A PLACE ON THE GLOBAL TECHNOLOGY MAP

- **Amitabh Kant**

Throughout history, technological advancements have repeatedly disrupted the labour market. The printing press, mechanised looms or the World Wide Web, each brought about a transition that heralded turning points in human achievement. Now, as we stand on the brink of an A.I. revolution, we face another profound shift in the workforce. The Indian economy is experiencing a once in a generation opportunity with the ongoing AI revolution. AI is set to contribute a substantial $967 billion to India's economy by 2035 and usher in a new era of innovation and growth.

Recognizing the significance of this transformative period, the Government of India has allocated a substantial five-year budget of Rs 10,372 crore to the India AI Mission. This initiative aims to spur AI innovation through dynamic public-private partnerships, with Rs 2,000 crore specifically designated to support deep technology startups.

India's engagement in AI on a global scale is robust, with the second-highest number of GitHub AI projects worldwide, comprising 19% of global AI endeavours. From 2015 to 2023, India led the world, expanding its AI talent pool, with an impressive 263% increase since 2016. In 2023, the hiring of AI talent in India surged by 16.8% year-over-year, indicating a strong emphasis on cultivating AI skills within the workforce.

According to NASSCOM, 70% of Indian startups are integrating AI to propel their growth, highlighting its pivotal role in our start up ecosystem. The 'IBM Global AI Adoption Index 2023' reveals that 74% of Indian enterprises that have adopted AI are not merely using the technology but are actively increasing their investments, underscoring the strategic importance of AI in enhancing operational efficiencies and pioneering new avenues for development.

Transition periods invariably bring their own set of adjustment challenges, and the current shift towards AI-driven economies is no exception. According to the "Future of Jobs" report by the World Economic Forum, we're on the brink of a major upheaval in the global job market, with nearly one-fourth of existing jobs facing potential turnover and about 44% of the workforce needing to adapt to altered skill demands. Similarly, the International Monetary Fund's recent analysis reveals that 40% of global employment is now vulnerable to AI innovations.

AI's remarkable ability to enhance operational efficiency, streamlining processes with unparalleled precision, is indeed transformative. However, this surge in productivity also prompts critical questions about inclusivity within the workforce. How can we ensure that the benefits of technological advancements are equitably shared? Moreover, AI ushers in unprecedented creative possibilities with the advent of GenAI. Yet, there's a risk that excitement about these capabilities could overlook the valued role of human diligence. It is essential to strike a balance where AI complements rather than replaces human expertise, fostering a collaboration that enhances both technology and human insight. As the Prime Minister put it eloquently in his remarks this week at the G7 Summit, *"We have to collectively ensure that the benefits of technology reach all sections of society, to realize the potential of every person in the society, to help in removing social*

inequalities, and expand human powers instead of limiting them. This should not only be our desire, but our responsibility. " Herein, a collaborative effort of policymakers, businesses, and the tech community becomes critical.

First and foremost, as we navigate the integration of AI into the workforce, India must aim to establish comprehensive end-to-end AI capabilities. India should not limit itself to merely being the application frontier of AI; it must ambitiously strive to establish foundational capabilities in both hardware and software, shaping the very core of AI technology. It is noteworthy that India generates 20% of the world's data yet hosts only 2% of the world's data centres, with our computing infrastructure comprising less than 2% of the global capacity. This significant discrepancy poses a critical bottleneck that impedes our technological advancement. It is crucial to catalyse a robust strategy that pole vaults India into a leadership position within the global AI supply chain. This approach will not only create more jobs and elevate opportunities for value addition but will also bolster our standing in the global technology landscape.

Secondly, it is crucial to integrate comprehensive AI curriculums within our education system. Our schools, colleges, and research institutions must offer robust learning modalities that enable students and researchers to explore and experiment with the fundamentals of AI. This should encompass a wide range of subjects, from mathematics and statistics to machine learning, deep learning, natural language processing, computer vision, reinforcement learning, and AI ethics. We must develop curricula that are industry-contextualized, technologically iterative, and globally relevant from K-12 to graduate levels, serving as beacons for educational excellence.

Establishing career tracks from the school level to cultivate AI specialists and implementing an AI-first strategy in our Atal Tinkering Labs within the next few years should be taken up in mission mode. It is vital to create a collaborative and competitive ecosystem among educational and research institutions to enhance AI interventions. Initiatives like the FutureSkills PRIME, a partnership between industry leaders and the government, aim to re-skill and up-skill approximately 1.4 million employees over the next five years in emerging technology skills are essential and should be actively supported and expanded to address the evolving needs of the workforce amid rapid technological changes.

Finally, the continuous development of a robust and smartly targeting social welfare net to aid workforce transition should be prioritised. Furthermore, creating a national employment information monitoring platform that tracks real-time changes in employment across critical regions and key positions will prove invaluable. By providing up-to-date employment status, early warnings, and predictive forecasts, we can navigate the ever-changing employment landscape more effectively. This comprehensive approach will ensure that the benefits of AI advancements are widespread and risks are actively mitigated, building a resilient and forward-looking economy.

Our steadfast commitment to building a developed India by 2047 is anchored in the principle that no section of society should be left behind in our national journey toward development. As we embrace this ambitious resolve, it is essential to recognize that we are amidst an AI era brimming with limitless possibilities. It is vital that our policies set forth clear guiding principles—our North Stars—and create robust navigation tools for every societal stakeholder. This strategic approach

will illuminate the path toward our ambition, ensuring that every individual has the opportunity to both contribute and benefit.

- ***The author is G20 Sherpa. Views Expressed are personal.***