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Daily News Analysis

The Hindu Important News Articles & Editorial For UPSC CSE

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In his year-ending Mann Ki Baat address and subsequent interaction at the Conference of Chief Secretaries, Narendra Modi outlined India's achievements in 2025 and articulated the government's vision for a Viksit Bharat. The emphasis was on youth-led nation-building, next-generation reforms, human capital development, and quality-driven growth, reflecting the evolving governance and development paradigm of India.

World is looking at India with great hope, says PM

In his *Mann Ki Baat* address, Modi highlights achievements of 2025, says youth can contribute to nation-building via platforms like Viksit Bharat Young Leaders Dialogue, Smart India Hackathon

The Hindu Bureau
NEW DELHI

Prime Minister Narendra Modi on Sunday said 2025 had been a year of proud achievements for India, with the country making its presence felt across sectors, inspiring citizens to look forward to 2026 with confidence.

"From national security to the sports field, from science laboratories to the world's biggest platforms, India left a strong mark everywhere," Mr. Modi said during the year-ending *Mann Ki Baat* episode.

Terming Operation Sindoor a symbol of pride, he said the world saw that India does not compromise on its security. "The same spirit was also visible when *Vande Mataram* completed 150 years," he added.

He highlighted achievements in sports, including victories in the men's ICC Champions Trophy, the women's Cricket World Cup, and the Women's Blind T20 World Cup, as well as successes in the Asia Cup T20 and the World Para Athletics Championships.

Shubhanshu Shukla became the first Indian to reach the International Space Station, he said. On environment conservation, the Prime Minister noted that the number of cheetahs in India had risen to over 30.

"In 2025, faith, culture, and heritage came together," he said, citing the Prayagraj Maha Kumbh and the flag-hoisting ceremony at the Ram Mandir in Ayodhya, and noting the growing enthusiasm for *swadeshi* (self-reliance).

Stating that, today, the world was looking at India with great hope, especially owing to youth power in the areas of science, new innovations, and technology, Mr. Modi said the youth can contribute to nation-building via platforms like the 'Viksit Bharat Young Leaders Dialogue' and the 'Smart India Hackathon'.

This year, student participants in the hackathon worked on more than 270 problems of over 80 government departments, he said, and over 13 lakh students and about 6,000 institutes have participated in the event in the last seven to eight years.

The Prime Minister also spoke about a music class started at the Indian Institute of Science (IISc) via research and innovation a few years ago, and now established as a cultural centre named 'Geetanjali IISc', where students together practise Hindustani classical music, folk traditions, and classical genres.

Indians living in different parts of the world were also making efforts to stay connected to their roots. In Dubai, Kannada families took the initiative to teach Kannada to children. "The land and language of Kannada are our pride," Mr. Modi said in Kannada.

The Prime Minister praised a young man from Manipur, Moirangthem Seth, for launching a campaign to install solar panels in remote areas, particularly health centres. Under the 'PM Surya Ghar Muft Bijli Yojana', the government is providing ₹75,000 to ₹80,000 to each beneficiary family for installing solar panels.

Antibiotic use

He expressed concern over an Indian Council of Medical Research report that antibiotics are proving ineffective against many diseases such as pneumonia and urinary tract infection. He urged people to refrain from using medicines at their own discretion.

Mr. Modi highlighted the lace craft of Narasapuram in Andhra Pradesh, saying that the State government and NABARD (National Bank for Agriculture and Rural Development) were jointly teaching artisans new designs, providing better skill training, and connecting them with new markets.

Nation is witnessing next-generation reforms, says Modi

The Hindu Bureau
NEW DELHI

The PM says youth development plays a key role to achieve the vision of a developed India

Prime Minister Narendra Modi on Sunday addressed the Conference of Chief Secretaries, with this year's deliberations centred on the theme "Human capital for Viksit Bharat".

Emphasising the need for collective action, the Prime Minister said empowering India's people, especially the youth, was key to achieving the vision of a developed nation. Noting that India is witnessing a phase of next-generation reforms, Mr. Modi said the country had "boarded the Reform Express", with its primary engine being India's demographic strength.

Empowering this demography, he said, remains central to the government's efforts towards building an Aatmanirbhar Bharat and uplifting the poor.

The Prime Minister underlined the importance of quality across sectors, calling for quality in governance, service delivery and manufacturing. He stressed that the 'Made in India' label must become synonymous with global standards, while reaffirming the commitment to the principle of 'Zero Defect, Zero Effect'. Mr. Modi also highlighted steps taken to foster a new work culture in governance and public service delivery, pointing to the role of technology in bringing positive changes to citizens' lives. Discussions during the conference covered a wide range of issues, including skill development, higher education, youth empowerment and sports.

Calling upon the States to play a proactive role, the Prime Minister urged them to encourage manufacturing, improve the ease of doing business and strengthen the services sector. He said India should aim to emerge as a global services hub.

On agriculture, Mr. Modi said India had the potential to become the world's food basket.

He advocated a shift towards high-value agriculture, horticulture, animal husbandry, dairying and fisheries, asserting that these sectors could help position India as a major food exporter.

Key Themes and Analysis

1. Youth and Human Capital as Growth Engines: The Prime Minister repeatedly highlighted India's demographic dividend as the "engine" of reforms. Platforms such as the Viksit Bharat Young Leaders Dialogue and Smart India Hackathon were presented as institutional mechanisms to channel youth innovation into governance. This aligns with UPSC themes of **demographic dividend, skill development, and participatory governance**, while also raising questions about inclusivity, regional balance, and long-term employability outcomes.

2. National Security, Science, and Global Standing: References to Operation Sindoor and achievements in space, including an Indian reaching the International Space Station, signal India's intent to project itself as a secure, technologically capable power. This reflects continuity with India's strategic narrative of **security-development linkage** and growing global stature.

3. Culture, Soft Power, and Diaspora Engagement: By invoking milestones such as Vande Mataram completing 150 years, the Maha Kumbh, Ram Mandir events, and diaspora initiatives like Kannada language teaching in Dubai, the address reinforced **cultural nationalism and soft power diplomacy**—important dimensions of India's international image.

4. Innovation, Environment, and Sustainability: Initiatives such as solar panel deployment under PM Surya Ghar Muft Bijli Yojana, cheetah conservation, and the integration of culture with science at **Indian Institute of Science** highlight a narrative of sustainable development blended with innovation. However, implementation capacity and ecological trade-offs remain critical concerns.

5. Governance Reforms and Cooperative Federalism: At the Conference of Chief Secretaries, the stress on quality in governance, Zero Defect, Zero Effect, ease of doing business, and States' proactive role reflects the model of **cooperative federalism**. The push for India as a global manufacturing and services hub, alongside agriculture diversification, indicates a holistic development strategy.

6. Public Health and Social Awareness: The concern over antibiotic resistance, citing ICMR findings, signals recognition of **non-traditional security threats** like public health, and the need for behavioural change.

Conclusion

Overall, the Prime Minister's statements project confidence in India's trajectory towards Viksit Bharat, anchored in youth empowerment, reforms, quality governance, and cultural self-confidence.

UPSC Mains Exam Practice Question

Ques: "Human capital is the primary engine of India's next-generation reforms." Examine this statement in the context of India's demographic profile and governance priorities. **(150 Words)**

Page 06 : Prelims Exam

The passing away of **S. Krishnaswamy**, an internationally acclaimed documentary and television filmmaker, marks the end of a significant chapter in India's non-fiction cinema.

Documentary filmmaker S. Krishnaswamy passes away

The Hindu Bureau
CHENNAI

Internationally acclaimed documentary and television filmmaker S. Krishnaswamy, who produced over 900 non-fiction films, including the famed *Indus Valley to Indira Gandhi*, passed away on Sunday evening at a hospital in Chennai. He was 88.

He had been under treatment for a heart ailment and visited the hospital in the evening, said his daughter Gita Krishnaraj. He is survived by his wife Mohana Krishnaswamy and children Latha Krishna, Gita Krishnaraj, and Bharat Krishna.

Born in Chennai (at the time, Madras) on July 15, 1937, to iconic film director K. Subrahmanyam and lyricist Meenakshi Subrahmanyam, he joined Columbia University in the U.S. in 1960 and studied mass communications with a special reference to documentary films. He founded his firm Krishnaswamy Associates in 1963.

His magnum opus, *Indus Valley to Indira Gandhi*, a four-hour film traversing 5,000 years of subcontinental history, was released in December 1976. It was shot in 100 locations across the country and the rights for its international distribution were bought by Warner Brothers.

Among his works were *Unknown Freedom Fighters* (1978); *Rajaji* (1979); *Kamaraj* (1981); *With Apologies to Tagore* (1987), a five-minute, hilarious portrayal of the state of the nation with animation; *Jaya Jaya Sankara* (1991), a film on the Kanchi Math; and *Reality Behind Religion* (1992), which emphasised the need for brotherhood and understanding among the followers of various religions.

S. KRISHNASWAMY (1937-2025)

His films covering political leaders included those on R. Venkataraman and C. Subramaniam, both released in 2002, and M.G. Ramachandran in 1984. In the 1980s, he made films on the complex problems of Punjab and Sri Lanka, highlighting the operations of the Indian defence forces. The subject of electoral reforms did not escape his imagination, which was reflected in *Who loses when India wins* (2006).

His magnum opus *Indus Valley to Indira Gandhi* was shot in 100 locations across the country

Awards received

In 2009, he received the Padma Shri and in 2020, the Dr. V. Shantaram Lifetime Achievement Award for his contribution to documentary films at the Mumbai International Film Festival.

He also won the Honor Summus Award of the Watumull Foundation, Hawaii, in 1987 and the Lifetime Achievement Award in 2005 at the U.S. International Film and Video Festival, Los Angeles.

He authored several books, including one brought out by *The Hindu* titled *Voyages Retraced: India's Influence in East Asia* in February 2025. The book gave an insight into ancient India's impact on Southeast Asian countries, and a phase in history when Indian sailors travelled to countries such as Vietnam, Laos, Cambodia, and Thailand, and became conduits for spreading Indian culture, architecture, and fine arts to these countries over centuries. It was a narrative of his travels between 2005 and 2010.

He co-authored the book *Indian Film* with Erik Barnouw.

During the writing of the book, the authors camped in Darjeeling where Satyajit Ray was filming his *Kanchenjunga*.

Key Points Relevant for Prelims

1. Personal Background

Born on **July 15, 1937**, in Chennai (then Madras).

Son of **K. Subrahmanyam**, a pioneering filmmaker, and **Meenakshi Subrahmanyam**, a noted lyricist.

Studied **Mass Communications (Documentary Films)** at **Columbia University, USA** (1960).

Founded **Krishnaswamy Associates** in **1963**.

2. Landmark Contribution to Documentary Cinema

Magnum opus: **Indus Valley to Indira Gandhi (1976)**

Four-hour documentary covering **5,000 years of Indian history**.

Shot across **100 locations in India**.

International distribution rights acquired by **Warner Brothers** (important factual point).

3. Major Works (Selective)

Unknown Freedom Fighters (1978)

Rajaji (1979)

Kamaraj (1981)

With Apologies to Tagore (1987) – noted for use of animation and satire

Jaya Jaya Sankara (1991) – on Kanchi Math

Reality Behind Religion (1992) – interfaith harmony

Who Loses When India Wins (2006) – electoral reforms

Political biographies including films on **M.G. Ramachandran**, **R. Venkataraman**, and **C. Subramaniam**

4. International and Strategic Themes

Documentaries on **Punjab and Sri Lanka conflicts** in the 1980s, highlighting Indian defence forces.

Engagement with themes of **national integration, democracy, religion, and governance**.

5. Books and Intellectual Contribution

Author of Voyages Retraced: India's Influence in East Asia (2025)

Focus on **ancient India–Southeast Asia cultural links** (Vietnam, Laos, Cambodia, Thailand).

Relevant to **Indian cultural diffusion, maritime history, and soft power**.

Co-authored Indian Film with **Erik Barnouw**.

Anecdotal association with **Satyajit Ray** during the filming of Kanchenjunga.

6. Awards and Honours

Padma Shri (2009)

Dr. V. Shantaram Lifetime Achievement Award (2020) – Mumbai International Film Festival

Honor Summus Award, Watumull Foundation, Hawaii (1987)

Lifetime Achievement Award, U.S. International Film & Video Festival, Los Angeles (2005)

Conclusion

S. Krishnaswamy's life and work exemplify the role of documentary cinema as a tool for historical narration, cultural diplomacy, and democratic discourse. For UPSC Prelims, the news is significant not for opinion-based analysis, but for **static facts linked with awards, films, books, and India's cultural outreach**, making it a high-value current affairs input.

UPSC Prelims Exam Practice Question

Ques : The documentary Indus Valley to Indira Gandhi is significant because:

1. It covered nearly 5,000 years of Indian history.

2. It was shot across more than 100 locations in India.

3. Its international distribution rights were acquired by Warner Brothers.

Which of the above statements are correct?

(a) 1 and 2 only

(b) 1 and 3 only

(c) 2 and 3 only

(d) 1, 2 and 3

Ans: (d)

Page 07 : GS 3 : Science and Tech / Prelims Exam

Indian astronomers, using data from the **James Webb Space Telescope (JWST)**, have discovered an unusually well-formed spiral galaxy named Alaknanda, dating back to when the universe was only about **1.5 billion years old (z ≈ 4)**. Published in **Astronomy & Astrophysics**, the finding challenges prevailing theories of galaxy formation, which suggest that such mature spiral structures require several billion years to evolve.

Alaknanda: Indian astronomers spot implausibly old spiral galaxy

Alaknanda's existence poses a significant puzzle for astronomers: it took shape when the universe was only about 1.5 billion years old, defying current models of galaxy formation; according to one expert, either the galaxy grew steadily by drawing in cold gas or it interacted or merged with a smaller companion galaxy

Shreejaya Karantha

Astronomers from India have discovered the second farthest spiral galaxy in the depths of the universe, using the powerful James Webb Space Telescope (JWST), and have named it Alaknanda.

The galaxy was an unexpected sight during a broader study of galaxy shapes in the early universe. The findings were published in *Astronomy & Astrophysics* in November.

The study's lead author Rashi Jain, a PhD student at the National Centre for Radio Astrophysics in Pune, was analysing public JWST data from the UNCOVER survey, which contains about 70,000 objects, to understand the morphologies of galaxies in the early universe. That's when she stumbled on the galaxy with two perfectly symmetrical spiral arms. The first question that popped into her mind was: "Should this exist so early in the universe?"

'Meticulous analysis'

Ms. Jain and her doctoral advisor Yogesh Wadadekar undertook a detailed study to determine the galaxy's nature. They found it had a prominent disk with two clear spiral arms and a small central bulge. When they removed the smooth light from the disk and the bulge, the spiral arms remained visible, confirming they were real and not an artifact in the light data.

They also found that new stars formed along the spiral arms at about equivalent of 60 stars of our sun's mass every year. This confirmed Alaknanda was a fully developed spiral galaxy, and only 1.5 billion years after the Big Bang.

Ms. Jain named the galaxy Alaknanda for the river in Uttarakhand. She was looking for a female name to be consistent with how galaxies are often referred to in Indian languages.

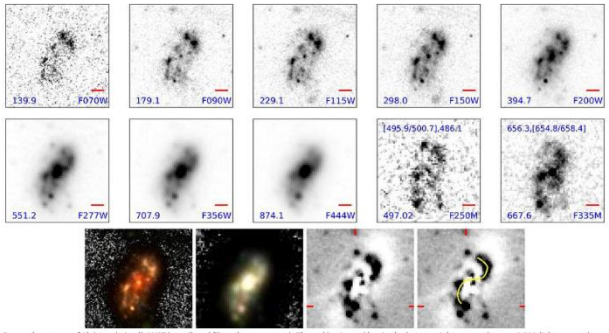
"I remembered seeing Alaknanda and Mandakini, both tributaries of the Ganga, flowing together during my visit to Uttarakhand. Since our own Milky Way is called Mandakini in Hindi and is also a spiral galaxy, I named this one Alaknanda," she said.

"The discovery is serendipitous and the result reflects the power of JWST-quality data and meticulous analysis," Girish Kulkarni, a professor at the Department of Theoretical Physics at the Tata Institute of Fundamental Research, Mumbai, said. "It's not so much a brand-new technique as careful work making the most of the observations."

Prof. Kulkarni wasn't involved in the study.

Too soon, too ready

Alaknanda's existence poses a significant puzzle for astronomers.



Greyscale cutouts of Alaknanda in all JWST broadband filters (top two rows). The red horizontal bar in the bottom right corner shows a 6,500-lightyear scale at the galaxy's redshift. The bottom row shows two composite images of the galaxy; the last two images show an algorithm's fitting of the telescope data. A&A, 703 (2023) A96

"Current models suggest it takes billions of years for the stable, rotating disks necessary for spiral arms to form," said Ms. Jain.

However, Alaknanda took shape when the universe was only about 1.5 billion years old, defying the current models of galaxy formation.

According to Prof. Kulkarni, understanding galaxy formation is a "complex system problem," akin to predicting the weather or the climate. Unlike "simple" physics problems, where fundamental principles might be unknown, complex problems involve known principles but have too many interacting parts to be modelled perfectly.

"Current simulations don't yield spiral galaxies with this degree of structure at z ~ 4, and when observations disagree with simulations, it usually tells us which ingredients need refinement," Prof. Kulkarni said. This means any mismatch is scientifically more useful rather than troubling.

('z ~ 4' is a reference to the redshift, which is the stretching of light to longer wavelengths as the light source recedes from the observer, in this case the earth. The 'z' measures the fractional increase in wavelength.)

So how did Alaknanda manage to form a mature spiral disk in such a short time?

According to Ms. Jain, there are two theories about the formation of spiral arms. One is that the galaxy grew steadily by drawing in cold gas, allowing it to settle into a stable, rotating disk in which density waves could form and sustain the spiral patterns. The other is that

> The discovery is serendipitous and the result reflects the power of JWST-quality data and meticulous analysis
>
> GIRISH KULKARNI
> TATA INSTITUTE OF FUNDAMENTAL RESEARCH, MUMBAI

Alaknanda interacted or merged with a smaller companion galaxy, causing the arms to form. Even so, astronomers believe spiral arms would have needed more time to form in such a young universe.

"There could be some factor accelerating this process," Ms. Jain said.

'Robust findings'

Astronomers usually study galaxies in the distant universe using the energies of light they emit, which reveal the chemical composition and physical conditions in the galaxy. In the absence of such data, as in the new study, they measure the galaxy's brightness at different wavelengths to reconstruct its overall energy distribution. This is called photometric analysis. Jain *et al.* did this using data from the JWST. And with the reconstructed spectrum, they were able to estimate its redshift, stellar mass, and star-formation history.

Prof. Kulkarni said that while the study relied on photometric analysis, its findings appear robust as the team carried out three independent and consistent redshift measurements. However, he suggested the researchers also examine detailed spectroscopic data, such as JWST's Integral Field Unit images, to ensure the observed structure is not caused by clumpy features and to confirm Alaknanda is truly spiral rather than a chance alignment.

The current observations are also insufficient to determine which of the two plausible mechanisms is responsible for Alaknanda's arms. To this end the team plans to propose further observations with JWST or with the Atacama Large Millimeter/submillimeter Array in Chile.

Indian astronomy

Finally, the discovery of Alaknanda is also a significant achievement for Indian science. Prof. Kulkarni said India's presence in major JWST discoveries has been limited by a smaller astronomy workforce, fewer dedicated training programmes, and lower funding compared to that in the bigger research economies, as well as less sustained participation in large international survey collaborations.

To catch up, the Indian astronomy community is pursuing a two-pronged strategy: to build domestic facilities, like the proposed 10-metre optical telescope in Hanle, to train the next generation of scientists, and to join large, multinational projects like the Square Kilometer Array (SKA) and LIGO, which can guarantee access to world-class instruments.

(Shreejaya Karantha is a freelance science writer. shreejayakaranth@gmail.com)

THE GIST

Researchers at the National Centre for Radio Astrophysics in Pune stumbled on the galaxy with two perfectly symmetrical spiral arms while analysing public JWST data from the UNCOVER survey to understand the morphologies of galaxies in the early universe

Galaxy formation is a complex system problem, akin to predicting the weather or the climate. Unlike physics problems, where fundamental principles might be unknown, complex problems involve known principles but have too many interacting parts to be modelled perfectly

Researchers have been advised to examine spectroscopic data to ensure there are no clumpy features. Also, since observations are insufficient to support the two plausible mechanisms, the team plans to propose further studies with the Atacama Large Millimeter/submillimeter Array in Chile

Why is Alaknanda Significant?

Challenge to Standard Galaxy Formation Models

Current cosmological models predict that early galaxies were irregular and turbulent due to frequent mergers.

The presence of a **stable disk with symmetric spiral arms** so early in cosmic history contradicts these expectations.

Implications for Astrophysical Processes

Two competing explanations emerge:

Cold gas accretion model: Continuous inflow of cold gas allowed rapid disk stabilisation and density waves.

Interaction/merger model: A minor merger may have triggered spiral arms.

Both scenarios imply that **existing simulations underestimate the speed of disk settling**.

Role of Advanced Observation Technology

JWST's infrared sensitivity enabled detection of faint, high-redshift structures previously inaccessible.

The study relied on **photometric analysis**, supported by multiple independent redshift estimates, strengthening reliability.

Scientific Value of Model–Observation Mismatch

Discrepancies between simulations and observations help refine theoretical "ingredients" such as feedback processes, gas dynamics, and dark matter interactions.

As experts note, such anomalies are **scientifically productive rather than problematic**.

India's Growing Footprint in Astronomy

The discovery highlights India's emerging role in frontline astrophysics, despite constraints like limited funding and a smaller research workforce.

India is pursuing a **dual strategy**:

Developing domestic infrastructure (e.g., large optical telescopes in Hanle).

Participating in global collaborations such as **Square Kilometre Array (SKA)** and **LIGO**, and proposing follow-up studies using facilities like **Atacama Large Millimeter/submillimeter Array (ALMA)**.

Conclusion

The discovery of Alaknanda underscores how next-generation observatories like JWST are reshaping our understanding of the early universe. By revealing a mature spiral galaxy far earlier than expected, it compels scientists to revisit existing galaxy formation models. Beyond its astrophysical importance, the finding also signals India's increasing engagement with high-impact global science, reinforcing the need for sustained investment in research infrastructure and international collaboration.

UPSC Prelims Exam Practice Question

Ques: With reference to the recently discovered galaxy 'Alaknanda', consider the following statements:

1. Alaknanda is a well-developed spiral galaxy observed at a redshift of around $z \approx 4$.

2. Its discovery was made using spectroscopic data from ground-based optical telescopes.

3. The galaxy formed when the universe was roughly 1.5 billion years old.

Which of the statements given above is/are correct?

(a) 1 and 3 only

(b) 1 only

(c) 2 and 3 only

(d) 1, 2 and 3

Ans : a)

UPSC Mains Exam Practice Question

Ques: How has the James Webb Space Telescope transformed the study of early galaxy evolution? Illustrate your answer with reference to the discovery of Alaknanda.

Page 10 : GS 2 : Indian Polity / Prelims Exam

The increasing dominance of digital platforms in electoral campaigning has exposed regulatory blind spots in India's election framework. An analysis of digital political advertisements during the Bihar Assembly election highlights that third-party actors—such as campaign firms, influencers, and interest groups—often outspend official political parties and candidates while achieving significantly higher visibility. This trend challenges the effectiveness of existing rules enforced by the Election Commission of India (ECI) under the Representation of the People Act, 1951, raising serious concerns about transparency, accountability, and fairness in digital democracy.

Gaps in regulating digital campaigns

An analysis of digital political advertisements during the Bihar Assembly election shows that third-party actors outspend official parties and candidates and achieve far greater visibility; this creates an accountability gap, allowing opaque funding and influence to persist beyond regulatory oversight

LETTER & SPIRIT

Abhishek Sharma
Vandita Gupta

India's election rulebook is governing a campaign ecosystem that no longer runs only on parties and candidates. As political persuasion shifts to platforms and intermediaries, regulation is struggling to keep pace with how votes are actually influenced. This disjunction surfaced in the Election Commission's (EC) press note of October 14 on the Bihar Assembly elections, which mandated pre-certification of political advertisements by the Media Certification and Monitoring Committee (MCMC) and reiterated the requirement under Section 77(1) of the Representation of the People Act, 1951, that political parties disclose social media campaign expenditure.

Limited lens

What unites these directives is their point of address. They remain focused on parties and candidates, even as electoral outreach is increasingly mediated by third-party actors such as campaign firms, influencers, and interest groups operating outside formal regulatory structures.

A subsequent notification issued by the EC on October 21 sought to widen the regulatory net by requiring that no political party, candidate, organisation, or individual publish political advertisements in the print media on polling day or the preceding day without prior MCMC certification. While this acknowledged the changing campaign environment by including entities other than parties or candidates, it also exposed the limits of the Commission's regulatory imagination. The restriction applies only to a narrow pre-poll window and remains confined to print media, even as electoral influence has decisively migrated to digital platforms.

Read together, these advisories foreground two unresolved questions: time, in an era where digital campaigns peak well before polling, and stakeholders, in a system shaped by actors beyond those formally regulated.

This analysis uses the Bihar Assembly election as a case study. Using Meta's Ads Library, it examines digital political advertisements by advertisers spending over one lakh in Bihar during the 30 days ending on November 10, the day before the final phase of polling, distinguishing between official party, candidate pages, and third-party actors.

Who pays, who persuades

An analysis of party expenditure reports, published by *The Hindu* on May 6, 2024, shows that digital campaigning now dominates election spending. What remains less visible is how this expenditure is distributed beyond parties and candidates, a gap that becomes evident from digital advertising data from the Bihar Assembly election.

On Meta, 55 campaigners spent more than ₹1 lakh on digital political advertisements nationally during the period under analysis. Of these, only 23 were official parties or candidates. The remaining 32 were third-party or surrogate campaigners.

In digital elections, reach is shaped as much by who speaks as by how much is spent. Third-party actors not only outspent parties and candidates but also achieved far greater visibility. Despite near-identical average spending, their campaigns generated almost twice the average impressions of official parties and candidates (Table 1).

Election outreach: BJP supporters celebrating after the party's victory in Patna on November 14. R. V. MOORTHY

THE GIST

- India's election rulebook governs a campaign ecosystem that no longer runs only on parties and candidates, as political persuasion shifts to platforms and intermediaries operating outside formal regulatory structures.
- Digital advertising data from the Bihar Assembly elections shows that third-party actors outspend official parties and candidates and operate with higher campaign efficiency.
- The absence of regulatory obligations for these actors creates an accountability gap, allowing opaque financial entanglements and unaccounted influence to persist.

Table 1: Summary of digital advertising during the Bihar election on Meta

Stakeholders	Number	Total spend	Total impressions	Average spend	Average impressions
Parties/Candidates	23	₹5.55 crore	85.93 crore	₹24.16 lakh	3.74 crore
Third-parties	32	₹8.08 crore	210.84 crore	₹25.25 lakh	6.59 crore

Table 2: Age-wise consumption of political advertisements

Stakeholders	13-24	25-34	35-44	Above 44
Parties/Candidates	40.3%	36.1%	13.3%	10.2%
Third-parties	36.8%	37.7%	14.8%	10.6%

Table 3: Campaign efficiency of political advertisements

Stakeholders	Impressions per ₹10 lakh
Parties/Candidates	1.54 crore
Third-parties	2.60 crore

A clearer asymmetry between official, unofficial campaigning emerges when the efficiency is examined; it shows that in digital campaigns, comparable spending produces unequal circulation, raising questions about where communicative power in online elections actually resides

Nearly three-fourths of all digital outreach by parties and candidates (76.4%), as well as by third-party actors (74.5%), is consumed by individuals aged 13-34. However, the age-wise distribution of consumption diverges. Party and candidate advertisements remain sharply concentrated among the 13-24 and 25-34 age cohorts, while third-party advertisements show a more dispersed pattern, generating relatively higher impressions among those aged 25-44 and retaining a comparable presence beyond the age of 44 (Table 2).

A clearer asymmetry between official and unofficial campaigning emerges when campaign efficiency is examined. Measured as impressions per ₹10 lakh spent, third-party advertisers are markedly more cost-efficient, generating an average of 2.60 crore impressions compared to 1.54 crore for party or candidate pages (Table 3). This shows that in digital campaigns, comparable spending produces unequal circulation, raising questions about where communicative power in online elections actually resides.

An unaccountable nexus

Beyond differences in reach and efficiency, the analysis reveals direct financial entanglements between political parties and third-party actors. In some cases, advertisements on official party pages were funded by external entities. For instance, advertisements on the official Meta page of the Janata Dal (United) were sponsored by an entity identified as "The Spectrum".

This raises a deeper concern. Expenditure incurred by third-party entities to sponsor advertisements on official party pages may not be reflected in the expenditure statements submitted to the EC, risking an understatement of the true financial footprint of digital campaigning. More importantly, this pattern challenges the assumption that influence flows only from parties to third-party campaigners. Instead, it points to a dual-directional relationship in which third-party actors not only amplify political messaging but also directly finance it on official platforms, blurring the line between authorised expenditure and unaccounted influence.

Accountability gap

In *Secretary, Ministry of Information and Broadcasting v. M/s Gemini TV* (2004), the Supreme Court held that no individual or entity may publish advertisements for the benefit of any political party or candidate. By the same logic, advertisements directed against a party or candidate are equally impermissible, as such messaging inevitably benefits electoral competitors. Yet the guidelines issued by the EC ahead of the Bihar Assembly elections fall short of applying this standard to third-party actors, many of whom continued campaigning even on the evening of polling and on polling day itself.

Addressing this gap requires a recalibration of how electoral stakeholders are understood. Political campaigns are no longer confined to parties and candidates alone, but are shaped by a wider ecosystem of actors involved in content dissemination and campaign finance.

Unless regulatory obligations are extended – both in substance and scope – beyond parties and candidates, space will continue to exist for opaque, bi-directional arrangements that escape scrutiny.

The problem is compounded in the context of campaign finance. While parties are legally required to submit expenditure statements to the EC, digital spending is often disclosed ambiguously, with payments listed under platform names such as 'Facebook' rather than the specific entities that design or fund advertisements. More troubling still is the reverse flow of funding, where third-party entities pay for advertisements on the official page of a political party. Parties are required to report what they spend; they are not required to disclose what others spend on their behalf. This inversion poses an equal, if not greater, threat to the principles of transparency and fairness, allowing political influence to remain formally invisible.

Delayed regulation

Finally, the temporal framing of regulation remains inadequate. Electoral influence now builds over months through sustained digital exposure, rendering rules that activate only on the eve of polling ineffective against harms already set in motion. Each election conducted without a framework attuned to this reality carries clear costs in terms of the gradual erosion of trust in a fair digital democracy. The challenge now is no longer one of recognition, but of resolve.

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Key Issues Highlighted

Regulatory Focus on Outdated Stakeholders

Current election regulations primarily address **political parties and candidates**, while electoral influence increasingly flows through **third-party digital intermediaries**.

Although ECI advisories mandate pre-certification of political advertisements, they inadequately cover the broader ecosystem shaping voter behaviour online.

Disproportionate Influence of Third-Party Actors

Data from **Meta Ads Library** shows that third-party advertisers not only match party spending but generate **far higher impressions per rupee spent**, indicating superior campaign efficiency.

This implies that **communicative power in digital elections is shifting away from formally accountable actors**.

Accountability and Campaign Finance Gaps

Third-party funding of advertisements on official party pages may not appear in party expenditure statements submitted to the ECI.

Parties are required to disclose **what they spend**, but not **what others spend on their behalf**, enabling opaque financial flows and potential circumvention of expenditure limits.

Judicial Standards vs Regulatory Practice

In **Secretary, Ministry of I&B v. M/s Gemini TV**, the Supreme Court held that no individual or entity may publish advertisements benefiting or harming a political party or candidate.

However, ECI guidelines have not been effectively extended to **third-party digital campaigners**, many of whom continued campaigning even during polling periods.

Temporal Mismatch in Regulation

Digital influence accumulates **months before polling**, while regulatory controls activate largely in the immediate pre-poll window.

This delayed intervention fails to address sustained exposure and long-term opinion shaping.

Implications for Democracy and Governance

Erosion of Electoral Fairness: Unequal reach and hidden funding distort the level playing field.

Weak Transparency: Incomplete disclosure undermines voter trust and informed choice.

Regulatory Lag: Institutions struggle to adapt to platform-driven political persuasion.

Way Forward

Expand the definition of **electoral stakeholders** to formally include third-party digital actors.

Mandate **end-to-end disclosure** of digital campaign financing, including spending done on behalf of parties.

Extend pre-certification and silence-period norms to **digital platforms**, not just print or traditional media.

Develop a **continuous, technology-aware regulatory framework** rather than last-minute controls.

Conclusion

The Bihar Assembly election case study demonstrates that India's election regulation is misaligned with the realities of digital campaigning. As political influence increasingly operates through third-party intermediaries and sustained online exposure, limiting oversight to parties and candidates alone creates an accountability vacuum. For a credible and fair digital democracy, electoral regulation must evolve in scope, timing, and substance—moving from reactive advisories to a comprehensive framework that matches the scale and sophistication of modern political persuasion.

UPSC Prelims Exam Practice Question

Ques : With reference to regulation of political advertisements in India, consider the following statements:

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Which of the statements given above is/are correct?

(a) 1 and 2 only

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UPSC Mains Exam Practice Question

Ques : How does data-driven digital campaigning challenge the principles of free and fair elections? Suggest regulatory and technological measures to address these challenges. (250 words)

Page 11 : GS 3 : Indian Economy / Prelims Exam

Rare-earth elements (REEs), a group of 17 metallic elements including the lanthanides along with scandium and yttrium, have emerged as strategic resources in the 21st century. Although not truly "rare" in terms of crustal abundance, their difficult extraction, complex separation processes, and indispensable role in clean energy and high-technology sectors have made them central to contemporary geopolitical and economic debates.

BUILDING BLOCKS

What are rare-earth elements and why is everyone looking for them?

Even when they are not very scarce in the earth's crust, they tend to be spread out in low concentrations and mixed together in the same minerals, so they are difficult to separate; however, countries worldwide are interested in acquiring them because they are crucial for many green technologies

Vasudevan Mukunth

Rare earth elements are a set of metallic elements in the periodic table. Chemists usually refer to a group of 17 elements when they use this label: the 15 lanthanides from lanthanum to lutetium, and scandium and yttrium. In most classroom periodic tables, the lanthanides are shown as a separate row placed beneath the main periodic table. Scandium and yttrium lie in the main table, in Group 3, above and near the transition metals.

Even when they're not very scarce in the earth's crust, they tend to be spread out in low concentrations and mixed together with each other in the same minerals, so they're difficult and expensive to separate. However, countries worldwide are interested in acquiring them because they're crucial for high-performance magnets, specialised lighting and optics, catalysts, and other components that underpin many green technologies and electronics.

Rare-earth oxide powders are typically heavy and gritty; clockwise from top-centre: praseodymium, cerium, lanthanum, neodymium, samarium, and gadolinium. PUBLIC DOMAIN

History and technology

The rare-earth elements are scandium, yttrium, lanthanum, cerium, praseodymium, neodymium, promethium, samarium, europium, gadolinium, terbium, dysprosium, holmium, erbium, thulium, ytterbium, and lutetium.

They're called 'rare earths' for historical reasons. "Earth" was an old chemistry term for oxide powders and many of these elements were first identified as oxides from which they couldn't be isolated easily.

However, people often use the term 'rare-earth' loosely, leading to confusion. Some use 'rare-earths' to mean only the lanthanides. Some others bundle rare-earths with 'strategic' or 'critical' elements such as lithium, cobalt, gallium, and germanium even though the latter aren't rare-earth elements.

Rare-earth elements show up in many contemporary technologies because of their useful electrical, magnetic and/or optical behaviour. One particularly important application is as permanent magnets.

Neodymium-iron-boron magnets, which are the world's most common magnet type involving a rare-earth element, are used in motors and generators.

Phosphors – substances that emit light when irradiated – also incorporate europium and terbium while dopants in lasers and optical devices (including in fibre optics) use neodymium and erbium. Rare-earth elements are also used in catalysts, glass and ceramics, polishing powders, and other specialised materials.

Magnetic chemistry

In permanent magnets, rare-earth atoms have electrons in the 4f shell that behave differently from the other electrons. The 4f electrons are relatively more localised, meaning they stay close to the nucleus, whereas the other electrons become 'smeared out' when they become part of bonds in a solid. As a result, the 4f electrons maintain a strong magnetic moment, i.e., they behave very faithfully like small magnets. An atom with multiple electrons like this also behaves more strongly like a magnet.

Every good permanent magnet needs to have two things: a large magnetisation, meaning many atomic magnetic moments can line up in the same direction to make a strong overall field; and stability, which means once the magnetic moments line up, they don't easily get knocked out of alignment by heat, vibrations or even an opposing magnetic field.

Rare-earth atoms have both. Their 4f electrons can carry relatively large magnetic moments, so they can contribute to strong magnetisation. And because these electrons are localised as well as closely align with the crystal's preferred direction (due to a property called magnetocrystalline anisotropy) they can 'pin' the magnetisation down. Motors and generators that use such magnets thus work efficiently even at high speeds and high temperatures.

Rare-elements are also good phosphors because they produce sharp, stable colours. The idea is to supply energy to such a phosphor at a frequency its 4f electrons are likely to absorb. When they do, the electrons get excited, then de-excited, reemitting the excess energy at a different (but fixed) frequency. We see this emission as light.

Because the 4f electrons sit relatively close to the nucleus, they're partly shielded from the surrounding solid by the outer electrons. So the exact energy levels of the 4f electrons aren't much affected by the crystal they're inside. The light the 4f electrons emit is also concentrated in a small slice of the visible spectrum instead of being a mix of colours.

Rare-earths v. oil

Rare-earth ore deposits that can be mined in an economically feasible way are usually found in a few pockets of rock and soil rather than being spread evenly. Companies start by looking for minerals that carry rare-earth elements in higher concentrations, such as bastnäsite and monazite, or for certain clay deposits in which rare-earth ions are loosely held on the surface of clay particles.

Many mines are open pit since these minerals are usually dispersed through large volumes of rock and the ore has to be dug out, crushed, and moved in bulk. This is also where some of the environmental complications of rare-earth element value chains first appear: some minerals occur alongside thorium or uranium, so the waste rock needs to be handled carefully. Mines may also need copious amounts of water and specific chemicals to produce an initial concentrate.

This said, while both rare-earth elements and crude oil have to be extracted and processed before use, the processing step is significantly different – so much so that for rare-earth elements it has emerged as a strategic element.

A refinery uses physical separation plus some chemical reactions to refine crude. Fractional distillation, the main step, works because hydrocarbons' boiling points are spread out, so just heating and condensing the crude can separate its constituents efficiently at industrial scale.

On the other hand, rare-earth producers start with solids that contain many elements together, and they must be separated at very high purity for applications. The problem is that neighbouring rare-earth ions behave similarly in solution, so the corresponding separation process is voluminous and energy-intensive.

Second, a magnet maker doesn't want any or all rare-elements but a specific oxide or metal, of a minimum purity. If a separator is short on one element or can't deliver the required purity, the factory can't switch one element for another. In the oil industry, however, refineries can swap feedstocks and trade intermediates at scale.

Midstream menace

After mining, the first goal is to make a smaller, richer product. This begins with beneficiation: physically processing the ore to separate more valuable mineral grains from the less. Workers crush and grind the ore to free the grains, then use flotation, magnets or gravity to separately collect different concentrates. The resulting concentrate will still contain many rare-earth elements together, plus other unwanted elements.

Next is chemical cracking, where the producer breaks the rare-earth minerals apart using strong acids or bases or high temperature, converting them into a form that dissolves more easily.

Third is leaching. The cracked material is mixed with a liquid, often an acidic solution, so the rare-earth atoms move into the liquid as ions. Then the producer separates the liquid from the remaining solids; this liquid contains a mixture of all rare-earth ions dissolved together plus some impurities.

The hardest step is separating this mixture into individual rare-earth elements of high purity because these elements often have the same common charge (usually +3) and their ions are similar in size. In a simple chemical reaction, then, the ions behave in roughly the same way.

Industry thus uses a technique called solvent extraction instead. The leach solution is repeatedly brought in contact with an organic solvent that doesn't mix with water. The solvent contains molecules that prefer to bind with certain rare-earth ions slightly more than others. When the two liquids touch and separate, a little more of one rare-earth element moves into the solvent than its neighbours do. The difference is small, so producers run the liquids through many stages in a row, until the process separates the elements one by one and each element has been collected in a separate stream at high purity.

Producers finally recover the elements from the liquid as a solid by precipitation: they add a compound that bonds with the rare-earth ions and becomes insoluble, falling out of the solution as a solid. The solids are filtered and washed, then heated to remove the water and some other substances, to finally yield a rare-earth oxide. The elements are usually stored and transported as these oxides.

If a manufacturer needs an element as a metal, the oxide is subjected to a reduction reaction in which the oxygen atoms react away from the oxide.

Some rare-earth ores contain thorium or uranium, which can make some waste streams radioactive and harder to store safely. Acids and bases can also create hazardous wastes if they aren't captured, treated, and recycled properly.

China's dominance

Because rare-earth elements' midstream refinement is so arduous, a country can have substantial deposits in the ground but still have to depend on other countries if it doesn't have the means to convert the ore into rare-earth oxides.

According to the U.S. Geological Survey's Mineral Commodity Summaries, the world has more than 90 million tonnes of rare-earth-oxide equivalent. Some notable national reserves include China (44 million tonnes, MT), Brazil (21 MT), India (6.9 MT), Australia (5.7 MT), Russia (3.8 MT), Vietnam (3.5 MT), the U.S. (1.9 MT), and Greenland (1.5 MT). Note: these estimates exclude scandium.

On December 23, Japan announced that in January and February 2026, it would excavate mud rich in rare-earth elements from 6 km underwater off Minamitori Island.

The International Energy Agency has estimated that China's position is especially strong in separation and refining, accounting for around 91% of global production, and around 94% of the production of sintered rare-earth permanent magnets.

Since many green technologies require motors, generators, and other hardware where high-performance magnets are crucial, countries are focusing on building refining and magnet-making capacity, rather than just approving new mines.

What makes rare-earth elements important?

Rare-earth elements possess unique **magnetic, optical, and electronic properties** arising mainly from their partially filled 4f electron shell. These properties make them critical for:

Permanent magnets (e.g., neodymium–iron–boron magnets) used in electric vehicles, wind turbines, robotics, and defence systems.

Green technologies, including renewable energy systems, energy-efficient motors, and batteries (indirectly).

Optics and electronics, such as lasers, fibre-optic communication, LEDs, and smartphone components.

Strategic and defence applications, including precision-guided munitions and radar systems.

Thus, REEs form the backbone of the global energy transition and digital economy.

Why are they difficult to produce?

The challenge with rare-earths lies not in mining alone but in **midstream processing**:

Low concentration and co-occurrence: REEs are dispersed in low concentrations and usually occur together in minerals like bastnäsite and monazite.

Complex separation: Since most rare-earth ions have similar chemical behaviour, their separation requires **multi-stage solvent extraction**, which is capital-intensive, energy-consuming, and environmentally sensitive.

Environmental concerns: Some ores are associated with radioactive elements such as thorium and uranium, raising concerns related to waste management and ecological damage.

As a result, countries with reserves but without processing capabilities remain dependent on external suppliers.

China's dominance and global implications

China dominates the global rare-earth value chain, especially in **refining and magnet manufacturing**, controlling the vast majority of separation capacity and downstream production. This dominance has strategic implications:

Supply chain vulnerabilities for countries pursuing renewable energy and electric mobility.

Use of rare-earths as a geopolitical leverage, similar to energy resources.

Renewed focus among countries like the U.S., Japan, Australia, and India on building **domestic refining and processing ecosystems**, not just mining.

Recent initiatives, such as Japan's plan to extract rare-earth-rich seabed mud, reflect attempts to diversify supply sources.

Relevance for India

India possesses substantial rare-earth reserves, particularly in monazite-rich coastal sands, but lags in large-scale separation and value-added manufacturing. Strengthening this sector aligns with:

Atmanirbhar Bharat

Clean energy targets

Strategic autonomy in critical minerals

Conclusion

Rare-earth elements are not merely industrial inputs but **strategic enablers of the green and digital future**. The global scramble for rare-earths underscores a shift from resource availability to processing capability and technological sophistication. For India and other emerging economies, investing in refining, environmental safeguards, and downstream manufacturing will be crucial to secure supply chains and achieve long-term economic and strategic resilience.

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UPSC Mains Exam Practice Question

Ques : How does data-driven digital campaigning challenge the principles of free and fair elections? Suggest regulatory and technological measures to address these challenges. (250 words)

Linked civilisations, a modern strategic partnership

Mohammad Fathali

is Ambassador of the Islamic Republic of Iran in India

A revitalised partnership between Iran and India will aid economic partnership and ensure stability in West Asia

Relations between Iran and India transcend the boundaries of conventional diplomacy. They represent an ongoing dialogue between two ancient civilisations that emerged from a shared cultural womb at the dawn of human history. Long before the Aryan tribes divided – one settling on the Iranian plateau and the other in the fertile plains of the Indus and Ganges – they spoke related languages, worshipped through similar myths, and held a common worldview.

The profound resemblance between the Avesta and the Rigveda stands as clear testimony to this shared origin. Through centuries of political change, this civilizational affinity has nurtured a deep reservoir of trust and cultural understanding – never completely severed despite periods of distance and turmoil.

Nowhere is this historical bond more vividly reflected than in the enduring presence of Persian in the Indian subcontinent. India embraced Persian for centuries – not merely as a language, but as a vessel of art, diplomacy and poetry. This cultural hospitality gave rise to the luminous "Indian Style" (Sabk-e Hendi) in Persian literature, shaped by the imagination and creativity of Indo-Persian poets. Among them, Mirza Abdul-Qadir Bedil Dehlavi shines as the most illustrious figure – a poet whose philosophical depth and boundless imagination expanded the horizons of Persian poetry and continues to inspire scholars and writers across generations.

The modern drivers of ties

In today's world, nostalgia alone cannot sustain bilateral relations. Fortunately, the evolving geopolitical environment and economic needs have drawn Tehran and New Delhi closer than ever. As the global order tilts toward multipolarity, the Iran-India axis is positioned to assume a strategic role in shaping regional stability and economic architecture.

Energy security remains a central pillar. India, one of the fastest-growing economies globally, continues to rely significantly on oil and gas to fuel its industries. With extensive hydrocarbon reserves, Iran stands as a natural partner in securing India's long-term energy needs.

Perhaps the most consequential arena of cooperation is transport and connectivity. India's participation in the development of the Chabahar Port signals the strategic weight both nations attach to this maritime gateway. Complementing this, Iran forms a vital link in the International North-South Transport Corridor (INSTC) – a multimodal route connecting India to Russia and Northern Europe through Iran. This corridor is approximately 40% shorter and 30% more cost-efficient when compared to the traditional Suez Canal route, granting both countries a competitive advantage in Eurasian trade.

Security and technology

Beyond commerce, Iran and India share mutual concerns regarding regional security. The rise of extremism and terrorism in West and South Asia threatens both nations, making intelligence cooperation a discreet yet essential foundation of bilateral ties.

Challenges remain. Historically, third-party pressures have influenced the trajectory of relations. Yet, India has often navigated these complexities by prioritising its national interest with strategic prudence. In an era marked by shifting power centres and the rise of Asia, it is imperative for both countries to strengthen flexible financial mechanisms – such as trade through local currencies – to reduce vulnerability to external constraints.

The future demands diversification beyond traditional oil trade. Cooperation in knowledge-based industries, information technology – where India holds significant comparative advantage – and in nanotechnology and the medical sciences (fields in which Iran has made remarkable progress), can open new horizons of economic partnership.

Such collaboration can transform the relationship from transactional to innovation-driven, benefiting both societies.

A shared future built on an ancient past

Iran and India may rightly be described as one soul in two bodies – united by history, enriched by culture, and positioned by geography to complement one another. If the Silk Road and Persian language once formed the bridge between them, today, energy cooperation, counterterrorism and strategic transit connectivity serve as the new pillars of partnership.

As the two nations mark the 75th anniversary of diplomatic relations, the moment is ripe for Tehran and New Delhi to transform historical goodwill into a bold, forward-looking alliance. A revitalised partnership will not only enhance the prosperity of their peoples but also anchor stability in the turbulent landscape of West Asia.

The time has come for Iran and India, guided by their shared legacy and mutual interests, to design a future that is collaborative, resilient, and independent, echoing the ancient symphony of civilisations that still binds them today.

GS Paper 2 : International Relations

UPSC Mains Practice Question : In a multipolar world order, middle powers require flexible partnerships rather than rigid alliances. Discuss this statement in the context of India–Iran relations. **(150 words)**

Context :

Relations between **India** and **Iran** are not confined to conventional state-to-state diplomacy. They are rooted in deep civilisational linkages that date back to the early Indo-Iranian cultural continuum. In the contemporary geopolitical context marked by multipolarity, supply-chain disruptions, and regional instability in West Asia, these historical ties are acquiring renewed strategic relevance.

Civilisational and cultural foundations

India–Iran relations are underpinned by shared linguistic, religious, and cultural traditions. The close resemblance between the **Rigveda** and the **Avesta** reflects a common Indo-Iranian heritage. Over centuries, Persian language and culture flourished in the Indian subcontinent, shaping administration, diplomacy, literature, and art.

The emergence of Sabk-e-Hindi (Indian Style) in Persian literature exemplifies this cultural synthesis, with figures like Bedil Dehlavi symbolising intellectual exchange rather than one-sided influence. This enduring cultural familiarity has created a reservoir of trust that distinguishes India–Iran ties from purely interest-based partnerships.

Strategic and economic drivers in the modern era

1. Energy security

Iran possesses some of the world's largest oil and natural gas reserves, making it a natural partner for India's long-term energy requirements. Although sanctions have constrained direct energy trade, Iran continues to figure prominently in India's strategic energy calculus.

2. Connectivity and geoeconomics

The most significant contemporary pillar of cooperation is connectivity. India's involvement in **Chabahar Port** provides it access to Afghanistan, Central Asia, and beyond, bypassing Pakistan. Chabahar complements India's broader Eurasian outreach through the **International North-South Transport Corridor (INSTC)**, which is shorter and more cost-effective than the Suez Canal route.

This connectivity vision enhances:

- India's trade competitiveness in Eurasia
- Iran's role as a regional transit hub
- Strategic balance in West and Central Asia

3. Security cooperation

Both countries face threats from extremism, terrorism, and regional instability in West and South Asia. While cooperation remains discreet, shared security concerns provide a silent but stable foundation for bilateral engagement.

Constraints and challenges

Despite complementarities, relations have faced disruptions due to:

- **Third-party pressures**, particularly sanctions regimes
- Limitations on financial transactions and insurance
- Reduced people-to-people and commercial exchanges

India has adopted a calibrated approach, balancing strategic autonomy with global diplomatic commitments. The article highlights the need for **alternative financial mechanisms**, such as local currency trade, to reduce vulnerability to external constraints.

Future areas of cooperation

To move beyond an oil-centric relationship, diversification is essential:

- **Information technology and digital services** (India's strength)
- **Nanotechnology, pharmaceuticals, and medical sciences** (Iran's emerging capabilities)
- **Knowledge-based and innovation-driven sectors**, aligning with both countries' developmental priorities

Such cooperation can shift the relationship from transactional to structural and future-oriented.

Conclusion

India–Iran relations represent a rare convergence of **civilisational depth and strategic logic**. As both countries navigate a multipolar world order, cooperation in energy, connectivity, counterterrorism, and technology can transform historical goodwill into a resilient strategic partnership. On the 75th anniversary of diplomatic relations, India and Iran have an opportunity to anchor regional stability in West Asia while advancing their own national interests—demonstrating how ancient civilisational ties can meaningfully shape modern geopolitics.
