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Financial development and economic growth in Nigeria: Evidence from threshold modelling

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ABSTRACT

This paper re-examined the relationship between financial development and economic growth in Nigeria. Unlike existing studies, we attempted to assess the information content of non-linearities in the finance–growth nexus for Nigeria. We also attempted to inventively gauge the impact of financial reforms on the Nigerian economy particularly in terms of economic growth. Using annual data covering the period 1960–2010, we factored in threshold effects through the financial development (FD) measures. Following these, we unearth a number of interesting results. First, financial development negatively impacted growth but a sign reversal resulted on accounting for threshold-type effects. This is indicative of some turning points in the finance–growth association. Second, using a composite index of FD led to a similar outcome. Third, on the heels of sample splitting, the coefficients for the pre- and post-reform era are hardly distinguishable casting doubt on the efficacy of financial system reforms. On the basis of the foregoing, broader structural reforms should pervade Nigeria's policy space if the aim of sustained, inclusive and employment-generating growth is to be realized.

1. Introduction

Investigating the role of financial development in understanding the growth trajectories of countries has a long history in economics. Over these years, both theoretical and empirical arguments have been offered as explanations for the contribution of the financial system to the process of economic growth. However, theoretical ambiguities and empirical inconclusiveness remain. In terms of theory, the idea that finance influences growth is fairly standard. Nonetheless, what is less clear is the precise timing of such influence namely whether the growth of the economy is preceded by an initial expansion in the demand for and delivery of financial services on one hand or if the precondition for financial development is sustained economic growth at the inception on the other. On the empirical side, there is also a multiplicity of conclusions. Regardless of the orientation of specific studies (panel or country-centred), sample coverage, estimation techniques among

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other criteria, there is evidence in at least four possible directions.[1] First, the finance leads growth view as in Ghirmay (2004), Agbetsiafa (2004) and Abu-Bader and Abu-Qarn (2008). Beginning with the most recent, Abu-Bader and Abu-Qarn (2008) studied the finance–growth association for Middle East and North African countries and found causality running from financial development to economic growth in Egypt, Morocco and Tunisia respectively. Also, seven of the countries in Agbetsiafa (2004) turn up with the finance causes growth conclusion. In line with the previous two studies, the success rate for Ghirmay (2004) stood at a little over 60% (8 out of the 13 sampled SSA economies showed that finance causes growth).

Second, the growth leading up to finance paradigm which posits that sustained increases in overall economic activity is at least a necessary precursor of a rise in the demand for improved financial services. To empirically support this view, two papers by Nicholas Odhiambo, which are appealing examples, are briefly summarized next. Specifically, Odhiambo (2004) using data for South Africa demonstrated that growth predates financial system advancement, while a similar outcome is reported in Odhiambo (2008) even with the analysis focused squarely on the Kenyan economy. Using data for the period between 1969 and 2005 both years inclusive, and savings as an intervening explanatory variable, Odhiambo concludes in favour of unidirectional causality from Kenya's economic growth to financial sophistication.

Third, bi-directional causality has also been reported in a handful of studies notable among which is Akinboade (1998) for Botswana. In his study, the two indicators of financial development namely private sector credit and bank deposit liabilities caused economic growth in the Granger sense. Also, there is a statistically important reverse causation from output growth to both of these finance measures.

Fourth, a pocket of attempts have also wound up in the precincts of no causal linkage (Atindehou et al., 2005 appears to be an example to display for SSA). In a study of the role of financial intermediation in economic growth for a group of 12 countries in West Africa, the authors' unearth evidence suggesting, in line with the earlier theoretical proposition of Lucas (1988), that the potential influence of finance in defining the growth trajectory of economies might be overrated. With other words, the growth effects emanating from finance was largely absent in their sample.

The foregoing notwithstanding, an examination of the finance–growth nexus remains an interesting empirical exercise in the case of Nigeria. First, the country is a candidate to study since her saga with respect to financial sector reforms dates back to the well-known structural adjustment programme (SAP) adopted around 1986. This far-reaching economic reform agenda had financial reforms especially of the banking industry as an integral component. Following SAP, marked structural makeover, in terms of bank ownership, number of onshore and offshore branches, total liquid liabilities among others has taken place. It is thus interesting to assess if these has translated to expanded opportunities for economic activities to thrive. Second, incorporating thresholds into the modelling framework is another exciting research direction to pursue. This offers a chance to arrive at estimates which convey some information about the critical level of a key variable, financial development, which must be reached before growth impacts begin to materialize. This is instructive for the sequencing of reforms particularly in developing countries where the costs of policy errors are likely to be accentuated given the prevailing economic malaise emblematic of their domestic landscape.

The present study attempts to add to existing knowledge in a number of respects. First, the introduction of thresholds into the financial development–economic growth space. This has not been done so far in this literature especially for Nigeria. The basic intuition underpinning this is that the influence of finance on growth might only become palpable once a given level of financial development is attained by an economy. Interestingly, a recent support appears in Rousseau and Wachtel (2011) where the conclusion is that the link between finance and growth might be more complex than suggested by linear models. Second, we embark on an assessment of the likely impact of financial sector reforms in the context of Nigeria. We are not aware of any study, particularly on Nigeria, which emphasizes the potential impact of thresholds[2] in evaluating financial reforms. Third, beyond the already expected use of distinct measures of financial development, an index that broadly covers a multi-faceted conception of financial development is used with a view to more meaningfully quantifying the growth impact of Nigeria's financial system. This in our estimation is also novel to the finance–growth empirical discourse on Nigeria. Finally, needless to say, we contemplate a few policy implications for Nigeria on the basis of the findings from our empirical exercise.

As a preview, our results broadly suggest the following. One, both financial indicators returned negative growth coefficients but the signs were reversed on the inclusion of squared terms suggesting a critical role for thresholds in the finance–growth nexus. Two, using the composite index of finance lead to a qualitatively similar outcome. Three, both total liquid liabilities as a share of GDP and private sector credit to GDP ratio displayed indistinguishable coefficients for the pre- and post-reform era. In sum, therefore, the impact of finance on economic growth in Nigeria may have little to do with the financial sector reforms adopted in the mid-80s.

Following this introductory section, the trends in financial development indicators and economic growth for Nigeria are displayed in Section 2. Section 3 provides a literature review on the subject matter with pointed emphasis on studies with

[1] Our emphasis here is basically on single country studies using data on African countries and even in a few instances where countries from other regions are included we chose to isolate and detail on SSA evidence only. This narrowed focus helps in at least two ways other than the simplicity it brings into the analysis. First, SSA countries are more likely to be credible comparators since over time they have typically meandered through a similar growth path with Nigeria. Two, the broader literature on the finance–growth nexus is vast. Hence, getting into the nitty-gritty would not add much to the core – especially the goal, analysis and discussion – of the present paper.

[2] Although there are a number of incisive studies which focus explicitly on a threshold perspective to the finance–growth nexus (see for instance, Rousseau and Wachtel, 2002, Rousseau and Yilmazkuday, 2009 and Yilmazkuday, 2011 among others), none of these have focused on Nigeria.