

Fossil fuel subsidy reforms, trade, and market power

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Abstract

Fossil fuel subsidies reached an all-time high in 2022. Yet the literature on Fossil Fuel Subsidy Reforms (FFSR) using Computational General Equilibrium (CGE) models broadly supports a phase-out. While these models captured the spillover effects of FFSR, they relied on the Walrasian tradition of perfect competition. Using a perfectly competitive theoretical engine to study FFSR is puzzling knowing the role of OPEC and the importance of economies of scale in the oil sector, historically one of the largest single-sector recipients of fossil fuel subsidies. The present study develops a multi-regional CGE model with endogenous markups to explore the impact of market power on subsidy reforms in the oil sector. Results show that compared to the perfectly competitive case, markups lower the overall effectiveness of a global reform to reduce fossil fuel consumption. However, the impact of pro-competitive effects on unilateral policies in oil-exporting or importing countries varies. Complementary industrial policies will therefore be needed to maximize the benefits of phasing out fossil fuel subsidies and ensure commitment across regions.

Keywords: Fossil Fuel Subsidy Reforms, Computable General Equilibrium (CGE), Market Power, Imperfect competition, Petroleum and oil, Energy transition, leakages.

The paper, currently under review, could not be uploaded online. It is, however, available upon request. Please reach out to robin.argueyrolles@unibas.ch if you would like to be sent a copy or if you have any questions. Thank you.

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