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MOBILITY AND TRANSPORT

The hidden value of car ownership

Private cars are valued not just for their functionality but also for the freedom, autonomy or status they offer. New research quantifies the value individuals assign to car ownership and shows that more than half of it derives from non-use value.

Sonja Haustein

Private cars lead to air and noise pollution, contribute to climate change, and occupy space that could otherwise be used for recreation and active travel modes. Cars additionally pose a safety threat; road injuries are a leading cause of death worldwide¹. Yet, high car dependence makes reducing vehicle ownership difficult. It has been argued that individuals would be more willing to give up their car if they were aware of the full costs of owning it, given these are systematically underestimated². However, writing in *Nature Sustainability*, Moody et al.³ show in their new study that people do value owning cars more than they cost, and suggest that car reduction is hindered by the high appreciation of cars beyond their pure functionality, rather than by underestimated costs.

In recent years, many solutions have been considered and implemented across cities to reduce car ownership and use, such as improving infrastructure for alternative modes or car restrictions. Still, passenger transport around the world is far from sustainable. Car ownership levels remain high in the Global North, and continue to rise in the Global South. New technical advances are often promoted to solve car-related problems; for example, less polluting vehicles or combining or sharing different transport modes. Yet, most people are either reluctant or unable to switch to alternative mobility solutions. In addition, environmental gains from electric cars are overcompensated by the production of larger and heavier cars⁴.

Moody et al. put a number to the value of car ownership and use. They presented study participants with several hypothetical scenarios. In one scenario, participants had to choose to either keep access to their primary vehicle or receive a specific (systematically manipulated) amount of money. In a second scenario, they were offered a new free ride-hailing service to cover all their car-use needs in addition to a varying compensatory amount of money to give up their own car. Differences between the two scenarios allowed the authors to

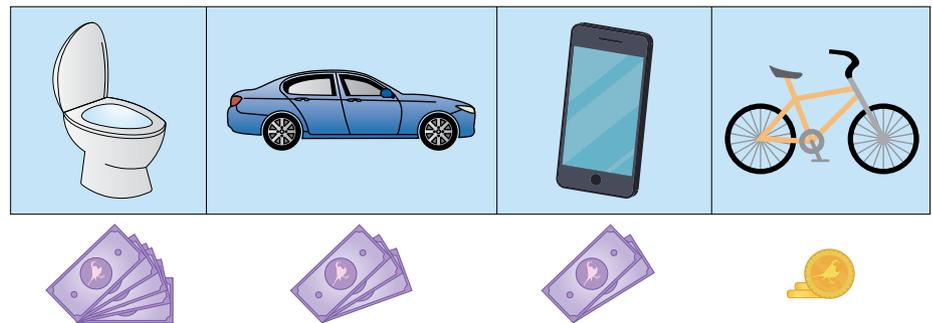


Fig. 1 | Required monetary compensation for not having a toilet in the home, access to a personal car, smart phone and personal bike for a one-year period. See fig. 1 in ref. ³ for details.

isolate the value of car use. They found that the total benefits of car ownership and use are on average higher than car costs. Importantly, more than half of this value is non-use value, such as the flexibility, privacy or status resulting from owning one's own car.

The study was conducted during the COVID-19 pandemic. Half of participants responded given the current situation, while the other half was asked to respond considering a typical year instead. Results show that the non-use value of car ownership increased during the pandemic, probably resulting from an increased desire to avoid shared transport, where infection risk may be higher, and also a higher need to control mobility options under uncertainty. Car ownership was also valued more by respondents with low reported use of alternative modes, and for respondents living outside urban areas — both generally associated with higher levels of car dependence.

Car value was also compared with other goods through another choice experiment, where respondents selected their best and worst choice among three: a mobility good (for example, access to personal car, bicycle), a non-mobility good (for example, personal smart phone, TV), and a varying amount of money (Fig. 1). Among the services or amenities included in the study, the only

one valued higher than car ownership was having toilets at home. Access to technical devices and even meeting friends in person over a year were considered less important than access to a personal car, whose value was estimated to be US\$16,890. Access to alternative transport modes, ride-hailing or -sharing services was valued considerably lower — even in combination, their value was estimated below US\$50.

The study was conducted in four metropolitan areas in the United States. It would be interesting to repeat it in regions in which culture differed in terms of the status associated to cars or public transport; for example, northern European or South Asian cities⁵. In addition, comparing car values in cities with similar cultural context but differing urban mobility cultures, such as transit metropolises or cycling cities⁶, could contribute to the measurement of the comprehensive but vague concept of mobility cultures⁷.

One important conclusion of the study is that much more needs to be invested to reduce car ownership and transition to more sustainable transport systems. During the COVID-19 pandemic, cycling levels increased supported by measures such as new bike lanes and car-free zones, which shows that urban transformation is possible and has positive effects⁸. This increase, however, has been mainly at the expense

of public transport rather than car use. Providing smart alternatives as functional as the car will not be sufficient to overcome the additional symbolic and affective value of car ownership, perpetuated by the automotive industry and related policies^{9,10}. To decouple car ownership from social participation and well-being, work places, social and cultural opportunities need to be easily accessible without a personal car. Also, urban environments should facilitate social interaction and the use of active transport modes to counter the perceived need to protect oneself inside increasingly large cars.

By quantifying the value of car ownership, Moody et al. demonstrate the

high barriers to reduce car ownership. Their approach can also be useful to compare different mobility cultures, and to monitor progress towards lower car dependence, by measuring decreasing values of car ownership and use.

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Competing interests

The author declares no competing interests.