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TOPIC: START UP

Piyush Goyal is right. India needs an ecosystem that better enables deep-tech innovation

1. Context: Minister's Strong Remarks Spark National Debate

- On **April 3, 2025**, Commerce and Industry Minister **Piyush Goyal** sharply criticized Indian startups during the **Startup Mahakumbh** event.
- He highlighted that India's startup ecosystem is **over-focused on consumer-centric ventures** (like food delivery apps and boutique products) rather than **deep-tech innovation**.
- Goyal's remarks triggered a broader debate on whether India is truly building a future-ready innovation ecosystem.

2. Goyal's Wake-Up Call to Startups

- Goyal's comments served as a **provocative warning** to the startup ecosystem to rethink its direction.
- He questioned the **overvaluation of quick commerce and lifestyle startups**, such as gourmet ice cream brands and instant delivery platforms.
- In contrast, he pointed to **China's prioritization of strategic tech sectors** — AI, semiconductors, and electric vehicles — as a model for India to reflect upon.

3. India's Innovation Deficit: A Core Challenge

- India has immense **tech talent**, yet fails to produce **disruptive innovations** on a global scale.
- Ironically, **Indian-origin leaders** are heading breakthrough innovations at **global firms** like Google, Microsoft, and Tesla.
- However, within India, startups tend to pursue **low-risk, high-return consumer models**.
- Goyal's critique aligns with the broader vision of **Viksit Bharat 2047**, where innovation should be the **catalyst of transformation**.

4. Global Innovation Rankings: India vs. China

- In the **2024 Global Innovation Index**, **India ranks 39th** while **China ranks 11th**.
- Despite India's rise as the third-largest startup ecosystem with **100+ unicorns**, most innovations are **incremental** and consumer-facing.



- China, by contrast, leads in **core technological domains** like **quantum computing, advanced robotics, and smart hardware** — vital for future global leadership.

5. Structural and Policy-Level Barriers

- India lacks a **cohesive, well-funded national innovation strategy** like China's "Made in China 2025" plan.
- From 2014 to 2024:
 - India invested **\$160 billion** in tech development.
 - China invested **\$845 billion**, over **five times more**.
- Although India has launched programs like the **IndiaAI Mission** and **Fund of Funds for Startups**, their **scale and impact are limited**.

6. Education System: The Missing Link in Innovation

- India produces lakhs of **engineering graduates** annually, but few go on to do **cutting-edge research**.
- Systemic issues:
 - Emphasis on **rote learning** over creativity.
 - **Poor industry-academia collaboration**.
 - **Lack of world-class research infrastructure**.
- As a result, many of India's brightest minds **migrate abroad**, where they flourish in **enabling environments**.

7. Role of Venture Capital and Investment Trends

- **Indian venture capitalists** often prefer **short-term returns** and **safe investments** in consumer apps.
- This contrasts with the **US model**, where VCs support **ambitious, long-term bets** like **SpaceX or Neuralink**.
- Regulatory issues like the now-defunct **angel tax** discouraged risk-taking and **slowed funding** for breakthrough ideas.

8. Deep-Tech Successes That Offer Hope

- Despite these gaps, some **deep-tech success stories** have emerged:
 - **Digantara, Skyroot Aerospace, and Agnikul Cosmos** in the space sector.



- **Fintech giants** like Paytm and PhonePe changed digital finance.
- **Cybersecurity startups** have shown global competitiveness.
- However, **many innovative startups are acquired too early**, limiting their potential to become **global leaders**.

9. A Shift Toward Deep-Tech: Encouraging Signs

- According to Nasscom, deep-tech startups saw a **78% increase in funding in 2024**.
- This is a **positive signal**, but isolated efforts aren't enough.
- India must make **sectoral priorities** clear — in **AI, med-tech, smart manufacturing, defense tech, and climate innovation**.
- Achieving this requires:
 - **More R&D spending.**
 - **Simplifying regulatory hurdles.**
 - **Promoting scientific thinking** in early education.

10. Building a National Innovation Culture

- India's past success in **IT services** is commendable but **not enough** to compete in the new tech-driven world.
- To become an innovation powerhouse:
 - **Filing patents** must be encouraged.
 - A culture of **tinkering and experimentation** must be cultivated in schools and universities.
 - **Risk-taking and long-term thinking** should be rewarded — across government, investors, and academia.

11. Conclusion: From Rhetoric to Action

- Piyush Goyal's remarks are not just criticism — they are a **call for bold structural reform**.
- India must **transition from being a market of consumers to a builder of world-changing technologies**.
- Key steps:
 - Nurture ideas **from lab to market**.



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- Create a **supportive ecosystem for deep-tech entrepreneurship**.
- Align **government, industry, investors, and academia** for a shared innovation mission.
- If India truly wants to lead in the **global technology order of the future**, it must act **decisively and immediately**.

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