

Electric battery manufacturing: A game changer for the Democratic Republic of Congo

Christian S. Otchia

Nagoya University, Graduate School of International Development

E-mail : otchia@gsid.nagoya-u.ac.jp

Abstract

The recovery of the economy of the Democratic Republic of Congo (DRC) has gained momentum over the past 10 years, with high growth rate, significant FDI inflow and lower aggregate poverty incidence. As the commodity price picked up and FDI poured in the country, DRC achieved the fastest expansion since independence in 1960, supported by prudential macroeconomic management and peace. The growth rate has been maintained at an average of 8 percent between 2010 and 2019 while the stock of inwards FDI increased 3 times compared to its 2000 level. To sustain this growth, DRC policy makers have devoted special attention to the Manono Special Economic Zone that will harness DRC and Africa's endowments of strategic minerals (cobalt, manganese, graphite, copper, lithium, etc) which are components of the lithium-ion batteries, therefore, creating the possibility of a robust regional value chain for batteries, electric vehicles, and renewable energy. By so doing, Africa can get a share of a market that is expected to reach US\$ 8.8 trillion by 2025.

The aim of this paper is to assess the impacts of developing an electric battery industry on the Congolese economy and to seek for plausible complementary policies to accelerate structural transformation using the forces of globalization. We apply a forward-looking dynamic computable general equilibrium (CGE) framework to quantify the economic effects, specifically on growth, investment, sectoral output and employment, labor income, and household welfare. We make two special contributions to the development of CGE models and social accounting matrices for policy analysis in Africa: (i) We develop a dynamic CGE model and introduce special structures for electric battery production and energy consumption; (ii) we develop a new spatial social accounting matrix for the Democratic Republic of Congo, with a detailed disaggregation of the mining sector.

Keywords: Electric battery; Economic impact; CGE model, DRC