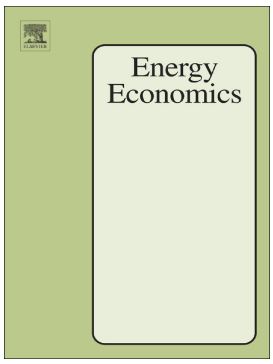

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Re-analyzing the Economic Impact of a Global Bunker Emissions Charge

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[Abstract]

Regulating bunker emissions continues to be a challenging task, largely due to the lack of a globally coordinated scheme providing economic and political incentives to potential participating countries. This paper analyses the economic costs and benefits of imposing a global carbon tax on international bunker emissions by employing a computable general equilibrium model approach. Under the assumption of an emissions reduction of 5 percent below 2000 levels by 2020, we demonstrate that a global bunker emissions charge, on one hand, reduces trade volume and change trade patterns between countries and regions, while on the other hand, accelerates the adoption of energy-saving technologies and reallocates the supply of international transportation services throughout the world. The net economic impact, though negative on average, is modest compared to the benefits obtained from the emissions reduction. If revenues from a bunker emissions charge are properly distributed among countries and regions, the losses to disadvantaged countries are likely to be offset by the benefits to advantaged countries. This finding provides useful insights for policy makers: a global bunker emissions charge could, in future, be an economically feasible strategy to reduce the increasing bunker emissions though the implementation requires more political effort and wisdom.
Key Words: Bunker Emissions Charge; International Maritime Transport; Economic and Trade Impact; CGE Model.
JEL Code: N70, C68, F64

1. Introduction

To reduce the carbon emissions from the international transport industry sector, rigorous analysis of the economic impacts of a global bunker emissions charge under a global policy framework and coordination scheme is essential. Due to the rapid expansion of international trade in recent decades, international aviation and shipping services have significantly increased their