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Ancient Hierarchies, Modern Algorithms: Why the AI Economy Is Inheriting India's Gender Problem

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ABSTRACT

India's constitutional promise of gender equality - inscribed in Articles 14, 15, and 21- has produced an impressive body of judicial doctrine over seven decades without producing commensurate change in women's lived economic reality. The convergence of artificial intelligence and existing gender inequalities presents one of the most consequential economic challenges of the current decade. This article examines women's socioeconomic status in the age of AI across four dimensions: labour market displacement, wealth and wage gaps, legal and institutional under-protection, and the structural exclusion of women from the industries building the AI economy. Drawing on data from the ILO, World Bank, WEF, and peer-reviewed research, the article argues that AI is not a neutral technological force - it is arriving in economies already stratified by gender and is amplifying those stratifications rather than correcting them. The unpaid care economy, occupational segregation, and the absence of a coherent indirect discrimination doctrine are identified as the three structural conditions that make women disproportionately vulnerable to AI-driven disruption. Without deliberate intervention at the levels of law, policy, and institutional design, the AI transition will widen existing gender wealth gaps to a degree that formal equality law is currently unequipped to address.

Keywords: women and AI, gender wage gap, unpaid care economy, occupational segregation, female labour force participation, algorithmic discrimination, indirect discrimination, gender wealth gap, AI displacement, socioeconomic inequality

I. INTRODUCTION

A single data point frames the problem. India ranks 142nd out of 146 countries on economic participation and opportunity for women, according to the World Economic Forum's Global Gender Gap Report 2024.¹ Female labour force participation sits between 25 and 32 per cent.² China draws around 60 per cent. Bangladesh has overtaken India. This is not a new problem - it is a deeply rooted one that has survived constitutional guarantees, legislative reform, and judicial intervention across seven decades.

What is new is what is arriving on top of it - Artificial intelligence is reshaping hiring, performance evaluation, wage-setting, and the definition of skilled work - and it is doing so in a country where the structural exclusion of women from economic life was never resolved. The result is not disruption of the status quo. It is acceleration of it.

This article examines four dimensions of that acceleration: displacement from existing work, exclusion from new work, bias encoded into AI systems, and the legal framework's failure to keep pace with any of it. The argument is not that AI is uniquely hostile to women, It is that AI is indifferent to a pre-existing inequality - and indifference, at this scale and speed, produces the same result as hostility.

II. THE BASELINE- WHAT WOMEN BROUGHT INTO THE AI AGE

Before examining what AI is doing, it is worth being precise about what the starting point was. Globally, women earn 20 per cent less than men for comparable work.³ They own roughly 32 per cent of the world's wealth despite constituting over half its population.⁴ They perform 76 per cent of all unpaid care work - cooking, cleaning, child-rearing, elder care - work that does not appear in GDP, does not attract social security, and is not counted in any measure of productivity that governments treat as serious.⁵

In India, each of these figures is more pronounced. The Time Use Survey of 2019 found Indian women spend 299 minutes daily on unpaid domestic work, against 97 minutes for men.⁶ In agriculture, which employs the largest share of India's female workforce, women performing identical tasks in the same fields are routinely paid 50 to 80 per cent of the male daily wage.⁷ These are not residual inequalities from a pre-modern economy. They are current, documented, and persistent features of a twenty-first century labour market.

This is the baseline. AI did not create it. But it is the ground on which the AI transition is now playing out - and the ground matters enormously for where the transition lands.

III. THE TRIFECTA OF TROUBLES - HOW DOES IT NOW AFFECT THE FLFP ?

(A) THE DISPLACEMENT PROBLEM

The ILO's 2024 research found that women are significantly more likely than men to hold jobs at high risk of automation.⁸ The vulnerable categories - data entry, customer service, clerical work, administrative processing, basic financial services - are disproportionately female. The McKinsey Global Institute estimates that up to 12 million Indian women in formal service roles face significant automation exposure by 2030.⁹ Globally, the ILO estimates that 26 million female clerical workers face high displacement risk from generative AI alone.¹⁰

This concentration of women in automation-vulnerable roles is not accidental. These were the categories formal economies opened to women first - considered lower-status and lower-paying than the male-dominated technical and managerial roles above them. The prior exclusion created the current vulnerability. The labour market's historical structure is now determining who bears the cost of its technological transformation.

Women in the gig and informal economy face a compounding version of this risk. Platform work was presented as an equalising force - flexible earnings without the gatekeeping of formal employment. In practice, women cluster in the lowest-paying gig categories: domestic cleaning, home-based data entry, beauty services.¹¹ Male gig workers cluster in higher-paying roles: delivery, ride-hailing, technical freelance. And gig work strips away the statutory

protections - maternity benefit, minimum wage, Internal Complaints Committee coverage under the POSH Act, 2013 - that formal employment, however imperfectly, provides.

(B) THE CREATION PROBLEM

If the first problem is losing existing jobs, the second is being excluded from the jobs replacing them. Women hold 22 per cent of AI-related roles globally and less than 14 per cent of senior executive positions in the sector.¹² In India, women constitute approximately 26 per cent of the technology workforce - a figure that has been declining, not rising, as AI roles become more prominent.¹³

Only 32 per cent of female students enrol in technology-related undergraduate degrees, despite performing comparably to male peers in school-level mathematics and science.¹⁴ The confidence gap compounds the access gap. A 2025 study found an 18-percentage-point difference between young men and young women in self-assessed AI skills - 74 per cent against 56 per cent.¹⁵ Sixty-three per cent of women cite lack of access to workplace AI training as a barrier to entry.¹⁶

None of this reflects a deficit of ability or ambition. It reflects the same structural pattern the labour market has reproduced across successive technological transitions: high-earning, high-status fields signal their exclusivity early and maintain it through hiring norms, professional culture, and the arithmetic of who is already in the room when new roles are designed. The AI economy is serving not as an exception to that pattern. It is the latest instance of it.

The wealth consequences compound over time. Women displaced from automatable roles and unable to enter AI-economy roles face not just income loss but wealth loss - fewer years of high-earning work, smaller pension contributions, lower lifetime savings, and greater dependence on social security systems designed around male breadwinner models that have not been meaningfully updated.

(C) THE BIAS PROBLEM

The third dimension is less visible than displacement or exclusion but in some respects more insidious. A Berkeley Haas Centre audit of 133 commercial AI systems found that almost 44

per cent exhibited measurable gender bias.¹⁷ AI hiring tools trained on historical employment data learn to replicate historical hiring patterns - which means they learn to replicate historical discrimination. A system trained on a decade of a company's hiring decisions will encode whatever biases produced those decisions.

The sharpest evidence comes from a 2024 study on AI-assisted work. Female-identifying engineers who used AI tools were rated 8.9 per cent less competent than male-identifying engineers who produced identical output using identical tools.¹⁸ The work was the same. The tool was the same. The evaluation was not. This competence penalty is not a cultural attitude that training can fix. It is a measurable, reproducible outcome of how evaluation systems interact with gender at the present moment.

Voice assistants present a further dimension of the same problem. Alexa, Siri, Google Assistant, and Cortana - together accounting for approximately 92 per cent of the smartphone assistant market - have historically been designed with female voices programmed to respond with compliance and deference.¹⁹ These are design decisions about gender and subservience, made by predominantly male teams, and embedded in devices used by hundreds of millions of people daily. The AI economy is now reflecting existing gender norms and is installing them in infrastructure.

IV. THE WEALTH GAP- WHERE THIS IS HEADING

These three pressures - displacement, exclusion, and bias - converge on one outcome: the gender wealth gap is likely to widen materially over the next decade. Women globally already own 32 per cent of wealth despite constituting over half the population.²⁰ The ILO projects that without intervention, the gender employment gap could widen by up to 5 percentage points in high-automation economies over the next decade.²¹ In India, where the baseline gap is already among the world's widest, the compound effect is particularly acute.

Displacement from automatable roles reduces current income. Exclusion from AI-economy roles reduces future income. Algorithmic bias in hiring and evaluation suppresses wages and promotions in the roles women do hold. The unpaid care economy - which has not shrunk - continues to limit the hours available for paid work and the career continuity that wealth

accumulation requires. Each of these is a separate pressure. Together, they constitute a structural income and wealth drain that no single policy instrument currently addresses.

V. THE LEGAL GAP - WHERE DOES THE LAW STAND

The socioeconomic consequences described above are not merely economic problems. They are legal problems - and the legal frameworks currently in place are not equipped to address them.

The Equal Remuneration Act, 1976 prohibits direct pay differentials but not AI-mediated performance scoring that suppresses women's salaries through facially neutral evaluation systems. The Constitution prohibits sex-based discrimination but Indian courts have never formally applied it to algorithmic systems, and no Indian statute or judgment has adopted an indirect discrimination doctrine - the rule that treats demonstrated disproportionate adverse impact, rather than proven intent, as sufficient to establish unlawful discrimination.

The gap is not unique to India, but the absence of remedial frameworks is acute here. The EU AI Act, 2024 classifies AI systems used in employment as **high-risk** and requires conformity assessments, human oversight, and transparency obligations before deployment.²² The EU Equal Treatment Directive, 2006 establishes a burden-shifting rule - **once a complainant shows statistical evidence of disproportionate harm, the employer must justify the practice.**²³ The UK's Gender Pay Gap Information Regulations, 2017 require employers above 250 employees to publicly report mean and median pay gap data annually.²⁴ India has none of these instruments.

VI. WAY FORWARD - WHAT INTERVENTIONS WOULD BE REQUIRED

Three things, specifically, and in order of foundational importance -

The first is counting the unpaid care economy. Until unpaid domestic and care labour appears in national income accounting, policy will continue to be designed around the assumption that only paid work constitutes economic activity. Social security systems, pension structures, and labour law built on that assumption will continue to disadvantage the people -

overwhelmingly women - who perform the work that does not count. India's Time Use Survey exists. The data is there. What is missing is the political decision to treat it as economically real.

The second is mandatory AI audit and disclosure. Every AI system used in hiring, performance evaluation, promotion, or wage-setting should be audited for gender-differential outcomes before deployment and at regular intervals thereafter, with results disclosed to a regulatory body. Discrimination that is invisible cannot be challenged. France's Index de l'Egalité Professionnelle, introduced under the *Loi pour la Liberté de Choisir Son Avenir Professionnel*, 2018, requires employers to score themselves on five gender equality indicators annually and face financial penalties for failing to improve. The principle is transferable.

The third is constructing an indirect discrimination doctrine in Indian law. A legal rule that treats demonstrated disproportionate adverse impact as presumptively unlawful, a mechanism that shifts the burden to the employer to justify the practice, a specialist forum with the expertise to evaluate the evidence, and remedies proportionate to structural harm - compensation, injunctive relief, system redesign - rather than merely declaring that something wrong occurred - these are the components of a framework that can actually reach structural discrimination. Each exists in comparative law. None exist together in India. Building that framework - through litigation, legislation, or both - is the task that the AI economy has made urgent.

VII. CONCLUSION

Artificial intelligence is arriving in a world where women's economic position was already defined by structural disadvantage - lower wages, less wealth, more unpaid work, fewer legal protections, and institutions that have consistently declared equality without building the machinery to deliver it.

The AI transition offers a genuine choice. It can be managed in ways that redistribute economic opportunity more evenly - through investment in women's AI skills, through legal frameworks that treat algorithmic discrimination as real discrimination, through social infrastructure that shares the care burden more equitably, and through accountability

mechanisms that make bias visible before it compounds. Or it can proceed as a market process, in which case the existing distribution of economic power will determine who benefits and who absorbs the costs. That distribution already has a gender.

The question is no longer if AI will change women's economic lives. It will, and it already is. The question is whether the institutions responsible for managing that change will treat gender equity as a design requirement or an afterthought. The evidence so far points toward the latter. There is still time to change that. The window may not remain permanently open.

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