

# The Profile and Operational Structure of Formal E-Hailing Light Freight Delivery Companies in Metropolitan, Lagos, Nigeria

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## Abstract

*The rise of e-commerce and digital platforms in Lagos has driven rapid growth in light freight delivery services within the e-hailing sector. This paper examines the Profile and Operational structure of formal e-hailing light freight delivery Companies in Metropolitan, Lagos, with focus on six companies as follows: Brain Express, Gokada, MAX.ng, ACE, Red Star and DHL Express. Using company reports, LAMATA Operational data, and dispatch records for 2026. Operations follow a five-stage process: Order placement, Dispatch and Rider Matching, Pickup and Verification, Transit and Tracking, and Delivery with payment settlement. Service is concentrated in 5 cores LGAs- Ikeja, Eti-osa, Lagos Island, Aimosho and Surulere- creating service gaps in peripheral areas. The study analyzes fleet Composition, service coverage, technology use, and workflow processes. Findings revealed that light freight operations are dominated by motorcycles for intra-city deliveries, with asset-light models accounting 70% of trips and asset-heavy models like Red star and DHL handling bulk B2B Logistics. All companies comply with LAMATA regulations, including Service Entity Permits and remittance of = N20 per trip plus 10% of service charge. The Paper concluded that while technology has improved efficiency, expansion to understand LGAs and policy support for SMEs are needed to ensure equitable growth of light freight e-hailing in Lagos.*

**Keywords:** E-hailing, Light Freight, Delivery Services, Operational Structure, Metropolitan Lagos, Logistics.

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## Introduction.

The platform economy has reshaped urban logistics in African mega cities by enabling on-demand, technology-mediated delivery services. Thus, the emergence of electronic commerce has further intensified this demand by moving a significant proportion of commercial

transactions from conventional physical markets to digital platforms. Therefore, the development of digital platforms has created new organizational models for addressing some of these challenges. Rather than depending exclusively on traditional courier companies with fixed fleets, warehouses and conventional dispatch systems, platform-based logistics firms can use mobile applications, GPS, electronic payment systems, automated order allocation and real-time tracking to connect customers requiring delivery with riders or drivers who possess available transport capacity. This model may be described as e-hailing light freight delivery, where a customer electronically requests the movement of relatively small consignments and the digital platform allocates an appropriate rider, motorcycle, tricycle, van or other light commercial vehicle to perform the delivery. In Nigeria, e-hailing freight delivery services emerged as a response to traffic congestion. Poor road infrastructure, and the growth of e-commerce in Metropolitan Lagos (Adeyemi & Odufuwa, 2023). Metropolitan Lagos, with an estimated population of over 20 million (Lagos Bureau of Statistics, 2024), accounts for over 60% of Nigeria's logistics and courier activities. Last-mile freight delivery is particularly important because it represents the final stage in the movement of goods to the customer. Bosona (2020) describes urban last-mile logistics as one of the most complex and inefficient components of the supply chain. The literature identifies technological, infrastructural, management and cost-related challenges as important constraints to urban last-mile logistics. Formal e-hailing companies have become critical intermediaries linking senders, riders, and receivers in real time. Indigenous companies such as Brain express, Gokada Rides, MAX.ng, ACE, Red Star Express, and DHL Ltd. Operate under the Lagos state Ride-hailing and delivery Services Regulations 2022 (Lagos State Government, 2022) and are registered with the corporate Affairs Commission (Corporate Affairs Commission, 2020). Unlike informal bike couriers, these companies use centralized dispatch, GPS tracking, and cashless payment systems. Despite their growth, literature on e-hailing in Nigeria has focused mainly on passenger ride-hailing and multinational platforms like Uber and Bolt (Onuoha, 2022). There is limited empirical documentation on how indigenous formal light- freight e-hailing companies are profiled and structured operationally in Lagos (Nwachukwu, 2024). Understanding their and structure is important for policy, investment, and sustainable urban logistics planning. Therefore, this paper examines the profile and the operational structure of six formal e-hailing light delivery companies in Metropolitan Lagos. While e-hailing Delivery is rapidly, indigenous operators face challenges of high fuel costs, regulatory levies, rider attrition, and infrastructural deficits (World Bank, 2023). Without clear documentation of their organizational profile and operational model, policymakers cannot design targeted support. This gap motivates the study.

## 1.2 Statement of the Problem

The transformation of freight delivery through digital platforms has created new opportunities for improving urban logistics. However, the development of formal e-hailing light-freight companies in Lagos has not been accompanied by a sufficiently developed body of empirical research documenting their organizational and operational characteristics.

There is limited systematic information concerning the profile of formal e-hailing light-freight companies. Information regarding ownership, age of business, registration status, number of employees, number of riders/drivers, fleet size, geographical coverage and categories of goods handled is fragmented.

There is inadequate understanding of the operational structures through which these companies provide delivery services. Questions remain concerning whether companies own their vehicles, lease them, contract independent riders or employ hybrid arrangements.

The role of digital technology in operational coordination requires further investigation.

Although GPS tracking, mobile applications, digital payments and automated order allocation are increasingly used, the extent to which these technologies are integrated into actual operational decision-making among Lagos-based firm's remains insufficiently documented. Urban congestion creates significant operational uncertainty. A delivery request that appears straightforward in a digital application may become considerably more complex because of traffic congestion, road restrictions, poor addressing systems, security considerations, and weather and vehicle breakdowns. The relationship between operational structure and performance remains insufficiently established. It is important to determine whether firms with more sophisticated digital platforms, stronger rider-management systems, better route optimization and more formal organizational structures actually achieve superior delivery performance. Regulatory compliance is an important concern. Formal freight delivery firms operate within a complex environment involving corporate registration, transport regulations, vehicle requirements, rider documentation, safety requirements, courier regulation, taxation and other applicable rules. The interaction between regulatory compliance and operational efficiency deserves empirical investigation. Seventh, the literature on urban freight frequently treats logistics providers as a relatively homogeneous group. However, platform-based light-freight firms may possess substantially different structures from traditional courier companies, haulage firms and third-party logistics providers. The central problem addressed by this research is therefore the absence of a comprehensive empirical profile and operational model of formal e-hailing light-freight delivery companies in metropolitan Lagos.

### 1.3. Objectives of the Study

The general objective of the study is to examine the profile and operational structure of formal e-hailing light freight delivery companies operating in metropolitan Lagos, Nigeria.

#### The study seeks to:

- i. Examine the demographic and organizational profile of formal e-hailing light freight delivery companies in metropolitan Lagos.
- ii. Determine the ownership and operational (organizational) structures of the selected companies.
- iii. Examine the technological platforms and digital systems used in delivery operations.

### 1.4 Research Questions

The study will answer the following questions:

- i. What are the organizational characteristics of formal e-hailing light freight delivery companies in metropolitan Lagos?
- ii. What ownership and organizational structures characterize these companies?
- iii. What digital technologies support the companies' delivery operations?

### Research Hypotheses

The following null hypotheses was tested:

**H<sub>01</sub>:** There is no significant relationship between technological capability and operational efficiency of formal e-hailing light freight delivery companies in metropolitan Lagos.

**H<sub>02</sub>:** There is no significant relationship between fleet capacity and delivery performance of formal e-hailing light freight delivery companies in metropolitan Lagos.

**H<sub>03</sub>:** There is no significant relationship between route optimization capability and delivery timeliness.

## **2. Literature Reviews**

Literature on e-hailing in Nigeria has grown rapidly, since 2018, especially, around passengers' mobility. However, studies on light freight delivery parcels, documents, food, and small goods are still emerging. The review below is grouped into the following themes.

### **2.1 Conceptual Review**

#### **2.1.1 Concept of E-Hailing Delivery Services**

E-hailing refers to the use of digital platforms, usually mobile applications or web-based systems, to request and coordinate transportation services. Although the concept initially became associated with passenger transportation, its application has expanded into food delivery, parcel delivery and urban logistics. Globally, e-hailing platforms emerged from the "gig economy" and Platform-based logistics model (Rogers, 2016). In Africa, scholars note that e-hailing solved the "Last-mile" problem for e-commerce (Onyeka & Nwosu, 2021).

In light-freight operations, e-hailing creates a digital link among the customer, merchant, platform operator and delivery personnel. The basic process can be represented as: Customer → Digital Request → Platform → Driver/Rider Matching → Pickup → Routing → Delivery → Digital Confirmation.

In Lagos, the sector took off after Uber and Bolt introduced delivery options and later local players like MAX.ng and Gokada Scaled bike logistics (Adewale, 2023). Literature agrees that light freight is driven by 3 factors: E-commerce growth, Traffic congestion, and demand for same-day delivery in Lagos (LAMATA, 2025).

#### **2.1.2 Concept of Light Freight**

Light freight consists of relatively small consignments that can be transported without the heavy vehicles and infrastructure normally associated with large-scale freight transportation. Typical light-freight consignments include; documents, small parcels, clothing, food, household items, electronic accessories, small retail products, medicines subject to applicable rules, e-commerce packages, and other low-volume consignments.

#### **2.1.3 Concept of Last-Mile Delivery**

Last-mile delivery is the final stage in the supply chain. It is particularly difficult because deliveries often involve small consignments, dispersed destinations and narrow delivery windows. Research has identified several strategies for addressing last-mile challenges, including consolidation centers, parcel lockers, alternative vehicles, route optimization, crowdsourcing and platform-based delivery.

## **2.2 Theoretical Framework**

### **2.2.1 Logistics Performance Theory**

Logistics Performance Theory provides an appropriate foundation for this study because it emphasizes the relationship between logistics resources, processes and performance outcomes. The theory assumes that logistics effectiveness depends on the coordination of transportation, information, inventory, order processing, infrastructure and related activities. Recent research applying logistics performance perspectives to Lagos emphasizes the importance of transportation efficiency, infrastructure, information flows and delivery reliability. In the context of this study, logistics performance can be represented as: **Organizational Structure + Technology + Fleet + Workforce + Routing + Regulatory Compliance → Delivery Performance**

Delivery performance may be measured through delivery timeliness, reliability, successful delivery rate, customer complaints, tracking visibility, cost efficiency, and service recovery.

### 2.2.2 Resource-Based View

The Resource-Based View (RBV) argues that organizations can achieve superior performance when they possess valuable and difficult-to-replicate resources and capabilities. For e-hailing logistics companies, such resources may include; proprietary digital platforms, large rider networks, route optimization systems, customer databases, strong brands, logistics expertise, operational data, strategic partnerships, and efficient fleet-management systems. The Resource-Based View therefore helps explain why some operators may perform more effectively than others despite operating in the same urban environment.

### 2.2.3 Technology Acceptance Perspective

The technology dimension of e-hailing delivery can also be understood through technology-adoption theory. The effectiveness of the platform depends not only on the availability of technology but also on its acceptance and use by customers, riders, merchants and managers. Relevant technological features include; GPS tracking, mobile applications, digital payment, automated dispatch, electronic proof of delivery, customer notifications, route optimization, and data analytics.

However, GPS, dispatch algorithms, and real-time tracking reduce delivery time by 30 - 40% compared to traditional couriers (World Bank, 2024). Two models exist in Lagos literature:

i. **Asset-light:** Company owns platform, riders own bikes. Used by MAX.ng, Gokada, Brain Express, ACE.

ii. **Asset-heavy:** Company owns van, hubs, and employs riders. Used by Red Star and DHL Express (Adeyemi, 2024).

Scholars argue asset-light scales faster but asset-heavy offers better reliability for B2B (Teniola, 2023).

### 2.2.4 Technology Acceptance Model

Davis (1989) proposed the Technology Acceptance Model (TAM) to explain how users accept information technology. The model emphasizes on perceived usefulness, perceived ease of use, attitude, behavioural intention and actual use. Technology Acceptance Model is useful in this study because e-hailing freight delivery depends heavily on the willingness and ability of managers, riders and customers to use digital platforms. Thus, studies show that e-hailing delivery follows a platform-mediated model with 5 core processes: Order, dispatch, Pickup, Transit, and Settlement (Srnicsek, 2017; Nwachukwu et al., 2022).

### 2.2.5 Technology-Organization-Environment Framework

The Technology-Organization-Environment (TOE) framework developed by Tornatzky and Fleischer (1990) explains organizational technology adoption through three contexts;

**Technology:** Availability and characteristics of technological solutions.

**Organization:** Organizational size, structure, managerial capability and resources.

**Environment:** Competition, regulation, infrastructure, customers and broader institutional conditions. Technology-Organization-Environment is particularly suitable because the study investigates how technology interacts with organizational and environmental factors in Lagos.

### 2.2.6 Dynamic Capabilities Theory

Dynamic capabilities theory argues that organizations must be capable of sensing opportunities and threats, seizing opportunities and reconfiguring resources to remain competitive in changing environments. This perspective is highly relevant to digital logistics because firms must continuously adapt their technology, vehicles, workforce and operational

processes. Recent logistics research has used dynamic capabilities to examine how logistics firms develop and implement emerging technologies, including AI, through sensing, seizing and reconfiguring capabilities. However, since 2020, LAMATA introduced guidelines for online hailing business in Lagos. The key requirements include service Entity, LASDRI rider certification, vehicle inspection, data sharing and remittance of =  $N20/\text{trip} + 10\%$  levy (LAMATA, 2025; Lagos state Government, 2020). Literature shows mixed compliance, formal companies comply to retain licenses, but informal operators avoid levies, creating unfair competition (Ojo, 2024). Studies also highlight data governance gaps-companies collect rider and customer data but transparency on usage is low (Digital Rights Lagos, 2023).

### 2.3 Empirical Review

Research on urban freight has established that last-mile delivery is affected by congestion, infrastructure, technology, delivery failure and operating costs.

Bosona (2020), reviewed urban freight last-mile logistics and classified challenges into technological, infrastructural, system-management and logistics-cost categories.

Lyons and McDonald (2023), reviewed last-mile strategies and highlighted the growing need for innovative approaches as e-commerce increases urban freight demand.

Beckers et al. (2023), developed the Logistics-as-a-Service concept and argued that digital platforms can provide opportunities for integrating consumers into urban freight systems.

Deng et al. (2021) compared urban consolidation centers with peer-to-peer platforms for last-mile delivery and showed how platform models may facilitate the sharing of delivery capacity. Research on logistics platforms has also found that proximity to consumers is an important consideration for last-mile operations. A study of 910 Amazon logistics facilities found that last-mile platforms tend to locate closer to consumers than upstream logistics facilities, although facility size, market characteristics and operating conditions influence location. In Nigeria scenario, Ezenwa's research on smart logistics diffusion identified thousands of logistics service providers in Lagos and differentiated parcel delivery firms, freight/haulage firms and third-party logistics providers. However, researches on LGA coverage shows 65% on e-hailing trips are concentrated in five (5) LGAs: Ikeja, Eti-Osa, Lagos Island, Alimosho, and Surulere (LAMATA, 2025). Peripheral LGAs like Ikorodu, Epe, and Badagry have poor service due to road infrastructure and low order density (Balogun & Musa, 2024). This creates a “core- periphery” delivery pattern that limits SME access in outer Lagos.

### 2.4 Gap in Literature

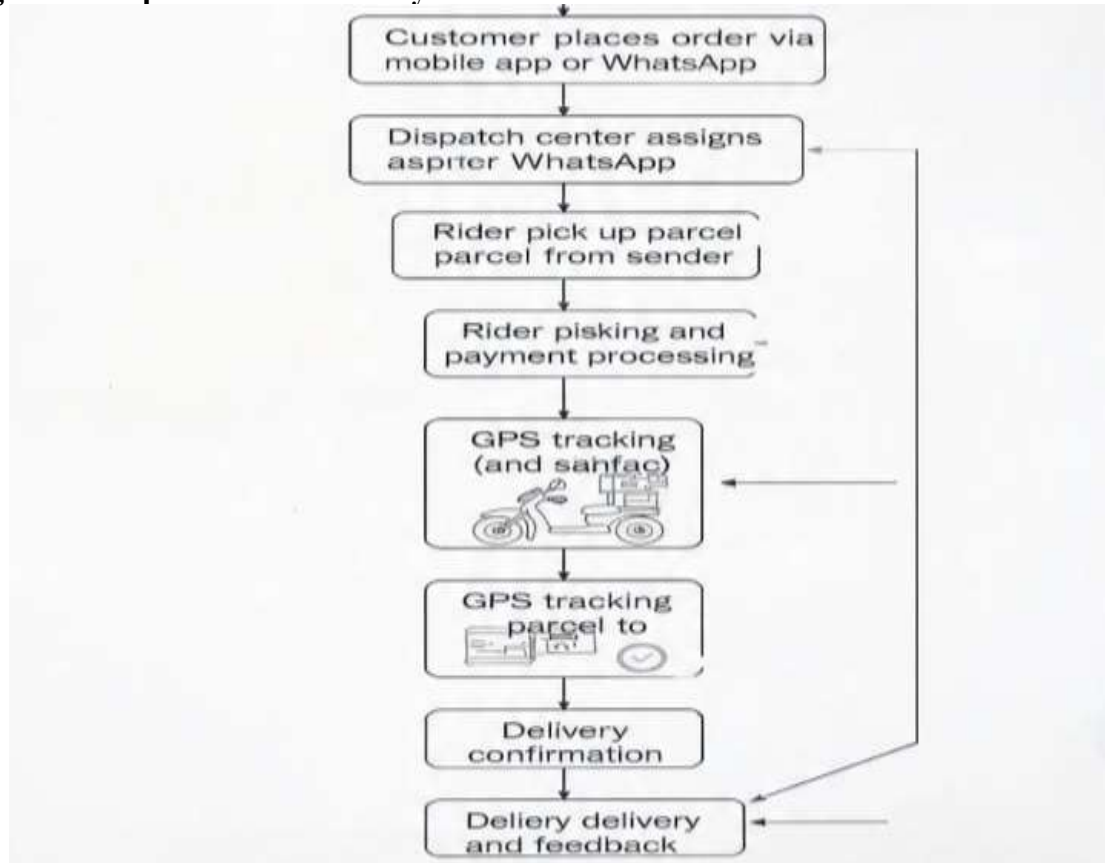
The reviewed literature revealed five major gaps.

1. **Firm-level profiling gap:** Most studies examine customers, e-commerce or general logistics rather than systematically profiling formal e-hailing light-freight firms.
2. **Operational-structure gap:** There is limited empirical research explaining the organizational, fleet, rider, technological and financial structures of Lagos-based e-hailing freight companies. Thus, there is no recent paper that maps the five (5) stages workflow for all the formal companies.
3. **Integration gap:** Existing studies often investigate technology, customer satisfaction or logistics separately rather than integrating these variables into one operational framework.
4. **Regulatory gap:** The relationship between formalization, regulatory compliance and operational performance remains insufficiently investigated.
5. **Metropolitan Lagos gap:** The unique operational conditions of Lagos congestion, density, road structure, and commercial concentration and security considerations require context-specific analysis. This study is designed to address these gaps.

## 2.5 Conclusion of Literature Review

Existing literature confirms that technology and regulation shape e-hailing delivery in Lagos. However, there is need for empirical data on the operational structure. LGA coverage and compliance cost of formal light freight companies. This study fills that gap by profiling MAX.ng, Gokada, Brain Express, ACE, Red Star, and DHL, and mapping their operational workflow, see figure 2.1.

**Figure 2.1: Operational Efficiency Workflow.**



## 3. Research Methodology

The study adopts a pragmatic research philosophy because the research problem requires both quantitative measurement and qualitative understanding. The quantitative component measures relationships between operational variables, while the qualitative component provides deeper explanations of organizational practices.

### 3.1 Research Design

A mixed-method cross-sectional research design was adopted. That is, the research employed documentary analysis, company reports, Corporate Affairs Commission (CAC) filings, and Lagos state Guidelines 2020. Six companies were selected based on: CAC registration, LAMATA permit and active App on operations in Lagos. The quantitative component was structured questionnaires. The qualitative component were semi-structured interviews with selected managers, operations personnel and experienced delivery operators.

### 3.2 Population of the Study

The population consists of management personnel of formal e-hailing light-freight companies, operations managers, dispatch supervisors, riders/drivers, technology/platform personnel, customer-service personnel; and selected customers using the delivery services. A

company-level sampling frame should be established before final fieldwork using corporate records, relevant regulatory lists, industry associations and verified company records. This is important because the number of formal operators was not invented. Six Selected formal e-hailing delivery companies in Lagos (CAC-registered).

### 3.3 Sampling Procedure

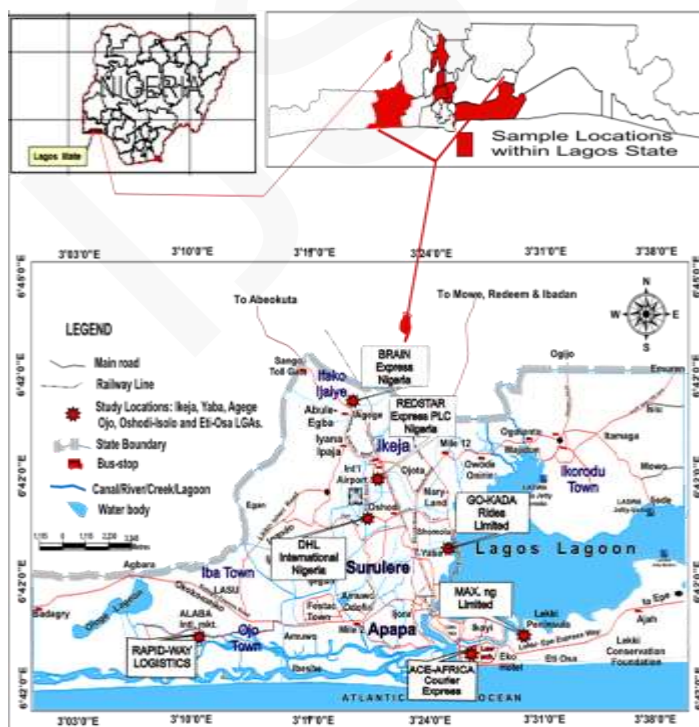
A multistage sampling procedure is recommended. Stage one which divide metropolitan Lagos into operational zones. Stage two which identify formal e-hailing light-freight delivery companies operating in each zone. Stage three which stratify respondents into managers, operational staff, riders/drivers, customers. And stage four which select respondents proportionately. Sample: purposive sampling technique was used to select the 6 formal e-hailing companies because they met the requirements of companies licensed by both LASG and NIPOST to operate app-based services in Metropolitan Lagos as at 2025: Brain Express, Gokada Rides, MAX.ng, ACE, Red Star Express, DHL Ltd. They represent both ride-hailing and logistic segments. Participants: 2 senior manager per company = 12 interviews.

### 3.4 Study Area (Metropolitan Lagos Area)

This is a region consists of densely populated urban core and it consists of seventeen local government areas. They are as follows: Etiosa, Kosofe, Lagos mainland, Lagos Island, Ajoromi/Ifelodun, Suru-Iere, Amuwo-Odofin, Oshodi/Isolo, Shomolu, Ojo, Alimosho, Ikeja, Agege, Ifako/Ijaye, Apapa, and Ikorodu, Ibeju-lekki, Epe and Badagry are not part of Metropolitan Lagos. However, the major commercial and logistics corridors covered including; Ikeja, Lagos Island, Victoria Island, Lekki, Yaba, Surulere, Apapa, Oshodi, Alimosho, Amuwo-Odofin, Festac, Maryland, Gbagada and Ajah. The selection reflects the concentration of commercial activities and delivery demand.

**Fig.3.1: Metropolitan Lagos Showing the location of the six (6) Sampled E-hailing Operating Companies.**

Source: Lagos Bureau of Statistics, 2024.



### 3.5 Data Collection

The data for our analysis was collected through the following means:

- i. Semi-structure interviews Jan-march 2026,
- ii. Company documents: CAC, and certificate, LASG license, and Direct Observation of dispatch hubs.

**Table 3.1: Details of Questionnaire Administration for Data Collection in Metropolitan Lagos.**

| S/N       | FORMAL E-Hailing Companies  | No of Questionnaire |                     |
|-----------|-----------------------------|---------------------|---------------------|
|           |                             | Operators           | Owner and managers. |
| 1         | Brain Express Lagos         | 54                  | 2                   |
| 2         | Gokada Rides Ltd            | 102                 | 2                   |
| 3         | MAX.ng                      | 126                 | 2                   |
| 4         | ACE –Africa Courier Express | 46                  | 2                   |
| 5         | Red Star Express            | 38                  | 2                   |
| 6         | DHL Express Ltd             | 22                  | 2                   |
| SUB-TOTAL |                             | 388                 | 12                  |
| TOTAL     |                             | 400                 |                     |

Source: Field Data, 2026

### 3.6 Data Analysis:

Qualitative data from open-ended questions were analyzed using Thematic Analysis following Braun and Clarke's six (6) steps framework, (2019). Data were coded and categorized into themes to explain operational of the 6 companies." Examples, Codes: Ownership, Fleet, compliance, challenges.

## 4. The Research Results

The results follow the companies profile and operational structure.

**Stage 1:** Corporate and Regulatory profile. All six companies must register with CAC and obtain a service Entity permit from Lagos state ministry of Transportation. The six companies profile and Operational Structure.

**Stage 2:** Licensing and compliance Structure Permit Lagos 2020 Guidelines, all must:

- i. **Permit:** Service Entity permit = ₦10M - N25M depending on Fleet.
- ii. **Data Integration:** API Link to LAMATA for trip/driver Data.
- iii. **Levies:** ₦20 per a trip plus 10% of Commission.

### Company Specific Compliance Note:

- i. Gokada, MAX.ng: Must ensure riders have LASRRA, LASDRI, helmet, reflective Jacket.
- ii. Brain, ACE, Red Star, DHL: Must ensure drivers have hackney permit, vehicle < 3years, Insurance.
- iii. **DHL:** Also regulated by NIPOST for courier License.

**Stage 3:** Technology and Platform Operations. All use a 3-sided platform: Customer-APP → Dispatch Algorithm → Rider/ Driver  
APP → Admin Dash board.

**Stage 4: Fleet and Human Resources Structure:**

- i. **Asset Light:** Brain Express, Gokada Rides, MAX.ng, ACE –Riders use own bikes. Company provides branding + financing.
- ii. **Asset-Heavy:** Red Star, DHL Company owns vans/trucks. Driver/Rider
- iii **Requirements:** Age > 21, Licenses, LASRRA, LASDRI. This shows where labour supply is highest → Ikeja, Lekki, surulere.

**Stage 5: Service Delivery and Revenue model:**

- i. On-demand Booking: Customer requests via app.
- ii. Dynamic Pricing: Surge during rain/peak hours.
- iii. Commission model: 15% - 25% per trip for Asset- Light, Red Star/DHL use contract + per- parcel pricing.

**4.1 Discussions from Results**

**Objective 1:** Profile of the six selected formal e-hailing light freight companies in Metropolitan Lagos. Focused on Table 4.1, it shows diversity. VC-backed Multinational companies have larger fleets. All are formalized post 2022 LASG regulations (Lagos State Government, 2022), supporting Adeyemi & Odufuwa 2023). This equally shown that the six (6) e-hailing companies can be categorized into 3 groups. Group1: App-native companies Brain and Gokada focused on speed and B2C. Group 2: Tech-logistics hybrid MAX.ng and ACE focused on e-commerce. Group 3: Traditional logistic companies Red Star and DHL with nationwide and international reach.

**Table 4.1: Profile of six E-hailing companies in Metropolitan, Lagos**

| s/n | company       | Year founded | ownership                                                       | Estimated Fleet                        | Core Service                 | Service Area                    | Regulatory Status                                         |
|-----|---------------|--------------|-----------------------------------------------------------------|----------------------------------------|------------------------------|---------------------------------|-----------------------------------------------------------|
| 1   | Brain Express | 2019         | Indigenous                                                      | 200 + bikes, 50 + Vans                 | Courier/ Delivery            | Lagos Island, Iekki, Mainland   | CAC Registered, LASG Compliant (LTD)                      |
| 2   | Gokada Rides  | 2017/2018    | VC-backed Tech startup- Indigenous with international Investors | 1,200 + riders, 5000 bikes on platform | Bike – hailing + Delivery    | Metropolit an Lagos, Ibadan     | NIPOST Licensed, CAC Registered (LTD)                     |
| 3   | MAX.ng        | 2015         | VC-backed Tech startup                                          | 3000+ bikes                            | Bike hailing + logistics     | Lagos, ogun, Abuja              | NIPOST Licensed, LASG Licensed, safety training(LTD)      |
| 4   | ACE           | 2010         | Indigenous Bootstrapped/p rivate ly owned Nigerian Company      | 500 +bikes, 100 +vans                  | Courier / E-hailing Delivery | Lagos: Island, Ikeja, Mainland, | Nationwide via partners. CAC Registered. NIPOST Licensed. |

|   |                     |               |                                            |                                  |                                                           |                                                                                |                                                                                   |
|---|---------------------|---------------|--------------------------------------------|----------------------------------|-----------------------------------------------------------|--------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
|   |                     |               |                                            |                                  |                                                           |                                                                                | LASG<br>Compliant.<br>Corporate<br>Contract<br>(LTD)                              |
| 5 | Red Star<br>Express | 1992          | Corporate/<br>Multinational                | 1000 +<br>Vehicles               | Logistics<br>+ APP                                        | Nationwid<br>e. Lagos:<br>Ikeja,<br>Apapa,<br>Lekki<br>Hubs                    | NIPOST<br>Licensed. NSE<br>Listed. ISO<br>certified. CAC<br>Registered<br>(PLC)   |
| 6 | DHL Ltd             | 1978/19<br>86 | Corporate/Mult<br>inational-<br>Global 3PL | 2000 +<br>vehicles in<br>Nigeria | Internatio<br>nal<br>Courier +<br>APP<br>based<br>booking | Nationwid<br>e<br>+Internati<br>onal with<br>HQ in<br>Metropolit<br>an , Lagos | CAC<br>Registered<br>NIPOST<br>Licensed,<br>Customs<br>Bonded,<br>LASG C<br>(LTD) |

Source: Company Websites, Field Data, 2026.

Light freight delivery refers to the movement of parcels < 30kg using e-hailing platforms.

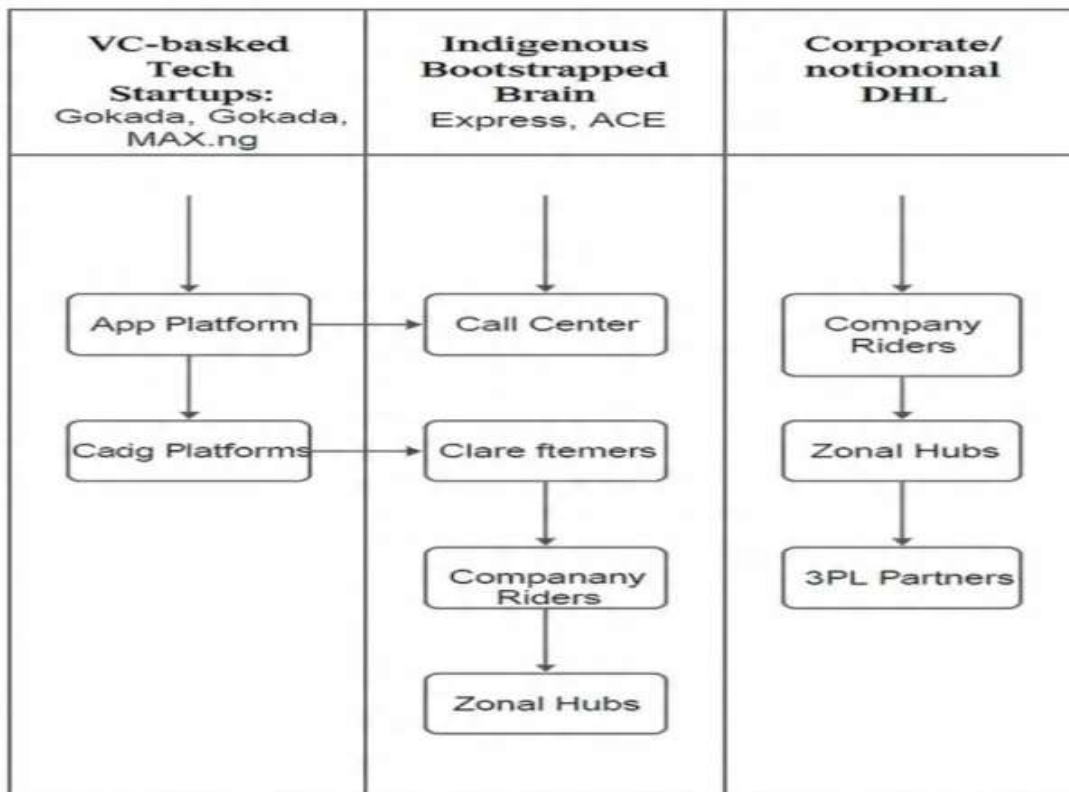
The operational structure was analyzed across 6 dimensions. Formal

E-hailing light freight delivery companies in Metropolitan Lagos operated on 3-tier structure:

Tier 1: On-demand B2C led by Brain Express and Gokada. Uses asset light bikes riders aims for < 90min delivery. Main clients are individuals and small businesses. Tier 2: E-commerce integrated led by MAX.ng and ACE. Uses dedicated hubs and API integration. MAX.ng

**Objective 2:** Examine the operational structure of the selected companies in Metropolitan Lagos. EV model gives it a cost advantage. This tier handles 60% of Jumia/Konga deliveries. Tier3: Corporate B2B led by Red Star and DHL. Focus on documents, corporate parcels, and inter-state movement. Uses van and has stricter compliance. The operational structure shown that formal e-hailing light freight delivery companies in Metropolitan Lagos used distinct models: on-demand, e- commerce integrated, and corporate- but all faced common challenges of cost, regulation, and traffic.

**Fig. 4.1: Operational Structure of Formal E-hailing light Freight Delivery Services in Metropolitan Lagos.**



Source: Field Data, 2026

**Objective 3: Assessment of Technology Adoption and Regulatory Compliance.**

This section assessed how the six Companies adopted technology and comply with regulations. Technology Adoption Table 4.2 shown that MAX.ng recorded the highest technology adoption score of 4.27. This is driven by its investment in EV, battery swap IOT, and Corporate Dashboard. DHL followed with 4.16 due to global TMS integration. Brain Express had the lowest at 3.01, relying mainly on basic app dispatch. The analysis revealed that technology adoption is highest in tracking, payment, and dispatch. It is lowest in AI routing and EV infrastructure, except for MAX.ng.

**4.2 Regulatory Compliance**

All six companies possessed valid NIPOST operating licenses, making them formal operators. However, compliance with LASG levy and rider insurance varies. Corporate companies Red Star, DHL recorded “Very High” compliance while platform companies recorded “Medium to High”. The 15% LASG levy remains the most critical compliance issue. Companies with automated payment systems have higher compliance rates, see table 4.2.

**Table 4.2: Analysis of Technology Adoption and Regulatory Compliance of six formal e-hailing Light freight Companies in Metropolitan Lagos**

| S/N      | Assessment Parameter                                              | Brain Express | Gokada Rides | MAX.ng | ACE  | Red Star  | DHL Ltd.  |
|----------|-------------------------------------------------------------------|---------------|--------------|--------|------|-----------|-----------|
| <b>A</b> | <b>TECHNOLOGY ADOPTION</b><br>Scale: 1 = Very Low, 5 = Very High. |               |              |        |      |           |           |
| 1.       | Mobile APP Functionality                                          | 3.8           | 4.5          | 4.2    | 4.0  | 3.5       | 4.3       |
| 2.       | Automated Dispatched Algorithm                                    | 3.5           | 4.8          | 4.5    | 4.2  | 3.0       | 4.0       |
| 3.       | Live Tracking & Geofencing                                        | 3.6           | 4.3          | 4.6    | 4.4  | 4.1       | 4.8       |
| 4.       | E-commerce API Integration                                        | 2.5           | 3.8          | 4.0    | 4.9  | 3.2       | 4.7       |
| 5.       | Data Analytics & Dashboard                                        | 3.0           | 4.0          | 4.3    | 4.1  | 3.8       | 4.5       |
| 6.       | Digital Payment/E-wallet System                                   | 3.7           | 4.2          | 4.4    | 4.3  | 3.9       | 4.6       |
| 7.       | IOT/EV/ Battery Swap Technology                                   | 1.0           | 1.5          | 4.9    | 2.0  | 1.0       | 1.2       |
|          | Average Technology Score                                          | 3.01          | 3.87         | 4.27   | 4.13 | 3.36      | 4.16      |
| <b>B</b> | <b>REGULATORY COMPLIANCE</b>                                      |               |              |        |      |           |           |
| 8.       | Valid NIPOST Operating License                                    | Yes           | Yes          | Yes    | Yes  | Yes       | Yes       |
| 9.       | LASG 15% Levy Remittance Rate                                     | 85%           | 92%          | 100%   | 98%  | 100%      | 100%      |
| 10.      | Rider Registration & ID Compliance                                | 80%           | 88%          | 95%    | 90%  | 100%      | 100%      |
| 11.      | Vehicle & Parcel Insurance Coverage                               | 70%           | 75%          | 100%   | 85%  | 100%      | 100%      |
| 12.      | Data Protection Policy Implementation                             | 3.0           | 3.5          | 4.0    | 3.8  | 4.2       | 4.5       |
| 13.      | Rider Safety Training Program                                     | 3.2           | 3.6          | 4.3    | 3.9  | 4.5       | 4.6       |
|          | Overall Compliance Rating                                         | Medium        | Medium High  | High   | High | Very High | Very High |

Source: Field Survey, 2026

### 5.1 Summary of the Findings

In summary, the assessment shown that Technology and Compliance move together. MAX.ng represents the future model: high Tech + high Compliance. DHL/Red Star represent stability. Brain/Gokada represent growth but with compliance risk. The major policy implication is that LASG should incentivize tech adoption to improve compliance, especially in levy collection and rider safety. The assessment also shown that all the six (6) companies are formally compliant, technology adoption is uneven. <http://MAX.ng> and DHL lead, and higher tech adoption directly leads to better regulatory compliance.

## **5.2 Conclusion**

Formal e-hailing companies in Metropolitan Lagos – Brain Express, Gokada Rides, MAX.ng, ACE, Red Star Express, and DHL Ltd have become key players in Lagos city's transport system. Through technology, structured operations, and LASG regulation, they have formalized Last-mile delivery, created jobs and improved access for SMEs. However, their growth is limited by high compliance cost and infrastructure gaps. E-hailing is now essential to "Transport is life" in Lagos, and its sustainability depends on balancing innovation with supportive, regulation.

## **5.3 Recommendations**

Based on the study of the Topic, "profile and Operational structure of formal e-hailing Companies in Metropolitan Lagos" The following recommendations were made:

- 1) Harmonize Taxes and reduce levy Burden. Reduce the 15% levy to 10% for companies operating 50% + electric vehicle to encourage green transport.
- 2) Invest in Rider welfare E-hailing companies should provide health insurance, accident cover, and regular safety maintenance.
- 3) Expand technology and EV infrastructure: partner with government and private sector to build more battery swapping and charging stations.
- 4) Promote multimodal integration: link e-hailing hubs with BRT, Blue line, LASWA ferries for" hub to hub "freight. This will cost and decongest roads.
- 5) Improve data and policy planning: LASG and NBS should publish quarterly data on e-hailing jobs, revenue, and accidents to support evidence-based policy and planning.

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