The Determinants of Economic Growth in Africa: A Dynamic Causality and Panel Cointegration Analysis

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Abstract: This paper examines the dynamic causal relationships between trade openness, foreign aid, domestic investment, long-term external debt, government spending and economic growth for a panel of 33 highly aid-dependent African countries for the period 1974-2009. Short-run bidirectional causality is found between economic growth and trade openness. Short-run unidirectional causalities are found from external debt to foreign aid, from trade openness, foreign aid, external debt to domestic investment, from economic growth, trade openness to external debt and also from trade openness to government spending. The long-run effects of trade openness, domestic investment and government spending on economic growth are significantly positive.

I. INTRODUCTION

Since the mid-1970s many African countries implemented liberal trade policies to attract FDI for economic growth and development. While the impact of FDI on economic growth has been largely positive for many of the African economies, the role of foreign aid in economic growth of Africa has been a contentious issue for many years. According to a World Bank report published in 2008, half the population in sub-Saharan Africa was still living below

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the poverty line in 2005. This appears astounding considering the amount of development assistance received by the African countries from external sources over the years. Studies have shown that the more foreign aid the African countries have received, the more aid dependent they have become. As growth faltered despite massive aid flows, most of the African countries have been left in a debt trap. A question, therefore, arises on whether the liberal trade policy measures and foreign aid have had any significant positive impact on economic growth of African countries. Is there any significant long-run relationship between trade openness, foreign aid, external debt and economic growth for the African countries?

The objective of this study is to investigate both the cointegrating and causal relationships between trade openness, foreign aid, domestic investment, external debt, government spending and economic growth for a panel of 33 African countries for the period 1974-2009. The paper is organized as follows: Section II presents a literature review; Section III discusses data sources and empirical model; Section IV provides empirical analysis and finally section V concludes with a summary of the main findings and policy implications.

II. A REVIEW OF EMPIRICAL LITERATURE

A vast body of empirical literature has looked at the relation between economic growth and its determinants for developing countries and the results are mixed and inconclusive. Amongst numerous studies, Onafowara and Owoye (1998), Foster (2008) and Yavari and Mohseni (2012) reported a positive long-run correlation between trade openness and economic growth. While Murty et al. (1994), Levy (1998) and Gounder (2001) reported positive relationship between foreign aid and economic growth, Nyoni (1998) and Mallik (2008) observed a negative impact of foreign aid on economic growth. Burke and Ahmadi-Esfahani (2006) reported lack of any significant relationship between foreign aid and economic growth.

Domestic investment, government spending and external debt are highly correlated with economic growth. Except external debt, the effects of domestic investment and government spending on economic growth are most likely to be positive. Studies that have reported a positive relationship between domestic investment and economic growth include Firebaugh (1992), Ciftciouglu and Begovic (2008) and Adams (2009). While Loizides and Vamvoukas (2005) found a positive relationship between government spending and economic growth, Hsieh and Lai (1994) reported lack of evidence of any definite relationship between the two. Most of the studies that have reported a negative correlation between external debt and economic growth include Fosu (1999) and Ciftciouglu and Begovic (2008).

III. DATA AND METHODOLOGY

This paper uses annual time series data for a panel of 33 African countries for the period 1974-2009. The variables are per-capita real GDP (PGDP), trade openness (OPN), foreign aid (FAID), domestic investment (DIV), external debt (EXD), and government spending (GSP). Per-capita real GDP (PGDP) is measured in constant 2005 prices and exchange rates in US dollars and is used as a proxy for economic growth. Trade openness index measures the degree of trade liberalization and the index is constructed by dividing the sum of exports and imports