



Algorithmic Capitalism and Economic Inequities: A Literature Review on Data Colonialism and Policy Challenges in India's Platform Economy

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Abstract

The review paper will concentrate on the topic of algorithmic capitalism, data colonialism, and economic inequities in the platform economy of India. The review focuses on the Indian specifics of manifesting global platform capitalism with the synthesis of theoretical frameworks based on the critical study of data, labour economics, and post-colonial theory. It uses empirical studies, policy reports, and theories to examine the studies about the 7.7 million gig workers in India, whose number is expected to reach 23.5 million by 2029-30, the platform market concentration, the use of algorithms in managerial behaviours, and the policy reactions. The literature that survives points to three major themes: (1) the imitation of colonial patterns of extraction by appropriating data (2) the structural precarity of the labour market based on platforms, where workers make less than Rs.102 per hour net of costs and (3) the inequacy of current regulatory frameworks, such as the Code on Social Security 2020 and the Digital Personal Data Protection Act 2023. The gaps found to be critical include a lack of empirical studies of the issue of algorithmic discrimination by caste, religion, and gender in India; little examination of platform cooperatives as an alternative model; and the inability to effectively incorporate the issue of digital sovereignty into a framework of competition policy. The conclusion of the review is a research agenda based on the intersectional analysis of the unfairness of the platform economy, comparative analysis of the efficiency of regulations, and creating a framework of context-specific policies to apply to the Global South.

Keywords: *Platform capitalism, data colonialism, gig economy, algorithmic management, labour rights India, digital sovereignty*

Introduction

Context and Rationale

The rise of platform capitalism as the most dominant economic paradigm of the twenty-first century has been the subject of a vast amount of scholarly attention, spanning the topics of economics, sociology, labour studies, information systems, and critical data studies. Srnicek (2017) defines platform capitalism as a type of economic architecture, where online platforms become the centres of value creation by employing network effects, accumulation of data, and algorithmic coordination to extract value. This phenomenon has been brought to bear on labour, market structuring, data governance, and economic justice as researchers began to question the consequences of the gig economy, which is predicted to rise to US\$1.847 billion in 2032.

India represents a popular model of platform economies. It is the most populous nation in the world, with a fast-growing digital infrastructure where approximately 20 percent of platform workers are (NITI Aayog, 2022). The number of workers working in the gig economy has increased in 2020-21 to 7.7 million with projections that indicate it is going to grow to 23.5 million by 2029-30 taking up 6.7 per cent of the non-agricultural workforce (Ministry of Finance, 2024). This immense involvement is enacted against the backdrop of the colonial legacy of India, the demands of development, and new digital sovereignty issues that makes it as essential to the understanding of platform capitalism in the Global South as possible.

Objectives

1. To make a synthesis of theoretical frameworks explaining platform capitalism and data colonialism, and specifically to the Indian case.
2. To undertake an analysis of empirical evidence of the mechanics of inequality in the platform economy of India, which includes labour precarity, market concentration, and algorithmic discrimination.
3. To determine the literature in the field of regulatory response and policy frameworks, the identification of gaps and directions to pursue in future studies.

Methodology

The selection and synthesis of literature was done in a systematic process. Among the sources, there will be peer-reviewed scholarly articles, governmental reports and policy files, research conducted by industries and platform disclosures of companies, and reports by civil society organisations. The timeframe covers the period between 2017 (coinciding with Srnicek's foundational work on platform capitalism) and early 2026, and especially the scholarship on India will be concentrated after 2020.

This analysis focuses on platform economy in India, but the comparison of other developing economies and theoretical accounts of platform capitalism in the world is also included. The thematic organisation of this paper includes the theoretical basis of data colonialism and platform capitalism, the empirical investigation of the labour market, market concentration and competition, data sovereignty and governance, algorithmic discrimination, and policy analysis.

Theoretical foundations conceptualising platform capitalism and data Colonialism.

Platform capitalism: Main theoretical foundations

The foundational study of Srnicek (2017) Platform capitalism assumes that platforms represent a new form of business model based on digital infrastructures in which users interact yet which also extract and control information as one of the key competitive resources. Platforms can have various typologies that are described by Srnicek as advertising, cloud, industrial, product platforms and lean platforms which differentiate themselves based on the different value extraction techniques. The theory highlights the use of platforms to create network effects to gain monopolised positions and use data analysis to maximise extraction.

Van Doorn, Ferrari and Graham (2022) further apply this discussion to platform labour by theorising how the platforms create new forms of employment that cannot be regulated through the traditional labour market but which have significant management capacity. Their 'platform labour' construct is the work mediated by digital platforms where workers are categorised as independent contractors despite the importance of platforms in algorithmic control, price-making and performance scoring.

Those who criticise the data colonialism paradigm high light such important deviations with regard to classical colonialism. To begin with, the process of digital data extraction is performed through the ostensibly voluntary engagement, and not with the force of the sword visible; the validity of consent is also disputed under the influence of digital interaction being virtually mandatory to be economically included. Second, this steadfast and opaque quality of data extraction is seen to be in stark contrast to the territorial specification of colonial regimes. However, the predictive nature of the data colonialism framework is grounded on its ability to anticipate the power imbalance and value circulation of the architecture of global digital capitalism.

Algorithmic management and labour control

The ground-breaking case study of Uber workers by Rosenblat and Stark (2016) creates the concept of algorithmic management, which is a type of control that platforms take over to manipulate workers with automated decision-making systems. Their study records widespread information asymmetry, with drivers not being open about algorithms that dictate job assignments and income and hence create an imbalanced promotion of power that is skewed in the favour of the platform. Algorithms of managing have been emphasised in the literature to focus on the lack of transparency; workers cannot understand or disagree with systemic decisions. It also brings into focus disciplinary power as manifested through rating systems and performance levels and the use of flexibility rhetoric to hide instability of precarity and income.

Later research has applied algorithmic management theory to a wide range of sectors of platforms. The model is of particular relevance to the Indian context, wherein algorithmic control overlaps with large relative informal workforces, low levels of education, lack of technological literacy and poor infrastructures of labour organisation. Survey data of workers shows that 29% of Indian gig workers have only a middle-school education, which only limits their ability to comprehend or criticise algorithmic systems (as cited in a series of industry reports, 2024).

Theoretical integration and Indian specificity

The recent literature attempts to integrate these paradigms to explain the unique expression of platform capitalism in the post-colonial setting like in India. According to the synthesis, platform capitalism brings value in concert: data grabbing by the users (characterised as data colonialism), work exploitation via algorithmic worker, rent grabbing by merchants (characterised as platform power). This poly-focal extraction in the Indian context is devolved in frameworks characterised by colonial pasts, and the logic of developmental states sets up tension among the sovereignty of digitality and the integration of the economy. The concept of caste and gender stratification can be recreated with the help of algorithmic processes and the massive labour informal sector makes platform precarity a continuity of informalisation.

Platform labour: Empirical literature in India

Earnings and income distribution studies among workers

Empirical research studies on gig workers income in India show significant gaps between the platform marketing accounts and the facts. The most often mentioned modern statistics is the result of the disclosure of Zomato on 25th, when it is stated that delivery partners usually earn 102 INR per hour without tips, which is more than the result of 2024 (ANI, 2026). However, the critical analysis shows that these figures not only consider significant costs which workers bear such as vehicle ownership and maintenance, fuel costs (which cause 30-40 percent gross earnings to the delivery of the motorcycles), insurance, and mobile data costs.

Independent research is more comprehensive in its assessments. The National Council of Applied Economic Research's (NCAER) 2023 socio-economic impact assessment of food delivery platform workers documents an 11% decline in real wages from 2019 to 2022, with monthly earnings dropping from ₹13,470 to ₹11,963 despite platform revenue growth (Bhandari & NCAER, 2023). This is a survey of 924 employees in a total of 28 cities and blames the drop on inflation and increasing operations expenses.

Research indicates that there is great income stratification. . Research by the India Brand Equity Foundation (2021) identifies approximately 15 million freelancers in high-skilled sectors (IT, design, HR) earning ₹10,000 to ₹30,000 per day. However, Fair work India's (2023) labour standards assessment found platform-based delivery and rideshare workers earn ₹15,000-20,000 monthly (approximately ₹500-650 daily), below minimum wage for hours worked. The People's Association in Grassroots Action and Movements (2024) reports 43% of gig workers earn less than ₹500 daily after expenses, with concentration in smaller cities (Outlook Business, 2026).

The literature, therefore, presents a very clear divide between high-skill freelancers and platform-based delivery/rideshare workers, the latter being exposed to wage stagnation or even decline despite growing platforms in general.

Literature of competition and concentration in the market.**Platform Market Structure in India Studies.**

Empirical studies always indicate high concentration within the Indian platform economy. Research on food-delivery applications shows that Zomato controls about 58 per cent of market share and Swiggy has 34 per cent, thus forming a duopoly hegemony of over 92 per cent (SellerSetu, 2024). National Restaurant Association of India which presently represents more than 500,000 restaurants indicates that the commission rates vary between 18-25 per cent order, without consideration of GST and payment-gateway fees.

Studies on commission systems show that the nominal rates do not reflect all the cost- burden of restaurants. As documented by Business Standard (2025), restaurants commonly subsidise deep discounts as opposed to the platforms and therefore increase in the effective cost of participation beyond the publicly reported commission rate. Several works also reveal other auxiliary costs as delivery fines paid by being imposed on the automatic calculation of the rating according to the delays in the preparation, rating fees in favour of a premium position in certain geographic areas, and the costs of packaging coordinated by the delivery materials specified by the platform ((₹5-15 per order per Kouzina Food Tech, 2024),). Moreover, the inflationary pressure in price, forces restaurants to charge higher platform prices than what they charge in-restaurants.

Competition barriers and entry constraints literature.

Empirical research and theoretical models identify various obstacles to entry in platform markets together. Literature on network effects records a reinforcing cycle in which platforms that attract more users also attract more merchants and workers thus forming the virtuous loops that do not allow new entrants to easily imitate. The similar scale would require such a massive subsidisation of both sides of the market that the capital outlays are beyond nascent competitors.

Studies of data-benefits demonstrate that data on behaviours accumulated by the incumbents through accumulated behavioural and transactional data as well as market data are beneficial in improving the abilities of the algorithm and fostering within them an apparent competitive advantage. That switching costs are incurred by consumers even considering alternative platforms that offer apparently better terms are supported by brand-recognition research.

Self-preferencing and data exploitation research

Numerous academic and regulatory investigations invariably find out proof that platforms use their impact of the middleman to promote proprietary products. Within the e-commerce sector, web shops process sales information provided by merchants, and based on it they create rival own-brand products at superior prices, and apply search-ranking features to reward their own products.

Investigations by the Competition Commission of India question claims that Amazon and Flipkart are unfairly favourable to chosen vendors, use predatory pricing strategies, and use merchant information to launch partaking products. Food delivery investigations assess whether Zomato and Swiggy abuse dominance through exclusive restaurant partnerships and discriminatory commission structures.

Data Localization Debates

There is extensive literature on policies since the propositions of data-localization in India stipulate that a subset of data should be spent on Indian soil. The proponents believe this localization will help in controlling the information or data that falls under the Indian sovereignty, local data-infrastructure and cloud-services development, national-sovereignty protection against foreign-government access in extraterritorial legal procedures and allow law-enforcement and national-security organs to gain access to relevant data.

Interpreted research will put these arguments into the context of the wider concept of digital-sovereignty. The approach of the India is placed in the context of the global tension in safeguarding information, economic integration and state-security interests, and the result shows unresolved difficulties in prioritising various policy goals (Information Technology Foundation 2025).

Digital sovereignty scholarship

Greater digital-sovereignty scholarship studies the attempts of India to control its digital economy. Scholars capture three-pillar vision that entails potential use of data in the economic growth, establishing regulatory control over the actions of multinational platforms and ensuring protection of the state-security interests with the help of access to data.

This literature prefigures the historical consciousness to hold that colonial experience makes the neo-colonial data mining especially salient to the Indian policy talk. The rhetoric of East India Company by Minister Ravi Shankar Prasad is an example of how the issue of sovereignty is expressed based on the parallels in colonial history (India TV, 2021).

Algorithmic Bias and Discrimination Literature

The algorithmic discrimination research that is conducted globally will be the basis of considering the concerns in India regarding the platform economy. The Gender Shades study by Buolamwini and Gebru (2018) reported that the facial-recognition error rate was 0.8 per cent of light-skinned men and 34.7 per cent of the darker-faced women. The study of National Institute of Standards and Technology (2019) showed that African Americans and Asians misidentified a face 10-100 times more frequently than white male faces.

These results prove that algorithms tend to recreate and increase current discrimination patterns with the use of biased training data, optimisation goals that are correlated with the characteristics that are being protected, and design choices based on the views of dominant groups.

Gaps in India-specific research

Although much has been written globally, there are still few studies that are India based on algorithmic discrimination. As observed by Harvard Science Policy (2024) and the University at Buffalo (2024), standard training databases consist of white males aged 18-35, that is, the technology learns to extract attributes of these groups and applies them to analyse different groups that also include Indian users.

Conceptual scholarship recognises several possible sources of discrimination in the Indian platform context: geographic discrimination, in which algorithms prioritise urban over tier-2/tier-3 cities and rural locations by giving them longer delivery times, fewer driver options, and/or more commission rates; linguistic and cultural barriers, whereby the platform designed to cater to English speakers discriminates against vernacular-language users by imposing an access barrier despite the linguistic diversity of Indians; caste and religious discrimination potential mechanism in which algorithms are geographically discriminatory due to longer delivery times and fewer driver choices, or gender bias mechanisms

Methodological challenges

The literature on algorithmic discrimination in proprietary platform systems has major research limitations. Algorithms Platforms are treated as trade secrets, which restricts access to research, algorithms never stand still, and therefore constant adaptation of algorithms by complex interplay between the training data and optimization goals instead of explicit programming; and causation would be impossible without access to counterfactual data, which is generally unavailable.

These methodological restrictions somehow justify why there is scanty empirical research on India though theoretically, there are intense issues. Establishing a strong algorithmic discrimination research methods in the Indian platform settings is a paramount research agenda.

Discussion of the code on social security 2020

The Code on Social Security 2020 is a key platform-labour regulation extensively analysed in the legal and policy scholarly field. The importance of the Code is that it is the first legal framework to define the terms of a gig worker and platform worker, the structure of social-security to benefit a worker and the platform requirements to contribute to the welfare of a worker.

Critical analysis found various defects. Contributions made by platforms to pension schemes 1-2% turnover (limited to 5% of that given to workers) are considerably lower than formal employment contributions (12-13% to the provident fund alone), which transfer welfare expenses to the platforms receiving worker labour to the public budgets. It is not fully implemented; social-security provisions need to have rules which are yet to be passed years after enactment of the Code. Social insurance, including life and disability insurance, health insurance, maternity insurance, and old age insurance, but not the more basic employment protections like minimum-wage law, maximum-hours law, and termination protection, are covered.

Identified Research Gaps

The literature analysis demonstrates that there are a number of research gaps that have to be addressed:

Alphabetical Discrimination in the Indian Background

As much as theoretically there are issues of concern, empirical studies that impossible algorithmic discrimination by police on caste, religion, gender, and geographic factors have not been done much. Necessary specifications to achieve rigorous studies are resounding and negotiated access to platforms as a methodological approach.

Intersectional Analysis

The current literature primarily regards labour precarity, data extraction and algorithmic control as phenomena. Multidisciplinary studies which explore the interplay of these mechanisms especially when combined to solidify inequalities against multiply-marginalised populations (e.g., Dalit women in tier-three cities) are long overdue.

Platform Cooperatives and Alternatives

As much as critique of extractive platforms is fielded, the academic literature on cooperative alternatives, models of public infrastructure other than the Unified Payments Interface (UPI) and commons-based strategies in India is scant. Policies would be enhanced by empirical case studies of available cooperatives and scaling up feasibility of such alternatives.

Longitudinal Studies

The vast majority of studies report cross-sectional views of data, as opposed to longitudinal courses. Studies on how worker earnings, platform market development and regulatory effectiveness evolve over time would add to the existing knowledge of dynamic trends and policy effects.

Regional and Sectoral Variation

The literature is imbalanced in its coverage to urban food-delivery or rideshare systems. Further research on the topic of quick commerce, professional freelancing sites, rural platform work, and sector-specific processes would enlarge the scope of evidence on the variety of the platform economy.

Comparative global south research

Although some comparisons compare India and Western markets, an organised comparative analysis across the Global South contexts (Latin America, Africa, and Southeast Asia) would help reveal similar problems and different national responses to platform capitalism.

Theoretical contributions

The review demonstrates the utility of data colonialism as a framework for interpreting the Indian platform economy, revealing historical continuities and their resonance in present-day policy discussions. By synthesizing diverse theoretical currents—including platform capitalism, data colonialism, and algorithmic management—the review constructs a multifaceted understanding of value extraction and highlights the influence of post-colonial dynamics on both platform operations and emerging forms of resistance.

Policy implications

Findings from this review imply the necessity for regulatory approaches that are comprehensive rather than piecemeal, addressing worker protections, data governance, competitive market structures, and algorithmic accountability collectively. There is a clear need for increased institutional capacity—both in technical and organizational terms—to enforce such frameworks effectively. The notable success of UPI signals the potential of public alternatives to private, extractive platforms. Policy solutions must be tailored to local socio-political and historical contexts, rather than relying on strategies imported from the West without adaptation.

Conclusion

The examined literature paints India's platform economy as emblematic of global algorithmic economies, while exhibiting distinct post-colonial characteristics. There is broad agreement on the exploitative tendencies of digital platforms, ingrained job insecurity, regulatory insufficiencies, and persistent digital sovereignty challenges. Nevertheless, significant knowledge gaps are present, particularly around algorithmic inequity, the practicality of alternatives to mainstream platforms, and the capacity of regulatory approaches. With rapid transformation of the sector, research endeavours regularly find themselves competing to keep pace with the technological developments.

India's digital platform landscape presents both avenues for inclusive advancement and risks of continued structural inequity. Institutional models such as the UPI offer pathways to public-sector innovation, but achieving equitable governance of platforms will demand sustained analytical attention, structural reforms, and informed policy commitments. The fundamental issue raised by the literature is whether the prevailing platform-centric economic model can genuinely advance broad-based development, or if overhauling the underlying extractive dynamics is necessary. Answering this will require robust research engagement as laid out in this review, rooted deeply in the Indian and Global South realities.

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