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Artificial Intelligence and India's Industrial Strategy

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AI may claim to offer India significant productivity gains but it comes with serious risks. The country needs a comprehensive industrial strategy spanning promotion, regulation, and accountability, with a new institutional framework to guide AI adoption across health, education, and other domains.

Artificial intelligence (AI) is at the heart of a new technological revolution that is reshaping our world. The Government of India is keen to expand and deepen the role of AI, which is a set of loosely related technologies.

AI has enormous potential for boosting productivity, but its misuse can be very harmful. India needs a comprehensive industrial strategy to guide AI adoption. A strategy is needed because AI can be used in multiple domains, such as health, education, media, defence, finance, business services, in large and small enterprises, with differential implications for well-being and harm. Industrial policy can shape its utilisation by setting priorities and coordinating government action.

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AI is revolutionary in its ability to undertake cognitive and creative tasks that were regarded as exclusively human. The technology is improving with astounding rapidity. Leading experts are unsure about the limits of its capabilities and possible impacts. According to co-founder and Chief Executive Officer of Anthropic Daron Amodei, "Humanity is about to be handed almost unimaginable power-and it is deeply unclear whether our social, political and technological systems possess the maturity to wield it." Other luminaries, like Geoffrey Hinton (2024 Nobel laureate in Physics and "godfather of AI") believe that AI may soon become unmanageable. They view it as an existential threat.

The biggest threat is from the "superintelligent AI" models that are now being created without adequate regard for safety. These would be more capable than the smartest human minds on every mental activity. They could work autonomously without human interventions, collaborate with other AI entities, and design and control robots. In the face of such manifold dangers, it would be unwise for India to sleepwalk into AI adoption.

AI also has its cheerleaders. These include the global giant IT firms and several growth-hungry national governments. Proponents often present the adoption of AI as inevitable. They blatantly use fear as a tool of persuasion. The message is "adopt AI immediately to be productive or else be declared incompetent".

However, there is understandable reluctance among potential users who are uncertain of its value. The economic trajectory of a powerful technology like AI should not be determined by markets, in which oligopolistic technology companies dominate. It must be guided by wise policies and governed by appropriate participatory and transparent processes. Informed public discussions on AI in multiple forums are necessary for gaining trust and for shaping policies in the national interest.

Need for industrial policy

Many countries have adopted industrial policies for AI. They include China and the USA. The European Union (EU) has legislated a strong regulatory framework. The advent of AI offers India an opportunity to frame its post-liberalisation policy paradigm. This policy must address both macroeconomic and microeconomic challenges. The strategy must ensure that AI adoption results in equitable and inclusive economic growth. The strategy must negotiate the international dimension of the AI industry.

The US is the home base of the giant IT firms, with which India's AI initiative is intimately tied. These firms have unprecedented market power and the backing of the Donald Trump administration. It is therefore important, while cooperating with them, to protect national policymaking autonomy from economic and political pressure tactics. The strategy must also maintain a strong and credible regulatory framework that protects Indian citizens and firms from AI-induced harm.

> While adapting to AI, higher education institutions must ensure that students develop solid foundational intellectual capabilities and ethical awareness of AI threats.

The most immediate threat is from technological unemployment. AI can drastically disrupt jobs across many occupations. As new technology triggers economic growth, new jobs will eventually be created. However, such structural transformations can take decades. In the medium term, we should brace for unemployment.

AI has a dual impact on employment-as a substitute for mental labour in some roles, and as a complement in others. Jobs in the first category will be displaced. AI would displace less-skilled professionals engaged in text and image generation, entry-level jobs will shrink, and many young workers will be driven towards gig work.

On the other hand, AI can complement human work in the second category of jobs-those requiring decision-making responsibilities, domain expertise, face-to-face communication, and unstructured tasks. More experienced, higher-skilled workers will thus be able to deploy AI effectively and earn higher incomes. The result will be a "polarised" labour force, creating a large underclass of insecure workers.

Such a trend will surely fray the social fabric. However, a coherent strategy can counter this by moderating the speed and extent of technology adoption. Similarly, industrial policy can address competitive threats like monopoly in the value chain, algorithmic collusion, AI-driven price discrimination, and skewed industrial structure. Similarly, cooperation between the central and state governments can plan the best location for data centres and ensure the sustainable use of water and energy.

Beyond economics, there is need for regulation to curb misuse of AI for socio-political harms. This includes mass surveillance that puts privacy and democracy at risk. AI propaganda can manipulate public opinion through deep fake videos. The psychological risks to cognitive abilities, attention spans and "AI psychosis" must be addressed through regulation, as well as through public awareness building and education. Here, higher education institutions have an important role. While adapting to AI, they must ensure that students develop solid foundational intellectual capabilities and ethical awareness of AI threats.

Importance of Indian Market

The AI ecosystem has the following key components. At the apex are a handful of giant American AI firms, which create the foundation models in the generative AI segment. Well-known examples are Claude (Anthropic), GPT-4 (OpenAI), and Gemini (Google). Downstream firms must then adapt these foundation models to develop applications for different types of users.

> They need access to public data, including from Indian regional language sources. Anthropic, Open AI, and Nvidia have recently signed partnership deals with leading Indian IT companies.

These "development layer" firms use foundation models, algorithms, and programming tools to create "versatile AI models" that can be scaled and optimised for specific tasks. These models must be "fine-tuned" using domain-specific knowledge before they can be deployed for specific tasks in various industries.

For this, data are crucial. Data are collected in the "data layer" and processed by AI model trainers. AI also requires a physical "infrastructure layer" of computing resources-servers, specialised chips, and cloud and edge computing capacity. In India, foreign firms currently dominate the data layer, the cloud market, and the high-end AI chip market.

For the international tech giants driving the AI revolution, India is strategically important because of our human resources, IT competence, and huge market size. The IT giants, in a race for profits, have invested $400 billion globally in 2025-26 alone. India is a major recipient. Under the shadow of an AI-stock-market bubble, these companies are eager to expand business in India as quickly as possible.

However, to scale up their operations, they require active collaborations with central and state governments, as well as Indian companies. They need access to public data, including from Indian regional language sources. Anthropic, Open AI, and Nvidia have recently signed partnership deals with leading Indian IT companies. Google and Microsoft CEOs have stated their interest to form broad-based partnerships with the government, and to work on socially relevant models.

Google is developing AI tools for monsoon forecasting and disease screening. Thus, the major firms see India's role in the AI value-chain as data provision, support for infrastructure creation, including data centres, and also the supply of skilled workers for creating apps for deployment in various sectors. This places the Indian government in a good position for negotiating with companies on a developmental agenda.

The Government of India's approach to AI can be gleaned from policy papers published by Niti Aayog and the Ministry of Electronics and Information Technology (MeitY). The *Economic Survey 2026* devotes a chapter to AI. The policy recommendations in these documents are not closely aligned.

> A second focus is to strengthen and deepen the Indian AI-skilling system. For this, a network of organisations (universities, industries, and corporate boards) would be mobilised.

The recent AI Impact Summit proclaims broad developmental goals for AI utilisation-self-reliance, inclusive human development, environmental sustainability, and equitable progress. By contrast, the document "AI for Viksit Bharat" (prepared in partnership with McKinsey) enunciates an aggressive AI promotion agenda. Its socio-economic developmental agenda is muted. This suggests the need for a more cohesive strategy.

The basic infrastructural and "strategic enablers" of AI must be strengthened. These refer to cloud platforms, compute capacity, and foundational data sets. The AI Mission acknowledges the need for robust AI governance frameworks, ethical guidelines, and risk controls.

In this vision, India's comparative advantage in the global AI ecosystem is to be a "data capital" of the world. For this, the government must establish a "safe" institutional framework for public data collection. In addition, "specialised" data platforms need to be created for targeted industries (financial services, manufacturing, pharmaceuticals, and automotives). The Government of India-owned "AI Kosh" must compile and grant access to thousands of "curated, non-personal data sets" such as census data, Indian language resources, and satellite imagery. The data are essential for training AI models to make them commercially usable.

A second focus is to strengthen and deepen the Indian AI-skilling system. For this, a network of organisations (universities, industries, and corporate boards) would be mobilised. It hopes that jobs would be created via re-skilling and broadening AI access. However, creating jobs in low-income contexts would require creating a digital network and boosting demand.

Elements of an Indian Strategy

What should be the key elements of India's industrial strategy for AI? Maintaining national policy autonomy in this business environment dominated by the world's largest companies is a major challenge.

First, policy must ensure that the speed of AI introduction is optimal. We must not rush into it at a speed beyond our ability to control labour displacement. This requires state guidance of the market. We should promote the creation of apps to address our development needs. Stimulating employment and inclusive growth must have high priority.

Second, the government should help create ground-level innovation ecosystems that serve development objectives. Profit-seeking firms will gravitate towards prosperous buyers, like big farmers in agriculture. Therefore, the state and local governments must partner at the ground level with IT-skilled non-governmental organisations (NGOs).

> An international institution with the participation of China, the US, and India is needed to set rules for the AI companies. The BRICS presidency provides an opportunity for India to promote such an initiative.

Because they are more connected with ordinary people, NGOs would be able to adapt the AI better to suit varying local conditions. We therefore strongly recommend the creation of a more enabling working environment and funding mechanisms for Indian NGOs. Many of them have, over the years, demonstrated their commitment and competence in the development space. NGOs can partner with local agencies to create inclusive AI ecosystems. For example, IT for Change has several successful pilot projects on how digital technology can serve development-for example, in rural cooperative food marketing and in improving teachers' productivity.

Third, there is a need for close partnership between the government and large private and public sector firms for coordinated action on specific issues. Companies must moderate their adoption of AI to replace labour for immediate cost reduction. For example, the AI innovation ecosystem should be incentivised to develop applications that augment human labour and not substitute it. They must enable in-house skill adaptation.

In addition to reskilling employees, the gains from productivity increase can be shared more equitably. Bold labour reforms are possible in principle. These include shorter work-weeks and giving loans to workers to buy the companies' stock. However, government and business must work together because these reforms require vision and commitment to the long-term national interest.

The labour market's efficiency should be improved. Because AI is dynamic, job market trends must be monitored continuously and information disseminated to job-seekers.

Data are central to the AI Mission road-map for training AI models for commercial use. Indian data centres would be owned by private firms. These large data centres would enable companies to run "frontier AI" models at scale. Foreign private companies have the greatest expertise on how to use these models. In principle, they can use their products to brainwash millions of users.

These companies lack the legitimacy of the state. Hence, the governance of AI companies and data centres needs careful attention. The safe development and deployment of frontier AI models is a global concern. An international institution with the participation of China, the US, and India is needed to set rules for the AI companies. The BRICS presidency provides an opportunity for India to promote such an initiative.

Regulation is needed to manage harms. Some AI threats are more dangerous than others. For less serious harms "soft regulation" would suffice with AI firms adopting voluntary ethical codes of behaviour. Companies should continuously monitor AI models and conduct audits before release. They should immediately publicly disclose observed model behaviours that cause concern.

> Regulation should be designed to target specific harms, such as disinformation, IP violation, and deep fakes.

For more serious threats, there should be "hard regulations" with legally binding obligations. These regulations should govern "high-impact" AI products-those having "the potential to significantly impact human life, safety or fundamental rights". Companies must disclose if their system qualifies as "high-impact" and ensure that adequate safety and impact assessment and user protection measures are in place.

MeitY should certify the safety of these AI systems. For transparency, users must be informed whenever AI-generated content (sound, images, videos) is utilised. Regulation should be designed to target specific harms, such as disinformation, intellectual property (IP) violation, and deep fakes.

Conclusions

The advent of AI in India has not only opens tremendous economic opportunities but also brings major dangers. The diffusion of the technology cannot be left to markets. India needs a coordinated industrial strategy, which includes policies for promotion, regulation, and accountability. A new institutional policymaking framework is needed to guide the adoption of AI. This should enable shared vision, partnerships, consultation, and accountability.

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