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Ride-sharing applications like Uber, Lyft and Sidecar are currently revolutionizing the urban transportation industry. By allowing taxi drivers to find clients more rapidly, and other individuals to offer transportation services more easily, these technologies could lead to considerable improvements for customers.

The urban transportation market suffers from a basic organizational problem: Absent a system to bring them together, it is costly for consumers and service providers to find each other at the right place and the right time. In economics, this is an example of the problem of transaction costs as a barrier to exchange.

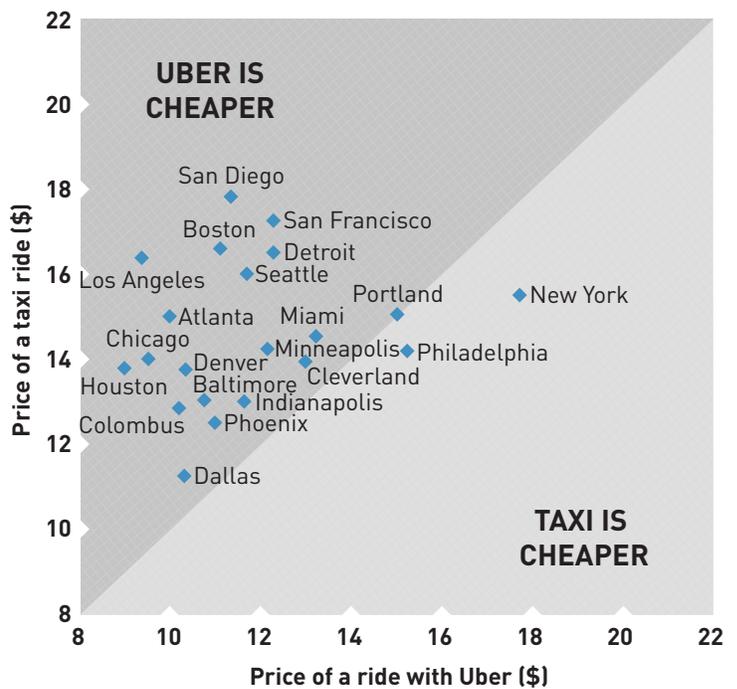
Buses deal with this problem by having specific routes and schedules. In the case of taxis, dispatching companies were set up to coordinate exchanges between drivers and a large pool of clients requesting service by phone. Given the technological constraints of the time, this was an appropriate advance. However, today smartphone ride-sharing apps offer a much more potent means of reducing transaction costs between drivers and passengers.

**The Benefits of Ride-Sharing Apps**

The largest benefits from these new applications result from a more efficient use of resources through carpooling. A study carried out in New York City using a database of millions of taxi trips revealed that sharing between passengers could reduce the total number of kilometers travelled by roughly 40%. This would contribute to smaller and fewer traffic jams, lower air pollution emissions, and a reduction in prices and waiting times for consumers.<sup>1</sup>

Already, studies have confirmed that the introduction of these applications into the San Francisco market have reduced waiting times considerably. From 4 A.M. to 6 P.M. on

**Figure 1**  
Price comparison between Uber and taxis in major US cities for a standard ride



Source: Sara Silverstein, "These Animated Charts Tell You Everything About Uber Prices In 21 Cities," *Business Insider*, October 16, 2014. Prices are for 5-mile trips at 30mph, no idling. Note: Taxis charge riders per mile when moving, and per minute when idling, while Uber charges them per mile and per minute whether they're moving or idling.

weekdays, 93% of customers who used ride-sharing apps waited 10 minutes or less for their rides to arrive after placing their calls, compared to just 35% of customers who used taxi dispatch services. Customers chose these services rather than traditional taxis because of ease of payment, short wait times and ease of calling a car.<sup>2</sup>

1. Paolo Santi et al., "Quantifying the Benefits of Vehicle Pooling with Shareability Networks," *Proceedings of the National Academy of Sciences*, Vol. 111, No. 37, 2014, pp. 13290-13294.  
2. Lisa Rayle et al., *App-Based, On-Demand Ride Services: Comparing Taxi and Ridesourcing Trips and User Characteristics in San Francisco*, University of California Transportation Center, August 2014, pp. 12, 15.

A survey of 21 large U.S. cities shows that using Uber is cheaper than using a taxi everywhere except in New York and Philadelphia for a standard ride (see Figure 1). Additionally, these technologies have the potential to encourage people to forego car ownership in favour of ridesharing. Hence the urban transportation market can expand by attracting consumers who are less interested in owning their own car.<sup>3</sup>

Drivers and customers also gain from the ability of these applications to implement what is known as “surge pricing,” whereby prices rise when there are too few drivers relative to the number of passengers looking for rides during an unexpectedly busy time of day. This has the effect of encouraging part-time drivers to offer their services. By equilibrating supply and demand, this therefore prevents the service shortages that happen at these times. Additionally, these smartphone apps allow drivers to find passengers more easily, spend less time in transit between rides, and maximize the number of passengers they carry per day.

### Compensating Taxi Drivers for Obsolete Policies

The only real barrier to the adoption of these new technologies is the existing, widespread system of taxi licences (permits of operation). It is impossible to enter the taxi industry without acquiring such a licence, or renting one from someone who owns one. In Montreal, the price of a permit of operation is currently about \$200,000.<sup>4</sup> The increased competition created by ride-sharing applications is reducing the

value of these licences. A study undertaken in the Chicago area shows that as ride-sharing applications grow in popularity from accounting for 2.5% of rides to 20% of rides, the value of the taxi permit falls by 57%.<sup>5</sup> Taxi drivers who rely on these licences as retirement assets will understandably see any deterioration in their value as hindering their retirement prospects.

This dynamic explains the resistance of the taxi industry. However, the potential benefits of ride-sharing are so great that it would be more economically efficient for everyone to avoid the temptation of trying to ban or overregulate these new services and instead partly compensate taxi drivers for their losses.<sup>6</sup> Entry into the urban transportation market would then be free. This would also improve the welfare of younger taxi drivers who, absent the large interest payments on the loans they need to acquire a license, will be able to lower their prices in order to compete without lowering their income levels.

### Conclusion

Ride-sharing applications have the potential to revolutionize the personal transportation sector in urban areas and yield large welfare improvements for citizens. Sensible economic policy should avoid hindering their adoption by consumers while compensating those who are negatively affected by obsolete government regulations from the past.

3. Elliot Martin and Susan Shaheen, “The Impact of Carsharing on Household Vehicle Ownership,” *Access*, No. 38, 2011, pp. 23-27; Farhad Manjoo, “With Uber, Less Reason to Own a Car,” *The New York Times*, June 11, 2014.

4. Taxi à vendre, Le portail officiel de l’industrie du taxi au Québec, Annonces pour Montréal.

5. Roger Teal, “Economic Impacts of App Development and Control,” Taxi Research Partners Limited, 2014, p. 14.

6. This compensation scheme could be implemented on the basis of the original amount paid by the owner of the license, the length of time he or she has owned it, etc. This is the same logic followed by the Australian government when compensating dairy farmers for the abolition of production quotas in 2000.



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