Car Rental 2.0
New alternatives to car ownership

Luca Lytton
Toby Poston
November 2012

The BVRLA is the UK trade body for companies engaged in the leasing and rental of cars and commercial vehicles. Its members provide short-term rental, contract hire and fleet management services to corporate users and consumers. They operate a combined fleet of around 2.5 million cars, vans and trucks, buying nearly half of all new vehicles sold in the UK. Through its members and their customers, the BVRLA represents the interests of more than two million business car drivers and the millions of people who use a rental vehicle each year. As well as lobbying the government on key issues affecting the sector, the BVRLA regulates its members through a mandatory code of conduct.

The Royal Automobile Club Foundation for Motoring Ltd is a charity which explores the economic, mobility, safety and environmental issues relating to roads and responsible road users. Independent and authoritative research, carried out for the public benefit, is central to the Foundation's activities.

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About the Authors

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The car remains a vital part of the transport system, accounting for 64% of all trips made and 78% of distance travelled. In many parts of the UK, particularly in rural areas, it is difficult to complete an entire journey using only public transport. However, the remarkable rise in day-to-day costs of motoring, most notably fuel and insurance costs, is making it increasingly difficult for people to afford travel on Britain's roads.
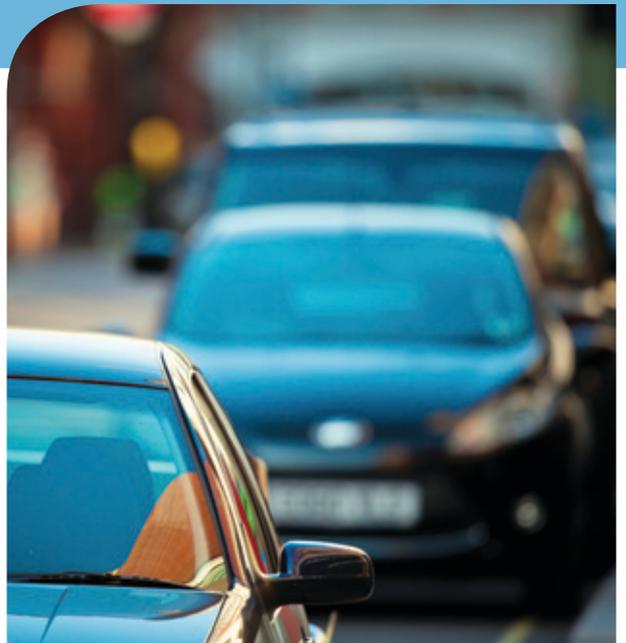
There is no single solution to this problem, but a rapidly developing range of complementary pay-as-you-go motoring options is enabling motorists to give up their own cars and opt for cleaner, safer vehicles that are more appropriate for their journey needs.

There is a range of pay-as-you-go motoring options to choose from:[1]

- **Car rental:** this is the longest-established and most widely-used form of pay-as-you-go motoring. Car rental operators allow customers to hire a wide range of vehicles by the hour, day, week or month. Rental cars are hired from and returned to depots, usually in towns, cities and airport locations. Examples of car rental firms include Avis, Hertz, Europcar, Enterprise and Sixt.
- **'Traditional' car clubs:** this is a self-service car rental scheme in which members reserve a car on a short-term basis, usually in 30-minute increments. The rental fleet is dispersed in dedicated on- or off-street parking bays around the local area. Examples of traditional car clubs include Zipcar and City Car Club.
- **One-way car clubs:** these are operated in a similar way to traditional car clubs, but they allow subscribers to use cars for one-way journeys within a defined geographic area. Advance reservations are possible, but most use is spontaneous and customers pay by the minute only for the time they are using the car. Examples of one-way car clubs include BMW's DriveNow and Daimler's car2go.

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1   Le Vine, S. (2012). *Car Rental 2.0: Car Club Innovations and Why They Matter*. RAC Foundation. Retrieved 13 September 2012 from www.racfoundation.org/assets/rac_foundation/content/ downloadables/car_rental_2.0-le_vine_jun12.pdf; www.liftshare.com.

- **Peer-to-peer car rental:** this type of service acts as a 'middle-man' between car renters and car owners who wish to rent their car out to them. The cars are owned privately – not by the central organisation that manages the central register (for example a website) – and used on a round-trip basis. One example of a peer-to-peer car rental scheme is WhipCar.
- **Liftsharing:** this is a scheme in which two or more people arrange to share a car and travel together. One example is *lift*share.

2. Industry Challenges

2.1 Barriers at the local level

The availability and success of pay-as-you-go alternatives to car ownership, particularly car clubs, can vary according to the enthusiasm and involvement of local authorities. While some local authorities are proactive at encouraging alternative forms of car access, others are not involved at all. This may be because of a lack of resources, will or political leadership. Authorities may not know how best to support such schemes, and this problem is exacerbated by the fact that policymakers are struggling to understand the rapid development of new and evolving pay-as-you-go-motoring business models.

London provides a good example of involvement at the local level. Although it is the UK's leader in car clubs and other forms of car access, challenges remain. The key barrier to rolling out these schemes, particularly car clubs, is the city's political fragmentation into 33 local authorities. This is not only problematic in terms of harmonising parking policy to meet car club operators' (and ultimately their users') needs, but also in terms of coordinating efforts and working with key individuals in the boroughs: having to deal with 33 boroughs and multiple Transport Planning Officers in each makes it a difficult administrative and operational environment for companies to work in. The problem is further complicated by the fact that parts of the transport system are not governed by the boroughs, but by Transport for London. Regulatory

barriers also exist: Kensington and Chelsea Council, for example, discourages diesel cars by charging more for residential parking permits, in order to tackle air quality. This, however, conflicts with car club and rental companies' business models because diesel vehicles tend to be more fuel-efficient and have lower greenhouse gas emissions.

Another barrier to integration is the fact that vehicles are not branded visibly, which would help to raise awareness of the different transport solutions, because users do not want them to be and councils, concerned about street clutter, do not permit particularly visible signage for passers-by.

Where local authorities are more proactive, there is a mixed approach: while some see car clubs as a money-making exercise, others view them as a transport solution. The attitudes of local authorities may vary, but they are driven by central targets, for example Local Transport Plans and narrow local considerations. Although many authorities base their pay-as-you-go car use policy on research, it is unfortunate that the only work that has been funded and carried out so far has been into car clubs – further research is needed into the other forms of pay-as-you-go motoring options and their potential, both in economic terms and also in providing improved mobility.

It is important for local authorities to understand that car clubs, car rental and other forms of car access will not only benefit residents, but also help them achieve their own targets on congestion, CO_2 emissions, air quality and social objectives, such as increased access and mobility.

2.2 Integrating with other modes of transport and the role of technology

Integrating car clubs and car rental with rail makes sense from a mobility perspective, particularly in rural areas where the final leg of a journey will most likely have to be travelled either by car or taxi. In Germany, for example, the

national railway company Deutsche Bahn runs a national car club scheme to ensure good access between the two modes of transport.

However, there are challenges. The most difficult one is the array of stakeholders in the transport sector – train operating companies (TOCs), private bus companies, local authorities – usually with multiple operators in each mode. A lack of political leadership aggravates this fragmentation. On a practical side, parking spaces are crucial for the success of car club schemes. They are particularly important by railway stations, where parking is a very limited resource and therefore too expensive for car club operators to rent or buy, or for the TOC to provide at a discounted rate.

Technology can play a major role in helping to overcome this fragmentation and integrate alternative forms of car access with the wider transport network. Specifically:

- it can provide users with real-time information on their smartphones or computers regarding, for example, the availability of vehicles, parking spaces, train and bus times; and
- it enables the interoperability of back office and payment systems, not only for different schemes of the same type of car access, but also between car access schemes and operators of other modes of transport, such as TOCs and bus companies.

In order to improve integration with other modes, car clubs in London could be linked up to the Oyster card system. This has been done in the Netherlands, where there is a national public transport card system for ticketing, which car club operators can tap into. Eventually these cards could also be used for parking or other small payments that do not require complex security systems. Potential problems of coordination of pricing and ticketing could be overcome by engaging a third-party organisation to manage the services and offer users a single product to access all types of transport services.

2.3 Further challenges

As the car club sector grows and matures, it faces a number of specific challenges. For example, damage checking of vehicles has become a major cost and customer service issue, as has the ability to expand – particularly because car clubs are dependent on on-street parking and working within bureaucratic council processes, as described above. Many car clubs struggle with a utilisation pattern that sees vehicles sitting idle during the week, but leaves them unable to cope with demand at weekends and other key times. This issue is being addressed by the development of local authority car clubs in which operators set up schemes for councils. These provide a cost-efficient, cleaner and easier-to-manage alternative than relying on staff using their own cars for work. These same council vehicles can then be rented to local residents at weekends (see section 4.2).

Car club and rental companies also face the challenge of balancing insurance risk and operational cost on the one side, and improving access (and the customer base) on the other. When considering this balance, recent changes in EU policy on equality mean that they will no longer be able to turn down younger or older drivers based on their age. They can still limit their rentals as now, but they will have to justify any restriction with statistical evidence, or potentially face a legal challenge.

Furthermore, giving customers accurate travel information is a major task. A good way of listing people's nearest car club or car rental car might be on transport advice websites, such as Transport for London's journey planner, but this is unlikely to be an option in the short term. Carplus, the UK's national car club charity, is aiming to create an open-source Google Maps-style service to help people locate their nearest car; making this available on smartphones would be a useful addition. Making the necessary data available to independent smartphone software developers, as some car clubs have done, is a way to encourage better multi-modal integration.

3. The Potential of Pay-As-You-Go Motoring

3.1 Mobility and access

As mentioned in section 2.2, an important question facing alternative forms of car access is how they fit in with other modes of transport, most notably rail and bus. They need to be integrated in a convenient way to maximise mobility and access benefits to consumers whilst at the same time reducing the environmental impact of transport and satisfying social objectives, such as road safety and social inclusion. Integration can take the form of physical integration, for example by providing parking bays at train stations, but, crucially, also informational integration by ensuring that back office systems, including reservation and payment, are interoperable and can be accessed via smartphone apps.

While some may assume that people in lower-income groups are less likely to be car users, according to the National Travel Survey, more 'Other public transport' trips – largely made up of taxis and minicabs – are made by those in the lowest income quintile than by any other income group.[2] The pay-as-you-go motoring options outlined earlier are cost competitive with taxis and public transport for all but the shortest journeys, and could therefore represent a realistic and affordable alternative for lower-income households. However, there are certain barriers to lower-income groups using pay-as-you-go cars, most notably the reliance on smartphone technology and credit cards, which may not be available to these households. These problems will need to be overcome.

Pay-as-you-go motoring options can encourage individuals and households to forego or reduce car ownership and there is also scope for improving access for younger, more cost-conscious drivers, for example through university-based car clubs. This potential is greater in urban areas, where there is a higher density of potential users and a greater provision of public transport that can be used alongside pay-as-you-go motoring services.

3.2 Environmental objectives and low-carbon vehicles

Although it is often claimed that one car club vehicle takes multiple privately owned cars off the road, the net effect on travel behaviour, i.e. whether the aggregate distance travelled is less or more, is not entirely clear. Research suggests that overall mileage does reduce: while some people drive a bit more, those that drive less, drive a lot less. Whether or not this is true, car clubs and other forms of car access must be encouraged, where possible, to replace permanent car ownership, and not to displace journeys on more sustainable modes – most notably cycling and public transport. Ways of ensuring this include marketing and using pricing mechanisms to reinforce the right behaviour (e.g. car clubs charging per mile rather than a flat-rate time fee to encourage people to think about mileage).

Car clubs and car rental operators are seen as an important testing ground and route to wider adoption for plug-in electric and other ultra-low-carbon vehicles. One of the biggest barriers to electric vehicle uptake by private individuals is that of cost, particularly high upfront purchase costs. This problem could potentially be overcome by offering electric vehicles through car clubs or rental operators, which would be more able to absorb the higher initial cost of ownership, although it would inevitably result in higher rental rates for these vehicles. Research suggests that there is a great match between the car rental market and potential electric vehicle buyers/users, supporting the argument that offering these vehicles on a pay-as-you-go basis could increase their use and visibility. For people who are unsure about making the move to electric vehicles, car clubs and car rental offer an ideal opportunity to test-drive the

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2   Department for Transport (2011). *Travel by Household Income Quintile and Main Mode/Mode: Great Britain, 2010*. National Travel Survey, Table NTS0705. Retrieved 3 October 2012 from http://assets.dft.gov.uk/statistics/tables/nts0705.xls.

technology and establish whether it meets their transport needs.

However, there are three practical issues that are holding back the wider adoption of electric vehicles in car rental and car club fleets:

1. **High purchase and operational costs**, linked with uncertainties about depreciation and resale value, mean electric vehicles are currently too expensive for car club and rental companies to offer in significant numbers.
2. The practicality of **recharging** conflicts with the way car club and car rental cars are used. High turnover of vehicles (and potentially high mileage) means that the vehicles would need to be recharged frequently, which in many cases would be physically impossible because of long recharging times and the need for charging points at each on-street parking bay. From this perspective, electric vehicles may be more suitable for depot-based car rental, where vehicles are parked for longer periods of time and there is easier access to charging points. Rapid charging can make plug-in electric rental cars much easier to 'turn around' for their next customer, but these points are costly to install and over the long term may degrade the battery more quickly.
3. The **limited range** of electric vehicles will make them unsuitable for most long journeys. For shorter trips or one-way journeys, the range is less of a concern although recharging remains problematic.

Questions requiring further research include:

- What is the net impact of alternative forms of car access on greenhouse gas emissions? (One-way car rental is of particular interest.)
- What is the cost per tonne of CO_2 saved for the different types of car access (assuming the carbon impact is positive)?
- What is the driving style of car club users in terms of safety and fuel efficiency? And how does this compare to car rental and peer-to-peer car sharing?

4. Future Role of Government

4.1 Political leadership

The role of government in encouraging pay-as-you-go car use is a much debated topic. Discussions revolve around whether, in principle, government should intervene and help to kick-start the market, or whether it should adopt a *laissez-faire* approach and let the market evolve on its own.

If alternative forms of car access are proven to have a positive impact on society it may be argued that there is a case for the public sector to become involved, given its responsibility to encourage the 'right' behaviours and achieve sustainability – environmental, social and economic. In practice, there are of course various degrees of intervention and ways in which government can do so, with different implications for both car rental/club operators and their users.

There is almost unanimous agreement across the industry that there is a lack of political leadership and vision, particularly from central government, to enable the car club and rental market to flourish. Government, both at the central and local level, needs to develop a longer-term vision of how all forms of pay-as-you-go car use fit into the broader transport picture, and to make policy accordingly. This would enable the interoperability of the different forms of alternative car access between local authorities. A good example of this is Transport for London's car club strategy, although it could be significantly improved by including other forms of car access.

Until this happens, the continued uncertainty will prevent operators investing in existing or new schemes, and the potential benefits of integrating with other forms of transport properly will not be realised. The fact that all the bids for investment into car clubs through the Local Sustainable Transport Fund were turned down by the Department for Transport is an example of the lack of support currently given to the sector.

Government urgently needs to help stimulate further research into this area, because the UK, which has a mega-city in the form of London, is falling rapidly behind other cities, including Berlin, Munich and Paris. One specific recommendation would be to include questions about alternative forms of car access in the National Travel Survey, which the government uses to monitor long-term trends in household transport activity and inform the development of new policy.

4.2 Support from local authorities

Local authorities can support alternative forms of car access through various policies:

- Subsidies for pay-as-you-go car use schemes, for example through the Local Sustainable Transport Fund.
- Forming partnerships between car club and rental companies and local authorities.
- Providing discounted parking spaces, particularly at locations that link up various modes of transport, for example bus and rail stations.
- Allowing car clubs and rental companies to tap into systems, such as London's Oyster card.

When making use of these policies, local authorities should not merely back one form of car access, but embrace as many alternatives as needed to provide the optimal mobility mix for users which at the same time avoids the risks of relying too heavily on one solution.

At the most basic yet crucial level, local authorities should include alternative forms of car access in their Local Transport Plans (which in some areas is already the case, but only in early stages), taking into account local needs and demographics. This will provide certainty for companies and also serve as a basis for integrating them with other modes of transport.

Parking policy is a key way in which local authorities can help encourage the adoption of car clubs. In the Netherlands, for example, the central government has streamlined parking policy across the country so that local authorities are able to offer free parking to car club operators. One-way car sharing with no dedicated parking bays may be a particularly interesting option to support.

Authorities can also play a leading role by using car clubs as fleets, perhaps even pool fleets with, for example, the NHS, although there is an embedded culture of viewing grey fleet mileage as a staff benefit. New levers could include an incentive for employers to switch to car clubs, perhaps through shared membership for employers or by providing car club parking spaces near the employer. One example of how this can work is Brunel University, which has set up a car club in partnership with Hertz on Demand. The fleet of self-service rental vehicles is typically used by staff during the day and by students and local residents at night and at weekends.

There are a number of lessons to be learnt for local authorities:

- They must engage directly with the public sector (as the London bus model demonstrates, in which London Buses, a subsidiary of Transport for London, manages bus services in London, which are provided by private sector operators).
- They should experiment with different car access schemes, although this does require funding.
- If they 'start from scratch', experience shows that local authorities should begin with a single-operator system but open up the market to a multi-operator system as soon as the scheme has established itself.

While support is needed to encourage market take-up and longer-term certainty, it is also clear that eventually companies' business models must be self-sustaining, without help from government.

5. Conclusion

The rising day-to-day cost of running a car and the inability of public transport to meet every journey requirement are clearly creating demand for new types of pay-as-you-go motoring.

There are a variety of business models to alleviate the current situation, yet none of them on their own provides the perfect solution. However, they complement not only each other but also other modes of transport, notably public transport. Technology, in the form of integrated ticketing or smartphone apps and other digital communications, has the potential to link them all together, creating a 'mobility mix' that helps travellers choose the cheapest, cleanest or quickest appropriate way of completing their journey.

Used together, the next generation of pay-as-you-go motoring services – *Car Rental 2.0* – can provide greater access to mobility while reducing car ownership and the associated congestion and emissions that blight many urban areas.
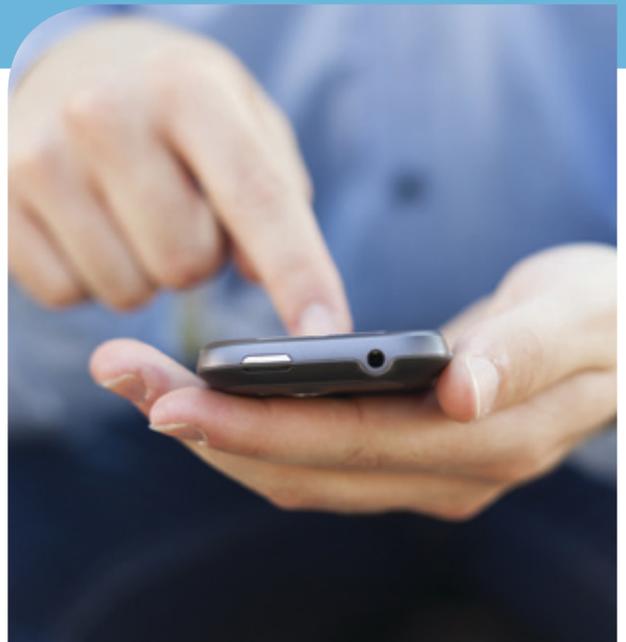
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