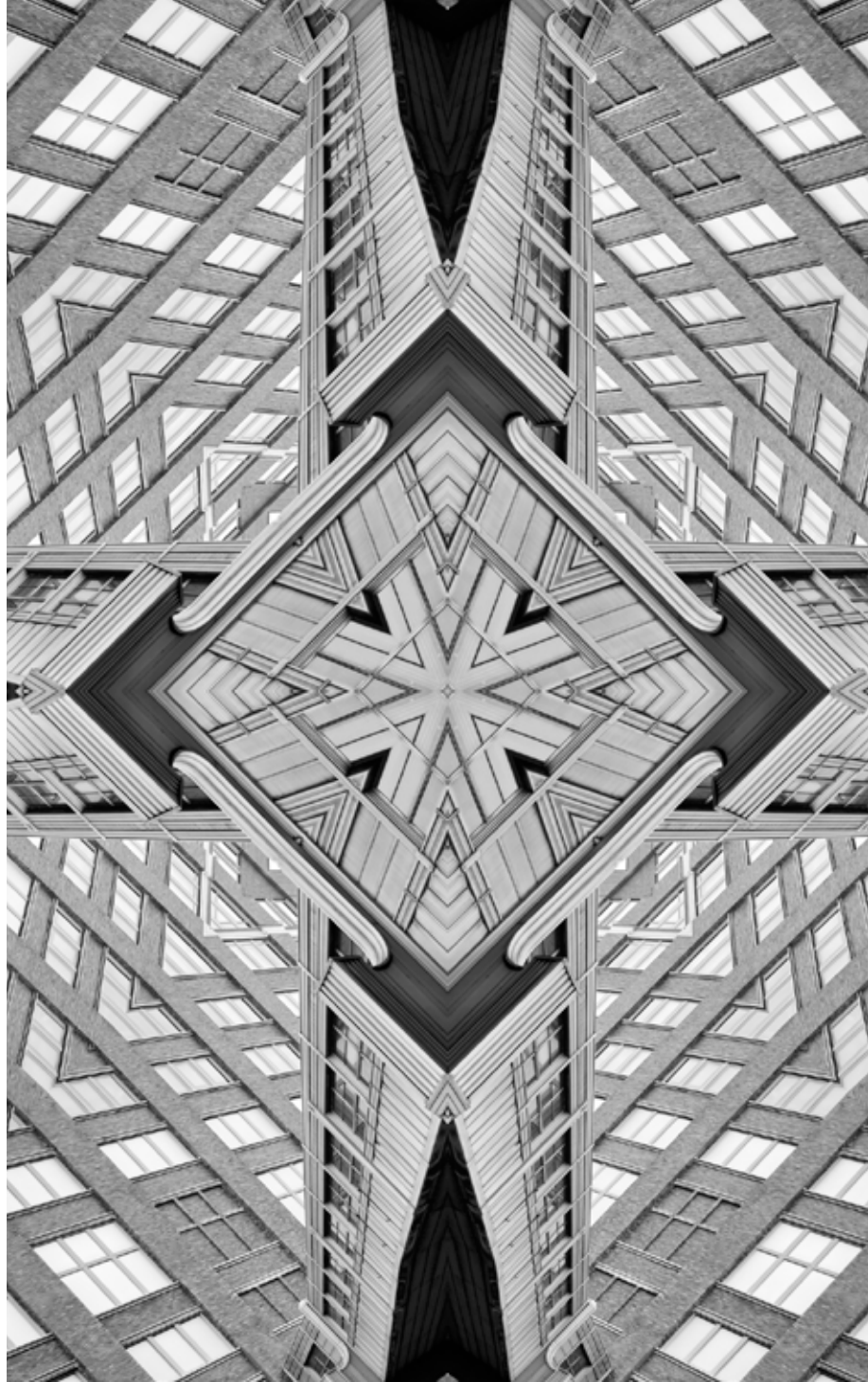


Issue

Brief

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The Bike-Taxi Alternative to Enhancing Urban Mobility in India

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Abstract

Despite concerted efforts to improve urban public transport, the use of personal vehicles has increased across India. City administrations must consider promoting the use of paratransit vehicles, such as bike-taxis, that can provide ridership to more commuters than a private vehicle. While bike-taxis are prevalent in some Indian cities, their use is curtailed elsewhere in the country by state policy and statutes. Amid growing city congestion, bike-taxis are a convenient and affordable transit option that must be encouraged through a regulatory regime that builds in safety and prevents misuse.

In the context of urban transport, India placed greater emphasis on moving vehicles than on moving people until the beginning of the 21st century, resulting in an extensive neglect of the public transport sector. For instance, the share of buses in the country's total motor vehicle fleet was 11 percent in 1951 but fell to a mere 1.1 percent in 2001,¹ and the Kolkata Metro was the only urban metro service in India until December 2002 when the Delhi Metro began operations.² In 2014, the Indian government formulated the National Urban Transport Policy,³ which prioritised mass public transport at both the central and state level, leading to the creation of more metro and bus rapid transit systems, and the expansion of bus fleets. Thirty-four metro rail projects (at a cumulative length of 1230 km) were under implementation across the country at the end of 2021,⁴ and a combined 754-km of metro network was operational as of March 2022.⁵ For smaller metropolitan cities, 'metrolite'^a systems are being implemented⁶ as per the 2017 Metro Rail Policy.⁷ Additionally, about a dozen cities have bus rapid transit systems,⁸ with 35,000 operational buses, 80 percent of which are concentrated in eight cities alone.⁹

However, despite the attempt to boost and improve public transport, very few cities and towns in India¹⁰ have adequate public transport—of the 450 cities with more than 100,000 inhabitants, only 10 have suburban or metro rail service and about 65 cities have some form of formal bus transport.¹¹ At the same time, the sale of private vehicles has grown steadily. Across India, the number of operational vehicles increased from 141.8 million in 2011 to 295.7 million in 2019.¹² In 2010, 1.9 million cars were sold in the country, and India became one of the fastest-growing markets for cars globally, second only to China.¹³ In 2021, despite the pandemic challenge, car companies sent 3.82 million units to dealerships.¹⁴ Similarly, in 2019, 21 million units of two-wheelers were sold in the country, nearly double the 11.77 million units sold in 2011.¹⁵ This growth is perhaps attributable to the fall in prices of cars and two-wheelers, rise in family incomes, easy availability of loans, and absence of strict laws restricting car ownership in cities. Additionally, a 2021 survey indicated a shift towards personal vehicles due to the fear of using public transport arising from the COVID-19 pandemic.^{16,17}

a Metrolite denotes a light rail transit system designed for cities with low ridership at costs lower than the metro.

As urban spaces and private vehicle use grow across the country, it is prudent to consider alternative motorised modes of transport to ease congestion, such as intermediate public transport (or paratransit). Paratransit is a transportation service—such as taxis, autorickshaws, and bike-taxis—that supplements mass public transit systems by providing individualised rides without fixed routes or timetables.¹⁸ Urban activities are often spatially dispersed, and accessing these through mass public transit is time-consuming. As such, paratransit options can cater to work and leisure trips, or occasional (such as to airports and railway stations) and emergency trips, meeting first and last-mile connectivity needs^{b,19} as well as point-to-end trips.²⁰ As relatively cheap modes of transport, paratransit options can make transportation more affordable and accessible for all. They are often available in ride-sharing forms and via mobile-based ride-hailing apps, enhancing their accessibility.²¹

Among the several available paratransit alternatives in India, bike-taxis—motorbikes that operate as taxis—must be popularised for use. Although some Indian states have allowed bike-taxis to operate, many others are still considering the option, particularly because of the lack of clarity in the regulations regarding mobility as a service.^c This brief assesses the bike-taxi scenario in India and makes the case for enhanced bike-taxi usage to address urban mobility needs.

b First- and last-mile connectivity denotes the beginning or end of a trip made by using public transportation.

c Mobility as a service is the integration of multiple types of transport services into a single mobility service that is accessible on demand through a joint digital channel. Public and private transportation services are combined through a unified gateway that creates and manages trips for each customer who can pay via a single account.

Bike-Taxis: The Indian Context

Various countries around the world have permitted the use of motorbikes as taxis. Bike-taxis are particularly popular in Latin American countries, such as Mexico, Colombia,²² and Brazil. Indeed, most Brazilian cities have bike-taxi services,²³ although they are unregulated in smaller towns and are under similar regulations as taxicabs in the larger cities.²⁴

Bike-taxis are widely prevalent in many Southeast Asian countries, such as Cambodia, Thailand, Indonesia, Timor-Leste and Vietnam,²⁵ particularly on account of the associated low costs and quick travel time.²⁶ In Indonesia, bike-taxis (locally known as *ojek*) are popular as they save both time and money amid the massive traffic congestion in the cities.²⁷ The entry of aggregators such as Gojek has helped formalise Indonesia's bike-taxi sector.²⁸ Thailand, meanwhile, has had a functioning bike-taxi sector for many years, and regulations^d were introduced in 2005.^{29,30}

Similarly, bike-taxis are also popular and widely used across Africa, in Nigeria, Cameroon, Benin, Uganda, Kenya, Rwanda, Sierra Leone, and Tanzania.³¹

As of end 2018, about 13 states and union territories in India had permitted bike-taxis to operate.^{e,32}

Regulatory landscape

The legal position on bike-taxis in India is slightly complex. As per the Constitution, road transport falls under the Concurrent List,³³ thereby allowing both the Centre and state governments to frame and enforce rules and regulations on transport. The 1988 Motor Vehicles Act defines a 'contract carriage'³⁴ as a motor vehicle that carries a passenger or passengers for hire or reward and is engaged under contract. The contract is entered into with a person who holds a permit, and the journey is performed from one point to another without stopping to pick up or drop off a passenger between those two points. Contract carriages include maxicabs (a motor vehicle that carries more than six but no more than 12 passengers, excluding the driver, for hire

d They provide, inter alia, rules for setting fare rates, license plate (yellow plate with a black front), drivers wearing specified jackets and safety equipment such as a helmet for passengers and penalties for traffic violations.

e These are Goa, Haryana, Andhra Pradesh, Gujarat, Telangana, West Bengal, Punjab, Rajasthan, Bihar, Chandigarh, Jharkhand, Madhya Pradesh, and Meghalaya.

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or reward³⁵) and motorcabs (a motor vehicle that carries a maximum of six passengers, excluding the driver, for hire or reward³⁶).³⁷ Notably, as per the Act, a motor vehicle cannot have less than four wheels.³⁸ As such, a two-wheeled motorbike does not fit the definition of a motor vehicle and, therefore, cannot operate as a contract carriage.

Nevertheless, government departments have long been considering the legalities of allowing bike-taxis to operate. In 2004, the Indian government allowed motorbikes to be used as transport vehicles and their registration as such, thereby permitting motorbikes to carry one pillion passenger on hire.³⁹ In 2016, a committee instated by the Ministry of Road Transport and Highways concluded that state transport departments could allow two-wheeler taxi permits, similar to those issued for city taxis.⁴⁰ The committee noted that allowing bike-taxis to operate would offer an economical and convenient last-mile connectivity solution to commuters and aid the economy as it would facilitate the utilisation of idle assets. The committee also presented bike-sharing guidelines, and a 2018 NITI Aayog report included several models on implementing bike-sharing transit services.⁴¹

In the light of these recommendations, and despite India not having a central legislation on bike-taxis, individual states can decide on allowing such transit services to operate. To be sure, while replying to a question on the legality of bike-taxis in parliament in December 2018, the Minister of State for Road Transport and Highways confirmed that states may issue permits for bike-taxis under sections 72 and 73 of the Motor Vehicles Act, and that the government was in favour of shared mobility, which will help reduce the congestion in cities and ease traffic jams.⁴²

Operational scenario

In 1981, Goa became the first state to permit bikes to operate as commercial vehicles and notified 64 motorcycle taxi stands across the state.^{f,43} In 2016, Mizoram became the second state in India to allow bike-taxis to operate, stipulating that only bikes that were less than two years old and had a speed capability of 125cc or more would be eligible for permits. It also mandated that drivers wear a yellow helmet with the word 'taxi' written in red on the front and that the bike have a yellow registration plate.⁴⁴

Bike-Taxis: The Indian Context

In 2016, West Bengal permitted bike-taxis to operate⁴⁵ as commercial vehicles after considering public suggestions and the central government's recommendations.⁴⁶ Bike-taxis can be registered as contract carriages in the state, provided the pillion rider is given a helmet and has minimal baggage during the travel. Operational limits in terms of distance and area have also been prescribed.⁴⁷ Similarly, based on the central government's recommendation, the government of Haryana has permitted the operation of bike taxis.⁴⁸

Karnataka banned the use of bikes-taxis in 2016 due to several instances of guidelines being violated,⁸ and aggregators were asked to approach the Road Transport Authority of India to obtain permission to operate a bike-taxi. In July 2021, Karnataka permitted electric bike-taxis to operate in the state,⁴⁹ with the aim of providing affordable first- and last-mile connectivity, promoting urban mobility, and assisting commuters to access public transport.⁵⁰ The state government projected that greater flexible entrepreneurship opportunities will be generated. These factors led to the introduction of the Karnataka Electric Bike Taxi Scheme, 2021.⁵¹ As per the scheme, e-bike-taxi operations are restricted to agents and entities exclusively engaged in the business of providing e-bikes to passengers to hire for a journey; and individuals providing their own e-bikes to passengers to hire for a journey.⁵² Notably, the scheme is applicable only to e-bikes and not to non-electric two-wheeler vehicles. It also stipulates a distance limit of 10 kms, prohibits the hiring of bikes by those under the age of 15, and prescribes the use of helmets and reflective jackets by the driver and passenger.⁵³ Furthermore, the scheme requires that the name and details of the service provider be affixed on the exterior of the e-bike, and any aggregator operating more than 50 bike-taxis must mandatorily adopt GPS tracking of the vehicle.⁵⁴ The scheme is in line with the Karnataka government's objective to encourage the manufacture of e-vehicles in the state.⁵⁵ Indeed, the scheme clearly states that one of its aims is to reduce pollution in cities and promote environment-friendly transport solutions.⁵⁶

In early 2022, Maharashtra's transport commissioner said that the state is considering granting permission to bike-taxi services, but will first conduct a study to assess the vehicular density of cities in the state and the feasibility of the service.⁵⁷ However, for now, bike-taxi operations in Maharashtra are prohibited and violations are punishable.⁵⁸ For instance, in February 2022, Pune city officials seized 250 two-wheelers that were operating as a bike-taxi service.⁵⁹

Bike-Taxis: The Indian Context

While considering permitting bike-taxis, states must also contend with potential opposition from taxi and autorickshaw unions. In Maharashtra and Karnataka, for instance, taxi and autorickshaw unions have been protesting developments to allow bike-taxis to run as commercial transport vehicles as this will certainly impact their services.⁶⁰ Nevertheless, commuters in Karnataka⁶¹ and Maharashtra⁶² appear in favour of bike-taxis since it is a more affordable and convenient mode of transportation and aids in job creation.

“As of 2018, only Goa, Haryana, Andhra Pradesh, Gujarat, Telangana, West Bengal, Punjab, Rajasthan, Bihar, Chandigarh, Jharkhand, Madhya Pradesh, and Meghalaya have permitted bike-taxis to operate.”

^f Currently, 70 more stands are pending notification.

^g Karnataka had barred Ola for six months for running bike-taxis illegally. The state also seized 62 two-wheeler taxis that were put into operation by Uber as this was in violation of the Motor Vehicles Act. They were operating under white number plates meant solely for private vehicles and not permissible for commercial vehicles.

The Case for Bike-Taxis

The public acceptance of bike-taxis in many states are one of the several reasons why state governments must permit such paratransit services. As urbanisation intensifies, vehicle density in cities is certain to rise further, generating more traffic, congestion, and air pollution. In such a scenario, four-wheelers will struggle to operate, especially if travel time is of concern. The need for a smaller, faster, cheaper, and more convenient mode of transportation is best served by two-wheelers. The ability to navigate busy traffic and the low cost in comparison to cars have made two-wheelers a dominant feature of the Indian urban mobility landscape, such that they comprised 79 percent of all vehicles sold in the country in 2018.⁶³ The success of the cab aggregator business model and the high demand for two-wheelers has improved the prospects for bike-taxis in the country.⁶⁴ Additionally, India's bike-taxi industry has the potential to generate over two million livelihood opportunities and about US\$5 billion in revenue.⁶⁵ Indeed, the advantages arising from permitting bike-taxis to operate can be summarised in the following points:

- Providing first- and last-mile connectivity
- Generating livelihood opportunities
- Assisting the local economy
- Providing greater affordability to commuters
- Providing greater convenience to commuters through quick availability
- Saving time by better ability to navigate traffic congestion
- Helping commuters reach areas inaccessible by four-wheelers
- Easing traffic woes in cities
- Improving linkage with public transit systems
- Ability to ply on difficult terrain
- Ability to integrate with app-based platforms
- Providing demand responsive and real-time services

The Case for Bike-Taxis

India is a ripe market for micromobility, transportation over short distances provided by lightweight, usually single-person vehicles such as bicycles and scooters.⁶⁶ Most of India's smaller cities and towns have very limited or no public transport, and where available, these are mostly unviable for shorter journeys. Moreover, first- and last-mile connectivity provisions are generally weak. Micromobility options like bike-taxis can fill this gap.

Indeed, bike-taxis already have a sizeable presence in the states where they are allowed to operate, and aggregators have played a crucial role in their uptake. For instance, Ola Bike, which first began operations in Gurgaon, Faridabad, and Jaipur in 2016, is now available in 200 cities and towns, and assesses that the real potential for bike-taxis is in India's smaller towns and cities, where people are experiencing on-demand transportation for the first time.⁶⁷ Similarly, Uber operates bike-taxi services in 30 cities,⁶⁸ with plans to expand to 200 others.⁶⁹ Rapido, functioning exclusively in the two-wheeler rental space, has its bike taxi services in 100 cities in India.⁷⁰

Needed regulation

As bike-taxis become more prevalent, governments must introduce regulations on the aspects of safety and emissions. The safety related rules can include: a vehicle fitness certificate for the bike; prescribed speed limits; a minimum age for the driver; service providers must have insurance coverage, both for accident and death, for the driver and the passenger; drivers should be given mandatory safety training by the service provider; carrying of a first-aid kit and helmets for the passengers; provision of mandatory GPS tracking; emergency response numbers; and maximum number of hours a driver should operate. Additionally, as working women have shown a greater inclination to use bike-taxis,⁷¹ certain rules must be adopted to ensure their safety, such as conducting a thorough background check of the drivers, employing more women drivers, GPS tracking, and SOS services.

Bike-taxis will need to be climate-friendly and mandated to adhere to emission standards. All non-electric bike-taxis will have to be phased out gradually and replaced by e-bike-taxis. Bike-taxis will also need to be integrated with public transport through route rationalization.^g Additionally, traffic regulation must be an area of focus while permitting bike-taxis. Differentiated and higher penal provisions for traffic rule violations by bike-taxis should be considered.

^g Route rationalisation is the process of designing routes and service levels of a transportation system that will bring in the best efficiency in service delivery based on a study of components such as supply and demand, frequency, boarding and alighting, and load factor.

Conclusion

As India's cities grow and congestion increases, it is imperative to adopt modes of travel other than private transport. The expansion of public transport services is already underway in several major cities to cater to the rising mobility needs, and these are being made available at reasonable rates. Paratransit vehicles such as bike-taxis can be considered as an additional transport alternative, given their utility in terms of time and cost for certain kinds of travel. Crucially, bike-taxis will provide a positive impetus to the urban economy and generate much-needed employment opportunities.

There is no doubt that commuters will benefit from the addition of bike-taxis to their choices of transport, even as their deployment may face opposition from other transport unions, such as those of taxis and autorickshaws. Greater competition could improve the quality of travel experience for commuters. Given that the central government has encouraged the use of this paratransit service, it is imperative that states enact the necessary rules to govern the operation of bike-taxis, striking a balance between safety, emissions, and commuter convenience. [ORF](#)

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