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Vulnerable Digital Labour Platform Workers in the Wake of Pandemics: Exploring Lessons From Ride-Hailing Drivers and the COVID-19 Pandemic in Ghana

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Research Article

Keywords: Digital labour, Ride Hailing, Health, Vulnerability, Covid-19, Lessons

Posted Date: March 30th, 2026

DOI: https://doi.org/10.21203/rs.3.rs-9078941/v1

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Additional Declarations: No competing interests reported.

Abstract

This study examines the vulnerabilities and challenges of ride-hailing and delivery drivers in Ghana during the COVID-19 pandemic, situating their experiences within wider debates on digital labour, precarious employment, and governance in the Global South. Digital labour platforms such as Uber and Bolt are often celebrated for generating flexible employment opportunities, particularly in developing economies where formal job markets remain limited. However, the pandemic exposed the fragility of these forms of work, highlighting the ways in which algorithmic control, weak institutional protections, and crisis conditions intersect to intensify precarity. Drawing on in-depth interviews with 50 drivers, couriers, and platform administrators across Accra, Kumasi, and Cape Coast, the study employs situational analysis to explore how individual experiences of risk were shaped by broader structural, organisational, and policy contexts. Findings indicate that drivers faced heightened exposure to COVID-19 due to daily interactions with the public, inadequate provision of protective gear, and inconsistent enforcement of health measures by platforms. Algorithmic management further pressured drivers to prioritise customer satisfaction and ratings, often at the expense of their own safety. These dynamics reinforced a sense of insecurity and powerlessness, particularly among workers who relied exclusively on platforms as their primary source of income. The study makes three key contributions. First, it extends existing literature on platform labour by centring African experiences, which remain underrepresented in global debates especially during the COVID 19 Pandemic. Second, it demonstrates how platform-mediated work during a health crisis reveals underlying governance gaps in labour regulation, occupational health, and social protection. Third, it underscores the importance of policy interventions to strengthen regulatory frameworks, ensure fair working conditions, and establish crisis-responsive protections that can safeguard platform workers in future emergencies. By connecting lived experiences to structural inequalities, the paper not only advances theoretical understandings of precarity in the platform economy but also provides practical insights for policymakers, labour unions, and civil society actors in Ghana and beyond.

Introduction

The development and adoption of Digital labour platforms have become a defining feature of modern urban economies, especially in the third world. The Platform offers thousands of young people flexible income opportunities who often lack access to secure formal employment (Akorsu et al., 2023). These platforms offer more than just Jobs; they provide a pathway to economic empowerment in most countries. This means instead of the Youth waiting for years for nonexistent formal jobs, the young generation can now turn to ride-hailing digital platforms to earn income, build skills and add value to themselves. The overall goal is to improve urban transportation convenience by enabling instant ride requests and fare transparency. Ride-hailing platforms have also shaped the lives of most people by offering a level of convenience and comfort that the traditional public transport system often struggles to provide. In most circumstances, with a simple tap on a smartphone, passengers can request a ride instantly, see the fare upfront and track their driver in real time. This is possible because digital platforms rely heavily on GPS tracking, real-time traffic updates, Smart routing algorithms, and dynamic pricing to improve fleet distribution and shorten wait times for all users. Furthermore, with the growth in population coupled with the lack of adequate public transport services and long waiting times for public transport, ride-hailing services are considered attractive by offering fast and on-demand services. This means that digital labour and ride-hailing platforms have become interwoven into the fabric of urban life. They support livelihoods, enhance mobility, and offer a level of flexibility and responsiveness that traditional systems often cannot. Their impact extends far beyond transportation to help people feel more connected, more empowered, and more in control of how they move and work in the modern city.

Despite the benefits of digital ride-hailing platforms, their model embeds structural vulnerabilities, precarious earnings, weak protections, and occupational risk exposure that became more acute during COVID-19 (Bastuji-Garin et al., 2023). During periods of pandemic, ride-hailing and delivery drivers are usually considered essential workers whose continued customer interactions could heighten infection risks (Rani & Dhir, 2022; Howson et al., 2022). In such situations, interventions such as platform-led safety interventions, usual health prompt questionnaires, limited PPE distribution, and “contactless” delivery were widely framed as protective according to the digital platform providers. However, these workers’ experiences reveal that these measures operated in some cases less as safeguards and more as mechanisms of discipline. This development, when studied under the Labour Process Theory (LPT) perspective, put forward the argument that such interventions extend managerial control by monitoring compliance, individualising responsibility for safety, and penalising deviations. This means that instead of such measures mitigating risk, they rather reinforced workers’ subordination within a labour process governed by algorithmic surveillance and customer ratings.

The operation of algorithmic management, according to literature, could intensify these pressures because the embedded issues, such as rating systems, performance metrics, and time-sensitive tasks, compelled workers to prioritise customer satisfaction, even when it conflicted with personal safety (Fielbaum et al., 2023; Dedema & Rosenbaum, 2024). In the Ghanaian context, during the Covid 19 situation, state support for drivers operating in the ride-hailing environment was limited and regulatory oversight was often weak. These institutional dynamics were further exacerbated by the socio-economic situations of drivers, which left the drivers to navigate a crisis under heightened precarity (Arriola Vega & Coraza de los Santos, 2022).

This study, therefore, employs the Theory of Planned Behaviour (TPB) to analyse how drivers interpreted risks and made decisions under COVID-19 conditions. TPB therefore provides a framework for understanding how attitudes toward risk, social pressures embedded in rating systems, customer expectations and perceived control over working conditions shape workers’ behavioural responses. In linking the theory of Planned Behaviour and the labour process theory, the study situates individual decision-making within the broader political economy of platform work,

revealing how structural constraints and managerial control systems shaped drivers' choices during the pandemic. Recent literature (Rani & Dhir, 2020; Arriola Vega & Coraza de loss Santos, 2024; Silveira-Santos et al., 2024) on digital ride-hailing has been growing, significant gaps still remain, some regarding the working conditions of these drivers. Also, most studies centre on the Global North, offer limited theorisations of worker agency under crisis, and rarely integrate behavioural models with labour process dynamics. This study addresses these gaps by examining how platform drivers in Ghana negotiated overlapping economic and health risks, platform controls, and customer expectations.

The paper is guided by three questions

1. What health and economic vulnerabilities did ride-hailing and delivery drivers face during the pandemic?
2. How did platform-imposed safety measures shape workers' behaviours and perceptions of risk?
3. How can TPB explain workers' decision-making under conditions of heightened precarity?

The study's contribution empirically provides contextually grounded evidence from a developing-country platform economy. Theoretically, the study also advances dialogue between TPB and LPT by showing how behavioural intentions are shaped through algorithmic governance and structural power relations. Policy-wise, it underscores the need for enforceable health and safety standards, targeted protections, and regulatory accountability for digital labour platforms. In doing so, the paper extends recent work by other authors and offers insights that are relevant to researchers, policymakers, and platform governance debates.

Theoretical review

The Theory of Planned Behaviour (TPB) is used to explain why gig workers continue to use ride-hailing and delivery platforms during crises such as COVID-19. An attempt that risks their lives and the lives of their families. According to TPB, behaviour is shaped by attitudes, subjective norms, and perceived behavioural control (Ajzen, 1991). For many drivers, attitudes toward platform work are influenced by economic necessity, which often outweighs health concerns (Hasegawa et al., 2022). The theory further argues that the subjective norms, which include peer influence, customer expectations, and platform messages, could encourage ride-hailing drivers to "keep working" despite heightened risks (Fiers & Hargittai, 2023). Perceived behavioural control reflects workers' sense of being able to manage pandemic risks; however, according to Bosnjak et al. (2020), limited alternatives, inadequate platform support, and weak welfare systems undermine their actual control. The theory, therefore, highlights how gig workers' decisions emerge from a tension between economic survival and personal safety.

In addition, the TPB also explains how drivers Psychological behaviour can influence their decision to work during a pandemic situation. Since ride hailing platform has algorithmic control, and is associated with unstable income and weak social protection, there are often trade-offs that the workers face during health crises such as COVID-19 (Friedland & Cole, 2019). The gaps so far observed are that most TPB research on gig workers focuses narrowly on single constructs and mainly examines high-income countries, with limited attention to how structural governance mechanisms or weaker welfare systems in low- and middle-income settings shape perceived and actual control. As a result, the labour process theory in this study is used to examine the structural issues in the gig economy in developing countries.

Labour Process Theory (LPT), originating from Braverman's (1974) critique of capitalist production, argues that employers continually seek to maximise control over labour to extract surplus value. Central to the theory is the idea that employers deliberately restructure work to discipline workers, reduce autonomy, and increase efficiency. Classic characteristics of the labour process include managerial control, surveillance, deskilling, and the transfer of risks and responsibilities from employers onto workers (Edwards, 1979; Thompson, 1989). Although developed in industrial settings, LPT can be expanded to analyse the relationship between digital labour and the gig economy. For instance, in platform-based ride-hailing services, LPT reveals how digital platform owners exercise control not through direct supervision but through algorithmic management systems. The algorithms would allocate trips, set prices, track performance, discipline workers through ratings, and deactivate drivers instantly when the paltform suspect any unethical usage, and this cannot be contested by the driver (Rosenblat & Stark, 2016). In this situation, while drivers are described as *"independent"* contractors or entrepreneurs however their work is tightly governed by the platform's invisible rules and automated decisions, reinforcing the idea of employer control. In addition, the platform's owners shift nearly all economic risks onto drivers. In the current arrangement in Ghana and elsewhere, drivers must purchase and maintain vehicles, bear fuel costs, cover insurance, absorb demand fluctuations, and provide their own safety equipment, but they do not determine the prices of their trips and receive no guaranteed wage or social protection (Cant, 2019). In deed the absence of collective bargaining power further deepens this vulnerability. Structurally, this creates a labour regime marked by income instability, long working hours, occupational insecurity, and exposure to social and health risk conditions that disproportionately impact workers in contexts with weak welfare systems. Thus, LPT helps explain why drivers remain economically and socially precarious despite technological innovation. It shows that platform work is not simply a flexible digital opportunity, but a system designed to maximise control and profit while externalising costs and vulnerabilities onto drivers. In summary, while the TPB explains *why workers choose to adopt* ride-hailing platforms, the Labour Process Theory (LPT) illuminate *what happens after they join*, highlighting the structural conditions that shape their vulnerability.

Empirical Review

A review of empirical literature (Bhattacharya & Ray, 2021; Blundell, Machin, & Ventura, 2020) shows that the COVID-19 pandemic reconfigured digital labour platforms by intensifying reliance on ride-hailing and delivery services as people sought alternatives to in-person shopping and public transport. According to Greenhalgh et al. (2021), the surge in demand placed drivers and couriers at the centre of urban mobility and supply chains; however, it also heightened their exposure to infection due to continuous interaction with customers. Also, Katta et al. (2020) argue that although some public health frameworks recognised these risks, implementation of protective measures was uneven, especially across the Global South. In trying to segregate the activities of digital platforms work Heeks et al. (2021) identified two main forms. These are location-based services and remote web-based tasks. Scanning through the various studies conducted, it can be observed that during the pandemic, location-based workers became essential, though drivers remained classified as self-employed. The implication of this is the shifting of responsibility for health and safety onto drivers despite platforms' extensive algorithmic control over work intensity, access to customers, and earnings. Studies from Aston et al. (2020) and Mastercard, (2019) showed that before and during the pandemic, global platform revenues were projected to grow rapidly, driven largely by transportation and delivery services. Though there is growing evidence that participation in platform work has increased, with 28 million workers in Europe (European Commission, 2021) and up to 100,000 in Ghana (Fairwork, 2021). This growth in the literature, but it has failed to examine if it has translated into improved working conditions. Few research (Berg et al., 2018; Veen, Barratt, & Goods, 2020) highlights pervasive precarity such as volatile incomes, limited protections, and restricted labour rights. The review of literature reveals significant gaps. Most of them heavily concentrated on advanced economies, offering limited insight into developing countries where weak labour institutions magnify risk. The interaction between pandemic conditions and platform governance mechanisms, algorithmic control, incentive structures, and rating systems also remains under-examined, especially in Ghana. Moreover, existing scholarships rarely integrate behavioural theory to explain why ride-hailing drivers adopt, modify, or resist safety practices. Addressing these gaps is essential for developing context-specific frameworks that strengthen the protection of platform workers in rapidly expanding gig economies.

Methodology

The study adopted a qualitative research design. This approach was deemed most suitable for obtaining a nuanced understanding of drivers' risk perceptions in their activities during the Covid 19 outbreak, rather than aiming for statistical numbers that fail to share the lived experience of the ride-hailing drivers. In terms of sampling, participants engaged in the study were sampled purposively. The eligibility criteria required participants to (1) have worked on a digital labour platform during the COVID-19 period, (2) have worked not less than 15 hours per week, and (3) have accumulated at least five months of experience. The thresholds of 15 hours and five months were set to ensure that participants had sustained a meaningful engagement with platform work, thus enabling them to provide informed insights into risks and coping strategies.

In total, 50 participants were recruited, among which included platform administrators (4) and government officials (1). The sample was diversified intentionally to capture perspectives from both frontline workers and institutional actors involved in risk governance. Recruitment was carried out through professional networks, snowballing among drivers, and direct contact with platform associations. Though we acknowledge that this approach carries potential selection bias, efforts were made to mitigate this by ensuring representation across different platforms, work arrangements, and geographical locations. Data were gathered through in-depth interviews conducted both face-to-face (with COVID-19 safety precautions) and via telephone. Open-ended questions were used to elicit participants' perceptions of workplace risks, coping strategies, and views on the adequacy of institutional responses. Platform administrators and government officials were also interviewed to understand organisational and policy-level responses to pandemic-related risks. In addition, documentary sources such as government guidelines, platform-issued safety protocols, and COVID-19 advisories shared with drivers were collected and analysed to triangulate accounts and situate worker narratives within broader institutional contexts. Although the study initially drew on situational analysis (Clarke et al. 2018) as a guiding framework, in practice the analytical process combined situational mapping with thematic analysis.

Situational, thematic and comparative analysis, as shown in Table 1 was employed to map the wider social worlds, institutional arenas, and positionalities that structured digital platform work during the pandemic. This approach enabled the study to capture the complex relations, power dynamics, and contextual conditions shaping workers' experiences. Complementing this, thematic analysis supported by NVivo was used to systematically identify recurring patterns in workers' risk perceptions, work demands, and coping strategies. Using both methods together strengthened the analysis: situational analysis provided a macro-level understanding of the landscape of platform work, while thematic analysis offered a detailed, micro-level examination of participants' narratives. This dual approach ensured that individual themes were interpreted within the broader social, institutional, and political-economic contexts in which platform work is embedded.

During data analysis Codes were developed inductively from the data but refined abductively in dialogue with existing literature and theoretical frameworks. Differences in interpretation were resolved through iterative coding, constant comparison across cases, and team discussions until consensus was reached. To ensure the validity of the study, triangulation across interviews, documents, and stakeholder perspectives was done to strengthen the robustness of the findings. The study received ethical approval from the Institutional Review Board of the University of Cape Coast. All participants were provided with informed consent, with the purpose and voluntary nature of participation clearly explained. Pseudonyms were used in the analysis to protect identities, and care was taken to avoid linking sensitive information to specific individuals.

Table 1
Data Sources and Their Use in the Study

Data Source	Description	Purpose	Analytical Use
In-depth interviews with drivers	45 platform-based transport and delivery workers (15 + hrs/week, 5 + months exp.)	Explore lived experiences, health risk perceptions, coping strategies, and work challenges.	Thematic coding to identify patterns in risk perception, mitigation strategies, and work demands.
Interviews with platform administrators	4 managers/administrators from different digital platforms	Understand organisational responses, safety measures, and institutional perspectives.	Comparative analysis with workers' accounts to highlight gaps and complementarities.
Interviews with government officials	1 official from relevant agencies (labour).	Examine policy responses, enforcement of safety protocols, and institutional framing.	Situational mapping of governance arenas and positionalities.
Documentary evidence	Government guidelines, platform-issued safety protocols, and COVID-19 advisories	Triangulate interview data, contextualise drivers' narratives, and examine institutional logics.	Content analysis to corroborate or contrast with interview data.
Field notes	Detailed notes from interviews and observations	Record contextual details, non-verbal cues, and reflections during interviews.	Used to supplement coding and refine the interpretation of emerging themes.

Results and Discussion

The findings are presented through the lens of situational analysis, which moves beyond documenting drivers' individual experiences to situating these accounts within the broader organisational, structural, and policy contexts of platform work in Ghana during the COVID-19 pandemic. Specifically, we examine how drivers' narratives intersect with labour governance, public health mandates, and the political economy of digital platforms. This approach enables us to trace the connections between personal accounts of risk, insecurity, and adaptation, and the wider structures of power and inequality that shape platform labour in Ghana.

The study drew on in-depth interviews with both drivers and platform managers to capture the multiple layers of digital labour during the COVID-19 pandemic. Data were collected between August and December 2020, a period that coincided with Ghana's strictest public health measures. Forty-five drivers were interviewed across Accra, Kumasi, and Cape Coast, twenty from Bolt and twenty-five from Uber. In Cape Coast, only Bolt was operational at the time. The interviews were conducted through a combination of telephone and socially distanced face-to-face conversations, in line with national COVID-19 safety protocols. In addition, platform managers were interviewed to provide an organisational and governance perspective.

The sample reflects the structural composition of platform labour in Ghana: the majority of drivers were male (37 out of 45), with only eight women participating. Among the women, three were divorced mothers, while the rest were married. Male drivers had a mean age of 28 years, while female drivers were on average older, at 35 years. This gendered age gap aligns with broader evidence of women's delayed entry into platform work due to family responsibilities and restricted access to vehicles. On average, drivers reported working 33 hours per week, generating an estimated annual income of GHS 47,000, with hourly earnings averaging 38 Ghana Cedis. These figures provide a useful baseline for situating the drivers' accounts within Ghana's wider political economy, where platform work has emerged as a buffer against youth unemployment but remains largely informal and unregulated by national labour law.

Importantly, many drivers worked simultaneously for both Uber and Bolt, reflecting the precarious and competitive nature of platform labour, where diversifying across multiple apps is a survival strategy rather than a choice. To contextualise their accounts, participants also provided screenshots of COVID-19 safety messages and support measures pushed through the apps. These digital traces were analysed alongside interview data to examine how platform companies communicated responsibility for health and safety to drivers. This dual dataset enabled us to situate drivers' personal experiences not only in terms of fears of infection or economic strain, but also within the broader organisational practices of the platforms and the structural gaps in Ghana's labour protection regime.

Everyday Interactions with the unknown

A central theme emerging from the interviews conducted was drivers' strong perception of being at heightened risk of contracting COVID-19 due to their continuous interaction with strangers in enclosed spaces. Within the Theory of Planned Behaviour (TPB), this perception shaped their *attitudes* toward their work, often producing fear, anxiety, and a sense of vulnerability. Drivers consistently contrasted their circumstances with public health guidelines promoting social distancing, which were nearly impossible to follow in their line of work.

As Yakubu, a Bolt driver, explained:

As a driver, I constantly interact with people and have newcomers enter and exit my car, which makes me more vulnerable. You aren't merely remaining in your social spheres. We know that simply being in the automobile with whoever poses a risk at any time

Similarly, an Uber driver, Kobina Jones, emphasised the uncertainty of exposure in his daily work:

I always have continuous and everyday interactions with people I don't know as an Uber driver. Some of them keep coughing and sneezing right in my car… I don't know whether I am safe or not mingling with everybody every day in my car.

These comments agree with Apouey et al. (2020) and Montano & Donnelly (2022)'s observation that ride-hailing and app-based platform workers had heightened fears of transmission as a result of occupational exposure and the inability to control their work environment all over the world. Similarly, Fielbaum et al. (2022) analyse daily job impacts for ride-hailing, delivery, and public transport drivers, showing that these drivers experienced sustained and unavoidable contact with the public without adequate protective barriers. These comments also resonate with broader literature on occupational health risks in platform economies, where informalized work structures leave drivers bearing disproportionate responsibility for workplace safety (Woodcock & Graham, 2020). In Ghana, as elsewhere, platform companies placed the burden of risk management on drivers while limiting structural protections such as access to sick pay or personal protective equipment. This was corroborated by both platform administrators and government officials interviewed, who emphasised that responsibility for drivers' safety during this period rested largely with the drivers themselves, while the role of the state was limited to enforcing the public health protocols. The risk was amplified for those engaged in delivery services, including trips to homes and even isolation centres.

As Kwesi Atta, a Bolt driver, reflected:

Day after day, I transport individuals who may be COVID-positive. I therefore frequently communicate with people about whom I do not know the safety measures they have previously taken. Hence, there is a risk of COVID infection with every ride undertaken.

Another driver, Paa Bobo, highlighted the invisible, uncontrollable dimension of exposure:

I can get infected at any time because I am always with anybody in my car as part of my work. I don't even know whether they have the virus or not, as they hop into my car and start to touch things and breathe out and in.

Such accounts underscore the intersection of micro-level anxieties with macro-level structural inequalities. While Ghanaian labour law requires employers to provide a safe working environment, the classification of drivers as independent contractors excludes them from protection by platform owners. This structural gap left drivers reliant on intuition to assess risks, creating constant psychological strain on them.

An Uber driver, Ekow Panyin, recalled how even ambiguous symptoms triggered anxiety:

I picked up a rider who looked so tired. I mean, she appeared to be really exhausted, with a runny nose and coughing here and there. I started experiencing some intense anxiety for almost an hour following that…… in fact, I was worried because I was thinking he might have the virus ……this kept me thinking throughout the trip.

These comments align with findings of Anwar & Graham, (2021), who argue that platform workers often report heightened vulnerability in the course of their work due to inadequate occupational health policies of platform owners.

Mr Dee, another Bolt driver, also highlighted the stigma associated with disclosure:

People just won't claim to have it……, who would like to be known to have the virus? Even I would be afraid to make deliveries to such persons or allow them in my car if I found out they had Covid-19. But what if that is the only request I have that day? ……hmmmm.

These comments reflect the complex social pressures drivers navigated during the pandemic period. In some cases, they recognised the risks of concealed illness but also feared perpetuating stigma since that would affect their income and rating. Within the TPB framework, this illustrates the interplay of subjective norms (stigma around illness disclosure) and perceived control (inability to verify passengers' health).

Overall, the drivers' accounts reveal more than personal fears. They also highlight how structural factors such as weak public health enforcement in informal economies, gaps in Ghanaian labour protections, and the governance strategies of global platform companies shaped drivers' risk perceptions and coping behaviours. Viewed through Labour Process Theory, these dynamics show how the labour process itself embeds risk by prioritising productivity and managerial control over driver working conditions. Drivers' health anxieties and fears, therefore, were not personal to them alone, but manifestations of systemic inequalities and power imbalances inherent in the organisation and governance of ride-hailing work during the pandemic.

Weak and Inadequate Safety COVID-19 Measures

This theme explores the adequacy of COVID-19 safety measures introduced by digital platform owners and their implications for drivers' health and decision-making. Our findings show that while platform owners such as Uber, Bolt, and Glovo introduced some preventive measures such as health questionnaires, contactless delivery options, and PPE distribution, some drivers still reported that these measures were weak, inconsistently applied, or ineffective in reducing their daily exposure to the virus. Our understanding from the situation was that driers were not only vulnerable but also shaped their behavioural responses (Ajzen, 1991). For instance, some drivers described how screening questionnaires quickly became irrelevant by the time a customer boarded, leaving them exposed to the virus.

As Kwasi Twum, an Uber driver, explained:

Because we have to be dealing with all sorts of people, I believe that we are more vulnerable than any other person. Our cars are not actually a place where everyone entering can have their temperature checked or taken. If there are no inquiries, such as, Have you been coughing?" "Have you been consistently weak for some time? Is your throat sore?" among others, we may not be safe in our cars. These questions become irrelevant by the time the customer gets to the car……indeed, what is the use of it when what is pushing to accept the request is economic.

Similar frustrations were echoed by a Bolt driver, who stressed that the apps' health declarations were outdated and "not accurate."

Even though the apps have a number of questions for the riders or clients, they are usually not updated. Furthermore, since they are not questioned every day, the items on apps concerning clients/riders' health are not always accurate. This is worrisome because a driver may end up contracting COVID-19 without knowing……at least I have been using uber app for a long time before the disease outbreak, so during this time they can treat us like other government workers by paying us something for the risk we take…

In one case, Mansa Musa, another Uber driver, realised only mid-ride that a coughing passenger was likely symptomatic. He felt trapped: he narrates

One day I had a rider who was just coughing, and everything pointed to me that he might be having Covid 19…….. I therefore felt quite unsafe, but it was already too late because I only realised this halfway through the journey. I immediately drove home after the ride and cleaned my car.

These accounts resonate with Beckman et al.'s (2021) findings that argued that ride-hailing drivers reported heightened fear of infection due to repeated contact with unknown passengers, often without adequate health safeguards. Also, some literature confirms that such occupational vulnerability was a broader public health concern, particularly in contexts where protective measures and institutional enforcement were weak (Apouey et al., 2020; Nguyen-Phuoc et al., 2023). Some digital platforms introduced "contactless" deliveries, but these measures relied on customers' choices rather than drivers' preferences. For instance, Jomo, a food deliverer, explained:

In most cases, the client emerges without her mask and checks to make sure that all her deliverables are present. Because I don't want a bad rating, I wait while she makes sure everything is in place. Don't forget this makes nonsense of the objective of prohibiting physical contact capable of spreading the pandemic.

This statement reflects Chen et al.'s (2021) and Nanda & Rodrigues' (2021) findings that customer control over delivery modes undermined the intended protective effect of "contactless" protocols. Drivers' dependence on customer ratings reinforced this vulnerability, as documented by MacEachen et al. (2022), who argue that algorithmic supervision and rating systems pressured workers into unsafe interactions. Similarly, Fairwork (2020) reported that gig workers globally often breached health guidance, including mask wearing and distancing, to avoid negative reviews. From a Labour Process Theory perspective, this reflects how control within the labour process is structured to prioritise managerial and consumer demands over workers' autonomy. This leaves drivers with limited power to influence safety practices that directly affect their working conditions.

Our study further found that the distribution of PPE by platform owners was also inconsistent and inadequate. While some drivers acknowledged moments when Bolt and Uber distributed masks and sanitisers in Accra, many complained that items were limited in quantity, of poor quality, or only available in distant places. As a result, most workers had to purchase their own PPE. Agyemang et al. (2023) similarly report that although some companies distributed free PPE, access was inconsistent, distribution centres were costly to reach, and less than one-third of drivers received sufficient supplies. These barriers are consistent with broader occupational health research showing that logistical and structural challenges undermined PPE access for gig workers in low- and middle-income countries (Beckman et al., 2021). Viewed through the lens of the Theory of Planned Behaviour, these findings highlight the misalignment between workers' health-related attitudes and their ability to act on them. Drivers expressed strong attitudes toward protecting themselves, but then subjective norms (customer expectations and fear of poor ratings) and limited perceived behavioural control (lack of effective platform measures, inaccessible PPE, and absence of enforcement mechanisms) constrained their actions. As a result, intentions to follow health guidance often failed to translate into consistent protective behaviour. The inadequacy of safety measures, therefore, did not only reflect operational flaws but also reinforced structural vulnerabilities, compelling drivers to prioritise customer satisfaction and income security over their own health and safety. This supports wider evidence that algorithmic control and customer-rating systems by ride-hailing platform owners intensified precarity during the pandemic (MacEachen et al., 2022; Anwar et al., 2022). In

Labour Process Theory terms, these systems act as forms of labour discipline that tighten managerial control, limit workers' autonomy, and ultimately deepen the structural vulnerabilities experienced by drivers.

The findings illustrate how ride-hailing drivers and delivery workers navigated the risks of COVID-19 exposure in the course of their daily interactions with customers. Although some workers recognised their vulnerability, they often weighed the health risks against the more immediate and tangible threat of income loss. Some case tension was most visible in encounters with clients who refused to wear masks. Drivers described regularly reminding passengers to wear masks before boarding and, in some cases, refusing service to noncompliant clients. However, this stance often provoked conflict, with customers interpreting the reminder as an insult or sign of disrespect. Consequently, some drivers admitted to allowing maskless clients to board, according to them, to "let peace to prevail."

As Abdul Basit, a Bolt driver, recounted

They just sit in with a straight face without their face masks, no greetings, because they know they have done something wrong by not wearing their masks. Immediately, you turn to them to remind them to wear their masks, but they frown and make it clear to you that they don't feel comfortable wearing them. At that moment, you just have to let it slide for peace to prevail.

Similarly, delivery workers reported that even when mask rules were clear, they often found themselves in situations where enforcing compliance was impossible. George, a Glovo deliverer, recounted:

When you get to a door where you are to deliver food to a client, he or she comes out without a nose mask. What was even more frightening was when we delivered to offices; you are in an elevator with a total stranger who is maskless and keeps getting closer to you without thinking of social distancing. Other times, when we are waiting to get into an elevator. Everywhere you turned you will be afraid of being infected.

These accounts underscore the daily dilemmas workers faced in balancing personal safety with professional obligations. The Theory of Planned Behaviour provides a useful lens to interpret these dynamics. Drivers' attitudes toward mask enforcement reflected a clear understanding of the health risks and the importance of compliance. However, subjective norms such as the fear of offending customers or provoking conflict often discouraged strict enforcement. Moreover, perceived behavioural control was limited, as drivers and deliverers felt they had little authority to compel customers to wear masks without jeopardising their livelihoods or safety. This explains why many drivers and deliverers adopted coping strategies such as tolerating noncompliance or concealing their discomfort, even while experiencing heightened fear of infection.

These findings resonate with broader literature on gig work during the pandemic, which shows that workers' health-protective behaviours were often compromised by economic precarity and lack of institutional support (Fielbaum et al., 2023; Anwar et al., 2022). In addition, studies from MacEachen et al. (2022) suggest that ride-hailing and delivery workers in some developed countries considered themselves especially vulnerable to COVID-19 due to the close physical proximity required by their jobs. However, many continued working because the need for income outweighed the health risks, a pattern also observed in Africa. Some literature also affirms that despite platform-imposed safety measures (such as contactless delivery or mask mandates), platform workers still deem their risk of exposure high, partly due to gaps in enforcement and customer cooperation (Apouey et al., 2020; Beckman et al., 2021; Chen et al., 2021). Overall, the results highlight how the fear of being infected intersected with structural vulnerabilities to shape decision-making among ride-hailing and delivery workers during COVID-19.

Another defining feature of digital platform work in developing countries is the customer rating system, which drivers must maintain at a certain threshold in order to remain active on the application. This structural feature significantly shaped drivers' behaviour during the COVID-19 pandemic. This is because of the constant fear of receiving poor ratings, drivers and deliverers were compelled to prioritise customer satisfaction even in situations that compromised their health and safety. For example, while some drivers and deliverers described feeling unsafe when interacting with maskless customers, they also admitted hesitating to ask clients to wear masks or keep their distance for fear of confrontation, job cancellation, or a poor rating. As one Uber driver (Kwasi) in Accra put it,

The rating system that allowed passengers to rate us was not a fair system at all, especially in these pandemic times. It allowed our customers to be too powerful and could always blackmail us emotionally to compromise our safety for a good rating. Honestly, when you weigh the cost of having a confrontation with a rider/passenger against the benefits of passengers wearing masks, the cost outweighs any benefits because man must survive.

This dilemma echoes findings from Beckman et al. (2021), who observed that drivers most often struggled to enforce mask rules with noncompliant customers, often choosing to remain silent to avoid retaliation. Similarly, studies by MacEachen et al. (2022) also emphasised that platform workers operate under intense social and economic pressures, where attempts to enforce public health rules risk negative reviews, conflict, or loss of work. The rating system, in this sense, amplifies the structural power imbalance between customers and workers, forcing workers to weigh their personal safety against the immediate necessity of maintaining income. Also customer rating system exemplifies how digital platforms exercise control indirectly, as argued by the Labour Process theory. The literature further supports the idea that customer ratings create a cycle of precarity. Anwar et al. (2022) argue that rating systems institutionalise vulnerability by making workers overly dependent on customer evaluations for continued access to income. This reliance incentivises tolerance of unsafe or disrespectful customer behaviour, as

drivers fear being “blackmailed” with low ratings that could lead to deactivation. In the context of COVID-19, we conclude that these dynamics meant that many drivers knowingly exposed themselves to health risks rather than jeopardise their standing on the app. Taken together, our study highlights how the intersection of digital surveillance in the form of a rating system intensifies the precarity of ride-hailing and delivery work in Ghana.

Pressure from the Algorithm

This theme aims to explore how algorithmic management shaped delivery workers’ behaviours and decision-making during the COVID-19 pandemic, particularly the trade-offs between health protection and income security. Our study revealed that drivers reported intense time-related pressures imposed by the apps’ algorithmic systems. This system, which relies on software and data-driven rules, dictates the pace of work and penalises delays, regardless of external conditions such as traffic congestion, long queues, or health protocols requiring physical distancing. For instance, a driver picking up an order in a crowded restaurant had to choose between potential COVID-19 exposure and the risk of losing a trip. Just as he puts it:

Sometimes you go to an eatery or a chop bar (local restaurant) where you meet so many people… You need to forcefully do everything possible to get the food for your customers. If not, he or she might cancel the order as a result of time, even though it is not your fault.

This account highlights the constant tension between adhering to health guidelines and avoiding penalties or customer dissatisfaction.

Our study findings in this study resonate with the findings of Wotschack et al. (2024), who reveal that delivery drivers in Europe also experienced algorithm-enforced urgency, where speed was prioritised over safety. Similarly, Cheng et al. (2023) and Lehdonvirta (2022) note that platforms did not extend delivery times to accommodate pandemic-related hygiene measures, forcing workers to choose between risking infection and risking their livelihoods. Morita et al. (2022) also report comparable patterns in Asia, where drivers were penalised for order cancellations even when health concerns were legitimate. This global consistency underscores the structural nature of algorithmic control, which prioritises efficiency and customer satisfaction over drivers’ well-being.

Overall, our findings show that algorithmic time constraints intensified drivers’ vulnerability during the pandemic. Very few drivers accepted lower ratings or cancelled orders to protect themselves; the majority of them risked COVID-19 exposure to safeguard their income. This reflects what Dong et al. (2025) and Mbare et al. (2024) found in their study that digital platforms’ rigid time windows and penalty systems left drivers with limited options but to sacrifice health for economic survival.

Fear of being known as a COVID-19 Patient

An important theme that emerged from the experiences of ride-hailing drivers during the COVID-19 pandemic is the pervasive fear of being identified as a COVID-19 patient even though they are not. Unlike workers in more formalised employment systems who were paid sick leave or employer support, drivers in our study, on the other hand, faced the stark dilemma of balancing their health risks with the need to sustain income. Uber in some developed countries, for example, provided financial assistance for up to two weeks for any driver or delivery person diagnosed with COVID-19 or asked to self-isolate by a public health authority. However, in our study, we found out that drivers and deliverers were on their own in the face of COVID-19 contraction. A Bolt Driver, Kobby, in an interview said,

Some of our colleagues were infected with COVID-19 in their line of duty, but never got any assistance from Bolt or Uber. Meanwhile, we have been informed about how our colleagues in advanced countries are supported financially when infected. Here in Africa, you will face the risk all alone and treat it all alone. We were always at risk.

Our findings reveal the precarious conditions faced by ride-hailing workers in Ghana during the COVID-19 pandemic, particularly the absence of institutional or corporate support when drivers contracted the virus. While companies such as Uber and Bolt provided limited financial assistance or sick leave to workers in some developed countries, drivers in Africa were left to manage both health risks and economic burdens independently (Anwar et al., 2022). This assertion was confirmed in a discussion with Uber and Bolt platform managers, who argued that they only provide the platform for drivers to take advantage of. This disparity reflects the broader inequalities in the global gig economy, where stronger social protections are typically extended in jurisdictions with stricter labour regulations, while drivers in less-regulated contexts remain highly vulnerable (Woodcock & Graham, 2020; Anwar & Graham, 2020). The situation was compounded by the classification of digital platform workers as self-employed by platform owners. This, according to the platform owners, excludes the drivers from statutory sick pay and formal labour protections (Lane, 2020). Beyond the physical risks of frequent passenger interactions, workers also faced psychological distress associated with navigating the pandemic without employer or state support. Overall, these results underscore the vulnerability of Ghanaians' ride-hailing drivers and the urgent need for policy interventions to ensure equitable protections across regions.

Our findings also highlight how fear of being identified as a COVID-19 patient shaped drivers’ decisions regarding symptom reporting and access to platform-based sickness benefits. Drivers not only expressed uncertainty about application procedures and the extent of support available, but more importantly, they hesitated to report symptoms because doing so often led to account deactivation until a negative test result was produced.

In this context, where rapid testing was unavailable or prohibitively slow, this meant losing income for weeks regardless of whether one was positive or not. For low-wage drivers, isolation without income was considered an unaffordable “luxury,” as it directly threatened their ability to afford essentials such as food or rent. Consequently, many drivers chose to conceal their symptoms and continue working, even while potentially infected. This confirms Fielbaum et al.’s (2023) observation that inaccessible or unpaid sick leave created conditions where workers felt they had no choice but to remain active, despite health risks and symptoms.

Conclusion and Recommendations

Our study amplified the structural vulnerabilities of drivers and delivery workers on digital labour platforms during the covid 19 period. It can be concluded that drivers faced heightened health risks, economic precarity, and insufficient safety measures, all intensified by algorithmic management and customer rating systems. Safety interventions such as contactless deliveries or health questionnaires were often inadequate, and workers frequently bore the cost of protective gear themselves. In such situations, drivers continued working while ill, illustrating the constrained agency and systemic coercion inherent in platform labour. Applying Labour Process Theory illuminates how algorithmic governance, structural precarity, and platform control intersect to shape workers’ decisions, behaviours, and lived experiences, offering a theoretically grounded lens that moves beyond descriptive accounts to critically analyse risk, control, and resilience in digitally mediated work. The findings of this study underscore the need for targeted policy interventions to improve the safety and overall working conditions of platform workers. A priority is for digital platform owners to strengthen occupational safety mechanisms and ensure their adaptability during crises such as pandemics. This can be achieved through automating regular health screenings, provision of appropriate protective gear, and algorithmic adjustments that allow workers to adhere to safety protocols without facing penalties in terms of reduced earnings or limited work opportunities. The Second recommendation is the establishment of a more comprehensive financial assistance system where formal social protection structures remain weak among ride-hailing drivers. Also platforms owners, governments, and social partners could create emergency relief funds, provide paid sick leave, and develop micro-insurance products tailored to gig workers. Such mechanisms would mitigate the vulnerability of workers who must suspend their activities due to illness or injury. Third, the septal legal classification of ride-hailing drivers as individual entrepreneurs requires critical reassessment. The current categorisations deny these workers access to basic employment rights and social protections. Extending health insurance, pensions, and workers’ compensation schemes to gig workers would reduce employment precarity and align their protections more closely with those of traditional employees.

Another recommendation worth noting is that platforms must enhance transparency in their managerial and algorithmic practices. The opacity of rating and disciplinary systems can inadvertently compromise drivers' well-being. Policies mandating algorithmic accountability and the establishment of independent appeals processes would ensure that safety and equity are not undermined by automated decision-making processes. Finally, the effectiveness of these policy interventions should be evaluated through longitudinal studies that assess the long-term impacts of platform policies on drivers' health, financial stability, and job satisfaction. Complementary comparative cross-country analyses are also recommended to identify how variations in regulatory environments and institutional arrangements shape outcomes across different contexts. Such research would provide valuable evidence to guide the design of context-specific, sustainable interventions that promote equity and resilience in the gig economy.

This study provides novel insights into how the COVID-19 pandemic amplified structural vulnerabilities of drivers and delivery workers on digital labour platforms in developing countries. By combining empirical evidence with Labour Process Theory, it critically examines how algorithmic management, performance metrics, and economic precarity constrain worker agency and shape risk-related behaviours. The research highlights the insufficiency of platform safety measures and the difficult trade-offs workers face between following protocols and meeting deadlines. Importantly, it offers context-specific, actionable recommendations—including enhanced occupational protections, algorithmic accountability, financial safety nets, and legal reclassification that bridge theory and practice, advancing both scholarly understanding and policy approaches to supporting gig workers in structurally constrained, digitally mediated labour systems. In summary, the COVID-19 pandemic underscored the pressing need for an approach to safeguarding and supporting digital platform workers. By tackling these issues, stakeholders can strive towards creating an economy that is more resilient and fairer, balancing flexible work benefits with essential safeguards for workers’ health, safety and financial well-being.

Declarations

Author Contribution

Shaibu BukariConceived and designed the study, developed the research methodology, and supervised the overall implementation. Contributed to data interpretation and provided critical revisions to the manuscript.Licarion Kunwedomo MiineLed the data collection process, performed formal analysis, and prepared the initial draft of the manuscript. Contributed to editing and refining the final version.Musah DankwaSupported data collection, performed analysis, and contributed to the development of the results section. Reviewed the manuscript for technical accuracy.Benjamin Yaw TachieAssisted with research design, contributed to literature review development, and participated in manuscript editing. Provided additional validation of findings.Gabriel Nii KommeyFacilitated the research administration, performed analysis, and contributed to the

development of the results section, contributed to the visualisation and presentation of results, and participated in manuscript review and proofreading.

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