Refereed article

Klimaneutrale Elektromobilität in Indien

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Summary
For long, the breakthrough of electric vehicles seemed an intractable challenge. All kinds of concerns and reservations were uttered: these vehicles were too expensive, had range issues, would require additional infrastructure for charging, and were not more environmentally friendly than conventional vehicles when running on a power mix dominated by fossil fuels. These perceptions are gradually changing. National and subnational policy efforts are increasing, prices for electric vehicles are coming down, while auto manufacturers, energy utilities, and other service providers are intensifying their respective efforts. The goal in this paper is to disentangle the complexity of the sociotechnical transition process toward electric vehicles in India through an event history analysis encompassing the years 1994 to 2018. The results of this analysis show two major phases in the transition to electric vehicles in India: the early-mover entrepreneurial one (1994–2002) as well as an ongoing period of predominantly government-driven multistakeholder interactions (2010–2018). Especially since 2017, India has been at an accelerated stage in the sociotechnical transition process toward electric mobility. Nonetheless, niche features such as pilot and demonstration projects continue to dominate the technological innovation system, and electric vehicle registration figures lag far behind what would be needed to reach the National Electric Mobility Mission Plan target of six to seven million such vehicles by 2020. Yet, the past two years have been filled with particularly promising signs of cumulative causation that manifest themselves in continued growth in electric vehicle sales and rising levels of renewables in the Indian energy mix.

Keywords: India, sociotechnical transitions, technological innovation systems, electric mobility, renewable energies

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