Impact of vehicle automation and electric propulsion on production costs for mobility services worldwide

Author(s):
Becker, Henrik; Becker, Felix; Axhausen, Kay W.

Publication Date:
2019-05

Permanent Link:
https://doi.org/10.3929/ethz-b-000341751

Rights / License:
In Copyright - Non-Commercial Use Permitted
Automated driving technology along with electric propulsion are widely expected to fundamentally change our transport systems. They may not only allow a more productive use of travel time, but will likely trigger completely new business models in the mobility market. A key determinant of the future prospects of both existing and new mobility services will be their production costs. Hence, in this research the production costs of various transport modes both today and in an automated-electric future are analyzed. To account for different local contexts, the study is conducted for 17 cities across the globe. The results indicate that high-income countries will benefit the most from vehicle automation, while only smaller changes can be expected in lower-income countries. This is due to the different relative contribution of labor cost to the total cost of current taxi and bus operations. In a likely final state, transportation costs will be largely decoupled from a country's income level, which will favor productivity in higher-income locations.