

Summary

Shared e-scooters in Oslo

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Authors: Nils Fearnley, Siri Hegna Berge, Espen Johnsson
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Shared e-scooters in Oslo have proven immensely popular. Supply as well as demand sky rocketed during the summer of 2019. Shared e-scooters are used for relatively short trips and appear to meet the needs of in particular people who are late for meetings and other errands. A majority of e-scooter users is men, under the age of forty, and traveling to/from work or education. Two key challenges with shared e-scooters are high accident risk and littering. There is a clear need to regulate the market. Norwegian city authorities must take his responsibility.

Mapping of shared e-scooters in Oslo

The purpose of this report is to perform a quick status description for shared e-scooters (hereafter only referred to as e-scooters) in Oslo: Supply, demand, users, traffic safety, environment, public health and regulation.

We have performed a large data collection of two, in periods three, e-scooter providers by means of publicly available e-scooter data from the National travel information provider Entur's API. The data show, with time stamps, vacant e-scooters in Oslo, their battery level and geographical location. We have also performed a web survey among e-scooter users in Oslo, several depth interviews with operators and public sector representatives, as well as a broad review of literature.

Supply and demand

Seven e-scooter companies operated in Oslo during the summer 2019: VOI, Tier, Circ, Zvipp, Ryde, Lime, and Libo. Our API data analysis of two of these companies during the months of June and July showed that their supply of e-scooter vehicles exceeded the numbers they had announced to the public, by far. We observed 4,778 vehicles with trips.

We find that e-scooters amass in central parts of the city centre and in other central intersections (figure S.1). Many trips are typical *last mile* trips, i.e. egress trips from public transport stops to final trip destinations, and many trips are typical *last minute* trips just before the (half) hour. Many trips are short. They average one kilometre in distance (as the crow flies) and ten minutes in duration.



Figure S.1: Location of e-scooter trips which start between 6am and 10am.

Users and use of e-scooters

The typical user of e-scooters is a man, under forty and on his way to or from work or education. 70 percent report that they use e-scooters at least once per week during the summer season and 42 percent during autumn. Almost all users spent less than three minutes searching for a vacant e-scooter. They choose e-scooters because it is quick, flexible and fun.

60 percent of our survey respondents say they would have walked had they not used e-scooter for their last trip. 23 percent would have used public transport. In comparison, e-scooters replace very few car trips. Three percent state they would have used car and another five percent would have taken taxi on their last trip. Two percent wouldn't have traveled (figure S.2). At the same time, more than half our respondents state that the e-scooter was part of a multimodal trip chain for their last e-scooter trip. These multimodal trips are for the most part made in combination with metro, bus and walking.

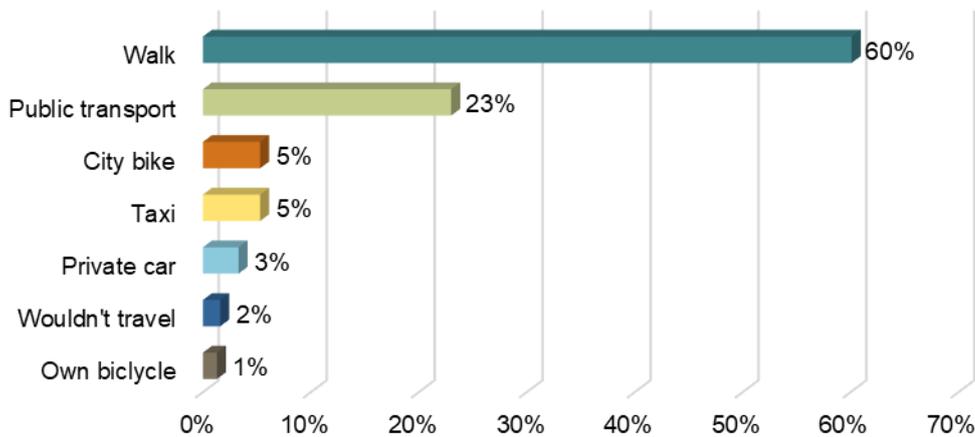


Figure S.2: «What would you have done on your last e-scooter trip if you couldn't use e-scooter?» (n=549).

Traffic safety

E-scooter traffic safety and accident risk are a major concern. Our preliminary assessment suggest e-scooters have about ten times higher accident risk than ordinary bicycles.

Climate and environment

The e-scooters themselves have so far not offered any climate gain, for several reasons. The first generation of vehicles were mostly short-lived *off the shelves* types. Collection and deployment of e-scooters have been car based. E-scooters replace very few car trips.

In the near future, we expect considerably more robust and long-lived vehicles with exchangeable components and exchangeable batteries. This will make the procedure of battery charging and maintenance more efficient and less car based.

While studies from North America typically find that one-third of e-scooter trips replace car, we find that this is so only for eight percent of e-scooter trips in Oslo. However, more than half of the e-scooter trips were made in combination with other transport modes. This suggests that e-scooters are one element of a multimodal alternative to car use and car ownership. A total of ten percent of our survey sample report that they consider to get rid of a car or have gotten rid of a car because of the e-scooters (figure S.3).

More research and more knowledge is needed to fully understand the performance of e-scooters with respect to environment and climate change.

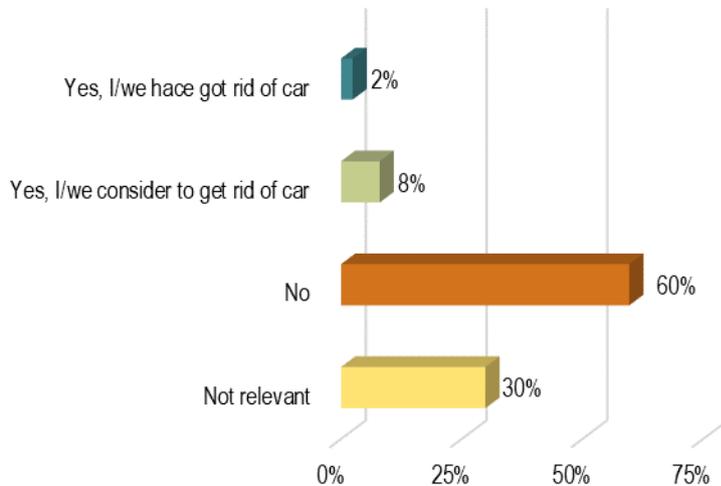


Figure S.3: Response to question of whether e-scooters affect respondents or their household's car ownership ($n=549$).

Public health

There is little to indicate that e-scooters promote public health. On the contrary, e-scooters replace active modes of transport, which in a public health perspective is a much-needed source of physical activity for many.

At the same time, we find that e-scooters often are used in multimodal combination with active modes of transport which, compared with car, offers some physical activity.

Also, e-scooters contribute to increased mobility. 22 percent of our respondents state that they are outside of home more often and 11 percent state that their last e-scooter trip was made for the fun of it. This represents public health gains in terms of a richer social life and increased participation.

Regulation

In Oslo, and elsewhere, unregulated e-scooter markets create challenges in particular with respect to traffic safety and littering of excess numbers of vehicles. The market must be regulated and the competent authority appears to be city authorities.

E-scooter regulation should seek to enable the great benefits and advantages they represent while at the same time safeguard other societal goals. Rules and regulations should take form of the least necessary actions needed to meet those goals. The technology and the markets develop fast. Regulatory policies and the way they are organised should acknowledge that trial and error will be part of the process – on both sides. We recommend a flexible approach to regulation with focus on dialogue, limited duration pilot tests with plans for evaluations and adjustments. There will be much learning both on the authority side and on the supply side.

This report includes a separate chapter with considerations for e-scooter regulation in Oslo.