

Abstract:

After the COP15 meeting in Copenhagen, one of major environmental policy debates in Japan is whether to adopt carbon pricing regulation such as carbon tax and Cap and Trade system. Carbon leakage and decline in competitiveness of industries are the major concerns involved with the introduction of the regulation. Border tax adjustment (BTA) and output based allocation scheme (OBA) are policy tools potentially resolving these issues. Employing CGE model, this paper evaluates the effectiveness of 5 different BTAs and OBA to mitigate carbon leakage, competitiveness loss in energy intensive trade exposed industries (EITE), and welfare loss in Japan. We obtain the following findings. Carbon tariffs on imported products recover the welfare loss more effectively than other BTAs. Carbon tariffs with export rebates for the extra cost caused by the regulation is effective to help EITE with regaining the competitiveness. OBA is effective to mitigate the competitiveness loss of EITE and carbon leakage, but it has a significant negative impacts on welfare. These findings imply that the best policy among BTAs and OBA depends upon which issue a policy maker set as the first priority to be resolved.

[183 words]

Key words: climate change, Cap and Trade, Carbon Leakage, Competitiveness, Economic Efficiency