

# Understanding paratransit

Global overview and local challenges



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# Why a paratransit toolkit?

This document is aimed at decision-makers, experts, consultants and policy-makers responsible for integration in the urban transport sector, working to promote sustainable, inclusive, efficient, and high-quality mobility systems. Its aim is to help stakeholders consider paratransit in these systems in a coherent and integrated manner.

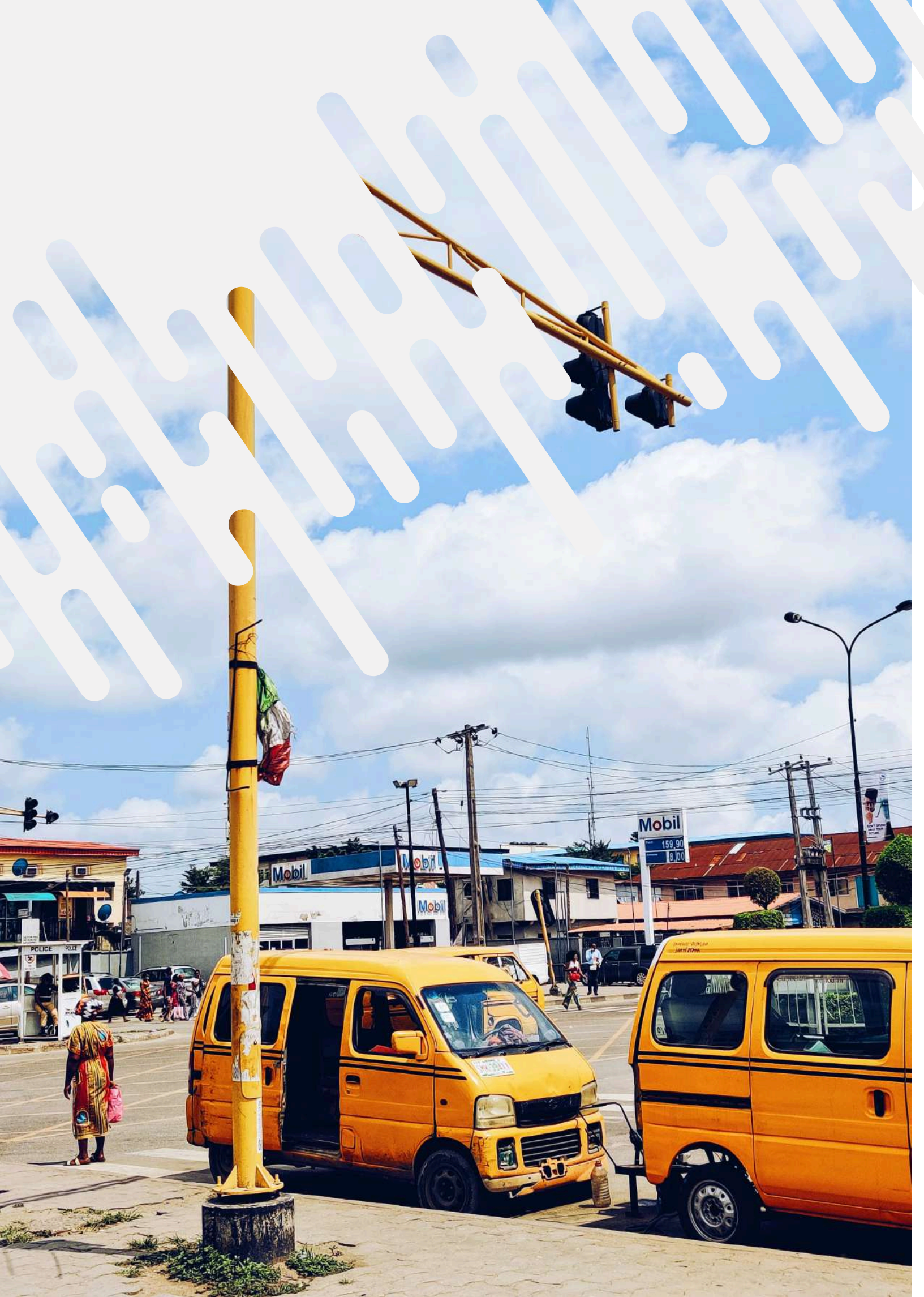
Paratransit is an essential mode of transport – and often the only public transport available – in many towns and cities in the Global South. Better integrating paratransit into urban mobility systems is therefore a key challenge if we are to achieve fairer and more sustainable urban mobility for everyone.

Improving the integration of paratransit means meeting three key challenges for the sector, which can sometimes be contradictory: optimising the efficiency and quality of the service provided; improving working conditions for operators; and controlling negative externalities, particularly in terms of environmental impact and road safety. To achieve these objectives, we must first identify the relevant levers that will enable decision-makers and experts to reform paratransit services in a manner acceptable to all stakeholders, in order to build a sustainable and inclusive mobility system.

This publication therefore aims to provide decision-makers and experts with practical tools for planning and implementing paratransit reforms. The MobiliseYourCity toolkit consists of four documents:

- **Tool I – Understanding paratransit – Global overview and local challenges**
- Tool II – Conducting a paratransit diagnosis – A practical guide with 6 key questions
- Tool III – Reforming paratransit – Catalogue of practical measures
- Tool IV – Examples of paratransit reform – Case studies

In this document (Tool I of the Toolkit), we aim to provide the key elements to understanding the sector by reviewing the most important characteristics of paratransit and its performance from a technical, financial, and social perspective. We also provide key elements to understand the complex ecosystem of this sector, in particular, to shed light on the impact of the relationships between the stakeholders in the ecosystem on the operation of paratransit services. The various stakeholders' intersection, overlapping interests and sometimes antagonistic motivations explain the numerous knock-on effects in the implementation of paratransit projects. Finally, the document sheds light on the recent, more favourable context for the better integration of the sector.



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# Paratransit, a key sector for mobility in cities of the Global South

As an essential part of the urban landscape in many cities and towns in the Global South, paratransit is a diverse, complex sector often poorly understood by some local and international stakeholders. Its evolution over several decades reflects the major trends in urbanisation in the countries of the Global South and makes it a central link in the construction of more sustainable cities capable of meeting the demographic challenges of the 21<sup>st</sup> century

## The explosive urbanisation of cities in the Global South: a lack of infrastructure for access to essential services

The world is currently facing unprecedented urbanisation: more than half the world's population lives in cities, compared with just 30% in 1950. This growth has been particularly strong in Africa, where the urban population grew by an average of 4% per annum between 1960 and 2010. The average growth rate has been more moderate – although still high – in Asia (2.3%) and Latin America (1.2%). This urban growth has affected large cities (a quarter of the world's population now lives in cities with more than a million inhabitants) and small and medium-sized towns, beginning a type of “urban transition” from rural towns. However, this concentration of the population in towns and cities **has not been, in most cases, accompanied by the development of the infrastructure and facilities** needed to provide people with services that are essential to daily life and economic development (water, energy, waste management, telecommunications, transport).

In providing high-quality services that are financially and spatially accessible to as many people as possible, we face challenges such as limited financial resources on the part of both households and public authorities, added to



low-density urban areas that make it challenging to concentrate demand. At the same time, other forms of networked services are developing in an informal, spontaneous, and decentralised way. In the transport sector, informal services appeared in the Global South very early in the 20<sup>th</sup> century to meet the needs of populations relegated to urban areas increasingly distant from public services as a result of various processes of social and spatial exclusion (urban sprawl, urban fragmentation, withdrawal of public authorities, and the introduction of apartheid-style discriminatory planning policies). Nevertheless, these services emerged and spread widely during the second half of the 20th century. Their diffuse nature resulted from either the structural absence or the deliberate withdrawal of governments from urban transport issues. This absence or withdrawal generally occurred when structural adjustment plans cut public spending, and private entrepreneurship was particularly valued. Paratransit flourished during a period when government inaction and deregulation were strongly encouraged.

However, while these informal services fill gaps and provide an essential response to the urgent needs of urban populations, they also generate multiple negative externalities, particularly in terms of equal access, quality of service, and environmental sustainability.

## From “informal” transport to “paratransit”: short-term profitability at the heart of the sector

The urban transport sector is representative of how services are provided in cities of the Global South, i.e., in a spontaneous, private, and decentralised manner, commonly referred to as “informal”. This term refers to a wide range of activities and is the subject of much academic debate (Lautier, 2004; Steck, 2015). In the transport sector, it refers to an exceptionally varied range of services: buses, minibuses, private cars, two- and three-wheelers, carts, and boats, all of which provide public transport services organised around set routes, as well as taxis and car-pooling services. From the perspective of the ongoing academic debates, the term “informal transport” is too imprecise to understand how the sector operates and to categorise the services provided. Beyond the term’s imprecision in describing complex and diverse services and systems, the notion of informal is also part of an ethnocentric normative framework (Wester, 2018), as if formal services represented the culmination of the process of formalisation and centralisation toward which all societies should necessarily strive. This concept’s restrictive and prescriptive nature explains the attempts to (re)define it over the last few decades, particularly in Francophone scientific literature.

The most important contribution is the concept of “*transport artisanal*”, developed by Godard in the 1980s. The term “*artisanal*” refers to the fragmentation of ownership observed in the urban transport sector in the Global South, as well as the relative autonomy of the vehicle operators. This concept offers a new perspective on the sector while providing a global understanding of mobility systems observed on every continent. Indeed, what all these modes of transport have in common – beyond their diversity – is not their informal nature but the economic rationale behind them: that of an entrepreneur seeking short-term profitability and making all their own decisions (on investments, operations, etc.)

Other terms have since been put forward, such as “*transport adaptatif*” (Lammoglia, 2013) to characterise these services, as well as the term “paratransit”, which refers to all transport services that do not operate according to timetables or fixed routes. Initially developed in the United States, this term has been reappropriated to refer to the mobility systems of cities in the Global South and to highlight the possible link between paratransit and mass transit services (Berhens & Salazar-Ferro, 2015). This concept is part of a broader paradigm shift in which so-called “informal” transport does not necessarily exist in opposition to mass transit but can be complementary. In India, the term “*Intermediate Public Transport*” describes the interface between public and private transport services and a range of services evolving between scheduled services and on-demand services (such as taxis). More recently, the term “*shared transport*” (Schalekamp & Saddier, 2020) refers to all motorised transport services where the driver or staff collect a payment, thereby excluding self-service vehicle rentals.

In this document, we have chosen to use the term “*paratransit*”, though the contributions of the academic literature concerning all of the aforementioned terms have guided these reflections. Above all, this choice reflects the objective of our study: as the fragmentation of the transport sector and the relationships between its various stakeholders are the main factors in the resulting negative externalities, they are at the centre of projects to improve paratransit services. However, this study does not include privatised services such as (driver and/or vehicle hire) or shared mobility services (car-sharing). The car-sharing services are considered where they have some form of

institutionalisation. Once again, this choice reflects our focus on services exhibiting a certain minimum degree of structure, thus enabling them to be integrated into an urban mobility system.

# An essential industry in the cities of the Global South

Having appeared very early in the 20<sup>th</sup> century, paratransit services often constitute a majority modal share in the mobility systems of cities in the Global South. Sometimes, they are the only public transport service available; in other cases, they are linked to other, more formal public transport services. In Yaoundé, for example, shared taxis account for 40% of the modal share and motorbike taxis for 12%, while formal public transport accounts for only 5%<sup>1</sup>. In Bogotá, paratransit accounts for almost 40% of journeys<sup>2</sup>, and in the secondary town of Dire Dawa in Ethiopia, transport by scooter accounts for 41% of the modal share.<sup>3</sup> Paratransit has a 12% modal share in Cape Town, representing a third of all public transport journeys<sup>4</sup>. In Manila, jeepneys accounted for 19% of daily trips in 2015<sup>5</sup>.

## Strong political awareness

In addition to the importance of paratransit in terms of modal share, its crucial role in societies and economies is demonstrated by the number of jobs it generates, both directly and indirectly. In many towns and cities, paratransit represents a significant percentage of all jobs. For example, in Kampala – a city of around 4 million inhabitants – the number of jobs directly linked to the taxi and motorbike taxi sector is estimated at approximately 260,000<sup>6</sup>. For this reason, and because trade associations are often closely connected to politics (they can mobilise people quickly; they often fund political parties, etc.), the sector has real political power.

Faced with the development of this sector, governments and local authorities have adopted various positions and regulatory methods, depending on the period and the approach chosen. In Mexico City, *peseros* (microbuses) and *colectivos* (minibuses) were initially tolerated, though not legally recognised. The authorities then encouraged the development of these services by legalising them and entrusting operators' associations with responsibility for regulating the sector. In contrast, Vietnam has favoured strong sector regulation, with authorities imposing strict access conditions in the late 1990s to protect publicly-owned transport services. While these measures effectively limited the development of private transport services, they have not curbed the explosion in the number of motorbike taxis. Considering the local and historical context, we can see why completely contradictory measures have been implemented in certain cases. While three-wheelers with non-motorised traction have been banned in Jakarta, the authorities in Manila have encouraged these services to make it easier for passengers to access higher capacity services. These examples illustrate the difficulty of implementing regulatory frameworks and consistent, long-term regulation and suggest that sectoral reforms should not be based on short-term needs and objectives.

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<sup>1</sup> Data from PMUS Yaoundé, 2018

<sup>2</sup> WRI et al. (2020)

<sup>3</sup> Data from PMUS Dire Dawa, 2020

<sup>4</sup> TDA (2016), [https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&ved=2ahUKEwjuooPkIPrzAhUCQBoKHddJAKk-QFnoECACQAQ&url=https%3A%2F%2Fresource.capetown.gov.za%2Fdocumentcentre%2FDocuments%2FCity%2520strategies%2C%2520plans%2520and%2520frameworks%2FComprehensive%2520Integrated%2520Transport%2520Plan.pdf&usg=AOvVaw0D7I1Kdt-16LYPHAL\\_cnJ57](https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&ved=2ahUKEwjuooPkIPrzAhUCQBoKHddJAKk-QFnoECACQAQ&url=https%3A%2F%2Fresource.capetown.gov.za%2Fdocumentcentre%2FDocuments%2FCity%2520strategies%2C%2520plans%2520and%2520frameworks%2FComprehensive%2520Integrated%2520Transport%2520Plan.pdf&usg=AOvVaw0D7I1Kdt-16LYPHAL_cnJ57)

<sup>5</sup> JICA (2015).

<sup>6</sup> Global Labour Institute "Kampala Bus Rapid Transit: understanding Kampala's Paratransit Market Structure", 2019

## Box 1. Diversification and segmentation of mobility services

Paratransit includes a wide variety of services, with a decidedly segmented offering. This is certainly not unique to this sector; the variety of modes of service provision is, more generally, a characteristic of urbanisation in many cities in the Global South, and can also be observed in water, energy, sanitation, and other sectors (Jaglin, 2014). The diversification and segmentation of transport services makes it possible to serve a wide range of journeys, in cities where residents' needs are particularly heterogeneous and differentiated. This diversity can be seen in the variety of vehicles, of varying capacity, both motorised and non-motorised (such as cycle rickshaws, which play a central role in certain Asian cities, as well as riverboats). The type of service offered also varies: public or semi-public transport, operating along fixed routes or as on-demand services (shared taxis that roam around, looking for passengers), or even a combination of the two.

Traction	Type of vehicle		Service	Fixed line/on demand
Motorised	4 wheels	Mindibus	Public	Fixed route
		Minibus/microbus	Public	Fixed route
		Car	Public/semi-public	Fixed route, on demand
	3 wheels	Rickshaw/tuk-tuk	Public/semi-public	Fixed route, on demand
	2 wheels	Motorbike taxi	Semi-public	On request
	Other	River shuttle	Public/semi-public	Fixed route
Non-motorised	Other	Boat	Public/semi-public	Fixed route
		Rickshaw (pedicab)	Semi-public	On request

**Table 1. Types and modes of paratransit services**

**Public** transport (minibuses, such as jeepneys in the Philippines, dala dalas in Tanzania, colectivos in Argentina, Colombia, and Chile, and Taxi-Be in Madagascar) meets growing demand and serves the general interest by providing daily transport services for a large proportion of the population.

**Semi-public** transport (e.g., motorbike taxis in South-East Asia, *bajajs* in Africa) generally caters more to niche and/or occasional demand. More flexible than public transport, these services allow users to make quick, door-to-door journeys. They also make it possible to travel on routes where public transport is absent or inadequate (no service, inaccessible outlying areas, low frequency). In some towns, however, modes that are normally used to provide a semi-public transport service are used as actual public transport. In Douala, for example, semi-public transport accounts for the majority of journeys (41% for motorbike taxis, 13% for shared taxis), with public transport virtually non-existent (less than 1%).

Two other important parameters can help us characterise paratransit services:

- The degree of flexibility of the service provided. In particular, this allows us to determine whether a paratransit service constitutes a taxi service (individual, on-demand), a regular service (frequency, service, and in some cases even defined routes), or something in between (*"fill and go"* on a fixed route, shared taxi, regular line with on-demand detours, etc.).
- The type of regulation, in particular, external regulation. Here, we can distinguish between a complete lack of regulation (no rules, no controls) and situations where there is some form of regulation (permits, licences, contracts, etc.), or, once again, something in between (driver registration, internal regulations, etc.).

This diverse offer is matched by an equally diverse quality of service and fares. There are a number of factors that distinguish service levels and fares:

- The capacity of the vehicle, from an "on-demand" service to one shared by several or more people;
- The presence and number of stops, in particular, the possibility of making "express" or omnibus journeys;

**the box continues on the next page**

- The vehicle occupancy – related to “fill & go” services, in which operators only depart once their vehicle is full or mostly full;
- Regularity and the existence of a minimum frequency, which also depends on whether providers operate on a “fill & go” basis.
- On-board services (TVs, Wi-Fi, choice of music) and the vehicle’s visual identity, which can, for example, evoke a religious, sporting, or cultural affiliation;
- The general condition of the vehicle and the number of seats, which sometimes influence the fare charged.

**What role do digital platforms play?** It is interesting to note that the digital platforms that first developed in the Global North (such as Uber) have reconstituted the conditions for paratransit, and sometimes semi-public transport (such as UberPool). In many countries, digital platforms have been developed to put customers in touch with each other (for example, the Ola platform for rickshaws in India). Can we still consider this approach paratransit? One answer is to look at vehicle ownership. Although it remains fragmented (with platforms that only put people in touch with each other), we are still very much in the realm of paratransit. However, when a company owns a large fleet of vehicles and sells its services on Uber, this no longer qualifies as paratransit, as one of the stakeholders in the chain – the owner – is applying entrepreneurial logic, rather than the small-scale logic of paratransit.

## Towards an integrated approach to mobility services

The limits of the prohibition or *laissez-faire* measures observed in the urban transport sector led to a change of approach at the turn of the 21<sup>st</sup> century, in particular through a UN-Habitat publication (Cervero, 2000), which explains the extent to which regulating non-conventional transport makes it possible to limit competition with public supply, thus opening up new opportunities for paratransit. Salazar-Ferro’s (2015) publication examines the complementary relationships between conventional and non-conventional transport in cities of the Global South and explores several hints for reassessing the role of paratransit in mobility systems. These reference documents have since been supplemented by other publications, such as “*Informal and Semiformal services in Latin America: an overview of public transportation reforms*,” a study carried out by WRI, GEF, and IDB in 2020, or “*Myths and Realities of “informal” Public Transport in Developing Countries: Approaches for Improving the Sector*”, published by SSATP in 2021.

Several factors underlie this change: on the one hand, the increase in car ownership rates and the scale of traffic congestion are calling into question the decades-long policy of prioritising the construction of road infrastructure to meet mobility needs (Porter, 2007). Among the many negative externalities associated with the rise in car ownership, the increase in greenhouse gas emissions justifies a drastic change in public policy (Jennings, 2020). Finally, the need to deploy public services capable of meeting the demands of a growing urban population is prompting governments and municipalities to develop a strategic vision for mobility, integrating mass transit and paratransit services in particular.



# Contrasting levels of performance

At first glance, paratransit seems quite efficient because it provides a fairly wide range of services without involving any public money. However, a more detailed analysis of the sector's performance from a technical, economic, financial, social, and environmental perspective reveals a more mixed picture, with negative externalities and hidden costs.

## Contrasting technical and economic performance

- **Spatial coverage: high flexibility and adaptability to demand**

Paratransit stands out for its high degree of flexibility and adaptability, which (like all operational choices) primarily result from its emphasis on short-term profitability. In cities in the Global South, where urbanisation is leading to the rapid emergence of new suburban and exurban districts, paratransit operators have to go out and "find their customers". Their responsiveness is also evident in their rapid adoption of digital tools and new technologies.

- **Quality of service: unreliable timetables and frequent low comfort**

However, paratransit operators' quest for profitability generally results in a mediocre quality of service and a high degree of uncertainty for users, largely due to the lack of control over journey times. With on-demand "taxi" services, the primary concern is finding an available vehicle, both at off-peak times (due to low supply) and at peak times (due to very high demand). Regarding public transport, travel times remain uncertain due to the fill-and-go business model, which involves waiting until most seats in the vehicle are occupied before departing to maximise overall occupancy. In other cases, the driver may ask passengers to disembark before arriving at their destination if he determines that the occupancy rate is not profitable or if another more profitable opportunity arises (for example, a private hire). More generally, comfort and safety conditions vary greatly from one vehicle to another. While dangerous practices and behaviour on part of the drivers often have a detrimental effect on the quality of service

(overloading passengers, lack of vehicle maintenance, sudden stops to load new passengers, driver fatigue, and even drug use), the fact that passengers can sit down for the duration of their journey (unlike conventional bus services) is the main criterion for this modal choice.

- **Technical efficiency: the challenge of optimising fleet management**

The technical efficiency of paratransit needs to be assessed in the light of each urban context, combining several factors of analysis:

- Corridor density: as the operator always prefers smaller vehicles to maximise capacity, paratransit is not efficient on high-demand routes, which require higher scale passenger movements and therefore more “investment” in capital terms. Conversely, in other cases, paratransit offers a complementary service, whether by reinforcing other services at peak times to meet local demand at the neighbourhood level, or by providing a feeder service (Salazar-Ferro, 2015). These various configurations sometimes coexist in the same area: this is the case, for example, with individualised transport services which serve more sporadic or even “premium” travel needs. On the other hand, the function of a particular service may evolve depending on changes in the broader mobility system as well as the relevant regulatory framework. This was the case in Abidjan, where *gbakas* were not allowed to serve the city centre for several years to limit competition with the bus company, SOTRA, until the lack of bus services made it necessary to authorise these vehicles to increase supply.
- The degree of competition: Oversupply can lead to overall inefficiency. For example, the “Transport Operating Company” pilot project in Cape Town demonstrated that by grouping operators into entities that pool passenger revenue and optimising minibus routes at the entity level, the same number of passengers could be carried, and the same revenue collected in fewer vehicle kilometres, thus reducing overall operating costs. Furthermore, excess supply can lead to or exacerbate congestion, primarily affecting paratransit operators.
- Optimising fleet operation at the individual operator level: Operators – who often have a partial or limited understanding of demand – may not adopt optimally efficient behaviour. For example, *fill & go* ensures that a given vehicle departs with the maximum possible number of passengers. However, if we consider the long waiting times at the terminals, that is not always the most efficient model.
- Vehicle fleet efficiency: The vehicles used for paratransit services are often old and suffer from a lack of regular maintenance, which is often kept to a minimum. These characteristics generate additional costs, whether in terms of fuel consumption or in the case of a breakdown due to lack of maintenance, downtime and repair costs.

- **The functioning of a city, use of public space, road safety, and pollution**

Paratransit in smaller towns and cities, even if fragmented, can be a relatively effective solution to local mobility needs. In larger cities, and particularly in large metropolises and megacities, paratransit generally reaches its limits and can have significant negative effects on the functioning of the city:

- Due to the fragmentation of services and the significant number of small vehicles competing for passengers, small-scale transport can take up a lot of space at stations and car parks and on main roads, causing or contributing to congestion;
- Due to poor regulation and the predominance of the “target system”, whereby drivers’ remuneration depends solely on their ability to find as many passengers as possible each day, the driving practices

of paratransit drivers can be dangerous and have a sometimes significant impact on road safety conditions in a city, particularly for pedestrians;

- Due to the large number of vehicles and their poor general condition, sometimes exacerbated by the use of adulterated fuel, paratransit is generally a significant contributor to greenhouse gas emissions and air and noise pollution.

## Contrasting financial performance: zero cost for local authorities, variable fares

- **Zero cost to the local authority**

One of the undeniable advantages of paratransit is that it is provided without public subsidy and, therefore, at zero direct cost to the local authority in the vast majority of cases. All expenses of paratransit are therefore borne by passengers themselves. Paratransit users, who often come from modest or even poor households, do not benefit from redistributive effects, as opposed to users in towns and cities with formal, subsidised public transport systems, where all residents and businesses contribute to the transport system, whether they use it or not. As a result, transport costs can be high, or even unaffordable, for the poorest households in towns and cities without formal transport services. In Dakar, for example, the effort rate (mobility expenditure as a proportion of overall household income) is 34% for the top quintile of the population<sup>7</sup>, which is very high.

- **Variable fares**

As paratransit is generally not subsidised and all revenue comes directly from passengers, operators can only hope to make a profit by increasing fares, making the service more attractive (passengers/km), or reducing costs/km.

In the “target system”, the driver is responsible for making the service attractive and usually actively seeks to increase the number of passengers. More often than not, the driver and operator also actively try to reduce costs per kilometre, thereby maximising short-term profitability. This results in, for example, minimal vehicle maintenance.

Fares are the final variable in the system. In some cases, they are set by the public authorities. There are generally no discount fares. In some cases, these set fares are too low to allow drivers to make a sufficient margin, in which case the drivers themselves may circumvent them. Where the public authority does not set fares, they are set by operators themselves at a level that enables them to make a minimum profit while remaining affordable for most target users. They may also vary according to supply and demand.

## Mixed social performance: a sector that provides jobs but with precarious working conditions

Against a backdrop of widespread mass unemployment in developing countries, paratransit is a major provider of jobs and resources, particularly where there are few barriers to entry. Drivers generally only need to have a driving licence, while fare collectors do not. For vehicle owners, all that is usually required is to pay a licence fee to the local authorities and a membership fee to a professional organisation, which makes paratransit a “safe sector” for small-scale entrepreneurs. A study by the Global Labour Institute in 2019 estimated that *boda-bodas* provided employment for around 200,000 operators in Kampala in 2013, and that the sector was the second largest provider of jobs after agriculture. The same study found that the 20,000 taxis operating in Kampala employ nearly 60,000 people, and there are more than 200,000 Go-Jek drivers in Indonesia. As well as generating jobs, the paratransit sector is a source of income, particularly for owners and license holders. In Morocco, for example, a single collective taxi operating licence can support up to five families (Le Tellier, 2005).

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<sup>7</sup> Source: EMTSUD CETUD 2015

However, the large number of operators in the sector and the resulting intense competition mean that working conditions are difficult. Drivers tend to operate alone for long hours to maximise their daily revenue. The low socio-economic status of drivers also encourages them to adopt dangerous driving habits, while social insurance is often non-existent. At the same time as the number of operators is increasing, the fleet of vehicles is also growing: 150,000 rickshaws were counted in Mumbai, 100,000 matatus in Kenya (ITF, 2017), and over 100,000 motorbike taxis in Douala (SUMP 2019). Even if the concentration of vehicles varies according to the context, the trend remains fragmented: the majority of owners have only one vehicle, as in Manila where almost 80% of jeepney owners have only one vehicle, and only 1% have ten cars or more (Kaenzig, Mettke & Mariano, 2020). Lastly, the sector is characterised by the lack of resource pooling: operators' access to formal credit remains limited; when loans are available, the interest rates are generally very high. In addition, there are few central procurement agencies or fiduciary organisations.







# Analysing and understanding the dynamics of stakeholders in a complex ecosystem

In each city, paratransit develops according to its own local logic, balancing the various aspects of performance: technical, economic, financial, and social performance. Prior to any reform aimed at increasing efficiency and quality of service for users, improving employment conditions, or reducing negative externalities, it is important to identify this balance, which is a product of the primary stakeholders in the local paratransit ecosystem, as well as the financial flows that connect them.

## Who are the main groups of stakeholders in the ecosystem?

Several groups of stakeholders make up the paratransit ecosystem. Though these stakeholders do not always share the same objectives, they maintain close relationships reflected in economic and financial patterns. These interactions influence the way the sector operates: the contractual relationships and balance of power between the stakeholders determine the technical and economic choices made (even if they are sometimes ineffective overall). The main stakeholder groups include:

- Crews, owners, and licence holders

Drivers are central to the operation of the paratransit ecosystem and fall into two categories: owner-operators and lessee-drivers. Sometimes, the owner operates the vehicle directly, but more often the vehicle is leased to a driver for a fixed fee, while the owner benefits from the income generated (the “target system”). In some cases, the owner owns a fleet of vehicles in collaboration with outside investors, who also benefit from the income generated by the vehicles. Between these two distinct models – namely, the owner-operator, for whom transport is a subsistence activity, and the owner-lessor, for whom the car is, above all, a source of profit – various other modalities exist. For example, an owner may choose to operate their own vehicle for part of the week and hire a crew to work the rest of the time. These different models result in other relationships between owners and drivers and varying degrees of owner involvement in the day-to-day operation of the vehicle and the service. The driver generally enjoys a high degree of independence and makes decisions regarding day-to-day operations (timetables, frequency, services), while the owner manages the capital and the level of profitability. In some cases, a third group of stakeholders is added to those of the owners and crew, namely the licence holders. Licenses may be held by vehicle owners (as is the case in South Africa), by professional organisations (notably in Ghana), or by a third party (Saddier & Schalekamp, 2020) and may require the payment of an additional stakeholder. This is the case, for example, in Morocco, where the owners and/or drivers of large taxis (collective taxis) do not hold a licence in their own name, but rather the licence is held by a third party who then receives royalty income (Le Tellier, 2005).

- Professional organisations

Professional organisations are autonomous structures whose primary function is to regulate relationships between operators and limit internal competition, as basic market mechanisms do not lead to the optimal organisation of services (Godard & Teurnier, 1992; Rekhviashvili & Sgibnev, 2019). Their influence and role varies from city to city; in some cases, they have a more limited role, while in others, they are keystones of the day-to-day organisation of the transport sector. For example, professional organisations may manage paratransit terminals, vehicle scheduling, fleet operations, passenger allocation, and equipment use; in some cases, they are even responsible for setting routes and allocating licences. These structures can also facilitate risk and resource pooling among operators. While, in theory, the existence of these organisations enables operators to retain their independence while pooling risks, in practice, these structures exercise varying degrees of authority over operators, while the extent to which they represent operators before public authorities also varies. In some countries, such as Madagascar and Cameroon, operators’ unions or cooperatives are primarily made up of individuals who have ceased operations and are therefore disconnected from the profession. Furthermore, rather than facilitating individual representation, professional organisations sometimes create an additional barrier between operators and public authorities (Wester, 2018), and internal power dynamics – or even racketeering practices – in some cases call into question the legitimacy of these organisations. In South Africa, for example, the minibuss associations were set up in the socio-economic and political context of the post-apartheid transition; today, their managers resemble a veritable bourgeoisie in a highly bureaucratic and hierarchical system (Seftel, 2021). In contrast to this hierarchical structure, in Kenya, in the absence of a strong vertical structure, the multiplicity of professional organisations contributes to the sector’s fragmentation (see box).

## Box 2. Fragmented internal regulation in Kenya's matatu services

Since 2010, it has been compulsory to be a member of a *Savings and Credit Cooperative (SACCO)* or a private company to obtain a licence to operate a matatu (a minibus with at least 12 seats). These structures act more like investment banks than transport cooperatives. They are the main point of contact with the government regarding paying various taxes and managing problems, including offences involving one of its members. SACCOs are also involved in organising operators: they pool some resources of operators working the same route and then redistribute them through credit programmes. More generally, these organisations are supposed to organise and monitor operations, respond to operators' concerns, and take responsibility for asserting their claims. In reality, the SACCOs' role is more that of a credit union than a professional organisation. In addition, the governance structure of these SACCOs partly explains why they are not directly involved in the sector's organisation. The members are independent and autonomous, each defining the terms and conditions under which he wishes to operate.

As the cooperatives are organised horizontally, no internal body is responsible for managing and implementing decisions, and no authority is capable of imposing directives on members. In this context, SACCOs are not in a position to coordinate supply or distribute passenger demand; operational management is ultimately limited to monitoring terminals to manage passenger queues. In addition to SACCOs, other operators' organisations exist, such as the Matatus Welfare Association and the Matatus Owner Association. In practice, however, these associations have a relatively limited role and significance in Kenya.

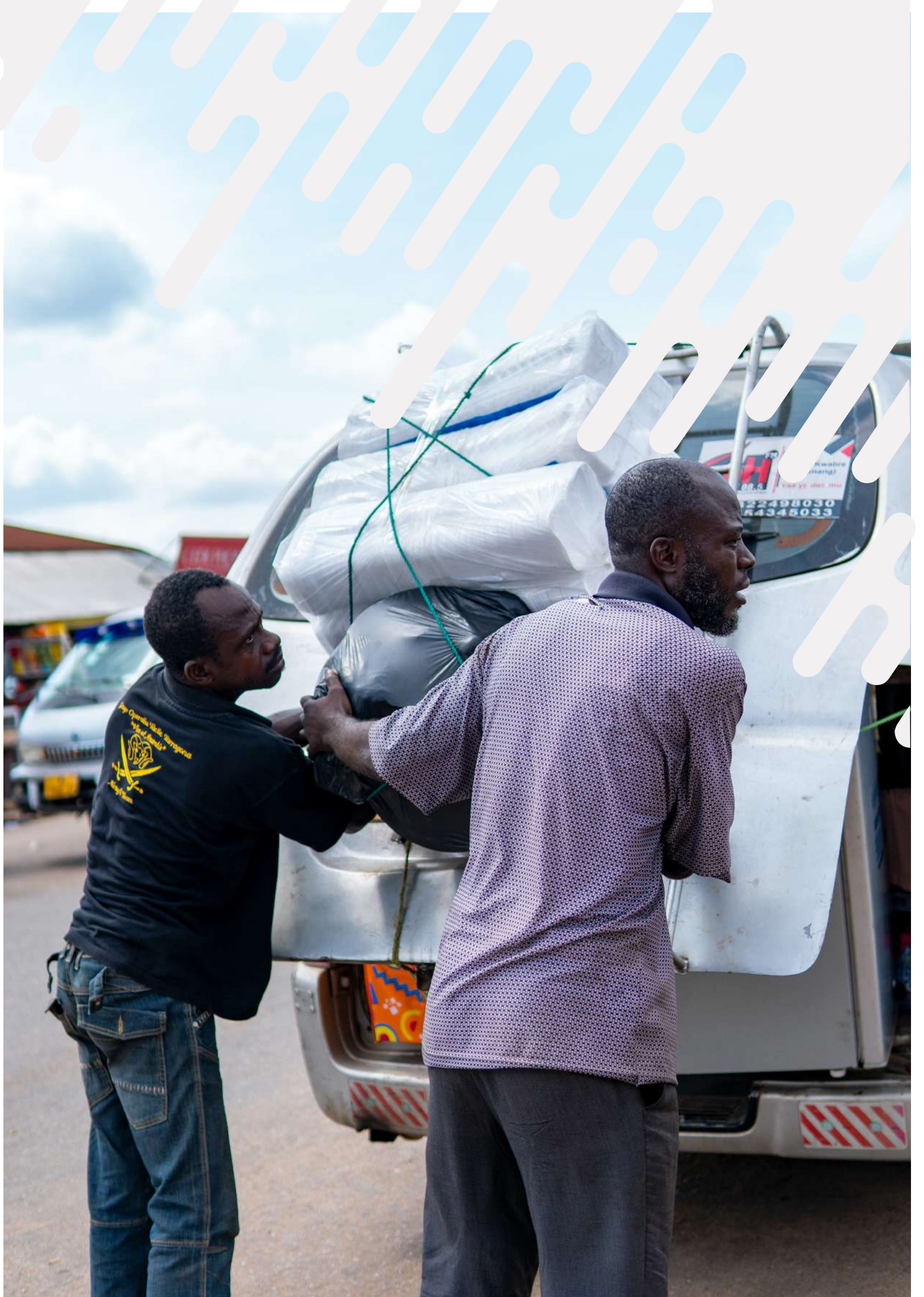
Finally, while these professional organisations bring together many stakeholders in the sector, many operators operate outside this framework, more or less voluntarily.

- Passengers

Users, sometimes referred to as passengers or even "customers" – the multiplicity of terms denotes the complex position of this particular group of stakeholders (Saddier & Schalekamp, 2020). Though they play a central role (the income received by paratransit operators generally depends exclusively on the revenue they provide), passengers find it difficult to impose their needs to improve the level of service supplied by paratransit. In fact, the existence of "captive" urban populations, those dependent on paratransit services for their mobility, puts operators in a strong position. In some cities, however, the growing population of "middle-class" paratransit passengers who use the service by choice is changing the balance of power between paratransit operators and users. Users then choose between modes of transport – including paratransit – based on the various advantages of each mode: price, speed, comfort, etc. For example, in Yaoundé, formal transport is very slow but inexpensive, shared taxis represent a mid-range offer in terms of the speed/cost ratio, and motorbike taxis are faster and more expensive – a premium offer. In addition, the crew and passengers sometimes have a close relationship, as they often live in the same neighbourhood.

- Local authorities and law enforcement agencies

In contexts where decentralisation processes have not been completed or even started, responsibility for urban transport regulation is often shared between multiple spheres of government and/or between ministries, local authorities, and government agencies (Wilkinson, 2008). This results in the fragmentation of management and regulatory powers, a lack of clarity for operators and, in some cases, competition between institutions. In many cities, the lack of control by local authorities means that regulations remain largely unenforced. The poor enforcement of regulations sometimes also results from a lack of political will regarding paratransit's integration into urban mobility systems. Corruption also remains a major issue, making it difficult to enforce regulations. Moreover, it is



common in sub-Saharan Africa for civil servants themselves to own paratransit vehicles, which is not without its conflicts of interest (Klopp & Mitullah, 2016).

- Peripheral stakeholders

Within the paratransit ecosystem, several stakeholders influence how the sector operates and its economic model, even though they are not directly involved in providing, managing, or regulating paratransit services. These include vehicle manufacturers, mechanics, and other employees working in the sector, particularly at transit stations, as well as companies providing financing, insurance, and energy. Energy suppliers play a key role, as fuel is the biggest single expense for operators, in addition to the vehicle itself. For example, in South Africa in 2019, minibuses operators spent 39 billion South African rand (over €5.8 billion) on fuel and 2 billion rand (around €300 million) on insurance (Seftel, 2021). These high costs explain why some drivers use smuggled or adulterated fuel.

Vehicle repairs are another significant expense, particularly concerning ageing fleets and inconsistent maintenance. The availability of spare parts and the vehicles' costs also depend on carmakers' distribution strategy and infrastructure. In Africa, for example, only Morocco and South Africa have a car manufacturing industry, which largely explains the continent's dependence on vehicle imports, primarily from Europe and Asia. In Asia, the dynamism of the automotive sector is facilitating access to low-cost vehicles, particularly two- and three-wheelers.

In addition to mechanics, a large number of peripheral jobs are also generated by the paratransit sector, particularly at stations: representatives of the station management organisations, who vehicle movements, "touts", who coax passengers from the street (in a more or less coercive manner), loaders who help move the goods to be transported, cleaners, guards, and traders, who are more or less formally authorised to sell food in the stations, and even "seat drivers", whose job it is to attract customers by making them believe that the vehicles are full and ready to leave.

- Digital platforms

There is an increasing number of digital platforms. Run by both local and multinational companies, their main role is to put an on-demand transport operator in touch with users. These applications are aimed at taxi services – primarily motorbike taxis, cars, and in some cases, minibuses.

The introduction of these new services is transforming the regulatory framework in some cities: these companies are not always subject to the legislation applicable to paratransit operators and to public transport operators in general. In Vietnam, Uber and Grab are not registered as transport operators, but as IT services companies (Eskenazi & Boutueil, 2016). Furthermore, for operators, these platforms sometimes replace membership in a professional organisation. As a result, these operators are not constrained by the regulatory measures applied by professional organisations.

## 22 Understanding paratransit

The main stakeholders in the paratransit ecosystem are listed below, together with their specific objectives and source(s) of revenue. The relationships between these stakeholders are largely determined by their respective economic interests.

Stakeholders	Objectives	Primary sources of income
<b>Drivers</b>	Optimising the number of passengers carried per day	Passenger revenue
<b>Touts</b>	Attracting passengers and maximising occupancy	Passenger revenue or commission from the driver
<b>Owners</b>	Profiting from their investment as quickly as possible	Passenger revenue or driver fee
<b>Licence holders</b>	Leasing their licence to a driver or running their own business	Passenger revenue or driver charge
<b>Associations</b>	Representing operators' interests, optimising the organisation of the service	Contributions from operators
<b>Passengers</b>	Getting around	Personal
<b>Local authorities</b>	Regulating the number of vehicles and ensuring mobility for residents	Fuel taxes, licence and permit fees, parking/terminal use fees
<b>Police</b>	Monitoring the enforcement of regulations	Salaries and fines
<b>Mechanics</b>	Selling their services with the best possible margin	Cost of repairs (owner or driver)
<b>Financiers (banks or others)</b>	Selling credit and securing repayments	Interest
<b>Insurers</b>	Increasing the number of vehicles insured	Investments by owners
<b>Manufacturers</b>	Selling vehicles – Increasing the number of vehicles	Investments by owners

Stakeholders	Objectives	Primary sources of income
Energy suppliers	Increasing the number of vehicles on the road	Fuel sales (driver)

Table 2. Key stakeholders in the paratransit ecosystem

## What are the economic and financial patterns that structure the relationships between stakeholders?

- The target system and its impact on the paratransit ecosystem

The “target system” is at the heart of the paratransit sector. This refers to the widespread practice in which a vehicle owner sets a certain threshold, above which any revenue goes to the vehicle’s crew. For the owner, this amount corresponds to their daily income; for the crew, it is a target that must be exceeded. The driver is also responsible for the vehicle’s fuel and routine maintenance, the remuneration of any other crew members (including the fare collector), and any additional costs that may arise during the operation (fines, bribes, tolls, etc.). The fact that the driver bears these costs often explains the disrepair in which some vehicles operate, with the driver preferring to limit routine maintenance until more significant repairs – the owner’s responsibility – become necessary. This contracting system between owners and drivers has major repercussions on the transport offer and quality of service. Indeed, to ensure profits beyond the daily target, drivers are encouraged to maximise vehicle occupancy and to adopt competitive behaviour that can prove dangerous and is often to the detriment of passengers (*‘fill & go’*, aggressive soliciting, reckless driving, speeding). The target system also has implications for the relationship between vehicle owners and the crew. The latter sometimes have to conceal some of their revenue – otherwise, if the service turns out to be more lucrative than expected, the owners might increase the daily threshold. This practice tends to create a climate of mistrust between owner and crew and explains why it is difficult to understand this business model, particularly the daily revenue it generates.

- A source of cash income

The predominance of cash is due, above all, to the still large informal economy in many cities in the Global South, as well as limited access to banking services. However, the preponderance of cash payments limits traceability and makes it all the more difficult to keep operating accounts. Also, the operators often have a very rough understanding of the revenue generated by their activity. Cash also enables crews to maintain a certain opacity regarding the income generated by the paratransit service, which explains their reluctance regarding plans to promote card-based and cashless payment methods. The use of cash and the resulting lack of transparency also facilitates tax evasion for both owners and operators, who pay little or no tax. However, paratransit is sometimes also seen as a source of revenue for public authorities, particularly concerning licence fees. In some cities, the large number of licences in circulation is explained by the local administration’s view of the paratransit sector as a potential windfall.

- The scale of corruption

The use of cash, the opacity of the sector, and the existence of conflicts of interest create a business environment conducive to corruption at various levels. Racketeering practices are frequent, both when drivers arbitrarily increase fares and when law enforcement officers impose informal tolls, as is the case in Cameroon, where officers routinely demand 1,000 FCFA notes in exchange for the right to pass (Godard & Teurnier, 1992). In Bangkok, police or military officers position themselves as “protectors” of certain districts and charge bribes to motorbike taxi operators who pass through the district without authorisation (Sun, 2016). In Nairobi, a study conducted by the Global Labour Institute in 2019<sup>8</sup> estimated that the cost of bribes paid to police officers represents between 5 and 10% of matatus’ passenger revenue. Paratransit services can receive some protection when civil servants own one or more vehicles and wish to safeguard their interests. In some cases, conflicts of interest concern social affiliations, particularly when police officers come from the same neighbourhoods or social groups as drivers or owners, in

<sup>8</sup> “Nairobi Bus Rapid Transit: Labour Impact Assessment”, Global Labour Institute, 2019

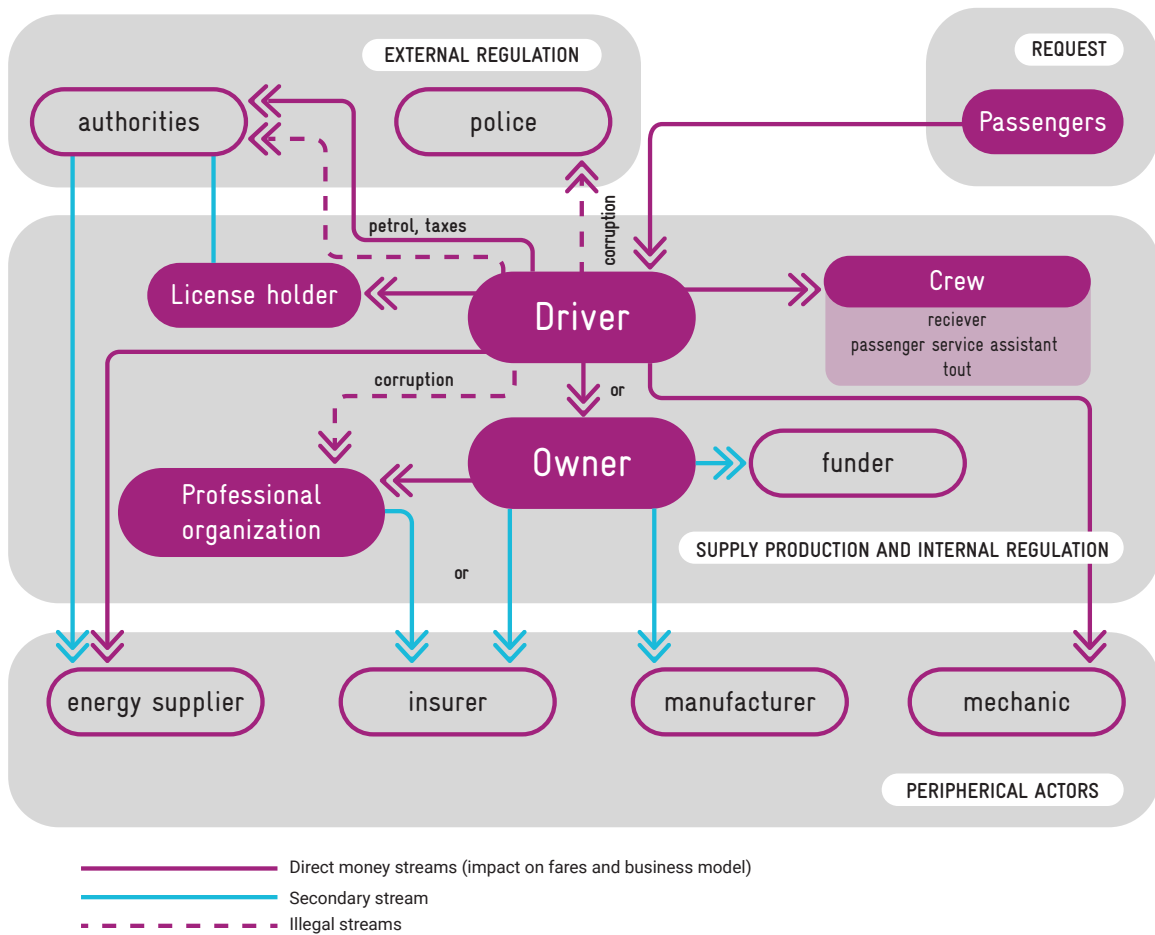
which case they are considered “traitors in a microenvironment” if they enforce the applicable regulations (Sef-tel, 2021).

In addition, professional organisations sometimes impose informal taxes, such as in Abidjan, where the *gnamboro*, thugs directly employed by the unions, run a racket on transport operators and public authorities (Kassi-Djodjo, 2015). Without resorting to violence, these organisations also exert their influence when they negotiate directly with local authorities on the amount of taxes they wish to pay (Lombard et al., 2006).

Corruption also manifests itself in the intersecting interests of various stakeholders, particularly when they share a common social, economic, or ethnic background.

- Diagram of stakeholders and relationships

These intertwining interests ultimately lead the various stakeholders to implement certain strategies: operators include bribes in their business models, and professional organisations bribe police officers and civil servants in



exchange for protection from the public authorities. Considering these relationships and all the “hidden costs” is essential to understanding the economic model of the paratransit sector, as well as the balance of power between the various stakeholder groups.

The relationships between these stakeholders – and, on a broader level, the very functioning of the sector – are structured around economic and financial patterns, which are generally largely informal and difficult to trace. However, identifying this ecosystem and these economic and financial patterns is an essential step in understanding how the paratransit sector works and is therefore a necessary prerequisite for any plans to reform the sector.

**Diagram 1. Diagram of stakeholders and relationships**



## What are the strengths and weaknesses of the paratransit sector from the perspective of each group of stakeholders?

The paratransit ecosystem is different in each city and each particular local context. However, it is generally complex, involving many stakeholders with distinct and often antagonistic interests. Each group has its own view of the strengths and weaknesses of the paratransit sector, depending on their objectives. To ensure that any sector reform is acceptable to as many people as possible, it is vital to identify the sector's strengths for all stakeholders, as well as the negative externalities that need to be mitigated or even eliminated.

Drawing up a Strengths, Weaknesses, Opportunities, and Threats (SWOT) matrix can help guide our thinking in this direction. Of course, the matrix is based on a reference case and cannot be applied to all cities. The purpose of this matrix is to identify the specific features of paratransit that need to be preserved and enhanced ("strengths"), while the "weaknesses" relate to service deficiencies and any negative externalities produced by the sector. At the same time, "threats" and "opportunities" represent external factors that may positively or negatively influence the implementation of a project to integrate paratransit or, more broadly, a reform of urban transport services. In addition, this matrix needs to be adapted to the local context and multiplied to consider the viewpoints of the various stakeholders in the paratransit ecosystem.

Based on the characteristics of the paratransit sector identified above, we can construct a draft SWOT matrix<sup>9</sup>, which can then be adapted and expanded according to the local context. Far from being exhaustive, this matrix aims to categorise certain characteristics based on the perspectives of the various stakeholders.

In the example given, four stakeholder categories are presented (although others could be added), while the items in the "external" category correspond to the opportunities for improving paratransit, as envisaged by each group of stakeholders. These opportunities could be implemented as part of a sector reform (for example, when implementing a Sustainable Urban Mobility Plan), launching new online booking tools, or conducting fleet renewal programmes.

The SWOT matrix effectively bridges the gap between an initial analysis of the paratransit ecosystem and the sector diagnosis phase. This stage enables us to identify the converging and contradictory objectives of the various stakeholder groups, the impact on service quality, and the potential levers that can be mobilised to improve the sector's functioning. The matrix can also be used as a coordination tool, to clarify the points of view of the various stakeholders and identify any potential obstacles. Lastly, it helps us shape the measures to be implemented and make strategic choices to support the sector's development.

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<sup>9</sup> There are other such attempts in literature, such as the Strengths and Weaknesses table drawn up by UITP in the publication *Key insights into transforming the informal transport sector* <https://www.uitp.org/publications/key-insights-into-transforming-the-informal-transport-sector/>, or analyses in the scientific literature (e.g., Lesteven & Boutueil, 2018).

		Users	
		STRENGTH	WEAKNESS
INTERNAL		<ul style="list-style-type: none"> <li>• Availability of services</li> <li>• Flexibility</li> <li>• Door-to-door service (or close to it)</li> <li>• Prices</li> <li>• Speed</li> </ul>	<ul style="list-style-type: none"> <li>• Lack of reliability</li> <li>• No passenger information</li> <li>• Fares</li> <li>• Congestion</li> <li>• Pollution</li> <li>• Dangerous driving</li> <li>• Insecurity in vehicles and when boarding</li> </ul>
	EXTERNAL	<ul style="list-style-type: none"> <li>• New travel planning tools (to reduce waiting times)</li> <li>• Fare and modal integration</li> <li>• Comfort in the vehicles</li> </ul>	<ul style="list-style-type: none"> <li>• Reduced availability if the sector is reformed</li> <li>• Fare increases</li> </ul>

Table 3. SWOT matrix for users

		Drivers	
		STRENGTH	WEAKNESS
INTERNAL		<ul style="list-style-type: none"> <li>• Access to employment without qualifications (except a driving licence)</li> <li>• Source of income (more or less regular)</li> <li>• Social status in certain contexts</li> <li>• Access to a form of social protection in certain cases</li> </ul>	<ul style="list-style-type: none"> <li>• Strong competition</li> <li>• Target system</li> <li>• No social insurance</li> <li>• Poor working conditions</li> <li>• Corruption</li> </ul>
	EXTERNAL	<ul style="list-style-type: none"> <li>• Improved working conditions</li> <li>• Optimised vehicle occupancy</li> <li>• Vehicles with lower maintenance costs</li> <li>• Access to social benefits</li> </ul>	<ul style="list-style-type: none"> <li>• Job losses if the sector is reformed</li> <li>• Decrease in daily revenues</li> <li>• Tougher barriers to accessing the sector</li> </ul>

Table 4. Driver SWOT matrix

Vehicle owners		
	STRENGTH	WEAKNESS
INTERNAL	<ul style="list-style-type: none"> <li>Regular source of income</li> <li>Little or no need for capital</li> <li>Pooling of certain needs within professional organisations</li> <li>Strong demand</li> <li>Social status</li> </ul>	<ul style="list-style-type: none"> <li>Strong competition</li> <li>No economies of scale</li> <li>Pressure from professional organisations</li> <li>Corruption and pressure from public authorities</li> <li>Financial risk in the event of a severe breakdown</li> </ul>
EXTERNAL	<ul style="list-style-type: none"> <li>Optimising vehicle occupancy and operations</li> <li>Vehicles with lower maintenance costs</li> <li>Licence buybacks</li> </ul>	<ul style="list-style-type: none"> <li>Loss of income</li> <li>Decrease in daily revenues</li> <li>Tougher barriers to accessing the sector</li> </ul>

Table 5. Owner SWOT matrix

Local authorities		
	STRENGTH	WEAKNESS
INTERNAL	<ul style="list-style-type: none"> <li>No subsidies, services at zero cost to local authorities (sometimes even generating revenue)</li> <li>Adapting to demand</li> <li>Job-creating sector</li> <li>No need for specific infrastructure</li> <li>Representative of a local culture</li> </ul>	<ul style="list-style-type: none"> <li>Not a service of general interest</li> <li>Competition with public transport services (if any)</li> <li>Congestion</li> <li>Pollution</li> <li>Accidents and insufficient safety</li> <li>Difficulties in regulation</li> <li>Lack of data on the sector and services</li> <li>Political risk in the event of strikes or tensions</li> <li>Tax evasion</li> </ul>
EXTERNAL	<ul style="list-style-type: none"> <li>Emergence of new tools to facilitate regulation or partnerships with new stakeholders</li> <li>Tariff and modal integration</li> <li>Cleaner, safer vehicles</li> </ul>	<ul style="list-style-type: none"> <li>Political opposition from operators if the sector is reformed</li> <li>Job losses</li> <li>Discrediting the new transport offer (if applicable)</li> </ul>

Table 6. Local authority SWOT matrix



# A favourable context for paratransit action

## A new consensus on the need for reform without eliminating the sector

- The central role of paratransit operators in mobility systems

For several years, views on the paratransit sector have been evolving, primarily around two points: the role of operators and their contribution to public service. The support of operators themselves now appears essential for urban transport reform, both from a positive point of view (these stakeholders often have detailed knowledge of how the mobility system works and on local supply and demand) as well as a defensive point of view (professional organisations generally enjoy strong political power, and therefore can cause considerable trouble if they oppose the project - as was the case in Dar Es Salaam, for example, during the initial implementation of the BRT project) (Rizzo, 2014).

When it comes to reforming the urban transport sector, the aim is to strike a balance between the interests and needs of three distinct groups of stakeholders: operators, residents, and public authorities. It is therefore a question of finding engagement strategies that reconcile the specific interests of operators with the general interest (i.e., that of residents, for whom public authorities are supposed to advocate). These engagement strategies can focus on various points. In South Africa, for example, Venter (2013) analyses the transition of the minibus sector in the context of a BRT project and highlights the pragmatic attitude of operators, who see the project as an opportunity to reduce the instability and precariousness inherent in the informal aspect of their trade. In the case of the *Association de Financement des Transports Urbains à Dakar* (Dakar Urban Transport Financing Association), it is opportunities for obtaining financing and improving working conditions that have notably enabled operators to join.

- From “displace and replace” to “embrace, engage, improve, and integrate”

This change in approach is evident in certain urban transport projects currently under construction in Cape Town (BRT) and Dakar (BRT and rail projects), or already underway (the Kochi metro), where paratransit services are in-

egrated into mass transport projects from the design phase. This marks a paradigm shift in public action, moving from a strategy of “*displace and replace*”, aimed at wiping out paratransit, to one of “*embrace, engage, improve, and integrate*”, where public authorities seek to support the structuring of the sector and improve quality of service (Schalekamp & Klopp, 2018). Indeed, for several decades, the desire to set up large-scale international projects to promote the “political sublime” (Flyvbjerg in Klopp et al., 2019) may have contributed to the neglect or restrictive actions concerning paratransit. The “*displace and replace*” approach is also part of a “top-down” understanding of the urban transport sector on the part of public authorities, which has led to a lack of dialogue with paratransit operators (Venter, 2013). More generally, the aim of eradicating paratransit indicates decision-makers’ desire to favour transport services similar to those found in cities in the Global North, even though they are often unsuited to the operating methods, economic models, and culture of local populations. After several decades of implementing “displace and replace” measures, the relatively limited success – and in some cases failure – of some projects and the high costs of major transport projects have led to the paradigm shift we currently see, that is, paratransit and its operators being (better) taken into account in urban transport reform projects, and where there are no such projects, the emergence of projects dedicated to improving the paratransit performance, even if the latter is still relatively rare.

## Public investment refocuses on collective urban mobility

- A new priority for public transport

For decades, public authorities invested exclusively in urban road infrastructure, while the private sector was supposed to “follow” and offer mobility services. Faced with the intrinsic limitations observed nearly everywhere (congestion, security issues, pollution, limited access to jobs and social services), public investment has gradually been redirected to mass transit projects by financing either rail projects (metro, tramways, suburban trains) or high-capacity bus services with an exclusive right-of-way (Bus Rapid Transit), which are less costly but sometimes consume more public space. These investments change the balance of the mobility system and need to be coordinated with paratransit services.

Where there are no transport capacity projects, improving the quality of paratransit service is an inexpensive way for public authorities to provide a collective transport offer.

- New planning documents (SUMP and NUMP)

Since the 2000s, there has been new momentum in European urban mobility planning, particularly for energy- and congestion-related reasons. The movement of people and goods is responsible for more than a quarter of global CO<sub>2</sub> emissions from fossil fuels. These emissions, which are expected to increase by 70% between now and 2050, are the fastest growing of all sources of emissions, due in particular to the growth in urban travel in the cities of developing countries, which is also exacerbating congestion problems. This is why, for example, the multi-partner MobiliseYourCity initiative, launched at COP 21 in 2015, aims to help approximately 100 cities in the developing world develop efficient urban mobility planning that can be described as sustainable. These Sustainable Urban Mobility Plans (SUMP) coordinate spatial planning and transport and build a consensus around a shared vision for the city’s development. Managers and decision-makers in developing countries, often overwhelmed by the day-to-day management of transport networks and by the paratransit sector, focus on very short-term, sector-specific issues without adopting an interdisciplinary or longer-term approach (Helluin, 2019<sup>10</sup>). A SUMP is a strategic planning tool that aims to define a shared vision for developing a sustainable multimodal mobility system, including paratransit. The SUMP for Douala, Cameroon – one of the very first of this new generation – includes the following innovative measures:

<sup>10</sup> <https://www.codatu.org/bibliotheque/doc/la-planification-de-la-mobilite-urbaine-dans-les-pays-en-developpement-pour-des-villes-plus-economes-en-energie-la-necessaire-alliance-entre-objectifs-globaux-et-besoins-locaux/>

- The taxi and motorbike taxi sector is supported, professionalised, and modernised;
- Paratransit/formal transport allowed to coexist;
- All operators of transport networks, whether buses, minibuses, taxis, or motorbike taxis, are inspected and trained at a Mobility and Transport training and vehicle inspection centre;
- The necessary arrangements to accommodate passengers comfortably and safely have been made.

As local planning does not address the levers for action at the national level, MobiliseYourCity is also encouraging countries to adopt Nump or National Urban Mobility Policies. This new dynamism also makes it possible to raise the question of the relationship between the State and paratransit at a national level, sometimes for the first time. It often comes down to clarifying the division of competencies regarding regulating paratransit. In Tunisia, for example, the Nump ensures the coherence of the organisation of urban public transport in each conurbation. The entities responsible for urban mobility (municipalities, establishments for inter-municipal cooperation, or mobility authorities in large urban conurbations) should themselves be responsible for regulating non-regular public transport, i.e., small-scale operators, within the perimeter of the conurbation<sup>11</sup>.

Although Sump and Nump are ideal frameworks for introducing urban mobility reform and integrating paratransit, these planning frameworks are not *sine qua non* for taking action on paratransit. Projects to reform paratransit can be developed independently of these approaches or mass transport projects.

- Transition plans

At the project level, “transition plans” are increasingly being drawn up to plan the development of the paratransit sector. These transition plans can be drawn up by introducing BRT-type mass transit. Introducing this type of transport generally leads to an upheaval in a city’s transport supply, making it necessary to plan a new mobility system to coordinate this new supply with the existing paratransit supply. In other cases, transition plans for the paratransit sector may be drawn up without any plans for mass transit projects. This was the case in Dakar, for example, when the reform of Cars Rapides and Ndiaga Ndiaye was introduced, and in Cape Town with the pilot reform of the Transport Operating Companies in Mitchell’s Plain.

### Box 3. The example of the Karachi BRT transition plan

In the case of the Karachi BRT project, a transition plan for the paratransit sector has been defined, particularly for the restructuring of paratransit lines in conjunction with the new BRT service. For paratransit employees affected by the BRT (particularly drivers), the transition plan provides for training and priority recruitment by the BRT operator. Owners of paratransit vehicles affected by the BRT can either obtain a licence on a new paratransit line or benefit from a scrappage scheme and financial compensation, with the possibility of reinvesting this compensation in the BRT operating company.

<sup>11</sup> République tunisienne, Politique nationale de la mobilité urbaine, Vision de la mobilité urbaine et recommandations pour la mise en œuvre, June 2019, page 30

## The rise of local authorities

In the context of globalisation, the increasing power of cities (Lombard et. al., 2006) to drive growth and development has also been manifested by a takeover of the management of urban networks (Lorrain, 2011), particularly transport networks. This takeover is generally part of a decentralisation movement involving a transfer of powers – and even resources – from the central or national state to the major metropolitan areas. At the same time, for many years now, development aid programmes and international cooperation, particularly decentralised collaboration, have been deployed at this level. As a result, infrastructure projects and reforms to existing networks are multiplying, as much to meet local needs as to satisfy the ambition of the metropolises of the Global South to assert their power and competence (Lorrain, 2011; Chaléard et al., 2014). In the urban transport sector, the construction of high-capacity transport projects meets this dual requirement and partly explains the spread of the BRT model from Latin America to Asia and, in recent years, to Africa. In Africa, however, the process of genuine decentralisation seems incomplete in many countries, with local authorities generally still lacking human and financial resources.

## Digital tools create opportunities for action in a fragmented sector

Since the early 2010s, the spread of information and communication technologies in the urban transport sector has been part of a major transformation of the sector. The use of these new services is based on two innovations: on the one hand, geolocation tools (GPS), which make it possible to use location data, and on the other, the widespread use of mobile telephony and 2G and 3G data systems, which make it possible to carry out various operations via smartphone. The flexibility of the paratransit sector and the scale of demand in the cities of the Global South explain why mobility platforms have been springing up in recent years, including motorbike taxi services (Safe Boda, Heetch, Gozem), taxis (Uber, Ola, Bolt), and on-demand buses (SWVL). These platforms have mainly focused on matching supply and demand, though their activity has in some cases expanded, and some now offer their own transport services (such as Ola in India). In addition to the existence of these booking platforms, the spread of information and communication technologies is opening up new possibilities in the paratransit sector, through tools for mapping, analysis, and managing licences/operators/drivers, managing operations and fleets, passenger information, and payment. With limited hindsight, opportunities are already clearly emerging, particularly regarding regulation, improving fleet operation, and payment systems. In some cases, platforms are facilitating the introduction of new regulatory measures, as in Kampala in Uganda, where since January 2020, local authorities have required motorbike taxi drivers to register on an online on-demand transport platform to authorise them to operate. In Lagos, on the other hand, the rules prohibit platforms from operating in the city centre.

This last example reminds us that there are also difficulties in providing a legal framework for the activities of these new stakeholders, which sometimes have harmful consequences in terms of working conditions, and more generally highlights the essential role of local authorities in regulating the sector.

Finally, it's important to remember that the spread of these digital tools is still very limited in many cities in the Global South and is a source of inequality in areas where there is a significant digital divide.

# Conclusion

As an essential mode of transport, paratransit offers an agile, flexible mobility service that is relatively well adapted to demand at generally zero cost to public authorities. It is operated by private stakeholders, generally highly fragmented, with intimate knowledge of local mobility practices. In this sense, paratransit represents a real opportunity.

However, paratransit does not meet the objectives of public service because it is based on individual, short-term profitability and results from a local balance between technical, economic, financial, and social performance. It generally concentrates on the most profitable services. It reaches its limits in the most populated cities regarding efficiency, quality of service for users, working conditions, and negative externalities, particularly concerning environmental and safety concerns. To overcome these limitations, the sector needs to be supervised to some extent by the public authorities, who need to identify its inefficiencies and hidden costs in order to use them as levers to improve services.

An essential prerequisite is therefore to establish a detailed diagnosis of the sector, particularly to establish a precise understanding of the paratransit ecosystem and the various relationships – regulatory, authoritative, or financial – between the players in this ecosystem. The second tool in the MobiliseYourCity Paratransit Toolkit, *“Conducting a paratransit diagnosis – A practical guide to six key questions”*, focuses on this essential diagnostic phase by proposing a systemic diagnostic model based on six key questions.







# List of Diagrams, Boxes and Tables

## Diagrams

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**Diagram 1.** Diagram of stakeholders and relationships

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## Boxes

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**Box 1.** Diversification and segmentation of mobility services

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**Box 2.** Fragmented internal regulation in Kenya's matatu services

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**Box 3.** The example of the Karachi BRT transition plan

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## Tables

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**Table 1.** Types and modes of paratransit services

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**Table 2.** Key stakeholders in the paratransit ecosystem

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**Table 3.** SWOT matrix for users

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**Table 4.** Driver SWOT matrix

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**Table 5.** Owner SWOT matrix

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**Table 6.** Local authority SWOT matrix

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