

HOW CAN SHARED MOBILITY CONTRIBUTE TO THE POST-PANDEMIC URBAN MOBILITY TRANSITION?

Albert Gragera

Future Mobility Consultant, Bax & Company

The severe economic impacts of the COVID-19 pandemic and the social distancing measures introduced to tackle it have caused the mass adoption of telecommuting. The result was an unprecedented reduction of mobility and temporary improvements in air quality in major urban areas. But the pandemic also widened the mobility divide between social groups. Disadvantaged neighbourhoods and low-income communities where people are more reliant on public transport and often have low-skilled jobs that are not compatible with remote work have been severely impacted and faced major travel disruptions. With lockdowns, people were forced to meet their needs in their neighbourhoods, highlighting differences in quality of life between high and low amenity areas. One of the few positive aspects of this development was the forced reduction of travel distances, which triggered a burst in the use of active and shared mobility that is better suited to such shorter trip ranges. The post-pandemic normality is expected to present serious challenges to the urban mobility transition. In this chapter, I explore the likely mid- to long-term effects on the mobility sector and why shared mobility might be key to achieving a positive outcome.

I. The post-pandemic city and its mobility challenges

The COVID-19 pandemic has shown that it is impossible to disentangle mobility, environmental and equality issues when we think about cities. We now better recognise that city layouts are a complex combination of housing, job and transportation markets and that their interactions will determine whether the measures passed in European cities in response to the health crisis and its socioeconomic impacts will be effective in the long term.

COVID-19 heavily increased the negative externalities associated with urban agglomerations and population density (EIT, 2021). The perceived larger risk of infection and generally stricter social distancing measures have limited chances to exploit agglomeration economies and have prevented citizens from enjoying urban amenities. These trends have introduced a shift in the balance of the push and pull forces that shape city layouts, affecting the

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trade-offs that households and firms make when choosing their location. The broad adoption of telecommuting, while lower now than during the lockdowns, makes part of this shift permanent and acts as a land-use change facilitator. Such changes have ripple effects that translate into altered mobility flows and mobility mode choices.

Early evidence suggests that telecommuting will trigger residential moves towards suburban locations, where housing prices per square metre are lower and household can still enjoy high levels of amenities (Su & Liu, 2020). The fear is that the relocation effect (increased travel distance) will outweigh the substitution effect (number of trips foregone), potentially leading to higher car usage and greater environmental damage. Further, the evidence potentially points towards the concentration of firms in central locations increasing, as they seek to exploit agglomeration economies by taking advantage of space-efficiency gains from the reduced number of on-site workers. Combined, these two trends could further increase commuting distances, private car usage and pressure on cities trying to reclaim public space from cars. To limit these knock-on effects, it will be crucial to ensure that telecommuting-induced relocation does not occur in car-dependent scenarios.

Lockdowns and fear of infection have led to major reductions in public transport ridership. The institutionalisation of this fear in public discourse – despite mixed evidence on the relationship between public transport use and risk of infection – has certainly not helped. It adds to the already worrying situation in which capacity restrictions to ensure social distancing and low occupancy rates eliminate public transport's competitive advantage and greatly diminish its congestion relief effect (see Degen in this volume). Social distancing restrictions pose a threat to the financial sustainability of public transport by undermining the core economic efficiency justifications for public transport spending, especially at a time when public budgets are already aggravated by the economic crisis.

Part of this modal shift has been funnelled into individual mobility options, with a positive rise in cycling figures and a worrying increase in the appeal of cars (EIT, 2021). However, while bike sales have skyrocketed since the pandemic, car sales have not. Rather than being a cause for celebration, this should worry city officials. At current car ownership levels, even a small increase in usage can cause much harm. Many cities are seeing air pollution returning to pre-pandemic levels even though the economy has far from recovered, putting the sustainability goals reached in past decades at risk. To avoid the increase in the appeal of cars also translating into higher ownership rates, travel demand management initiatives and financial constraints ought to be applied in cities, such as low emission zones and congestion charges (see Bernardo in this volume) or market-oriented paid parking initiatives where drivers bear the full cost of parking.

II. Shared mobility solutions

Shared mobility options, from shared micromobility to car sharing, can provide solutions to some of the key challenges of the urban mobility transition in the aftermath of the COVID-19 crisis.

If well-integrated with public transport systems, shared micromobility, such as bike and scooter sharing, can increase accessibility to public transport and replace some trips, thereby curbing crowding on public transport and the perceived associated health risks. Moreover, micromobility options can enlarge public transport's spatial reach, allowing it to offer a competitive alternative to car travel to a larger pool of riders. Better integration between public transport and shared micromobility options offers a unique opportunity to accelerate the rollout of Mobility as a Service (MaaS), fostering the much-needed increase in the flexibility of transport systems, as the pandemic has once again highlighted.

Car sharing services are another effective tool for enlarging transport users' mobility options and offering residents of transport-deficient areas a true alternative to car ownership. However, big car-sharing operators face challenges to make ends meet even in the most densely populated areas. The cases of Zipcar in Barcelona, Autolib in Paris and Car2Go in Copenhagen have shown that even large user numbers are not enough to ensure profitability. Smaller car sharing cooperatives with less focus on profitability, more socially oriented business models and a stronger community base and engagement often seem to do better at adapting to less densely populated areas. This is especially relevant in the current context of the rise in telecommuting and the trend towards residential relocation to more suburban areas, where more flexible travel options need to be deployed to truly compete with the increased appeal of cars.

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III. Creating an enabling environment for shared mobility services

The degree to which shared mobility will be able to contribute to the sustainable mobility transition in the post-COVID city will greatly depend on the regulations imposed by cities and other levels of government. This is particularly true for shared micromobility. Cities need to carefully consider how they regulate shared micromobility options and manage their coexistence with other modes of mobility in public space in a fair manner. The regulatory frameworks municipal governments impose – such as fees, limited fleet size, and parking or outright bans – can either make or break the initiatives that try to establish themselves in a city. To support evidence-based local decision-making and regulation, more analysis and data is needed on the actual impact of these services. Currently, the science lags behind the new services continually being launched.¹

A level playing field also needs to be established for the plethora of subsidies and incentives for car ownership and usage. The first step in this regard should be to rethink government support for the car manufacturing industry in the post-COVID economic recovery in a way that makes it both productive and beneficial for achieving sustainability goals. We need to start thinking about trip-based subsidies instead of capacity-based ones, and allocate them to the trips that generate the highest social return (i.e. by reducing externalities or inequality), including those involving shared mobility options.

The introduction of new travel demand management regulations and the funnelling of price-based alternatives (like congestion charging or

1. It is relevant to highlight that commendable efforts are being made by some cities to support the evaluation of the impact of shared mobility services, like those participating in the MOBI-MIX Interreg project (<https://www.interreg2seas.eu/en/MOBI-MIX>).

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paid parking) into mobility sector adaptation is also necessary. These new revenue streams can offer much-needed support to transport system investments, especially public transport. As the International Association of Public Transport (UITP) has argued, there is a need to take actions to: mitigate the financial risks public transport faces due to ridership shortfalls; allow it to more dynamically adapt to changing situations; and help public transport face the challenges of digitalisation and the disruptions of new mobility solutions by supporting it with more flexible and scalable modes (UITP, 2020). Shared mobility options can act as a support tool to complement the much-needed optimisation of transport networks and loosen the pressure on already tight budgets at a fraction of the cost of standard investment solutions.

Further, a thorough analysis is needed of new forms of public-private partnership that can help with the integration between shared mobility and public transport. This could be done by analysing the use of subsidies to incentivise transport operators to adhere to public-private schemes and explore user-oriented subsidies that favour new business models and the participation of start-ups to cover unserved needs (POLIS, 2019).

The structural changes brought on by the COVID-19 pandemic have amply exposed the dysfunctionalities of the urban mobility marketplace and planning, as well as the need for cities to plan for future disruptions linked to digitalisation and automation. We need more resilient urban mobility systems that can adapt more easily to crises and change. Shared mobility offers a good starting point. To fully enable the development and flexible integration of shared mobility options into existing urban transport systems, cities must include these options in their long-term mobility strategies and broader sustainability agendas.

References

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