

Title:

Subsidizing Industry Growth in a Market with Lemons: Evidence from the Chinese Electric Vehicle Market

Abstract:

Consumer subsidies are common policies to foster growth in emerging green industries, such as the electric vehicle (EV) industry. Ideally, such policies can expand the market and improve welfare by promoting firm entry and inducing technology spillovers to related industries. However, a poorly designed subsidy can attract “lemon” entrants with low and imperfectly observed quality, undermining the industry’s collective reputation and dampening industry growth. Using Chinese EV market data from 2012 to 2018, this paper examines how subsidies affect the growth of an ascent industry. We develop a structural model of vehicle demand, firm entry and expansion, and EV reputation dynamics to analyse the subsidy’s equilibrium impact. Our results suggest that the net welfare impact of the subsidy is nearly zero and that the reputation impact reduces the subsidy benefits by 10.8%. Decreasing the subsidy level can improve policy efficiency and mitigate the reputation impact, while stringency in the attribute-based subsidy can serve as a screening tool to effectively filter out lemons. This paper develops a framework for designing green industrial policies, highlighting the critical but often neglected role of the reputation channel.