

Taxi and private hire vehicle regulation: A Briefing

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This paper seeks to contribute to the deliberations of the Task and Finish Group on Taxi and Private Hire Vehicle (PHV) licensing.

Summary

Price and quantity regulations, as well as statutory vehicle and driver standards, for the taxi and PHV sector have long been justified on grounds of imperfect information (OECD 2008). The nature of taxi markets in the pre-digital era was such that searching (finding and sorting through the available alternatives) and bargaining (negotiating a fare) could not be done in competitive conditions with adequate information. Providers would in many cases have a temporary monopoly on passengers.

However, for a number of years it has been the case that technological advances have rendered much regulation obsolete. The emergence of platforms whose value proposition is precisely the reduction of transaction costs means that regulatory intervention is, in most instances, no longer needed. It is in the business interest of platforms to provide a safe, secure and friendly environment for drivers and passengers to interact.

This paper makes the following recommendations:

- **Quantity restrictions on the number of taxis and/ or PHVs should be abolished**, as they do not raise passenger welfare but limit choice and the availability of transport.
- **Cross-jurisdictional competition between licensed providers should be allowed**, according to the principle of mutual recognition of functionally equivalent regulations. This includes the use by passengers of mobile apps to hire PHVs licensed outside their location.
- **The two-tier system of regulation which distinguishes between taxis and PHVs should be phased out**. Special privileges granted to taxis – including the right to drive on bus lanes and stand at taxi ranks – should be removed. Instead, access to those services should be auctioned off.
- **Price regulation and vehicle standards should be left to the discretion of each private regulatory brand**, which in a competitive environment will have an incentive against abusing passengers. Only criminal background and MOT checks should remain a statutory responsibility.

The changing landscape of taxi and PHV markets in England

The market for private passenger transport in England has experienced a quite dramatic transformation in the last five years. Prior to 2012, the picture was one of relative stability, with the number of taxis and private hire vehicles growing modestly but steadily year-on-year (Table 1). From 2012, there has been a remarkable acceleration in the growth of private hire licences across England, and especially in the London area where the number of PHV licences grew by 75 per cent in four years.

Table 1. Taxi and private hire licenses ('000s) in London, England and Wales, 2005-present

Year	Licensed taxis			Licensed PHVs		
	London	England outside London	England and Wales outside London	London	England outside London	England and Wales outside London
2005	20.8	43.4	47.3	40.00	80.37	84.52
2006	..	..	..	..	..	..
2007	21.6	47.3	52.0	44.36	84.92	88.67
2008	..	..	..	..	..	..
2009	22.3	48.8	53.6	49.32	96.88	101.44
2010	..	..	..	..	..	..
2011	22.6	50.5	55.4	50.66	99.31	103.45
2012	..	..	..	..	..	..
2013	22.2	50.9	55.8	49.85	98.71	102.73
2014	..	..	..	..	..	..
2015 ^R	22.5	53.6	58.7	62.75	103.51	107.76
2016	..	..	..	..	..	..
2017	21.3	54.2	59.3	87.41	118.07	122.84

¹ London figures at end December to 2004, then as at 31 March

Figures for England and Wales outside London as at 31 March 1982-1985 and 2004 onwards, otherwise at end December

R Minor revisions made to 2015 data

Source: Department for Transport

The regime change which is apparent from the data was brought about by the application of mobile technologies to the taxi and PHV sector. A particular turning point in the London market was the arrival of Uber, the American ride-sharing platform, in June 2012. As of September 2017, when Transport for London announced that it would not renew Uber's license, this platform had 40,000 users on the supply side (drivers) and 3.5 million on the demand side (passengers).¹

The advent of technology-enabled providers is important for two reasons. Firstly, it illustrates the latent demand for privately provided transport at a lower price point than traditional taxis. Secondly, it is proof that market-based innovations can resolve the informational asymmetries which historically had raised transaction costs in this market. The two together explain the dramatic expansion of the volume of transactions in PHV markets during the last half-decade.

¹ It is important to emphasise that many more apps, some aimed at taxis, others at PHVs or both, have served the London market since 2012. Hailo, Kabbee and Addison Lee are particularly salient examples.

Passenger welfare and the role of regulation

Consumer surplus

There are various measures of passenger welfare which are relevant for regulators. Economists' preferred indicator is willingness to pay, which yields customers' demand curves and enables an estimation of how much value users get from a service above and beyond the price they pay. This measure, consumer surplus, is normally difficult to derive because consumer preferences are heterogeneous.

However, in the case of Uber a thorough study has been attempted, taking advantage of the wealth of user data (Cohen et al. 2016). The authors find that, for all U.S. markets served by Uber, the app generates consumer surplus equivalent to \$6.8bn each year. To put this in context, the current market value of Uber is \$62.5bn.² This means that Uber every year generates value to U.S. passengers equal to 13 per cent of all the profits it is ever expected to produce for shareholders. One ought to be careful extrapolating these figures to the UK market, which for reasons of size, geography, regulation and ride-sharing app penetration is different from the United States. Nevertheless, the study gives a measure of the magnitude of the welfare gains that such apps can deliver.

The safety of passengers

A common concern about the recent growth of private hire licenses – which, in some ways, are subject to less strict rules than taxis – is that they may compromise the safety of customers.

Table 2 below compares trends in reported sexual assaults and, specifically, rapes as reported to the Metropolitan Police and collected by Transport for London, with the number of licensed taxis and PHVs in London. No correlation between growth in PHV licences and sexual assaults is apparent. There has been an uptick in reported rapes over 2014 and 2015, but this brings the number back to levels seen in 2009-2011, before the surge in PHV licences.

Table 2. Reports of sexual offences and number of licensed taxis and PHVs, 2005-2015

Year	Rape	Other sexual offence	Total sexual offences	Licensed taxis (000s)	Licensed PHVs (000s)
2005	15	101	116	20.8	40
2006	14	93	107		
2007	15	89	104	21.6	44.36
2008	12	96	108		
2009	24	112	136	22.3	49.32
2010	21	102	123		
2011	30	77	107	22.6	50.66
2012	23	105	128		
2013	17	84	101	22.2	49.85
2014	28	108	136		
2015	28	108	136	22.5	62.75

Source: Metropolitan Police, Transport for London, Department for Transport

It is reassuring that the development of a thriving and diverse market for private passenger transport has not been accompanied by a decrease in passenger safety. That ride-sharing technology includes a number of safety-enhancing features – such as real-time GPS location, identification of drivers, passengers and vehicle details, rapid user feedback via ratings – goes some way to explain the absence of a correlation. It is also part of the reason why the market has expanded since the advent of apps. Passengers feel safe using them, so they transact more.

Cross-border provision and regulation

There is no prima facie case for restricting competition among providers simply because the operator may be located in an outside jurisdiction. If the supplier is available in a different market – usually, one would imagine, because it provided a ride from its home jurisdiction to another one – and so long as it complies with relevant local regulations, it ought to be authorised to serve passengers in an outside jurisdiction.

Competition is generally viewed as a beneficent force, pushing suppliers to use resources efficiently and raise their standards of customer service. Research in the U.S. city of Chicago shows that the quality of taxis, as measured by the volume of customer complaints, rose following the entry of Uber into the local transport market (Wallsten 2015). This finding is consistent with the experience of other previously monopolistic sectors which were opened up to competition.³

It can be expected that increased contestation of local transport markets by outside suppliers will tend to increase quality and lower prices (Morrison 1997). Local providers will continue to have an advantage, since the cost of provision in one's local area is lower – it takes less time and fuel to get there if you are local – and the knowledge of the market is greater. Note that a liberalising reform of this kind would not necessarily reduce demand or revenue for any individual supplier, since they will all be free to provide services in local as well as outside areas. But, to the extent that some of the providers' current profit margin is the product of supracompetitive rents, it will be eroded, to the benefit of existing consumers and those who will be able to buy and sell on a more competitive market.

The principle of mutual recognition of functionally equivalent rules should govern cross-jurisdictional competition. The Competition and Markets Authority can be relied on to resolve disputes in which outside suppliers may be discriminated against by a local authority.

Driver welfare and trade conditions

Quantity and technical restrictions

It is widely believed that the present system of quantity and/ or technical restrictions on the supply of taxi drivers is of benefit to them. In fact, only the original beneficiaries of licensing – those who operated before the local industry was made subject to licence – tend to profit. In the case of quantity restrictions, the value of the supracompetitive cash flows to be had from the restriction is capitalised into licence prices. In New York City, for instance, medallion prices reached around \$1mn before dropping to around \$250,000 following the advent of Uber (NYC Taxi and Limousine Commission 2017).

In the case of technical restrictions such as London's famous Knowledge requirements, part of the rents is dissipated in the form of intensive expenditure of time and effort on acquiring the requisite training. The average time to learn the Knowledge for an All London ('Green Badge') licence – the broadest and most common – is listed as 3.5 years on a specialist website.⁴ To the direct costs of training – £55 per calendar month, £5 per class, plus the cost of a moped, licence applications, etc. – must be added the opportunity cost of foregoing remunerative work partly or wholly for an extended period.

Quantity restrictions were never economically justified, even before the technological innovations which have led regulators worldwide to consider wide-ranging reviews of existing policy (OECD 2008). Placing a cap on the number of licensed taxis in a jurisdiction does nothing to improve the information of passengers or the choices available to them. In fact, quantity restrictions reduce passenger welfare by making it less likely that they will find a ride.⁵

Even if the quantity of taxis was optimal at the time of the introduction of the cap, the evidence suggests that it will quickly fall behind demand, as licensed drivers lobby to limit entry (Niemietz and Zuluaga 2016). After the removal of quantity restrictions in Dublin, the number of taxis grew to more than double what the regulator had forecast to be the equilibrium number that the city would require, 12,500 against 5,901 (Barrett 2010). The rather modest growth of taxi licences in London, 6.2 per cent between 2000 and 2013, suggests that this effect is also present in markets with technical restrictions such as the Knowledge.

3 See, for instance, Littlechild (2000) on electricity markets and Niemietz (2015) on healthcare provision.

4 <http://www.taxitrade-promotions.co.uk/which-taxi-licence.html>.

5 If prices are unregulated, a cap will also raise them. But most if not all jurisdictions have price regulation of taxis alongside quantity restrictions.

Price regulation and other standards

Maximum prices per mile and per minute, vehicle standards, statutory background and MOT checks, and other requirements from taxi drivers – and, where applicable, PHVs – were justified by the informational asymmetries and imperfect competition issues outlined above. But there is a powerful case for many of them to be scaled back now that technology is increasingly intermediating transactions in this space.

Most PHV operators, whether for quasi-immediate hire or pre-booked, operate a system of variable prices. Fares are adjusted for expected traffic, time of day, prevailing driver supply and passenger demand, and so on. This is an efficient system because changing prices make it easier to prevent temporary excess supply or shortages. It also facilitates competition between providers.

Given increased competition, price regulation of taxis is now unnecessary because taxis are no longer a price-setting cartel but have become price-takers in a larger market. It might be argued that, for those customers who have no access to mobile apps or pre-booked PHVs, taxis might still be able to profit from informational asymmetries. But this presupposes that taxi operators will put short-term rent extraction before their long-term economic interest, since becoming known for fleecing customers will only lead customers to shift to other providers.

As Niemietz and Zuluaga (2016) argue, one of the phenomena brought about by the sharing economy in transport is the emergence of regulatory brands, of which Uber is one and London black cabs are another. Regulatory brands compete with each other on standards and internal governance, much like Android and iOS software in the smartphone market. But in order to retain a customer base, each regulatory brand must ensure it maintains a good reputation. This means that each brand has an incentive to offer competitive, predictable prices in safe conditions. As is the case across the market economy, competition and the profit motive act as a spur for virtuous behaviour. This makes statutory price regulation and vehicle standards unnecessary, although criminal background and MOT checks ought to remain a statutory responsibility.

Conclusion

Recent technical innovations have the potential to deliver large welfare gains for passengers, whilst expanding the market for private passenger transport and increasing competition between providers. The Task and Finish Group should consider wide-ranging reform of taxi and PHV regulation, along the lines suggested above, to ensure the benefits of technological progress are maximally reaped by passengers and drivers.

References

- Barrett, S. (2010) The sustained impacts of taxi deregulation. *Economic Affairs* 30(1): 61-65.
- Cohen, P., R. Hahn, J. Hall, S. Levitt, and R. Metcalfe. (2016) Using Big Data to estimate consumer surplus: the case of Uber. NBER Working Paper No. 22627. National Bureau of Economic Research.
- Littlechild, S. (2000) Privatisation, competition and regulation. IEA Occasional Paper No. 110. London: Institute of Economic Affairs.
- Morrison, P. (1997) Restructuring effects of deregulation: the case of the New Zealand taxi industry. *Environment and Planning* 29(A): 913–928.
- Niemietz, K. (2015) Internal markets, management by targets, and quasi-markets: an analysis of health care reforms in the English NHS. *Economic Affairs* 35(1): 93–108.
- , and D. Zuluaga. (2016) Hire authority: turning statutory regulation into private regulation for the UK's taxi industry. IEA Discussion Paper No. 76. Institute of Economic Affairs.
- NYC Taxi and Limousine Commission. (2017) Medallion transfers, January 2012.
- OECD (2008) *Taxi services: competition and regulation, competition law and policy*. Paris: OECD Publishing.
- Wallsten, S. (2015) *The competitive effects of the sharing economy: how is Uber changing taxis?* Technology Policy Institute.