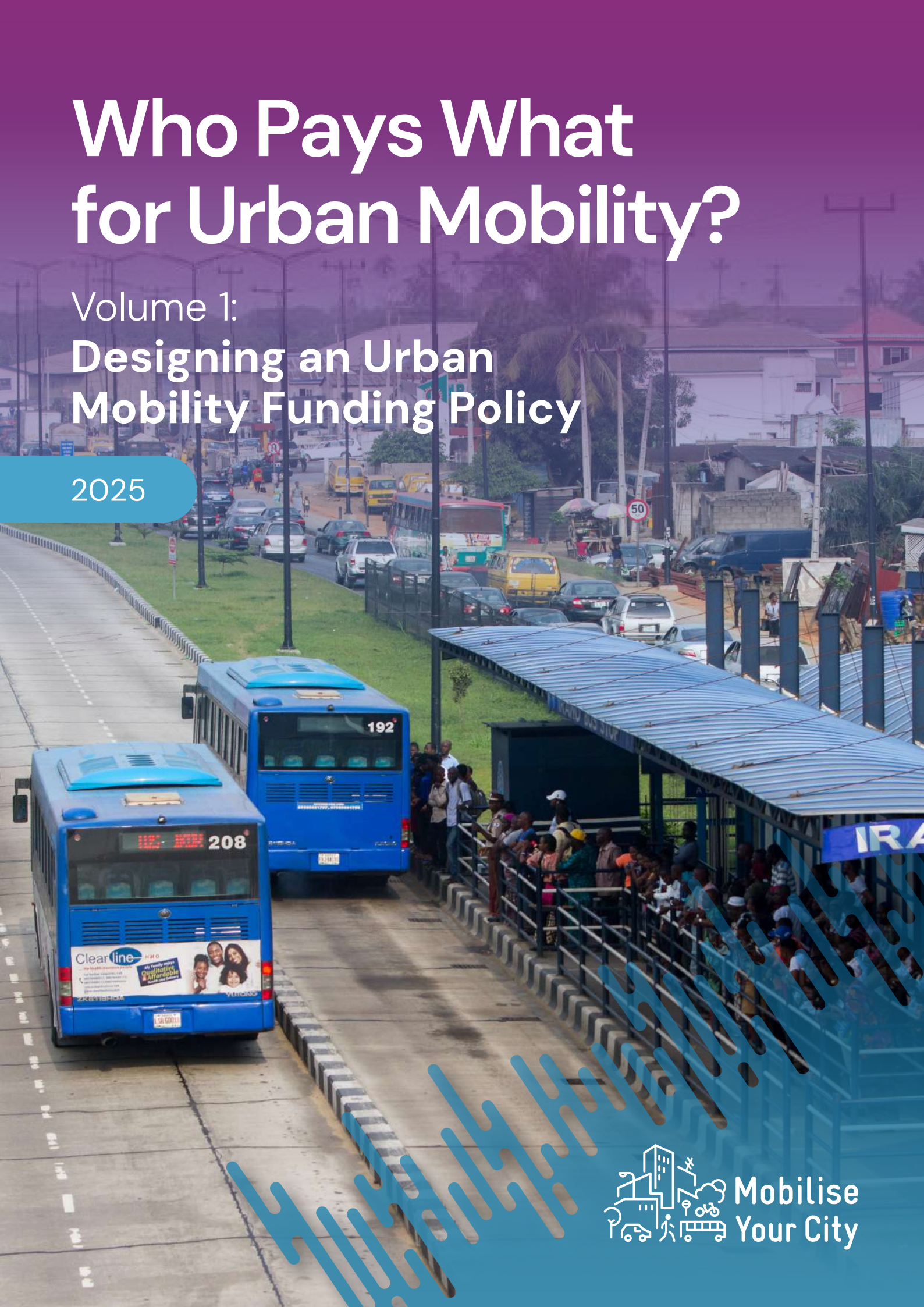
Who Pays What for Urban Mobility?

Volume 1:
Designing an Urban Mobility Funding Policy

2025



Mobilise Your City

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Title
Who Pays What for Urban Mobility?
Volume 1: Designing an Urban Mobility Funding Policy

Published and distributed
December 2025

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About this publication

Urban mobility needs are steadily increasing worldwide, particularly in rapidly growing cities of the Global South. The development of sustainable and efficient urban mobility systems to meet this increasing demand is vital to these countries' development paths, as they provide a strong backbone for ensuring access to jobs, public services, socio-economic opportunities, economic development, and freedom of movement.

Financing the development of urban mobility systems, however, poses a challenge for decision-makers in cities of the Global South. Setting the right financing policy, both in terms of objectives and instruments, is a complex task. It requires an analysis of the characteristics of a given city and its urban mobility systems, the institutional framework and its stakeholders, the overall vision for urban mobility in the city and the country, the available public funding and capacities, as well as a wide variety of funding and financing mechanisms that could be leveraged to achieve the set objectives.

This two-volume publication provides decision-makers with (i) a framework for designing an urban mobility financing policy and (ii) approaches to increase resources and optimise financial needs. Rather than offering ready-made answers or prescriptive solutions, this publication establishes a structured framework and key considerations to support decision-makers and urban mobility practitioners in designing and implementing their urban mobility financing policy.

The publications are structured in two volumes:

- Volume 1: Designing an urban mobility financing policy.
- Volume 2: Increasing resources and optimising financial needs.

These publications build on the **handbook of good practices – who pays what for urban transport**, developed by MEDDE and CODATU for AFD.

Introduction and Executive Summary

Volume 1 of the Who Pays What for Urban Mobility? provides an analytical framework for decision-makers in cities of the Global South to formulate efficient and effective urban mobility financing policies. It begins with an overview of historical trends and their impacts on urban mobility funding in the Global South.

The publication then examines key financing challenges, presents a framework for making critical policy choices with particular attention to user contributions, fare and social policies, before outlining options for directing public funding to the sector.

Three key takeaways from Volume 1 are summarised below:

1. Urban mobility financing policies in the Global South have historically favoured road infrastructure, with poor and unstable public spending on public transport, no or minimal support to paratransit, and a significant gender bias.

An overview of urban mobility financing policies in the Global South shows that public funding has historically been directed mainly to road infrastructure. This has supported the growth of private motorised mobility and constrained public transportation development. Most public transport networks in the Global South are characterised by insufficient and unstable public funding, resulting in inefficient systems that fail to respond effectively to growing mobility needs. In turn, inadequate public funding for formal transport provision has led to the emergence of paratransit systems, which serve as the predominant gap-filling modes, facilitating access to everyday activities in many Global South cities. However, aside from limited modernisation efforts, paratransit services remain largely self-sustaining, with minimal oversight from public authorities and no public subsidies. In addition, gender disparities remain significant in urban mobility, as publicly funded systems often fail to address women's needs and thus disproportionately benefit men. As such, urban mobility systems should adopt inclusive approaches that address existing issues through their design and planning.

2. Defining the objectives of an urban mobility financing policy is context-dependent. It should therefore consider the specificities and complexities of each city and country, including the development objectives for urban mobility (such as priorities for transport modes, service levels, and coverage), available funding resources, and existing governance frameworks.

Decision-makers need to balance trade-offs between sector development, available public resources, and households' capacity to spend on urban mobility. Therefore, the sector's financing objectives should be (i) aligned with the sector's policies and governance frameworks, and (ii) coherent with the operational and financial capacities of the existing institutions.

Decision-makers should consider five key questions:

Which mobility needs should be considered as a priority, and which should consequently be developed: Private motorised mobility, collective motorised mobility, or active mobility?

There is no universal answer to this question, as priorities depend on multiple local factors, including the city's specificities, residents' mobility patterns, available resources, and the regional vision and strategy for urban development. Nonetheless, sustainable forms of collective and public transport need to be favoured to keep up with growing demand for urban mobility while mitigating the negative externalities of motorised private mobility. On a per-passenger basis, public transport generates three to four times fewer CO2 emissions than private cars. Moreover, policy objectives must be defined with the awareness that today's choices will shape urban form for decades to come, and that ensuring urban sustainability therefore requires deliberate, forward-looking decision-making.

What are the available financial resources?

Decision-makers should carefully assess all available funding sources at the earliest stages of the financing policy definition process. Three main questions need to be answered at this stage:

- **What are** the funding resources already allocated to the sector, and for how long?
- **What are the existing institutional arrangements**, mechanisms and instruments to channel this funding, i.e. to subsidise the industry?
- **What other financial resources** can be mobilised for the sector in the future?

What is the desired level of service and coverage?

To quantify mobility needs in the city, decision-makers should first develop a technical assessment of demand, access levels, and the distribution of origins and destinations. Determining the appropriate mix of transport modes to meet this demand, as well as the coverage and level of service of each mode, is a more complex discussion that builds on this assessment:

Transport mode mix:
This requires balancing the city's mobility vision and priorities, recognising that different modes entail very different costs, and aligning these with available financial resources.

Level of service and coverage:
Decisions must consider objectives related to user access and affordability, as well as the availability of long-term public funding, to ensure budgetary sustainability.

What is the existing governance framework, and is it aligned with the financing framework?

Without delving into the specifics of governing and managing urban mobility, this publication primarily focuses on the financial aspects of governance. Specifically, it examines the alignment — or lack thereof— between the institutional and financing frameworks, and how this can be managed and/or improved in each case.

How much are people currently spending on urban mobility, and how can we design efficient fare and social policies?

Identifying households' willingness to pay and spending on urban mobility in the city, setting fare policy principles, and designing efficient social policies are prerequisites for any financing policy, as users are the primary source of revenue for the public transport system.

3. Once the objectives of the urban mobility financing strategy are defined, decision-makers will have a relatively clear idea of the necessary public financial support for the sector. The next question to answer is: how to channel public funding to the industry?

The publication provides an overview of the advantages and disadvantages of each channelling method. It aims to equip decision-makers with the necessary elements to structure their subsidies based on the context and local characteristics of their cities.

Chapter 1

Overview of urban mobility financing policies in the Global South

This chapter provides an overview of urban mobility financing policies in the Global South to support a better understanding of current trends and the key issues at stake. Some key definitions of urban mobility modes are provided in the box contained in the next page to facilitate reading.


Photo: **Rafael Atantya**

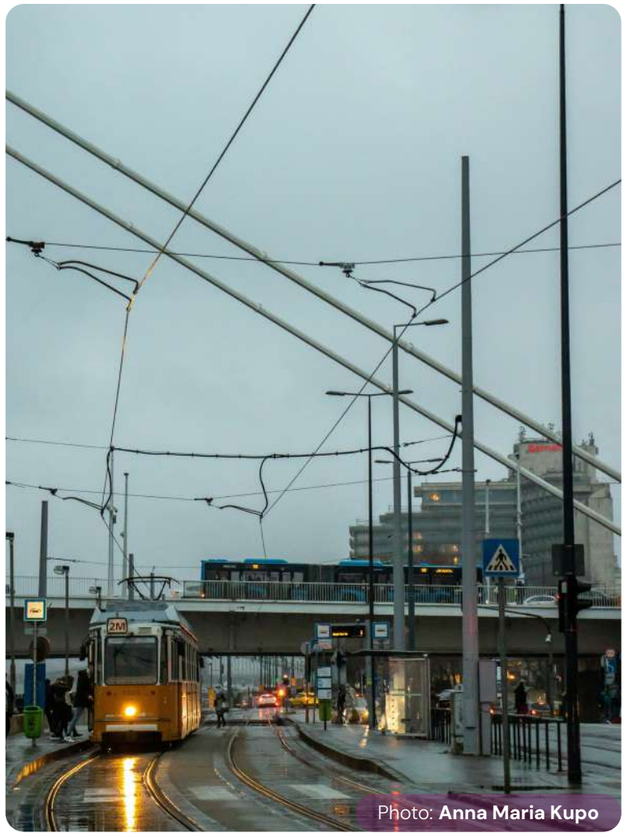


Photo: **Anna Maria Kupo**

Box 1

What is urban mobility?

Urban mobility refers to the movement of goods and people within a city. It can be divided into three prominent families: "Public", "private" and "active."

Public transport, in this document, indicates any means of transport which is considered a "public service," i.e. accessible to the public by means of a predetermined fare. Public transport can be collective (trains, metro, buses, etc.) or individual (taxi, rickshaw, etc.). It can be operated by a public, private or mixed-ownership entity, in a corporate or separate form. People are free to choose among all public transport modes according to their needs, using a mix where appropriate. In all cases, public transport refers to the transportation of people.

Public transport can be divided into two categories: **"formal public transport"** is regulated by public authorities, operated through clear contractual arrangements and has a structured operation with dedicated stops and itineraries, defined frequencies, etc.; while **"paratransit"** or **"informal transport"** refer to all transport services that are not regulated by a public authority and are provided by private operators with little or no organisation. The latter uses various types of vehicles, from carts to motorbike taxis, tricycles, minibuses, cars, etc. In some cases, other terms are used for this type of transport, such as "clandestine", "illegal" or "popular transport".

Private transport is conditioned by factors such as owning a vehicle or belonging to a group of rights-holders. It includes individual modes (private car, motorbike, etc.) as well as collective modes (school bus, company coach, etc.). It is not limited to passenger transport but also includes the transportation of goods (by minivans, trucks, etc.).

Active modes relate to non-motorised, personal modes of transport such as walking, as well as bicycles, roller skates, etc. These modes can make use of electric assistance. They can be combined with public or private modes, especially for the last-mile segment of the journey. Still, they can also be used alone for a whole trip: this is typically the case for impoverished residents or those who wish to combine mobility with physical activity.

Organising urban mobility must not only consider public transportation; it must also integrate private modes – whether for people or goods – as well as "active" modes.

1.1 A historic trend of favouring road infrastructure in public spending decisions

In the Global South, as in much of the world, the development of urban mobility has often favoured investment in roads for motorised private modes, benefiting also freight and, to a much lesser extent, public transport. This approach disregarded active mobility (walking, cycling, etc.) and collective public transport, treating them as secondary priorities in transport planning. For instance, dedicated bus lanes and proper pedestrian and cycling infrastructure, such as sidewalks, crosswalks, and cycle lanes, are less common in most Global South cities.

These development decisions have mainly been driven by the urge to satisfy rapidly growing mobility needs and reduce increasing traffic congestion: there has been a constant, and sometimes very rapid, rise in the use of private vehicles, in the Global South as in many wealthier cities with relatively well-developed transport systems.

In many Asian cities, with few notable outside exceptions, motorcycles account for many urban trips, often representing more than 50%.[2] In contrast, African and Latin American cities still rely heavily on walking and cycling for around 78% of trips in Africa[3] and between 10% and 55% in Latin America. However, rising incomes in these regions pose a significant risk of accelerating motorisation. This trend could discourage the uptake of non-motorised modes and lead to greater reliance on private vehicles (see figure).

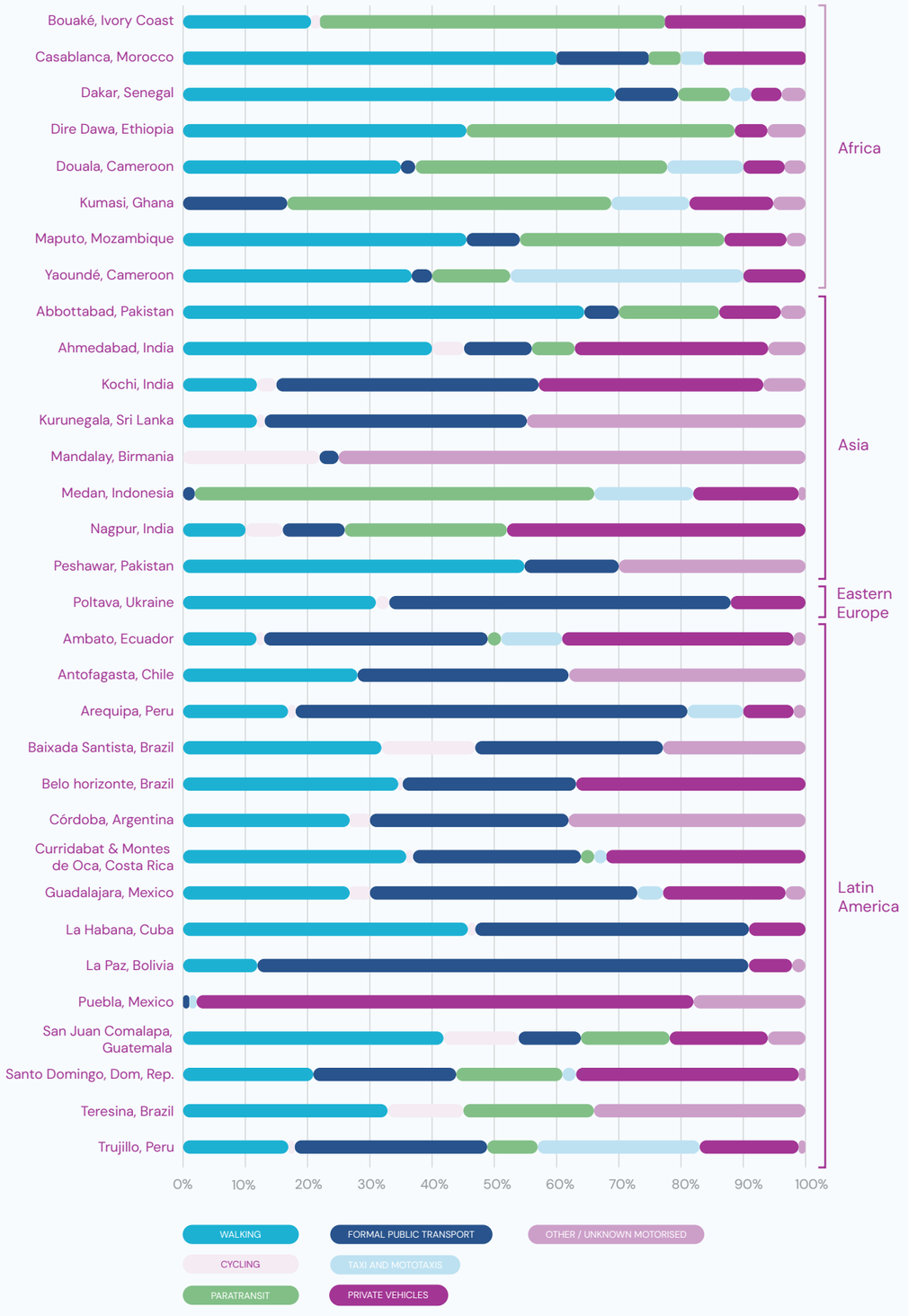
Declining vehicle prices, rising per-capita incomes, and easier access to credit have enabled a growing share of the population to purchase motorbikes and private cars.

Globally, motorcycle ownership is projected to increase by 50% by 2035, and car ownership could nearly double in some countries over the same period.[4] However, short-term responses to these legitimate aspirations often overlook the severe negative externalities of motorised mobility. Rising motorisation, driven by cheaper credit and increasing household revenues, is already fuelling congestion, air pollution, road fatalities, an d economic losses. These impacts are reaching critical levels in many countries of the Global South. They impose immediate costs, such as the loss of productive time in daily traffic, as well as long-term burdens, including higher public health expenditures. In addition, when essential mobility needs remain unmet, more than 60% of the world's urban population lacks access to reliable and frequent public transport. In Africa, for example, 67% of pedestrians and 85% of cyclists would require continuous networks of footpaths and bike lanes, as well as safe spaces to walk and cycle.[5] While such improvements require proportionally significant investments compared to other transport sectors, many cities, particularly in the Global South, continue to face severe infrastructure gaps. Limited financial resources result in either the absence of paved roads or poorly maintained networks[6], which directly worsens travel conditions. These deficiencies restrict access to jobs, basic services such as education, healthcare, and administration, and cause significant daily losses of productive time, ultimately constraining economic development.

Overall, the prevailing policy bias in favour of private motorised mobility does not provide a sustainable solution to urban mobility needs in the Global South. Moreover, decision-makers often face financial, institutional, and technical constraints that hinder the design and implementation of more sustainable and effective urban transport strategies and plans.

1. Source: https://www.mobiliseyourcity.net/sites/default/files/2022-04/Global%20Monitor%202022_final.pdf
2. Espelia-Codatu. (2022). Paratransit in Asia: Scalable solutions to Re-from, Modernise and Integrate. Agence Française de Développement (AFD), MobiliseYourCity.
3. United Nations Environment Programme, & United Nations Human Settlements Programme. (2022). Walking and cycling in Africa: Evidence and good practice to inspire action. Nairobi.
4. Lebrand, M., & Theophile, E. (2022). Rising incomes, transport demand, and sector decarbonization (Policy Research Working Paper No. 10010). World Bank.
5. UNEP & UN-Habitat, 2022
6. In Africa for example, there is not only a significant lack of paved roads, with 7km per 100 km², compared to 170 km per 100 km² in Europe, but 40 percent of these roads are in poor condition.

Figure 1: **Modal shares in selected MobiliseYourCity cities[1]**



1.2. Poor, unstable and unpredictable public spending on formal public transport

The prevailing focus on private motorised mobility is reinforced by limited and unstable support for public transport investment. Public contributions to this sector often take the form of unpredictable government budget allocations (Kumar & Barrett, 2008)[7], which are typically the first to be cut during macroeconomic shocks.

In many African countries, large bus services were long provided by public monopolies.[6,8] However, political resistance to fare increases, declining productivity due to congestion, governance challenges, and restrictive labour policies left these monopolies increasingly dependent on subsidies. These subsidies, however, proved both insufficient and insecure, undermining operators' ability to maintain financial balance, renew fleets and infrastructure, or expand services. As subsidy flows became detached from transport policy objectives and subject to broader budgetary pressures, operators faced growing deficits, leading to service cuts in both quality and coverage, even as urban mobility needs expanded.

Consequently, many public monopolies were dismantled (e.g., in Accra, Dar es Salaam, Kampala, Kigali, Lagos, and Conakry), with services in some cases replaced by private or public-private operators (e.g., in Casablanca and Ouagadougou). Yet, these new entities often encountered equally difficult financial conditions, and their service levels and quality progressively declined.
A similar trajectory unfolded in many Latin American cities, albeit with different structural features. Before the recent wave of modernisation programmes and large-scale bus rapid transit (BRT) projects, public transport in the region was primarily composed of (i) publicly operated but small-scale rail systems, constrained by limited government investment, and (ii) privately operated independent bus networks, which often delivered poor service quality due to inadequate oversight and support.

Moreover, where financial support is available, it tends to prioritise capital investments, such as infrastructure, over operational or maintenance needs. As shown in several developing countries, governments are often able to fund large-scale investments in public transport, but fail to ensure the long-term resources and capacities required to operate and maintain these assets. This results in a rapid decline of benefits that could otherwise have been sustained.

In several recent bus investment projects across African cities, governments financed the acquisition of large public transport fleets and subsequently transferred ownership to existing operators. However, these initiatives often lacked accompanying measures to strengthen operators' performance, maintenance practices, or fare management systems. As a result, many operators were unable to maintain financial balance. Without adequate resources for upkeep, new buses quickly deteriorated, and a portion of the fleet was eventually cannibalised for spare parts, further reducing service capacity.

This chronic lack of adequate and reliable funding, driven by the structural challenges outlined above, has led to inefficient, and in many cases virtually non-existent, mass public transport systems. Unable to meet the rapidly growing mobility needs of citizens, formal systems have ceded ground to informal public transport (paratransit), which has emerged as the default solution to fill the widening gap in urban mobility options.

7. Stuck in traffic : Urban Transport in Africa, AICD, SSATP, Ajay Kumar and Fanny Barrett, 2008.
8. A few among many examples are in Morocco (e.g., Casablanca and Rabat local public transport monopolies: Régie Autonome des Transports en Commun de Casablanca, Régie autonome des transports de Rabat-Salé), Burkina Faso (Ouagadougou, Régie X9), Sénégal (Dakar), Ethiopia (Addis Ababa, Anbessa), etc.

1.3 Minimal support for paratransit

Paratransit has become the predominant mode of transport in most cities of the Global South. It first emerged spontaneously as a local response to the absence of efficient formal public transport systems. Over time, it has expanded to play an essential role in ensuring access to mobility services for most urban residents, particularly for low-income populations.

Paratransit encompasses a wide range of home-grown, flexible, and demand-responsive services. These are typically operated with small vehicles—such as minibuses, cars, tricycles, and motorcycles—owned and managed by relatively small-scale private operators. Depending on the country and city, services may operate along fixed routes or on a semi-flexible, demand-based basis, picking up passengers wherever possible. Despite this diversity, paratransit systems share several common characteristics:

- **Rapid, fragmented growth:** Paratransit services expand quickly and opportunistically to meet rising mobility demand. Their flexibility and relatively low fares make them strong competitors to formal public transport.
- **Employment generation:** The sector creates substantial, though often unstable and informal, employment. Most operators own only a small number of vehicles, which are either driven by the owners themselves or by hired staff, such as drivers[9] and fare collectors.
- **Collective organisation:** Operators are frequently organised into associations, unions, or cooperatives that coordinate aspects of fleet management and service provision.
- **Revenue for local governments:** Although poorly regulated, paratransit operators are often required to obtain licences or pay fees and taxes, providing a non-negligible source of income for municipalities.
- **Lack of public financial support:** The sector generally receives no direct funding from public authorities, except for occasional modernisation or fleet renewal programmes.
- Operators rely almost exclusively on passenger fares, and the industry as a whole operates on marginal profits.

With most operators unable to cover their full costs or accumulate sufficient savings, fleet renewal is nearly impossible. As a result, paratransit systems often rely on ageing and obsolete vehicles, which compromise passenger safety and contribute significantly to urban air pollution.

Despite its potential as a revenue source for governments, paratransit remains a largely self-sustaining industry, operating with minimal oversight and receiving no direct public funding. The fragmented nature of the sector and the absence of effective regulation prevent the efficiency gains that could be achieved through more coordinated and integrated networks. However, as decision-makers' awareness of the importance of sustainable urban mobility grows, efforts to modernise and professionalise the paratransit sector are gaining traction. Recent initiatives in Africa include programmes in Senegal and South Africa, with additional plans under development in Côte d'Ivoire and Mozambique. In Latin America, reform and modernisation efforts have been pursued in cities such as Bogotá, Santiago, São Paulo, and Mexico City.

Further guidance on adopting a coherent and integrated approach to diagnosing and reforming the paratransit sector is available in the **MobiliseYourCity Paratransit Toolkit.**[10]

9. Most drivers are hired according to the "target revenue" model: the driver pays each month, week or day a preset amount to the operator. This amount is independent of the actual revenue made by the driver. This model puts the drivers in a fragile situation where they compete for passengers and the most profitable routes to generate enough revenue to pay the operator and keep some profit. This prevents the materialisation of network efficiencies, where potentially more profitable routes fund less profitable ones, ensuring better access overall.
10. "Understanding Paratransit" and "Reforming Paratransit", November 2021. Accessible online: https://www.mobiliseyourcity.net/fr/node/959 .

Box 2

MobiliseYourCity Paratransit Toolkit
The MobiliseYourCity Paratransit Toolkit provide cities and national governments with a practical knowledge base to better understand and address this essential yet often informal part of urban mobility. Leading publications from the toolkit include:

- **Tool I:** Understanding Paratransit outlines the key characteristics of the sector, explains its role in daily mobility, and identifies its main challenges.
- **Tool II:** Conducting a paratransit diagnosis proposes a structured framework to analyse paratransit systems through six guiding questions, helping stakeholders map actors, identify strengths and weaknesses, and assess current dynamics.
- **Tool III:** Reforming paratransit is a catalogue of measures to transform, professionalise, integrate, and reform the paratransit sector.
- **Tool IV:** Examples of paratransit reform – Case studies showcasing the experience from 11 different cities that undertook actions to improve the paratransit service
- **Topic Guide:** Paratransit contracting options explores possible models for formalising and regulating paratransit operations, offering practical pathways for integration into sustainable mobility policies.

Photo: **Carlos Felipe Pardo**

Photo: **Carlos Felipe Pardo**

Photo: **Carlos Felipe Pardo**

1.4. The consequence: low-capacity urban public transport and constrained motorised mobility

Overall, the urban mobility policy choices described in the previous sections have resulted in low-capacity, fragmented urban public transport services, restricting citizens' mobility in cities of the global south. Compared to cities in developed countries, this limits citizens' mobility and increases the overall cost of urban transport. Low-capacity modes such as minibuses and autorickshaws typically have much higher operating costs per passenger than mass transit modes (e.g., metro or brt). These cost differentials become even more pronounced when accounting for the full economic costs, including the negative externalities generated by each mode.

Service quality also differs significantly: many vehicles fail to meet safety standards, and unsafe driving practices further compromise passenger welfare.

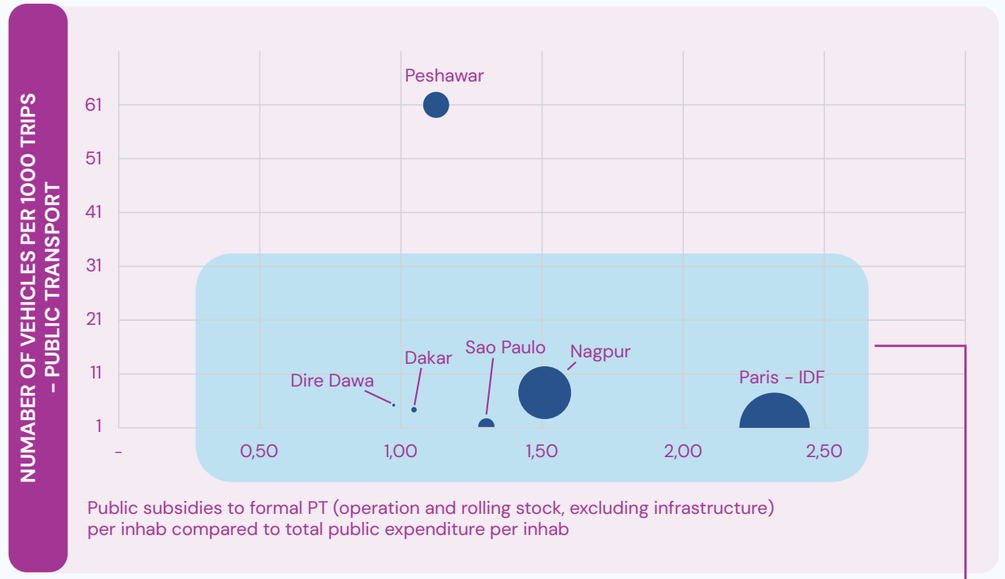
The graph on the right illustrates the fragmented structure of motorised public transport. It presents the estimated number of vehicles required to provide 1,000 public transport trips in different cities, plotted against motorisation rates (measured as the number of motorised trips per inhabitant) and the level of public financial support to formal public transport (excluding infrastructure investments, expressed relative to total public expenditure per inhabitant in each country).

In general, the more a city ensures sustainable funding for formal public transport, the more the system is composed of high-occupancy vehicles and has higher ridership levels. Paris provides a clear example: Substantial subsidies[11] have supported a dense, less fragmented system that combines metro, train, and tramway networks with extensive bus services. By contrast, where subsidies for formal public transport are limited, mobility levels are lower and services are more fragmented. In such contexts, paratransit—operating primarily with small vehicles—becomes predominant. This is the case in cities such as Peshawar, Dakar, and Dire Dawa, where reduced motorised mobility coincides with low levels of public financial support.

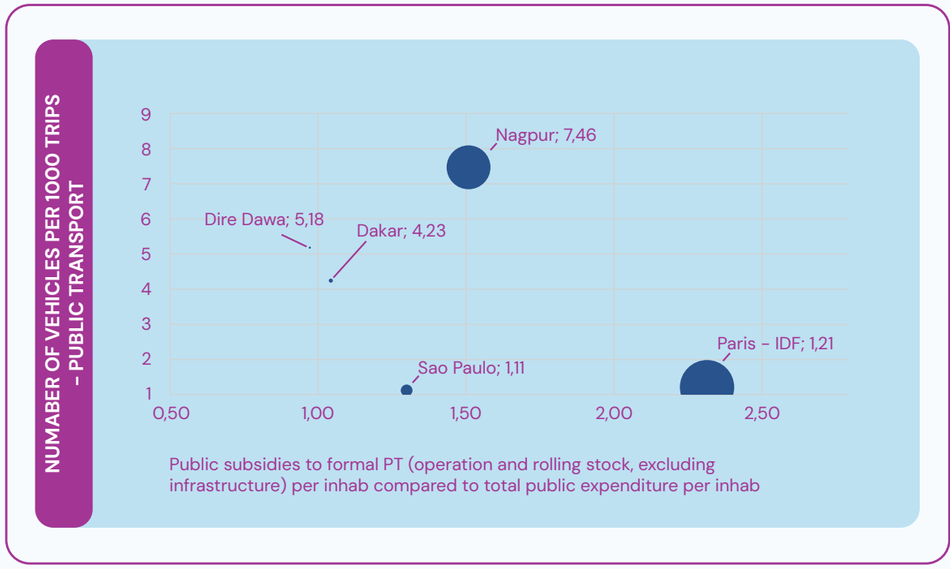
This situation highlights the need for public authorities to take a more proactive role. Yet, in the Global South, public funds are often scarce, sometimes inversely proportional to the scale of unmet needs. Moreover, governments face competing priorities in other critical sectors, creating difficult trade-offs. This manual proposes an approach to urban mobility financing that recognises these constraints and equips decision-makers with analytical frameworks and practical tools to design and implement more sustainable funding strategies.

11. From the study's sample size.

Figure 2: **Atomisation rate of public transport and paratransit.**



Focus



1.5. Most mobility financing policies disproportionately benefit men over women.

In the Global South, public transport systems are often poorly adapted to women's needs in terms of safety, affordability, and accessibility. Transport networks tend to be planned around male commuting patterns, as men account for a larger share of formal urban trips. As a result, men generally derive greater benefit from public investment in public transport. By contrast, women typically have distinct mobility patterns—characterised by shorter, more frequent trips, often outside of peak hours, and involving multiple stops. When transport planning remains commuter-focused and systems are fragmented, women face greater difficulty and higher costs in meeting their mobility needs.[12]

In addition, personal safety remains a significant concern. In most developing countries, both public transport systems and paratransit often fail to provide safe conditions for women. Common shortcomings include insufficient lighting in stations, a lack of CCTV or security personnel on vehicles and at stops, and the absence of on-demand or door-to-door services. These gaps have severe social and economic consequences. In India, for example, 52% of women reported turning down a work or education opportunity because their commute was considered unsafe.[13]

Recognising these challenges, transport planners and development partners are increasingly integrating gender considerations into the design of urban mobility projects and policies. Strengthening safety measures and improving the affordability and convenience of public transport have demonstrated significant positive impacts on women's mobility in recent initiatives.

- **Morocco**: In Casablanca and Rabat, women use the new tramway lines almost twice as much as men, shifting away from buses and paratransit ("Grand Taxis"), mainly due to improved comfort and safety. Surveys show that the presence of agents in stations and on board reassures women passengers. In Casablanca, 60% of women reported preferring to walk along tramway corridors because they are better lit, which reduces the risk of muggings.

- **India**: In Delhi, the government introduced free public transport for women to remove affordability barriers and deployed security agents on buses to enhance safety.

Beyond passenger experience, greater efforts are also needed to expand women's employment opportunities in the urban mobility sector and ensure their stronger participation in sector governance.

As outlined in the following section, financing sustainable urban mobility requires defining clear policy goals and managing trade-offs. To avoid reinforcing gender inequalities in the use of public funds, these trade-offs must be informed by gender-disaggregated mobility data and gender-sensitive planning. This enables design choices that generate positive outcomes for both women and men.

Photo: **Carlos Felipe Pardo**

12. Combining different modes in the absence of fare integration policies.
13. Ratho, A., & Jain, S. (2021). Women on the Move: The Impact of Safety Concerns on Women's Mobility. Observer Research Foundation. Accessible online: **https://www.orfonline.org/wp-content/uploads/2021/05/ORF_Monograph_WomenOnTheMove.pdf**

Chapter 2

Urban mobility financing stakes and framework

Scarce public funding for urban mobility has historically created self-reinforcing "catch-22" situations, as described in the previous chapter: decisions —or the absence of them —have aggravated mobility constraints, making solutions progressively more complex and costly.

Reversing this trajectory, even under constrained budgets, requires financing choices to be explicitly aligned with clearly stated mobility priorities. More efficient and effective urban mobility financing, therefore, depends on identifying three core elements:

- **Development objectives for the sector:** Which types of mobility should be prioritised, and what levels of service and coverage are targeted?
- **Available financial resources:** Including both public budgets and household spending on urban mobility.
- **Governance frameworks:** The tools and institutions that must guide and align with financing policies.

Financing objectives must also be consistent with broader transport policies and governance frameworks, and realistic in relation to the operational and financial capacities of existing institutions.

This chapter presents the key trade-offs faced by decision-makers and proposes practical approaches for setting financing objectives in urban mobility policy. These approaches should be embedded within a broader Sustainable Urban Mobility Planning framework. In this regard, tools such as Sustainable Urban Mobility Plans (SUMPs) can support authorities in assessing needs, prioritising actions, and planning urban mobility expenditures.

Box 3

What is a Sustainable Urban Mobility Plan (SUMP)?

The European Guidelines for Developing and Implementing a Sustainable Urban Mobility Plan define SUMPs as follows:
"Sustainable Urban Mobility Planning is a strategic and integrated approach for dealing effectively with the complexities of urban transport. Its core goal is to improve accessibility and quality of life by shifting towards sustainable mobility. SUMP advocates fact-based decision-making guided by a long-term vision for sustainable mobility. As key components, this requires a thorough assessment of the current situation and future trends, a widely supported common vision with strategic objectives, and an integrated set of regulatory, promotional, financial, technical and infrastructure measures to deliver the objectives – whose implementation should be accompanied by systematic monitoring and evaluation".

SUMPs are therefore key to securing financing for urban mobility. They help cities and countries identify the most appropriate projects or programs for their needs, along with associated cost estimates.

To understand the implications of a SUMP for African, Asian, and Latin American and Caribbean cities, MobiliseYourCity proposed specific guidelines: **Developing Sustainable Urban Mobility Plans: Guidelines for MobiliseYourCity geographies.**

Medan SUMP - MobiliseYourCity

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2.1. Prioritising mobility types

Urban mobility is ensured by a mix of modes, ranging from individual options such as walking, cycling, motorcycles, and private cars to collective options such as public transport networks and paratransit. Decision-makers must therefore prioritise which mobility needs should receive greater focus and which mobility types should be developed accordingly: Private motorised mobility, collective motorised mobility, or active mobility?

There is no universal recommendation. Policy choices must reflect local realities, including the structure of the urban fabric, residents' mobility patterns, available resources, and the city's long-term vision for urban transport. Different contexts naturally lead to other strategies.

However, scarce public funds require a policy choice between emphasising:

- **Expanding road infrastructure** to accommodate growing traffic and new car users—a response that has historically induced more private vehicle use, worsening congestion and pollution; or
- **Strengthening public and active modes** that are more accessible, socially inclusive, and associated with lower externalities and long-term costs.

Given the common challenges faced by growing cities in the Global South and worldwide climate and sustainability concerns, the international community is increasingly placing greater emphasis on sustainable solutions, in which public and non-motorised transport are set to play a significant role. In contrast, private modes (cars, motorcycles, etc.) play a complementary role. Yet, findings in various parts of the world show that there has not been enough attention or effort given to public or active modes to meet mobility needs under acceptable conditions (see sections 1.1 and 1.2).

Decisions on mobility priorities should be informed by a careful assessment of the full economic costs associated with each mode. Beyond investment and operational expenses, these costs include the use of scarce public space and a range of negative externalities, such as pollution-related health impacts, environmental degradation, and productivity losses from congestion. While not always reflected in current budgets, these factors ultimately translate into significant financial costs for society.

For instance, when steering resources towards motorised private mobility, decision-makers rarely take into consideration that active modes (walking and cycling) consume up to twenty times less space than a private car, as illustrated in Figure 3.

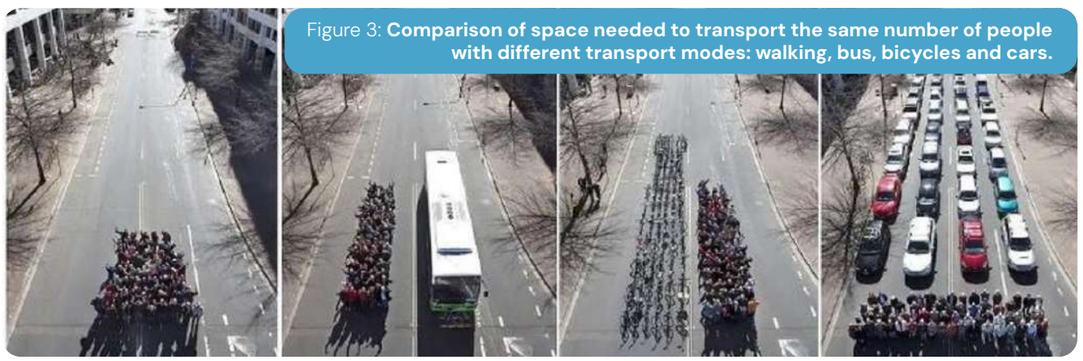


Figure 3: **Comparison of space needed to transport the same number of people with different transport modes: walking, bus, bicycles and cars.**

Source: © www.thecityfixlearn.org

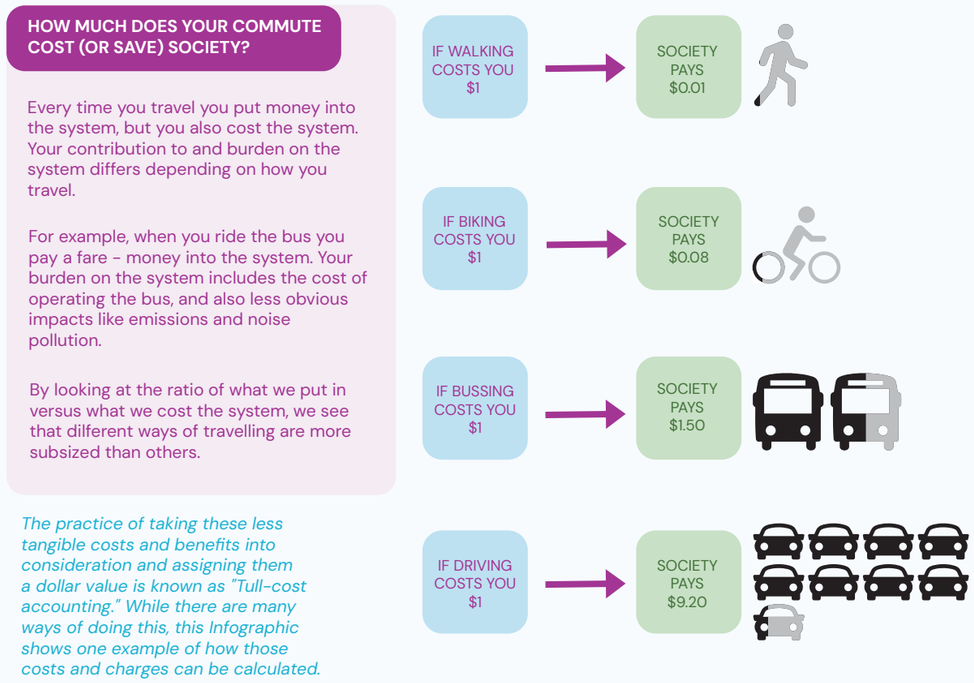
Box 4

Full social costs of different modes of transport

Figure 4 attempts to quantify the full social cost of each of four means of transport in the Vancouver Metro area: driving, walking, bicycling and riding a bus. This comparison considers the ratio of money contributed by users to the cost to the system of each mode of transportation. For example, for each dollar private car users pay to the system in Metro Vancouver (Taxes, levies, etc.), society pays 9.20 dollars for roads and parking development, road maintenance, increased healthcare costs due to air pollution, etc. In contrast, for each dollar paid to public transport by the users (fares), society pays 1.5 dollars.[14] This comparison, although approximate, is quite striking, as it shows the significant differences in the costs and benefits to society between public transport, active mobility and private cars. This finding remains valid in other contexts as well.

Originally published as part of Moving Forward, an independent journalism project produced by Discourse Media. Data and analysis by George Poulos. A cost of commute calculator —an interactive tool to capture the full cost and benefits of driving, taking the bus, cycling, and walking in Metro Vancouver —is also available to the public to calculate the full cost of their commute.

Figure 4: **Comparison of the full cost of a trip using different means of transport.**



Produced by Discourse Media, data by George Poulos. Calculate your commute at MovingForward.DiscourseMedia.org/CostofCommute

14. Source: https://thediscourse.ca/scarborough/full-cost-commute

These decisions are particularly challenging in developing countries, where resources to build or subsidise public transport are limited, and where road investment is sometimes still a prerequisite for the eventual rollout of mass transit systems.

Although the financial requirements for new large-scale public transport infrastructure are high, low-cost measures can play a significant role in promoting sustainable mobility:

- **Active transport** can be supported through the systematic provision of sidewalks, crosswalks, and protected cycling lanes, especially as cities expand.
- **Modernising paratransit**, including fleet renewal and the professionalisation of services, can substantially improve overall mobility conditions, given paratransit's dominant role in many cities of the Global South.
- **Traffic demand management (TDM) measures**, such as dedicated bus lanes, improved signalling, or congestion charges, can reduce congestion and generate new sources of revenue for urban transport.

Ultimately, decisions on which modes to prioritise and the effects on the urban fabric must be made carefully, with sustainability in mind. The choices taken today will shape long-term development trajectories and risk locking cities into either sustainable or unsustainable patterns for decades to come.

2.2. Identifying the available financial resources

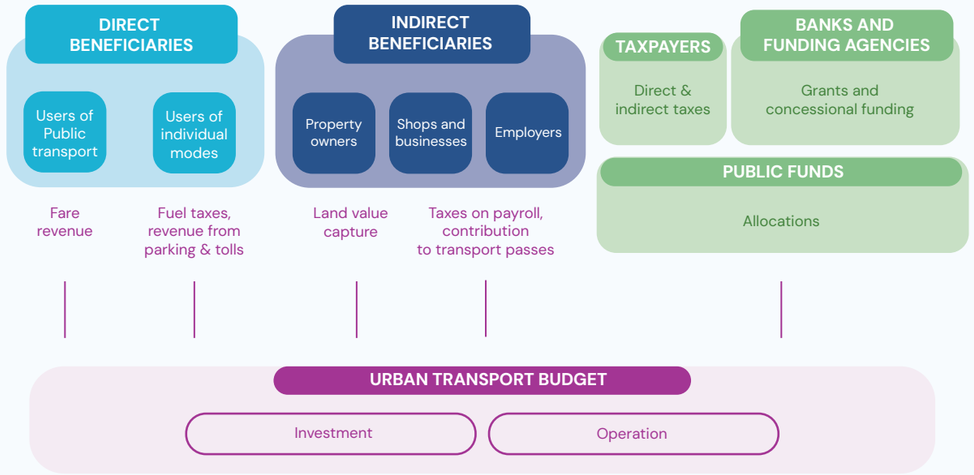
Having a clear sense of the available financial resources and the ability to support the urban mobility sector is a prerequisite for both setting sector targets and improving the financing framework in line with those targets. Setting financeable policy objectives, then growing available public resources (Volume 2 Chapter 1) and reducing reliance on them by optimising their use (Volume 2 Chapter 2)

At the early stages of mobility policy development, decision-makers must answer three key questions:

1. **Current resources:** What funding has already been allocated to the sector, and what is its duration?
2. **Institutional mechanisms:** What arrangements, mechanisms, and instruments currently exist to channel or subsidise this funding?
3. **Future opportunities:** What additional financial resources can be mobilised to support the sector?

To meet these needs, three main groups can be mobilised to fund the sector (see Figure): **direct beneficiaries**, meaning users who directly benefit from mobility services; **indirect beneficiaries**, such as businesses, institutions, or communities that gain indirectly from increased accessibility, productivity, or land value; and **public funds**, provided by the general taxpayer through national or local government contributions. Each group corresponds to different financing instruments, which will be further detailed later in Volume 2, Chapter 2.

Figure 5: **Overview of potential urban mobility financing resources.**



A review of each group's contribution to total funding can reveal inconsistencies between the contributions provided by different stakeholders and the benefits they derive from the resulting investments and services. Such an assessment can, in turn, inform adjustments to urban mobility financing policies.

- **Direct beneficiaries** of urban mobility systems are the first prominent contributors to funding the sector. They include public transport users who contribute through fares, as well as users of individual modes (private cars, motorcycles, etc.) who could also contribute through congestion charges, fuel taxes, or revenues from parking and tolls.

However, contributions from these beneficiaries are often highly imbalanced between users of public transport modes and users of private motorised modes. Overall, in most countries, both developed and developing, urban roads are provided to their users free of charge (except for a few exceptions, such as urban tolls or congestion charging). The only costs that users of private vehicles pay are those incurred by the vehicles (fuel consumption, maintenance, parking fees, etc.) and, sometimes, an indirect contribution through taxes, primarily on fuel or vehicle ownership or registration.
This is even more obvious in cities of the Global South, where urban tolls and adequate parking policies are still rare. Policies in place regarding private motorised modes rarely account for the full costs borne by society, such as congestion, pollution, and the full cost of road maintenance. Even in countries with higher fuel taxes and relatively advanced parking policies, user payments are rarely equal to the total social costs they generate.

This financing gap has several undesirable effects:

- **Modal choice distortion** in favour of motorised private mobility, as public transport, which has lower social costs, is rarely or poorly subsidised in the Global South, resulting in comparatively higher costs for its users.
- **Severe impact on non-motorised residents**, particularly women, who often end up with little or no access to suitable mobility options.
- **Growth in private** motorised mobility further accentuates congestion.
- **Insufficient revenues** for road maintenance, leaving the costs to be borne by city authorities.

For these reasons, pricing and taxation policies for individual motorised modes aim to charge individual vehicle users as close as possible to the full social cost of their trips, while accounting for income levels. Such policies can help generate additional financial resources to subsidise public transport and non-motorised modes, promoting a transition towards more sustainable mobility systems. The different policy instruments that apply such charges are detailed hereafter: taxes on vehicle ownership and private use, tolls, and parking (see Volume 2, Section 1.3).

- **Indirect beneficiaries** of urban mobility systems: Property owners, shops and businesses, and employers benefit indirectly from urban mobility systems and hence could also contribute to funding the sector. Their contributions can be collected through dedicated portions of business license fees or property taxes, land value capture mechanisms, payroll taxes, or mandatory employer contributions to public transport passes.

- **Public funds:** Across all continents, payments and subsidies provided by national and/or local authorities are among the primary funding sources for urban mobility, both for investment (capital) and operating costs. They are typically provided in exchange for public service obligations, generally linked to the provision of public transport at a defined price, coverage and quality.
  - **General budget allocations:** Public funds often come from local or national government budgets, i.e. a share of the direct and indirect taxes collected from households and businesses. However, because public budgets are annual and shaped by political mandates, this form of support can be unstable.
  - **Dedicated tax instruments:** Since urban transport requires long-term commitments, dedicating a tax instrument—or earmarking a small percentage of the proceeds of an existing one (such as value-added taxes, residential taxes, or payroll taxes)—can create more stable, "buoyant" resources and make the sector more financially sustainable.
  - **Loans and grants:** Borrowing from banks or mobilising support from funding agencies provides additional resources, typically for one-off investments in the early stages of public transport development. However, loans are a form of financing, not funding. Public authorities must secure reliable funding streams to ensure repayment.

At this point, it is essential to clarify a critical distinction: loans are not, in themselves, a source of funding, but rather a tool for financing. While financing helps cover upfront costs, it must ultimately be backed by sustainable funding sources to ensure repayment and long-term viability.

Box 5

Funding vs. Financing

Financing refers to mobilising financial resources to cover upfront investments for infrastructure construction, vehicle procurement, or service provision. Financing sources include public budgets, debt from private banks, and capital from investors such as private equity firms and institutional investors (e.g., pension funds and insurers). Debt financing always carries repayment obligations.

Funding, by contrast, refers to the financial resources used to repay upfront and ongoing expenditures over the project lifecycle. A sound long-term funding model—essentially, a plan for refinancing initial expenses—is often a precondition for attracting private finance. Funding can come directly from users through fees, from beneficiaries such as property owners near transit stations (via local taxes or value-capture mechanisms), or from general budget transfers across different tiers of government.

(Source: Topic Guide "Funding and Financing of Sustainable Urban Mobility Measures," European Platform on Sustainable Urban Mobility Plans).

Photo: **Hector Brasil**

Photos: **Carlos Felipe Pardo**

2.3. Making choices

2.3.1. Who pays for what: A simple decision framework

Once the broad objectives regarding the mobility types to be prioritised are set and the available financial resources are quantified, the next question decision-makers need to answer is what coverage or level of service and access are required, especially for public transport.

Determining coverage needs first requires a technical assessment of demand levels and the distribution of origins and destinations, conducted through surveys, demand modelling, and forecasting. This will give decision-makers a picture of the city's overall mobility needs. However, the final decision on the mix of transport modes to answer this demand, coverage and level of service and access of each mode, is a more complex discussion:

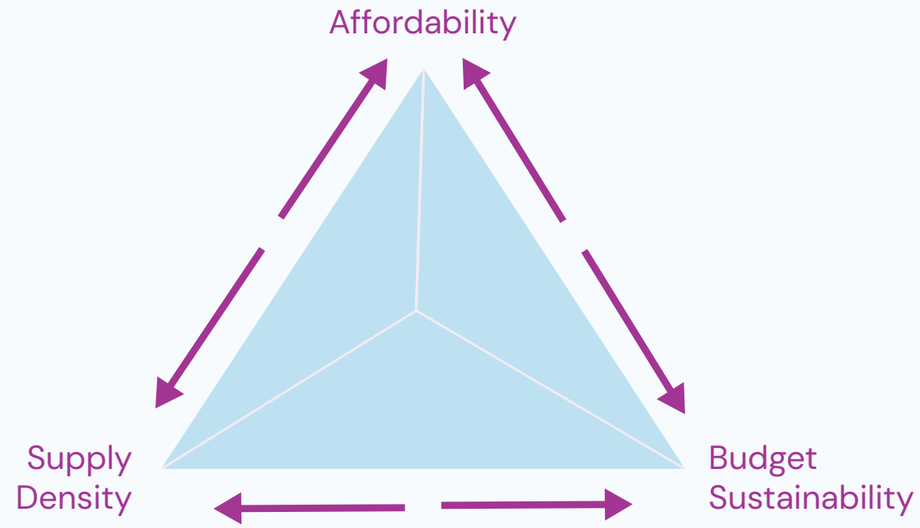
- The first question about the mix of transport modes is more a trade-off between the city's vision and priorities for mobility types (cf. Section 2.1), and available financial resources.

- The second question on the level of service and coverage introduces a third dimension specific to public transport modes, where a difficult balance must be struck between service levels, reliance on public funds, access, and affordability for users.

  In fact, assuming constant productivity levels.[15] Every urban public transport system must strike a balance between conflicting priorities or objectives:

  - Affordability to users
  - Supply density (quality and quantity)
  - Budgetary sustainability for public authorities

Figure 6: **Public transport policy trade-offs (assuming constant production efficiency).**



15. Productivity improvements are discussed in Vol. 2, Chapter 2

Public transport is almost always subsidised in one form or another, at least for investment costs. It has a **"viability gap"**: farebox revenue is insufficient to cover all operational and maintenance costs. As a result, it is not possible to improve one of the three dimensions above without impacting at least another:

- Increasing supply levels also requires increasing fares to cover the additional viability gap
- Increasing the affordability of transport through a reduction of fares means higher subsidies, and a more fragile financial situation (budget sustainability). This, in turn, leads to a decrease in total farebox revenue and eventually to a decline in the sources of funding available to maintain efficient service quality or coverage levels (supply density).
- All other parameters being equal, reducing public transport fares or increasing production levels is not feasible without additional public subsidies.

The analysis framework on the right (affordability, budget sustainability, and supply density, Figure 7) helps articulate a coherent set of objectives for an urban public transport project, strategy, or policy. It can be applied not only to characterise an existing situation, but also to help identify necessary trade-offs to achieve chosen objectives. This, of course, assumes that possible gains in production efficiency have been identified and leveraged as a first step[16]

This framework has been used in Who Pays What for Urban Mobility? to develop a benchmark tool that helps compare cities and characterise the different trade-offs they have made (consciously or de facto) between these three dimensions.

To create the benchmark, three indicators were identified, measured, and normalised based on the "best performer" (city) in each category:

- The ratio between collective transport ticket prices and local per capita income.
- Metrics of supply density (number of vehicles, length of rail track).
- The ratio between the authorities' financial support for collective transport and overall public expenditure.

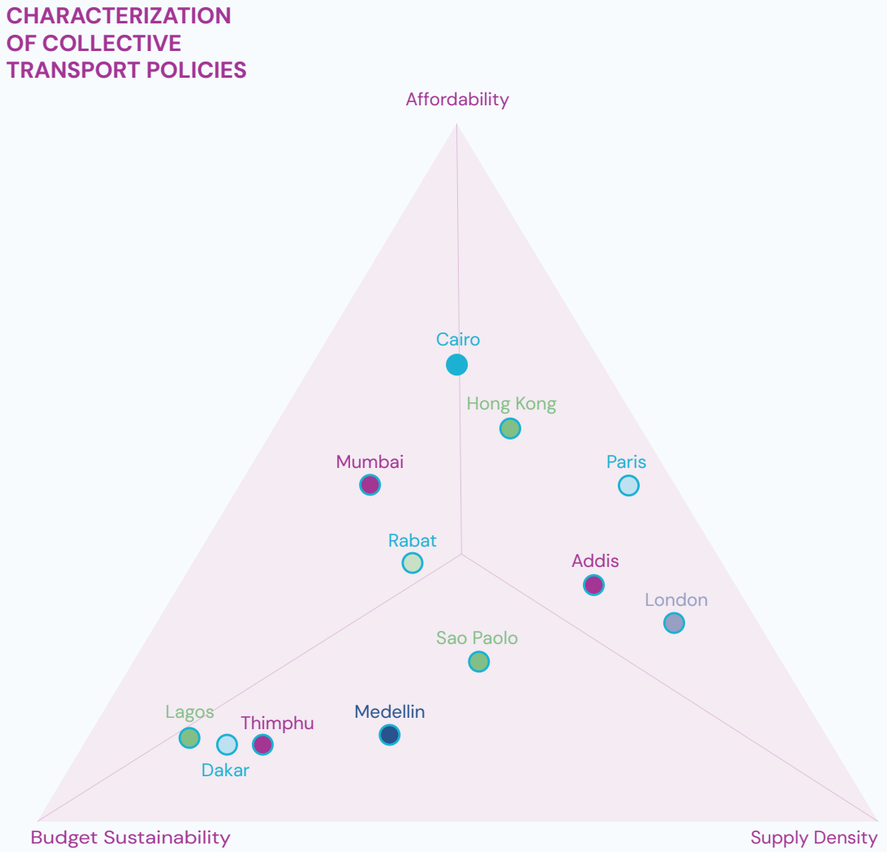
The ratios used here are not perfect measures, but they serve to highlight underlying trends rather than provide exact values. The following chart summarises the results for a selected sample of cities: Paris, London, Cairo, Rabat, Lagos, São Paulo, Medellín, Hong Kong, Mumbai, Dakar, Addis Ababa, and Thimphu.

It is to be noted that the graph summarises the relative weight (i.e. importance or priority) given to each of the three dimensions by each city, not the absolute performance of each municipality relative to others in any one dimension. Each city's position in the triangle reflects its relative priorities.

For instance, Cairo places the most significant emphasis on affordability at the expense of the other two dimensions, but affordability there may not be better than in Hong Kong[17]

16. This includes assessing the performance of operators and ensuring that production efficiency gains are captured through contracting arrangements.
17. Other graphs based on the same benchmark database are available that show city rankings along each dimension.

Figure 7: **Benchmark study of collective transport financing policy in several cities.**



Thimphu, Dakar, and Addis Ababa are all in the lowest tier of cities, ranked by the income levels of their inhabitants. As a consequence of their limited financial resources, these cities have become constrained in their efforts to promote affordability and supply density:

- **Thimphu and Dakar** (like Lagos, which is the fourth city of this group), emphasise budgetary sustainability, rather than developing extensive or affordable services;
- **Addis Ababa** has put much less emphasis on budgetary sustainability and uses its limited financial resources for growing supply density and maintaining affordability.

Due to varying resource availability and city characteristics, it is challenging to define macro-level standards for service and coverage. Box 6 below provides an example of how coverage and service standards originating in Latin America proved unsuitable for South Africa. Decision-makers must define their desired level of service and coverage in the local context, keeping in mind potential trade-offs and the defined public transport financing policy priorities.

Box 6

Heavy infrastructure is not enough: The examples of Cape Town and George BRTs.

Service levels and coverage of public transportation systems are often based on demand forecasts and technical studies. However, experience in cities of the Global South shows that the assumptions used for the latter are usually optimistic and unrealistic. This leads to heavy designs for mass transit (full BRTs instead of the lighter option 'BRT lite'), very high-quality service levels (high frequencies, high commercial speeds, etc.), and extensive coverage that is sometimes not commensurate with a city's actual mobility patterns. All these factors, combined with an underestimation of construction and operating costs, put the financial sustainability of systems at risk (as projected demand levels and, thus, projected revenue levels are rarely achieved). This also puts the efficiency of urban mobility systems in these cities at risk.

The South African cases of the Cape Town BRT and George BRT provide clear evidence of the necessity of considering alternative (less expensive and lighter) investment approaches that account for all the trade-offs outlined above, not just political considerations. In fact, in some instances, decisions on the level of service and coverage are more political than technical (e.g., serving isolated and disadvantaged neighbourhoods rather than sufficient existing demand).

The first phase of the Cape Town BRT was designed as a high-quality, high-coverage system, with heavy, dedicated infrastructure and a comprehensive replacement of the existing paratransit and conventional bus services along the initial corridors and feeder routes. However, given the project's limited cost coverage, it quickly became clear that alternative operational approaches had to be explored. Future phases are therefore shifting to a more limited but focused BRT corridor and feeder network, supplemented by existing paratransit services with improved operational quality. This would allow similar levels of geographic coverage and accessibility while achieving higher levels of cost coverage.

For the George BRT, a different approach was taken. It sought to implement a system that maintained most of the service quality characteristics of the entire BRT system, as promoted by national policy, while being optimised and fit-for-purpose for the city's context (lower costs and investment). The design emphasised reduced investment in infrastructure and prioritised the limited available resources for operations. The project offered a very similar level of service to its passengers but achieved higher capital savings than the Cape Town BRT project. In theory, this would mean the George BRT project would be more financially and operationally sustainable than the Cape Town one.

Photo: **George BRT - GO GEORGE**

Photo: **Cape Town BRT - Solene Baffi**

2.3.2. Aligning mobility policy decisions and the financing framework

Without delving into the specifics of governing and managing urban mobility systems, this section focuses primarily on the financial aspects of governance. Specifically, it examines the alignment between institutional and financing frameworks, and how this can be managed or improved.

Overview of urban mobility governance frameworks

Urban transport is a key metropolitan service. To function effectively, it needs to be managed at the local level, ensuring the system responds to residents' daily needs and to the economic and social activities of the urban area.

The role of local authorities, however, differs widely. Levels of involvement vary not only between countries but also between cities within the same country. As a result, governance arrangements take different forms depending on the local context. These variations are summarised in the table below.

Figure 8: **Urban mobility governance typologies**

Steering committee-based	Lead agencies agree to associate through a steering committee provided with a specific mandate, such as developing and implementing an MRT project. Lead agencies may depend on local or national administration.
Vertical or mode-based	An entity is created with full responsibility for one public transport mode, to secure the execution of dedicated funds, optimise project implementation, and facilitate capacity building. Such lead agencies depend on the national government.
Horizontal or two-phases	The national government establishes a multimodal lead agency to oversee mobility – i.e., most mobility sub-sectors – at strategic and tactical levels. The original mandate of such agencies leaves room for the emergence of additional agencies to assume additional tactical and/or operational functions. These additional agencies can be subordinated to the top agency or directly attached to the government.
Multimodal or integrated governance	One lead agency – commonly called Public Transport Authority – dominates the institutional landscape and oversees most mobility sub-sectors, concentrating an enormous scope of functions.

Decentralisation and the role of central governments

In most countries, legislation provides for some degree of decentralisation or devolution of responsibilities to local entities. However, decentralisation is not always effectively implemented. Local institutions often lack the organisational, human, and financial capacities needed to manage urban transport in line with governance requirements.

Despite decentralisation frameworks, central governments remain key actors in urban transport governance, regardless of a country's political or administrative structure. Their involvement typically takes several forms:

- **Funding local authorities** through national budget allocations, equipment subsidies, or tax revenue transfers (e.g., the federal tax on oil products in the United States).
- **Direct project support**, often in partnership with other stakeholders such as municipalities, regional governments, or urban mobility authorities.
- **Legal or financial requirements**, such as participation in public–private partnerships or projects financed by international Development Finance Institutions (common in the rail sector).

National governments often play a direct role in supporting urban mobility projects, working in partnership with other public stakeholders such as municipalities, regional governments, and urban mobility authorities. Their involvement may also be required by law or by funding arrangements. For example, public–private partnerships and projects financed by international Development Finance Institutions (such as in the rail sector) typically require central government participation. Given the metropolitan scale of urban mobility, the design and financing of policies almost always require coordination across multiple levels of government and administrative boundaries. This coordination is particularly challenging in the Global South, where institutional fragmentation is common.

To address this, a widely recommended approach is to create a Metropolitan Transport Authority (MTA) or an Urban Mobility Authority (UMA). These bodies consolidate planning and operational expertise across the urban area—covering public transport, traffic and parking management, and walking and cycling —into a single, integrated authority, even when several local governments are involved.

UMAs get locked into a multi-year process of conceptualisation before they can own and operationalise their full mandate. By contrast, in smaller cities, with no metropolitan area, or in cases where there is an existing local government with adequate reach in both geography and mandate, a single, non-sector-specific local government (e.g., the municipality) can be sufficient for the management and financing of urban mobility without the creation of any new dedicated entity. Some cities operate in this way satisfactorily, as is the case in many Chinese cities.

Regardless of the model chosen —municipal or metropolitan —UMAs require stable financial resources. Reliable funding enables them to implement mobility policies effectively and, where necessary, support the operation of transport services.

Aligning the governance and funding frameworks

Regardless of how the urban mobility sector is organised in a city or a country —whether under a local authority, a central government, or a metropolitan body —it is essential to align financing and governance frameworks. Efficient funding requires that the entity (or entities) responsible for urban mobility have adequate and sustainable financial resources to carry out their mandate.

Funding can therefore come from two primary sources:

- **Transfers from central government** (e.g., national budget allocations, subsidies, or earmarked taxes).
- **Local revenue-raising powers** (e.g., dedicated taxes, fees, or charges).

For financial sustainability, funding levels must be both predictable over the long term and relatively stable.

In practice, however, governance and funding often fail to align, especially in the Global South. A funding framework may be absent or not enforced, even when a clear institutional framework exists. For example, CETUD, the transport authority in Dakar (Senegal), faces this challenge.

To be effective, decision-making authority over investments and service levels (spending autonomy) must be matched with authority over revenue generation (funding autonomy). This is best achieved when the authority responsible for implementing urban mobility policy has dedicated, clearly defined revenue instruments.

This is, for example, true of Île-de-France Mobilités (the transport authority regulating public transport across the Ile-de-France region), or generally urban mobility authorities in France, which have their own revenue-raising instrument with a local tax base (the "Versement Mobilité", which is a regional payroll tax, see Vol.2 Section 1.4), and also enjoy budget (spending) autonomy. Even where a transport institution or body is autonomous in revenue-raising or spending decisions, it may be constrained by dependence on national budget cycles or a lack of long-term visibility into the stability of the budget source, which can affect the financial viability and planning of public transport systems.

However, even where authorities enjoy such autonomy, they may still face constraints. Dependence on national budget cycles or uncertainty about the long-term stability of revenue streams can undermine both the financial viability of transport systems and their long-term planning.

In practice, large-scale investments, such as the construction of new mass transit lines, are often beyond local funding capacity and require supplementary support from the central government.

More broadly, funding practices generally follow two patterns:

1. **Ad hoc transfers** (grants, budget support) from national governments are typically used for capital investments, not operations.
2. **Operating expenses**, which require continuous and predictable funding, are more difficult to cover through ad hoc mechanisms. This often creates equity challenges between different urban areas.

To address this, some countries have established multi-year national funds for urban mobility. For example, Morocco created an Urban Mobility Fund that subsidises the operation of new mass transit projects during their initial years. This covers the ramp-up period, when operating deficits tend to be highest.

Photo: **Carlos Felipe Pardo**

Chapter 3

Focus on users' contribution to the funding of urban mobility

Users are the primary revenue source for urban mobility systems, especially with public transport. Setting sound fare policy principles is therefore essential. These principles must strike a balance between:

- **Financial viability**, by ensuring the system can sustainably cover its costs, and
- **Affordability and access**, by guaranteeing that all social groups, especially vulnerable ones, can use the system.

Achieving this balance requires careful policy choices grounded in evidence about household transport expenditures, as well as users' willingness and ability to pay.

This chapter provides decision-makers with an overview of household spending on urban mobility across the Global South, key considerations for defining fare policy principles, and guidance on designing social policies that ensure inclusive and efficient urban mobility.

3.1. Identifying household spending on urban mobility

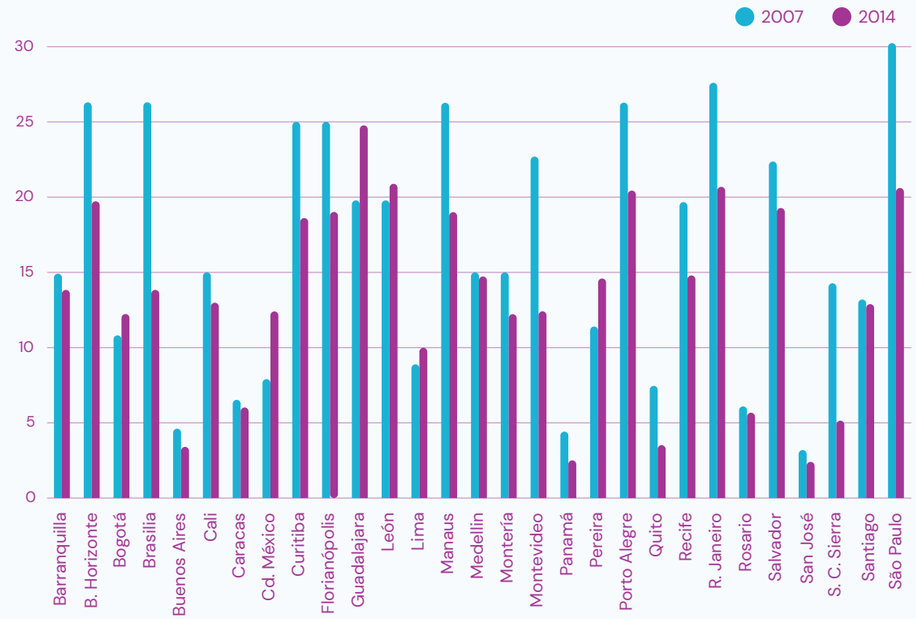
Urban mobility is a basic necessity. For many households, spending on mobility is one of the last expenses to be cut; in some cases, families even adjust their food consumption patterns to afford transport services. A commonly referenced affordability benchmark is 5% of total household income. Spending above this threshold can create financial strain. However, in many cities across the Global South, household spending on urban mobility often far exceeds this level, in some cases reaching 30% of income (see Figure 9).

Patterns vary widely:

- **Excessive burden:** Households spend well beyond 5%, with middle- and high-income groups sometimes allocating 10% or more of their income when relying on private vehicles.
- **Exclusion by cost**: Some low-income households cannot afford transport at all and therefore make most of their trips on foot.
- **Inefficient alternatives**: Where public transport is unsafe, unreliable, or inconvenient, people may feel compelled to spend disproportionately on private vehicle ownership—despite its far higher cost compared to public transport.

Photo: **Dakar BRT – ITDP**

Figure 9: **Bus ticket prices compared to the minimum wage**



Fuente: Elaboración propia con datos a diciembre de 2014

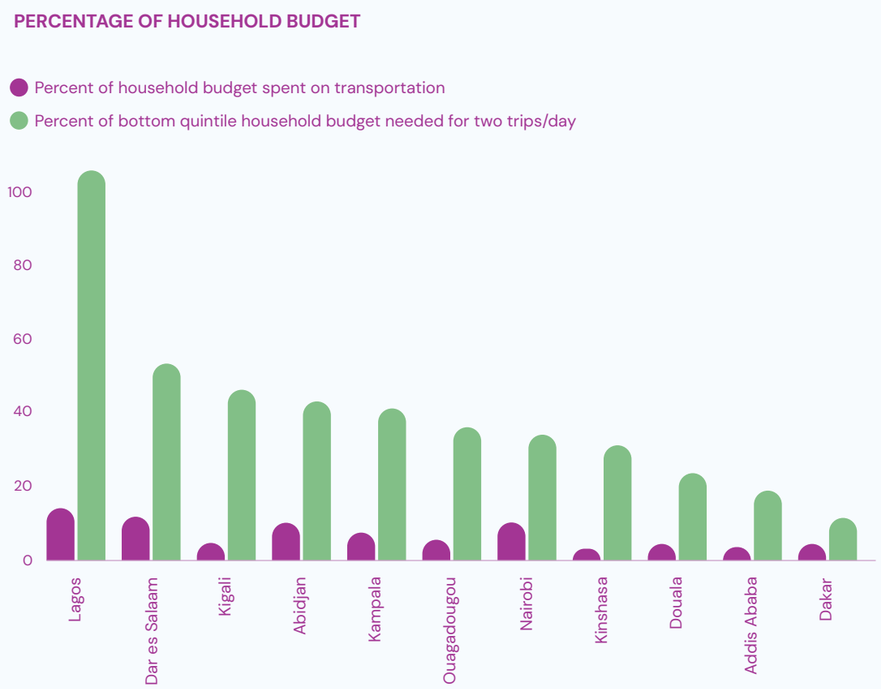
(price of 50 tickets - assuming 50 bus trips per month- compared to the monthly minimum wage)
Source: Observatorio de Movilidad Urbana: Informe 2015-2016 (resumen Ejecutivo), 2016.[18]

18. Accessible online: https://scioteca.caf.com/handle/123456789/981

In many cities of the Global South, public transport fares can be very high compared to incomes, and in some cases, out of reach for the poorest groups of society. In the absence of effective, subsidised transportation, alternatives such as shared taxis are expensive relative to income levels, as reflected in Figure 10 below.

The graph compares how much the bottom quintile of the population spends on transport (for two trips per day), versus how much the average household spends on transport. It shows significant disparities between these two groups, with some of the poorest residents in cities like Lagos and Dar es Salaam facing prohibitive costs (equivalent to their total household income). This leads to low mobility rates, commuting by foot, and a wide range of associated negative externalities, such as reduced productivity due to long commutes and exhaustion, and reduced access to critical health and education services.

Figure 10: **Household income spent on transportation.**



Source: Kumar and Barret: 2005

Assessing households' spending on urban mobility in the city, and their ability to pay, is a prerequisite to designing an efficient and effective financing policy for urban mobility, as this limits what households can or will pay, in turn impacting the level and type of transport that is provided (and associated levels of public funding required). More details on how to structure this financial support, including how to define fare policies, design effective social policies and structure public subsidies, are provided below.

3.2. Defining a public transport fare policy

At the operational level, users are the primary revenue source for public transport, through the fares they pay to operators. On average, fare revenues cover only 30–40% of total operating costs. The remaining gap must be filled by public financial support, but before deciding how to channel subsidies, decision-makers must first establish clear fare policy principles.

Fare levels are a strategic and political trade-off between subsidising public transport and asking users to bear the real cost of service, which can lead to distortions in modal choices. This decision must be considered in the broader context of the urban mobility system.

Decision-makers need to evaluate:

- Existing urban mobility strategies and policies,
- Competition from other modes of transport,
- The socio-economic profile of different user groups,
- Users' ability and willingness to pay,
- The quality, coverage, and reliability of services, and
- The government's capacity to provide subsidies

A clear political vision for the sector usually shapes such policies:

- Cost recovery and economic efficiency to ensure efficient and adequate supply of public transport services;
- Inclusion and affordability, especially for the poor and vulnerable, to reduce poverty and enhance access to jobs and public services in the city,
- Environmental efficiency, through the reduction of congestion and pollution from road traffic.

It is essential to bear in mind that fare-setting policies are often applicable to the formal public transport sector. Still, paratransit systems remain hard to regulate, if not impossible. Unless professionalised and integrated into the overall public transport network, paratransit is often unregulated by public authorities[19] and operators set tariffs that allow them to cover their costs, but at the expense of the level of service (only coverage of profitable routes, poor quality of service, etc.) and labour conditions. Nevertheless, paratransit systems tend to be more affordable than other, more formal modes like metros and BRTs.

The following subsections are therefore mainly related to formal public transport regulated by public authorities.

19. Or in the best cases, public authorities define reference tariffs. However, operators do not always apply them.

3.2.1. Economic efficiency

The cost-to-revenue coverage ratio is often used to measure the economic efficiency of a public transport system. In practice, two main ratios are used:

- **Operating cost coverage:** The ratio between business revenues (fares plus complementary revenues such as advertising, rental income, etc.) and operating expenditures (staff, fuel and electricity, routine maintenance, etc.).
- **Total cost coverage:** The ratio between business revenues and the system's total costs, including both operating expenditures and investment costs (rolling stock and infrastructure).

Depending on the mode of transport and its organisation, fares may or may not cover the full operating costs (including operations and equipment amortisation). However, in most formal public transport systems, fare policies are not designed to recover initial investment costs.

In the case of paratransit, the equation is different. These systems are generally self-sustained, but often at the expense of adequate maintenance and quality of service. Fare revenues typically cover daily operating costs, but:

- **Maintenance is often neglected,** leading to rapid vehicle deterioration.
- **Limited profitability** makes it difficult for operators to finance fleet renewal, which usually becomes possible only with public funding support.

Global experience shows that if formal public transport is to meet at least one of its social efficiency (affordability) or environmental efficiency (sustainability) objectives, it cannot realistically be expected to cover all operating costs (see Box 7). For example, in France, fares account for only around 29% of operating costs. As a result, subsidies are a universal feature of public transport systems.

Photo: **Carlos Felipe Pardo**

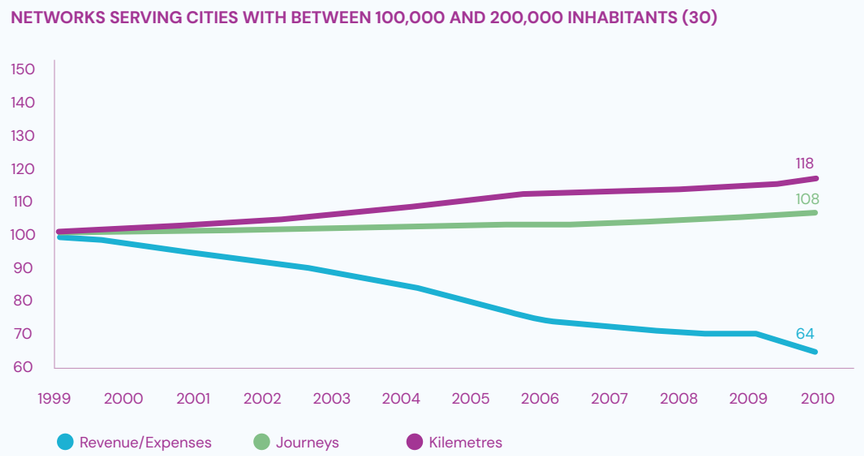
Box 7

Cost recovery of public transport systems

In Ho Chi Minh City, public subsidies cover around 45% of the system's operating costs (all public, private and cooperative bus companies). In France, public transport systems have considerably improved their offering. However, ridership growth has been more moderate. At the same time, fares have consistently fallen in constant Euros. The result of these simultaneous changes is that the ratio of commercial revenue to operating costs has worsened across urban transport systems in France, thereby compromising their financial equilibrium. From about 70% in 1975, 50% in 1995, the ratio has fallen to 29% in 2019.[20] The ratio varies by system size: around 15% in urban areas with fewer than 100,000 inhabitants, up to 30% and up to 50% in those with over 300,000 inhabitants.

To control the constantly rising operating deficits, transport authorities are moving towards rationalising their offerings and increasing fares, whilst also trying to discourage the use of private vehicles.

Figure 11: **Revenue/Expenses, trips, and kilometres run for public transport.**



20. Or in the best cases, public authorities define reference tariffs. However, operators do not always apply them.

3.2.2. Inclusion and affordability

Public transport fares must be inclusive of all user groups, especially the poor and vulnerable, such as youth, older people, and women. According to various World Bank studies, transport becomes unaffordable when it accounts for more than 5% of a household's income. An acceptable fare can therefore be assessed in relation to what the poorest groups can pay, typically by calculating the cost of a daily return trip as a proportion of the minimum household income.

The elasticity of demand for public transport must also be considered in both economic and social contexts. Fare increases tend to affect low-income groups much more severely than middle-income groups. When fares are too high, they can become a barrier to social inclusion by limiting access to employment opportunities and public services, which are usually concentrated in city centres. This challenge is even more pronounced because low-income households often live on the outskirts of cities, where housing costs are lower but commuting distances are longer.

While political commitments to social inclusion are essential, they can sometimes lead to well-intentioned but economically inefficient subsidy programs. Such subsidies often benefit all users equally, regardless of their income level. As a result, wealthier passengers—who already have the means to contribute—may enjoy a windfall effect by receiving subsidies they do not actually need.

The question of an inclusive public transport fare policy is not only linked to fare levels but also to the fare structure, such as social fares, integrated fares, flat fares, distance-based fares, zonal fares, or peak-hour fares (see Chapter 2). Each type of fare has its own impacts on users and their mobility patterns, and can significantly impact the financial sustainability of the systems:

- **Integrated fares** encourage multimodal trips by allowing passengers to transfer between modes under a single fare. However, they often reduce farebox revenue compared to non-integrated systems, since a combined tariff for two modes is usually lower than the sum of separate fares. Although fare elasticity can boost ridership, the increase typically only partially compensates for revenue losses.

- **Flat and non-integrated fares** tend to favour passengers making longer journeys while disadvantaging those who rely on multiple modes for shorter trips. Setting these fares at a level that balances both affordability and system sustainability is difficult: too low, and the system struggles financially; too high, and the service becomes unaffordable. Moreover, flat fares can encourage urban sprawl, as households may choose to live in suburban areas where housing is cheaper while benefiting from the same fare structure as central residents.

- **Distance-based and zonal fares** offer a more balanced approach to both affordability and financial sustainability. However, defining fare zones poses challenges, given the wide socio-economic diversity within a single geographic area.

Fare policies also have significant implications for the inclusion of vulnerable groups. Women, children, and older people often display distinct travel patterns, such as off-peak trips, shorter commutes, frequent stops, and trip-chaining. Flat fares per mode can disproportionately disadvantage these groups, making public transport less attractive and pushing some users—especially women—toward private car use or to reduce their trips altogether to cut costs. Decision-makers must therefore carefully assess the discriminatory impacts of fare structures to ensure equity and accessibility. Finally, environmental considerations also influence fare-setting. Pricing fares below the actual cost of service may be justified as part of policies to encourage modal shift from private cars to more sustainable, environmentally friendly public transport options.

The decision to set public transport fares below the actual cost of service can also stem from the goal of encouraging a shift away from private car use and toward more affordable, environmentally friendly modes. When combined with traffic demand management measures—such as congestion charges, fuel levies, or tolling systems—low fares can serve as a powerful catalyst for attracting private car users to sustainable transport alternatives.

The key takeaway is that public transport systems cannot be financially sustainable or socially inclusive in the long term without ongoing financial support, particularly through subsidies. Any plan to develop or expand public transport must therefore account for these funding needs from the outset.

The following sections will examine how public financial support can be structured and which target groups stand to benefit most from such policies.

3.3. Designing inclusive and just policies

This chapter provides an overview of existing social policies and general guidelines for designing and implementing them efficiently. These policies are closely linked to fare structures, as discussed previously in Section 3.2 and further examined in Volume 2, since fare levels directly affect the revenues collected and, in turn, the financial resources available to support subsidies. This chapter focuses on social measures implemented within broader fare policies.

In some cities, public transport is provided free of charge, either across the entire system, as in Montpellier, or on specific routes, following the tarifa zero approach adopted in certain Brazilian cities. Such policies remain rare in the Global South, where municipal budgets are more limited and where public transport often relies heavily on paratransit.

Nonetheless, there are important initiatives in the Global South that aim to promote mobility for the poorest. One of the most frequently cited examples is the Brazilian Vale Transporte, a subsidy scheme introduced in 1985 under which employers help their employees cover the cost of commuting between home and work. Employees may be required to contribute up to 6% of their gross salary toward commuting expenses, while employers are obliged to cover any costs beyond that amount. The scheme has the advantage of protecting workers from the impact of fare adjustments by ensuring that commuting costs remain predictable and affordable.

However, the system also has significant limitations. Its redistributive impact is constrained by the fact that only workers in the formal economy benefit, even though formal employment accounts for just 48% of the total labour force in the six largest metropolitan areas of Brazil. This leaves a significant portion of the urban population excluded from the subsidy. Over time, the use of paper travel vouchers within the system has also created opportunities for black-market trading, particularly in small-business transport services. To address this problem, authorities have increasingly moved toward electronic payment cards to replace traditional vouchers and reduce opportunities for misuse.

Box 8

Vale Transporte in Brazil - Covering costs for employees with the lowest income

This transport voucher system, which was introduced in 1987, is an employer-subsidised public transport scheme. Employers are under an obligation to cover the extra cost of an employee's transport if it exceeds 6% of their salary. The employer purchases public transport vouchers from the transport authority and tops up the employee's electronic transit pass. It is a legal obligation applicable across all urban centres, and, on average, nearly 40% of public transport passengers benefit from it.

Transport vouchers can be used for urban and interurban public transport services, subject to the fare policy set by the transport authority. Other transport is excluded, including small-scale transport operators, which are very common in large Brazilian cities.

Vale Transporte is an essential resource for financing the cost of transport services, and it offers several advantages:

- Employees do not feel the pinch of rate increases, as their costs are capped at 6% of their salary. The employer covers the extra cost.
- It represents a means of social justice, in that only the poorest are entitled to it, at least for workers in the formal sector of the economy.

The Vale Transporte system is most widely used in Brasilia, with 68% of users, because public-sector jobs are dominant there.
However, as the system has developed, it has on occasion been misused: Vale Transporte has become a parallel money traded on the black market, especially for small-scale transport. Introducing electronic cards has significantly reduced this illegal traffic.

Another drawback is that Vale Transporte is only available to formal economy workers. Despite significant progress in the labour market, informal employment still accounts for 35% of the workforce in the country's urban areas. Therefore, a large number of users are excluded from the system.

Nonetheless, transport authorities and operating companies are overwhelmingly in favour of this system, because it guarantees user loyalty and creates an incentive to use public transport.

Who benefits from Vale Transporte?
In Brazil, a transport ticket costs on average 4.9 reais (€0.90). Employees thus spend an average of €39,6 per month on travel costs, i.e., one return ticket for 22 days, if they use only one means of transport. (However, many cities do not offer ticket integration, and so, usually, two modes of transport are used per trip.) Without transport vouchers, this cost would represent 15% of the income of an employee earning minimum wage, which is 1,412 reais (€258) in 2024. Thanks to the system, all employees earning less than €660 per month are entitled to transport subsidies. This accounts for more than 60% of the formal economy's working population.

Photo: **BRB Mobilidade - Carolina Bruzzone**

Photo: **BRB Mobilidade - Carolina Bruzzone**

Another example can be found in Medellín, where the user's SISBÉN level determines public transport fares. SISBEN (Sistema de Selección de Beneficiarios) is Colombia's national system for identifying the poorest and most vulnerable households and individuals who may qualify for social welfare programmes, including subsidies for certain public services and, in particular, public transport.

The system is based on a nationwide household survey through which the State collects detailed information on a range of socioeconomic factors, including housing conditions, education, and health. This data is processed using specialised software that assigns each household or individual a score. The score reflects the relative importance of different criteria and ranks the population across six SISBEN levels, from 1 (the poorest) to 6 (the wealthiest). Only those in levels 1, 2, and 3 are eligible for assistance with public services.

Figure 12: **Applicable fares for the Arvi to Medellin gondola lift (line l), from Medellin Metro, 2014.**

PROFILE	FARE FOR TRANSTERS FROM THE SUBWAY	FARES FOR TRAVEL FROM THE STATIONS OF THE ARVI GONDOLA LIFT
With the Civica card and a SISBEN level of 1, 2 or 3	250 Col$	600 Col$ per trip
Without the Civica card and a SISBEN level of 1, 2 or 3	600 Col$ per trip	600 Col$ per trip
Without SISBEN	4,600 Col$ per trip	4,600 Col$ per trip
Children under 1 m	Free	Free

Although this is a complex and administratively demanding process, it is part of a broader national social policy framework and is not limited to the transport sector. In Medellín, public transport fares, specifically for the L line of the gondola lift serving Arví Park, are set according to the passenger's SISBÉN level.

Subsidies for people in SISBEN levels 1, 2, and 3 also extend to special fares across the entire public transport system, particularly for students through the Estudiantil Municipios programme and for older adults through the Adulto Mayor fares. These reduced fares are administered by the Secretariat of Social Welfare, which distributes discounted tickets to eligible users. The tickets are printed on a special paper designed to prevent counterfeiting, ensuring the benefits reach the intended recipients.

Other examples can be found that promote access to public transport either through social fares or direct aid to supply, but whose progressiveness or level of targeting is unclear. [21]
of the poorest is not always optimal:

21. To analyse if the poor are properly targeted, two indicators can be calculated. The objective of the first one is to measure the share of individuals who should benefit from the subsidy but who do not benefit (exclusion error). The second aims to measure the share of individuals who benefit from the subsidy when they should not initially have been targeted by the measure (inclusion error)

- **Supply-side subsidies in Buenos Aires:** To cope with the dramatic budget crisis in 2001/2002, the State implemented direct subsidies to operators. It might have been preferable to grant demand-side subsidies. Still, this type of subsidy would most certainly have resulted in very large exclusion errors, as the eligibility criteria for aid are based on having a social security plan, and only 2 million of the 6 million poor people have access to one. The analyses conducted in 2002 and 2006 showed that this type of subsidy was mainly neutral or regressive, and that the regression even tended to worsen over time.

- **Supply-side subsidies in Mexico City in 2006:** The analysis showed that the various subsidies were neutral for the metro and trolleys and slightly progressive for buses. However, the exclusion errors were medium-high, which is explained by the fact that small buses used mainly by people experiencing poverty were excluded from the subsidy system.

- **Various types of subsidies in Santiago:** Subsidies for students (passes for the buses, lower fares for the metro) appear slightly progressive or regressive when not taking into account the way the cost of the measure is covered: when the type of resources used, based on cross-subsidies, are taken into account, in both cases, the system is mainly neutral. It transfers resources from rich or poor households without students to rich or poor households with students. The income criterion is not taken into account in granting student fares. This results in significant exclusion effects. The investment subsidy for the metro is even less efficient, from a social point of view, doubtless because people with low income mainly use other modes of transport. The direct transfers by allowances have the best social performance indicators; however, they are a general subsidy and not a transport subsidy

- **In the case of Mumbai**, supply-side subsidies are regressive regardless of the poverty threshold level. The positive point here is that the exclusion errors are very low.

There are also social subsidies that extend beyond public transport. A typical example is fuel subsidies, which in many countries were initially introduced in response to oil crises and justified either as social protection measures in importing countries or as mechanisms of wealth redistribution in exporting ones. However, these subsidies are highly costly to governments: on average, fuel subsidies before taxes account for 3.8% of GDP, compared to just 0.7% for food subsidies. Moreover, they do little to foster social integration. In Egypt, for instance, the poorest 40 per cent of the population received only 3% of the total petrol subsidies. These subsidies are therefore clearly regressive and poorly targeted, as wealthier groups benefit disproportionately due to their higher consumption of fuel for private vehicles, generators, and taxis. They also subsidise activities with very negative externalities, which, from an economic perspective, should instead be taxed (see paragraph 3.1.3).

In the Middle East and North Africa, the gradual elimination of fuel subsidies over the past few years has necessitated complementary measures to mitigate severe social impacts. These measures have included careful planning and public communication campaigns, phased price adjustments to bring domestic fuel prices closer to international levels, compensatory programmes such as public-sector wage increases, expanded social safety nets, improved education and health services, and the development of public transport alternatives.

Iran offers a particularly illustrative case. Its subsidy reform, launched in 2010, aimed to gradually adjust the domestic prices of oil, food, natural gas, and electricity over five years. Before implementing these adjustments, the government opened new bank accounts for all households and paid monthly monetary transfers into them as compensation. These transfers were non-targeted and universal, but more progressive than the system of subsidies they replaced. In 2014, the government even launched a televised campaign encouraging wealthier households to forgo aid voluntarily. Despite these efforts, the campaign proved largely ineffective: nearly 95% of Iranians continued to claim the financial support, equivalent to around US$14 per person each month, or roughly US$1 billion per month in total. As a result, the compensation system quickly ran into deficit, since revenues from higher energy prices were insufficient to cover the rising costs of the transfers.

Ghana provides another example where the political acceptability of eliminating fuel subsidies was carefully addressed. Beginning in 2003, the government gradually reduced unsustainable subsidies due to rising fuel import costs. Between 2000 and 2008, petrol prices increased by 600 per cent. To offset the social impacts, the government introduced subsidies for bus transport services, school lunch programmes, housing support, and lump-sum payments to vulnerable households. These measures were financed through revenues from a dedicated fuel tax, the "Social Impact Mitigation Levy," which represented 3.7% of the pump price of petrol. Additional fuel taxes were also introduced to generate resources for road infrastructure development.

Figure 13: **Analysis of various forms of subsidies in different cities, comparing their redistributive effects, exclusion error and inclusion error**

YEAR	CITY	TYPE OF SUBSIDY	REDISTRIBUTIVE EFFECT	EXCLUSION ERROR	INCLUSION ERROR
2006	Buenos Aires	Supply-side subsidy: train	neutral	medium high	high
2006	Buenos Aires	Supply-side subsidy: subway	regressive	high	high
2006	Buenos Aires	Supply-side subsidy: bus	slightly regressive	medium high	high
2007	Mexico	Supply-side subsidy: subway	neutral	medium high	medium
2007	Mexico	Supply-side subsidy: bus	slightly progressive	medium high	medium
2007	Mexico	Supply-side subsidy: trolleys	neutral	medium high	medium
2007	Santiago du Chili	Student pass bus	slightly progressive	medium high	medium
2007	Santiago du Chili	Student fare subway	slightly regressive	high	high
2007	Santiago du Chili	Subway canex subsidy	slightly regressive	high	high
2007	Santiago du Chili	Direct transfer to poor households	progressive	medium	low
2007	Mumbai	Supply-side subsidy: bus	regressive	very low	high
2007	Mumbai	Supply-side subsidy: train	regressive	low	high

(Source: Estupinan Gomez-Lobo, Munoz-Raskin et Serebrisky, 2007.

3.3.1. Designing more efficient, inclusive, and just policies

Social public transport subsidies do not consistently achieve their stated goals of greater equity and improved access. It is therefore crucial to carefully examine both the mechanisms of implementation and the potential ripple effects to ensure that such subsidies remain efficient in reaching the intended target groups. The composition of the existing public transport user base also influences their effectiveness.

Subsidies can be directed either to public transport operators or directly to users. When investment or operating subsidies are paid to operators, the benefits are shared by the community as a whole. Whether such subsidies are regressive or progressive depends mainly on the profile of public transport users. They are regressive when middle-class populations constitute the majority of users. At the same time, poorer groups are excluded due to cost barriers or inadequate physical access to the system, particularly in remote or underserved areas. They may be progressive if the poorest make up the largest share of users, although, as the examples discussed earlier suggest, this is rarely the case in developing countries.

Investment and operating subsidies also have broader effects on urban development. By improving the accessibility of the areas they serve, such subsidies tend to increase land values. Part of the benefits generated by the subsidies is thus transferred to property owners, some of whom may also use the improved transport services, but often not the poorest residents.

When subsidies are paid directly to the beneficiaries:

- **Without any selection or income-testing:** the results in terms of redistribution are analogous to what occurs in the case of operating subsidies. This may be even worse, because there can also be deadweight losses.[22] This is the case of fuel subsidies, as discussed above, which encourage individual modes of transport, thereby offering a temporary response to the absence of public transport (low-density areas, investments too heavy for the economy, etc.) despite their shortcomings.

- **Based on a selection associated with socioeconomic criteria:** specific fares by passenger category that are cheaper than the standard fare – reduced fares for youth, students, large families, veterans and the disabled, free fare for the poorest and the unemployed. This is the case in Medellín, where fares depend on the standard of living category: the wealthiest contribute to the cost of public transport for the poorest. When the selection takes account of income criteria or standard of living, it is generally progressive but often quite difficult to implement. When there is no income criterion, the measure does not necessarily yield progressive results (e.g., student fares in Santiago). Attention must also be paid to the resources mobilised to implement these measures, which are funded, in particular in the case of cross-subsidies.

- **The case of commuting subsidies is a special case of selection:** the payment of 50% of transit pass fare in Ile de France (including Paris) is extended to all of the population living within the region, and benefits all categories of income. It does not explicitly target the poorest. The partial or full reimbursement of mileage expenses in private vehicles does not apply, and the Vale-Transporte voucher supplied by the employer in Brazil, a self-selecting mechanism, would most likely be progressive if applied to all workers.

22. A deadweight loss occurs when the person receiving a benefit had already planned on acting the same anyway, even if the benefit had not been granted.

→ **The measures discussed above are, furthermore, limited to people with jobs.** Still, other measures exist for the unemployed or precariously employed: in Ile-de-France the Transport Solidarity Reduction (75% discount on transit passes) or the Free Transport Pass are granted under certain conditions (to the unemployed or minimum guaranteed income beneficiaries), “Vale-transporte social in Brazil” or indirect aid for household income (minimum income, grants for families, students grants, etc.) but these measures do not fall into the category of transport subsidies.

Accordingly, discussions of social equity and access to opportunities have set aside the geographic dimension of accessibility. Yet the choice of where people live, often shaped by land prices, social segregation, or other constraints, profoundly influences transport needs and can itself be a source of discrimination. Limited accessibility may prevent residents from reaching specific workplaces or essential services, reinforcing patterns of exclusion.

When expressed in geographic terms, social equity and access to opportunities imply that all residents of a given area should enjoy the same conditions of access to transport. Poor connectivity to urban resources creates a real risk of social exclusion. Isolated regions or those with weak accessibility are often inhabited either by wealthier residents, who can easily rely on private vehicles, or by poorer households, who may benefit from subsidies such as those discussed in the previous section. For the latter, however, subsidies are only meaningful if reliable public transport services are available.

This rationale underlies area-based policies designed to improve access to disadvantaged neighbourhoods. Medellín, Colombia, provides a notable example: the municipality launched a significant investment programme to enhance mobility in poor, isolated districts through projects such as gondola lifts and outdoor escalators. These investments not only improved access to the city centre for residents in hilly areas but also reduced crime rates.

In multimodal transport systems, fare integration and smart ticketing across operators and modes are essential to inclusivity. Without integration, requiring passengers to pay a separate fare for each leg of a journey becomes prohibitively expensive and discourages use. For this reason, megacities such as Paris, London, Medellín, Jakarta, and Hong Kong have adopted unified, system-wide payment methods that allow for free or discounted transfers across modes.

Moreover, fares are not always distance-based. In some systems, prices are structured by zones, enabling residents of low-density areas to access the broader network at a unit cost significantly lower than that borne by residents of denser urban cores. For such systems to be effective and equitable, they must be carefully designed using detailed geospatial analyses of socio-economic conditions.

Finally, investment in infrastructure for safe walking and cycling can greatly enhance access to jobs and services in disadvantaged neighbourhoods. In addition to their environmental benefits, active modes of transport are among the most affordable and cost-efficient mobility options available.

Photo: **Carlos Felipe Pardo**

Chapter 4

Channelling resources to the sector: subsidy options

Global experience shows that public transport subsidies are essential for developing effective and inclusive urban mobility systems. Such subsidies can take different forms as detailed below:

- **Investment assistance (CAPEX):** transfer of capital, in cash or kind, by the public authorities to partly or wholly cover the cost of acquiring fixed assets:
  - Infrastructure (roads, bridges, bus lanes, sidewalks, etc.) and fixed equipment;
  - Rolling stock;
  - Tax exemptions (on investment);
- **Operating assistance (OPEX):** transfer from the public authorities to the operator
  - Supply-side subsidies: assistance paid per service unit produced; these reduce certain charges or encourage certain activities;
  - Balancing subsidies: they cover operators' losses arising from the implementation of an economic policy that entails setting fares below the average cost of production, or they cover the operational deficit during the ramp-up period;
  - Contributions to certain costs (infrastructure, operation, debt, etc.);
  - Fare compensations (difference between the standard fare and the concessionary fare, which may go as far as free travel);
  - Tax exemptions (on fuel, sales, etc.);
- **User assistance:** transfer from public entities to users
  - Demand-side subsidies: amount of financial support per consumed unit of a good or service, to all users or just a category of users;
  - Compulsory payment by employers of part of their employees' transport expenses;
  - Fuel tax exemptions, or even fuel price subsidies;

The following section provides an overview of the advantages and disadvantages of the various subsidy instruments.

4.1. Investment subsidies

The cost of road infrastructure, which primarily benefits private vehicle users, is almost always borne by public authorities, given that such infrastructure is rarely revenue-generating. Individual motorised modes of transport are seldom priced at their full social cost, with users generally covering only direct expenses such as fuel, maintenance, and insurance. While many countries have introduced fuel taxes to capture some of these external costs, revenues are typically collected at the national level and redistributed locally to finance road construction and maintenance. Even so, such revenues rarely cover the full cost of investments.

Some cities, however, have gone further by introducing traffic demand management measures that seek to rebalance costs between users and non-users. Cities such as London, New York, and Abidjan have implemented tools like congestion charges and urban tolls, which are discussed in greater detail in Volume 2.

In general, the main instruments used to finance transport infrastructure projects are subsidies, grants, and loans from public authorities, complemented, in some cases, by private-sector participation and bond issuance. In many countries of the Global South, international financial institutions, including development banks, also play a critical role in supporting investment in transport infrastructure.

When it comes to public transport, commercial revenues may or may not be sufficient to cover investment in rolling stock, as well as operating expenses, depending on the mode and organisational arrangements. However, fare revenues are never enough to finance significant infrastructure investments such as dedicated bus lanes, bus rapid transit (BRT) corridors, or rail systems, the costs of which are always borne by public authorities. On average, farebox revenue covers only 30-40 per cent of total operating expenses.

The case of Moroccan cities illustrates this challenge. Historically, investment in the rolling stock of conventional diesel bus networks was the responsibility of private operators, without subsidies from public authorities. This approach led to serious consequences for service quality and vehicle maintenance. With the introduction of new modes such as BRT and tramways, however, public authorities were obliged to take responsibility for financing not only the infrastructure (dedicated lanes, rail systems) but also the rolling stock itself. More recently, studies on the introduction of electric buses have shown that technological transitions will require even greater financial support from public authorities, as commercial revenues are insufficient to cover the higher capital costs of electric rolling stock.

In such cases where commercial revenues are not sufficient to cover investment in rolling stock, particularly for electric buses and BRT systems, the additional financial support provided by public authorities can either take the form of a one-off investment subsidy, intended to cover the initial capital expenditure, or a recurrent balancing subsidy provided to the operator to offset the financing costs over time. The former approach helps to reduce the financial burden at the outset of a project, while the latter provides ongoing support to ensure the long-term viability of operations. In practice, many systems combine both mechanisms, blending upfront investment subsidies with recurrent operating support, depending on the financial sustainability of the network and the institutional arrangements in place:

- A one-off investment subsidy (paid to the operator or by directly procuring the infrastructure with public funds) provides the following advantages:
  - It is a one-off expenditure that does not require local authorities to secure recurring resources for the entire duration of the operation period, which can be difficult in the context of constrained budgets and an unpredictable financial environment that characterises most local authorities in the Global South.
  - It is interesting from an accounting point of view as it is accounted as an investment and does not impact the operating statements of contracting authorities.
  - It is generally easier to mobilise financing from financial partners for investments rather than recurring expenditures such as balancing subsidies.
  - An investment subsidy can enhance competition as the upfront investment burden to be borne by the operators can be significant in some cases (BRTs, new technologies such as electrification, etc.), which may exclude small operators. An investment subsidy is also more secure for an operator, as it reduces the risk of delays or non-payments that come with a balancing subsidy, for example.

However, to mobilise an investment subsidy, local authorities must have adequate financial resources or capacities to mobilise financing from banks or financial institutions (including development finance institutions).

- **A balancing subsidy** is a recurrent subsidy paid to the operator. The subsidy amount is set in advance (it does not depend on the actual deficit) and changes only under specific circumstances. The subsidy is also subject to budget constraints and is not intended to systematically cover the operational deficit, which may open the door to endless support for deficient operators. Contractual arrangements to strictly monitor and control the operator's performance are a must.

  - Most of the time, the subsidy is not only intended to cover investment costs.[23]
  - But it can also cover a predefined portion of operational costs (see the next section).

  - While this type of subsidy provides local authorities with the advantage of spreading expenses over a long period, the reality of unstable, unpredictable operating budgets in some cities of the Global South makes this option quite challenging to implement in such contexts. In fact, it will require a more complex contractual framework with guarantees provided to operators for the balancing subsidy. In addition, as mentioned above, it is more difficult for local authorities to mobilise financing for recurrent expenditure from banks or international financial institutions.

- Investment subsidies for public transport can also take the form of tax exemptions, which significantly reduce the cost of rolling stock and equipment for operators. A notable example is Senegal's mini-bus renewal programme, in which the local industrial partner, SENBUS, was granted tax and customs duty exemptions to keep vehicle prices affordable. For the last three phases of the programme (2010–2019), these exemptions amounted to more than 17 billion FCFA, equivalent to an average of 9.45 million FCFA per vehicle assembled by SENBUS. Although the contribution was relatively small, it nevertheless helped lower vehicle costs and facilitate fleet renewal.

- Tax exemptions can also play an essential role in supporting the deployment of electric buses. Since electric buses are more expensive than diesel ones, they almost always require subsidies from public authorities. Incentives such as duty waivers or tax reductions can complement direct subsidies and help accelerate the adoption of this technology.

- For active mobility, in addition to investing in bike lanes and sidewalks, public authorities can introduce subsidies to support bicycle purchases. Across Europe, there are nearly 300 schemes offering tax incentives or purchase premiums for cycling, implemented by national, regional, and local governments with the dual aim of promoting cycling and encouraging a shift away from private car use. Similar programmes have also been introduced in Seoul, South Korea, and in several other developed countries. However, such initiatives remain relatively limited in cities of the Global South, though some Latin American countries have begun experimenting with them.

23. Mainly in the rolling stock. Investment in heavy infrastructure (such as BRT corridors) is usually ensured directly by the public authorities.

Box 9

Premium subscription in Ile-de-France for bicycles (including e-bicycles)

In Ile-de-France, the urban mobility authority implemented a premium subscription to support modal transfer towards active mobility, namely biking. Similar schemes have also been implemented in the Netherlands and other countries in Europe,
In 2023, every resident of the Île-de-France region could benefit from a 50% contribution toward the price of a new bike, up to 500-600 Euros, depending on the bike type. This contribution from the urban mobility authority could also be combined with other donations from local governments.

This scheme applies to:

- Classic bicycles with electric assistance
- Cargobikes with or without electric assistance
- Folding bikes with or without electric assistance
- Adapted bikes for people with special needs

Similar schemes have been implemented by the urban mobility authority since 2020, but only for electric bikes. Between February 2020 and August 2023, approximately 776,700 residents (equivalent to approximately 6% of the region's population) benefited from this scheme.

(Source: Île-de-France Mobilités (March 2023)

Photo: **Thomas De Luze**

4.2. Operation subsidies

The operating subsidy is intended to cover the operational deficit of a system, i.e., the gap between its operating costs (excluding rolling stock) and its commercial revenues. These subsidies are almost always necessary for public transportation systems, as fares are often set below the average cost of production. As with investment subsidies, operating subsidies can take different forms:

- A recurrent subsidy paid to the operator[24] to compensate for fare reductions (the difference between the standard fare and the concessionary fare, which may go as far as free travel), or to contribute to some operating costs (as a fixed percentage of the total operating cost):
  - Compensation for the allocation of special fares to specific user categories;
  - Compensation of losses at the end of the year. In this traditional subsidy practice, companies have no incentive to improve profitability or service.
  - Payment of an amount per trip (or per kilometre travelled) based on the operating costs declared by the companies or estimated by the public authorities. When operating costs are set or negotiated by public authorities, operators may be encouraged to improve performance and reduce operating costs through preventive maintenance and staff training (particularly drivers).
- Tax exemptions on fuel, sales, and electricity costs[25], etc., granted to the operator

In some cases, public authorities also tie the payment of subsidies to key performance indicators related to service productivity or quality levels, or to the fight against fraud, by introducing a bonus or penalty system if these indicators are not met. In all cases, and regardless of the chosen method, authorities must introduce a service agreement that lays down the rights and obligations of operators, whether public or private.

In its recurrent form, the operating subsidy requires public authorities to have stable financial resources to finance it throughout the entire service operation period. In the case of balancing subsidies, operators, particularly private-sector ones, may require guarantees from public authorities, particularly when their remuneration depends on commercial revenues and minimum service requirements bind them.

In many cities in the Global South, operating subsidies were the standard solution for keeping fares affordable. However, when the first macroeconomic shocks occurred, these subsidies were either eliminated or drastically reduced, which led to a deterioration of public transport services (as in Ouagadougou) and, in some cases, their total disappearance (as in the case of SOTUC in Douala). This highlights the importance of securing long-term financial resources when opting for such subsidies.

Overall, implementing subsidies with long-term visibility into the availability of public financial resources is difficult, particularly in the financially constrained context of cities in the Global South. However, the current international momentum toward more sustainable transport modes presents an opportunity to redirect financial support in the sector from operating subsidies to investment subsidies, particularly for electric buses. This shift can help reduce the level of subsidies required at the operational stage. In addition, it can lower financing costs and, thus, overall project costs by mobilising more concessional financing and climate-related funding mechanisms.

Photo: **Carlos Felipe Pardo**

24. Per service unit produced, per passenger transported, etc. The metric can vary depending on the context and the contractual arrangement.
25. In India for example, operators of electric buses benefitPer service unit produced, per passenger transported, etc. The metric can vary depending on the context and the contractual arrangement.

4.3. Subsidising users

The investment and operating subsidies described in the previous sections are primarily directed to public transport operators. However, there are other ways to channel financial resources into the sector, namely by supporting users directly.

In public transport, this can take the form of reduced fares for specific social categories such as students, young people, or low-income groups. It can also take the form of employer contributions to cover employees' commuting costs. Such measures can help reduce the overall level of public subsidies required in the sector.

Direct support to users, however, raises the question of targeting: should subsidies be granted universally to all users, or only to vulnerable groups?

The previous chapter provides key considerations to guide decision-makers in addressing these questions.

Photo: **Dakar BRT – ITDP**

Mobilise Your City

Volume 1: Designing an Urban Mobility Financing Policy

Urban mobility needs are rising globally, especially in rapidly growing cities of the Global South, where efficient and sustainable mobility systems are essential for enabling access to jobs, public services, socio-economic opportunities, economic development, and freedom of movement. Yet financing these systems remains a major challenge. Defining an appropriate financing policy, its objectives and instruments, requires a careful analysis of city characteristics, mobility systems, institutional frameworks, stakeholders, visions for urban mobility at city and national level, available public resources, and the wide range of funding and financing mechanisms that may be mobilised.

This first volume offers decision-makers a structured framework for designing an urban mobility financing policy. Rather than providing prescriptive solutions, it outlines key considerations to support policy development and implementation. Building on the handbook of good practices *Who Pays What for Urban Transport*, developed by MEDDE and CODATU for AFD, this volume equips urban mobility practitioners with an essential foundation for addressing the complexities of financing sustainable urban mobility.