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Export-Led Growth Hypothesis: Empirical Evidence from Selected Sub-Saharan African Countries

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Abstract

The objective of this study is to examine the validity of Export-Led Growth (ELG) hypothesis in selected Sub-Saharan African (SSA) countries for the period from 1985 to 2014. A new generation panel data approach is applied such as panel unit root, panel cointegration, Fully Modified OLS (FMOLS) and Dynamic Ordinary Least Square (DOLS). The empirical findings revealed that the panel unit root is stationary after the first difference and presents a cointegration. After the confirmation of panel cointegration, there exists a long-run relationship between exports and growth based on FMOLS and DOLS results. FMOLS and DOLS estimation showed a positive impact of investment, government expenditure and exports on the economic growth. Hence, the findings proved that export-oriented growth strategy is valid in the SSA countries.

Keywords: Export; economic growth; panel data; Sub-Saharan Africa

1. Introduction

Africa is one of the world's poorest continents (Basu et al., 2005). Over the last 20 years, Sub-Saharan African (SSA) countries started enjoying robust and sustained economic growth. After the growth expanded by 4.9% in 2013, the economic performance is expected to continue increasing about 5.5% in 2015 (IMF, World Economic Outlook

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database, 2014). The strong economic performance is mainly driven by investments in the mining activities, infrastructure for transport and communication, and energy production. In the early of 1960s, policy makers and scholars showed an interest in the relationship between exports and economic growth. However, there is still an ongoing debate among scholars. Numerous studies, both theoretical and empirical have been undertaken to validate the ELG hypothesis and SSA countries are getting less attention in academic discussions.

Cross-country studies such as Abu-Quarn and Abu-Bader (2004) supported a positive relationship between export and growth in the developing countries, while few groups of studies investigated the causal relationship between export and output growth for individual countries using Granger's (1969) or Sims' (1972) causality test. Among these studies are Dodaro (1993), Sharma and Dhakal (1994), and Riezman et al. (1996). In fact, another group of studies used cointegration techniques to examine the long-run relationship between exports and output of individual countries such as Bahmani-Oskooee and Alse (1994) and Bahmani-Oskooee and Economidou (2009). Overall of these studies suggested that there is a positive long-run relationship between exports and output, and causality is running from exports to output or in both directions in the most of the developing countries.

Giles and Williams (2000) reviewed more than 150 export-growth papers which fell into three groups of studies. The first group of studies was based on cross-country rank correlation coefficients, second group applies cross-sectional regression analysis and third group employs time series techniques on a country-by-country basis. Two thirds of this paper is owned by the third group and more than 70 are papers based on Granger causality tests.

In addition, this study does not belong to any of these groups. Additionally, voluminous literature focused on developing countries that utilized cross-sectional data, production function, and time series data. On the other hand, far too little attention has been paid to the panel data technique in the Sub-Saharan African countries that this paper seeks to investigate. One of the primary reasons to utilize the panel unit root tests for cross-sectional data is because this test can increase the statistical power of univariate counterparts as compared to the traditional Augmented Dickey-Fuller test (ADF) (Dickey-Fuller, 1979) characterized to have a low power in rejecting the null of non-stationary of the series, especially for short-spanned data. Recent literature suggests that a new generation of panel unit root tests has a higher power that is able to capture the country-specific effects, heterogeneity in the direction and magnitude of the parameters across the panel, and weak restrictions.

Against this background, presently scholars and policy makers have raised issues on the relevancy of export-led growth hypothesis strategy as an appropriate development tactic to achieve the MDGs (Millennium Development Goals) 2015 in the SSA countries. The importance of economic transformation in the SSA countries is a key to achieve the Millennium Development Goals 2015 to improve their standard of living and reduce poverty, hunger, maternal and child deaths, disease and gender inequality. Hence, this study intends to re-examine the ELG hypothesis with a new panel data approach in selected Sub-Saharan African countries, namely; Botswana, Equatorial Guinea and Mauritius.This paper is organized into five sections. The second section discusses the literature review. The third section describes data sources, whereas the methodology and empirical evidence are presented in section four. The final section concludes the paper with important findings and policy implications.

2. Review of literature

ELG hypothesis has been done by many researchers using different econometric techniques. In general, recent empirical literature has shown that causality relations vary with the period of study, the use of econometric methods, treatment of variables (nominal or real) whether one-way or two-way linkages, and the presence of other related variables or inclusion of interaction variables in the estimated equation.

Exports-growth nexus which has still been a subject of extensive debate since the 1960s was also studied by Giles and Williams (2000). It was surprising that there is no clear consensus between the export-led-growth and growth-led-exports even though early cross-section studies favored the past. Wernerheim (2000) found bidirectional causality between exports and growth by using cointegration and causality test. However, only few papers applied the panel data causality analysis.

Several literatures argued that positive productivity effects estimated by export-led growth hypothesis do not necessarily occur in developing countries. This is because most of the developing countries are heavily dependent on primary commodity exports. At the same time, exports can lead economies to shift away from the competitive manufacturing sectors which have many externality factors required for sustainable growth. This is compared to the