Price dynamics in the global Input-Output economy: The case of the global car industry and climate policy.

Topic:
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(1) The research question pursued in the paper is:
When and why are many prices stable in the long run despite innovations in technologies and cultural values - and the reverse, i.e. when and why are breakthrough innovations in technologies and cultural values triggered by price changes?
(2) The method used is:
a case study over a century of price fluctuations, technological and cultural innovations (for good or for bad), with a focus on the car industry and related sectors like the oil industry.
(3) The data used are:
published input-output data that allow to construct a coarse input-output model of the world economy, published time series of the prices of selected goods, well documented analyses of technological and cultural innovations, and widely available data about global climate policy, including policy measures to increase carbon prices and reduce carbon emissions.
(4) There is a rich literature about price dynamics in Input-Output economies (e.g. PrzybyliÅ„ski and GorzaÅ‚czyÅ„ski, 2022; Weber, Jauregui, Nassif Pirez, 2022; Aiwen Zhao, Ruilin Li, 2019) that clarifies the relations between critical prices and inflation indices as well as causal chains from a price exposed to an exogenous shock to other prices. The present paper investigates in new ways important interactions between price dynamics and technological as well as cultural innovations, interactions that so far have not been studied in-depth by Input-Output scholars. Building on marketing research that shows how prices often work as social norms (e.g. the seminal "Asking about Prices" by Blinder et al. and Thaler's emphasis on reference prices in mental accounting), the long-term stability of US car prices despite massive technological and cultural innovation can be understood.
While oil prices have experienced massive changes over their history, this has not led to a breakthrough of electric vehicles. Tesla's breakthrough, in contrast, was not due to a price advantage - quite the opposite - nor to climate policy. Remarkably, China triggered the impressive development of BYD and others to become highly successful producers of electric vehicles by inviting and fostering Tesla to establish its Shanghai gigafactory. With regard to the car industry, the European Union now finds itself in a dilemma: threatened by falling car prices from China it may implement protectonist measures in parallel with increasing gasoline prices; by opening the doors to Chinese cars the EU may reduce carbon emissions by accelerating its European Green Deal. The standard input-output price model will be essential to master the resulting challenge, but only if it is complemented by a new understanding of the interactions between price dynamics and different kinds of technical as well as cultural innovations.