Financial Market Structure and Finance-Growth Relationships in the BRICS

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Abstract

This study examines financial market structure and the finance-growth relationship in the emerging markets of Brazil, Russia, India, China, and South Africa (BRICS). While causality runs from the stock market to economic growth in Brazil, credit drives economic growth in South Africa. On the other hand, our results show that causality runs from economic growth to financial development in Russia, India, and China. We explore the financial market structure and economic management arrangements of each country in order to explain the observed test results. In countries with extensive government controls over the financial sector, economic growth is more likely to drive financial sector development. On the other hand, in open market economies with developed financial systems, causality is more likely to move from financial sector development to economic growth.

JEL Classification: G21, G28, G32, E44

Keywords: Financial Sector; Economic Growth; BRICS.

1. Introduction

The financial sector plays important roles in every economy, and at every stage of the development process. By pooling funds from the savings-surplus units and making such funds available to the savings-deficit units who have viable investment projects, the financial sector plays value-enhancing intermediation role and, in the process, contributes to economic growth. Similarly, through the process of project evaluation for credit decisions, the financial sector helps to ensure that only viable projects are funded. Given the roles of the financial sector, countries with developed financial systems are likely to grow faster than those with less developed systems (Rajan & Zingales, 1998; Levine & Zervos, 1998).

Where the financial system is inefficient in allocating investible funds, or when banks allocate credit to corrupt or inefficient governments and politically connected clients, who in turn use the funds for welfare-diminishing activities, the financial system can become an inhibitor rather than a facilitator of growth and development. This was
the situation in many countries during the era of financial repression when banks were largely owned and directed by the government (McKinnon, 1973). In a regime of extensive government interventions in the financial sector, the government may determine interest rates and issue guidelines on sectoral credit allocation. In financial systems where resource allocation decisions are not based on rational economic considerations, innovation is discouraged, and bank managers do not have the freedom to use their professional expertise to make informed decisions on investment projects. McKinnon (1973) argued that these forms of government intervention in financial systems produce financial repression and retard economic growth. This argument contributed to calls for financial liberalization in developing countries in the early 1980s.

In the past few decades, the emerging economies of Brazil, Russia, India, China, and to a smaller extent, South Africa, have become increasingly important actors in the global political economy. The share of world GDP by the BRICS has increased from about 8.21% in the 1989-1992 period to 22% in 2015 (World Bank, 2016). Trade and economic cooperation between the BRICS have also expanded significantly, with member nations signing an agreement in 2014 to set up a development bank that would focus on funding infrastructure development in developing countries. This study makes two important contributions to the literature. First, it examines the causal linkages between measures of financial sector development and economic growth in the BRICS. Second, and perhaps more significantly, it explores how economic management arrangements and financial market structure of each country shape the observed relationship between finance and growth. The rest of this paper proceeds as follows: section 2 provides a review of related literature. Data and methodology are presented in section 3. In section 4, we provide analysis of results, while section 5 concludes the paper.

2. Literature Review

Several studies have explored the relationship between financial sector development and economic growth. There are two major strands of argument and empirical evidence on the finance-growth relationship. The first points to the intermediation roles of the financial sector, and argues that a developed financial sector plays critical roles in unleashing economic growth. Some early proponents of this school include Schumpeter (1912), Goldsmith (1969) and McKinnon (1973). These studies emphasized the intermediation roles of the financial system in producing growth by enforcing efficient resource allocation. The second major strand contends that economic growth leads to financial sector development, as the financial sector simply “follows” economic growth. This line of argument has been associated with Robinson (1952), as well as with proponents of the endogenous theory of credit who insist that loans create deposits (Lavoie, 1985and Moore, 1988).
Recent studies, especially those using cross-sectional data, have generally identified positive relationships between financial sector development and economic growth. Studies such as those of Levine (1997), Levine & Zervos (1998), and Rajan & Zingales (1998), show positive relationships between measures of financial sector development and economic growth. However, these studies have generally used simple regression techniques to examine the relationship between finance and growth. Simple regression analysis using cross-country data can only show some form of association, and cannot indicate the direction of causality. Demetriades & Hussein (1996) and Bell & Rousseau (2001) note that one of the weaknesses of cross-sectional studies is that the pooling of data from different countries at different levels of development fails to account for differences in economic structures and institutional characteristics. Because cross-sectional data fail to account for country-specific characteristics, time series analyses that focus on individual countries provide more suitable methodologies for examining causality (Rousseau & Wachtel, 1998; Liang & Teng, 2006).

More recent studies such as those of Samargandi & Kutan (2016), Peia & Roszbach (2015), Panopoulou (2009), and Christopoulos & Tsiona (2004) have used different causality tests to examine the relationship between finance and growth in different countries. For example, focusing on 22 advanced economies, Peia and Roszbach show that the direction of causality differs across these countries. One would expect that countries at about the same level of development should exhibit similar patterns of finance-growth relationships. However, empirical evidence shows significant differences even for countries at comparable levels of development (Panopoulou, 2009; Peia & Roszbach, 2015). These results show that the nature of the relationship between finance and growth depends on several factors specific to each country. La Porta et al. (1997) show the connection between a country’s legal system, investor protection and financial sector development, and subsequent economic growth. Differences in financial market structure and institutional characteristics account for observed differences in the finance-growth relationships in different countries.

Samargandi and Kutan (2016) examine whether a credit shock in one country produces spillover effects on other countries of the BRICS. Their study is inspired by the growing economic relationships between the BRICS nations, and the need to ascertain the extent of interconnectedness between these countries. They show that shocks to private sector credit in one member of the BRICS could have spillover effects on the economies of other member countries. Perhaps the huge volume of trade between these countries explains the existence of such spillover effects. This study is different from those of Samargandi and Kutan because this study examines the causal relationships between measures of financial sector development and economic growth in each member of the BRICS on the one hand, and explores how the economic management arrangements and financial market structure of each country shape the finance-growth relationship.
Different proxies for financial sector development have been used in the literature, including measures based on monetary aggregates, bank-based measures, and market-based measures. Bank-based measures, specifically the level of credit to the private sector as a percentage of GDP, show the extent to which financial institutions provide financing to facilitate the flow of economic activities. In the same vein, the stock market has become increasingly important in providing the platform for public offers of debt and equity. These, bank-based measures and market-based measures have become the most common proxies for financial sector development (Samargandi & Kutan 2016; Peia & Roszbach, 2015; Panopoulou, 2009; Christopoulos & Tsiona, 2004).

3. Data and Methodology

We use two broad measures of financial sector development: total credit to the private sector as a percentage of GDP, and stock market capitalization as a percentage of GDP. These measures of financial development have been used extensively in the literature (Levine & Zervos, 1998; and Rajan & Zingales, 1998; Peia & Roszbach, 2015). The bank-based measure reflects the amount of credit available to the private sector, while the market-based measure shows the relative size and depth of the capital market. We use changes in GDP per capita as our measure of economic growth. Data for this study were obtained from the World Bank’s World Development Indicators for the period 1992 to 2015. We use Granger (1969) causality tests to examine the causal linkages between these measures of financial sector development and economic growth in each country.

3.1 Granger Causality Tests

We conducted Granger causality tests using vector autoregressive (VAR) models. The VAR estimations follow stationary vector processes which use first differences of the variables. We want to know whether measures of economic growth ($G_t$) and financial market development (credit market, $C$, and stock market, $S$) are linked over time. We then apply Granger causality tests to determine the existence of causal relationships. The basic model is presented thus:

$$GDP_{it} = \sum_{i=1}^{n} \beta C_{t-i} + \sum_{i=1}^{n} \theta S_{t-i} + \sum_{i=1}^{n} \alpha GDP_{t-i} + \epsilon_{it} \quad (1)$$

Where:

$GDP = \text{the logarithm of GDP per capita (constant 2010 US dollar).}$

$C = \text{the logarithm of total credit to the private sector as a percentage of GDP.}$

$S = \text{the logarithm of stock market capitalization as a percentage of GDP.}$
4. Analysis of Results

The test results in Table 1 confirm what has been documented in previous time series studies, such as those of Rioja & Valev (2004), Panopoulou (2009), and Peia & Roszbach (2015), to the effect that the causal relationships between finance and growth are not uniform, even for countries at relatively similar levels of development. The Granger causality tests show the existence of causal relations from credit to economic growth in South Africa, while the stock market has causal influence on economic growth in Brazil. On the other hand, test results show reverse causality in Russia, India, and China. In the cases of Russia and China, economic growth has significant causal influence on the level of credit, and the same applies to India at a relatively reduced significance level ($p$-value of 0.506).

In our view, these results reflect the nature of the economic management, as well as the structure of the financial sector in each of these countries. Although the BRICS nations all belong to the group of emerging economies with fairly stable macroeconomic environment and rapid growth during the past few decades, the countries differ widely in terms of political arrangements, history, institutional qualities, and economic structure. Indeed, it would have been rather puzzling to find similar outcomes in these countries. In the sections that follow, we provide possible explanations of the observed results, pointing out relevant differences between these countries and making inferences as to how the economic structure of each country could shape the finance-growth relationship.

Table 1. Granger Causality Test

<table>
<thead>
<tr>
<th></th>
<th>Brazil</th>
<th>Russia</th>
<th>India</th>
<th>China</th>
<th>South Africa</th>
</tr>
</thead>
<tbody>
<tr>
<td>$\Delta C_{t-1} \rightarrow \Delta G_t$</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$F$-test</td>
<td>0.0140</td>
<td>0.27492</td>
<td>0.1743</td>
<td>0.5387</td>
<td>7.285***</td>
</tr>
<tr>
<td>$p$-value</td>
<td>0.9861</td>
<td>0.7704</td>
<td>0.8428</td>
<td>0.5960</td>
<td>0.0068</td>
</tr>
<tr>
<td>$\Delta S_{t-1} \rightarrow \Delta G_t$</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$F$-test</td>
<td>3.8831**</td>
<td>1.0359</td>
<td>0.3551</td>
<td>2.2631</td>
<td>1.3629</td>
</tr>
<tr>
<td>$p$-value</td>
<td>0.0455</td>
<td>0.4203</td>
<td>0.7105</td>
<td>0.1434</td>
<td>0.2879</td>
</tr>
<tr>
<td>$\Delta G_{t-1} \rightarrow \Delta C_t$</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$F$-test</td>
<td>0.7391</td>
<td>6.277**</td>
<td>4.2344**</td>
<td>9.814***</td>
<td>0.1261</td>
</tr>
<tr>
<td>$p$-value</td>
<td>0.4953</td>
<td>0.0433</td>
<td>0.0506</td>
<td>0.0025</td>
<td>0.8825</td>
</tr>
<tr>
<td>$\Delta G_{t-1} \rightarrow \Delta S_t$</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$F$-test</td>
<td>1.0965</td>
<td>0.6332</td>
<td>3.3336</td>
<td>0.0999</td>
<td>1.1795</td>
</tr>
<tr>
<td>$p$-value</td>
<td>0.3611</td>
<td>0.5687</td>
<td>0.0825</td>
<td>0.9056</td>
<td>0.3362</td>
</tr>
</tbody>
</table>

Note: $G$ is logarithm of GDP per capita (constant 2010 US dollar). $C$ is the logarithm of total credit to the private sector as a percentage of GDP. $S$ is the logarithm of stock market capitalization as a percentage of GDP. *** Statistically significant at the 1% level. ** Statistically significant at the 5% level.
4.1 The BRICS in the Global Economy

BRIC (without the “S”) was originally coined in 2001 by economist Jim O’Neill to represent the four nations of Brazil, Russia, India, and China. At that time, O’Neill and fellow economists at Goldman Sachs Asset Management Group felt that these four countries had enormous potentials and were on track to enhance their positions and influence in the global economy over the next few decades. The relatively large population of the respective countries, combined with each country’s bold ambitions, was seen as important factors that would propel the countries toward the kind of growth and transformation that would redefine the global economic order (O’Neill, 2011). In less than two decades after these projections, BRIC achieved tremendous economic growth, and China in particular has redefined the world economic order with its phenomenal growth and outstanding transformation.

The four original BRIC members formally invited South Africa to join the group, and the acronym became BRICS in December 2010. Relatively smaller in size compared to the initial four members of the group, South Africa is often seen as a candidate of compromise to represent the African region in the group of emerging nations. According to O’Neill (2013, 5), “the growth of trade and investment between Africa and the BRIC countries is an important aspect of the transition into a mainly non-Western world economy—a story that is currently underappreciated.” Perhaps it was the need to foster closer ties with the entire African region that led the original members of BRIC to invite South Africa to join the group, given South Africa’s dominant position in the African region.

The BRICS have been expanding their reach and economic importance during the past two decades. Phenomenal growth rates, most notably in China and India, have enhanced the group’s share of world GDP. Table 2 shows growth rates in the BRICS compared to other regions of the world since the 1990s. As shown in the table, the combined performance of the BRICS in terms of GDP growth has been much higher than those of the OECD, the EU, and the world. The BRICS have also consistently achieved higher growth rates than the United States.

Table 2. Growth Rate of the BRICS Compared to Other Groups and the World

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>BRICS</td>
<td>4.10%</td>
<td>5.48%</td>
<td>6.38%</td>
<td>4.48%</td>
</tr>
<tr>
<td>EU</td>
<td>2.58%</td>
<td>2.02%</td>
<td>0.77%</td>
<td>0.95%</td>
</tr>
<tr>
<td>OECD</td>
<td>2.99%</td>
<td>2.42%</td>
<td>0.97%</td>
<td>1.84%</td>
</tr>
<tr>
<td>World</td>
<td>3.16%</td>
<td>3.18%</td>
<td>2.55%</td>
<td>2.95%</td>
</tr>
<tr>
<td>USA</td>
<td>4.03%</td>
<td>2.69%</td>
<td>0.94%</td>
<td>2.17%</td>
</tr>
</tbody>
</table>

Source: World Bank (2016), World Development Indicators
China, the biggest and fastest-growing economy among the BRICS, expanded its share of world GDP from an average of 2.66% in the 1993–1997 period to 15% in 2015 (World Bank, 2016). As of 2015, the BRICS were home to 42% of world’s population, and controlled 22% of world’s GDP (Table 3). With a combined GDP of $16.6 trillion, the BRICS are less than $2 trillion from overtaking the economy of the United States. The enormous size of these economies and their recent growth rates (despite the slowdown in 2015 and 2016), show that it should be only a matter of few years before the BRICS, as an economic bloc, overtakes the United States in GDP. Little wonder there have been more strategic collaborations and alliances between these economies in recent years.

Table 3: Credit to the Private Sector (% of GDP)

<table>
<thead>
<tr>
<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Brazil</td>
<td>29.5</td>
<td>44.43</td>
<td>63.52</td>
</tr>
<tr>
<td>Russia</td>
<td>21.26</td>
<td>39.67</td>
<td>49.34</td>
</tr>
<tr>
<td>India</td>
<td>33.18</td>
<td>47.88</td>
<td>51.96</td>
</tr>
<tr>
<td>China</td>
<td>116.74</td>
<td>113.46</td>
<td>138.55</td>
</tr>
<tr>
<td>South Africa</td>
<td>126.09</td>
<td>150.47</td>
<td>146.91</td>
</tr>
</tbody>
</table>

Source: World Bank (2016), author’s computations

Despite the phenomenal growth recorded in most of the BRICS nations during the past two decades, each member of the group follows a different path to social, political, and economic development. As Table 3 demonstrates, there are wide disparities in the level of credit to the private sector in each country. The table shows that South Africa and China have the largest financial depth, with credit to the private sector as a percentage of GDP averaging well over 100% during the past two decades. While these high ratios for China and South Africa portray the extent to which the financial system extends credit to the private sector in these countries, we note that the true structure and significance of the observed ratios are different across the two countries, largely because of different economic arrangements and financial market structures.

The banking system and economic activity in general are largely market-driven in South Africa. In South Africa, all the major banks are owned by private investors, and credit allocation decisions are driven by market imperatives. In the case of China, the government is heavily involved in different sectors of the economy. Government-owned banks dominate the banking sector in China, and most of the large corporations that use banking sector credit are equally owned by the government. When dealing with two economies so radically different, interpretation of economic relationships can only be approached with caution. The Chinese system continues to exhibit strong elements of directed credit, where the government decides which sectors or firms that would receive directed and often subsidized credit. The openness of the South African
economy versus government controls in China means that the observed high levels of financial depth in both countries can, and indeed should be interpreted differently.

4.2 Members of the BRICS

Brazil

Three unique characteristics of Brazil’s economic management since the 1990s have been more reliance on market forces, the formalization of its economy, and significant enhancement in the country’s capital market, as more foreign investment flows into the country. Studart (2000) notes that Brazil’s financial sector and its economy underwent significant reforms and transformations in the 1990s. These reforms have promoted market liberalization, enhanced domestic regulation, and brought about price stability in the economy. With these changes, Brazil has enjoyed a significant increase in investor confidence, with the result that foreign portfolio investment and pension funds became important components of the Brazilian capital market. Financial liberalization brought about the entry of new players into the financial market, and necessitated bank mergers as well as the liquidation of weak banks. These changes led to increased competition and efficiency, and broadened the scope for innovation in the financial system.

Russia

Despite Russia’s celebrated efforts to embrace the market-based economic system, lingering legacies of central planning continue to shape the country’s political economy. Berglof and Bolton (2002) show that there was no relationship between financial sector development and economic growth in the former Soviet countries in the 1990s. Similarly, focusing on Russia’s economy, Berglof and Lehmann (2009) note that one negative aspect of the country’s heavy dependence on natural resources is the sector’s drag on financial sector development. According to Berglof and Lehmann, the capital-intensive nature of the oil and gas sector in an environment with a shallow financial system only produces distortions in the system. This is because the oil sector dominates the financial system and crowds out the entrepreneurial class, resulting to little or no demand for banking credit on a broader scale. This form of risk concentration distorts financial development and increases the vulnerability of the financial sector to shocks.

In addition, the Russian banking sector is largely dominated by state-owned banks, which account for more than half of all banking industry assets as at 2015 (Angel, Alvarez, & Makunin, 2016). The top six banks in Russia collectively accounted for 69% of industry assets and 83% of total loans in 2015. With a relatively weak capital market, the government, through state banks, continues to determine the trajectory of the Russian financial system. Despite renewed efforts at reform since 2013, when a new governor took over at the Central Bank of Russia (CBR), the Russian
banking system can only be described as less than strong. The regulatory body has revoked several banking licenses during the past three years. Between January 2014 and June 2016, the Central Bank of Russia revoked a total of 214 banking licenses and an additional 28 banks were put on the CBR’s watch list (Angel, Alvarez and Makunin, 2016).

**India**

Like China, India has recorded significant growth during the past two decades. In most of the last decade, India achieved an average GDP growth of over 7% per annum. Consequently, the country’s share of world GDP grew from 1.11% in 1989–1992 to 3% in 2015 (World Bank, 2016). However, when India’s economy is placed within the context of the country’s 1.3 billion people (17.8% of the world’s population), it is easy to see that India has considerable scope to expand its economy. Despite India’s strong economic growth, the country has been plagued by hydra-headed institutional problems that have sustained poverty in the country. Although the country has embarked on reforms geared towards greater liberalization of the economy, many factors, such as infrastructure deficit, large and growing population, and extensive government involvement in the economy continue to define the country’s economic system.

Commenting on the need for greater reforms, Farrel and Lund (2005) note that India’s financial system remains largely undeveloped on all fronts. Bank penetration is low, with banking services mainly available to affluent households and firms. In addition, the cost of financial intermediation remains high, constituting a disincentive for many small firms and individuals to embrace banking services. These features of India’s financial sector diminish the sector’s relevance to the Indian public.

**China**

China has outperformed all other countries of the BRICS by industrial output and economic growth. China’s GDP is almost twice the combined GDP of the rest of the BRICS members. It also continues to grow faster than the rest of the BRICS, besides India. China has achieved significant improvement in almost all measures of growth, from infrastructure development to industrial production and exports. In addition, the country has made good progress towards reducing the level of poverty in the average population. With GDP of $11 trillion in 2015—second only to the United States—China controls 15% of the world economy (Table 3). However, beneath the super economic numbers is a highly opaque economic management system driven heavily by government forces. Although China has taken good advantage of opportunities in the global economy, liberalization of the country’s economy and the use of market forces as the primary basis of exchange are not in line with China’s economic management philosophy.
China’s economic system can be described as mixed, with significant direct involvement by the government. Because China’s economy has been driven largely by government directives, it is hard to isolate the impacts of the financial sector, because the government often dictates the investment decisions of Chinese banks and corporations. As the state controls several large banks and corporations, it continues to provide subsidized credit and guarantees to public corporations, with the result that banking credit is almost exclusively reserved for these government-connected corporations (de Rambures and Duenas, 2017). The consequence of this credit market dynamics has been a high level of non-performing loans in the Chinese banking system, as financial sector credit is driven largely by government directives rather than market fundamentals. De Rambures and Duenas note that the result of this form of credit allocation has been that many small firms that are not connected to the government find it difficult to access credit from the formal banking sector. Such “unconnected” firms resort to the informal loan market at relatively higher costs.

**South Africa**

South Africa is by far the smallest of the BRICS countries by population and size of GDP. In addition, South Africa’s growth rates during the past two decades have not been close to the growth rates in China or India. Compared to the rest of the BRICS, South Africa is a marginal player. However, its inclusion in the BRICS could be seen more as a strategic step than based on the country’s growth characteristics or size of its economy. As the only African country in the group, South Africa is seen as providing both geographical balancing and a credible path towards stronger economic ties between the BRICS and Africa’s emerging markets.

Similar to Brazil, South Africa is a regional power with a stable macroeconomic environment. Unlike the situation in most other African countries, South Africa’s economy and financial system were modernized in the early twentieth century. The financial sector in South Africa is highly developed, and appropriate infrastructures such as credit bureaus, strong financial institutions, and modern regulatory systems have been in place in South Africa for several decades (Odhiambo, 2014). In addition to the country’s export of minerals, South Africa exports manufactured goods, including automobiles and machinery.

As Table 4 demonstrates, each member of the BRICS follows a distinct economic management and financial market structure. These differences, at least in part, account for the differences in the nature of the finance-growth relationships reported in the Granger causality tests.
Table 4: Economic Structure and Financial Markets Characteristics in the BRICS

<table>
<thead>
<tr>
<th>Country</th>
<th>Economic Arrangements</th>
<th>Financial Market Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brazil</td>
<td>Largely liberalized, market-driven economy</td>
<td>Dominated by the private sector; growing capital market; significant inflow of foreign capital</td>
</tr>
<tr>
<td>Russia</td>
<td>Moving towards market openness, but government controls persist</td>
<td>Government banks dominate the sector; state-owned banks account for more than 50% of banking industry assets. Stock market only gradually coming on board</td>
</tr>
<tr>
<td>India</td>
<td>Moving towards openness; government controls remain. Institutional weaknesses constrain market development</td>
<td>Public sector banks dominate the industry; low bank penetration; high cost of intermediation; several small businesses do not have access to credit</td>
</tr>
<tr>
<td>China</td>
<td>Largely government-controlled economy</td>
<td>Public sector banks dominate; elements of directed credit persist</td>
</tr>
<tr>
<td>South Africa</td>
<td>Structured, open economy</td>
<td>Well-developed financial sector; financial market is dominated by the private sector</td>
</tr>
</tbody>
</table>

5. Conclusion

Beneath the wonderful stories and growth miracles of most members of the BRICS, are significant differences between member countries in terms of political culture, institutional configuration, economic management, and financial systems. The distinct economic management and financial market structure account for some of the differences in the nature of finance-growth relationships reported in this study. Test results presented in this paper show that causality runs from financial sector development to economic growth in Brazil and South Africa, while in Russia, India, and China, economic growth leads to financial sector development.

This paper confirms what has been documented in previous studies, to the effect that the relationship between finance and growth differs across countries. A unique contribution of this paper has been the attempt to explain how specific economic arrangements and financial market characteristics in each country can contribute to the nature of the causal relationships between financial sector development and economic growth. Our premise and results are broadly consistent with the literature showing that institutions and economic management systems shape the trajectories of financial sector development and economic growth (Maclean, Zhang, & Zhao, 2012). In addition, test results presented in this paper suggest that in countries with extensive government controls over the financial sector, and stable macroeconomic arrangements, causality is
more likely to run from economic growth to financial sector development. On the other hand, in open market economies with developed financial systems, causality is more likely to move from financial sector development to economic growth. There are extensive government controls over the financial sector in Russia, India and China. On the other hand, Brazil and South Africa present open market economies characterized in large part by formal corporations and developed financial systems.

References


