Tax" reform. Yet, frequent demands for compensation highlight strains in **fiscal federalism and cooperative federalism**.

Challenges to Fiscal Federalism under GST Reforms

1. **Revenue Uncertainty & Compensation Dilemma:** Proposed rationalisation from a four-tier to a **two-tier (5% and 18%) structure** may cause a short-term revenue dip of **₹60,000–1,00,000 crore annually (0.2–0.3% of GDP)**. States like **Maharashtra, Karnataka, Tamil Nadu** (manufacturing-heavy) face sharper losses compared to agrarian states, leading to asymmetrical impact. The expiry of the **five-year GST compensation cess in June 2022** has aggravated mistrust between Centre and States.
2. **Vertical and Horizontal Fiscal Imbalances:** According to **RBI's State Finances Report 2023**, states' own tax revenue has stagnated around **6-7% of GDP**, while their expenditure responsibilities under the **Seventh Schedule** have expanded. Disparities exist—industrialised states generate more GST but redistribution via the **Finance Commission transfers** often disadvantages them.
3. **Erosion of Fiscal Autonomy:** With the subsumption of indirect taxes like VAT, excise, and octroi, states lost flexibility. **Article 279A** empowers the GST Council, but voting power asymmetry (Centre has 1/3rd share) raises fears of central dominance.
4. **Political-Economic Mistrust:** States like **Punjab and Kerala** have argued that GST compensation denial undermines fiscal space for welfare expenditure. The **COVID-19 pandemic** exposed the fragility when states demanded additional borrowing under **FRBM relaxation** to meet shortfalls.

Importance of Ensuring State Cooperation

1. **Strengthening Cooperative Federalism:** The **Supreme Court in Mohit Minerals v. Union of India (2022)** clarified that GST Council decisions are not binding, reinforcing the need for **consensus-**

driven policymaking. A permanent **GST Compensation Fund** or contingency mechanism, akin to **Australia's Horizontal Fiscal Equalisation**, can sustain trust.

2. **Ensuring Equity and Stability:** **15th Finance Commission** emphasised balancing equity and efficiency—states with weaker tax bases (e.g., NE states, Bihar) need greater protection to ensure uniform development.
3. **Boosting Compliance and Expanding Tax Base:** Lower rates encourage **formalisation** and reduce evasion. Increased compliance (e-invoicing, GSTN data analytics) can expand revenues, benefiting both Centre and states in the long term.
4. **Attracting Investment and Ease of Doing Business:** Rationalised GST rates (~10% average, close to OECD levels) can enhance India's global competitiveness and boost **Make in India**, provided states see themselves as stakeholders in this reform.

Conclusion

As **B.R. Ambedkar** envisioned, India's federalism is a **"Union of States, not unitary."** Sustained **state cooperation, equitable compensation, and fiscal autonomy** remain vital to uphold true cooperative federalism in tax reforms.

India's demographic dividend is at risk of becoming a time bomb. Examine the policy and governance reforms needed to bridge the widening gap between education, skills, and youth employability.

Introduction

India, with over **800 million youth under 35 (UNFPA, 2023)**, risks turning its demographic dividend into a liability, as highlighted by the **India Skills Report 2024**, which found only **43% graduates employable**.

Demographic Dividend Turning Risky

1. **Low employability:** Nearly **40-50% of engineering graduates remain unemployed** (AICTE data).
2. **Automation threat:** McKinsey (2023) warns that **70% of Indian jobs face automation risk by 2030**.
3. **Career awareness gap:** **93% of students (Mindler, 2022)** know only 7 traditional careers, while the modern economy offers **20,000+ paths**.
4. **Mismatch:** Education remains **rote-based and exam-centric**, while industries demand **21st-century skills — critical thinking, AI literacy, problem-solving, adaptability**.

Policy and Governance Reforms Needed

Education System Reform

1. **Curriculum modernization:** Update every **2-3 years** instead of decade-long cycles. Align NEP 2020 goals with **AI, climate tech, digital economy**.
2. **Vocational integration:** Countries like **Germany (Dual System of Vocational Training)** show how apprenticeship models bridge learning and industry demand.
3. **Skill mapping:** Use **AI-driven National Skills Registry** to link student abilities with job trends.

Bridging Education-Industry Gap

1. **Industry-academia partnerships:** As seen in **Singapore's SkillsFuture Programme**, create continuous lifelong skilling platforms.
2. **Compulsory internships:** Make **industry exposure mandatory** in higher education.
3. **Sector-specific skilling hubs:** Especially in **green jobs, healthcare, AI, cybersecurity**.

Governance & Policy Reforms

1. **Unified framework:** Replace fragmented schemes (PMKVY, PMKK, PMYY, etc.) with a **National Employment & Skills Authority (NESA)** for coordination.
2. **Labour market information systems:** Like **South Korea's WorkNet**, India needs real-time data on job demand.
3. **Funding reforms:** Introduce **outcome-linked financing** for skilling (payment based on actual job placement, not training numbers).

Empowering Students & Teachers

1. **Career counselling in schools:** Only **7% of students currently receive guidance**; institutionalize it nationwide.
2. **Teacher reskilling:** Launch **National Faculty Development Mission** for training in AI, EdTech tools, and global pedagogy.
3. **Digital literacy:** Integrate coding, financial literacy, and entrepreneurial skills in school curricula.

Social & Regional Inclusion

1. **Focus on rural-urban divide:** Create **skill hubs in rural districts** to prevent migration stress.
2. **Women's participation:** Female labour force participation is only **37% (PLFS 2023)** — targeted skilling for women can boost both inclusivity and GDP.
3. **Global mobility:** Align skill certification with **international standards (e.g., EU, Gulf countries)** to make Indian youth employable abroad.

Way Forward

1. **Whole-of-society approach:** Government, private sector, and universities must collaborate.
2. **Continuous skilling:** Shift from "degree-centric" to "lifelong learning ecosystem."
3. **Link NEP 2020, National Digital University, and Skill India 2.0** to create a **future-ready workforce**.

Conclusion

As Lant Pritchett asked in *"Where Has All the Education Gone?"*, India must urgently align education with employability, else its demographic dividend risks exploding into a demographic disaster.

Examine how India can "detoxify" its entrance examination system by transitioning from a toxic, high-stakes race to one based on fairness and equal opportunity.

Introduction

With nearly **70 lakh aspirants annually (MoE, 2023)**, India's entrance examination ecosystem (JEE, NEET, CUET, CLAT) has become a **"pressure-cooker system"**, fuelling coaching dependence, inequity, and student suicides — demanding urgent reform.

Why Current System is "Toxic"

1. **Excessive competition:** 15 lakh students vie for 18,000 IIT seats — success rate <1.2%.
2. **Coaching industrial complex:** ₹60,000 crore industry (ASSOCHAM, 2022) charging ₹6–7 lakh, excluding poor/rural candidates.
3. **Mental health crisis:** Kota reported **26 suicides in 2023**, highest ever (Rajasthan Police data).
4. **False meritocracy:** Privileges wealthier, urban families — creating **structural inequity** in access.
5. **Over-qualification paradox:** Students forced to study Irodov-level problems, unnecessary for B.Tech readiness.

Principles of Detoxification

1. **Fairness:** Reduce socioeconomic and regional barriers.
2. **Equity:** Address **urban-rural, gender, caste divides** in higher education access.
3. **Holistic development:** Protect adolescence from toxic over-specialisation.
4. **Merit with inclusivity:** Redefine merit beyond percentile obsession.

Pathways for Reform

(A) Strengthening School System

1. **Rely on Class 12 Boards:** Standardized evaluation across states, as NEP 2020 recommends.
2. **Eligibility thresholds:** Example — 80% in PCM for B.Tech admission, followed by weighted lottery.

(B) Global Inspirations

1. **Dutch Lottery System:** Weighted lottery for medical schools (1972–1999, reintroduced 2023) reduced inequity, ensured diversity.
2. **China's "Double Reduction Policy" (2021):** Banned for-profit tutoring, reducing financial stress and academic burden.
3. **US Holistic Admissions:** Combines grades, extracurriculars, socio-economic background — limiting test-centric obsession.

(C) Lottery & Quota Innovations

1. **Weighted lottery:** Grades determine chances, not cut-offs — aligning with Michael Sandel's critique of "tyranny of merit."
2. **Social equity quotas:** Reserve 50% IIT seats for rural/government school students, enhancing upward mobility.
3. **Regional diversity:** Ensure proportional representation across states.

(D) Tackling Coaching Menace

1. **Nationalisation/regulation:** Like China, regulate or integrate coaching into public system.
2. **Free digital content:** Expand SWAYAM, DIKSHA, IIT-PAL lectures.

3. **Ban predatory practices:** Mandatory registration, counselling support, fee caps for coaching centres.

(E) IIT Systemic Reforms

1. **Student exchange across IITs:** To reduce hierarchy between old vs. new IITs.
2. **Faculty rotation incentives:** Uniform teaching standards nationwide.
3. **Common grading norms:** Reinforce equal institutional worth.

(F) Mental Health Safeguards

1. **Mandatory counsellors in schools/coaching centres.**
2. **Periodic well-being surveys (NCERT)** to track stress.
3. **Helplines & peer support systems:** Already piloted by Rajasthan government in Kota.

Way Forward

1. Move towards **“multiple pathways to merit”** — combining board exams, aptitude tests, and contextual background.
2. Implement **lottery-based allocation with academic thresholds** to replace “fractional score obsession.”
3. Strengthen **public universities’ quality** to reduce the IIT-others divide.
4. Ensure **affordable, inclusive, stress-free access** to higher education opportunities.

Conclusion

As Amartya Sen argued in **Development as Freedom**, true progress lies in **expanding capabilities**. Detoxifying India’s exams means creating fairness, equal opportunity, and restoring education’s role as empowerment, not oppression.

Critically examine the statement “energy sovereignty is the new oil” in the context of India’s current geopolitical and economic vulnerabilities, and evaluate the policy measures needed to achieve uninterrupted, affordable, and indigenous energy security.

Introduction

India, importing 85% of crude oil and 50% of natural gas (MoPNG, 2024), faces a \$170 billion energy import bill. In an unstable geopolitical order, “energy sovereignty” has become synonymous with national security.

The Vulnerability Landscape: Why “Energy Sovereignty” is the New Oil

1. **Import Dependence:** Oil imports form **over 25% of India’s total merchandise imports (FY 2023-24)**, weakening rupee stability and widening CAD.
2. **Geopolitical Risks:** Russian oil now makes up **35–40% of imports** (S&P Global, 2025), creating over-concentration. Middle East flashpoints (Hormuz chokepoint) threaten supply.
3. **Energy Transition Imbalances:** Despite renewable expansion, **fossil fuels still meet 80% of global demand** (IEA, 2023). India risks stranded assets and vulnerability if it over-relies on volatile imports.
4. **Strategic Risks:** India’s **SPR (Strategic Petroleum Reserves)** covers just **9.5 days of net imports**, compared to **China’s 90 days** and the **US’s 60 days**.

Global Flashpoints: Lessons for India

1. **1973 Oil Embargo:** Triggered diversification strategies in the West.
2. **2022 Russia-Ukraine War:** Exposed Europe's over-dependence (40% gas from Russia) → coal revival.
3. **2025 Iberian Blackout:** Showed risks of over-reliance on intermittent renewables without storage.
→ Lesson: Energy strategy must balance sovereignty, diversification, and resilience.

India's Current Policy Gaps

1. **Over-centralisation in fossil imports** despite renewable push.
2. **Slow nuclear expansion** — capacity stagnant at 8.8 GW vs 63 GW in France.
3. **Storage Deficit** — inadequate pumped hydro and battery capacity.
4. **Technology Dependence** — China controls **70% of solar PV manufacturing and 80% of lithium-ion battery supply chains (IRENA, 2024)**.

Pathways to Energy Sovereignty: Five Pillars

1. **Coal Gasification & Carbon Capture:** Leverage **150 billion tonnes of coal reserves** for syngas, methanol, hydrogen; reduce reliance on imported LNG.
2. **Biofuels & Ethanol Blending:** Ethanol blending already transferred **₹92,000 crore** to farmers (NITI Aayog, 2023). Scaling **E20 by 2025** can save **\$4 billion annually** in forex.
3. **Nuclear Power Expansion:** Implement **thorium-based reactors** and Small Modular Reactors (SMRs) for dispatchable zero-carbon baseload; diversify uranium partnerships (Kazakhstan, Australia).
4. **Green Hydrogen Mission (2023):** Target **5 MMT/year by 2030**; indigenous electrolyser manufacturing crucial to avoid China-like dependence.
5. **Pumped Hydro Storage & Grid Inertia:** With over **96 GW potential (CEA)**, India can stabilise renewables-heavy grids.

Complementary Policy Measures

1. **Strengthening SPRs** to 30–60 days of imports.
2. **Diversification of sources** (Africa, Latin America, US shale).
3. **Atmanirbhar Bharat push** for battery, solar, and hydrogen supply chains.
4. **Regional energy diplomacy:** I2U2 (India–Israel–UAE–US), International Solar Alliance.
5. **Just Transition policies** ensuring affordability and equity in rural electrification.

Conclusion

As Vaclav Smil argues in **Energy and Civilization, power defines prosperity**. India's path lies in foresight-driven energy sovereignty — blending resilience, affordability, and self-reliance to secure tomorrow's most vital resource.