Impact Of Artificial Intelligence In The Indian Job Market Post Covid-19

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ARTICLE DETAILS	ABSTRACT
Research Paper **Accepted:** 17-01-2026 **Published:** 10-02-2026 **Keywords:** *Artificial intelligence (AI); Indian job market; post-COVID-19 economy; automation and job polarization; future of work; skill transformation and reskilling; hybrid workplaces; sectoral AI adoption; workforce well-being; employability and inequality.*	This study attempts a thorough analysis of the impact of artificial intelligence (AI) on the Indian labour market in the post-covid-19 scenario focusing on the issues of job displacement and job creation, changing nature of skills demanded in the economy, the changing nature of work arrangement and sector specific adoptions. Building on empirical evidence of the pandemic jump-starting the digital transformation of Indian industries, the analysis strives to summarise post-pandemic dynamics in automation and workforce restructuring, with a special focus on the information technology services sector, manufacturing, agricultural supply chains, banking, tourism and hospitality, and public-sector service delivery. The paper argues that the impact of AI on the labour market in India needs to be conceptualised as a dual transition: (i) task level substitution and job polarization brought about by automation and digitisation of workflow, and (ii) job creation driven by capabilities in association with data centric operations, learning and development, and AI enabled business models. It further explains how hybrid and digitally mediated workplaces have increased the need for flexible human capital, while at the same time magnifying concerns about employability, as well as employee well-being and unequal distribution of opportunities across demographic groups. Moreover, the study covers the implementation barriers, including the apprehension of stakeholders, organisational readiness, and sectoral

constraints, and their moderating role in AI-driven employment outcomes. Overall, the paper concludes that post-COVD diffusion of AI in India is changing job roles more than eliminating entire jobs, but the absence of targeted skilling interventions, inclusive labour policies and responsible adoption practices could result in the productivity gains associated with AI, which adds to the scenario of compounding inequality and precariousness among vulnerable segments of the workforce.

1. INTRODUCTION

The pandemic of Covid-19 was a structural break in the development of the labour market in India. Nationwide lockdowns, supply-chain disruptions, and a sudden transition to remote and digitally mediated work revealed the weaknesses and the adaptability of companies and workers. Sectors like manufacturing, hospitality, tourism, aviation, retail, and informal services saw huge job losses and compressions in wages, while segments of IT services, digital finance, e-comm and plat formations rapidly grew. As organisations were looking to maintain continuity and manage health-related constraints, they also accelerated the implementation of automation, analytics and artificial intelligence (AI) in core business functions. This accelerated use of artificial intelligence (AI) based tools for forecasting, customer interaction, process optimisation and remote service provision generated more demand for digitally skilled workers - even as it led to concerns about the displacement of routine and low skills positions. In an Indian context, then, AI adoption has been piled on top of an already unequal labour market structure, which is characterised by high levels of informality, regional disparities, gender gaps and ongoing skill mismatches. Studies on the effect of automisation and AI on employment in India point to both the possibilities of job polarisation and the creation of new categories of jobs that complement intelligent systems and not necessarily compete directly with them (Hammer & Karmakar, 2021; Behera & Nigam, 2025). The available evidence from the IT and IT-enabled services (ITeS) sector points to AI-based solutions in software development, cybersecurity, cloud operations and customer support, changing the composition of tasks, with mid to high level analytical and supervisory occupations growing relative to the routine back office tasks (Grover, 2024; Haritha & Kuamar, 2025). At the same time, there has been a growing concern about the long-term employability of workers in labour-intensive industries, which are under cost pressures to automate (including manufacturing, agriculture supply

chains, logistics, and low-end service activities) (Bishnoi et al., 2023; Nayal et al., 2022; Mishra et al., 2023).

The pandemic thus became the inflection point speeding up the process of digitalisation and integrating AI in various sectors. In banking and financial services, artificial intelligence (AI) and Internet of Things (IoT) - enabled solutions were deployed for the sustenance and risk management of banking operations as well as extending digital channels for customers under mobility restrictions (Mishra & Sant, 2021; Perwej, 2020; Schrank, 2025). In agriculture and agri-food supply chains, AI and data-driven platforms were used for mitigating supply disruptions, better forecasting and coordination of actors in fragmented markets (Nayal et al., 2022; Sridhar et al., 2023). Healthcare, aviation, energy, and manufacturing also experimented with various AI-based analytics and automation and remote monitoring in an attempt to navigate the crisis and prepare themselves for the "new normal" (Singh et al., 2023; Jain et al., 2024; Sharifi et al., 2021; Bishnoi et al., 2023; Arsad et al., 2023). These sectoral transformations have direct and indirect implications for employment levels, skill profiles and work organisation in India as firms reconfigure production processes, value chains and service delivery models around AI-enabled capabilities. At a macroeconomic level, the extent of the COVID-19 shock was part of the pre-existing weakness in India's labour market, but also provided the impetus for policy debates in the areas of digital transformation, social protection, and human capital development. Analyses of the socioeconomic impact of the pandemic reported significant loss of jobs, increased precarity of jobs for informal and self-employed workers and unequal impacts on women and marginalised groups (Aneja & Ahuja, 2021; Jasrotia & Meena, 2021; Rakshit & Paul, 2020). In parallel, studies on the economic and sectoral impacts of the Covid-19, including manufacturing, higher education, tourism, and energy, pointed out the key role of digital technologies and AI in supporting continuity and reconfiguration of activities (Deshmukh and Haleem, 2020; Jena, 2020; Joshi and Gupta, 2021; Lama and Rai, 2021; Arsad et al., 2023). These trends are consistent with global evidence of the pandemic accelerating the Fourth Industrial Revolution and AI and machine learning becoming core enablers of resilience, productivity and new business models (Mhlanga, 2022; Chymis, 2020).

Within organisations, the deployment of AI is intersecting with changes in the nature of work, in particular, the increase of hybrid and remote workplaces. Studies of Indian workplaces during the post-covid era highlight the changing expectations in terms of productivity, performance assessment and work life boundaries with the advent of digital collaboration tools, virtual monitoring and algorithmic management (Verma et al., 2023; Singh & Tarkar, 2022). In the sphere of human resource management AI is increasingly used for recruitment, talent analytics and learning and development promotion leading

to potential efficiency benefits as well as potential concerns regarding fairness, transparency and surveillance (Mer & Virdi, 2023; Cramarenco et al., 2023). These organisational transformations have implications for not just the number of jobs but also the quality of jobs, employee well-being and who gets the bargaining power at work, especially where data driven performance measures and automated decision making systems determine access to opportunities and rewards.

Despite this being a growing body of work on AI, Covid-19, and a changing work frontier, there is a need for an integrated assessment of how AI is transforming the job market in India in the post-Covid era. Existing studies either focus on one sector, such as IT services, healthcare, agriculture, banking or manufacturing, or they look at macro-level indicators without describing the mechanism by which AI impacts various categories of workers (Grover, 2024; Mukherjee, 2022; Nayak et al., 2022). Moreover, much of the debate is polarised between accounts of large scale job loss, and optimistic visions of limitless digital opportunity. A more nuanced understanding calls for some attention to task-level transformation, skill complementarities, institutional context and policy responses. This article overcomes this gap by synthesising the empirical and conceptual contributions about the adoption of AI, labour market adjustments, and sectoral restructuring in India after the pandemic of Covid 19. The goal of the research is threefold. First, it maps the patterns of adoption of AI in key sectors of the Indian economy to highlight how the pandemic has accelerated or changed the pre-existing trajectories. Second, it discusses the implications of these patterns in terms of levels of employment, occupational structures and skill requirements with a special focus on job polarisation and emerging forms of digital precarity. Third, it examines the role of policy, corporate strategy and workforce development initiatives in mediating the impact of AI on different segments of labour market including women, youth, informal workers, and mid-career professionals. By doing so, the article aims to add evidence-based knowledge to current policy and managerial debates on the use of artificial intelligence for jobs in India for inclusive and sustainable employment growth in the post-COVID-19 era. Additionally, the study situates the experience of India in wider international debates on AI, development and the future of work, and so provides comparative insights that may be useful for other emerging economies facing similar technological and demographic transitions.

2. LITERATURE REVIEW

2.1 Covid-19, structural shocks and the basis of labour market change

The COVID-19 pandemic caused unprecedented shock to the Indian labour market resulting in deep and uneven ramifications across regions, sectors and demographic groups. Empirical studies on the

socioeconomic impact show significant decreases in jobs, increased income insecurity of the informal and self-employed, and increased vulnerability for women and lower-income households (Aneja & Ahuja, ladybird 2021; Rakshit & Paul 2020). Sectors like education, the hospitality and tourism sectors were especially affected by closure and mobility restrictions and forced universities, training institutions and service firms to quickly move towards online or hybrid delivery models (Jena, 2020; Joshi & Gupta, 2021; Lama & Rai, 2021). At the same time, the crisis has also accelerated digitalisation and technology adoption. Firms that survived to some extent by the reconfiguration of production and service processes based on digital tools, remote work and data-driven coordination. Sectoral assessments of manufacturing, for example, shows that the integration of automation, analytics and Industry 4.0 practices to restore supply chains and build resilience were fostered by Covid-19 (Deshmukh & Haleem, 2020; Bishnoi et al., 2023). Similar trends appear in the area of energy with AI-enabled forecasting and optimisation reducing the impact of demand volatility and improving system stability in the pre- and post-pandemic transition (Sharifi et al., 2021; Arsad et al., 2023). Viewed in a more general context, these developments fit into the international evidence that the pandemic acted as a "shock accelerator" for the Fourth Industrial Revolution. Research on labour markets in Brazil and other emerging economies shows how the pandemic exacerbated digital inequalities and accelerated the trajectory of automation and integration of AI and machine learning into new business and policy responses (Prates & Barbosa, 2020; Mhlange, 2022). For India therefore, understanding the post-Covid job market requires an analysis that goes beyond the cyclic job losses accounting for the reorientation of jobs and involves the structural redirection of firms to AI-based model of production and service delivery.

2.2 AI, Automation and Job in Indian Context

The consensus in the literature on the impact of AI on employment is that AI does not "destroy jobs" but rather it reconfigures the way the composition of tasks and skills is distributed across occupations. Empirical and conceptual studies on India's labour market suggest that automation and AI are likely to compress the demand for routine, codifiable work and at the same time increase the demand for high-skill digital, analytical and managerial positions (Hammer & Karmakar, 2021; Nippani, 2020). Analyses of automation and labour market trends in India point towards the risk of job polarisation with jobs growing at the top (AI engineers, data scientists, systems architects) and at the bottom in low wage, and work mediated by a platform, but middle skills clerical and operational jobs are at risk of being substituted (Behera & Nigam, 2025; Market, 2024). Mukherjee 2022 As an example, labour-intensive, pandemic-affected Indian industries used AI and related technologies to reduce exposure to health risks as well as rationalise labour costs, and as a result, pressures on low-skill workers are being reinforced. At the same

time, questions of complementarity also appear: it is common for AI systems to need human supervision, domain-specific knowledge and interpretive judgment, and thus lead to the creation of new roles in supervision, exception management and human-AI-interaction (Pavashe et al., 2023; Haritha & Kuamar, 2025). Globally oriented reviews support this nuanced view. Abuselidze and Mamaladze (2021) suggest that the effects of AI on jobs before and during the pandemic depend on the content of the task to be performed and the institutional context, whereas Cramarenco et al. (2023) show that the adoption of AI changes the demand for skills and well-being in complex ways, raising the demand for upskilling, but also increasing stress in contexts of rapid change and weak governance. Tayal's study on "Artificial Intelligence vs the Indian Job Market" supports this argument that the net impact of AI on employment is highly dependent on policy decisions, skilling and productivity gains distribution.

2.3 Sectoral paths of AI adoption and labour market impacts

A second strand of literature focuses on sector-specific paths through which AI diffused during and after the pandemic (i.e. Covid-19). Within the Indian IT and ITeS industry, using AI-powered tools is revolutionizing the software development, testing, and operations and customer support sector. Grover (2024) and Haritha & Kuamar (2025) report the changes in demand driven by AI applications in coding assistance, automation of routine tickets, predictive maintenance and cybersecurity that are shifting from low to higher skilled work with a focus on system design, integration and governance. Manoharan et al. (2024) highlight a mediating role of learning and development: firms investing in continuous updates to the skills of their employees can use AI to boost employee performance, rather than merely as a strategy to lower headcount. In the manufacturing industry, AI and automation were incorporated into larger Industry 4.0 efforts. Bishnoi, S., Chen, Y., Chou, H., & Miao, Z. (2023) How Artificial Intelligence adoption in Asia-Pacific Manufacturing Systems Hastened under Combined Pressure of Covid-19 and Competition Challenges: When digital twins, robots, and predictive analytics changed the combination of roles at the shop floor and engineering levels. Deshmukh and Haleem (2020) underscore similar dynamics in the Indian manufacturing sector with post-COVID frameworks stressing on resilience, automation and lean operations with implications on the direct and indirect jobs. Agriculture and agri - food supply chains can be taken as another salient pathway. Nayal et al. (2022), Mishra et al. (2023) and Sridhar et al. (2023) discuss the countermeasures of AI-enabled forecasting, risk management and digital platforms in combating the disruptions in agricultural logistics and global food systems. These technologies can provide new job opportunities in agri tech start ups, data analytics and digital extension services but on the other hand, they will marginalise smallholders and informal labourers who do not have access to connectivity, capital or digital literacy. The financial industry saw the explosive growth of

digital and artificial intelligence (AI)-driven services as banks and fintechs and regulators continued to operate and provide access to customers despite mobility challenges. Mishra and Sant (2021) and Perwej (2020) highlight how AI, IoT, and digital platforms helped in making payments contactless, remote KYC, risk analytics, and automated customer interaction in Indian banking. Schrank (2025) brings post Covid-19 evidence of how AI-improved mobile banking services would impacts on behavioural intentions and adoption patterns, which indirectly affecting job structures in branch networks, call centres and fintech ecosystems. Energy, justice, tourism and aviation are additional extensions to this picture. Sharifi et al. (2021) and Arsad et al. (2023) study the role of AI in optimisation and

Decarbonisation in the energy sector requires the development of new competencies in the fields of data engineering, grid analytics and system operations. Chandra et al (2020) Assessing the Impact of Artificial Intelligence on the Transformation of the Justice Delivery System in India through Virtual Hearings and Decision Support Tools Implications for Legal Clerical Work and Professional Practice in the Legal Profession. Studies of tourism and the aviation industry find that there have been massive job losses, but also document a shift to AI-enabled contactless services, demand forecasting and optimization of operations (Lama & Rai, 2021; Jain et al., 2024).

2.4 AI, HRM, Hybrid workplaces & employee outcomes

A third stream of work is the impact of AI and hybrid and remote work configurations changing human resource management (HRM) and work organisation in India. Verma et al. (2023) show that the "future of work" in Indian organisations is increasingly being characterised by hybrid workplaces that are built on digital platforms, algorithmic scheduling and virtual collaboration tools. Singh and Tarkar (2022) discuss the effects of AI-based automation and analytics on work culture and employee satisfaction and how although some employees appreciate the flexibility and alleviation of certain tasks, others find that they are now subject to more monitoring, intensification of workload, and uncertainty about the security of their long-term employment. AI's integration into HRM functions is also equally important. Mer and Virdi (2023) describe the impact of AI being used for recruitment, screening, talent analytics and performance management from a post-pandemic perspective. These applications promise efficiency and better talent matching but raise questions of ethics with regards to bias, transparency and due process. Manoharan et al. (2024) is making a point by suggesting the power of AI-enabled learning and development platforms to serve as a buffer to help employees learn new skills and adapt in changing job roles. Cramarenco et al. (2023) in a systematic review, alert that the adoption of AI also can lead to an increase in psychological pressure where workers feel that they are being surveilled or fear obsolescence.

Gendered and intersectional analyses highlight the fact that such transformations are not neutral. Jasrotia and Meena (2021) document that working women in India bore disproportionate burdens during the pandemic, such as job loss, increased unpaid care and digital exclusion. In such a context, AI-driven restructuring, if it is not safeguarded, risks entrenching existing inequalities by giving an advantage to those who are more stable in their connectivity, have advanced skills and are visible to organisations.

Synthesis of key strands of literature 2.5

The broad strands of the literature relevant to AI and the Indian job market post-covid-19 can be synthesised as given in Table no. 1.

Table 1. Key strands of literature on AI and the Indian job market post-COVID-19

Theme	Representative studies	Key insights
Macroeconomic and sectoral impact of COVID-19 in India	Aneja & Ahuja (2021); Rakshit & Paul (2020); Jena (2020); Joshi & Gupta (2021); Lama & Rai (2021); Deshmukh & Haleem (2020)	COVID-19 generated large employment losses and sectoral disruptions, especially in informal work, education, tourism and manufacturing, while simultaneously accelerating digitalisation and technology-driven restructuring.
Automation, AI and labour-market restructuring in India	Nippani (2020); Hammer & Karmakar (2021); Mukherjee (2022); Market (2024); Behera & Nigam (2025); Tayal (n.d.)	AI and automation drive job polarisation and task reallocation: routine roles are at risk, high-skill digital jobs expand, and low-wage precarious work persists. Outcomes depend on skilling systems, labour regulation and distribution of productivity gains.
Sectoral AI adoption and employment effects	Grover (2024); Haritha & Kuamar (2025); Bishnoi et al. (2023); Nayal et al. (2022); Mishra et al. (2023); Sridhar et al. (2023); Mishra & Sant (2021); Perwej (2020); Sharifi et al. (2021); Arsad et al. (2023); Chandra et al. (2020); Jain et al. (2024)	AI diffusion is uneven across IT, manufacturing, agriculture, finance, energy, justice and aviation. It enhances productivity and resilience but also reshapes occupational structures and skill requirements, with mixed implications for different worker groups.

AI, HRM and the future of work	Verma et al. (2023); Singh & Tarkar (2022); Mer & Virdi (2023); Manoharan et al. (2024); Cramarenco et al. (2023); Jasrotia & Meena (2021)	AI-enabled HR analytics, hybrid workplaces and digital learning platforms transform work organisation, performance management and employee development. They create new opportunities for upskilling but raise concerns about surveillance, fairness, well-being and gendered inequalities.

2.6 Identified gaps

A common theme that runs through these strands is that of fragmentation. Numerous studies focus on isolated sectors or functions and very few provide an integrated view concerning how artificial intelligence (AI) is jointly transforming the employment levels, quality of jobs and distributional effects in the Indian labour market as a whole. Little longitudinal evidence exists tracing worker trajectories in pre-, during-, and post-pandemic times, especially for those in an informal and semi-formal occupation. Moreover, while some authors have argued for a series of skilling approaches and inclusive labour policies (Nayak et al., 2022; Behera & Nigam, 2025), there is little empirical evidence on interventions that effectively reduce the impact of displacement as well as contribute to improved employability. This article fills in these gaps by synthesising the available evidence and presenting a structured analysis of the impact of AI on the Indian job market post - COVID -19 with a particular focus on sectoral heterogeneity, skill transformation and implications for a range of categories of workers.

3. METHODOLOGY

3.1 Research design and approach

The present study takes an integrated approach of qualitative research design of analytical literature synthesis combined with sectoral mapping of AI adoption and employment outcomes from India post the Covid-19 pandemic in a structured manner. The design is explanatory and interpretive as opposed to descriptive; it aims to understand how and why AI transforms the Indian job market in the post-'pandemic' period and traces the linkages between macro shocks, sectoral AI deployment, organisational practices and labour market outcomes. Three considerations are motivating this design. First, the diffusion of AI in India post-COVID is still evolution and the empirical evidence is scattered across various sectors such as IT, manufacturing, agriculture, finance, energy, justice, tourism, aviation and public services (Grover, 2024; Bishnoi et al., 2023; Nayal et al., 2022; Mishra et al., 2023; Sharifi et

al., 2021; Chandra et al., 2020; Arsad et al., 2 A literature-synthesis approach makes it possible to make these strands come together in a consistent picture of labour-market change. Second, the use of any one quantitative data set to understand the impact of AI on the Indian job market is limited: the Indian job market is characterised by a high share of informal employment, segmentation of occupations, and regional heterogeneity. Accordingly, the study emphasises on triangulation of several qualitative and quantitative sources as documented in existing research. Third, the article aims not only to summarise the findings but also to develop a conceptual framework that highlights the mechanisms by which AI impacts employment in the Indian context including sectoral, organisational and institutional mediators.

The research is organised on the basis of three guiding objectives, already stated in the introduction, (i) to map the patterns of AI adoption in key sectors of the Indian economy during the post-COVID period; (ii) to analyse the implications of the patterns for levels of employment, occupational structures and skills requirements; and (iii) to explore the role of policy, corporate strategy and workforce development initiatives in mediating the impact of AI on different segments of the labour market. These objectives serve as a guide for the design of the conceptual framework, the selection and coding of literature and the organisation of the sectoral analysis.

3.2 Conceptual analytical framework

To establish the connections between the various levels of analysis, the study proposes development of a conceptual framework linking four key elements: (1) the shock of the Covid-19 pandemic; (2) drivers of artificial intelligence (AI) adoption; (3) sectoral and organisational deployment pathways; and (4) labour market outcomes. This framework is shown in Figure 1 and provides a basis for the following analysis. At the first level, the treatment of the Covid-19 pandemic is as a exogenous structural shock that disrupted the existing patterns of production, consumption, and work organisation particularly in the sectors such as manufacturing, tourism, hospitality, education, and services (Aneja & Ahuja, 2021; Rakshit & Paul, 2020; Jena, 2020; Joshi & Gupta, 2021; Lama & Rai, 2021; Deshmukh & Haleem, 2 The shock created powerful incentives for firms and public institutions to implement digital and AI-based technologies in order to ensure continuity and manage health and mobility constraints and re-design processes for resilience. At the second level, drivers of adoption of AI are conceptualised as a set of economic, technological and institutional factors which are cost pressures, competitiveness concerns, availability of AI tools and infrastructure, sector-specific regulatory frameworks and public policies, and organisational capabilities in terms of digital skills, data governance and innovation. For example, work in banking and manufacturing would indicate that AI adoption has been driven by both crisis

management during the pandemic, and much larger strategies of efficiency, risk management, and supply chain visibility (Mishra & Sant, 2021; Perwej, 2020; Bishnoi et al., 2023; Sharifi et al., 2021; Arsad et al., 2023). At the third level sectoral and organisational deployment pathways describe the actual integration of AI technologies into the production and service processes. These pathways are different in a systematic way in the case of IT services, manufacturing, agriculture, finance, energy, justice, tourism, aviation and public services (Grover, 2024; Haritha, and Kuamar, 2025; Nayal et al, 2022; Mishra et al., 2023; Chandra et al., 2020; Jain et al., 2024). They also include organisational practices in human resource management, performance evaluation, hybrid work, and learning and development (Verma et al., 2023; Singh and Tarkar, 2022; Mer and Verdi, 2023; Manoharan et al., 2024). At the fourth level, the labour market outcomes are represented along three dimensions: (i) the level of employment and job creation/destruction; (ii) occupational structure and skill requirements, including job polarisation; and (iii) job quality, well-being, and distributional effects across the dimensions of gender, age, and forms of employment (Hammer & Karamakar, 2021; Mukherjee, 2022; Cramarenco et al., 2023; Jasrotia & Meena, 2021; Behera & Nigam, 2

Figure 1. Conceptual framework linking AI adoption to labour-market outcomes in post-COVID India
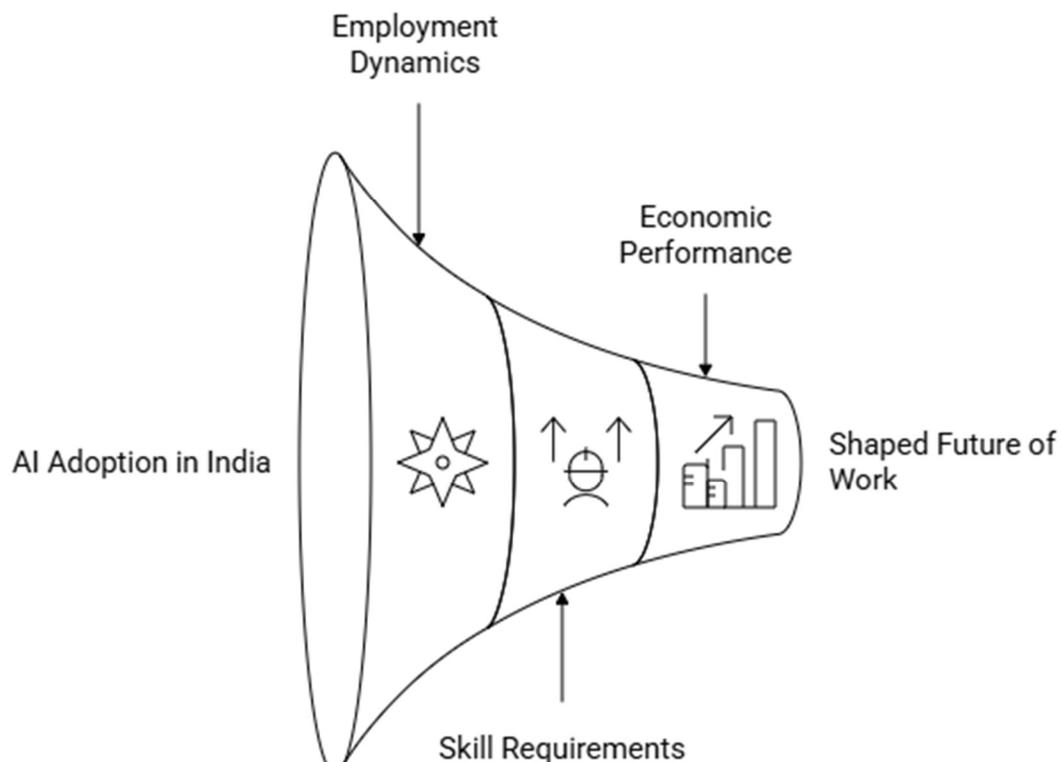
3.3 Data sources & selection of literature

The empirical basis of the study is a structured review of published academic and policy-oriented literature focusing on AI, COVID-19 and labour market dynamics with explicit relevance to India and where suitable, comparative contexts. The 40 references listed for this article make up the core dataset and were selected to ensure coverage over three dimensions: the impact of the pandemic on the labour market in India - sector; studies covering manufacturing, agriculture, tourism, higher education and services (Aneja & Ahuja, 2021; Rakshit & Paul, 2020; Jena, 2020; Joshi & Gupta, 2021; Lama & Rai, 2021; Deshmukh & Haleem, 2020; Sridhar et al., 20 AI, automation and labour market restructuring in India and other contexts, including sector specific studies of the IT, manufacturing, agriculture, banking, energy, justice and aviation sectors, and skills, HRM and the future of work (Nippani, 2020; Hammer & Karmakar, 2021; Mukherjee, 2022; Grover, 2024; Haritha & Kuamar, 2025; Bishnoi et al., 2023; Nayal et al., 2022; Mishra et al., Broader conceptual and comparative work on AI, digital transformation and employment or well-being in the post-COVID era including global and regional perspectives (Abuselidze & Mamaladze, 2021; Cramarenco et al., 2023; Prates & Barbosa, 2020; Mhlanga, 2022; Schrank, 2025; Aneja & Ahuja, 2021; Jasrotia & Meena, 2021). Although the selected works have different methodologies (quantitative econometric analysis, case studies, surveys, conceptual essays, focus groups and systematic reviews), taken together they offer rich information on AI adoption patterns, sectoral transformations, HR practices and worker experiences in the post-pandemic context. The study does not engage in any new data collection and uses these sources to build an integrated interpretation of the impact of AI on the Indian job market.

3.4 Coding and thematic analysis

The literature was analysed using a thematic coding strategy that was in line with the conceptual framework. Each of the studies was read through to identify: (i) sector or domain (e.g. IT agriculture, banking, education, tourism); (ii) type of AI or digital technology discussed (e.g. automation, analytics, digital platforms, robotics, IoT based systems); (iii) reported employment effects (job losses, job creation, task restructuring, skill demands, remote or hybrid work arrangements); (iv) organisational and HR practices (e.g. recruitment, learning and development, performance management, algorithmic management); and (v) distributional and well-being outcomes (e.g. effects on women, informal workers, Codes were used in both individual studies and then clustered into higher order themes, including: "job polarisation and task substitution"; "AI-complementary skill demand"; "sectoral heterogeneity in AI diffusion"; "hybrid and algorithmically mediated workplaces"; "gendered and intersectional effects"; and

"policy, regulation and skilling responses". Thematic matrices were built up to contrast the way individual studies report similar or divergent patterns across sectors and groups of workers. This process enabled the identification of consistent mechanisms (as AI-based automation of routine activities in IT support and manufacturing) and context specific dynamics (as exclusion risks of digital agriculture or AI mediated tourism recovery).

3.5 Sectoral mapping procedure

Based on the coded literature, the study undertook a qualitative sectoral mapping in order to organise evidence on adoption of AI and employment outcomes in key segments of the Indian economy. For each sector, the following three-step procedure was used consistently throughout the analysis: Characterise the sectoral employment structure in the pre-COVID period with typical occupational groups and the importance of informal work with the help of information embedded in the chosen studies. Identify the key AI-related technologies and applications that diffused during and following the pandemic (e.g. automated processes, predictive analytics, digital customer interaction, remote monitoring, risk management or virtual service delivery). Evaluate reported employment outcomes in terms of displacement or creation of jobs, changing occupational composition, new skills requirements and implications for quality and inclusion of jobs; This procedure is applied to the following areas: IT and IT-enabled services, Manufacturing and Industry 4.0, agriculture and agri-food supply chains, banking and financial services, energy and utilities, justice and public services, tourism and aviation, Cross-cutting HR and Hybrid-work practices. By applying a homogenous lens, the mapping allows for comparisons on the impact that AI has on various sectors and groups of workers, and how the same technology (e.g., AI-enabled analytics) may result in different labour market outcomes depending on institutional and organisational contexts.

3.6 Limitations

The methodology has a number of limitations that should be recognized. First, it is entirely based on secondary sources, which means that the analysis is limited by the availability, quality and scope of existing studies. Some sectors and groups of workers, especially in the informal economy, are not well studied, and their experiences with AI and post-COVD transitions may not be fully reflected. Second, despite the goal of making the thematic coding and sectoral mapping systematic, there inevitably is some room for interpretive judgment, particularly in synthesising findings from a range of methodologies and disciplinary perspectives. Third, the speed with which AI technologies and labour market responses are changing means that some of the findings may be time-sensitive and new evidence may alter certain

conclusions. Despite these limitations, the chosen methodology is in accordance with the objectives of the article. It enables an integrative and multi-level understanding of how AI is reshaping the Indian job market post-COVID-19 and provides a transparent conceptual framework (Figure 1) that can be used to guide future empirical work that includes quantitative analysis of labour market and qualitative field studies with a particular focus on specific sectors, regions or categories of workers.

4. DISCUSSION

With the synthesis of post-COV evidence, it is evident that AI is transforming the Indian job market through a dual transition i.e. task-level substitution and capability-based job creation. Across sectors, automation and intelligent decision support systems are taking over routine, codifiable activities in production, services and administration, mainly in the IT support, back-office operations, manufacturing shop-floors and standardised service processes (Grover, 2024; Bishnoi et al, 2023; Mukherjee, 2022). At the same time, AI is leading to the demand of new occupations in data engineering, model governance, human-AI collaboration, digital product design and service delivery with AI, particularly in IT/ITeS, fintech, healthtech and agri-tech ecosystems (Haritha & Kuamar, 2025; Nayal et al., 2022; Mishra et al., 2023). This confirms what the literature has underlined thatAI does not just eliminate jobs rather it is a reconfiguration of job content and occupational mix (Hammer & Karmakar, 2021; Behera & Nigam, 2025). Nevertheless, the distribution of opportunities and risks still remains very uneven. The post-pandemic acceleration of adoption of artificial intelligence (AI) has been most notable in relatively formal, capital-intensive sectors such as IT services, organised manufacturing, banking, aviation and large agribusiness, where firms have the necessary digital infrastructure and managerial capacity to adopt AI at scale (Grover, 2024; Bishnoi et al., 2023; Mishra & Sant, 2021; Jain et al., 2024). Workers belonging to these sectors are more likely to have access to upskilling programmes, AI-related career pathways and hybrid work arrangements which can boost autonomy and flexibility (Verma et al., 2023; Manoharan et al., 2024). By contrast, workers in small enterprises, informal services and traditional agriculture often experience AI indirectly through platforms, precarious gig work or exclusion from digitalised value chains, while limited support for reskilling or career mobility is available (Nippani, 2020; Nayal et al. 2022; Sridhar et al. 2023).

The pandemic shock has thus increased the pre-existent skill and institutional gaps. Many of the new roles that are AI complementary require advanced digital, analytical and socio-cognitive skills that are unequally distributed among regions, education levels and social groups. Studies of labour intensive and pandemic affected industries indicate that AI adoption is often accompanied by cost cutting strategies,

which in turn act to reinforce downward pressure on low skill employment and increase job polarisation (Mukherjee, 2022; Market, 2024). Systematic reviews of AI's effects on employees also suggest that fast-paced technological change leads to greater stress, a sense of insecurity, and monitoring intensity leading to greater stress (Cramarenco et al., 2023), particularly where workers have limited voice in the design and implementation of AIs. Gendered analyses emphasize how women have experienced disproportionate job loss, care burdens, and digital exclusion during the course of the Covid-19 pandemic, putting the risk that AI-driven restructuring could increase inequalities amongst existing ones if interventions are not explicitly inclusive (Jasrotia & Meena, 2021). The findings also emphasise the central role played by organisational strategy and HRM in mediating the labour market effects of AI. When AI is embedded in a much wider people-centred transformation that includes hybrid work, structured upskilling and transparent performance systems, employees can see AI as an augmenting technology that increases productivity and career opportunities (Verma, et al., 2023; Manoharan et al., 2024). On the other hand, when AI is mainly used as an instrument of cost reduction and control, it comes with work intensification, surveillance, and a lack of job quality (Singh & Tarkar, 2022; Mer & Virdi, 2023). This organisational heterogeneity implies that the employment impact of AI in India is not technologically predetermined, but is determined by the choices about investment in human capital, governance of algorithmic systems and the design of hybrid work places.

From a macro and policy perspective, on the basis of the evidence, India's post-COVID AI trajectory appears to be at a crossroads. On the one hand, there is an enormous potential for AI to boost productivity, increase the digital availability of services, make supply chains more resilient and contribute to green transitions in a number of sectors, e.g. energy and transport (Sharifi et al. 2021; Arsad et al. 2023; Chymis 2020). On the other hand, without strong systems of skilling, adaptive social protection and labour market institutions targeting non-standard forms of work, the chances of AI-driven growth concentrating among a thin stratum of high-skill workers and big firms could be the case (Prates & Barbosa, 2020; Mhlanga, 2022). The literature reviewed here offers only partial evidence regarding concrete policy responses, but it always highlights the need for concerted measures in the areas of vocational education, lifelong learning, digital infrastructure, regulation and control of algorithmic fairness, worker data rights and platform governance (Behera & Nigam, 2025; Nayak et al., 2022). Finally, the experience in India has wider relevance to the other emerging economies. The country has a very large and young population and good IT capacities accompanied by high levels of informality and social inequality. The post-COVID boom in adoption of AI is evidence of the opportunities and risks of a fast-paced digital transformation driven by crisis. The discussion implies that the question is not if AI is

going to change the Indian job market but if the transformation is going to be guided towards decent work or will it lead to further polarisation and precarity. The conceptual framework presented in this article - linking the shock of the Covid-19 pandemic, the drivers of adoption of AI, deployment across sectors, and labour market outcomes - provides the basis for future empirical research and policy experimentation to ensure that AI in the case of India becomes a tool for broad-base human development and not another dimension of exclusion.

5. CONCLUSION

This article discussed the changes in Indian job market brought about by artificial intelligence in the post-covid 19 era. The evidence shows that the AI is not just destroying jobs, rather it is reorganising work. Routine and codifiable tasks in IT services, manufacturing, banking, agriculture, and services are increasingly automated while new jobs have emerged in data analytics, AI development, systems integration, digital product management and human-AI collaboration. As a result, the labour market is subject to job polarisation, high demand for high-skills digital jobs and sustained pressure on many middle-skills routine occupations. The effect of AI is very unequal across sectors, firms, and groups of workers. Large, formal organisations that have a better digital capacity are better positioned to leverage AI as an augmenting technology while investing in upskilling and hybrid working models. In contrast, workers in informal enterprises and small firms are also more subject to displacement and precarious platform work, or to exclusion from AI-enabled value chains, as are workers in digitally marginalised regions. Existing gender and social inequalities, which have been exacerbated during the pandemic, will be at risk of being deepened if the adoption of AI is not accompanied by inclusive policies. Policy and corporate strategies therefore play an important role. India's capacity to translate the gains in productivity from AI into employment opportunities for all will hinge on the strengthening of lifelong learning and reskilling systems, as well as the update of social protection for non-standard work, and the enforcement of responsible and transparent use of AI in the workplace. Firms which view adoption of AI as a transformation of human capital, not just a cost-cutting ruse, are more likely to be able to deliver sustainable performance while supporting decent and inclusive work.

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