

## The System Dynamics Research of China-Africa Trade, Investment and Economic Growth

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**Abstract :** International trade and outward foreign direct investment are important factors which are generally recognized in the economic growth and development. Though several scholars have struggled to reveal the influence of trade and outward foreign direct investment (FDI) on economic growth, most studies utilized common econometric models such as vector autoregression and aggregated the variables, which for the most part prompts, however, contradictory and mixed results. Thus, there is an exigent need for the precise study of the trade and FDI effect of economic growth while applying strong econometric models and disaggregating the variables into its separate individual variables to explicate their respective effects on economic growth. This will guarantee the provision of policies and strategies that are geared towards individual variables to ensure sustainable development and growth. This study, therefore, seeks to examine the causal effect of China-Africa trade and Outward Foreign Direct Investment on the economic growth of Africa using a robust and recent econometric approach such as system dynamics model. Our study impanels and tests an ensemble of a group of vital variables predominant in recent studies on trade-FDI-economic growth causality: Foreign direct investment, international trade and economic growth. Our results showed that the system dynamics method provides accurate statistical inference regarding the direction of the causality among the variables than the conventional method such as OLS and Granger Causality predominantly used in the literature as it is more robust and provides accurate, critical values.

**Keywords :** economic growth, outward foreign direct investment, system dynamics model, international trade

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