

Vital but invisible?

Road hauliers in the academic literature on fossil-free freight

Background

Hauliers and other logistics actors such as freight forwarders and their customers are crucial when it comes to implementing fossil-free alternatives for freight deliveries. Therefore, it is important to assess what is known about them in this transition to find out how the uptake of new technology, with focus on electrification, can be accelerated.

The literature study

This systematic literature review is conducted within the PhD project EVÅLUTION and is an ongoing study. In a first step, we scanned the database SCOPUS for relevant academic literature on logistics actors' perspectives in electrification, especially the haulier's view. In a second step, we will expand the search to grey literature, such as reports and thesis works. We also aim to expand the geographical scope.

Results

Most research on electrification so far is of quantitative nature such as modelling studies or studies on technology and its performance.

Results cont.

Only a handful of papers deal with road hauliers in electrification. Additionally, only few papers investigate hauliers' views on other practices for emission reduction and environmental sustainability. In total, only 30 papers fit our study aim. These papers focus on battery electric vehicles (BEVs) and short-distance transport from different logistics actors' perspectives. Interestingly, the haulier often disappears behind a group of actors that has received more attention in literature: the freight forwarder, or logistics service provider (LSP). The geographical scope of the identified studies is narrow and mainly performed in Europe. There is a notable absence of Asian studies on actors' perspectives.

Conclusions

There is great need for further research on all kinds of different logistics actors' perspectives in freight transport electrification. Especially the haulier as vehicle owner and performer of the physical transport needs to receive greater attention. There is also a need to widen the scope of studies from BEVs to other technologies such as hydrogen, electric road systems or battery-swapping.

The project EVÅLUTION...

... is a five-year PhD project (2023-2027) with the overall purpose to understand and explain the emerging electrification of freight transport from a road haulier's perspective. The project includes both qualitative and quantitative methods.

PURPOSE

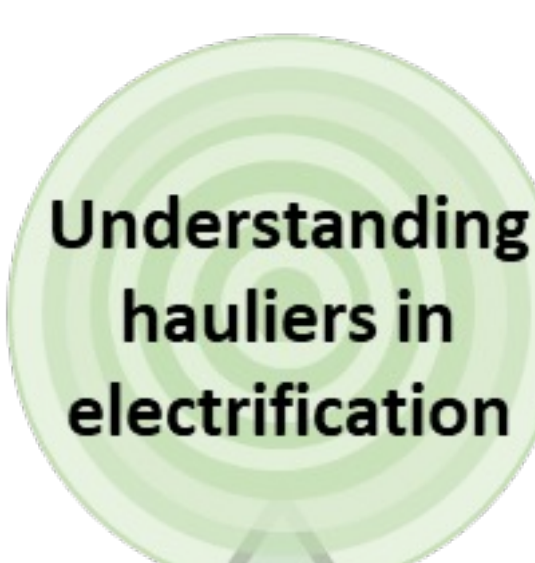


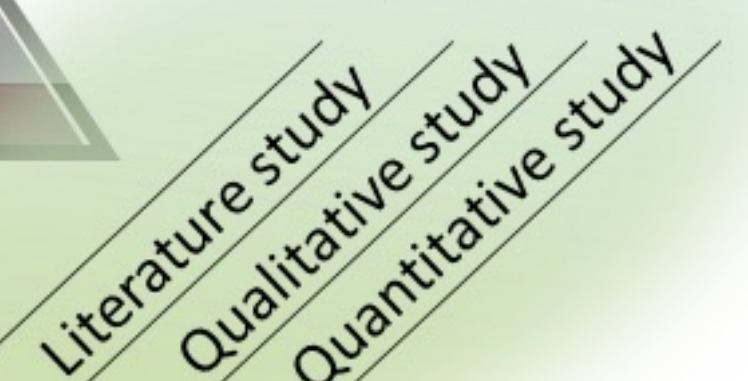
Fig. 1 – Project EVÅLUTION

FOCUS



Accelerating electrification

METHODS



The study is called "Decarbonizing road freight transport – A systematic literature review on the haulier's perspective" and was presented at the LRN conference in Edinburgh in September 2023. We plan to submit the study to an academic journal by the end of 2023.
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