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Financial development, trade openness and economic growth in African countries: New insights from a panel causality approach

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ABSTRACT

This paper examines the causal relationship between financial development and economic growth for 21 African countries within a framework which also accounts for international trade. We develop a financial development index based on four different financial development indicators and apply the panel bootstrapped approach to Granger causality. The empirical results show limited support for the finance-led growth and the trade-led growth hypotheses. The results imply that recent attempts at financial development and trade liberalization do not seem to have made a significant impact on growth.

1. Introduction

It is argued that the level of financial development and the degree of international trade openness are among the most important variables the empirical economic growth literature suggests as being highly correlated with growth performance across countries (Beck, 2002; Sachs and Warner, 1995). Financing constraints prevent poor countries from taking full advantage of technology transfer and this causes some of these countries to diverge from the growth rate of the world production frontier (Aghion et al., 2005). Poor countries with an underdeveloped financial system are trapped in a vicious circle, where poor financial development leads to poor economic performance and in turn, poor economic performance leads to poor financial development (Fung, 2009). In contrast, countries with a better-developed financial system tend to grow faster and therefore finance is not only pro-growth but also pro-poor suggesting that financial development helps the poor to catch up with the rest of the economy as it grows (see inter alias, Demirgüç-Kunt and Levine, 2009; Baltagi et al., 2009). Moreover, the endogenous growth theory as articulated by Greenwood and Jovanovic (1990) and Bencivenga and Bruce (1991) and others also stresses that financial development is an important factor in fostering long-run economic growth as finance is able to facilitate growth by enabling efficient intertemporal allocation of resources, capital accumulation and technological innovation (see Levine, 2005). Furthermore, the theoretical model of Blackburn and Hung (1998) also predicts that both financial development and international trade liberalization enhance economic growth. What is unclear, however, is whether these potential benefits of financial development and trade liberalization are being reaped by African countries. There is, however, an opposing view that economic growth and financial development may evolve independently of each other. This is the neutrality hypothesis (Lucas, 1988). This paper, therefore, seeks to explore whether or not financial development and international trade have a role in the growth process in Africa in the light of the limited, conflicting and inconclusive results of prior studies.[1]

This study contributes to the literature by extending the finance-growth nexus studies in three methodological ways for 21 African countries for the period covering 1965–2008. Firstly, unlike previous time series studies for African countries which concentrated on the two-variable case, we include openness to international trade as a third variable. By incorporating trade openness as a third variable, we not only attempt to underline the potential importance of trade openness for economic growth but also test the hypothesis that openness promotes financial development or vice versa (Beck, 2002). Secondly, as there are several controversies surrounding the measurement of the financial development indicator variable, we develop a financial development index using four financial development indicators to comprehensively capture the different dimensions of financial development.[2] Thirdly, we test for causality using a systematic modeling approach within the framework of panel data analysis as proposed by

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[1] The only two studies which have accounted for the impact of financial development and trade openness on economic growth are Gries et al. (2009) based on a sample of 16 SSA countries and the single country study of Kenya by Wolde-Rufael (2009).

[2] Most previous studies such as Gries et al. (2009) used at most three financial indicator variables unlike the four we use in this paper.

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Kónya (2006) which, unlike previous studies, accounts for cross-section dependency and cross-country heterogeneity in the empirical modeling.[3] Cross-section dependency can arise because economic dynamics show that a shock to one country may be easily transmitted to other countries through international trade and economic and financial integration. We account for cross-sectional dependency since there is evidence that there is a growing trend toward regional integration within Africa (Beck et al. 2011). This enables us to avoid any misleading inferences regarding the direction of causality which could arise with an individual country study that does not account for such dependence. The panel causality approach we use in this paper is also valid irrespective of unit root and cointegration properties of the variables.

The rest of the paper is structured as follows. In Section 2 we present a brief overview of financial development in SSA countries, followed in Section 3 by a short review of the literature on the relationship between financial development and economic growth on the one hand and between international trade and financial development on the other. Section 4 presents the description of the data. In Section 5 the methodology used is discussed. The empirical evidence is presented in Section 6 while concluding remarks are presented in Section 7.

2. Economic growth, trade and financial development in Africa

While Africa's dismal economic growth can be attributed to a multitude of factors, there is no denying the fact that past barriers to free international trade and lack of financial development are among the prominent factors that could have contributed to the continent's poor economic performance (Beck et al. 2011; Ndulu et al., 2007). Even, after recent policy changes including financial liberalization and development and further attempts at integration into the world market, many African countries are still showing only limited economic progress. Africa's financial systems have progressed over the past 20 years. However, the promise of the efforts in liberalization, privatization and stabilization in the 1980s has only been partly fulfilled and the benefits of deeper, broader, and cheaper finance have not yet been reaped (Beck et al., 2011). Generally, Africa's financial system is still characterized as being segmented, bank-based, government directed and oligopolistic, facing little competition (Honahan and Beck, 2008; Ncube, 2007). Government control implies that resource allocation decisions tend to be based more on political considerations rather than on economic viability (Honahan and Beck, 2008; Ncube, 2007). As can be seen from Table 1, Sub-Sahara Africa's level of financial deepening even towards the latter part of the sample period, 1995–2005 lags behind that of other regions such as East Asia and the Pacific countries.[4] For instance, the level of liquid reserves in SSA is higher than average, which indicates that SSA banks hold a large portion of liquid assets in the form of treasury bills rather than giving out loans to the private sector (see Ncube, 2007). The interest rate spread is also higher than in any other region (see Table 1). Africa has also the lowest saving performance in the world. For instance, while the gross saving rate of the East and Pacific region, South Asia and the world was almost 45%, 33% and 21.3% respectively in 2005, it was only 15% for SSA despite the fact that the average saving rate of SSA was higher than South Asia in the 1970s. Similarly, while gross capital formation was 38.4% for the East and Pacific region and 21% for the world average, it was only 19% for Africa. Despite recent growth, financial systems remain small in low-income regions, especially in much of sub-Saharan Africa. In banking, which is the dominant source of finance in these regions, the high spreads between deposit and lending rates reflect a lack of competition and inhibit firms from growing to take advantage of economies of scale. Banking sector liberalization that promotes competition (and takes due consideration of stability) boosts growth. The IMF estimated that the annual growth rate of developing economies with more open banking sectors exceeded that of economies with less open banking sectors by about 1 percentage point (Ostry et al., 2008). While recent experience suggests that progress has been made, there is still a long way to go to make Africa's financial and payment systems comparable to the other successful regions of the world (Beck et al. 2011; Murinde, 2012). However, whether or not further financial and international trade developments would accelerate the rate of economic growth remains the unresolved empirical question which this study seeks to investigate.

3. Finance, openness and economic growth: An overview

3.1. Financial development and economic growth

The debate on the role of financial development in economic growth is still flourishing and is still attracting several theoretical and empirical studies that investigate the causal relationship between the two (Ang, 2008; Murinde, 2012). Central to the debate is (a) whether the financial sector drives economic growth or (b) whether it is economic growth that explains the growth of the financial sector. The first hypothesis, commonly known as 'supply-leading' contends that financial development is a necessary pre-condition for economic growth; consequently finance leads economic growth and causality runs from financial development to economic growth. Proponents of this hypothesis contend that the quantity and the composition of financial development variables induce economic growth by directly increasing savings in the form of financial assets, thereby spawning capital formation and hence economic growth (King and Levine, 1993). In contrast to the above, the second hypothesis usually referred to as 'demand-following', contends that finance is led by rather than leads economic growth and finance plays a minor role in economic growth. In this line of reasoning finance is merely a by-product or an outcome of growth in the real side of the economy (Robinson, 1952). It is therefore argued that when an economy grows, more financial institutions, financial products and services emerge in the market in response to higher demand for financial services. Consequently, as the real sector of the economy grows, the financial system develops thereby increasing the opportunities for acquiring liquidity for funding investment and for reducing risk. According to the proponents of the 'demand-following' hypothesis the lack of financial institutions in developing countries is an indication of the lack of demand for their services. Shan (2005) provides empirical evidence to buttress that view by showing that a well functioning and liberalized financial system did not precede the spectacular economic growth of some Asian countries, including China, Japan and Korea. Additionally, Shan (2005) argues that the recent Asian economic crisis has cast further doubt on the claim that financial development always plays a positive role in economic growth.

In addition to the above two hypotheses, there are those who believe that economic growth and financial development can complement each other making financial deepening and real economic growth mutually causal where there would be a bi-directional causality running between economic growth and financial development (Blackburn and Hung, 1998, Blackburn et al., 2005; Greenwood and Smith, 1997). To the proponents of this hypothesis, financial development is indispensable to economic growth and economic growth inevitably requires a well functioning and an efficient financial system. Still others argue that there is no support for the view that financial development promotes growth (see De Gregorio and Guidotti, 1995).

The conflicting evidence outlined above is also true for Sub-Sahara Africa (see Murinde, 2012). For some authors, there is a long-run relationship between financial development and economic growth but the direction of causality is mixed and conflicting. For instance, Ghirmay (2004) found that financial development played a causal role in the economic growth of eight out of the thirteen countries he investigated. Agbetsiafia (2004) also found mostly unidirectional causality

[3] As pointed out by a referee, although the panel causality approach of Kónya (2006) is widely used in many empirical studies to test for causality in a panel framework, it is purely empirical and it is not validated analytically.

[4] For an excellent summary see Ncube (2007) and Murinde (2012).