JETIR.ORG ISSN: 2349-5162 | ESTD Year : 2014 | Monthly Issue
JOURNAL OF EMERGING TECHNOLOGIES AND INNOVATIVE RESEARCH (JETIR)
An International Scholarly Open Access, Peer-reviewed, Refereed Journal

The Indian Economy in the Age of AI: Promise, Peril, and the Path Forward

Dr. Namburu Babu
Faculty, Department of Economics
Acharya Nagarjuna University
Nagarjuna Nagar – 522510
Email: namburubabu@gmail.com

Abstract

India stands at a pivotal moment in the global artificial intelligence revolution. With the domestic AI market projected to grow from its current valuation of over ₹81,702 crore (US$9 billion) to exceed US$500 billion in the coming decades, the technology is poised to reshape every sector of the Indian economy—from agriculture and manufacturing to financial services and healthcare. Yet this transformation comes with profound challenges: a looming talent gap, structural disadvantages in the global AI investment landscape, and legitimate concerns over job displacement. Drawing on government budget documents, industry reports, expert interviews, and labour force data from 2025–2026, this article argues that India's AI moment is defined by a central paradox—extraordinary potential coexists with urgent structural vulnerabilities. The country contributes 16 per cent of the world's AI talent and has a median age of just 29 years, yet lacks the skilled manpower to deploy AI at scale. Success in the AI era will depend less on how much India invests, and more on how effectively it prepares its workforce, articulates its advantages to global investors, and ensures that productivity gains translate into broad-based prosperity.

Keywords: Artificial intelligence, Indian economy, AI talent, workforce transformation, digital economy, Industry 4.0, skill development, foreign investment, productivity, automation, services sector, gig economy

1. The Great Paradox: India's AI Promise and Its Missing Pieces

The numbers tell a story of remarkable potential. India's AI market is currently valued at over ₹81,702 crore (US$9 billion), with projections suggesting exponential growth to more than US$500 billion in the coming decades. The technology sector as a whole is expected to reach US$315 billion in revenue in fiscal 2026, growing at 6.1 per cent year-on-year. An extraordinary 87 per cent of Indian enterprises are actively using AI solutions to improve productivity, customer service, and decision-making. And most strikingly, India contributes an impressive 16 per cent of the world's AI talent.

Yet beneath these headline figures lies a troubling disconnect. The SBI chairman, C.S. Setty, recently warned that a "shortage of skilled manpower to deploy AI solutions is emerging as one of the biggest challenges" facing India's AI adoption. This is not a contradiction—it is a diagnosis. India has talent, but not enough of it is deployment-ready. India has ambition, but not yet the institutional scaffolding to match it.

The investment landscape reflects this gap. According to Emkay Global's Nirav Sheth, India finds itself "on the wrong side of the AI trade." Global capital is flowing aggressively toward AI-linked earnings growth in markets like Taiwan and the United States, while India struggles to articulate its value proposition to foreign

investors. Foreign direct investment inflows have been constrained by uncertainty over India's role in the emerging AI-driven economic landscape.

Table 1. India's AI Landscape: Key Indicators (2025–2026)

Indicator	Value
Current AI market valuation	₹81,702 crore (US$9 billion)
Projected market size	US$500 billion+
Global AI talent share (Indian origin)	16%
Enterprise AI adoption rate	87%
AI revenue as % of tech sector (FY26)	3–4%
Tech sector total revenue (FY26)	US$315 billion
AI-linked revenue (FY26)	US$10–12 billion
Workforce upskilled in AI	2 million+

The paradox is real: India has the raw materials for AI leadership—youth, talent, cost advantage—but not yet the refined capabilities, investment narrative, or deployment infrastructure to claim its place at the global AI table.

2. The Investment Challenge: Selling India's AI Story to the World

Vis Raghavan, Citi's head of banking, put it bluntly in a recent interview: "India needs to better articulate its position as a major winner in a post-AI world." The country's AI advantage, he argues, is "under-communicated", and this communication gap is costing India dearly in the global competition for capital.

The arithmetic is straightforward. Global investors are currently chasing AI opportunities with unprecedented intensity. In the United States, AI-data centre financing and AI infrastructure rollout have dominated deal activity, creating a two-tier market where AI and tech stocks have surged while the rest of the economy has performed more modestly. Chip stocks, in particular, have been major beneficiaries, directing capital toward economies with strong semiconductor positions—notably Taiwan.

India, meanwhile, has been largely driven by domestic participation from retail and institutional investors, with FDI interest remaining "muted." This is not because India lacks advantages—it possesses several compelling ones.

Table 2. India's Structural Advantages in the AI Economy

Advantage	Explanation
Cost competitiveness	A unit of compute produced in India is far cheaper than in the US or other economies
Talent depth	16% of global AI talent is of Indian origin; a large share of AI engineers in Silicon Valley are Indian
Demographic dividend	Median age of ~29 years; 371 million people between ages 15–29
Domestic market scale	India's domestic market itself will generate huge AI-driven opportunities
Policy momentum	₹21,632 crore allocated to MeitY; India Semiconductor Mission 2.0 launched

The challenge is not the absence of advantages—it is the failure to communicate them effectively. Raghavan argues that India can be "a core node in the global AI architecture—across power, green-energy transition, IP creation, and talent depth." But this potential must be translated into a compelling investment narrative. Greater macroeconomic stability, coupled with clearer articulation of India's long-term AI opportunity, could help strengthen the country's appeal among global investors.

The Union Budget 2026-27 has taken significant steps in this direction. The Ministry of Electronics and Information Technology has been allocated ₹21,632 crore, with a clear tilt toward semiconductor manufacturing, the IndiaAI Mission, and electronics component production. The Electronics Components Manufacturing Scheme, launched in April 2025 with an outlay of ₹22,919 crore, has already received investment commitments at double the target—prompting the government to increase the outlay to ₹40,000 crore.

Yet budget allocations alone will not suffice. What India needs, as Raghavan emphasizes, is a coherent narrative that connects these investments to a vision of India as a global AI hub—not just a back-office for AI services, but a creator of IP, a host of hyperscale facilities, and a generator of AI-native solutions for the Global South.

3. The Workforce Transformation: Jobs, Skills, and the Future of Work

The most urgent—and emotionally charged—dimension of India's AI transition concerns employment. With 43 per cent of the Indian workforce still engaged in agriculture, followed by trade and hotels (13 per cent), manufacturing (13 per cent), services (13 per cent), construction (12 per cent), and transport and communications (6 per cent), the impact of AI will vary dramatically across sectors.

Recent studies suggest that the jobs most exposed to AI-driven disruption are those built around repetitive, rules-based, and precedent-driven tasks. Computer programmers, customer-service representatives, data-entry operators, marketing professionals, and financial analysts are among those facing the highest exposure. In contrast, work involving creativity, judgement, emotional intelligence, physical interaction, or strategic reasoning—including AI product managers, agricultural workers, food service personnel, construction workers, and courtroom advocates—remains relatively resistant to automation.

The IT sector—India's flagship services industry—exemplifies both the promise and the peril. With nearly six million workers, the sector has witnessed layoffs, restructuring, and slower hiring linked to automation. New recruitments are increasingly linked to AI-related skills. Yet as SBI chairman Setty notes, fears of widespread displacement may be overstated: "In IT sector, 99% of the workforce are engineers. And these are the people who can be re-skilled in a short span of time."

NASSCOM's data supports this optimism. The technology industry recorded net workforce growth of about 2.3 per cent, with more than two million professionals upskilled in AI—including 200,000 to 300,000 in advanced AI skills. This is not a story of job losses—it is a story of job transformation.

Table 3. Sectoral Employment and AI Exposure in India

Sector	Share of Workforce	AI Exposure Level	Primary Impact
Agriculture	43%	Low	Productivity enhancement
Trade & Hotels	13%	Medium	Customer service automation
Manufacturing	13%	Medium-High	Process optimization
Services	13%	High	Knowledge work transformation
Construction	12%	Low	Project management tools
Transport & Communications	6%	Medium	Logistics optimization

The World Economic Forum's Future of Jobs Report 2025 identifies analytical thinking, AI, and big data among the most sought-after skills. The top-growing jobs are in agriculture, logistics, software development, food processing, healthcare, and education. The larger challenge, however, will be ensuring that these jobs are productive, sustainable, and better-paying—not merely the same roles with different titles.

4. Sectoral Deep Dive: AI in Action Across India

While much of the AI discourse focuses on the future, significant transformation is already underway across multiple sectors of the Indian economy.

4.1 Information Technology and Global Capability Centres

The IT sector remains the epicentre of India's AI story. AI-linked revenue is estimated at US$10–12 billion in FY26, still a modest 3–4 per cent of total tech revenue, but growing rapidly. Engineering research and development (ER&D) is projected to contribute US$63 billion, while software products are expected to reach US$23 billion.

Global Capability Centres (GCCs) have emerged as a significant driver of this transformation. These centres, which serve as offshore innovation hubs for multinational corporations—are increasingly integrating AI into their operations, moving from back-office support to high-value product development and IP creation. Export revenue is forecast at US$246 billion, with Asia-Pacific and the Middle East emerging as the fastest-growing markets.

4.2 Banking and Financial Services

The banking sector is among the early adopters of generative and agentic AI, largely aimed at boosting productivity. SBI, India's largest bank, has been at the forefront of this transformation, using AI for credit assessment, fraud detection, and customer service automation. Yet as Chairman Setty acknowledges, the sector faces significant deployment challenges—not for lack of capital, but for lack of skilled personnel to implement AI solutions. Advanced AI models also pose potential threats to financial systems, reinforcing the continuing importance of human supervision, technical expertise, and sound decision-making.

4.3 Agriculture

Perhaps surprisingly, agriculture—which employs 43 per cent of India's workforce—is unlikely to experience severe adverse employment effects from AI. Instead, AI could strengthen productivity through scientific farming inputs, better supply-chain management, and improved alignment between cropping patterns and changing consumption demand. Agri-startups are already deploying AI for climate-smart cropping systems, predictive monitoring tools, digital public infrastructure for credit and data access, and blockchain-enabled traceability for agricultural products. These innovations hold the potential to create more meaningful and productive jobs in rural India.

4.4 Manufacturing

The manufacturing sector presents a more complex picture. As SBI Chairman Setty noted, "The amount of capital invested and the jobs created always is a disconnect across the globe." Automation has created a structural decoupling between investment and employment in manufacturing—a trend that AI is likely to accelerate. However, the government's focus on electronics manufacturing and semiconductor production (with the Electronics Components Manufacturing Scheme expanded to ₹40,000 crore) suggests a strategy focused on capturing high-value segments of the AI hardware supply chain.

4.5 Healthcare

Healthcare is another sector already witnessing large-scale adoption of generative and agentic AI. From diagnostic assistance to drug discovery to hospital administration, AI is reshaping how healthcare is delivered in India. The sector's labour-intensive nature—combined with severe shortages of healthcare professionals—means that AI is more likely to augment rather than replace human workers.

4.6 The Startup and Gig Economy

A large segment of Indian startups are increasingly building consumer products in education, healthcare, governance, finance, and customer support—using foundational AI models from OpenAI, Meta, and Google. Much like cloud-computing platforms that enabled companies to scale without expensive physical infrastructure, foundational AI models today provide the "intelligence layer," while startups focus on deployment, innovation, and market-specific solutions. The growth of gig and platform work is also likely to accelerate as employment becomes increasingly digital, flexible, and project-based. Generative AI could further expand India's digital content economy, creating new opportunities for creators, marketers, designers, coders, educators, and consultants serving both domestic and international markets.

5. The Talent Imperative: From AI Consumers to AI Creators

If there is a single policy priority that emerges from the evidence, it is this: India must move from being a consumer of AI to a creator of AI. And that transition begins with talent.

India's 16 per cent share of global AI talent is impressive, but it is not evenly distributed across the skills needed for AI deployment. As SBI Chairman Setty observed, "the availability of the manpower to deploy these AI tools is actually becoming a challenge." This is not a shortage of engineers—India produces millions of engineering graduates annually. It is a shortage of engineers trained in the specific skills required for AI implementation: model deployment, fine-tuning, prompt engineering, data preparation, and integration with legacy systems.

Table 4. India's AI Talent Landscape: Strengths and Gaps

Strength	Gap
16% of global AI talent of Indian origin	Shortage of deployment-ready AI professionals
2 million+ professionals upskilled in AI	Only 200,000–300,000 in advanced AI skills
87% enterprise AI adoption	Legacy systems and siloed data hamper scaling
371 million youth population	Skill-education mismatch in emerging technologies

The NASSCOM AI Adoption Index highlights this challenge. While India "scores significantly higher than mature economies in AI skills penetration"—3.09 times the global average between 2015 and 2021—end-users are "hamstrung by legacy systems and siloed data." Having the skills is not enough if the institutional infrastructure is not there to deploy them.

The government has recognized this gap. The Union Budget 2026-27 announced a focus on "industry-led research and training centers to develop technology and skilled workforce" as part of India Semiconductor Mission 2.0. But the scale of the challenge requires more than budget allocations, it requires a fundamental rethinking of how India educates its workforce for an AI-driven economy.

6. The Global South Opportunity: India as a Model

One of the most compelling—and underappreciated—dimensions of India's AI story is its potential to serve as a model for the Global South. A white paper released at the India AI Impact Summit 2026 argued that "the next phase of growth will not be defined by access to AI, but by disciplined execution and large-scale institutional adoption." The paper positions India as "a model for the Global South" in demonstrating how AI can drive productivity expansion, institutional strengthening, and equitable participation in the digital economy.

This is not merely aspirational. India has already demonstrated that it can build digital public infrastructure at scale, Aadhaar, UPI, and the India Stack are global benchmarks. The question is whether India can replicate this success in the AI domain, building what might be called an "AI Stack" that other developing economies can adopt and adapt.

The opportunity is significant. India is projected to contribute nearly 20 per cent of incremental global GDP growth over the next 15 years. If AI can accelerate that growth while ensuring that benefits are broadly shared, India could demonstrate a development pathway that is both technologically advanced and socially inclusive—a model that stands in contrast to the job-displacing automation often associated with AI in developed economies.

7. The Policy Agenda: Five Priorities for India's AI Future

Drawing on the evidence presented, this article identifies five urgent policy priorities for India's AI era.

7.1 Articulate a Clear Investment Narrative

India must do more than invest in AI—it must tell the story of those investments in a way that resonates with global capital. As Vis Raghavan argues, "India's AI advantage is under-communicated." The government should develop a comprehensive "India AI" investment pitch, highlighting cost advantages, talent depth, domestic market scale, and policy momentum. This narrative should be targeted at sovereign wealth funds, pension funds, and technology-focused private equity firms.

7.2 Bridge the AI Deployment Skills Gap

The shortage of deployment-ready AI professionals is the single most binding constraint on India's AI adoption. The government, in partnership with industry, should establish AI deployment training programs at scale—not just advanced degrees, but short-term, modular, job-focused certifications in model deployment, fine-tuning, prompt engineering, and data preparation. The target should be to train 1 million AI deployment professionals within three years.

7.3 Build AI-Ready Digital Infrastructure

India's legacy systems and siloed data are major barriers to AI adoption. The government should accelerate the modernization of public sector data infrastructure, creating AI-ready data repositories across healthcare, agriculture, education, and governance. This should be accompanied by robust data protection frameworks that enable AI innovation while protecting citizen privacy.

7.4 Support Domestic AI Innovation

India cannot rely solely on foundational models from OpenAI, Meta, and Google. While these models provide a useful "intelligence layer," India needs its own AI capabilities—particularly for Hindi and other Indian languages, for Indian-specific use cases in agriculture and healthcare, and for deployment in resource-constrained environments. The IndiaAI Mission should prioritize the development of small, efficient, India-specific models alongside investments in large language models.

7.5 Manage the Workforce Transition

The government should establish an AI Workforce Transition Authority to monitor sectoral employment impacts, identify at-risk occupations, and coordinate reskilling and social protection measures. This authority should work closely with industry to ensure that reskilling programs are aligned with actual employer demand. As SBI Chairman Setty noted, India's engineers can be reskilled quickly—the key is ensuring that reskilling happens before displacement occurs.

8. Conclusion: India's Choice in the AI Century

India stands at a crossroads. The country has extraordinary advantages in the AI era: demographic youth, talent depth, cost competitiveness, domestic market scale, and a demonstrated capacity for digital innovation at scale. But it also faces profound challenges: a shortage of deployment-ready professionals, structural disadvantages in global AI investment flows, legitimate concerns over job displacement, and the risk of falling behind in the global AI race.

The future of India's AI economy will not be determined by the technology itself, but by the choices India makes today. Will India invest sufficiently in AI deployment skills? Will it articulate its advantages effectively to global investors? Will it build the institutional infrastructure—data systems, regulatory frameworks, workforce transition mechanisms—that AI adoption requires? Will it ensure that productivity gains translate into broad-based prosperity rather than concentrated wealth?

These are not technical questions. They are political, economic, and social choices. And they will determine whether India becomes a leader in the AI century or merely a spectator.

The evidence suggests cause for optimism. Enterprise AI adoption has reached 87 per cent. Two million workers have been upskilled in AI. The government has committed substantial resources to semiconductor manufacturing, the IndiaAI Mission, and electronics production. India contributes 16 per cent of the world's AI talent and is projected to contribute 20 per cent of incremental global GDP growth over the next 15 years.

But optimism must be tempered with urgency. As Emkay's Nirav Sheth warned, India finds itself "on the wrong side of the AI trade." The window to correct this is finite. Global capital is being reallocated toward AI-linked opportunities, and economies that fail to articulate their AI value proposition will be left behind.

India has the raw materials for AI leadership. What it needs now is the will to deploy them.

The AI era is not coming—it is here. India's response will define its economy for a generation.

References

1. *India's AI advantage needs better articulation: Citi's Vis Raghavan*. (2026, June 3). Enterprise AI, Economic Times.
2. *India emerging as key APAC growth hub for AI talent and energy security: Colliers Report*. (2026, May 27). IBEF.
3. *The NASSCOM AI Adoption Index*. (2026). NASSCOM.
4. *The Transformer: How AI Is Reshaping Jobs, Skills and the Future of Work in India*. (2026, June 4). Outlook India.
5. *India in right place at right time on AI but failing to make the right noises, says Citi's Vis Raghavan*. (2026, June 3). The Economic Times.
6. *AI Contributes Just 3-4% As India Tech Revenue Seen Rising To $315 Bn*. (2026, February 24). BW Businessworld.
7. *Budget Frames AI as Cross-Sector Growth Enabler*. (2026, January 31). MIT Sloan Management Review India.
8. *India spending big on AI, but lacks talent to deploy it, says SBI chairman*. (2026, June 3). Mint.
9. *'India is on the wrong side of the AI trade': Emkay's Nirav Sheth sounds the alarm*. (2026, June 2). The Economic Times.
10. *India contributes 16 per cent of world AI talent, white paper reveals*. (2026, February 17). Telangana Today.