Digitization and Platform Economy in Africa:

A Comparative Study of Ride-Hailing Sectors in Nigeria and Ethiopia

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Abstract

Africa is at the forefront of both population growth and technological advancement in the 21st century. With its rapidly expanding population and largely untapped market potential, the digital transformation of Africa's economy, particularly its emerging industries, is critical to fostering sustainable development and economic growth. Among the countries leading this digital evolution are Ethiopia and Nigeria. Both countries have witnessed the rapid growth of the ride-hailing industry as a result of digital platformization. Against the backdrop of expanding middle-class urban residents, tech-driven entrepreneurs, and poorly-financed and dilapidated public transportation infrastructure, digital ride-hailing services have surged in popularity in both Nigeria and Ethiopia. These services now represent a growing portion of the digital economy in each country, while also interacting in complex ways with various regulatory frameworks, fiscal policies, and market forces.

This paper explores the development of ride-hailing industries in Nigeria and Ethiopia, comparing the two countries' regulatory environments, business models, and individual market trends. An extensive literature review was conducted to inform this study. The findings highlight key differences in how each country has shaped its ride-hailing industry. Ethiopia's sector has developed with a more entrepreneurial approach, though it faces challenges in policy support and regulation. In contrast, Nigeria has focused on integrating large global corporations, such as Uber and Bolt, through more supportive regulatory frameworks. These differing strategies shed light on the role of governance and market regulation in fostering innovative industries, offering insights for other countries undergoing digital transformation.

Keywords: digitalization, platformization, urban transport, ride-hailing, Ethiopia, Nigeria

Introduction

Between 2017 and 2100, the population of Sub-Saharan Africa is projected to triple, reaching a staggering 3.07 billion and accounting for 35 percent of the global population (Azeh et al., 2020). This rapid population growth is accompanied by the rise of a burgeoning middle class; by 2030, over 42 percent of Africa's population is expected to belong to the middle class, with this figure set to increase further (Anoba, 2019). In addition, Africa is also experiencing a significant expansion in digital infrastructure and connectivity. By 2025, Africa is expected to have over 600 million unique phone subscribers, with the number of users expected to grow dramatically as the results of greater technological access and improved infrastructure (Cirolia et al., 2023).

These defining characteristics have created an ideal environment for digital growth across a variety of industries in Africa. This change is most evident in the digital platformization of work, driven by the prevalence of smartphones as the primary means of internet access and the substantial supply-side investments in large-scale digital infrastructure (Cirolia et al., 2023). One such industry that has taken advantage of this digitalization is ride-hailing. Through a mix of local entrepreneurship and global technology giants, the ride-hailing industry in Africa represents a rapidly evolving frontier, reminiscent of the American Wild West. In this largely unregulated space, characterized by high demand and fierce competition, numerous stakeholders have entered the nascent market.

This dynamic is particularly pronounced in Ethiopia and Nigeria, both of which have experienced a significant boom in ride-hailing services within their tech sectors. Yet, each country has taken a different approach to policy and regulation, resulting in distinct market environments. This paper aims to capture and understand the nuances between these two

countries' ride-hailing economies, through an analysis of its regulatory landscape, market evaluation, and individual case studies. This rest of the paper will proceed with a literature review, followed by an explanation of the conceptual framework and methods, a comparison between the two countries, and ending with discussions and conclusions.

Literature Review

Decent Work and Informality

A key focus of ongoing discussion on platform economy is the issue of informal work. Workers in the ride-hailing sector occupy a unique position: their work is often categorized as gig work in the informal sector without clear classification or formal recognition. The informal economy accounts for a staggering 60-90 percent of the working population in Africa, contributing to about 39 to 58 percent of its GDP (Cieslik et al., 2021). While ride-hailing drivers do gain from "platform affiliation" (Cieslik et al., 2021, p. 2), which provides access to services like insurance, credit, and cash transfers, they remain largely unprotected by social safety nets or labor standards.

In terms of income, gid work in ride-hailing generated good income for drivers, with drivers earning up to five times as much as the minimum wage (Cieslik et al., 2021). Nonetheless, the lack of formal recognition highlights the need for effective policy solutions addressing both the labor demand and supply side of the gig sector. Cieslik et al. advocated for the reclassification of gig workers as contractual employees (Cieslik et al., 2021). Overall, ride-hailing drivers can be seen as a transition stage between formal and informal sectors; they are not recognized as employees but have a history of earnings, volume, and performance ratings that ideally with better regulation and definition, will allow formality (Cieslik et al., 2021).

Hidden Resistances

In addition to the visible resistances faced by ride-hailing drivers, there also remains a slew of hidden algorithmic encounters that drivers must combat. If being classified as independent or gig workers, employers can offer a false sense of autonomy while inadequately rewarding labor. In the case of Uber, Arubayi claims that due a lack of official capacities to dispute unfair algorithmic and employment practices, ride-hailing gig drivers have utilized numerous unofficial practices such as "manipulating platform algorithms, gaming spaces and rewards as a way of falsifying compliance, [and overall] larger-scale sabotaging of ride-hail platforms to fight for better conditions" (Arubayi, 2021, p. 826). Drivers have implemented a variety of strategies to combat the lack of transparency they face within digital platforms, including communicating with one another to cause price surges, distorting location and accuracy of GPS systems to make more money, and utilizing the rider apps themselves to complete rides (Arubayi, 2021). The reason drivers are able to manipulate algorithmic management is the same reason they need to in the first place: poor urban infrastructure, traffic jams, and weak regulatory frameworks (Arubayi, 2021). While these methods do allow drivers to fight back against the unknown that is platform algorithms, it also tends to hurt riders and the market as a whole, leaving strategies increasingly dispersed, varied, and inconsistent over time (Arubayi, 2021). Thus, resistances that may have been hidden today, can very likely be public tomorrow, creating a field of ever-changing adaptability for both drivers, riders, and platforms.

Platform Methods

In order to counter the algorithmic unknown and opacity facing ride-hailing drivers in their combat against platforms described by Arubayi, Fields et al. contends that there are three ways in

escaping the “black box” of platform urbanism. In particular, they contend that rather than a pure fight for mere transparency, “a focus on the apparent opacity of platforms may reify them as external to, rather than thoroughly embedded in, the relations among devices, people, and the urban” (Fields et al., 2020, p. 465). This means that instead of focusing on regulation that simply requires more transparency, practices must keep in mind the dynamics platforms play in the shaping of urban life. The three approaches Fields et al. argue that will combat this murkiness include narratives, counter-mapping, and proxying (Fields et al., 2020).

Conjunctural Geographies

In addition to the fight against algorithms and transparency, ride-hailing drivers, and local actors and governments face the issue of conjunctural geographies in dealing with worldly enterprises. Platforms, especially global ones, tend to be more undemocratic, distant, with no interest in promoting local voices or priorities, as they act more like mediary parties that treat work as a commodity, while simultaneously being able to dramatically influence urban interactions (Graham, 2020). This operating style disembeds [platforms] from interpersonal trust networks, state policies, and legal frameworks, leading to poor working conditions and avoiding accountability by operating on a different spatial scale (Graham, 2020). Graham offers three strategies for combating this as well: through regulation, replication, and resisting (2020). Graham recommends regulation to be considerate of the level of embeddedness platforms have on every level, while replication enlightens the fact that the nature of platforms means they can be subject to replacements by other sources. Lastly, aligning with the argument made by Arubayi, Graham also supports the utilization of their collective power, rooted in their embeddedness rather than official associations, to challenge algorithmic structure and platform systems (Graham, 2020).

Algorithmic Suturing

Lastly, a final piece of literature that would prove useful in this conversation in regarding the concept of algorithmic suturing as described by Pollio et al. This helps to encapsulate how the market has grown so quickly and became as adaptable and flexible as it did with relation to ride-hailing drivers and delivery. One of the biggest challenges in urban Africa is the delivery and transportation within the "last mile" or the final part of the journey for a product or customer to travel through before their destination (Pollio et al., 2023). Due to extensive urban sprawl, poor roads and infrastructure, a lack of addressability, and fragmented delivery systems, mobility in these sectors have innovated to utilize motorcycle taxis in their travel to suture together the gap between the splintered urban networks and informal economic activity through platform business models (Pollio et al., 2023). Pollio et al. expands on the traditional theory of algorithmic suturing as simply a method of survival at the margins to being a deliberate business model that legitimizes problems of optimization in order to extract value (2023). This elaborates on the importance platform urbanism plays for the aforementioned rising lower to middle class in Africa, where capital is built upon the improvisation of network systems through the patching of urban segments.

Methods and Conceptual Framework

Most of the existing literature has focused on the issues surrounding digital urbanism within platforms, the response and actions of ride-hailing drivers to these issues, and policy approaches and considerations. This paper adopts a slightly different conceptual approach by applying a comparative lens. By examining the development of ride-hailing in two distinct contexts—Ethiopia and Nigeria—this study highlights the differences in policy and market environments.

These differences provide valuable insights into the frameworks necessary for effective governance and regulation in this rapidly evolving sector.

Additionally, this paper adopts a southern perspective as described by Cirolia et al. By taking a comparative lens and focusing the study on two Africa countries, the narrative will be allowed to emphasize African experiences while "resisting attempts to place them as case studies for global concepts" (Cirolia et al., 2023, p. 3). That is to say, the dramatic expansion of platform urbanism in Africa is not simply a case of global finance landing there, it also encapsulates infrastructural investments made by states, as well as strategic marketing and policy implementation. In essence, a southern perspective advocates for generating theory from Africa's unique and often marginalized urban experiences, rather than conducting research on them (Cirolia et al., 2023).

The methods for this paper primarily involve policy analysis, examining documents from both Ethiopia and Nigeria to understand their regulatory frameworks and implications. In addition, market developments were tracked, and individual case studies of specific digital platforms were evaluated. Lastly, secondary research and data were reviewed to support both the policy analysis and market evaluation for the two countries.

Empirical Analysis and Findings

Ethiopia

Policies. Ethiopia's regulatory framework has been heavily focused on the growth of its domestic technological sector while attempting to keep at bay global tech giants, such as Uber or Bolt, both of which want a piece of the untapped market of over 100 million people. Ethiopia's policy has broad goals of promoting both e-commerce and digitalization of the financial and

logistical sectors, mainly through the expansion of information and communications technology (ICT) in order to modernize its civil and public services (Ministry, 2020). With the help of infrastructural development such as broadband network augmentation, Ethiopia has also set lofty goals for itself, aiming to increase access to internet and mobile services to 100% while raising transport coverage to 100% in rural areas and 70% in urban ones (Ministry, 2020). However, their track record suggests that such an increase might be feasible given the success of their policies in recent years. The latest reforms have allowed telecom coverage to reach over 95% of the country by population and 85% of the country geographically, along with increasing affordability as costs have been cut between 50-80% (Cepheus, 2021).

However, even with increasing amounts of supportive infrastructure and policy catered towards the development and digital and platform friendly economy, there remains a lack in regulatory policy surrounding the ride-hailing industry. For one, there is a gap regarding even the way ride-hailing drivers are being defined and differentiated within the industry from taxi drivers, oftentimes still operating within the informal sector. With over 40 ride-hailing companies operating Ethiopia, the Transport Bureau has only managed to register around 17, less than half of what should be needed (Bogale, 2022). There was a E-Taxi directive passed in 2019 issued by the Addis Ababa Transport Bureau that had attempted to limit which kind of vehicles were allowed to participate in ride-hailing, but due to driver and industry backlash, it appears this directive has not been enforced (Cepheus, 2021). Thus, although Ethiopia's policies largely support the continued digital economic expansion, its complete lack of a regulatory framework surrounding the ride-hailing industry holds it back.

Market Evaluation. Despite its policy shortcomings, Ethiopia's ride-hailing industry plays a large role in its digital landscape, with estimates of over 90,000 rides per day (Cepheus, 2021).

With its strict regulations, it has been extremely difficult for external ride-hailing hailing enterprises to break into the Ethiopian market, with almost all of its roughly 42 ride-hailing businesses being home grown and locally established. This entrepreneurial spirit has led to fierce competition within Ethiopia between firms, especially as the ride-hailing market space is only expected to grow, with annual gross transaction value of over $137 million (Cepheus, 2021).

Nonetheless, there are gaps in the ride-hailing market, with a lack of intercity travel and cargo delivery (Cepheus, 2021). More importantly however, simply defining their legal status and business type would be the most crucial factor to consider first. Without a proper or agreed understanding of what the ride-hailing industry is, there can be no adequate regulation.

Case Studies. One case study that represents the Ethiopian market has been Zayride. One of the earliest large players in the Ethiopian ride-hailing market, it is largely based upon crowdfunding through equity partners (Cepheus, 2021). Additionally, Zayride was the first to launch an app for ride-hailing, capitalizing on the expansion of ICT connectivity. Its subsidiary and vertical, raised $3.5 million from 31 different investors (“Business”, 2021). Zayride itself was the selection of Google’s Startup Fund, raising another $100,000 (Koba, 2022). Zayride in particular differentiates itself through its built-in metered vehicles, simple booking procedures that allow payment before the ride, and being slightly catered to those with lower connectivity speeds (Gardner, 2016).

Nigeria

Policies. Nigeria sits quite contrary to Ethiopia’s regulatory framework, as Nigeria possesses a much stronger description of how to classify ride-hailing and what exactly the industry entails (Ministry of Finance, 2020). In a series of guidelines passed in 2020, the Lagos State

Government depicted important definitions for the distinction between a taxi driver and an E-hailing ride-hailing driver, including how they function, what differentiates them, and the different permits they must obtain to work (Ministry of Finance, 2020). Both the operator, or ride-hailing company, and driver must fill out a series of documentation, along with abiding by a series of operational guidelines, including not accepting street hails, maintaining an operational badge while working, and requiring an expressed contract for the operator to have direct control over a driver and his/her vehicle (Ministry of Finance, 2020).

Market Evaluation. Nigeria's market outlook differs much from what Ethiopia has experienced. In particular, Nigeria is much more embedded in the global ride-hailing economy, with companies like Uber and Bolt being primary options within its cities. This means Nigeria has a much less varied field of competition in the ride-hailing market. Given the two-pronged dominance of Bolt and Uber, they have each expanded across Nigeria in an attempt to gain greater market share, with Bolt owning the majority at a whopping 60% (Afolayan, 2020). Both have also launched integrated innovations in an attempt to compete, with Bolt launching Bolt tricycle and delivery services, while Uber developed boat and bus hailing (Afolayan, 2020). Nevertheless, Bolt's greater perceived accessibility and lower commission rates have kept it operating at a level slightly above Uber at this point (Afolayan, 2020).

Case Studies. In addition to Bolt and Uber, Nigeria does boast other local ride-hailing businesses as well, one of which is Gokada Motorcycle. In an attempt to fill a gap with the two giants fighting for market share, Gokada raised $5.3 million and has grown to over 1,000 drivers in Nigeria (Bright, 2019)). Gokada particularly excels in the urban periphery, where roads and infrastructure worsen and smaller, lighter, motorbikes are the preferred choice of travel. In addition to its current innovation, Gokada also aims to start a Gokada club in each city with a

restaurant for drivers to relax and Gokada Shop (Bright, 2019). In addition, its business model is one that doesn't split fares with drivers but instead charges a flat-fee of 3,000 Naira a day to work on the platform (Bright, 2019).

Discussion

There are significant differences between both the policy landscape and market structure of the ride-hailing industry in Ethiopia and Nigeria. In Nigeria, the market is dominated by a few major companies, with Uber and Bolt controlling a large share. In contrast, Ethiopia's market is more diversified, with several local businesses competing for market share. This reflects the impact of Ethiopia's anti-foreign investment policies, which have shaped its industries, resulting in top ride-hailing companies being homegrown entrepreneurial efforts.

Furthermore, Nigeria's policy guidelines and implementations have been more explicit and clearly defined compared to Ethiopia's. The formal classification of ride-hailing services and higher levels of regulation in Nigeria have favored larger companies that have the resources to meet regulatory requirements and overcome entry barriers. On the other hand, Ethiopia's regulatory framework is more complex, informal, and inconsistently enforced, creating gaps that allow a variety of local, less-structured business models to thrive. Ultimately, the differences in the ride-hailing markets of Ethiopia and Nigeria can be attributed to their contrasting policy approaches and regulatory environments.

Conclusion and Next Steps

Despite their differences, both Ethiopia and Nigeria are experiencing tremendous growth in not only their ride-hailing industry, but their digital economy as a whole. Yet their market structures

are differentiated by their contrasting approaches to policy. As seen with Nigeria's case study, due to its more rigid structure, its gaps must be filled with more formalized endeavors whereas Ethiopia, due to its existing informality and wide scope of established work at the urban margins, has an overall greater number of ride-hailing companies. With an understanding of the regulatory landscape and market situation, the next steps would be to conduct interviews to gather primary data from stakeholders, drivers, and union members within ride-hailing companies in Ethiopia and Nigeria to further understand the relationship between the labor market, employers, and legislators. Regardless, Ethiopia and Nigeria both present two contrasting cases of how policy can influence and outline the development of an industry, especially one as raw and unfamiliar as ride hailing.

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