"Effectiveness of a CO$_2$ Tax on Industrial Emissions"

This study quantifies the amount of taxes collected and reduction of emissions that implementing a CO$_2$ tax on industrial sources in Chile would generate. An optimization problem is used to simulate the situation that each source faces of choosing the technology and fuel in order to reduce the cost of the new tax. For this, we consider the investments in boilers or dual burners that allow for a change in fuel. The results indicate that taxes up to $10/ton do not greatly modify the use of fuels in industrial sources. If taxes between US $10/ton and $30/ton are implemented, then emissions are reduced rapidly. With taxes higher than US $30/ton, emission reductions stagnate. It can be concluded that taxes that are too low or too high are effective in raising revenue but not in reducing emissions.