

Fostering Local Development or Extraction: The Local Economic Effects of Chinese Aid in Sub-Saharan Africa

Yuqing Li*

Department of Economics, Jinan University, Guangzhou, China

Email address:

18470329607@163.com (Yuqing Li)

*Corresponding author

Abstract

Whether Chinese aid in Sub-Saharan Africa promotes local development or serves extractive purposes remains widely debated. This paper investigates the local economic effects of Chinese aid projects in Sub-Saharan Africa. The empirical strategy exploits the staggered rollout of geocoded Chinese aid projects in a staggered difference-in-differences framework to estimate the effects of these projects on local economic activity. The spatial analysis employs satellite-based nighttime lights data to produce both aggregate and spatially disaggregated assessments across multiple buffer zones around project locations. The analysis reveals that Chinese aid projects significantly increase nighttime light intensity around project locations, pointing to positive subnational development effects. Nighttime light intensity rises with the onset of project implementation, and the effects become more pronounced from the second year onward. Buffer-level estimates further indicate that the effects are spatially heterogeneous, with local responses displaying a clear gradient across spatial scales. The positive effects are stronger in areas with higher spatial frictions, where transport accessibility is poorer and market connections are weaker. These findings remain robust after excluding the immediate area around project locations and accounting for additional local development factors. This paper contributes to the debate over Chinese aid by providing project-level spatial evidence on observable local economic activity in Sub-Saharan Africa.

Keywords

Chinese Aid, Aid Effectiveness, Subnational Development, Spatial Spillovers, Nighttime Light, Sub-saharan Africa