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Preparing for the Future of Urban Mobility in India

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ABSTRACT

The Observer Research Foundation, with support from UBER, convened a roundtable on *The Future of Urban Mobility in India* in May this year in Mumbai. Participants also gathered in smaller groups to outline key concerns currently limiting urban mobility – such as supporting infrastructure, principles for regulating the ride-sharing industry, and dynamic pricing.

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Officials from the Maharashtra state government joined the discussions with members of civil society working at the intersection of innovation and urban mobility, business, and academia. This report is an outcome of the discussions and recommendations proposed by the participants at the roundtable. As India's urban hubs continue to become more congested and polluted—and with increasing road fatalities and inequity in access—India will need to find a solution to fix its urban mobility crisis. Expanding public transportation services will be key to transforming mobility in India's urban centres, along with efficient use of existing roads and smarter traffic management through technology-based interventions.

INTRODUCTION

While the majority of Indian citizens still live in rural areas, last estimated at 70 percent of the total population[1] — cities in India are also growing, with the number of inhabitants currently in the hundreds of millions. By 2030, India will see the rise of some 68 urban sprawls, each with a population of more than one million; the entire continent of Europe only has 35.[2] It is indisputable that cities are the engines of economic growth. To realise the full potential of its economy and demography, India must not only look to increase its rate of urbanisation but also enhance the quality of life in existing cities. Today, Indian cities are characterised by increasing levels of congestion, pollution, road fatalities, and inequity in access. To build inclusive, safer, and more sustainable cities of tomorrow, technology will play a decisive role in identifying mobility gaps and transforming existing transportation services.

The discussion around urban mobility in India stands transformed today for two reasons. First, technology has enabled real-time analysis of public transportation routes and traffic patterns that was previously not possible. Second, public sector agencies have now begun to encourage the use of public transportation through new mobility business models such as on-demand and multimodal trip-planning applications.[3] This is the reflection of a global trend where governments and businesses are exploring mobility solutions through multimodal transportation — where users will have the option of seamlessly integrating services like public transportation and ride-sharing, instead of having to choose one over the other. Integrated payment systems such as London's Oyster[4] and Singapore's EZ-Link[5] allow users to opt for different modes of public transportation through a single smartcard. These solutions, however, cannot be realised through the efforts of any one entity alone. Integration will require collaborative efforts by a diverse set of stakeholders: among them, central and state governments, transit agencies, infrastructure developers, transportation service providers, and data scientists.

As companies explore different ways to provide mobility in Indian cities, through ride-sharing, bus aggregation and car rentals[6] — stakeholders must agree on the guiding principles for regulating the on-demand and ride-sharing industry. Recognising these realities, the Observer Research Foundation (ORF), with support from UBER, convened a roundtable on *The Future of Urban Mobility in India* in early May in Mumbai. The participants included Maharashtra government personnel, and members of civil society working at the intersection of innovation and urban mobility, business, and academia. In addition to a roundtable discussion, a workshop was organised where breakout groups outlined key concerns currently limiting urban mobility—from infrastructure deficits to the absence of clear regulatory principles for on-demand and ride-sharing applications. Following the structure of the workshop, the recommendations are divided into three sections: evaluating infrastructure and promoting innovation in mobility, regulation of the ride-sharing industry, and adoption of dynamic pricing.

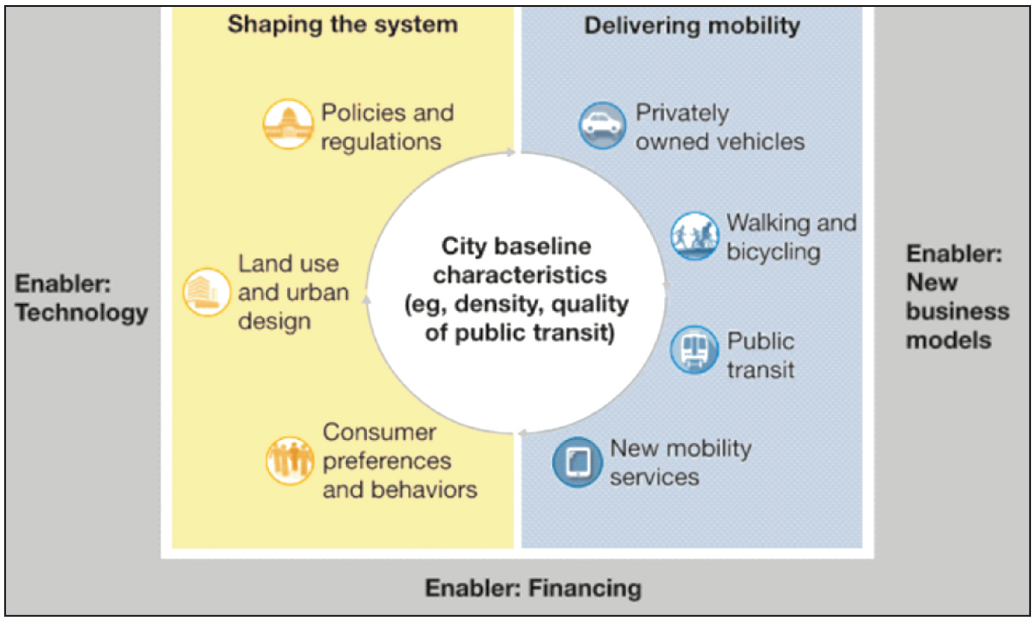
I. Evaluating transportation infrastructure and promoting innovation in urban mobility

The roundtable participants agreed that deficiencies in supporting infrastructure would need to be addressed before adopting new technologies in urban mobility such as driverless or electric cars. The transportation infrastructure in India—consisting of roads, suburban railways, metro lines and fuel stations—is inadequate in supporting current needs or any future rise in population. Poor transportation infrastructure development may be attributed to lack of political will, skills, and coordination amongst public agencies both at the state and city level. For example, there is insufficient route allocation for public transportation, leading to over-crowding in some routes and deficit in others. Experts have earlier noted other reasons for delay in development of infrastructure, including failure in devising and applying common design standards during construction and high costs and time-consuming processes involved in land acquisition.[7]

Further, the absence of reliable travel data, until now, has made it difficult for public officials to assess the impact of infrastructure projects on urban mobility and to identify future needs. This is no longer the case with developments in geo-mapping technologies and open standards, with GTFS (General Transit Feed Specification) being the most commonly used. Transit agencies need to make GTFS feeds on routes and schedules and GIS locations on transport infrastructure publicly available. Some transit agencies have also released data sets on budgetary, performance and ridership data.[8] Government

officials and businesses can make pointed investments in supporting infrastructure by analysing historical data on roadways and transportation. This data can be useful for policymakers, transit agencies, and urban planners to enable infrastructure to facilitate better mobility through efficient use of existing roads and smarter traffic management. Moreover, open transport data in other countries has led to the development of third-party mobile applications sharing real-time transit information, which enables users to plan their trips better, leading in turn to increased ridership and improved customer experience.[9] Indeed, studies have shown that open data in transportation presents huge economic opportunities—valued at between US$ 720 and US$ 920 billion globally—as it results in innovation in multi-modal planning apps and new mobility businesses.[10]

Figure 1: Factors affecting Urban Mobility



Source: Urban mobility at a tipping point, McKinsey & Company, 2015

Specific Recommendations

- The public and private sectors must collaborate to devise and develop India-centric solutions to fix the country's cities. Government agencies should invest resources to make transportation data open to the public to encourage innovation through development of new business models to mitigate the mobility crisis in the country.

- The private sector can share data on number of vehicles, traffic patterns, accidents, and user behaviour to allow policymakers to introduce evidence-based regulations on pricing and safety. Companies must share data in an anonymous, aggregate manner and effectively

address any privacy concerns of users when sharing data. The regulators, meanwhile, will need to ensure that proprietary rights of the companies are protected and consider the role of intermediaries to handle the data. In addition to this, regulators must have the systems in place to leverage the most from available data.

- Private car ride-sharing and car-pooling services will form only a part of the solution. Policymakers must look at revamping public transportation and infrastructure to transform urban mobility.
- Regulations must be introduced to encourage efficient use of existing roads and smarter traffic management. For example, not allowing trucks and large commercial carriers to ply city roads during the day.
- Policymakers must collaborate with data scientists to explore mechanisms to implement congestion pricing and dynamic pricing for parking spaces.
- The ride-sharing industry in the country must look at reducing, even eliminating, driver dependency on middlemen or intermediaries to procure cars. The ride-sharing industry must explore different credit-rating processes for their driver-partners.
- Transit agencies must ensure that buses are equipped with GPS tracking in order to provide real-time schedules and routes.
- Governments must ensure that the adequate ecosystem is in place before adopting new technologies in mobility. For instance, to adopt electric vehicles, cities must have first installed sufficient number of charging stations.
- Authorities must consider revising the regulatory framework in place to use vehicles for commercial use.

II. Principles for governing the ride-sharing industry in India

Participants in ORF's roundtable agreed that regulations governing the ride-sharing industry must promote user safety and competition in the market. However, regulation should not dictate business models and must be non-prescriptive or 'light touch'. After all, the transport department is usually an incumbent in the market and must not play the role of a regulator.

To guide regulation, principles based on fairness, equity and safety must first be established with the purpose of incentivising new and smaller players

in the market. Regulation—or the lack of it—plays an important role in promoting innovation. This, when companies are trying to push the government to legalise new mobility models such as using private cars for ride-sharing [11]— with some state governments contemplating banning ride-sharing altogether.[12] However, regulators have the additional burden of protecting user safety and would be cautious before adopting new business models. As drivers of traditional taxi services[13] and ride-sharing companies[14] demand government intervention to safeguard their interests, to prevent falling incomes and changing incentive structures[15]—companies must be transparent in their policies and directly address issues involving their drivers. Companies must share with regulators their data on pricing mechanisms and user behavior, such as user demand and willingness to pay, to help promote evidence-based policymaking.

In Maharashtra, the enforcement of the City Taxi Rules, 2017[16] might have an adverse effect on competition as it imposes a significant license fee on driver-partners seeking to operate through ride-sharing applications. Ride-sharing companies should be allowed to regulate themselves and the point of entry for public regulation must only lie in safeguarding consumer safety and competition in the market. The licensing authority must not prescribe either a price floor or cap on surge pricing, and regulators must instead consult with the Competition Commission of India (CCI) before regulating pricing.

Specific Recommendations

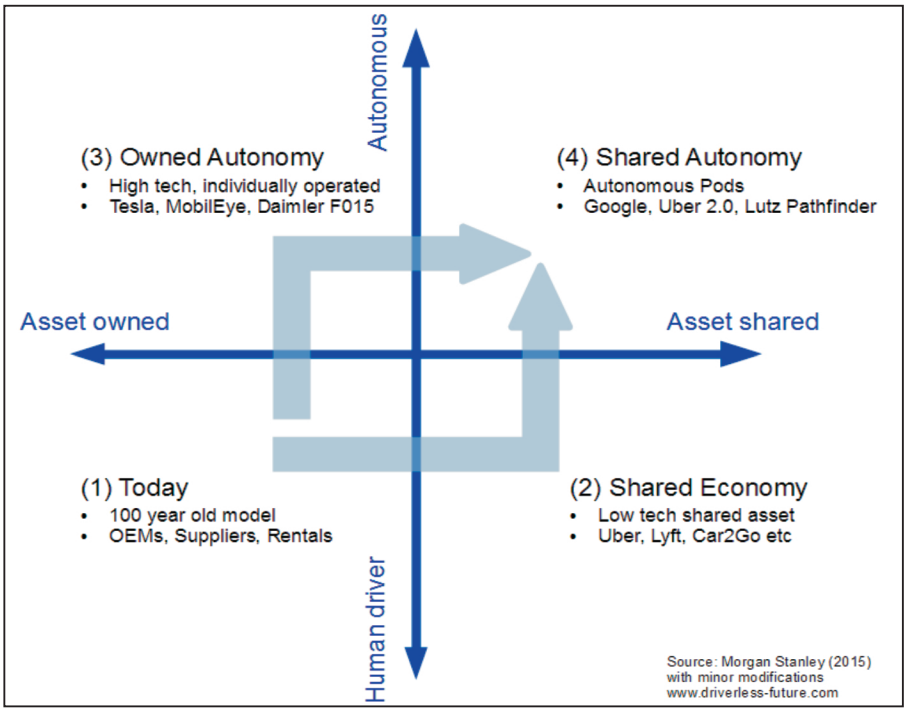
- The government, along with other stakeholders, must first agree on general principles to govern the ride-sharing industry before adopting any regulation.

- Ride-sharing platforms must be allowed to self-regulate. Authorities must avoid excessive regulation—for instance, the Maharashtra City Taxi Rules requires app-based taxis to adhere to a minimum limit for engine capacity and requires operators to have 30 percent of the vehicles on their platform over 1400 cc.

- Regulators must consult CCI to ensure that policies on licensing, vehicle standards and pricing are not anti-competitive—they must not act as a barrier to entry for drivers looking to join taxi aggregators.

- Accidents and criminal behaviour involving their drivers during the course of the journey must be mitigated through minimum insurance.

Figure 2: Four Stages of Mobility



III. Adopting dynamic pricing to meet urban mobility challenges

Ride-sharing companies price their fares dynamically based on variables including estimated time and distance of the predicted route, estimated traffic, and the number of riders and drivers using the service at a given moment. [17] During high demand for rides, prices peaks to reflect the 'surge' in demand to ensure that pickups are available for riders who are willing to pay the increased fare. UBER has attracted criticism for inflating prices after terrorist attacks,[18] during natural disasters[19] and even while Delhi implemented its odd-even scheme in early 2016.[20] In the aftermath of the London Bridge attack in June this year, UBER suspended their surge pricing after some delay[21] and refunded those users who were charged an increased fare[22]— a practice the company has followed earlier during terror incidents.[23] State governments including Delhi,[24] Karnataka[25] and most recently, Maharashtra,[26] have clamped down on taxi aggregators charging surge pricing by introducing caps on fares. Governments introduce caps on surge pricing to safeguard consumer interests and prevent predatory pricing.

Surge or dynamic pricing helps in increasing vehicle utilisation and reliability, and dynamic pricing based on demand and supply of drivers on a real-time basis ensures access to mobility. However, during emergencies such as natural disasters and terrorist attacks, surge pricing must be suspended.[27] The dynamic pricing model must also be imported to parking spaces to deter

driving and to encourage public transportation. Dynamic pricing in the ride-sharing industry has been successful in influencing user behaviour in India. In the future, policymakers must consider dynamic pricing mechanisms based on variables such as road congestion, fuel efficiency, and carbon emissions.[28]

Specific Recommendations

- Ride-sharing applications must suspend surge pricing during natural calamities, civil unrest, terrorist attacks and in other special circumstances prescribed by the state government.
- The CCI should intervene in pricing of ride-sharing applications only when the anti-competitive effects of the same can be proven.
- The State Government may prescribe fares temporarily to arrest instances of anti-competitive practices after due consultation with the CCI.
- Use dynamic pricing to charge for parking—on streets and in parking lots— to discourage people from using personal transportation.

India's urban mobility challenge will only become more acute in the coming decade as cities become more crowded, polluted and unsafe. Any mobility crisis is a unique one, seeing as it involves a multitude of actors from transit agencies to ICT entrepreneurs. To meet the challenge effectively, a dialogue between stakeholders is essential to evaluate assets and to devise innovative mobility solutions. To encourage new businesses that leverage technology to provide mobility, policymakers must first agree on principles for regulation based on fairness, safety and equity. New mobility is a lucrative industry —one that can serve local communities and provide opportunities to many. As the Maharashtra government looks to make sustainable urban transport a priority, Mumbai can become a model for policymakers and entrepreneurs in India to use ICT to provide customised, safe and sustainable transportation to all.[29]

ABOUT THE AUTHOR

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