The Impact of Carbon taxes on the B.C. Economy Jean-Thomas Bernard, Department of Economics, University of Ottawa, jbernar3@uottawa.ca Misbahul Islam, Department of Economics, University of Ottawa, misla075@uottawa.ca Maral Kichian, Graduate School of Public and International Affairs, University of Ottawa, mkichian@uottawa.ca

Overview

We analyze the effects of carbon taxes on carbon emissions generated from fossil fuel use in British Columbia, Canada, on various economic activity indicators in that province. The selected indicators are GDP, unemployment and petroleum product use. The tax was introduced at 10\$/ton of CO_2 in July 2008 and 5\$ were added every July to reach 30\$/ton of CO_2 in 2012. The tax is designed to be revenue-neutral. Thus collected tax revenue is redistributed via lower personal and corporate income tax rates and via subsidies to low-income households.

Methods

Our analysis is conducted via impulse responses in the context of vector autoregressive models, taking into account the possibility that certain impacts may be asymmetric in nature. We thus examine both the amplitude of the tax effect, as well as its duration over time.

Results

Our results indicate that the policy has achieved some success in limiting carbon emissions via fossil fuel use with little or no significant negative impact on GDP and unemployment.

Conclusions

Our results lend support to the use of carbon tax as an efficient tool to control greenhouse gas emissions on the base of a real policy initiative.

References

- 1. Murray B. C. and N. Rivers (2015) "British Columbia's Revenue-Neutral Carbon Tax: A Review of the Latest "Grand Experiment" in Environmental Policy", *Energy Policy*, 86: 674-683.
- 2. Rivers, N. and B. Schaufele (2015) "Salience of Carbon Taxes in the Gasoline Market" *Journal of Environmental Economics and Management*, 74: 23-36.
- 3. Killian L. and R.J. Vigfusson (2011) 'Are Responses of the U.S. Economy asymmetric in Energy Price Increases and Decreases', *Quantitative Economics*, 2:419-453.