What determines the long run growth rate in Kenya?

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Abstract

This paper examines the determinants of total factor productivity (*TFP*) in Kenya. We utilized the theoretical insights from the Solow (1956) growth model and its extension by Mankiw, Romer and Weil (1992) and followed Senhadji's (2000) growth accounting procedure. We find that growth in Kenya, until the 1990s was mainly due to factor accumulation. Since then, *TFP* has made a small contribution to growth. Our findings imply that while variables like overseas development aid, foreign direct investment and progress of financial sector improves *TFP*, trade openness is the key determinant. Consequently, policy makers should focus on policies that improve trade openness if the long run growth rate is to be raised.
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1. Introduction

Lifting the long run growth rate is, arguably, the pursuit of every economy. Since there are a number of policies designed to promote productivity growth and stability in Kenya, it is important to ask: which is best and how good is it in enhancing the long run growth rate? It is obvious that this is a difficult question given the recent economic turmoil, external pressure from donors, and oil crisis and economic mismanagement. Evidence shows that progress in the liberalization of the trade regime in Kenya has been sporadic, with periods of significant progress followed by slower movement and even reversals; see Odhiambo and Otieno (2006, p. 11).

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Since independence Kenya has embarked on pursuing a variety of investment and trade policies. There is a widespread belief that policies aimed at enhancing openness eventually stimulate long run growth (Edwards, 1998; Sachs & Warner, 1995). The structural adjustment programmes (SAPs) implemented by Kenya in the 1980s led the economy to shift from a highly protected import-substitution strategy to policies that boost exports. The International Monetary Fund (IMF) and the World Bank played a crucial role in facilitating the SAPs. Most of the trade liberalization (openness) policies were undertaken as part of the SAP, however Kenya's participation as a member of the World Trade Organization (WTO) also endorsed her benefits related to tariffs, import licensing and other trade interventions.

Kenya has increasingly participated in regional integration initiatives within Africa and beyond, with the aim of improving terms of trade, overall investment, growth and development. For example, Kenya is now a member of various regional trade organizations, such as the Common Market for Eastern and Southern Africa (COMESA), East African Community (EAC), Caribbean and Pacific States and the European Union (ACP-EU) and the Cotonou Partnership Agreement. Despite these forays into increasing trade liberalization, it is currently unclear as to whether they have been beneficial to the long run growth of this African economy. In fact, recent research by Odhiambo and Otieno (2006) contend that liberalization and trade openness in Kenya have failed to spell out a clear long-term path towards economic growth. They argued that most policies or initiatives were not sustainable, due to a lack of institutional framework and weak policy formulation. This paper attempts to re-examine the determinants of total factor productivity (*TFP*) in Kenya; particularly the relative importance of trade openness in long run growth.

The theoretical framework of Solow's (1956) growth model and the growth accounting framework in Solow (1957) is utilized in this paper. The Solow growth model implies that the long run growth rate of an economy depends on the rate of technical progress or *TFP* and his growth accounting framework showed that nearly half of the long run growth rate in developed countries is attributable to *TFP*. However, it is not known what factors determine *TFP* and for this reason the Solow growth model is known as the exogenous growth model (*EXGM*).

Subsequently, two alternative developments have taken place to analyze the determinants of *TFP*. Barro (1991, 1999), Lucas (1988), Romer (1986, 1990), etc., have developed the endogenous growth models in which *TFP* is endogenously determined by factors like the stock of knowledge through education and research and development, investment in human capital formation, in infrastructure, etc. While these endogenous growth models (*ENGMs*) are very useful they have a few limitations. Firstly, they are difficult to estimate because their structural equations are intrinsically non-linear in parameters and variables. Secondly, since the dependent variable is the long run growth rate it is necessary to proxy this rate with the average growth rate over longer spans of time. This reduces the number of observations for estimation. Therefore, in estimating *ENGMs* it is necessary to use cross-country data with a large cross-section dimension. Thirdly, there is no theoretical *ENGM* in which more than one or two variables are used to show how they influence *TFP*. Consequently, empirical works based on *ENGMs* use by and large ad hoc specifications; see Easterly, Levine, and Roodman (2004).

A second alternative is to extend the Solow growth model. Senhadji (2000) has used the growth accounting framework of Solow (1957) to estimate *TFP*, as the Solow residual, for 88 countries. He then regressed the estimated *TFP*s on some potential determinants of *TFP*. This approach has recently been used by Rao and Hassan (2012) to explain the long run growth rate of Bangladesh. In this paper we shall use this approach of Senhadji to analyze the determinants of the long run