Regulating Ridesharing Services in São Paulo

Discussion Paper

175

Roundtable

Ciro Biderman

Fundação Getúlio Vargas,
São Paulo

Regulating Ridesharing Services in São Paulo

Discussion Paper

175

Roundtable

Ciro Biderman

Fundação Getúlio Vargas,
São Paulo

The International Transport Forum

The International Transport Forum is an intergovernmental organisation with 60 member countries. It acts as a think tank for transport policy and organises the Annual Summit of transport ministers. ITF is the only global body that covers all transport modes. The ITF is politically autonomous and administratively integrated with the OECD.

The ITF works for transport policies that improve peoples' lives. Our mission is to foster a deeper understanding of the role of transport in economic growth, environmental sustainability and social inclusion and to raise the public profile of transport policy.

The ITF organises global dialogue for better transport. We act as a platform for discussion and pre-negotiation of policy issues across all transport modes. We analyse trends, share knowledge and promote exchange among transport decision-makers and civil society. The ITF's Annual Summit is the world's largest gathering of transport ministers and the leading global platform for dialogue on transport policy.

The Members of the Forum are: Albania, Armenia, Argentina, Australia, Austria, Azerbaijan, Belarus, Belgium, Bosnia and Herzegovina, Bulgaria, Canada, Chile, China (People's Republic of), Croatia, Czech Republic, Denmark, Estonia, Finland, France, Georgia, Germany, Greece, Hungary, Iceland, India, Ireland, Israel, Italy, Japan, Kazakhstan, Korea, Latvia, Liechtenstein, Lithuania, Luxembourg, Malta, Mexico, Republic of Moldova, Montenegro, Morocco, the Netherlands, New Zealand, North Macedonia, Norway, Poland, Portugal, Romania, Russian Federation, Serbia, Slovak Republic, Slovenia, Spain, Sweden, Switzerland, Tunisia, Turkey, Ukraine, the United Arab Emirates, the United Kingdom and the United States.

International Transport Forum
2 rue André Pascal
F-75775 Paris Cedex 16
contact@itf-oecd.org
www.itf-oecd.org

ITF Discussion Papers

ITF Discussion Papers make economic research, commissioned or carried out in-house at ITF, available to researchers and practitioners. They describe preliminary results or research in progress by the author(s) and are published to stimulate discussion on a broad range of issues on which the ITF works. Any findings, interpretations and conclusions expressed herein are those of the authors and do not necessarily reflect the views of the International Transport Forum or the OECD. Neither the OECD, ITF nor the authors guarantee the accuracy of any data or other information contained in this publication and accept no responsibility whatsoever for any consequence of their use. This document and any map included herein are without prejudice to the status of or sovereignty over any territory, to the delimitation of international frontiers and boundaries and to the name of any territory, city or area. Comments on Discussion Papers are welcome.

Cite this work as: Biderman, C. (2020), "Regulating Ridesharing Services in São Paulo", *International Transport Forum Discussion Papers*, No. 2020/05, OECD Publishing, Paris.

Table of contents

Introduction

Taxis have monopolised individual transport for commercial purposes for more than a century. This situation has changed drastically very recently. Transportation network companies (TNC) such as Uber, Lyft and DiDi (among others operating at the local level) proposed a new product in the market. TNCs connect users to drivers and receive a fee for the service. In contrast to most cities in which TNCs operate, São Paulo opts to charge TNCs for using its roads. The rationale is that the infrastructure is public but the gains from its use by TNCs are private. Furthermore, charging TNCs may yield efficiency gains, as TNCs give rise to negative externalities. If the fee reduces overuse of the road, it will improve welfare.

Charging a price for using public infrastructure is nothing new. A classic example is charging for construction rights. In São Paulo, real estate developers pay fees that are intended to recoup the costs of providing services to their land and to capture a part of the large increases in the value of their land that can arise from government investments in large urban projects. The similarity is that developers would make a private gain based on a public investment. However, charging TNCs differs from charging developers in some respects. First, the road system is a congested public good. Adding a vehicle to an empty road does not affect the consumption of other road users. However, in a congested road the addition of an extra car imposes costs on all other drivers. This is generally not true for real estate (except where major density changes occur). Second, developer charges are based on the total value of the project (i.e. the present value of a future cash flow). Road user charges, by contrast, are levied on the flow of individual services.

This paper discusses the logic of charging for road use given that TNC drivers do not internalise the congestion costs their activity imposes. The following section discusses the congestion externality associated with driving. This is the main problem addressed when imposing a fee on the use of the roads. The third section discusses the main advances in urban transport that happened in the last decade and argue that, while the way people commute might change in the next decade, there is no guarantee that such changes will improve welfare. The fourth section discusses how to regulate the sharing economy and focuses on the need to both allow the new economy to grow and ensure that the society profits from it. The fifth section reports the recent evolution of TNC regulation in Sao Paolo and the sixth section discusses the political economy of the regulation of TNCs. The final section presents conclusions.

Congestion externality

Road congestion is a problem in almost any large city. Hours stuck in traffic jams represent a large loss in terms of welfare. The problem is that drivers do not internalise the costs they are imposing on all other drivers. Each extra driver slows down the road for all users. Although those costs are individually small, they add to a non-negligible amount, which has been estimated as amounting to as much as 10% of the GDP.

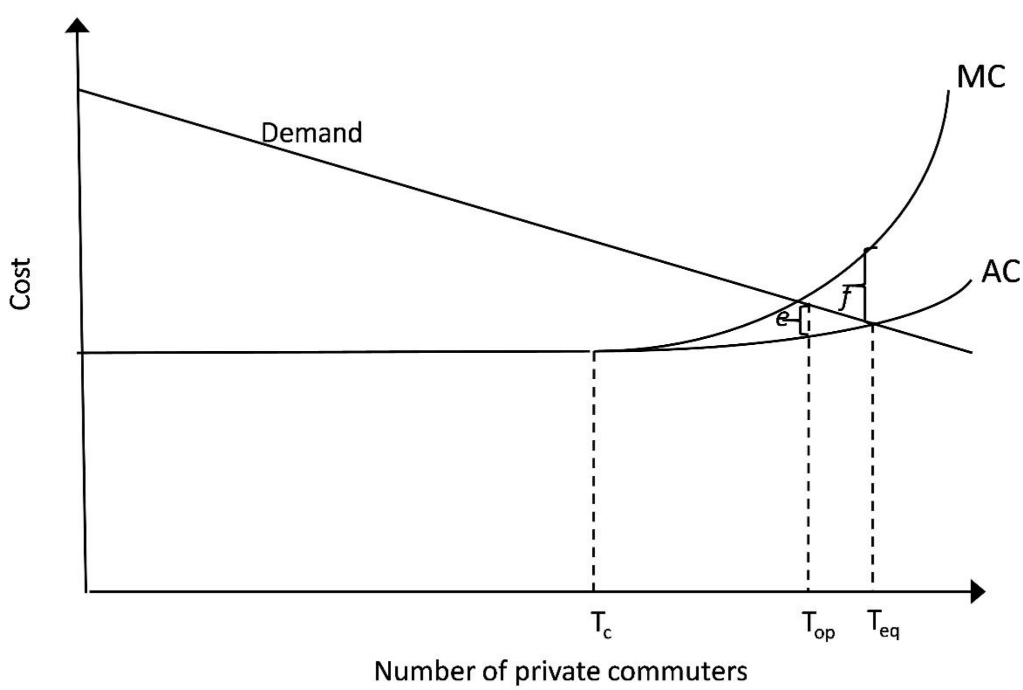
To understand the source of congestion externalities, start with a very simple model.[1] Imagine that there are just two ways to commute from your home to your job: you can use private or public transport. Public transport is segregated from private traffic, so its speed does not depend on the amount of commuters using it.[2] The speed of private transport, on the other hand, depends on the number of cars on the road. Up to some point (let us call it T_c – see Figure 1) there is no congestion on the road. An extra car does not reduce the speed of other cars. After that point, an extra car does reduce the speed at which all road users can travel. To be more formal, let us define the cost of commuting on the road to be:

$$c = m + wd/s \quad (1)$$

Where *c* is total commuting cost, *m* is the monetary cost of commuting (fuel, parking, depreciation, etc.) *w* is the individual cost per unit of time, *d* is the distance traveled and *s* is the speed of travel on the road. The cost of time might be the forgone wage per unit of time or some other measure.[3] Of course, *d/s* represents the time taken to travel distance *d*. If there are fewer than T_c cars on the road, this cost will not depend upon the number of commuters on the road (Figure 1). After this point, however, an extra car would slow all vehicles using the road. So speed is a function of the number of cars on the road, i.e. $s = s(T)$. Given this fact, the cost of commuting is also a function of the number of cars in the roads after T_c. So, equation (1) is rewritten as:

$$c(T) = m + wd/s(T) \quad (2)$$

Figure 1: Schematic approach to negative externality of private commuting



Source: Based on Brueckner (2011)

Consequently the total cost of commuting to the society is T*c*(T), i.e. costs are aggregated for all drivers.[4] The total cost to estimate the marginal cost of an extra driver on the road can be used:

$$c(T) + Tc'(T) \quad (3)$$

Where $c'(T)$ is the derivative of the commuting time when a new car is added to the road. Notice that the average cost of commuting is simply $Tc(T)/T=c(T)$. Consequently, the average cost of commuting after Tc is lower than the marginal cost. This is reflected in Figure 1 where the marginal cost (MC) is higher than the average cost (AC) after Tc. This is the point made before: the individual cost is the average cost but the social cost is the marginal cost. In other words, the "marginal" driver adds $c'(T)$ to the costs borne by all drivers, but from his standpoint the additional cost is just $c(T)$.

To find the market equilibrium the demand for transport needs to be added in the diagram. Evidently, the demand for a transport mode is always an indirect demand. The real demand is to commute from A to B. The modal choice decision always depends on the relative cost of all available modes. In this case we assume there are just two modes. Of course, we allow commuters to have their own modal preference. So, someone for whom the cost of using public transit is very high will be in the highest part of the demand curve represented in Figure 1. If there is no congestion fee the market equilibrium will happen when the demand crosses the average cost curve (T_{eq}). The reason is simple: for any individual commuter the alternative mode is more costly than driving on the road.

The problem is that the market equilibrium is not socially optimal. The socially-optimal equilibrium occurs where the marginal cost curve crosses the demand curve. The reason is that a user valuing the use of the road at less than the marginal cost (right after T_{eq}) will be willing to take the road, since the cost of the alternative (i.e. using public transit) is higher than the individual cost of using the road. However, the social cost is higher than the alternative cost for this commuter. Consequently, society gains from removing this driver: all drivers would be willing to pay to have one driver fewer on the road.

The best way to reduce the number of drivers on the road is to charge for its use. The ideal Pigovian tax would make the average and marginal cost curves identical. If the number of commuters in Figure 1 is T_{eq}, the tax should be equal to f, as represented in the diagram. If the number of commuters is equal to T_{op} the tax should be equal to e. If there are fewer commuters than T_c the tax should be zero. An interesting result is that the tax to disincentivise commuting at T_{eq} is f but, once it is implemented, it should eventually converge to e. This implies government should begin with a larger tax and then reduce it.[5]

In reality, there is never a unique road connecting jobs to residences. Roads are congested around the city centre and are not congested all the time, the main problem occurring during peak hours. Before and after peak hours roads are typically not congested and there will be no externality-based reason to charge the road user. Therefore, an optimal tax will vary with the time of the day, the day of the week and the trip location. It would also vary according to the number of passengers in the car and or the fuel used to move the car. This perfect schedule of taxation (changing according to the time and space) is known as Vickrey Pricing.

Singapore is the city that has most closely approximated this ideal form of congestion tax. It y relies on a number of technologies to implement the charging regime. For example, there are multiple sensors around the city, attempting to correctly price congestion. In comparison, London uses cameras to record vehicle registration plate numbers and levy the congestion charge on vehicles entering the charging zone, but the congestion charge is a single daily fee that does not take into account the number of miles travelled. The small number of other cities that have adopted generally applicable congestion charges have generally adopted similar approaches to London.

Transportation network company specific congestion charging

It is possible to implement Vickrey Pricing for TNCs in a simple manner. As TNC drivers must have a cell phone that sends a car's location to the platform, it is possible for the regulator, or the TNC itself, to control the flow of TNCs by adopting a location and distance-based pricing regime using this flow of location data. Furthermore, .having access to platform data in real time would make it feasible to change the fee based on actual speed.

One of the main criticisms of this policy approach is that in theory, all private vehicles should be charged, not just TNCs, since all privately-owned, single-occupant vehicles (SOVs) contribute to the negative externality of congestion.. However, it is not practicable to require all drivers to carry a cell phone reporting their location in real time, while issues of individual privacy would also arise from the adoption of such a requirement. Thus, while adopting a fleet-wide fee per mile based on location data from drivers, cell phones would be a very simple, efficient and effective mechanism to implement an optimal congestion charge, it is not currently feasible.

The Singaporean approach, outlined above, constitutes a straightforward way to levy a congestion charge on all cars, and can achieve an outcome very close to that achieved by Vickrey Pricing. However, few cities have successfully implemented a general congestion charge and. Singapore is the only city to implement it in a form which broadly approximates an optimal outcome. As noted above, the small number of other cities adopting such schemes have usually implemented a second-best solution, charging a fixed amount to enter the city centre. This reflects the substantial political difficulty involved in adopting a more economically efficient approach. It is also likely, in part, to be a function of the considerable cost of installing the networks of sensors required in order to implement time and distance-based charging effectively. Indeed the relative cost implications have led the Singaporean government to move toward the replacement of the current sensor-based system with one based on the monitoring of mobile phones.

However, as noted above, this option could well be politically unacceptable in many countries, with significant resistance likely to giving governments access to real-time location data on their citizens in order to implement an efficient and low-cost road user charging system. The fact that user-charging is already in operation in Singapore may explain the apparently greater acceptability of this use of private data in that context.

Alternative approaches to addressing congestion externalities

Other policy options also exist that can address the negative externalities arising from (individual) driving. One way is an excise tax on fuel. This is a less-preferred option since the price for driving on non-congested roads will be the same as for driving in congested roads. It is arguably possible to increase the efficiency of this pricing scheme slightly by lowering the tax as one gets further from city centres, but practical constraints, including the need to avoid arbitrage, are likely to be significant.

Adopting dynamic pricing for on-street parking spaces is another way to charge for negative externalities. The proposal by Shoup (2005) although outdated in terms of technology (being based on the use of parking meters) allows for significant pricing flexibility. If the parking fee is extended to companies that offer free parking to employees and/or customers and an excise tax is charged on private parking in inner-city locations this is, in theory, a better second best option than fuel excises,[6] particularly because parking in downtown areas does not compete with parking in the periphery; making arbitrage impossible. Conversely, since taxis and TNC vehicles do not have to park, this tool fails to provide appropriate incentives to this part of the vehicle fleet.

Urban mobility has changed considerably in the last decade. There is consensus that the way people commute in urban areas will be very different again within the decade or two to come. Congestion, one of the main urban transport issues, will not be solved by the adoption of new mobility services alone. Rather, government action will be required.

Regulating the Transportation Network Company sector in São Paulo

The sharing economy has grown extremely rapidly over much of the last decade. After five years of operation, Uber was operating in 128 cities worldwide. After four years of operation, Airbnb was offering the same number of rooms for rent as Intercontinental Hotels Group, the largest hotel chain in the world. However, despite this rapid growth, and the consequent economic importance of the sector, governments' regulatory responses to it have varied widely, while individual governments have often fundamentally altered, or even reversed, their regulatory stance within short periods. At the same time, innovative regulatory responses to these new business models have rarely been in evidence. Government responses to the taxi and TNC sector demonstrate all of these characteristics.

Regulatory responses to the TNC sector can be classified into four types. The first involves either seeking to ban TNCs or severely curtail their development. A second approach broadly accepts the development of the sector but subjects it to both detailed, prescriptive regulation, including details such as what should be offered in the vehicle (water, candies), the type of vehicle and restrictions (whether direct or indirect) on the number of drivers allowed in the platform. The third regulatory approach is very and accommodating, imposing almost no specific constraints on the provision of TNC services.

Sao Paolo has adopted a fourth regulatory approach. Perhaps uniquely, this is based on charging a fee per mile driven. The proposed price per mile is intended to be set at a level that will achieve regulatory objectives, rather than being primarily a revenue source. On the other hand, it does have a non-negligible potential to raise increased revenue in an efficient way. This is its advantage and at the same time, its risk. São Paulo's regulatory approach is intended to adopt a middle position in relation to the development of the industry, on the one hand allowing the market to grow as demand increases while, on the other hand, using the pricing system to correct negative externalities. It also allows the public sector to regulate the size of this market; a relevant concern for several reasons.

A fee per mile is at the same time relatively simple to implement (for TNCs) and a relatively sophisticated intervention. It can, in effect, be used to regulate the quantity of TNC vehicles in operation. The approach taken to set the fee involved the city defining a target level of TNC activity that was expressed in terms of taxi equivalents. That is, the city estimated how many miles per month five thousand taxis would travel and decided that this would be the target for the sum of miles travelled by all TNCs combined.

Most observers believed that the city government would conduct auctions of the right to drive TNC miles, however, this is not the way the system was designed. Rather, if TNCs travel more than the target in a certain period, the city government can take one of two possible actions in response: it can increase the target, if it believes that the target was set too low, or it can increase the price per mile, which would be expected to reduce the demand for TNC trips. In practice, it was decided in 2017 to double the target to ten thousand taxi equivalent miles, while keeping the price per mile at the level adopted at the inception of the scheme in 2016. (NB, Bus tariffs increased 13% in the same period, making TNCs relatively cheaper).

The adoption of a distance-based fee is a very different approach from that taken in most other cities. In the United States, seven cities have implemented either a flat per trip fee or a percentage based tax on TNC fares, or a combination of the two (Kim and Puentes, 2018). The most common is a fee per trip, which varies from USD 0.24 in Seattle to USD 2.75 in New York City. Philadelphia and Washington, D.C. have levied a tax on TNCs fares (of 1.4% and 6% respectively). Mexico City has also imposed a tax rate on TNC trips.

A key difference between a flat fee per trip and a fare tax or per mile charge is that the former effectively taxes shorter trips more heavily. This has the undesirable effect of discouraging the use of TNCs for first and last mile purposes (I.e. as complements to transit or other modes).

Both flat fees and single rate fare taxes are also inferior to the per mile charge in that they do not allow for fine-tuning the policy. In São Paulo the fee varies depending on both the time of the day and the location of the trip. The fee is higher in the centre where roads are congested and lower in the periphery where there is a scarcity of taxis. It is also higher in rush hours and close to zero in off-peak hours, when it is desirable to have a cheap transport option to reduce the incentives to drink and drive.

A fare tax will be similar to the fee per mile in regular conditions since the total fare is a function of the miles driven. In rush hours, the value of the fare tax will increase, given the use of surge pricing used by most TNCs. Similarly, the fee per mile is expected to be higher during peak times. Conversely, fare taxes due not reduce in low demand period, or in the periphery, unlike Sao Paolo's model.

Sao Paolo's regulation created a committee (CMUV), including the secretaries of transport, finance, urban infrastructure and urban development and the president of the São Paulo Business Company (São Paulo Negócios in Portuguese) that has the power to change the fee, change the target, change the schedule of the fee and also create new schedules. It meets once a month to analyse TNC trip data and decide if it wants to change the regulation. This is a very flexible system that does not depend upon the council not even on a Mayor's decree. This is a crucial element of the design of the policy.

Discounts for shared rides were also included in the regulation. The per mile fee will be lower if there are two people sharing the trip than one and lower again where three people share the ride and close to zero for a trip shared by a party of four. The only other city to differentiate its fee structure in this way appears to be New York City, which substitutes a fee of USD 0.75 per rider for its standard fee of USD 2.75 for pooled trips. However, in contrast to Sao Paolo, the NYC fee structure implies that a party of three will pay more (in total) than a trip with a party of two, while a trip with a party of four will pay more than a trip with just one rider. Congestion concerns would recommend the opposite.

The pooling option (e.g. Ridesharing by unrelated users) is a potentially promising alternative to private vehicle use, with significant benefits available in terms of reduced congestion and pollution. Private vehicle users are used to door-to-door service and usually have limited willingness to walk to a bus stop, wait for the bus and walk from the final stop to work or school. The TNC individual trip option simply substitutes the driver, with little other impact on the quality of the service: it will still be door-to-door, and would not affect congestion and emissions if it does not substitute for a public transit trip. However, substituting a shared TNC ride reduce affect congestion and emissions considerably at a relatively low cost (in terms of reduced service quality) for the user. For example, a two people trip would increase the number of stops for a user by at most two, compared to an individual trip, and remove one vehicle trip for the city, if the shared TNC ride substituted for two private vehicle trips.

However, the practical problem is that of finding two (or more) trips that match closely in terms of origin and destination pairs. Although TNCs trip numbers have increased at a very fast pace and now account for more than double the number of taxi trips in many cities, shared trips still account for only a small proportion of total TNC trips. For instance in São Paulo City, where Uber makes more trips than anywhere else in the world, the number shared TNC trip numbers are still equivalent to only 1/15th of the trips taken by car or public transit.

A key point is that achieving improved urban mobility outcomes fundamentally requires better integration of all modes, including TNCs. If TNCs are providing first and last mile connections to the transit system, at least part of the trip will be done in a collective mode, whereas many users would previously have used individual modes for the whole trip.

Integration across modes is currently very limited in most cities. Each mode and sub-mode has its own clearinghouse: TNCs, Buses on Demand, Municipality, (Traditional) Bus Operators, Taxis (that might even not have a clearinghouse system), Scooters, Bicycles, etc. The only relatively common form of integration is between the subway and the bus system. The challenge is to create an integrated system that will foster innovation in payment systems.

In this context, there is no reason to believe that the fee on TNCs will significantly inhibit the realisation of complementarities between modes. Rather, the fact that systems are not physically or financially integrated is the key factor. Moreover, integrating the system financially could imply returning all or part of the fee to the user when they transfer from an individual to a collective mode. The challenge in achieving greater complementarity between TNCs/taxis and public transit and active modes is that of improving intermodal operation.

Finally, an additional characteristic of the per mile fee is that it is straightforward to use it to support other policy objectives. In the São Paulo case, it has been used to incentivise the use of women drivers, by providing a discount on the fee for TNC vehicles driven by women, who already constitute a much larger proportion of TNC vehicle drivers than taxi drivers in São Paulo, as in much of the world. Discounts to the per mile fee have also been applied to encourage the use of non-fossil fuelled and hybrid vehicles and cars accessible to people with restricted mobility. Increasing the number of adapted vehicles is an important step towards universal accessibility.

Recent regulatory developments in São Paulo

This section provides a brief overview of key developments since the initial adoption of Sao Paolo’s model for regulating the TNC sector in 2016 and includes discussion of areas in which intended regulatory developments have not proceeded.

In 2017, a newly elected São Paulo City government made a number of changes to the regulations governing TNCs, which included the adoption of several new, prescriptive standards regulating characteristics of the driver and the car.

CMUV resolution 16 established two sets of mandatory requirements for TNC drivers (called CONDUAPP and CSVAPP[7]) that had the effect of bringing the regulation of TNCs closer in form to that of taxi regulation.

This was contrary to the original intention to harmonise regulatory approaches by making taxi regulation more flexible. The new provisions established a number of minimum requirements for drivers and for the insurance of the car, including standards for driver's clothes.

Subsequently, Decree 58.595 was issued by mayor Bruno Covas on January 4 2019. The decree attempted to limit the number of drivers working for TNCs. It effectively sought to substitute a limit of 10 000 TNC drivers for the existing limit of total TNC activity to 10 000 taxi equivalents. The impact of this change would have been to substantially reduce the volume of TNC operations, since most TNC drivers work on a part-time basis, usually as a second job and some will be temporarily on the platform until they find another job. However, the TNCs successfully challenged the decree, which was found to be unconstitutional and of no effect.

A second change to the initial design of the TNC regulation that was subsequently reversed following legal challenges saw the per mile fee varied according to the market share of the TNC, with TNCs with larger shares paying higher fees. This change was an attempt to respond to the dominant market position of Uber by encouraging greater competition. Such a move was seen as necessary in light of the network externalities of platforms, which give them natural monopoly characteristics and a strong first mover advantage.

Uber had a market share of around 95% when the "progressive" per mile fee was implemented. Following a legal challenge, the courts suspended progressivity. However, it was reinstated following a successful appeal by the São Paulo City government. Uber's market share had fallen to 70% within six months. A subsequent appeal by Uber was successful and the progressive fee was again suspended. The Sao Paolo City government did not appeal this latest ruling, suggesting that the progressive charge will not be reinstated.

Data sharing and modal integration

It was initially intended that the regulatory system would encourage or even require data-sharing by TNCs, in order to create improved opportunities for modal integration. The initial proposal was for TNCs to develop an API that would allow the city to access the data, including real time data on vehicle location, and consequently charge the correct, time adjusted, amount per mile. The data would also allow for more than monitoring the TNCs; it would potentially be an important tool for planning and monitoring the whole transport system.

However, Uber, as the dominant TNC, has consistently objected to this proposed requirement, saying that it would affect privacy and reveal strategic information about the company, and São Paulo's government has never addressed these concerns by proposing a specific data-sharing model incorporating privacy and other protections. This is a problem faced by many regulatory agencies in the world. Some cities however, including Chicago and Los Angeles in the United States have succeeded in making this information available for the government and for the general public as well. Chicago randomizes the exact position and time of the origin and destination of the trip within an area and period, making it almost impossible to find out exactly where and when the trip started but allowing analysis to be undertaken at a small geographical area level for specific and time periods. Los Angeles is establishing a protocol to share data from any mode (bicycle, scooters, cars) that will protect privacy and allow the data to be made available to the general public. After pioneering one of the most advanced regulations for TNCs, São Paulo is lagging behind in this area, not updating or improving regulation.

The political economy of Transportation Network Company regulation

As discussed above, Sao Paolo's initial approach to regulating the TNC sector was based on a recognition of the welfare benefits brought by TNCs and a consequent objective of enabling the development of the industry, while correcting for the negative externalities associated with its operation, notably in relation to congestion. It also sought to address the perceived "free-rider" issue, with the regulatory system being predicated on the view that the industry should contribute to the cost of the public road infrastructure which forms a necessary input to its operations. Setting per mile charges at a level intended to include an implicit contribution to the cost of road infrastructure can be seen as adopting an even-handed approach vis-à-vis the taxi sector, given that the latter pays significant licence fees to government.[8]

However, while the regulatory structure adopted in 2016 sought to enable the development if the TNC sector, the government has faced sustained lobbying from taxi industry interests which have faced significant losses since the entry of TNCs and argue that they face unfair competition from them. As in many countries, medallion owners are often politically powerful and city councilors see little gain from supporting TNCs and feel that they could lose votes by supporting the sector at the expense of taxi interests. . This dynamic persists despite the fact that it is clear that e-hailing is significantly improving mobility standards for users that could not use taxis before because of price or availability constraints and the fact that there are many more e-hailing drivers than taxi drivers.

The result of these dynamic is that, rather than lightening the regulation of the taxi sector, as originally envisaged, recent regulatory movement has been in the direction of making the provisions the TNC sector faces more detailed and onerous, effectively restricting their ability to compete with the taxi sector. The move to effectively adopt tighter quantitative restrictions on TNCs, via reinterpretation of the 10 000 taxi equivalent" rule is particularly notable in this respect.

However, while TNC operations have been subject to increasingly onerous regulatory requirements in some respects, the city government has apparently been mindful of the sector's objections to the foreshadowed data-sharing regulation and has not, to date, proceeded with this requirement. Sao Paolo is in a similar position to most jurisdictions in this regard, with TNCs generally expressing concern at the prospect of data-sharing requirements and relatively few TNC regulations currently including such provisions. This is problematic, since pushing TNCs to share their information with the public sector would provide a new set of tools to aid in mobility planning and management that would be very costly to obtain otherwise.

This observation applies generally to new mobility services. For instance, the most recent innovation to reach critical mass is scooter sharing. Once again cities are struggling to regulate the service and some are already prohibiting it. As noted above, prohibition is in general a very weak public policy. Scooters are a case in which real-time information is essential because the problems related to this mode of transportation is the way users park the vehicle and safety. To efficiently regulate parking and safety it is necessary to have real-time information on parking and speed. Yet governments appear to be reluctant to enforce data-sharing requirements in this area also.

It is clear that the TNC business model will advance both in the proportion of trips undertaken and in the scope of their operations. This means the importance of ensuring access to their data by transport planners and regulator will only increase. A general principle should be adopted to guide the regulation of new urban mobility services that would include the concept that any new provider should open their data to the regulatory agency. By using TNC information cities would be better able to regulate a service that is becoming more widespread and complex and to better achieve the cross-modal co-ordination that will be essential if the potential benefits of MaaS are to be fully realised. It is essential to have access to the information in real time using the best technology available. This is currently one of the main issues in TNC regulation: who should have access to which information; how to protect privacy; how to open information to the general public to foster further innovation?

Conclusion

The sharing economy has been one of the most dynamic sectors of the economy during the last decade. It is changing the way we think about mobility, especially when paired with advances in battery technology and autonomous vehicles. It might account for a significant share of urban trips in the future and it may drastically change modal shares in large cities.

Governments need to regulate this new system effectively, to ensure that it contributes to the achievement of key policy goals effectively and that negative externalities are minimised. A distance-based charging mechanism, which both addresses congestion and pollution externalities and ensures TNCs contribute to the cost of the road infrastructure they use is key aspect of such a regulatory system and it is possible to implement an efficient pricing structure at a very low cost.

São Paulo has successful implemented such a pricing mechanism. Local governments around the world should start thinking creatively on how to regulate and tax these new entrants in the market without unduly affecting their operation and growth. The opportunity to increase revenues and efficiency at the same time is considerable.

Two issues not resolved by São Paulo’s system of TNC regulation that are likely to be the main issues in mobility in the next decade are how to increase interoperability among different modes of transport and how to ensure access to mobility data for planners and regulators. Cities are currently experimenting with means of these issues and Chicago and Los Angeles are probably among the more advanced in terms of data accessibility. Finding a way to guarantee privacy while making the data available to assist in the development of new business and improve monitoring and management capabilities is a critical requirement.

Notes

1 This section follows very close Brueckner (2011); Small and Verhoef (2007).

2 It may be a subway, a commuter rail or a BRT.

3 An "ideal" measure would be how much an individual would be willing to pay to reduce commuting time. A meta analysis of studies using this measure shows that the "revealed" cost of time is usually around half of the wage per hour.

4 This aggregation assumes implicitly that all drivers travel the same distance. Making a more realistic assumption would require integrating over all distances traveled, making it a more cumbersome model, with little gain in terms of interpretation.

5 An alternative would be charging e directly. In theory the final equilibrium should be in Top as well.

6 A fee on fossil fuel might be a good environmental fee because it would reduce the consumption of this undesirable source of energy but it is certainly not the best way to solve the congestion problem.

7 The CONDUAPP is a mandatory driver permit, issued subject to requirements such as completion of a training course and a criminal record check being completed successfully. The CSV is the equivalent certification of the fitness of the vehicle to be used to provide TNC services.

8 While there is no user charging for the road system for private vehicles, it can be argued that residents effectively contribute to the cost of the road network via property taxes, and that direct user charging for taxis and TNCs is therefore necessary on equity grounds.

References

Acemoglu D., et al. (2012), "The environment and directed technical change". *American Economic Review*, Vol. 102(1), pp. 131–166.

Brueckner, J.K. (2011), *Lectures on Urban Economics*, MIT Press.

Kim, So Jung and R. Puentes (2018), "Taxing new mobility services: What's right? What's next?", *Eno Brief*, Eno Center for Transportation.

Shoup, D. (2005), *The high cost of free parking*, Planners Press.

Small, K. A., and E. T. Verhoef (2007), *The economics of urban transportation*, Routledge.

Vickrey, W. S. (1963) "Pricing in urban and suburban transport" *American Economic Review*, Vol. 53(2), pp. 452-465.

International Transport Forum

Regulating Ridesharing Services in São Paulo

This paper explores to what extent a road-use charge levied from transport network companies for their ridesharing services can mitigate negative impacts of ridesharing. This approach is being applied in the city of São Paulo in Brazil.

All resources from the Roundtable on Regulating App-Based Mobility Services are available at:
www.itf-oecd.org/regulating-app-based-mobility-services-roundtable

International Transport Forum
2 rue André Pascal
F-75775 Paris Cedex 16
+33 (0)1 73 31 25 00
contact@itf-oecd.org
www.itf-oecd.org

OECD

Published: 07/2020 | Photo credit: snkw147