
EconWorld2016@London

What's the Cost of Regulating the Environment? Aggregate Implications of Cap-and-Trade Programs

Evangelina Dardati¹, Meryem Saygılı²

¹United Alberto Hurtado, Chile

²University of Texas at Tyler, USA

ABSTRACT

We use a firm dynamics model with heterogeneous firms to study the effect on the aggregate economic outcomes and welfare of different allocation schemes in a cap-and-trade program. In particular, we quantify the long-run effects of allocating permits through auctions, grandfathering, and output-based allocations. We calibrate the model with US data on firm size distribution and firm emissions. A 30% reduction in emissions is associated with a welfare cost that is highest for auctioning, followed by output-based allocation and, finally, grandfathering. When we introduce an abatement option, the loss is smaller, but the ordering remains the same.

KEYWORDS plant heterogeneity; cap-and-trade program; welfare

JEL E23, Q52, Q50