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Bilateral CDM-flows: Stand-alone, or Substitute for FDI and Aid?

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Abstract

In 2005, the Kyoto protocol entered into force to combat climate change. With it, requests for and registration of projects under the so-called Flexible Mechanisms, the Clean Development Mechanism (CDM) and Joint Implementation, started. These mechanisms are meant to give developing and transition countries a contributing role in the combat against climate change. They construct an incentive scheme to engage in environmental projects without limiting the countries in their industrial growth. Under the Flexible Mechanism, each abated ton of CO_2 equivalent in such a project is rewarded with Certified Emission Reductions (CERs). Those CERs can be sold to firms in countries that underlie a cap in the Cap and Trade scheme of the Kyoto protocol, so it can be counted against their emission limit.

The UNFCCC actively facilitates projects, bringing together entrepreneurs in the respective host countries with entrepreneurs in the partner countries. Hosts benefit from easy financing and technology transfer and financiers gain CERs from the projects.

This paper analyses the determinants of partnerships and the amount of CERs generated between an industrialised financier country and a developing host country. The focus is on factors that facilitate partnership through pre-existing channels, like foreign direct investment and official development aid. In particular, light is shed on the determining factors for the small amount of CDM projects in Africa. So far, only 24 of the 2120 registered projects were hosted in Africa (excluding South Africa).

The analysis is conducted using a gravity model with bilateral panel data from the years 2005 until 2007 to control for period specific effects. Within this framework, multilateral resistance terms and spatial autocorrelation are accounted for by employing techniques by Anderson and van Wincoop (2003) and Porojan (2001), respectively.

Results suggest that African states lack properties attracting CDM project investments similar to a lack of properties attracting Foreign Direct Investment (FDI). Moreover, contrary to previous findings, the model does not yield a significant relationship between a host's CO_2 emissions and the number of CERs transferred from that country to partners.

Keywords: Aid, climate change, CO_2, gravity model, Kyoto protocol

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