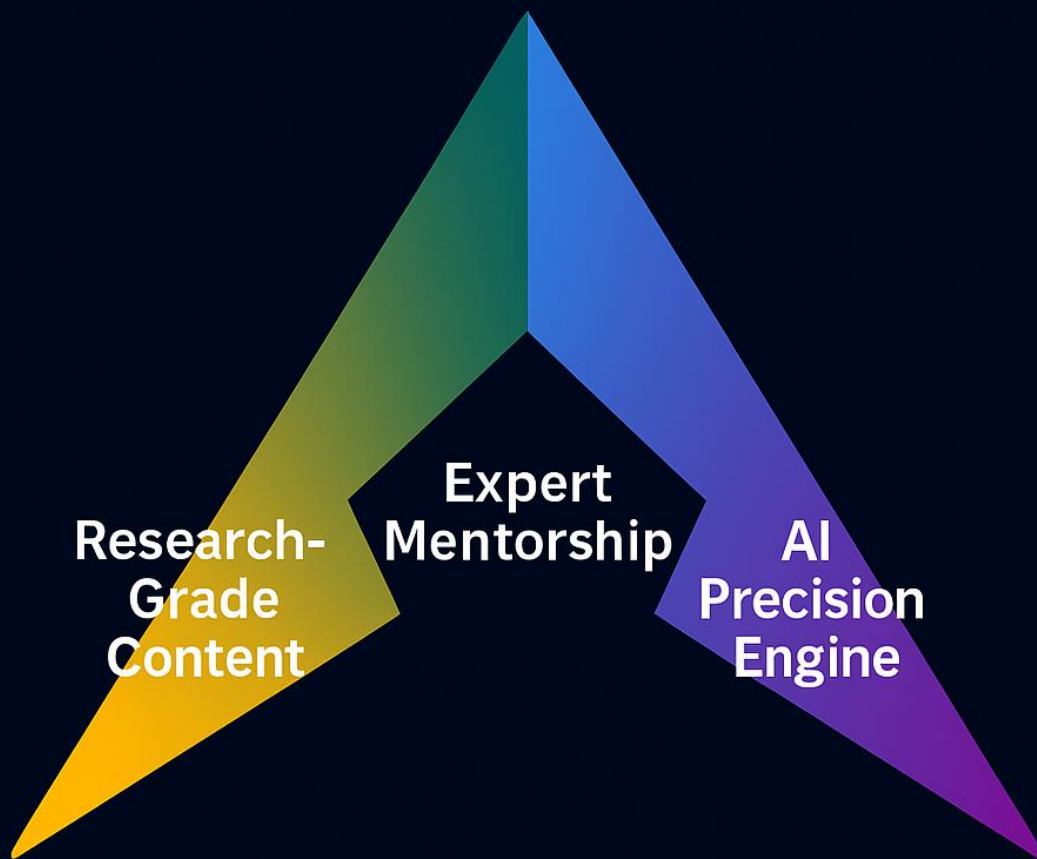


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DAILY CURRENT AFFAIRS DATED 04.06.2026

GS Paper II: Current Affairs

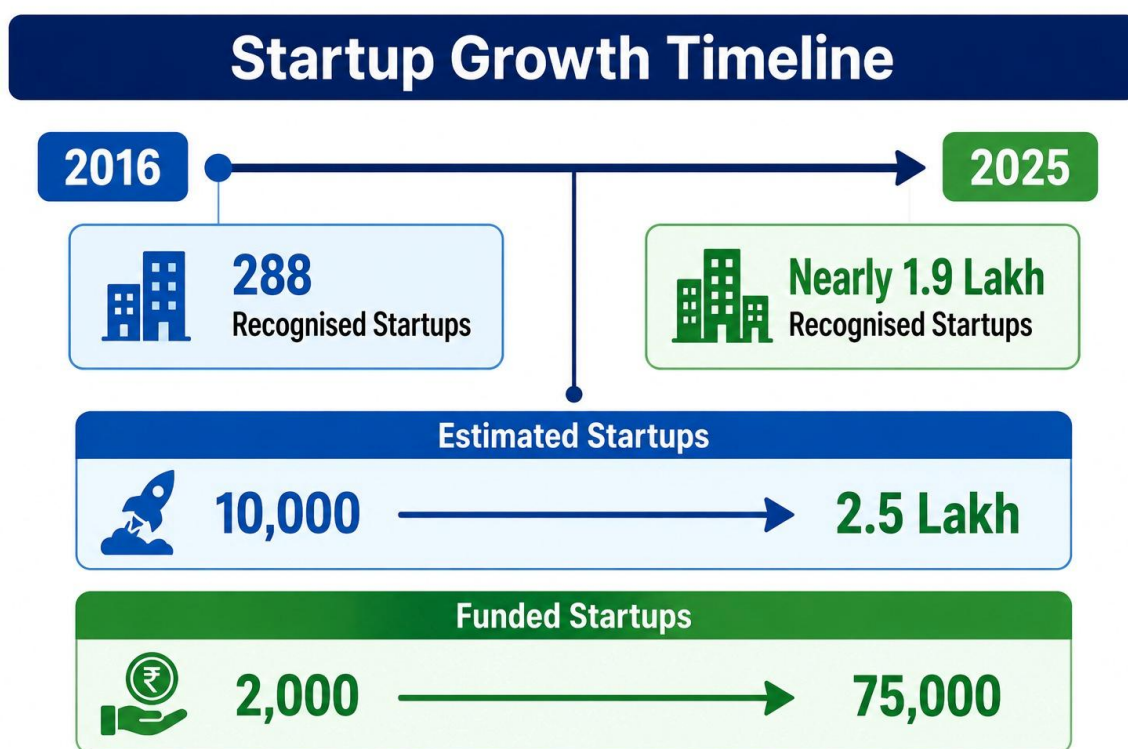
1. India's Startup Growth from 2016 to 2025

a. Introduction

India's startup ecosystem has expanded sharply between 2016 and 2025. Data from the Department for Promotion of Industry and Internal Trade, the Ministry of Corporate Affairs and YNOS Venture Engine show that India has moved from a small, metro-centred startup base to a much larger and more geographically distributed innovation ecosystem.

The rise reflects the impact of Startup India, formal recognition by the Department for Promotion of Industry and Internal Trade, digital public infrastructure, improved funding confidence, growing youth entrepreneurship and the increasing participation of women founders. The transformation is important because startups are no longer limited to a few technology clusters. They are becoming part of India's wider economic development, employment generation and innovation-led growth story.

Thus, India's startup growth should be understood not merely as a business trend, but as a wider shift towards innovation-led and geographically inclusive economic development.



b. Scale of Expansion

- **Growth in Recognised Startups:** The expansion of India's startup ecosystem has been remarkable. In 2016, there were only 288 startups recognised by the Department for Promotion of Industry and Internal Trade. By 2025, this number had crossed nearly 1.9 lakh.
- **Improvement in Formal Recognition:** Recognition coverage also improved significantly. In 2016, formally recognised startups accounted for only about 3 per cent of the estimated startup base. By 2025, they accounted for nearly 77 per cent. This shows that more firms are entering the formal innovation ecosystem and accessing policy support, credibility, compliance benefits and institutional recognition.
- **Expansion of Estimated and Funded Startups:** The total estimated number of startups rose from around 10,000 in 2016 to nearly 2.5 lakh in 2025. Funded startups increased from

about 2,000 to nearly 75,000 over the same period. This indicates not only an increase in entrepreneurial activity but also a deeper funding ecosystem.

This scale of expansion shows that startups have moved from being a niche urban phenomenon to a major component of India's economic landscape.

c. From Metro-Centric Growth to Geographic Democratisation

- **Early Metro Dominance:** One of the most important features of India's startup growth is the geographic spread of entrepreneurship. In 2016, Tier 1 cities such as Bengaluru, Delhi-National Capital Region, Mumbai and Hyderabad dominated startup formation. These cities had better access to investors, skilled talent, incubators, digital infrastructure and business networks.
- **Rise of Tier 3 Towns:** By 2025, the picture had changed significantly. The share of Tier 1 cities in new startups declined from around 65 per cent to nearly 18 per cent, while the share of Tier 3 towns increased from around 15 per cent to nearly 71 per cent.
- **Democratisation of Entrepreneurship:** This shift reflects the democratisation of entrepreneurship. Innovation is no longer confined to metropolitan centres. Smaller towns are now producing startups in sectors such as agritech, e-commerce, logistics, education technology, health technology, digital services and local manufacturing.
- **Enabling Factors:** Several factors have enabled this shift. Cheaper internet, digital payments, the Unified Payments Interface, e-commerce platforms, online learning, cloud services, State startup policies, local incubators and rising aspirations among youth have made entrepreneurship more accessible beyond major cities.
- **Inclusive Growth Dimension:** This trend is important for inclusive growth because it can create jobs and enterprise opportunities closer to where people live, reducing excessive dependence on metropolitan migration.

Thus, the geographical spread of startups strengthens the link between innovation and balanced regional development.

d. Economic Significance of Startup Growth

- **Contribution to Growth and Formalisation**
Startups contribute to economic growth in several ways. They create new business models, generate employment, promote formalisation, improve productivity and introduce technology into traditional sectors.
- **Development-Oriented Innovation**
In India, startups are especially important because they can address development challenges through market-based innovation. Financial technology can improve credit access and digital payments. Health technology can expand telemedicine and diagnostics. Agriculture technology can support farmers with market information, weather advisory, input management and supply-chain solutions. Education technology can widen access to learning resources. Climate technology can support clean energy, waste management and sustainability.
- **Entrepreneurial Culture**
The startup ecosystem also encourages risk-taking and problem-solving among young entrepreneurs. This cultural shift is significant for a country with a large youth population and rising demand for jobs, services and economic mobility.

Therefore, startup growth has significance not only for private enterprise but also for India's broader development strategy.

e. Funding Confidence and Investor Ecosystem

- **Rise in Funded Startups:** The increase in funded startups from around 2,000 in 2016 to nearly 75,000 in 2025 shows a major improvement in investor confidence. A deeper funding ecosystem helps entrepreneurs convert ideas into scalable businesses.
- **Sources of Startup Finance:** Venture capital, angel investment, seed funding, incubator support and government-backed funds have helped many startups grow. Funding allows startups to invest in technology, hire talent, expand markets and test new products.
- **Limits of Funding-Led Growth:** However, funding alone does not guarantee sustainable innovation. Some startups may grow rapidly without strong revenue models or sound governance. Funding cycles can also change, as seen during periods of “funding winter,” when investors become cautious and capital becomes harder to access.
- **Need for Viability and Governance:** Therefore, the next phase of startup growth must focus not only on valuation but also on viability, governance, profitability and social value.

This makes financial deepening important, but it must be matched by responsible business models and long-term sustainability.

f. Rise of Young Founders

- **Early-Career Entrepreneurship:** The data also show the increasing role of young founders. A large proportion of male and female founders are below 40 years of age. This reflects a broader cultural shift towards early-career entrepreneurship.
- **Changing Social Attitudes:** Earlier, entrepreneurship was often seen as a later-stage career choice or a family-business activity. Today, many young professionals and students are willing to start ventures early in life. This change has been supported by incubators, start-up competitions, university innovation cells, digital tools and easier access to information.
- **Employment and Innovation Impact:** For India, this is important because youth-led entrepreneurship can create new jobs and reduce dependence on traditional salaried employment. It can also support innovation in sectors where young founders understand emerging consumer behaviour, technology adoption and digital markets.

Thus, youth entrepreneurship has become an important part of India’s demographic dividend.

g. Women Entrepreneurship: Progress and Gaps

- **Growth of Female Founders:** Women entrepreneurship has shown encouraging growth. Female founders have grown at a higher compound annual growth rate of around 20 per cent, compared with around 14 per cent for male founders. This indicates that women are increasingly entering the startup ecosystem.
- **Economic and Social Importance:** This is a positive trend because women-led enterprises can improve household incomes, create jobs, bring new perspectives into markets and strengthen women’s economic participation. Women founders are active in sectors such as health, education, fashion, food, digital services, sustainability, financial technology and social enterprises.
- **Continuing Barriers:** However, the share of women founders remains uneven. Women entrepreneurs continue to face barriers related to access to finance, investor bias, limited professional networks, mobility constraints, family responsibilities, safety concerns and sectoral stereotypes. In many cases, women-led startups are concentrated in less-funded sectors or remain smaller in scale.
- **Economic Priority:** Therefore, supporting women founders is not only a matter of gender justice. It is also an economic priority because India cannot fully realise its entrepreneurial potential without women’s participation.

This gender dimension shows that startup growth must be made more inclusive if it is to become a genuine engine of national development.

h. Role of Startup India and Formal Recognition

- **Policy Support Through Startup India:** Startup India has played an important role in creating a supportive policy environment. Formal recognition by the Department for Promotion of Industry and Internal Trade helps startups access benefits such as tax exemptions, easier compliance, intellectual property support, procurement opportunities and credibility with investors and institutions.
- **Expansion of Formal Ecosystem:** The rise in recognition coverage from 3 per cent to 77 per cent shows that the formal startup ecosystem has become more accessible and attractive. It also reflects greater awareness among entrepreneurs about government schemes and institutional support.
- **Beyond Numerical Recognition:** However, formal recognition should not become merely a numerical achievement. The real test lies in whether recognised startups receive meaningful support for market access, compliance, funding, mentoring and scaling.

Thus, Startup India's next phase must focus on quality of support, not only quantity of registrations.

i. Challenges Before India's Startup Ecosystem

- **High Failure Rates:** Despite rapid progress, India's startup ecosystem faces several challenges. Many startups experience high failure rates due to weak revenue models, poor market fit, inadequate governance or inability to scale.
- **Funding Uncertainty:** Funding cycles remain uncertain. During periods of funding slowdown, early-stage startups and deep-technology firms are especially vulnerable. There is also a shortage of patient capital for sectors such as deep technology, biotechnology, clean energy, defence technology, semiconductor design and advanced manufacturing.
- **Regulatory Uncertainty:** Regulatory uncertainty is another concern. Startups often operate in emerging sectors where laws and rules are still evolving. This can create uncertainty in areas such as fintech, health technology, data governance, drones, mobility services and online platforms.
- **Tier 2 and Tier 3 Constraints:** Tier 2 and Tier 3 startups face additional difficulties. They often lack strong incubators, mentorship networks, skilled talent, logistics support, investor access and market linkages. Without local ecosystem support, many promising ideas may fail to scale.
- **Need for Deeper Innovation:** There is also a need to move beyond app-based services towards deeper innovation in manufacturing, artificial intelligence, climate technology, biotechnology, semiconductors and defence technology.

These challenges show that India's startup ecosystem must now shift from rapid expansion to durable, innovation-led and inclusive growth.

j. Way Forward

- **Deepen Tier 2 and Tier 3 Ecosystems:** Local incubators, university innovation hubs, co-working spaces, mentorship networks and State startup missions should be strengthened. Smaller towns need access to business advice, technology support, legal assistance, market linkages and investor networks.
- **Improve Access to Capital:** India should expand seed funding, credit guarantees, venture debt and patient capital for startups in deep technology, agriculture technology, climate technology and manufacturing. Funding models should support both rapid-growth ventures and socially useful enterprises.
- **Support Women Founders:** Women entrepreneurs need targeted credit, mentorship, market access, childcare support and networking platforms. Investor awareness and gender-sensitive funding frameworks can help reduce structural barriers.
- **Promote Innovation-Led Startups:** India must move beyond simple app-based services towards deep technology, artificial intelligence, semiconductors, biotechnology, clean energy, defence technology and advanced manufacturing. This will strengthen India's technological and strategic capabilities.

- **Simplify Compliance:** Taxation, labour compliance, exit rules, intellectual property registration and reporting requirements should be made simpler for early-stage firms. Ease of starting must be matched by ease of scaling and ease of exit.
- **Link Startups with Public Procurement:** Government departments and public sector undertakings can create demand for Indian startups through transparent procurement, challenge grants and sandbox mechanisms. This is especially useful in health, education, agriculture, defence, climate and governance technology.
- **Build Skilled Talent:** Industry-academia collaboration, entrepreneurship education and vocational-digital skilling must be strengthened. Universities should become centres of innovation, not only centres of degree production.

A strong way forward must therefore combine capital access, regional ecosystem-building, women's participation, deep innovation, simplified compliance and public procurement support.

Conclusion

India's startup growth from 2016 to 2025 reflects a major transformation in the country's innovation ecosystem. The shift from a small, metro-centred startup base to a wider, formal and geographically distributed ecosystem shows the rise of entrepreneurship as a national economic force.

Startup India, digital public infrastructure, investor confidence, youth participation and women-led entrepreneurship have helped create a more dynamic ecosystem. However, the next phase must focus on quality, sustainability, governance, deep-technology innovation, women's participation and stronger Tier 2 and Tier 3 ecosystems.

The ultimate success of India's startup movement will depend not only on the number of startups created but on how many become durable enterprises that generate employment, solve development challenges and strengthen India's economic competitiveness.

GS Paper III: Economics

2. Rupee Depreciation and the Question of "Undervaluation"

a. Introduction

The depreciation of the Indian rupee has again brought exchange rate management into the centre of economic policy debate. Over the past year, the rupee has reportedly fallen by more than 10 per cent against the dollar, leading to concerns over imported inflation, external stability and investor confidence.

A section of economists has suggested that the Reserve Bank of India may consider measures such as interest rate hikes or foreign currency deposit schemes to stabilise the rupee. However, the issue is more complex than a simple question of defending the currency. The central debate is whether the rupee's weakness is a case of temporary market overshooting or whether it reflects a deeper balance of payments adjustment.

Thus, rupee depreciation should be understood not only as a currency-market event, but as a reflection of wider external-sector pressures and policy trade-offs.

b. Present Context

- **Recent Weakening of the Rupee:** The rupee has weakened sharply against the United States dollar over the past year. At the same time, the rupee's Real Effective Exchange Rate reportedly fell to around 90.96 in April, the lowest level since September 2013. This has triggered discussion on whether the rupee has become undervalued.
- **Capital Flow Pressures:** The external sector context is also important. Since April 2024, net foreign direct investment and foreign portfolio investment flows taken together have reportedly

been negative. This means that the rupee's weakness is not only about trade pressures. It is also linked with subdued capital inflows.

- **Comparison with 2013:** There is also a historical comparison with 2013, when India faced currency pressure during the taper tantrum. At that time, the Reserve Bank of India raised interest rates, but this did not stabilise the rupee very effectively. What worked better was the mobilisation of foreign currency non-resident bank deposits, which helped raise around 26 billion dollars.
- **Cost of Repeating Past Measures:** However, repeating such a strategy today may be costlier because global interest rates are much higher. Any foreign currency deposit scheme would require careful assessment of fiscal cost, banking sector risk and long-term repayment obligations.

This context shows that the rupee's weakness must be assessed through both current pressures and lessons from earlier episodes of external-sector stress.

Causes of Rupee Depreciation	
External Factors	Domestic Factors
 Strong US Dollar	 Trade Deficit
 Global Uncertainty	 Higher Import Demand
 Rising Global Rates	 Weak Capital Inflows
 FPI Outflows	 Investor Sentiment
 Crude Oil Prices	 Inflation

c. Understanding Rupee Depreciation

- **Meaning of Depreciation:** Rupee depreciation means that the rupee loses value against another currency, usually the United States dollar. For example, if more rupees are required to buy one dollar, the rupee has depreciated.
- **Causes of Depreciation:** Depreciation can occur due to several factors. A strong dollar, higher interest rates in advanced economies, weak capital inflows, trade deficit, high crude oil prices, global uncertainty and lower investor confidence can all put pressure on the rupee.
- **Present Capital-Flow Dimension:** In the present context, the weakness appears to be driven significantly by capital-flow pressures. When foreign direct investment and foreign portfolio investment slow down or turn negative, the supply of foreign currency in the domestic market weakens. This reduces support for the rupee.
- **Need for Wider Analysis:** Thus, the rupee's weakness must be analysed not only through imports and exports but also through capital movement.

This makes exchange-rate management closely linked with investor confidence, capital inflows and external-sector resilience.

d. REER and the Question of Undervaluation

- **Meaning of REER:** The debate on whether the rupee is undervalued is linked to the Real Effective Exchange Rate. The Real Effective Exchange Rate measures the value of a currency against a basket of trading partner currencies after adjusting for inflation differences.
- **Interpretation of REER:** In simple terms, it gives a broader picture of a currency's external value than the rupee-dollar rate alone. A Real Effective Exchange Rate below 100 is often interpreted as a sign that the currency may be undervalued, while a level above 100 may indicate overvaluation.
- **Limits of Mechanical Interpretation:** However, this interpretation must be used carefully. A lower Real Effective Exchange Rate does not automatically mean that the central bank should push the currency upward. If the balance of payments has structurally weakened due to lower capital inflows or external uncertainty, a weaker rupee may be part of the adjustment process.
- **REER as Indicator, Not Target:** Therefore, the Real Effective Exchange Rate is a useful indicator of competitiveness, but it should not be treated as a rigid policy target.

This distinction is important because exchange-rate policy must respond to macroeconomic fundamentals, not only to numerical indicators of valuation.

e. Lessons from the 2013 Experience

- **Taper Tantrum Context:** The 2013 taper tantrum offers an important lesson for current policy. During that period, emerging markets faced capital outflows after the United States Federal Reserve indicated that it would reduce monetary stimulus. India's rupee came under severe pressure.
- **Limited Impact of Interest Rate Response:** The Reserve Bank of India responded partly through interest rate measures, but higher rates alone did not provide durable support to the rupee. Instead, the foreign currency non-resident bank deposit scheme helped attract dollar inflows and stabilise external sentiment.
- **Lesson for Present Policy:** This historical experience suggests that defending the rupee through interest rates alone may not be effective when the pressure is caused by capital outflows or weak inflows. Exchange rate stability depends on broader confidence in the external sector, not only on monetary tightening.
- **Difference from Present Situation:** However, the present situation differs from 2013. Global interest rates are now higher, and attracting foreign currency deposits may require larger incentives. This can increase costs for banks and the government. Therefore, past tools cannot be repeated mechanically.

The 2013 episode shows that policy responses must be adapted to current global financial conditions rather than borrowed unchanged from earlier crises.

f. Limits of Interest Rate Hikes for Currency Defence

- **How Rate Hikes May Help:** A sharp interest rate hike can sometimes support a currency by making domestic assets more attractive to foreign investors. It may also reduce import demand by slowing domestic consumption and investment.
- **Growth and Investment Trade-Offs:** However, this approach has serious trade-offs. Higher interest rates can weaken domestic growth, discourage private investment, increase borrowing costs for firms and households, and affect employment.
- **Risk of Negative Market Signal:** If investors begin to fear weaker growth, rate hikes may even trigger further capital outflows. This can reduce the effectiveness of monetary tightening as a currency-defence tool.
- **Monetary Policy Priority:** This is why monetary policy should not be used mechanically for exchange rate defence. The primary role of monetary policy is to balance inflation control and growth stability. Exchange rate concerns matter, but they should not completely dominate interest rate decisions unless currency volatility threatens macroeconomic stability.

Thus, rate hikes are a blunt instrument for currency defence and must be used with caution.

g. Changing Global Liquidity Conditions

- **Earlier Era of Easy Global Liquidity:** The rupee's movement must also be understood in the context of changing global liquidity. In the decade before 2022, advanced economies followed ultra-low interest rate policies. This pushed large volumes of global capital towards emerging markets, including India.
- **Tightening of Global Financial Conditions:** As advanced economies raised interest rates and normalised monetary policy, global capital became less abundant. Investors became more selective, and emerging market currencies came under pressure.
- **Structural Nature of Pressure:** Therefore, some part of rupee depreciation may reflect a return to more normal global financial conditions rather than a temporary market panic. This makes the policy response more difficult. If the underlying global environment has changed, short-term defensive measures may provide only limited relief.

This global liquidity context shows why India must strengthen domestic fundamentals rather than rely only on short-term currency stabilisation tools.

h. Importance of Stable Capital Inflows

- **Importance of FDI:** Foreign direct investment is especially important because it is more stable than portfolio flows. Portfolio investment can enter and exit quickly depending on global interest rates, risk appetite and market sentiment. Foreign direct investment, in contrast, is usually linked with factories, infrastructure, technology, services and long-term business plans.
- **Need to Strengthen Pull Factors:** The slowdown in foreign direct investment suggests that India must strengthen domestic pull factors. These include policy certainty, contract enforcement, infrastructure quality, regulatory clarity, ease of doing business, stable taxation and credible dispute resolution.
- **Limits of Temporary Defence:** A currency cannot be sustainably defended only through foreign exchange intervention or temporary deposit schemes. Long-term rupee stability requires confidence in India's growth story and stable capital inflows.

Therefore, exchange-rate stability is ultimately linked with the credibility of India's investment climate.

i. Policy Dilemma: Defence or Orderly Adjustment

- **Risks of Excessive Depreciation:** The central policy dilemma is whether to defend the rupee aggressively or allow orderly depreciation. Excessive depreciation can create problems. It can raise the cost of crude oil, fertilisers, electronics, machinery and other essential imports. This can feed into inflation and widen the current account deficit.
- **Costs of Excessive Defence:** At the same time, excessive defence of the rupee can also be costly. It may drain foreign exchange reserves, increase fiscal costs and create an artificial exchange rate level that is difficult to sustain.
- **Need to Avoid Symbolic Defence:** Therefore, the best approach is not to defend a symbolic rupee value. The objective should be to prevent disorderly volatility. A gradual and orderly adjustment allows the economy to absorb external shocks while avoiding panic in financial markets.

This balanced approach protects macroeconomic stability without forcing the currency into an unsustainable level.

j. Possible Benefits and Risks of a Weaker Rupee

- **Export Competitiveness Benefit:** A moderately weaker rupee can improve export competitiveness by making Indian goods and services cheaper for foreign buyers. It can support sectors such as textiles, leather, engineering goods, tourism, information technology services and pharmaceuticals.
- **Limits of Export Gains:** However, this benefit is not automatic. Export growth also depends on global demand, logistics quality, product standards, trade facilitation, input costs and market access.
- **Imported Input Costs:** If India imports many inputs used in exports, depreciation may also raise production costs. This can reduce the competitiveness advantage created by a weaker currency.
- **Need for Structural Support:** Therefore, a weaker rupee can help exports only when supported by structural reforms in manufacturing, logistics, standards and trade policy.

This shows that exchange-rate movement alone cannot substitute for export competitiveness reforms.

k. Way Forward

- **Avoid Over-Reliance on Rate Hikes:** Interest rates should primarily be guided by inflation and growth conditions. They should not be used as the main tool for short-term currency defence unless exchange rate volatility becomes a major macroeconomic threat.
- **Use Targeted Capital Inflow Measures Carefully:** If needed, foreign currency deposit schemes or special external borrowing windows can be used to attract dollar inflows. However, such measures must be assessed carefully in terms of cost, risk and long-term repayment obligations.
- **Strengthen FDI Pull Factors:** India must improve regulatory predictability, infrastructure, contract enforcement, taxation certainty and investment facilitation. Stable foreign direct investment is more useful for long-term external stability than volatile portfolio inflows.
- **Maintain Adequate Foreign Exchange Reserves:** The Reserve Bank of India should use foreign exchange reserves to smooth excessive volatility, not to defend a rigid exchange rate. Adequate reserves provide confidence to investors and reduce the risk of disorderly depreciation.
- **Boost Export Competitiveness:** A moderately weaker rupee can support exports only if accompanied by logistics reform, quality improvement, trade facilitation, market diversification and better integration with global value chains.
- **Reduce Import Vulnerability:** India should diversify energy sources, promote domestic manufacturing, encourage renewable energy, strengthen electronics production and manage non-essential imports. Reducing import dependence improves external resilience.
- **Communicate Clearly:** The Reserve Bank of India and the government should communicate clearly that rupee movement will remain orderly and that macroeconomic stability will be protected. Clear communication can reduce panic and speculation.

A sound way forward must therefore combine orderly currency adjustment with stronger investment fundamentals, export competitiveness and import resilience.

Conclusion

The rupee's weakness cannot be solved only through interest rate hikes or foreign currency deposit schemes. If depreciation reflects weak capital inflows and structural external pressures, India needs deeper reforms to strengthen foreign direct investment, improve export competitiveness, reduce import vulnerability and maintain macroeconomic credibility.

The correct approach is not aggressive currency defence. It is orderly adjustment supported by strong external-sector fundamentals. A stable rupee must ultimately rest on investor confidence, resilient capital inflows, competitive exports and sound macroeconomic management.

In this sense, the rupee debate is not only about exchange-rate levels; it is about the strength and credibility of India's external economy.

GS Paper III: Environment

3. Great Nicobar Project: Strategic Development and Ecological Responsibility

a. Introduction

The proposed development of Great Nicobar Island has become one of the most important debates at the intersection of national security, infrastructure and environmental governance. The project has been defended as a strategic necessity for India's maritime security and Indo-Pacific presence. At the same time, concerns remain over forest diversion, ecological fragility, island biodiversity and the possible impact on vulnerable communities.

Great Nicobar is located close to major global sea lanes and near the Six Degree Channel, which links the Malacca Strait with routes towards Africa, West Asia and Europe. This makes the island strategically valuable for maritime surveillance, logistics, trade and India's wider Indo-Pacific strategy.

Thus, the Great Nicobar project should be understood not merely as an infrastructure proposal, but as a test of India's ability to balance maritime ambition with ecological responsibility.

WHY GREAT NICOBAR IS STRATEGIC

Strategic Feature		Importance
	Six Degree Channel	Maritime Chokepoint
	Malacca Proximity	Trade & Energy Routes
	Eastern Indian Ocean	Strategic Presence
	Indo-Pacific	Regional Security
	Sea Lanes	Maritime Domain Awareness

b. Strategic Location of Great Nicobar

- **Position in the Eastern Indian Ocean:** Great Nicobar occupies a rare geographical position in the eastern Indian Ocean. It lies close to the Six Degree Channel, one of the important routes connecting the Malacca Strait with the wider Indian Ocean. The Malacca Strait is among the busiest maritime corridors in the world, carrying large volumes of global trade, energy supplies and naval movement.
- **Maritime Surveillance Advantage:** This location gives India an important vantage point near critical sea lanes. A stronger presence in Great Nicobar can improve maritime domain awareness, surveillance, logistics and rapid response capacity in the eastern Indian Ocean.
- **Shift Towards a Maritime Strategy:** In a world where sea lanes, undersea cables, energy flows and port access are central to national power, Great Nicobar offers India an opportunity to strengthen its maritime posture. It also reflects India's gradual shift from a largely continental security mindset towards a more balanced continental-maritime strategy.

This strategic geography explains why Great Nicobar has acquired importance in India's Indo-Pacific and maritime-security thinking.

c. Main Components of the Project

- **Four Major Components:** The proposed project includes four major components: an international container transshipment port, a greenfield airport, township development and a power plant.
- **International Container Transshipment Port:** The international container transshipment port is expected to reduce India's dependence on foreign transshipment hubs. At present, a significant portion of India's container cargo is transshipped through ports outside India. A major port at Great Nicobar can improve cargo control, reduce logistics dependence and strengthen India's role in regional maritime trade.
- **Greenfield Airport:** The greenfield airport can improve connectivity, logistics and strategic mobility. It can support both civilian movement and national security requirements.
- **Township and Power Plant:** The township component is intended to provide administrative, economic and service infrastructure needed for large-scale island development. The power plant would act as the energy backbone for the project.
- **Scale of the Project:** The project area is reported to be around 166.10 square kilometres, roughly 2 per cent of the total area of the Andaman and Nicobar Islands. Forest diversion is reported to be around 130.75 square kilometres. These figures show both the scale of the project and the seriousness of the environmental concerns associated with it.

The project's components therefore combine commercial, strategic and settlement-related objectives, making careful planning essential.

d. Strategic and Maritime Significance

- **Proximity to Critical Sea Lanes:** Great Nicobar is strategically important because of its proximity to major maritime routes. The Malacca Strait and the Six Degree Channel are crucial for global commerce, energy movement and naval mobility. Any state that can effectively monitor and operate near these routes gains significant maritime leverage.
- **Maritime Domain Awareness:** For India, stronger infrastructure in Great Nicobar can improve maritime domain awareness. Maritime domain awareness means the ability to detect, track and understand activities at sea, including commercial shipping, naval movement, illegal fishing, smuggling and security threats.
- **Logistics and Rapid Response:** The project can also support logistics for the Indian Navy, Coast Guard and other agencies. Better port, airport and surveillance infrastructure can strengthen India's ability to respond to contingencies in the eastern Indian Ocean.
- **Indo-Pacific Relevance:** This is especially important in the Indo-Pacific context, where maritime competition, strategic chokepoints, undersea cable security and supply-chain resilience are increasingly important.

Thus, Great Nicobar can strengthen India's role as a maritime power and improve its ability to secure the eastern approaches to the Indian Ocean.

e. Economic Significance of the Transshipment Port

- **Meaning of Transshipment:** The proposed transshipment port has major economic relevance. Transshipment refers to the transfer of containers from one vessel to another before they reach their final destination. India currently depends significantly on foreign transshipment hubs, which increases logistics costs and reduces strategic control over cargo movement.
- **Commercial Potential:** A port at Great Nicobar can help India capture part of this transshipment traffic. Its location near major east-west shipping routes gives it commercial potential. If developed effectively, the port can attract investment, generate employment,

improve supply-chain resilience and integrate India more strongly with Southeast Asian and global trade routes.

- **Operational Requirements:** However, economic success will depend on competitiveness. A transshipment port must offer efficient cargo handling, reliable connectivity, competitive tariffs, deep-draft berths, strong digital systems and predictable regulation.
- **Limits of Geography Alone:** Strategic location alone is not enough; operational efficiency will determine whether the port becomes commercially viable.

Therefore, the port's success will depend on whether India can convert geographical advantage into logistics competitiveness.

f. Geopolitical Context

- **Indian Ocean Competition:** The Great Nicobar project must also be seen in the wider geopolitical context of the Indian Ocean Region. Major powers are expanding port infrastructure, logistics access, maritime surveillance systems and dual-use facilities across the region.
- **China Factor:** China's growing presence through port projects and infrastructure investments has increased India's need to strengthen its island territories. Facilities that appear commercial can sometimes have strategic implications, especially when they support logistics, surveillance or future military access.
- **India's Strategic Presence:** Great Nicobar can help India consolidate its presence close to critical chokepoints. It can also strengthen India's ability to act as a net security provider in the eastern Indian Ocean.
- **Beyond Strategic Competition:** However, India's approach should not be based only on strategic competition. It should also aim at building resilient infrastructure, supporting trade, securing sea lanes and protecting ecological integrity.

This wider geopolitical context shows why the project must be strategically purposeful but environmentally restrained.

g. Ecological Concerns

- **Fragility of the Island Ecosystem:** The ecological concerns surrounding the project are serious. Great Nicobar is environmentally fragile and contains rich forests, coastal ecosystems, endemic biodiversity and sensitive habitats. Large-scale infrastructure can disturb forests, wildlife corridors, coastal stability, local hydrology and island ecosystems.
- **Forest Diversion:** Forest diversion of around 130.75 square kilometres is a major concern. Forests in island ecosystems are not merely tree cover. They regulate water cycles, protect soil, support biodiversity, reduce erosion and help maintain ecological balance.
- **Coastal Ecosystems:** Coastal ecosystems such as coral reefs, mangroves and nesting beaches are also vulnerable to construction, dredging, shipping activity, pollution and changes in coastal dynamics. Island ecosystems often have limited resilience because species may be endemic and habitats are geographically restricted.
- **Need for Strong Safeguards:** Therefore, environmental safeguards are not a procedural formality. They are central to the long-term legitimacy and sustainability of the project.

This ecological dimension makes scientific assessment and continuous monitoring indispensable for responsible island development.

h. Tribal and Social Concerns

- **Vulnerable Communities:** Great Nicobar is also home to vulnerable tribal communities and has cultural and ecological spaces that must be protected. Remote islands should not be treated as empty strategic spaces. Development must recognise the rights, dignity and customary habitats of indigenous communities.

- **Risk of Social Disruption:** Any disturbance to tribal communities can have serious consequences because such communities often depend closely on local ecosystems for livelihood, culture and survival. Their exposure to outside population inflows, disease risks, land-use change and social disruption must be carefully assessed.
- **Need for Early Integration of Safeguards:** Therefore, tribal protection must be integrated into project planning from the beginning. Development cannot be considered sustainable if it weakens the security and dignity of local communities.

This shows that social justice and tribal rights are central to the legitimacy of the Great Nicobar project.

i. Disaster and Climate Vulnerability

- **Disaster-Prone Location:** Great Nicobar lies in a region vulnerable to earthquakes, tsunamis, cyclones, coastal erosion and sea-level rise. The 2004 Indian Ocean tsunami demonstrated the disaster vulnerability of the Andaman and Nicobar region.
- **Need for Disaster-Resilient Infrastructure:** Large infrastructure in such an area must be designed with disaster resilience as a central principle. Ports, airports, townships and power facilities should account for seismic risk, tsunami run-up, storm surges, coastal erosion, freshwater stress and future climate impacts.
- **Climate Change Risks:** Climate change adds another layer of risk. Sea-level rise and extreme weather events can affect coastal infrastructure and island habitability. Therefore, the project must incorporate long-term climate modelling and adaptive design.

This makes climate-resilient planning essential for both ecological sustainability and strategic durability.

j. The Central Governance Challenge

Balancing Security and Ecology

- The Great Nicobar project raises a fundamental governance question: how should India balance national security with ecological responsibility?
- Environmental sensitivity should not become a permanent veto on strategic development. India has legitimate security and economic interests in strengthening its island territories. However, strategic urgency cannot become a justification for weak environmental compliance or inadequate public scrutiny.

Legitimacy of the Project

- The legitimacy of the project depends on transparent environmental assessment, strict legal compliance, credible mitigation, tribal safeguards and continuous scientific monitoring.

Balanced Approach

- The correct approach is not blanket opposition or unchecked construction. It is phased, scientifically guided and legally compliant development.
- Thus, governance quality will determine whether the project becomes a model of strategic sustainability or a source of ecological and social conflict.

k. Island Development and Carrying Capacity

- **Meaning of Carrying Capacity:** The project also raises broader questions about island development models. Islands have limited carrying capacity. Carrying capacity refers to the maximum level of population, infrastructure and economic activity that an ecosystem can support without long-term damage.
- **Limits of Island Ecosystems:** Great Nicobar's development must consider freshwater availability, waste management, biodiversity, disaster risk, coastal stability, transport

pressure and social impact. A mainland-style development model may not be suitable for fragile island ecosystems.

- **Need for Low-Impact Infrastructure:** Therefore, infrastructure should be compact, low-impact, climate-resilient and ecologically sensitive. Development must be designed around the island's limits rather than forcing the island to absorb mainland-style expansion.

This carrying-capacity perspective is essential for avoiding irreversible ecological stress.

1. Way Forward

- **Adopt an Ecological Security Approach:** Environmental protection should be treated as part of national security, not as an obstacle to it. A degraded island ecosystem can weaken long-term strategic resilience by increasing disaster risk, water stress and ecological instability.
- **Ensure Strict Legal Compliance:** Forest clearance, environmental clearance, coastal regulation norms and tribal protection requirements must be followed transparently. Compliance must be substantive, not merely procedural.
- **Establish Independent Scientific Monitoring:** Long-term monitoring of forests, coral reefs, coastal erosion, biodiversity, freshwater systems and local hydrology should be conducted by independent scientific institutions. Monitoring findings should guide project design and corrective action.
- **Minimise the Ecological Footprint:** Infrastructure should be compact and carefully located. Green building norms, renewable energy, waste treatment, low-impact construction practices and habitat-sensitive planning should be mandatory.
- **Protect Tribal Communities:** The project must ensure that vulnerable tribal communities, their habitats and customary rights are not disturbed. Health safeguards, restricted access zones and meaningful consultation should be prioritised.
- **Strengthen Maritime Capability in Phases:** Port, airport and surveillance infrastructure should be developed in a phased manner according to defence, logistics and commercial needs. Phased development allows better assessment of ecological and social impacts.
- **Build Disaster-Resilient Infrastructure:** Tsunami, cyclone, earthquake and sea-level rise risks should be incorporated into all infrastructure designs. Emergency evacuation, resilient energy systems and coastal protection measures must be built into planning.
- **Ensure Public Accountability:** Mitigation plans, compliance reports, ecological monitoring data and rehabilitation measures should be made available for scrutiny. Public accountability will improve trust and reduce conflict around the project.

A responsible way forward must therefore combine strategic clarity, ecological restraint, tribal safeguards, disaster resilience and transparent governance.

Conclusion

The Great Nicobar project represents a major test of India's ability to convert geography into strategic power while respecting ecological limits. Its location near critical Indo-Pacific sea lanes gives India rare strategic leverage in maritime security, trade and regional connectivity.

At the same time, Great Nicobar's forests, coastal ecosystems, biodiversity and tribal communities demand responsible development. The right approach is neither blanket opposition nor unchecked construction. India needs phased, scientifically monitored and legally compliant strategic infrastructure that protects both national security and environmental integrity.

If implemented with transparency, ecological restraint and strategic clarity, the project can become a model for balancing maritime ambition with sustainable island governance.

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While every effort has been made to balance depth with brevity, please keep the following in mind:

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