THE CHALLENGES OF ELECTRICATION OF CARGO TRANSPORTATION IN BRAZIL

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Purpose: The electrification of motor vehicles is a reality in recent years, especially when evaluating rates in developed countries. Much of this progress is made through the model of individual passenger transport. Electric vehicles appear as an alternative to road freight transport, but face obstacles that prevent their respective expansion, such as technological, economic, cultural and infrastructure barriers. The study aims to present the Brazilian scenario and its maturity in countries with outstanding cultural and financial similarities. The question that this study answers is “How to encourage and expand public policies for the development of a clean energy matrix for the main mode of transport adopted by the country”.

Research Approach: A search was carried out on the Scopus and Web of Science platforms, with a careful evaluation that aims to deliver worldwide quality on the aforementioned topic. In order to synthesize the research, the following keywords were used: electric vehicles, freight transport, public policies.

Findings and Originality: Because it is a contemporary theme and little discussed in the Brazilian academic environment, the research presents a high level of originality, seeking international material to compose the scenario related to the theme in Brazil. The research presents a Brazil that has contributed little to the theme, with isolated initiatives between federal, state and municipal governments. Therefore, the research correlates the theme with other countries and makes a parallel in the actions that can have a positive effect on the Brazilian model.

Research Impact: When exploring public policies related to the electrification of freight transport in Brazil, a still embryonic model in its application was found. The survey provides a macro view of the current scenario, highlighting the advances made, the expected benefits and the challenges faced by such changes. Long-term academic projections show an increase in the number of electric vehicles on the streets, this factor is intrinsically related to increasingly stringent requirements in terms of climate, but also to technological advances. A significant change in the transport matrix for the next decade will be associated with an important change in the supply chain in the medium term.

Practical Impact: The survey was designed to add relevant information to two actors, public management and the private sector. The study aims to present proposals from countries that have already applied public guidelines in order to enable an energy migration for cargo transport. At this point, the public manager will find technical guidelines for the adopted models, as well as possible adaptations to the Brazilian scenario. For carriers, the survey will present relevant results on the economy and innovation, applying an overview of the topic and how cargo transport in Brazil will be impacted by electric vehicles.

Keywords: Electric vehicles, Freight transport, Public policies,
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