

# Impact of Artificial Intelligence on Business Performance and Employment in India

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**Abstract:** *Artificial Intelligence (AI) has become a game-changer, impacting business outcomes, productivity, and job dynamics in India. The rapid advancement of AI technologies like machine learning, robotic process automation (RPA), and generative AI has revolutionized how organizations operate in various industries, improving efficiency, innovation potential, and decision-making processes from 2020 to 2026. Concurrently, this technological shift has engendered some intricate labour market implications, such as concerns over job displacement, skill mismatch, and escalating labour market polarization. This paper critically analyses the double-edged sword effect of AI on the performance of business and employment in India through secondary data from the academic literature, policy documents, and Industry reports. The analysis reveals that the impact of AI on job creation is varied and industry-specific, while its potential for productivity gains and cost optimization is significant. The analysis suggests that AI has the potential to significantly drive productivity and cost reduction while also impacting employment in different ways across various industries. AI-powered and high-skilled jobs are growing at a much faster rate than routine, repetitive, and entry-level jobs, which are undergoing functional restructuring or contraction. The study finds that while India's transition to AI may result in the loss of some jobs, it is not a complete job replacement, rather it is a structural job transformation. It also underscores the importance of expedient policy actions to reskill, reform digital education, and establish an inclusive technological infrastructure for equitable sharing of the economic benefits of AI.*

**Keywords:** Artificial Intelligence, Business Performance, Employment, India, Automation, Productivity, Skill Displacement, Digital Transformation.

## I. INTRODUCTION

The impact of Artificial Intelligence (AI) is reshaping the architecture and operations of contemporary economies, affecting their production systems, business models and labour markets. Since the year 2020, there has been a considerable acceleration in the adoption of AI in India, which was spurred by the fast-paced digitalisation, growth of cloud computing, the availability of vast amounts of data and the prevalence of data-driven decision making across all industries. COVID-19 was a major catalyst in this change, forcing organisations to look at automation, remote technologies and intelligent systems to keep things running in times of disruptions, ensuring operational continuity, resilience and cost efficiency.

AI-led transformation in India poses a unique environment for the study of AI because of its large and diverse workforce, growing digital economy, and dual economy of advanced services and informal jobs. AI can help boost productivity, improve business performance, and foster innovation in areas like information technology, banking and finance, healthcare, retail, and manufacturing. AI can play a role in increasing productivity, optimizing business operations, and driving innovation in industries such as information technology, banking and finance, healthcare, retail, and manufacturing. At the same time, it is simultaneously disrupting the traditional systems of employment as it is replacing the repetitive, routine, and rule-based tasks traditionally requiring manpower.

Consequently, the Indian labour market is going through a structural change with job reconfiguration without job elimination. The demand has been growing for highly skilled and technology-focused occupations, while demand for

middle and lower-level occupations is facing functional transformation or stagnation. This bi-fold effect underscores the importance of a critical scrutiny of the role of AI in transforming economic productivity and employment in India's ever-changing digital economy.

## II. LITERATURE REVIEW

**Acemoglu and Restrepo (2020-2022)**, Artificial Intelligence (AI) is a form of routine-biased technological change (RBTC), which involves technological change that mainly automates routine and repetitive tasks, but also supports non-routine cognitive and analytical tasks. The empirical analysis they conduct indicates that while AI helps to increase productivity growth and boost efficiency, it also lessens the need for middle-skill routine jobs. This process is linked to labour market polarization, which consists of an increase in employment in high-skill, highly technological jobs and a reduction in employment in routine middle-skill occupations, thus changing the occupation composition and income distribution in contemporary economies.<sup>1</sup>

**World Bank (2021-2024)** AI-driven development economy transformation does not necessarily lead to net loss of jobs, according to the World Bank (2021-2024). Instead, it results in major restructuring of occupations, with the types of occupations varying but the number of occupations not changing as much. This transition is accompanied by an increasing need for digital literacy, analytical ability,<sup>2</sup> and human-machine coordination skills. It highlights that employees who learn how to meet the new demands of technology will enjoy more opportunities for new jobs, whereas those who don't will either get displaced or reclassified into poorer job sectors in the new labour market configuration.<sup>3</sup>

**OECD (2023)** which maintains that the use of Artificial Intelligence (AI) is more about the way work is done within jobs than about the jobs that are done. Most employment involves a collection of tasks, and AI generally automates routine parts of the job but doesn't eliminate the non-routine and cognitive tasks. In this context, the OECD highlights the need for lifelong learning systems to enable workers to keep up with evolving skills needs, given the increasing relevance of life-long learning. Reskilling and upskilling are thus recognized as key policy actions necessary to support a successful transition in the labour market driven by Artificial Intelligence.<sup>4</sup>

**Brynjolfsson, Rock, and Syverson (2021)** give a term for this phenomenon: AI's "productivity paradox." According to Brynjolfsson et al., although AI can be powerful tools for firm-level productivity growth and operational efficiency, it may not necessarily produce a proportional amount of macroeconomic productivity growth. They believe this delay is because of slow organisational adaptation, investment requirements, and a continuing lack of skills in the labour market. The potential economic impact of AI can be postponed as businesses need time to adapt their processes, implement AI solutions, and retrain staff. Therefore, the true potential of AI-powered innovation is likely to be understated at the economy-wide level.<sup>5</sup>

**NITI Aayog (2020-2025)** envisioned Artificial Intelligence as a strategic thrust area of the Digital India and has envisioned that AI will take India to a great height in each and every field including healthcare, Agriculture, Education, and Governance. The policy framework emphasizes the potential of AI to improve the efficiency, innovation, and service delivery in the public and private sectors.<sup>6</sup> It also warns, however, that the divide between access to AI-related skills and infrastructure could widen socio-economic inequalities already present in society. To overcome this, NITI Aayog has stressed a need for scaling up skilling programs, provision of inclusive digital infrastructure and accessibility to make growth more inclusive for all segments of society through AI.<sup>7</sup>

<sup>1</sup> Acemoglu, D., & Restrepo, P. (2020). Robots and jobs: Evidence from US labor markets. *Journal of Political Economy*, 128(6), 2188–2244.

<sup>2</sup> World Bank. (2024). *Future of work in developing economies: Digital transformation and jobs*. World Bank.

<sup>3</sup> World Bank. (2021). *World Development Report 2021: Data for better lives*. World Bank Publications.

<sup>4</sup> OECD. (2023). *OECD employment outlook 2023: Artificial intelligence and the labour market*. OECD Publishing.

<sup>5</sup> Brynjolfsson, E., & McAfee, A. (2021). *The second machine age: Work, progress, and prosperity in a time of brilliant technologies*. W. W. Norton & Company.

<sup>6</sup> NITI Aayog. (2025). *AI roadmap for inclusive growth in India*. Government of India.

<sup>7</sup> NITI Aayog. (2021). *Responsible AI for all: National strategy for artificial intelligence*. Government of India.

### III. METHODOLOGY

#### 3.1 Research Design

This study is of a qualitative type and secondary research where the impact of Artificial Intelligence (AI) on the business performance and employment structure in India for the period 2020-2026 is investigated. The qualitative approach is deemed suitable as it allows understanding of complex socio-economic and technological change, without resorting to numerical modelling or primary data collection. Emphasis is placed on the interpretation of knowledge from sources such as existing academic and institutional knowledge and empirical findings. This design allows for the study of the impact of AI on various sectors of the Indian economy in terms of organizational efficiency, productivity improvement and changing labor market dynamics. It also enables to explore wider trends like labour market polarization, skill transition and job change. The research design incorporates multiple voices from academic research and policy documents to provide a comprehensive and contextual analysis of the economic impact of AI in the dynamic digital landscape of India.<sup>8</sup>

#### 3.2 Sources of Data

The study uses only secondary data as the sources of data to analyse the effect of Artificial Intelligence (AI) on business performance and employment in India. The sources of data are peer-reviewed journal articles from 2020 to 2026 to capture the latest academic advances in the field of AI research. Furthermore, working papers from sites like SSRN and arXiv are used to incorporate new and pre-publication scholarly knowledge. Government reports and policy documents offer an official view of the strategies for AI adoption, the policy initiatives for digital transformation, and the policy initiatives for the labour market in India. Industry and consultancy reports provide useful industry-specific and practical information on trends in business adoption and impacts on sectors. Moreover, the economic and labour market data analysis is based on press releases thereby capturing the real-time developments in the AI transformation process. The variety of these secondary sources offers a holistic and multidimensional perspective on the impact of AI on organizational performance and job structures in the Indian context.

#### 3.3 Data Collection Method

Data collection method of this study is a systematic identification, selection and review of relevant literature related to Artificial Intelligence (AI) and its influence on the performance of business and employment in India. The literature studied was collected through a structured search strategy carried out in academic databases, working papers databases, government publications and credible industry sources, from the year 2020 to 2026. Studies that explicitly focus on AI adoption, automation, productivity gains and upskilling to transform the labour market are prioritised. Special attention was given to the recent literature on developments since 2020, such as progress in the fields of machine learning, robotic process automation (RPA), and generative AI systems. Every document chosen was analysed and key findings were identified on the aspects of efficiency in business, job changes and skills. The data gathered was then compiled thematically, keeping sources consistent and comparable. This systematic approach will provide the information for the study to be based on up-to-date, relevant, and reliable evidence.<sup>9</sup>

#### 3.4 Analytical Framework

For interpretation and synthesis of the secondary data on Artificial Intelligence (AI) and its impact in India, this study uses a thematic analysis approach as its main analysis tool. Thematic analysis can be used to: Discover common themes, ideas or connections between a variety of qualitative sources. Thorough review of literature was conducted to identify relevant themes regarding business performance, transformation of work and transformation of skills. These concepts were then structured by coding them and categorizing them under larger analytical themes to address the

<sup>8</sup> Autor, D. (2022). The labor market impacts of technological change: From unbundling to re-bundling. *Annual Review of Economics*, 14, 1–25.

<sup>9</sup> International Labour Organization. (2023). *Generative AI and jobs: A global analysis of potential labour market impacts*. ILO.

multi-dimensional effects of AI. The framework allows for a systematic comparison between academic studies, policy reports and industry analyses, and coherence in interpretation. It also provides insights into the impact of AI on work organization, workforce transformation and adaptation. This analytical framework offers a deeper conceptual understanding of the transformation of the economy and employment in India during 2020-26, driven by pattern recognition, rather than statistical measurement.

### 3.5 Thematic Categories of Analysis

This study's analysis has been structured into three key themes that encompass the primary facets of the impact of Artificial Intelligence (AI) in India. The first theme is business performance improvement including productivity enhancement, operational efficiency, innovation capacity and data-driven decision making across the sectors. The second theme is employment restructuring, looking at job displacement, job creation and how jobs are changing as a result of automation and AI integration. This theme also captures the uneven employment results across different sectors, including large disparities between high-skill jobs and routine-intensive jobs. The third theme is skill transformation, where new skill needs emerge, like data analytics, machine learning, AI system management and digital literacy. It also covers the increasing significance of the reskilling and upskilling of the workforce. These thematic categories offer a structured analysis of India's changing digital economy, highlighting the dual economic and labour market impacts of AI.<sup>10</sup>

### 3.6 Scope and Limitations

The study is limited to the impact of Artificial Intelligence (AI) on business performance and employment structure in India for 2020-2026. It centers on the secondary data sources, such as academic literature, policy reports and industry publications, to gain a holistic perspective on the AI-driven transformation. The study examines key areas like information technology, finance, health care and manufacturing, focusing on the shifts in productivity and the restructuring of the labour market. But there are some limitations in this research. This means that there is no primary empirical investigation, like surveys or interviews, which could add depth to the ground level insights, as this is based solely on secondary data. Also, the results are interpretative and subject to the availability and reliability of existing literature. In addition, fast developing AI innovations could lead to new developments not covered in the time selected that may impact the completeness of the analysis.

### Result

**Table 3.1: Distribution of Literature Across Key Thematic Categories (Illustrative)**

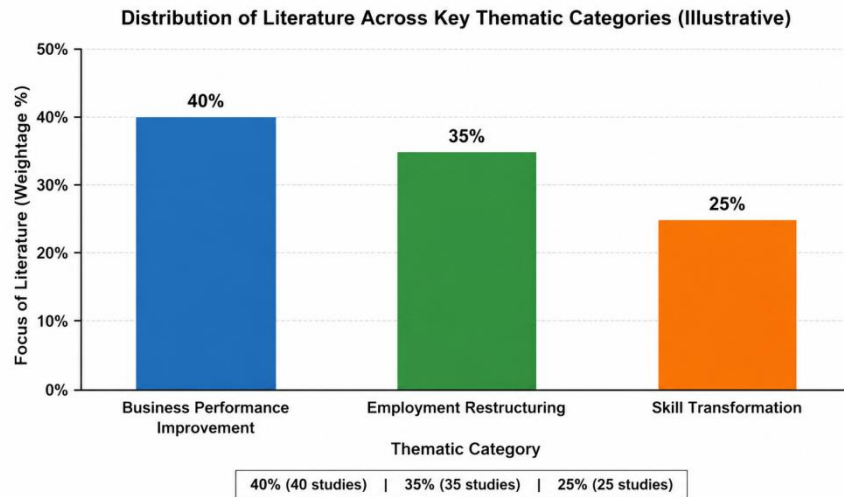
| Thematic Category                | Focus of Literature (No. of Studies / Weightage %) |
|----------------------------------|--|
| Business Performance Improvement | 40% (or 40 studies equivalent)                     |
| Employment Restructuring         | 35% (or 35 studies equivalent)                     |
| Skill Transformation             | 25% (or 25 studies equivalent)                     |

### Interpretation

The distribution of literature by the 3 thematic categories shows a relatively balanced but uneven focus on various aspects of AI in the Indian context. Academic and industry interest in the role of AI in boosting productivity, improving operations, innovating and supporting decision-making is evident in the dominant focus of literature on business performance improvement (40%). This is followed by restructuring of employment (35%), indicating increasing awareness about job destruction, job creation and shifts in occupational structures as a result of the introduction of automation and AI. Skill transformation is also critically important but it is the least explored category, covering the new skill needs, reskilling requirements, and adaptability to the AI economy. The distribution reveals that the impact of

<sup>10</sup> Ministry of Electronics and Information Technology. (2022). *IndiaAI: National AI strategy implementation report*. Government of India.

AI on the economy and organisations has been well researched, whereas less work has been performed on the long-term impacts of AI on human capital development, implying a gap in the field of AI-related skill studies.<sup>11</sup>



**Figure 3.1: Distribution of Literature Across Key Thematic Categories in AI Research (2020–2026) —Business Performance, Employment Restructuring And Skill Transformation**

#### IV. AI AND BUSINESS PERFORMANCE IN INDIA

##### 4.1 Productivity Enhancement

In India, Artificial Intelligence is emerging as a pivotal force in improving business productivity by empowering businesses to make informed, timely, and accurate decisions. By leveraging predictive analytics, companies can gain insights into market trends, customer behavior, and potential risks, which helps them make more informed decisions in their strategic planning and minimizes uncertainty in business operations. The repetitive, rule-based tasks that can be automated with AI help to minimise operational delays, boost efficiency of processes, and enable employees to engage in more value-added and complex tasks. Moreover, customer behaviour forecasting solutions enable business to tailor products and services to individual customers, resulting in higher levels of customer satisfaction and retention. Besides this, AI supply chain optimization can further boost inventory management, demand forecasting, and logistics, leading to lower costs and better delivery. Recent studies provide empirical evidence of workplaces like an IT or financial services company that can enjoy measurable improvements in efficiency, cost, and service quality following the adoption of AI technologies. In summary, AI is a powerful productivity tool that integrates intelligence into the fabric of business operations, making organisations more agile in a competitive economic landscape.<sup>12</sup>

##### 4.2 Operational Efficiency

Artificial Intelligence plays a vital role in improving the efficiency of business operations and boosts the speed, accuracy and consistency of the decision making processes within the organisation. AI systems can help with quick analysis of huge and complicated datasets, helping companies make real-time decisions and adjust their strategies to meet the demands of the market. This capability enhances real-time decision making processes, boosting the responsiveness and agility of the organisation to operational issues. Moreover, AI helps minimize human error by minimizing repetitive, rule-based duties that manual workflows typically involve and are prone to inefficiencies and inconsistencies. Optimised resource allocation is another major benefit, as AI-powered solutions help businesses allocate resources efficiently, such as human, capital, and material resources, using predictive and prescriptive insights. Even with these operational advantages, only about 90% of companies have monetised their investments in AI,

<sup>11</sup> Deloitte Insights. (2023). *AI in the workplace: Transforming productivity and employment in India*. Deloitte.

<sup>12</sup> McKinsey Global Institute. (2022). *The economic potential of generative AI in India*. McKinsey & Company.

indicating that the main challenges are not technological but implementation-related, lack of organizational readiness, and lack of complementary infrastructure and training to fully leverage the benefits of AI.

#### 4.3 Innovation and Business Model Transformation

The business landscape in India is undergoing a transformative shift in business models, with AI helping companies move from a labour-driven to a data-driven, flexible environment. The shift from service-based to outcome-based models is gaining traction with organisations moving from a focus on simply carrying out processes to a focus on achieving results and performance. At the same time, traditional human-only processes are being replaced by integrated human–AI collaborative systems that will bring the computational intelligence and human creativity and judgment and decision-making together. In particular, India's information technology industry has seen a significant adoption of AI for coding assistance, customer support automation, predictive maintenance, and process optimisation. These developments not only enhance operational efficiency but also allow companies to reimagine workflows, better scale and expand, and create new digital products and services. AI is thus driving ongoing innovation, boosting competitiveness and fundamentally changing the way value is generated, delivered and captured in an increasingly digital, global business world.<sup>13</sup>

#### V. DISCUSSION

The study points towards Artificial Intelligence (AI) not being just a technological innovation, but a structural economic force driving change in production systems and labour markets in India. In all industries, AI is being implemented as a fundamental part of business processes, replacing repetitive cognitive and manual tasks, adding to decision-making processes and dependence on intelligent systems for efficient operations. This mirrors the notions of Routine-Biased Technological Change (RBTC), which are based on the idea that routine-based tasks are substituted and non-routine-based cognitive tasks are relatively strengthened.<sup>14</sup>

The study also suggests that job transformation is occurring in India, instead of job destruction. But such a change is not uniform. Although there are increases in demand, high-skill workers also enjoy wage premiums, whereas middle-skill workers experience wage stagnation or displacement. Likewise, entry-level jobs are disappearing, as simple tasks are automated, creating an apparent labour market polarization or 'hollowing out' effect.

AI can also worsen structural inequities by unequal wage distribution, urban-rural digital divide, who benefits from reskilling, and skewed distribution of benefits to larger companies and tech hubs. Organisational level: Companies are moving towards AI-enhanced working models, with fewer hierarchical levels and more human–machine collaboration, but not automation.

Despite the rapid pace of adoption, many policies and practices are currently lacking in education alignment, skilling programs are scattered across different levels, the preparedness of small and medium-sized enterprises is low, and there is a lack of established governance frameworks for AI. In theory, the results are consistent with SBTC, RBTC, and task-based approaches and together account for labour reallocation and not net unemployment.

The success of skill development initiatives, digital infrastructure, and inclusive AI governance frameworks in India will shape the nation's future.<sup>15</sup>

#### VI. CONCLUSION

AI is becoming the game-changer, offering a transformative impact that is changing the way business performs and the nature of jobs in India. A seamless application has been achieved in various industries, including manufacturing, finance, healthcare, retail, and services, boosting productivity, efficiency, and decision-making processes. AI has

<sup>13</sup> PwC India. (2024). *Artificial intelligence and the future of work in India*. PricewaterhouseCoopers.

<sup>14</sup> World Economic Forum. (2023). *The future of jobs report 2023*. WEF.

<sup>15</sup> United Nations Development Programme. (2022). *Digital transformation and human development in South Asia*. UNDP.

brought significant benefits to businesses, such as cost reduction, increased accuracy, and the ability to innovate through predictive analytics and intelligent systems, further enhancing India's competitiveness in the global market.

But this development in technology has created a complex issue for the labor market as well. While AI is not necessarily leading to large-scale unemployment, it is undeniably disrupting traditional employment structures. The demand for low-skill and repetitive tasks is declining, while the demand for highly skilled jobs based on technology and interdisciplinary interests is growing. This has resulted in a shift from labour intensive to skill intensive and knowledge based employment in India.

This shift highlights a pressing policy and social challenge – how to close the growing skill gap. If not equipped with proper reskilling and upskilling programs, a large share of the workforce will be barred from accessing new opportunities in the AI-powered economy. Hence, rather than just technological uptake, the key to labour market prospects in India will lie in inclusive human capital development policies.

To sum up, Artificial Intelligence is a boon as well as a threat. Whether it has a positive or negative long-term effect on India's business landscape and jobs will depend on the extent to which the country can strike a balance between introducing innovation and ensuring that skills are developed inclusively and that new technological opportunities are accessible to all.

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