

# A Study on Management of Industrial Dispute & Collective Bargaining Process in the Era of Artificial Intelligence (AI)

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## Abstract:

The incorporation of Artificial Intelligence (AI) and unconventional technologies into our developed country's workforce is restructuring employment standards, making a two-fold bordered effect of revolution determined efficacy and socio-legal difficulties. By means of computerization, contraption knowledge, and AI-driven schemes infuse businesses like industrial, Information Technology, logistics, and the gig economy, old-style service hierarchies are being substituted by regionalized, algorithm controlled working systems. This change has activated job movement, expertise discrepancies, and the propagation of non-standard work provisions, alongside, creating more alarms about data secrecy, and the ethical implementation of automatic policymaking. The labour legislation has factually tailor-made to regulate human-centric workplaces and employer-employee relations, today it is facing unfashionableness in addressing these technological disturbances. The main legislative gap which comprises the nonappearance of formal acknowledgement for different level employees, insufficient protections for employee's data, and complex responsibility schedules for Artificial Intelligence decided employment practices. The present study will evaluate the principled and legal encounters modelled by Artificial Intelligence implementation, accenting the inevitability to revolutionize labour regulations to support reasonable wage and salary, social security, and workplace rights in a progressively digitalized economy.

**Key word:** Employee, Artificial Intelligence, Labour Market, Industrial Relation, Collective Bargaining, Mental, Skilled, Technical.

## Introduction:

The development of Artificial Intelligence (AI) and computerization machineries has piloted in a transformative age for worldwide labour markets; in our country it has emerged as a serious case study owing to its huge labour force and speedily digitalizing economy. Factually, the Indian labour laws were premeditated based on to regulate the era of industrial employment structures, highlighting proper employer & employee relations, working conditions, and uniformity. Though, the propagation of Artificial Intelligence regulated machineries and systems, machine learning algorithms, and platform based working systems has disturbed these outdated outlines, making a discrepancy among the old-fashioned procedures and the veracities of the current employees.

The several sectors for instance industrial, Information Technology, logistic, and the gig economy, Artificial Intelligence is restructuring the job roles, mechanizing daily responsibilities, and familiarizing process facilitated management arrangements. Though these developments pose for capacity as well as efficacy improvements and financial progress, and

also having vital challenges like change in job roles due to computerization, the attrition of steady engagement in favour of precarious gig work, and the strengthening of dissimilarities due to skill gaps. At the same time, the increase of remote and platform-based working has uncleared jurisdictional borders, confusing the responsibility for employee rights defilements, remuneration discrimination, and employment security. The present study puts the situation at the connection of technology and employee rights, probing how country's legal agenda must grow to protect workforces in an Artificial Intelligence occupied economy. It highlights the insistence of integration technical development with societal justice, encouraging for strategies that list comprehensive development, acceptable governance, and the protection of human self-respect in the future of work. Thru analysing universal best practices and India's unique socio-economic context, the research aims to propose actionable reforms that balance modernization with employee wellbeing.

The current study will try to say for active strategy involvements, with flexible monitoring agendas, improved automated culture with safeguarding the interest, and comprehensive working rules that complement technical development with reasonable employee safeties. Thoroughly emphasizing social justice and inclusivity in which our country can steer the use of Artificial Intelligence rebellion while guaranteeing a supportable and appropriate working culture in the organisation.

### Significance of the Study

- i. The Indian labour laws, engrained with industrial age contexts, are not well prepared to support the Artificial Intelligence governed working place due to changing aspects, like as algorithmic running system and gig work. The present study will highlight the vital necessity to apprise the legislation to protect workforces in a digitalized economy, safeguarding equality and responsibility in Artificial Intelligence facilitated employment systems.
- ii. The existence of huge informal employees and the growth of platform-based gig occupations, this research will emphasize the requirement of spreading social security, machineries for industrial dispute resolution, and challenging discernment protections to workforces accomplished by Artificial Intelligence arrangements, as due to want of legal acknowledgement.
- iii. AI-driven scrutiny, discriminating engagement algorithms, and impervious decision-making can create risk to employee secrecy and self-esteem. The research highlights the necessity for decent Artificial Intelligence strategies and healthy data safety regulations to avoid manipulation and discernment.
- iv. As AI disturbs traditional jobs, the study advocates for reskilling initiatives and equitable strategies to alleviate job shift while connecting Artificial Intelligence probable to generate new responsibilities. This type of stability is crucial for country's economic development and societal consistency.
- v. Our country's style to adopt Artificial Intelligence and labour laws could set examples for developing economies facing parallel challenges. The study provides understandings into matching technical development with employee rights.

### Objective of the Study

1. To analyse how Artificial Intelligence obsessed mechanization and algorithmic management disturb traditional employment structures and challenge the prevailing labour legislation in India.
2. To propose policy reforms for modernizing Indian labour laws to ensure social security, fair wages, and dispute resolution mechanisms for AI-managed workers.
3. To explore the traditional foundations of collective bargaining as a legal and social right.
4. To analyse the challenge developed due to remote working systems and AI driven management systems to the running of trade unions.
5. To study jurisdictional and governmental responses in India and relative jurisdictions about digital-age collective bargaining.
6. To suggest improvements for establishment of collective bargaining machineries in technically

## Methodology

The present study adopts a doctrinal legal methodology, beached in the analysis of primary sources like as constitutional provisions, statutes, and judicial decisions, as well as secondary sources including scholarly articles, policy reports, and international labor standards.

1. Primary sources of information includes legislation, constitutional provisions, case laws, and government notifications.
2. Secondary sources includes comments, various articles in journals, policy reports and official web site like Ministry of Labour.
3. A proportional lens is rarely used to study best practices from other nations.
4. A critical method is applied to assess gaps between law and practice.

## Collective Bargaining in the Age of Remote Work

The COVID-19 pandemic augmented the implementation of working from home, altering it from a role plan into a conventional form of employment. Though remote work offered flexibility and pliability for businesses, the situation developed substantial challenges for trade unions. Factually, unions prospered in workshop, workplaces, and other physical workplaces where regular communications nurtured harmony. The nonappearance of communal physical places under remote work decreases chances for workforces to participate casually, failing the social bonding that motivate collective accomplishment.

The working culture of remote work also confuses union unifying. The established approaches of hiring process have been set aside, workshop assemblies, and absence of direct communication are far less in working system where all are digitally facilitated surroundings. The Employers, in return of which are more grip towards digitalised monitoring equipment's to trace production and infrastructures which is hovering alarms and reprisal about union activity. The United State National Labor Relations Board has recently identified algorithmic monitoring and data-driven discipline as alarming paraphernalia on the execution of collective rights.

The European Union has identified these apprehensions in its Directive on Improving Working Conditions in Platform Work (2022), which says employers to offer better transparency about algorithmic decision-making and to confirm that workers' representatives are accessed in relation to digital monitoring systems.

In our country in India, yet, has yet to enact complete legislation addressing the connection of collective bargaining and digital surveillance. While the Information Technology (Intermediary Guidelines and Digital Media Ethics Code) Rules, 2021 regulate certain aspects of data governance, they do not extend to protecting workers' collective rights. Remote work has thus shifted the topography of collective bargaining. For unions to remain operative, they should familiarize by employing digital tools, such as encoded communication, video conferencing, and online mobilization platforms. Though, this involves not only technical capacity but also legal improvements that identify digital organizing as a protected form of employee's union.

## Algorithmic management and Collective Bargaining

The biggest challenges in the digital age are the rise of algorithmic management. In gig and platform economies, algorithms regulate work distribution, pricing, assessments, and even termination. This opaque power leaves workforces with slight simplicity about how conclusions disturbing their incomes are made, discouragement the basic principle of bargaining the capability to negotiate with a clearly distinguishable employer.

The case of *Aslam v. Uber BV* in the United Kingdom emphasized this issue, where the Uber drivers effectively claimed that notwithstanding being labelled as "independent contractors," the algorithmic control exercised by the company

rendered them “workers” entitled to collective bargaining protections. Similarly, in Glovo and Deliveroo cases across Europe, courts have increasingly scrutinized algorithmic systems that command the terms of employment.

In India, however, platform workers remain classified as “self-employed,” with no statutory right to collective bargaining. The Social Security Code, 2020, recognizes gig and platform workers for welfare purposes but stops short of granting them labour rights equal to employees. This gap has encouraged calls from researchers and labour activists for a redefinition of the employment relationship in light of algorithmic management.

International labour standards have also started to acclimatize. The ILO’s World Employment and Social Outlook 2021 advised that algorithmic control in platform work risks creating a new “digital Taylorism,” where workforces are subjected to continuous monitoring and performance tracking without corresponding protections. In response, some countries, such as Spain through the Riders’ Law (2021), have enacted legislation conceding platform workforces the assumption of employee status and authorizing algorithmic transparency. Algorithmic management, therefore, not only challenges the enforceability of collective bargaining but also necessitates a rethinking of the legal definition of employment itself. Without addressing this initial issue, trade unions will remain structurally deprived in negotiating with algorithmic employers.

### **Challenges for Trade Unions in the Digital Age**

Trade unions in India face multiple challenges in adapting to the digital economy:

1. **Decreasing Membership:** Trade union membership strength has dropped abruptly, with a increasing share of the workforce in the informal and gig sectors. This weakens unions’ bargaining power with management.
2. **Technological Barricades:** Several trade unions due to nonexistence of the technological set-up to engage in effective digital organizing. Outdated style of leadership structures are not at all times equipped to mobilize detached workforces.
3. **Employer Confrontation:** Employers, mainly in the technology sector, frequently resist unionization, mentioning the necessity for flexibility and modernization. Digital surveillance tools also allow to monitoring the organizing activities.
4. **Legal Omission:** Gig and platform workers remain outside the scope of core labor protections, including collective bargaining rights.
5. **Disintegration of Work:** The shift from permanent to contractual or self-employed arrangements has disorganized worker identity, making collective unity harder to build. These challenges collectively impend the significance of unions unless structural reforms are endorsed.

### **Expected Improvements for Strengthening Collective Bargaining**

To address these challenges, both legal and institutional reforms are necessary.

1. **Expanding the Definition of “Employee.”** The definition of “employee” in Indian labour law should be broadened to include gig and platform workers, similar to Spain’s Riders’ Law and the EU Platform Work Directive. This would extend collective bargaining rights to a large section of digital-age workers.
2. **Legal Recognition of Digital Organizing.** Statutes should explicitly recognize digital platforms such as messaging apps and online forums as legitimate spaces for union activity. This would protect workers from retaliation for engaging in online organizing.
3. **Algorithmic Transparency.** Employers using AI-driven management should be legally required to disclose the logic of algorithmic decisions affecting workers.<sup>65</sup> This would enable unions to bargain over algorithmic systems, not just traditional conditions of work.

4. Strengthening Union Representation. Thresholds for union recognition should be lowered to allow smaller, more flexible unions to represent dispersed workers. Multi-employer bargaining frameworks could also be introduced for platform-based industries.

5. Judicial Intervention. Indian courts should adopt a purposive interpretation of labor laws, recognizing algorithmic control as employer control. Such an approach, aligned with international trends, would bridge statutory gaps until legislative reforms are enacted.

These reforms would revitalize collective bargaining by adapting it to the realities of the digital economy, ensuring that the fundamental principle of balancing power in labor relations is preserved.

**CONCLUSION** The advent of artificial intelligence and emerging technologies has profoundly transformed the nature of work in India, creating both opportunities and challenges for the existing labour law framework. Traditional legal structures, designed for conventional employment models, struggle to encompass the complexities of gig work, algorithmic management, and AI-driven decision-making in modern workplaces. While India has taken preliminary steps through reforms like the labour codes and the Digital Personal Data Protection Act, significant gaps remain in addressing worker classification, data privacy, algorithmic accountability, and reskilling needs. To move forward, there is a pressing need for a forward-looking legal approach that acknowledges the realities of a technology driven economy while safeguarding the fundamental rights of workers. Legal reforms should be inclusive of diverse work arrangements, ensure transparency in AI applications, and integrate ethical principles into employment practices. As digital innovation continues to shape the future of work, India must build a legal ecosystem that not only supports economic transformation but also fosters fairness, security, and dignity for all

The right to collective bargaining has been one of the most powerful instruments of labour justice in history, safeguarding for fair wages, good working conditions, and industrial democracy. So far, in the digital age, these right faces unparalleled challenges. Remote work has disorganized harmony, while algorithmic management has indistinct the limits of the employer-employee relationship. Trade unions must adapt technologically, while legislatures and courts must modernize the legal framework. With one of the world's largest digital labour forces, the country cannot afford to leave gig and platform workers outside the scope of collective bargaining. Recognizing digital organizing, mandating algorithmic transparency, and expanding the definition of employment are urgent steps toward safeguarding workers' rights in the 21st century. The future of collective bargaining will depend on whether the law can evolve as quickly as technology. Without reforms, unions risk becoming relics of an industrial past. With timely adaptation, however, they can remain powerful guardians of worker justice in a digital future.

## References:

1. Kumar Parashar, B., Thakur, S., Scholar Bhopal, R., & Professor, A. (2017). *The Impact of Industrial Relations on the Level of Employees Job Satisfaction* (Vol. 5). [www.ijpub.org](http://www.ijpub.org)
2. *THE IMPACT OF ARTIFICIAL INTELLIGENCE ON INDIAN LABOUR LEGISLATION*. (n.d.). <https://iledu.in>
3. Principal, V. K. (2025). Right to Collective Bargaining in the Digital Age Challenges Faced by Trade Unions with the Rise of Remote Work and AI-Driven Workplaces. | *IJIRT* |, 12.
4. Shrivastava, P., & Hr-Marketing, (. (2015). The New Age Path of Industrial Relations. In *International Journal of Business and Management Invention ISSN* (Vol. 4, Issue 9). Online. [www.ijbmi.org](http://www.ijbmi.org)
5. Int'l Labour Org., Right to Organise and Collective Bargaining Convention, No. 98 (1949).
6. ILO, India Wage Report: Wage Policies for Decent Work and Inclusive Growth 64 (2018).