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A Grand Vision and the Great Indian Research Deficit

Context

- India stands at a defining juncture in its economic and technological journey; with a large population, expanding economy, and global aspirations, it appears poised for leadership.
- Yet, this promise is constrained by **a chronic and structural deficit in research and development**.
- Without correcting this weakness, the vision of a Viksit Bharat risks remaining rhetorical rather than real.

The Scale of the Deficit: A Stark Numerical Reality

- India is home to roughly 17.5% of the world's population but contributes **only about 3% of global research output.**
- This mismatch highlights the inability to convert demographic strength into knowledge leadership.
- Patent data reinforces the concern. Although India ranked **sixth globally in patent filings in 2023**, its share of worldwide applications remained below 2%.
- When adjusted for population, India's ranking drops sharply, revealing limited diffusion of innovation across society.
- The most revealing indicator is R&D expenditure. India's Gross **Expenditure on R&D has stagnated around 0.6–0.7% of GDP** and is declining proportionally as the economy grows.
- This contrasts sharply with China, the United States, and Israel, which treat R&D as a strategic national priority.
- The comparison with Huawei is particularly stark: the company's R&D spending alone exceeds India's total public and private R&D expenditure.
- This illustrates how **concentrated, mission-driven investment drives technological leadership**, a scale India has yet to achieve.

Structural Weaknesses in the Innovation Ecosystem

- **Weak Role of the Private Sector**
    - The numerical gap reflects deeper systemic problems. One of the most critical is the weak role of the private sector. In mature innovation economies, industry leads R&D spending.
    - In India, the government remains the dominant funder, while private industry contributes barely over a third.

    - Corporate investment is shaped by risk aversion, a preference for incremental improvements, and reliance on imported technologies rather than indigenous development.

- **Disconnect Between Academia and Industry**

    - Universities produce millions of graduates, but research often remains theoretical and detached from market needs.
    - Technology transfer mechanisms, commercialisation pathways, and collaborative projects are underdeveloped.
    - Unlike the United States, where firms routinely fund university research to create market-ready innovations, Indian companies rarely engage academia in this manner.
    - As a result, promising ideas fail to cross the **valley of death** between laboratory and marketplace.

- **Brain Drain**

    - While India trains large numbers of scientists and engineers, many of the most capable seek opportunities abroad due to better funding, infrastructure, and career prospects.
    - Domestically, researchers face bureaucratic delays, unpredictable funding flows, and limited access to world-class facilities.
    - Slow approval processes and staggered fund releases undermine ambitious, long-term research programmes.

The Path Forward

- **Reimagining India's R&D Strategy**

    - Correcting these failures requires a **fundamental shift in national priorities**. The most urgent step is to raise R&D spending to at least 2% of GDP within the next five to seven years.
    - This must be backed by significant public investment and strong incentives to raise private sector participation to at least half of total R&D spending.
    - The recently announced Research, Development and Innovation Fund is a positive step, provided it is deployed efficiently and focused on frontier technologies.
    - India must also abandon fragmented research efforts in favour of national missions.
    - Strategic domains such as semiconductors, artificial intelligence, quantum computing, advanced materials, and green energy demand sustained funding, clear objectives, and alignment with national security and economic sovereignty.
    - These areas will determine long-term competitiveness rather than short-term gains.

- **Universities and Research**

    - Universities must evolve from **teaching-centric institutions** into research-driven centres of excellence.

  - This requires expanded funding for doctoral programmes, competitive research faculty positions, and modern infrastructure.
  - Structured industry-academia collaboration, through sponsored research chairs, joint laboratories, and incubation centres, must become the norm rather than the exception.
  - Alongside this, India must foster a stronger intellectual property culture. Simplified patent procedures, stronger enforcement, and financial incentives for commercially successful patents would encourage innovation across academia and industry.
  - **Innovation must be rewarded,** protected, and commercialised at scale to generate economic value.

Conclusion

- India possesses the intellectual capacity and ambition to emerge as a global innovation leader. However, **ambition without sustained R&D investment is strategically hollow**.
- The contrast with global innovation leaders and even single multinational corporations exposes a systemic failure to prioritise knowledge creation.
- The coming decade is decisive. With political will, structural reform, and cultural change, India can convert its demographic advantage into technological power.
- Without it, the goal of a developed and sovereign nation **may drift far beyond 2047.**

A Grand Vision and the Great Indian Research Deficit FAQs

Q1. What is the core challenge limiting India's global power ambitions?

Ans. India's global ambitions are constrained by a persistent deficit in research and development investment.

Q2. Why is India's patent performance considered weak despite high filing numbers?

Ans. India's patent performance remains weak because filings are low relative to its large population.

Q3. What role does the private sector play in India's R&D ecosystem?

Ans. The private sector plays a limited role, with the government remaining the dominant R&D funder.

Q4. How does the academia–industry disconnect affect innovation in India?

Ans. The disconnect prevents research from being commercialised and reaching the marketplace.

Q5. What key reform is necessary for India to strengthen its innovation capacity?

Ans. India must significantly increase R&D spending and align it with strategic national missions.

Source: The Hindu

Linked Civilisations, A Modern Strategic Partnership

Context

- Relations between Iran and India extend beyond conventional diplomacy, drawing strength from millennia of civilisational continuity.

- Long before modern political borders, both societies emerged from a **shared Indo-Iranian civilisation**, rooted in common linguistic, cultural, and spiritual traditions.
- This historical affinity has endured political change and now intersects with contemporary strategic, economic, and security interests.
- In a **shifting global order** marked by multipolarity, Iran and India are well positioned to transform their ancient bond into a forward-looking partnership.

Historical and Civilisational Foundations

- The earliest connections between Iran and India originated in the **Indo-Iranian world**, whose legacy is evident in the parallels between the Avesta and the Rigveda.
- These texts reflect shared mythologies, ethical values, and cosmological views that shaped early social organisation.
- Despite later migrations and political divergence, this **common heritage** sustained a sense of cultural kinship.
- One of the most enduring manifestations of this relationship was the prominence of the **Persian language in India**.
- For centuries, Persian functioned as a medium of administration, diplomacy, and intellectual life across the subcontinent.
- This interaction fostered the development of the Indian Style (Sabk-e Hendi) in Persian poetry, blending Persian literary form with Indian philosophical depth.
- The work of Mirza Abdul-Qadir Bedil Dehlavi epitomised this synthesis, leaving a lasting imprint on Persian literary tradition and **Indo-Iranian cultural exchange.**

Transition to Modern Strategic Realities

- While historical memory provides depth and legitimacy, contemporary relations are shaped by **pragmatic considerations.**
- As global power structures evolve and Asia gains prominence, Iran and India increasingly share strategic objectives, including regional stability and foreign policy autonomy.
- A central pillar of this engagement is **energy security cooperation**.
- India's rapidly growing economy requires sustained access to hydrocarbons, while Iran's vast oil and gas reserves position it as a natural partner.
- This complementarity reflects a mutually beneficial relationship grounded in economic necessity rather than sentiment alone.

Key Aspects of India-Iran Relations

- **Connectivity, Trade, and Geoeconomic Cooperation**
    - Transport and connectivity initiatives represent one of the most consequential dimensions of bilateral cooperation.

    - India’s involvement in developing Iran’s Chabahar Port highlights the strategic importance of alternative trade routes that reduce dependence on traditional maritime corridors.
    - Iran’s geographical position further enhances its role in the International North-South Transport Corridor, linking South Asia to Russia and Northern Europe through a shorter and more cost-effective route than the Suez Canal.
    - Together, **Chabahar Port and INSTC** elevate Iran’s role as a Eurasian transit hub while expanding India’s access to continental markets.

- **Security Cooperation and External Challenges**

    - Beyond economics, Iran and India face common security challenges, particularly the spread of extremism and terrorism across West and South Asia.
    - Quiet but sustained **security and counterterrorism cooperation** has therefore become an essential component of bilateral relations.
    - External pressures and geopolitical rivalries have at times constrained engagement.
    - Nevertheless, India has generally navigated these complexities through strategic pragmatism, balancing global partnerships while safeguarding national interests.
    - For both countries, developing **alternative financial mechanisms** and reducing vulnerability to external constraints remain important objectives.

Prospects for Future Cooperation

- To ensure long-term sustainability, the **relationship must diversify** beyond traditional energy trade. Expanding collaboration in knowledge-based sectors offers significant potential.
- India’s strengths in information technology and innovation complement Iran’s advances in nanotechnology, medical sciences, and research-intensive industries.
- Such cooperation can gradually transform the relationship into an **innovation-driven future partnership**, capable of generating shared growth and technological self-reliance.

Conclusion

- Iran and India represent two historical expressions of a **deeply interconnected civilisation.**
- Their relationship, shaped by ancient cultural bonds and reinforced by modern strategic needs, possesses **exceptional resilience.**
- As the two nations commemorate seventy-five years of diplomatic relations, they face a critical opportunity to translate historical goodwill into concrete cooperation.
- By aligning cultural affinity with economic, security, and technological collaboration, Iran and India can forge a partnership that strengthens **regional stability, enhances prosperity**, and reflects both their shared past and collective future.

Linked Civilisations, A Modern Strategic Partnership FAQs

Q1. Why are Iran–India relations considered civilisational rather than purely diplomatic?
Ans. They are rooted in a shared Indo-Iranian heritage marked by common linguistic, cultural, and spiritual

traditions dating back to ancient history.

Q2. What role did the Persian language play in India?

Ans. Persian served for centuries as a key language of administration, diplomacy, and literature, deeply influencing Indian intellectual and cultural life.

Q3. Why is energy cooperation important for both countries today?

Ans. India requires reliable energy supplies for growth, while Iran possesses vast hydrocarbon reserves, making their partnership economically complementary.

Q4. What is the strategic significance of Chabahar Port and the INSTC?

Ans. They provide India with efficient access to Eurasian markets and position Iran as a crucial regional transit hub.

Q5. How can Iran and India strengthen future cooperation?

Ans. By diversifying into technology, innovation, and knowledge-based industries beyond traditional energy trade.

Source: The Hindu

Money, Politics and the Erosion of Electoral Equality in India

Context

- Free and fair elections are a core feature of India's constitutional democracy. However, persistent **inequalities in political funding** have undermined the level-playing field among political parties.
- Despite multiple reform attempts—most recently the striking down of the Electoral Bonds Scheme (2018) by the Supreme Court—India's political finance system continues to be dominated by corporate money.
- This raises concerns of quid pro quo (between the corporates and such parties), **institutionalised corruption**, and unequal political participation.

Core Issue – Unequal Political Funding:

- Unequal access to private donations distorts electoral competition and political participation.
- Better-resourced parties gain disproportionate advantages in campaigning, visibility, and organisational reach.
- Weak regulation, poor enforcement, and lack of political will have allowed the **money–politics nexus** to persist.

Corporate Donations and Party-wise Skew

- **Direct corporate donations (FY 2013–14 to FY 2023–24)**
    - For example, the incumbent political party (BJP) received nearly **65%** of all declared direct corporate donations.
    - Its donations were four times more than all other national parties combined.

- **Electoral trusts**
    - For example, BJP received around 71.67% of total funds routed through electoral trusts. This indicates a clear financial asymmetry in favour of the ruling party.

Electoral Trust Scheme – Performance and Concerns

- Introduced in 2013 to formalise corporate political donations.
- **FY 2013–14 to 2023–24 data**
    - Among the top ten trusts, Prudent Electoral Trust dominates.
    - It received ₹33,330.54 crore (86.38%) of total trust contributions. 75% of its donations went to the BJP.
- **FY 2024–25 data**
    - The trust received ₹2,668.49 crore.
    - Donated ₹2,180.71 crore to BJP and ₹216.34 crore to Congress.
- **Inference**
    - Political funding via trusts is highly concentrated—both in terms of donors (few trusts) and beneficiaries (incumbent party).

Transparency Deficit in Electoral Trusts

- **What is known**: Names of donor companies and recipient parties (via filings to ECI and IT Department).
- **What is not known:**
    - Which company donated to which party.
    - Method and rationale of fund disbursal by trusts remain opaque.
- **Reform suggestion:**
    - Electoral trusts should reflect the name of the company or corporate group that established them.
    - Public disclosure of donors–donees mapping is essential for democratic accountability.

Quid Pro Quo and Supreme Court Observations

- Political funding in India is heavily dependent on corporates donating to ruling parties at Centre or states.
- This creates a quid pro quo (“something for something”) relationship.
- **SC (Electoral Bonds Case, 2024):**
    - “The reason for political contributions by companies is as open as daylight.”
    - “Contributions made by companies are purely business transactions made with the intent of securing benefits in return.”
    - Thus, the apex court called quid pro quo an instance of “institutionalised corruption”.

Campaign Finance and Rising Cost of Elections

- **No legal cap** on political party expenditure (only on candidates).
- Unlimited party spending has led to:
  - Highly professionalised campaigns.
  - Escalating election costs.
  - India becoming one of the **most expensive electoral democracies**, surpassing even the US.

Public Funding of Elections – Historical Debate

- **Constituent Assembly (1948) deliberations:** Elections are a state affair, not a private one. Public funding was seen as a way to prevent unfair advantage to wealthy candidates. Several committees and experts have supported **state funding** of elections.
- **Preconditions suggested:**
  - Internal democracy within political parties
  - Transparency in party functioning
  - Bringing parties under RTI
  - Regulation or ban on private donations

Lessons from the Past

- Corporate donations were banned (1969–1985).
- The absence of alternative lawful funding:
  - Led to opaque, illegal practices
  - Rise of "**briefcase politics**"
- Indicates that bans without systemic reform can worsen corruption.

Challenges and Way Forward

- **Disparity in access to funds among political parties**
  - Design a comprehensive political finance framework that
    - Ensures equitable access to funding
    - Diversifies sources of political finance
    - Strengthens transparency and disclosure norms
- **Concentration of economic and political power**: Strengthen institutional oversight by ECI and judiciary.
- **Opaque funding channels**: Introduce calibrated public funding alongside reforms.
- **Lack of expenditure limits for parties**: Cap political party expenditure.
- **High entry barriers**: Reduce financial entry barriers (for new or less-resourced candidates) to political contestation.

Conclusion:

- India's democracy bears the cost of distorted political funding through weakened electoral competition and compromised public interest.

- Without urgent reforms to address inequality, elections risk becoming contests of money rather than mandates of the people.
- Ultimately, when political finance remains skewed and opaque, it is the citizens who pay the price for their democracy.

Erosion of Electoral Equality in India FAQs

Q1. How does unequal political funding undermine the principle of a level-playing field in Indian elections?

Ans. It allows better-resourced parties to dominate campaigns, distort electoral competition, and weaken political equality among contestants.

Q2. What is the role of Electoral Trusts in ensuring transparency in political funding in India?

Ans. While Electoral Trusts offer transparency, the absence of public donor–donee mapping limits their effectiveness in ensuring accountability.

Q3. What did the SC observe regarding corporate political donations in the Electoral Bonds judgment?

Ans. The SC termed corporate political funding as a form of institutionalised corruption driven by quid pro quo business transactions.

Q4. Why has the cost of elections in India increased significantly despite expenditure limits on candidates?

Ans. The absence of legal caps on political party expenditure has led to unlimited, professionalised campaigns.

Q5. Why must public funding of elections in India be accompanied by broader political reforms?

Ans. Without reforms like internal party democracy and transparency, public funding risks reinforcing corruption.

Source: IE
