Algorithmic Management, Data Practices and Worker Precarity on Ride-hailing Platforms in Kenya

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Abstract

Digital platforms have rapidly reshaped urban transport and employment in Kenya, offering flexible income opportunities while simultaneously introducing new forms of precarity. Central to this transformation is algorithmic management: the use of automated systems to govern pricing, driver-passenger matching, performance ratings, and account deactivation. This paper critically examines how algorithmic control affects job security, wages, and worker autonomy among ride-hailing drivers, providing insights into broader dynamics of digital labor in the Middle East and Africa.
The study employs a mixed methods approach. First, we conducted a document analysis of platform terms of service and algorithmic transparency statements. Second, we designed a stratified survey of 320 ride-hailing drivers in Nairobi and Mombasa, capturing data on income volatility, deactivation experiences, and perceptions of fairness. Third, we carried out 28 in-depth interviews with drivers, association leaders, and one regulator. Finally, a subset of drivers (n=4) voluntarily shared anonymized trip logs covering three months, enabling exploratory analysis of algorithmic allocation and pricing patterns.

Findings highlight four key dynamics.

(1) Algorithmic features

Dynamic surge pricing, opaque matching rules, and invisible deactivation thresholds-produce unpredictable earnings that drivers perceive as more destabilizing than fluctuating fuel costs.

(2) Platforms' refusal to disclose decision rationales or grant access to trip-level data limits drivers' ability to contest deactivations or identify potential bias.

(3) Drivers adopt coping mechanisms, including forming WhatsApp support groups and informal evidence-sharing networks, yet these remain fragmented and lack institutional recognition.

(4) Regulators acknowledge platform challenges but lack the technical capacity and clear mandates to audit algorithms or enforce accountability.

We argue that algorithmic opacity exacerbates existing inequalities in the Kenyan labor market by concentrating control in the hands of platforms while eroding worker autonomy. Policy interventions are urgently needed to rebalance power

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relations. We propose three measures:

(a) enforceable standards for algorithmic transparency and disclosure of income-affecting parameters

(b) mandated worker access to their personal trip-level data to enable contestation and informed decision-making; and

(c) creation of multi-stakeholder oversight bodies, bringing together regulators, worker representatives, and independent technical auditors.
By grounding algorithmic management debates in empirical evidence from Kenya, this paper contributes to the growing scholarship on digital labor rights in the Global South. It underscores that achieving fair work in platform economies requires not only labor protections but also the regulation of data practices and algorithmic governance.

Keywords: algorithmic management, platform work, ride, hailing, Kenya, worker rights, data access, algorithmic transparency, income volatility, deactivation, collective action