



8th International Conference on Management, Economics and
Humanities

7 - 9 December, 2018

Barcelona, Spain

Macroeconomic Effects of Intended Nationally Determined Contributions (INDCs¹) for Ethiopia

Tarekegne Wubie Wassie, University of Milan,
Italy

Abstract

Mitigation of climate change has become unavoidable discussion item in policy making agendas in both developed and developing countries. Having understood the important role played by developing nations in fighting against climate change, Ethiopia submitted its INDCs to the United Nation Framework Convention on Climate Change (UNFCCC) secretariat in 2015 with an emission reduction goal of 64% in 2030 compared to the BAU scenario. Two simulation scenarios have been introduced to analyze the economic effects of the implementation of Ethiopia's INDC policy in the form of carbon tax using Computable General Equilibrium (CGE) model. In the first simulation, carbon tax revenue has been allocated entirely for government consumption, whereas in the second simulation, the carbon tax revenue has been equally divided between government consumption and households in form of lump sum transfer. The results of both simulation experiments on selected macroeconomic variables indicate that, in real terms, GDP, national absorption and household consumption are found to be adversely affected by a considerable magnitude relative to the baseline scenario, the impact being higher in the first simulation. The implication of the results is that policies that increase household consumption has better spillover effects on GDP than those of government consumption. Finally, to achieve the emission reduction target set out in the INDC policy of Ethiopia with reasonable cost to the economy, the country has to invest in clean technologies that are meant to improve emission

¹ INDCs- Intended Nationally Determined Contributions- are emission reduction commitments submitted by countries, including Ethiopia, following the 2015 Paris climate agreement.

efficiency as most of the emissions emanate from activities in agricultural sector. Keywords: carbon tax; CGE, emission; economy; simulation