



The promise and perils of Artificial Intelligence partnerships

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(Mains GS 3 : Science and Technology- Developments and their Applications and Effects in Everyday Life.)

Context:

- Artificial Intelligence (AI) has emerged as one technology of particular importance because of its role as an accelerator, its versatility, and its wide applicability.
- But challenges include standards-setting, supply chain resilience, talent retention, and data policy.

Cooperation on emerging technologies:

- The subject of intensifying technology competition is making its way into new US avenues for cooperation with partners, including with India.
- This could take the form of bilateral cooperation, coordination at multilateral institutions, or through loose coalitions such as Quad.
- Driven by recent breakthroughs in machine learning made possible by plentiful data, cheap computing power, and accessible algorithms, AI is a good bellwether for the possibilities and challenges of international cooperation on emerging technologies.

Potential implications:

- There are some obvious areas of commonality and cooperation between India, the US, and other partners when it comes to AI; for example, there is a similar concern about developing AI in a broadly democratic setting.
- AI can be used in many positive ways like to foster innovation, increase efficiency, improve development, and enhance consumer experience.
- For India, AI deployment will be tied closely to inclusive growth and its development trajectory, with potentially positive implications for agriculture, health, and education, among other sectors.
- But AI can also be used for a host of undesirable purposes like generating misinformation, criminal activity, and encroaching upon personal privacy.

Inherently international:

- Despite the nominally more nationalistic rhetoric (e.g. “Build Back Better”, “Atmanirbhar Bharat”), there is a fundamental recognition that international partnerships are valuable and necessary.
- AI development and deployment is inherently international in character as basic and applied research involves collaborations across universities, research centers, and countries.
- There is also a recognition that countries can learn from each other’s experiences and mistakes, and that the successful deployment of AI would serve as a model for others.

Challenges ahead:

- India and its partners confront some similar challenges when it comes to the development and deployment of AI.
- One imperative involves nurturing, attracting, and retaining the requisite talent.
- According to Macro Polo’s Global AI Talent Tracker, 12% of elite AI researchers in the world received their undergraduate degrees from India, the most after the United States (35%) and more than China (10%); yet, very little top-tier AI research is being conducted in India.
- Additional challenges lie in securing the necessary infrastructure; ensuring resilient supply chains, especially for components such as microprocessors; alignment on standards, governance, and procurement; and ensuring critical minerals and other raw materials required for the development of the necessary physical infrastructure.

Aligning the approaches:

- The contours of cooperation are already discernible as some areas are proving relatively easy, such as coordination in the setting of standards at the multilateral level, which is already underway.

- Other areas will prove more challenging like supply chain security and building resilience should theoretically be easier, given the political-level agreement on this issue but ensuring bureaucratic and regulatory harmonisation remains complicated.
- India and its partners may have the most trouble aligning their approaches to data – a particularly touchy subject at the moment – and, in the long-run, incentivising joint research and development.

Conclusion:

Given that various governments have only recently established AI policies, and in some cases are still formulating them, international cooperation is still very much a work in progress.