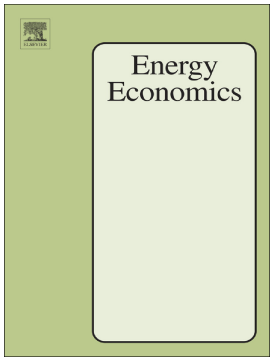

Economy-wide effects of international and Russia's climate policies

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Economy-wide effects of international and Russia's climate policies[1]

Anton Orlov[2] and Asbjørn Aaheim

Abstract

The objectives of this paper are to analyse the economy-wide effects of international climate policy on the Russian economy as well as the effects of Russia's climate policy on European economies. Our analysis is based on a general equilibrium model that includes inertias, such as imperfect sectoral labour mobility and vintage capital, and has a detailed depiction of the power generation sector. We found that international climate policy could reduce Russia's private welfare by 1.8% annually due to lower revenues from exports of fossil fuels. At the sectoral level, Russia could gain a comparative advantage in producing energy-intensive commodities and hence Russia's producers of those commodities increase their production and export supplies. This could result in a carbon leakage in Russia. Eliminating implicit subsidies on domestic consumption of gas and petroleum products could reduce Russia's private welfare loss by 0.6% points and eliminate the carbon leakage. Nevertheless, eliminating implicit subsidies on gas and petroleum products might not be sufficient to achieve the pledged emission reductions by 2030. Moreover, this leads to an undesirable increase in coal consumption and therefore, some additional climate policy such as a carbon tax or an emission trading system might be required. We also found that Russia's climate policy could have positive but moderate effects on the European economies; in particular, countries such as Lithuania, Slovakia, and Hungary benefit due to decreased export prices for gas, crude oil, and petroleum products from Russia.

Key words: Economy-wide effects; NDC; Paris agreement; EU; Russia; CGE model

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