UITP ADVANCING PUBLIC TRANSPORT

KNOWLEDGE BRIEF

A BUSINESS MODEL TOOLKIT FOR THE PARATRANSIT SECTOR

JUNE | 2024

INTRODUCTION

In recent years, there has been an increasing focus on the paratransit sector among many stakeholders, including universities, consultants, international funding organisations, transport operators and authorities, and associations. UITP is part of this trend!

There are several reasons for this increased interest in paratransit. First, the 2019 coronavirus disease (COVID-19) pandemic shed light on the critical role played by paratransit as a major mode of transport in many cities around the world. Second, there is evidence that paratransit is the main mobility provider in the Global South. According to the 2014 Current status of public transportation in ASEAN Megacities study, there was a 2% increase in demand for motor-tricycle taxis, referred to as tuk tuks in Thailand, and a 5% increase in demand for vans & pickups in Bangkok between 1994 and 2010 (Mo et al., 2014). The study also highlighted the overall increase in demand for paratransit in Asia.


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At the same time, as described in many papers, including a previous UITP publication, the paratransit industry is characterised by a number of weaknesses. For example, there is a lack of integration of timetables, fares, and physical infrastructure. Furthermore, paratransit generates road danger. It also functions in a strong profit-driven business manner, with a myriad of decentralised service providers who lack good working conditions. The sector needs to tackle such weaknesses as part of its transformation.

This approach focused on addressing existing issues reflects an ongoing change in how we view the paratransit sector. As presented in a UITP policy brief titled "Description, role, and function of the paratransit sector", rather than considering removing these services, the discussion has shifted to focusing on the sector as a major mobility solution provider that can help meet current and

future mobility needs in the Global South. However, the sector needs to be transformed in order for paratransit services to effectively serve this purpose.

This requires a good understanding of its functioning and structure. The question of data collection and data value has been addressed in the policy brief The value of data for the paratransit sector. One of the recommendations (recommendation 3) is data collection not only on mobility but also on the microeconomics and political economy of the sector, including the political, economic, social, technological, legal, and environmental contexts and trends. By analysing such data, one can get a holistic understanding of the sector. Looking at the sector differently is a starting point to considering different strategies and levers for sectoral transformation. This should contribute to a mindset change of all stakeholders involved in delivering the services or potentially managing or regulating them.

Different studies on the paratransit industry pursue that goal, covering topics such as the definition of the system, analysing the relationship between formal and informal transport, etc. (Cervero, 2000; Sebele-Mpofu & Mususa, 2019; Rivasplata et al., 2012; Berman et al., 2005).

The paratransit sector does not cost public authorities much; it does not rely on public subsidies to cover operating costs and is rarely supported by subsidies to cover capital costs (i.e. investment in the fleet). A lot of papers emphasise the business-oriented nature of the sector, with operators[1] competing with each other to onboard as many users as possible, to ensure their daily revenue targets are reached. The whole system has its own way of managing the flow of money between users and operators. This business model needs to be better understood in order to develop effective policies to strengthen it and transform the sector.

Because there are a limited number of detailed studies about paratransit business models and their connection to the political economy of the sector, this paper aims to develop a toolkit to help analyse the business-oriented nature of the industry. Our goal is to propose a business model framework that specifically applies to the sector and can be used by all involved stakeholders. We aim to adopt a holistic view of the sector and look at a range of different stakeholders, including authorities, operators, and passengers. The idea is to develop a tool that can evolve as the sector transforms itself. This study also uses the Political, Economic, Social, Technological, Environmental, and Legal (PESTEL) analysis method to identify the relevant external environmental factors that contribute to sustaining the business model. The framework will enable performance monitoring and benchmarking of companies in the sector.

THE BUSINESS MODEL CANVAS

INTRODUCTION

The business model canvas (BMC) developed by Osterwalder (2004) is widely used in both the research and business communities for the following:

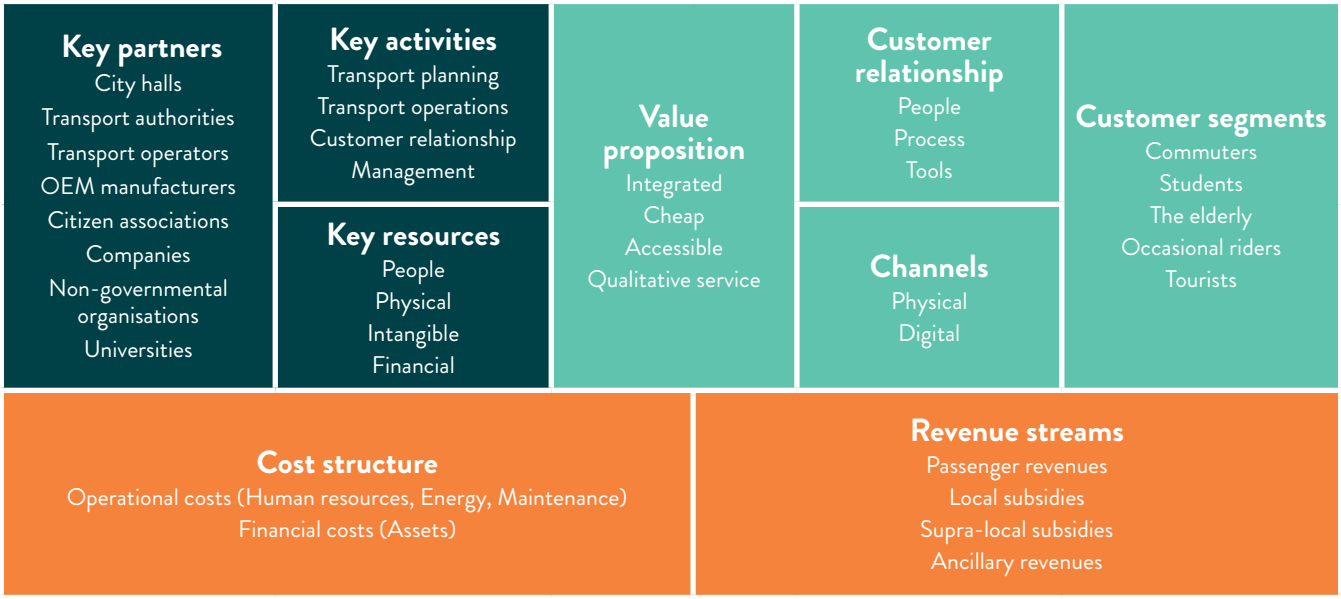
- Clearly outlining/defining business goals.
- Prioritising business elements.
- Managing activities, customer relationships, and financial growth in a coordinated manner.
- Reducing the risk of failure.
- Facilitating the creation of robust business plans.

The BMC presents the fundamental elements that help an organisation be profitable or provide services of general interest while simultaneously delivering a unique value proposition. This tool provides the following:

- A good basis for the preparation of a business plan,
- A clear presentation of the business from a holistic point of view, with strong customer orientation and value proposition(s) and a clear interrelationship between the two.
- A flexible tool that enables the identification of the interaction between building blocks and essential business elements.
- A strong understanding of the respective business model.

1 In this Knowledge Brief, the term "operators" is used as a blanket term to refer to all those involved in paratransit operations, including vehicle drivers, vehicle owners, cash collectors, mechanics, interchange staff, etc.

Figure 1 – BMC for public transport



APPLICATION TO THE PUBLIC TRANSPORT SECTOR

The public transport sector uses the business model canvas to describe its main activities and economic relations, as illustrated in the chart in Figure 1, derived from a *UITP Knowledge brief on the new normal.*

A BUSINESS MODEL FRAMEWORK FOR THE PARATRANSIT SECTOR

The business model depicted in Figure 1 is for a collective transport system based on mass transit systems. However, the paratransit industry has different characteristics, as described in previous UITP papers. Therefore, a specific tool needs to be developed for the sector.

The paratransit business model framework has been developed by the UITP Paratransit Working Group with a holistic perspective on stakeholders, which include the government, operators, and passengers. Different levels of government are involved, and operation covers different service provision functions: driver, money collector, vehicle owner, vehicle maintenance staff, etc.

THE DYNAMICS OF PARATRANSIT

The dynamics of paratransit can be summarised under three main themes: policy, demand, and culture (Buran, 2023).

- Policy includes "direct and indirect public policies". While regulation and legalisation fall under "direct policy" (i.e. policies that are outlined by public authorities due to their fundamental roles), accessibility, service quality, including comfort, time, information, reliability, safety, customer care, and environmental issues, land development, and cost fall under "indirect policies" (i.e. actions that could be outlined either by public or private entities).
- From the **demand** perspective, customer segmentation plays a critical role in understanding passenger needs.
- Looking at **cultural** dynamics, the historical background of paratransit is explored.


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Figure 2 – Business model framework for paratransit

THE PROPOSED FRAMEWORK

The proposed framework for the paratransit sector is shown in Figure 2 and has been designed so that the business model can be tailored to the local context.

First, this framework looks at **key stakeholders:**

- Municipal agencies & other governmental agencies on the political side
- Banks on the economic side
- Operators, drivers, owners, fare collectors, & mechanics on the operational side
- Non-governmental organisations and unions on the social side
- Universities, consultants, and experts.

Second, using a holistic approach, the framework looks at the **value offering** for the key stakeholders, as summarised in Table 1.

Table 1 – Paratransit's value offering

OPERATORS AND SERVICE PROVIDERS	CUSTOMERS AND USERS	GOVERNMENTS AND AGENCIES
Demand responsiveness can change quickly.	Users expect to move around quickly and with low-cost services.	Governments aim to reduce the use of private cars to improve mobility in cities and decrease congestion and road danger.
In the wake of the COVID-19 pandemic, passengers want specialised services.	Accessibility for different user groups should be provided.	Governments aim to integrate different transport services.
Passengers may not want to crowd into buses and are expecting special solutions that are less crowded and more comfortable.	What are the different groups of users?	Governments aim to reduce greenhouse gas emissions and foster green transport solutions.
For operators, the timetable and frequency, as well as flexible solutions.	The elderly	Governments aim to improve road safety and provide better services.
	Teachers	Governments aim to reduce violence and robbery.
	Students	Governments aim to improve the fiscal system and tax collection.
	Those on a privileged list	
	Customers may be differentiated according to their needs.	

Third, this framework specifies the following **enabling elements:**

- **Key activities** include planning, e.g. service scheduling and frequency, and operation (i.e. transport and fare definition).
- **Key resources** include human resources to run the vehicles and provide services: drivers, fare collectors, owners, and mechanics. The question of a gender-balanced workforce is also critical. Other key resources, both tangible and intangible, needed to make this sector work include knowledge and intellectual capital derived from training. Other physical assets should also be considered, such as charging points, fuel, and technological resources.
- On the **financial side,** revenue streams and cost structure are defined. **Direct or indirect income** is derived from tickets and fares and additional revenue, from advertising. If we consider a mobility-as-a-service (MaaS) model, data and subscription fees may also generate revenue. Some operators and fleet owners behave like investors, only caring about the return of their asset (e.g. the vehicle, value of the plates or licences, etc.).
- The **cost structure** covers vehicle operation (fuel), maintenance, and rental. The question of investment and access to finance may also be considered.

Fourth, **customer relations and channels** cover communication with vehicle drivers and include a large range of customer service tools such as call centres, short message service (SMS), and other chat platforms.

Fifth, after outlining a business model for transport, we can use the following **key performance indicators (KPIs)** to measure the performance of the system (Coates et al., 2010; Montemari, 2019):

- The number of key partners can be a performance indicator for key partners.
- The customer satisfaction survey score can be a performance indicator for value offering; the number and types of segments can also be used as an indicator.
- The profit margin can be an indicator of the revenue stream.
- The cost margin can be the performance indicator for the cost side.
- The reduction of road accidents, improvement of working conditions in the paratransit workforce, or the reduction of air and/or noise pollution in the fleet can also be evaluated.

CASE STUDIES

This business model framework is not set in stone; it should be updated in a way that takes into consideration a time dimension and evolution of the sector in line with PESTEL changes. It should also be tailored to different local contexts. To illustrate this, the paratransit business model framework has been applied to three different locations where paratransit plays a major role: Istanbul, Turkey, Bangladesh, and Mexico.

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ISTANBUL, TURKEY: THE CASE OF MINIBUSES

In Istanbul, minibuses are an important part of the paratransit mobility system. 5,710 minibuses are managed by the Istanbul Metropolitan Municipality (TUHİM, İBB). Improvements for minibuses are focused on increasing service quality, e.g. with new cameras, a Global Positioning System (GPS), and new low floor vehicles.

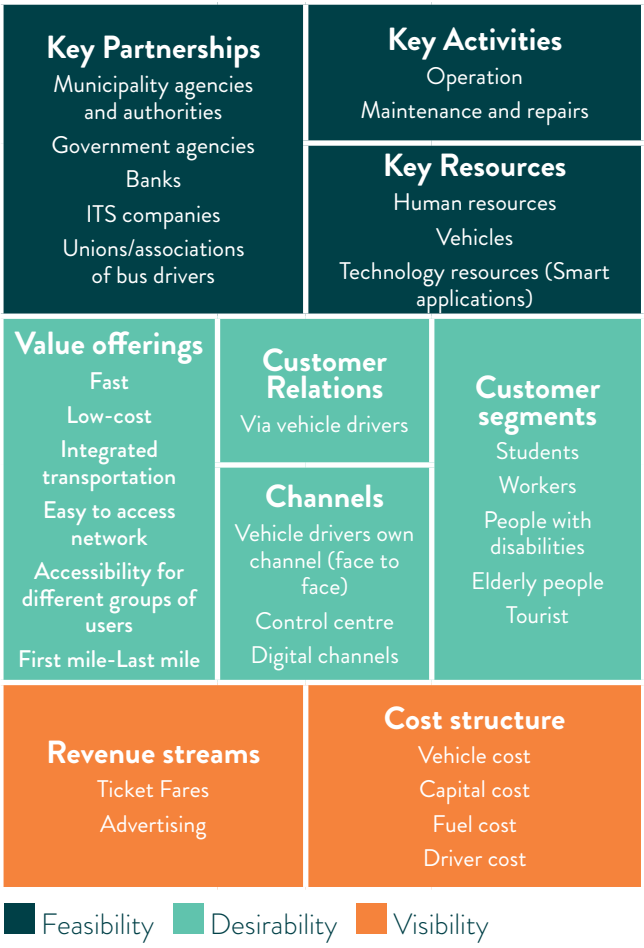
Figure 3 presents the BMC for the Istanbul minibus system. Green lines indicate planned future improvements. Key partnerships include municipal agencies and other government actors. For the tracking technology, intelligent transport system (ITS) companies are important partners. Investment requires funding. Trade unions and other associations represent the drivers and staff.

Key activities include operation, maintenance, and repair. Key resources cover human resources, vehicles, and smart applications such as cameras, GPS, sensors, liquid-crystal display (LCD) screens, and telematics. In terms of the value offering, paratransit provides passengers fast, low-cost, easily accessible, and integrated transport. In

the future, there is a plan to provide accessibility to different groups with different services such as first- and last-mile solutions.

The primary communication channel is face-to-face interaction between users and drivers. Digital channels and control centres are among the planned communication channels. Looking at customer segments, students and employees use the service, as well as disabled people and elderly people. Tourists will be using the service in the future. On the monetary side, ticket fares are seen as the main revenue source, while advertising generates ancillary income. The cost of vehicles and operation are the main costs.

Figure 3 – BMC for minibuses in Istanbul



MICHOACAN, MEXICO: THE CASE OF A RURAL TRANSPORT SERVICE

The personnel transport service in the state of Michoacan in Mexico represents 6% of total trips, with the municipality of Vista Hermosa having the highest percentage of trips (20% per day) of the 113 municipalities, according to data from the National Institute of Statistics and Geography's (INEGI) 2020 Census. In May 2020, a decree to the Regulation of the Law of Communications and Transport was published that seeks to regulate this type of service in the state. However, since it was published in the middle of the pandemic, it was not until 2022 that the government began working with companies on the regularisation of the service. In September 2023, the first permits for the operation of the service in the city of Morelia were granted.

The current regulations stipulate that bus type units can only be up to 10 years old, must have safety belts, and must have five stops for personnel boarding and alighting. Currently, the service is being provided by individuals or companies, and based on the new Law of Mobility and Road Safety of the State, the service was divided into transport of personnel and transport of agricultural personnel. The transport of agricultural personnel is currently being done with double cab vans, The government is working with the avocado industry to determine the best transport mode for this type of travel and begin the process of regulating this sub-sector; these types of services are generally provided under a person-unit scheme, i.e. by individual self-employed people.

The current administration entered office in October 2021, and it was its responsibility to make these new reforms operational to regularise personnel transport services. So far, the government, working with stakeholders in the sector, has redefined the service and the regulation in order to move towards service regularisation.

The Regulation of the New Mobility and Road Safety Law, which is currently being drafted, aims to incorporate feedback from the sector into the regulation and address the particularities of the currently operational services. It is organising meetings with agencies such as the State Secretariat for Economic Development, companies in

the sector, and other key organisations and stakeholders. The main objective of these meetings is to ensure that sectoral regularisation is aligned with the reality of the state and benefits the sector and its users, with a less complicated implementation progress.

The government has already started granting operating permits for personnel transport in the state and is making progress in modifying the regulations. In this way, the state is moving towards regular service provision that provides certainty to the operators, users (i.e. personnel), and relevant authorities.

Figure 4 – BMC for local paratransit bus services in Michoacan

<table>
<tr><td colspan="2">Key Partnerships
Coordinating Commission of Public Transport of the State of Michoacán de Ocampo, Secretary of Economic Development and Secretary of education of the State of Michoacán de Ocampo
Municipal authorities
Companies and organisations of work and school transport
Universities</td><td>Key Activities
Service Regulation
Operation
Vehicle Safety Elements
Creation of model vehicles

Key Resources
Human Resources
Regulatory Resources</td><td rowspan="2">Customer Relations
Insecure and without any government support

Channels
Discussions and site visits to learn about the operation of the service
Dialogues with the agencies involved to generate coordinated strategies
Communication strategies to bring regulation closer to all municipalities</td><td rowspan="2">Customer segments
Students
Workers from the different productive sectors
Student community</td></tr>
<tr><td colspan="2">Value offerings
Transport coverage not covered by the public service
Timetable coverage
Free services in some cases or facility to carry out other activities</td></tr>
<tr><td colspan="2">Revenue streams
Services free of charge or services
Outsourced services</td><td colspan="3">Cost structure
Contracts and agreements with companies or schools
Special services
Cost of incorporating security elements</td></tr>
</table>

Feasibility Desirability Visibility

BANGLADESH: A CASE OF ELECTRIC THREE-WHEELER VEHICLES

In Bangladesh, the paratransit sector primarily consists of electric three-wheelers (3W-EVs), known locally as easy bikes, autos, tomtoms, etc. These 3W-EVs are widely used for passenger transport, especially in urban areas (almost all districts of Bangladesh, except the capital city of Dhaka) and suburban areas throughout the country. Paratransit services provide a vital mode of transport for short to medium-distance commutes within urban and peri-urban areas. The vehicles have various capacities, ranging from 2-seater to larger 8-seater vehicles. It is estimated that Bangladesh currently has around 1 million 3W-EVs on the road and that there will be at least 1.5 million by 2030. While some are imported, local companies have also ventured into production to meet the growing demand.

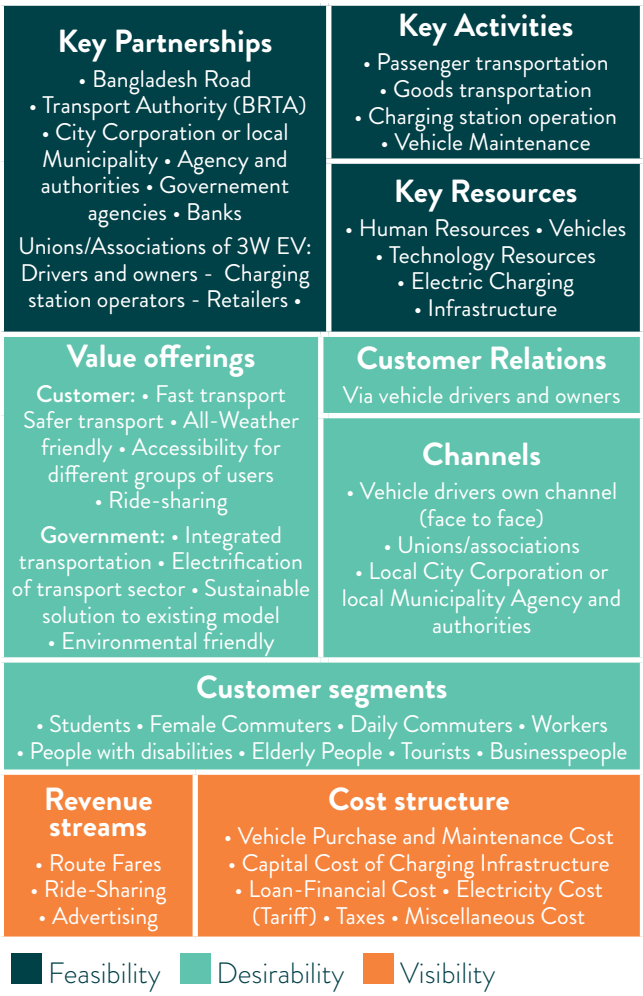
The paratransit sector in Bangladesh has undergone a significant transformation over time, primarily driven by changes in technology, economic factors, and government policies. This evolution has resulted in the proliferation of 3W-EVs as the dominant paratransit mode. These 3W-EVs offer a faster, cleaner, less noisy mode of transport and are a more energy-efficient alternative to traditional fuel-based transport.

The transformation process is continuing with a focus on future growth. Government policies, socio-economic indicators such as gross domestic product (GDP) and gross national income (GNI), and carbon tax parameters are expected to influence the growth rate of EVs in Bangladesh. The national government aims to enhance the quality of and add functionality to these vehicles. Sev-

eral local companies are developing eco-friendly 3W-EVs that run on solar power. These vehicles plan to feature internet of things (IoT)-enabled intelligent battery management systems and be zero-carbon emissions. In parallel, electric two-wheelers (2W-EVs) are also gaining popularity in Bangladesh due to their cost-efficiency compared to traditional fuel-based motorcycles. They offer significant savings on per kilometre (km) travel costs and are affordable for a wide range of consumers.

The paratransit sector in Bangladesh stands out on the global stage due to its thriving urban culture, dominance of 3W-EVs, economic significance, resilience, policy commitment to electrification, socio-economic inclusivity, and the unique cultural and geographical context in which it operates. The case serves as a compelling model for regions worldwide seeking to embrace paratransit as a solution to complex urban mobility needs.

Figure 5 – BMC for 3W-EVs in Bangladesh



ANALYSING THE PARATRANSIT SECTOR: BEYOND BUSINESS CHARACTERISTICS

The paratransit business framework is a powerful tool to describe and analyse the business environment of different local paratransit services. However, the BMC focuses on business characteristics, whereas other dimensions related to the microeconomics and political economy of the sector also need to be considered.

The paratransit sector can be viewed from many perspectives:

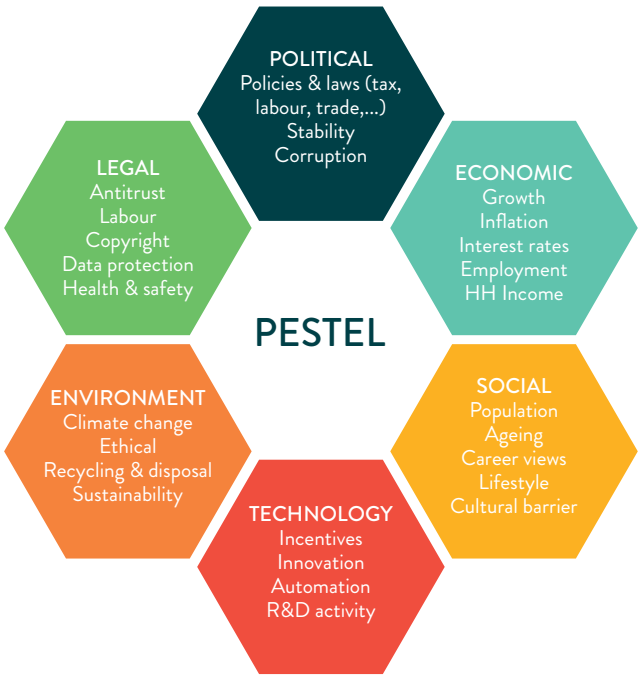
- As an investment for those saving money on vehicles.
- As an employer - the industry plays a socioeconomic role by allowing many to make a living.
- As a general interest service provider by allowing many people to move around.
- As a contributor to the economy, society, and cultural and social life of the community, which necessitates evaluation of the accountability and political legitimacy of the services provided.

Therefore, the paratransit business model should be complemented with tools that can help capture the complexity and multidimensionality of the sector.

PESTEL ANALYSIS: INTRODUCTION

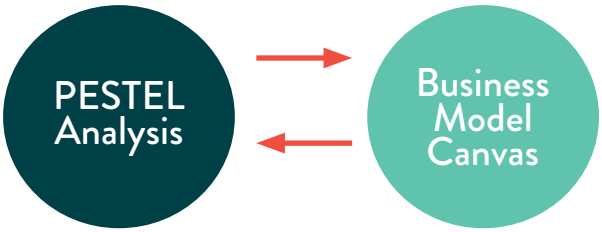
The PESTEL analysis looks at external environmental factors that influence an organisation or a system. It is a precondition analysis that is used in strategic management (Yüksel, 2012).

Figure 6 – Aspects covered in PESTEL analysis



The PESTEL approach can effectively complement the business model tool, as it or other similar tools can be used to deepen our understanding of the political economy and the internal and external environment in which the paratransit industry, and the companies in it, operates. Such analysis provides data and information that will enable the stakeholders to identify situations and issues that might be encountered in the future and help model the future of the industry. Figure 7 shows the relationship between the business model canvas and PESTEL analysis, which constantly feed each other with data and insights.

Figure 7 – PESTEL analysis relationship with BMC



PESTEL ANALYSIS: APPLICATION TO THE PARATRANSIT SECTOR

For the paratransit system, the PESTEL analysis can help highlight the elements in the six broad categories of analysis, as summarised in Table 2.

Table 2 – PESTEL analysis for paratransit

POLITICAL ENVIRONMENT	Institutional arrangement, framework, and responsibility allocation among different authorities. Specific structure (association, cooperative, company, etc.) and rules from the industry for vehicle owners, drivers, fare collectors, mechanics, etc. Regulations and tax policy. General interest role of paratransit services and their political accountability. Geopolitical context.
ECONOMICS	Conditions that influence operational costs, such as petrol prices and the use of diesel vehicles. Vehicle ownership and leasing models in the sector.
SOCIAL ASPECTS	City demographics – accurately estimating population growth is critical to selecting the right transport capacity to meet current and future demand. Service operator/staff sociology: working conditions and dignity. Passenger travelling conditions in the sector. Good health, road safety, and equity in serving the population. Transport culture.
TECHNOLOGICAL DEVELOPMENTS	Developments in technological science, innovations, and smart applications for vehicles in the transport sector. Data production and protection.
ENVIRONMENTAL ISSUES	Climate change. Natural risks.

ACCRA, GHANA: CONDUCTING A LABOUR ASSESSMENT BEFORE ENGAGING IN SECTORAL TRANSFORMATION. SOURCE: GLOBAL LABOUR INSTITUTE (GLI), MANCHESTER.

This case study looks at a methodology used to analyse the microeconomics and political economy of the paratransit industry in Accra. More specifically, it illustrates a way to capture the views and expectations of drivers and all other workers in the sector in order to transform it.

Field research was originally undertaken by the Global Labour Institute (GLI) to analyse the Accra paratransit industry (including trotro - minibuses, taxis, and okada – motorcycle taxis) from March to July 2021 as part of a study on public transport operations and performance and transition to scheduled services in Accra. The study was commissioned by GLI for the Ministry of Local Government and Rural Development's Ghana Urban Mobility and Accessibility Project (GUMAP) to support the Greater Accra Public Transport Executive (GAPTE) and local municipalities in enhancing mobility and accessibility in the Greater Accra Metropolitan Area (GAMA). It was financially supported by the Swiss State Secretariat for Economic Affairs (SECO).

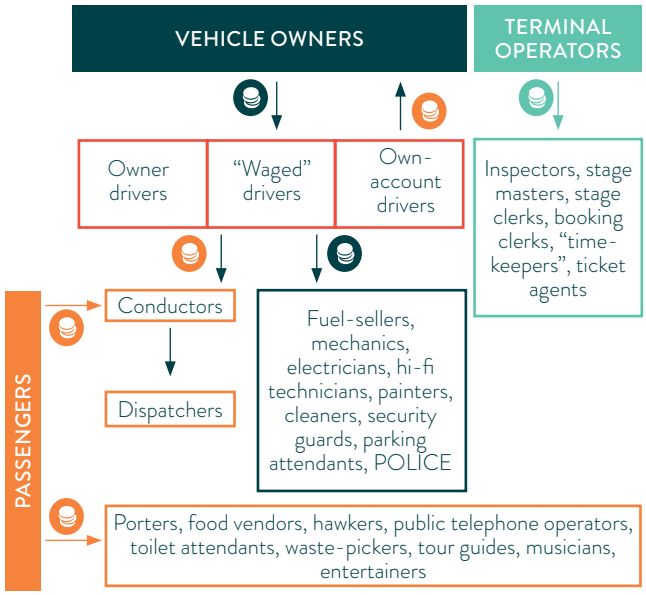
A street survey was conducted with 242 respondents on topics related to workforce characteristics, operations, problems faced at work, working conditions, and attitudes towards formalisation. In addition, focus group discussions were organised with trotro owners, drivers, and other staff involved in trotro service delivery, shared taxi owners and drivers, okada owners and riders, service workers, and station workers, including female workers. These discussions, in turn, were complemented by in-depth interviews.

Looking at the business model, it appears that very few workers understand or analyse their activity beyond immediate cash flow. There are large variations in operating costs and revenue. Some drivers are also entering a cycle of debt, making recapitalisation impossible and, thus, investment unreachable.

Beyond the business model, the larger picture of the industry shows that it is male-dominated – although a relatively larger proportion of women work in services (22%) and as okada workers (14%). 82% of workers are internal migrants, sending money home. No drivers or riders have had formal training, but, rather, have informally learned how to drive on the job. Working hours are long; 56% work more than 10 hours per day, 25% work more than 15 hours per day, and 90% work six or seven days per week.

The micro-economy of the paratransit sector is very complex, involving a web of micro-transactions between vehicle owners, workers, and passengers. The Accra trotro economy reflects a similar pattern to those observed in other sub-Saharan African cities.

Figure 8 – Typical paratransit industry flow chart
(Source: GLI 2019. Nairobi Bus Rapid Transit: Labour Impact Assessment)



The Accra study identified the following key issues facing the paratransit workforce:

- Impact on the business model: police harassment, traffic congestion, fuel prices versus fares.
- Operating aspects: bad road conditions, lack of secure access to land.
- Working conditions: lack of training opportunities.

- Technical issues: spare parts and tools, floaters.
- Lack of respect from passengers and the media and poor public opinion.
- Gender representation: discrimination, lack of respect, dangerous overloading, high numbers of accidents, sexual harassment.

Looking to the future, workforce feedback on several propositions for the transformation of the industry has been collected. Regarding the question of formalisation of paratransit services, most workers find it difficult to envisage a public transport system with a different business model to cash-based fill-and-run operations. Trotro workers are overwhelmingly negative regarding the prospect of scheduled services, because of a fear of decline in work and income, benefits for 'floaters' operating outside the stations, and the waste of expensive fuel. Most trotro workers (and owners) are opposed to or distrustful of the restructuring of the industry, although a minority is positive about it. Trotro, service, and station workers are overwhelmingly opposed to cashless payment, whereas taxi drivers and okada riders are slightly more in favour of it. Okada riders are strongly in favour of legalisation of their service, while other transport workers expressed mixed opinions. Union leaders are open to discussion with the authorities on formalisation and representing the drivers, provided conflicts of interest can be overcome.

Moving forward, the government should work with the unions to reorganise the system in the long term. Meanwhile, a series of immediate problems should be addressed, including stopping police harassment, cracking down on floaters, providing more bus stops and improving conditions in the terminals, providing access to affordable, good quality tools and spare parts, secure, affordable land, and affordable finance, and linking fares to fuel prices, in consultation with the unions.

CONCLUSION

There is a need to change the way in which the paratransit sector is viewed. First, it plays a crucial role as a major mobility provider and transports a large part of the passenger segment in both cities and rural areas in many countries in the Global South. Second, its externalities and weaknesses need to be addressed before it can be transformed. This requires a deeper, holistic understanding of the sector, to help us evaluate potential strategies and levers for sectoral transformation. Such an understanding should help contribute to a mindset change of all stakeholders involved in delivering the services or potentially managing or regulating them.

To contribute to the transformation of the paratransit sector, this paper has developed a specific business model framework for the sector. Based on the traditional business model canvas, this framework can be complemented, adjusted, and enriched to better describe the local context and characteristics of the specific paratransit services being analysed.

However, the BMC approach may miss out on important aspects of the political economy. Therefore, it may be complemented by an approach such as the PESTEL analysis that pays attention to broader political aspects, socio-economic elements, legal issues, technological developments, and environmental aspects. Finally, these aspects may be applied to help identify the specificities of different local contexts in a variety of cases, and the conclusions of these analyses may differ from one context to another. This paper showcases several case studies across four different continents where paratransit services play a major role, which have been described using the BMC and PESTEL analysis.

The next step is to identify the levers to be activated to facilitate a transformation of the paratransit industry that will benefit users, the community, and all those involved in delivering the service. Strategies should focus on operating services in an effective way to meet the demand, with emphasis on improving physical infrastructure, timely provision of service, and fares, integration with mass transit where available, greener transport services, and better working conditions for those involved in operations.

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The International Association of Public Transport (UITP) Paratransit Working Group has been working on three complementary topics, or work packages: 1) definition and planning of paratransit; 2) data collection; and 3) a business model framework for the sector. Work Package 1's (WP1) aim is to define the role and function of paratransit, Work Package 2 (WP2) looks at data as a means to better understand the sector, and Work Package 3 (WP3) focuses on understanding the business model by outlining a holistic framework based on the business environment.

This Policy Brief was prepared by the Paratransit Working Group and led by Büsra Buran, iett, vice chair of the working group

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