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Impact of foreign direct investment on environmental sustainability: Evidence from South Africa

CLARIETTA CHAGWIZA¹, NYANKOMO MARWA², FARAI KAPFUDZARUWA¹

¹*University of Pretoria, Future Africa, South Africa*

²*Stellenbosch Business School, Development Finance, South Africa*

Abstract

Countries are under pressure to meet goals such as the United Nations (UN) 2030 Agenda for the sustainable development goals (SDGs) and the African Union's Agenda 2063. As a result, developing countries, particularly in Africa, make considerable efforts to bring in more foreign direct investment (FDI) to stimulate economic growth, which in turn influences the interlinked goals and targets. However, ample evidence exists that shows that in as much as FDI is critical in promoting economic growth, it can have negative (environmental) impacts on the host economies. African countries, including South Africa, are well-endowed with natural resources and cheap labour that makes them targets for foreign and transnational investors. This, however, may lead to resource depletion posing huge negative implications on the economies. Environmental degradation implications are massive for Africa since the continent's wealth is heavily reliant on natural resources and its conservation. This paper uses time series data spanning 1971–2016 to investigate the impact of foreign direct investment (FDI) on environmental sustainability in South Africa. Two proxies of environmental sustainability are used: carbon dioxide (CO₂) emissions and natural resource depletion (NRD). The autoregressive distributed lag (ARDL) was employed for analysis. The Augmented Dickey–Fuller confirmed a mixed nature of integration of the series, i.e. I(0) and I(1) among the variables. The bounds testing results revealed that cointegration exists among the variables when NRD is the dependent variable. No cointegration existed among the variables with CO₂ as the dependent variable. With NRD as a dependent variable, the ARDL results revealed that in the long run, FDI and domestic investment negatively impacted on the environment. In the short run, FDI was found to also contribute to environmental degradation. When CO₂ was used as the dependent variable, it was found that FDI significantly promotes environmental sustainability, while GDP led to higher CO₂ emissions. The findings of this study can potentially inform policy on the importance of ensuring that the country accrues optimal benefits from FDI inflows while ensuring environmental sustainability for future generations.

Keywords: ARDL, environmental degradation, foreign direct investment, impact