FINANCIAL SECTOR DEVELOPMENT & FIRM GROWTH IN BRICS COUNTRIES

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Abstract

The development of an economy's financial sector facilitates improved access to capital. This study focuses on firm growth in terms of how much assets it controls and BRICS is chosen as the empirical medium of investigation. The impact financial sector development on firm growth amongst 3353 listed firms in BRICS countries is investigated using a GMM estimation technique. Firm's investment in assets increases the organizational resources and productive capacity needed to achieve growth in the market. Financial sector development improves access to capital and firms with higher access to external finance pursue growth opportunities using debt. Financial sector development helps firms to adjust their capital structures quickly thereby minimizing the costs of staying off target. The speed of adjustment of firms towards their target capital structure facilitates financing of firm growth. The study found that listed firms in Brazil, Russia India, China and South Africa have a target total liabilities-to-total assets ratio and financial sector development helps firms to partially adjust towards target levels and pursue growth opportunities.

Keywords: Financial Sector Development, Firm Growth, Total Liabilities

1. INTRODUCTION

The growth of firms depends on their ability to learn about their environment for instance financial sector development and linking their financial strategy to the changes and opportunities in the financial environment. Firms that experience continuous growth will demand more capital from the financial sector. Firm growth is also an opportunity to introduce financial innovation through securities and contracts which can only be facilitated by financial sector development in an economy. The financial sector consists of financial intermediaries and financial markets. Financial sector development, is generally defined as growth in the intensity, calibre and effectiveness of financial intermediary services (Graff, 2003). The growth of firms result in demand for capital from financial institutions such as bank and equity markets (Bonin & Wachtel, 2003).

Growing firms can convince investors of the certainty of getting their return on investment. Credit is an important linkage in money transmission; it funds production, consumption and capital creation, which should result in firm growth. An entrepreneurial venture is successful if it is exploiting growth opportunities. Firms require capital to finance their expansion and growth opportunities. Storey (1994) stated barriers of firm growth which include accessibility and cost of capital for expansion and availability overdraft facilities which are all attributes of financial sector development. There are many factors which are required for a firm's success and access to capital is one of them. Growth-oriented firms are an important contributor in a nation's economic growth (Gupta, Guha, & Krishnaswami, 2013).

Growth can be explained in terms of income generation, wealth creation, and escalation of business activities and operations. The understanding of firm growth depends on how much it has expanded in terms of assets it controls. Firm's total assets increases organizational capabilities and the productive capacity. Investment in assets strengthens an organization's muscle to fight competition and achieve growth in the market. Firm growth can be distinguished through theoretical perspectives. Gupta et al. (2013) identified four theoretical perspectives namely resource-based, motivation perspective, strategic adaptation and configuration. Resource-based perspective give emphasis to the firm's assets for instance volume and growth of business activities, financial resources, educated staff, etc. This paper adapts the resource based perspective and argues that financial sector development improves firm's access to capital and should result in increased investment in total assets.

Financial sector development is considered by many economists to be of paramount importance for production growth (Christopoulos & Tsionas, 2004). Recent studies have revealed that improved financial sector development result in increased economic

growth of a country (Greenwood, Sanchez, & Wang, 2013; Hassan, Sanchez, & Yu, 2011; Khan, 2001; Sehrawat, Sehrawat, Giri, & Giri, 2016; Zhang, Wang, & Wang, 2012). One of the reasons for this behaviour is that financial institutions serve to allocate funds from those with surplus, to those with a deficit of funds (Fisman & Love, 2003). Therefore, an economy with a well-developed financial sector will be able to allocate funds to businesses and projects that yield the highest returns. Financial sector development affects a firm's investment decisions through its access to capital. Growth is an important identifier of a thriving business entity and there are many features, such as access to capital, and skilled labor-force which influence firm growth and distinguishes it from a non-growing business (Gupta et al., 2013).

Firm growth is result of interaction of internal and external factors this paper selects the relationship between firm's investment opportunities and financial sector development which increases firm's access to capital. A firm pursuing growth opportunities may require investment in new technology and machinery all which requires capital. Manufacturing and technologically sophisticated firms are more likely to be hindered their growth by capital access constraints (Westhead & Storey, 1997). Diaz Hermelo (2007) analyzed determinants of firm's growth and found that investing in new technology is very important. Capital is critical for expansion therefore a firm with better access to capital must grow at a higher rate than those facing capital constraints.

There are many ways for companies to raise required funds to pursue growth opportunities and the most basic are equity and debt. Financial sector development makes it easy to raise both debt and equity at lower cost. When a firm expands, it requires capital, and that capital can be either debt or equity. If the actual debt ratio is below the target level, expansion capital should generally be raised by issuing debt, whereas if the debt ratio is above the target, equity should generally be issued. Firms adjust their capital structures towards a target level (Byoun, 2008; Drobetz & Wanzenried, 2006; Flannery & Rangan, 2006; Haas & Peeters, 2006; Jalilvand & Harris, 1984; Ozkan, 2001). Drobetz and Wanzenried (2006) find that fast growing firms and those that are further away from their optimal capital structure adjust more regularly. Firms can deviate from their targets in the short run in response to capital market conditions which is function of financial sector development (Ozkan, 2001). Studies such as Drobetz and Wanzenried (2006) and Cook and Tang (2010) have investigated the factors likely to influence speed of adjustment. Saugat, Heshmati, and Wihlborg (2000) estimated the speed of adjustment of firms towards the target capital structure and they hypothesized that the speed of adjustment is dependent on the absolute difference from the target debt ratio. Jalilvand and Harris (1984) used firm characteristics as factors affecting speed of adjustment whilst Drobetz and Wanzenried (2006) used firm-specific characteristics as well as macroeconomic factors (Drobetz & Wanzenried, 2006).

In the presence of adjustment costs, it might be cheaper for firms not to fully adjust to their targets even if they recognize that their existing leverage ratios are not optimal (Drobetz & Wanzenried, 2006; Heshmati, 2001). Previous studies investigated macroeconomic factors that influence speed of adjustment however no prior studies investigated the influence of financial sector development on speed of adjustment. Only Haas and Peeters (2006) found that banking development enables firms to adjust closer to their capital structure targets. However Haas and Peeters (2006) did not investigate the combined effect of banking sector development, stock market development and money market effect on speed of adjustment in pursuing firm growth. Economic intuition suggests that financial sector development in an economy should be an important determinant of access to capital and, hence, of financing decisions. It is therefore an interesting research question to analyze the impact of financial sector development on the speed of adjustment to the optimal capital structure and whether firms use this adjustment process to pursue growth opportunities.

There is a dearth of literature on the relationship between financial sector development and firm growth. This paper argues that financial development is particularly beneficial to large firms because they have better access to financial institutions and capital markets than small firms. Listed firms are used in this investigation to test whether development in the financial sector enables firm growth. This paper hypothesizes that access to capital affects firm growth and financial sector development improves access to capital. The objective of this paper is to examine whether financial sector development improves capital access and consequently result in firm growth as measured by firm's total assets. Firms with greater access to external capital grow much more than firms with limited access to capital and developed equity markets and a large banking sector are linked with externally funded company growth (Becchetti & Trovato, 2002; Demirgüç-Kunt & Maksimovic, 1998). The paper proceeds as follows: Section 2 reviews literature on financial sector development and firm growth. Then, section 3 outlines the methodology and the following section presents the results. Section 5 discusses the results whilst Section 6 concludes the paper.

2. LITERATURE REVIEW

Financial sector development is essential to attract both domestic and international investors which consequently increases capital within an economy. A well-developed financial sector is less vulnerable to financial crisis. Financial sector development is the ability of an economy to mobilise savings into investment efficiently and effectively within its own boundaries (Kar, Nazlıoğlu, & Ağır, 2011). The financial sector serves the purpose of providing capital to businesses. Hartmann, Heider, Papaioannou, and Lo Duca (2007) describe financial sector development as the progression of financial innovation, as well as institutional and structural improvements in a financial system. The development of the financial sector facilitates capital mobility within an economy. Financial sector development helps to lessen irregular information, as well as increase the depth of markets (Hartmann et al., 2007). Further, Hartmann et al. (2007) states that financial sector development provides

opportunities for agents to participate in financial dealings through (explicit or implicit) contracts, diminish transaction costs and intensify competition. Therefore, a well-developed financial sector will improve firm's access to capital and enable it to attract funds from various sources.

Rahaman (2011) found that financial sector development influences firm growth and that when firms are faced with external financing constraints, they rely more on internal funds to finance growth. If firm's access to external capital improves, firms switch to external capital as the major source of financing for growth (Rahaman, 2011). Companies with more growth opportunities usually have less long-term debt in their capital structure (Barclay & Smith, 1995). Leverage is negatively related to investment and this negative effect is considerably stronger for companies with low growth opportunities than those with high growth opportunities (Aivazian, Ge, & Qiu, 2005b). A higher percentage of long-term debt considerably decreases investment for companies with high growth opportunities (Aivazian, Ge, & Qiu, 2005a). Therefore, firms have a target debt-equity ratio and financial sector development should enable firms to raise both debt and equity with ease and adjust towards their target capital structure. Financial sector development is associated with externally financed firm growth (Demirgüç-Kunt & Maksimovic, 1998). A well-developed financial system is essential to ensure that financial markets and financial intermediaries serve as sources of capital. Investors need mechanisms for ensuring that they have access to information about firms' activities for them to make informed investment decisions. The existence of well-developed financial markets sector facilitates the raising of long-term capital (Demirgüç-Kunt & Maksimovic, 1998).

Öztekin and Flannery (2012) found that financial institutions significantly affect both the costs and the benefits of moving toward target leverage. Hall (1986) found that there are significant positive effects on firm growth from both investment in physical capital and research and development. Pagano and Schivardi (2003) found that large firm size promotes productivity growth because it allows firms to take advantage of the increasing returns associated with research and development. Gibrat's Law 'which states' that firm growth is dependent of firm size is rejected is rejected by the findings of the study (Evans, 1987). Firm growth is found to decrease with firm size inconsistent with the Gibrat's law (Evans, 1987). However, Hymer and Pashigian (1962) found that firm growth increases with firm size due to the possibility of continual economies of scale with increasing size and temporary or permanent monopoly returns which can enjoyed by large firms. Beck, Demirguc-Kunt, Laeven, and Levine (2008) support the view that underdeveloped financial systems are particularly detrimental to the growth of firms.

The level of a country's financial sector advancement is usually determined by the services delivered by financial intermediaries, such as, the size of banks to GDP, the size of stock market to GDP and credit provided to private firms (Ge & Qiu, 2007). Debt and equity are the two main capital sources used by firms to finance expansion. Rajan and Zingales (1998) found that firms in industrial sectors with a more requisite for external capital grow rapidly in economies with well-developed financial systems. It should be noted that financial intermediation mobilizes savings, distributes funds, spreads risks, and facilitates economic growth. Financial intermediation stimulates growth because it allows a higher rate of return to be realised on investment, and growth in turn affords resources to support financial sector development (Greenwood & Jovanovic, 1989). The level of banking and the development of the equity market have a causal relationship on economic development (Beck, Demirgüç-Kunt, & Levine, 2000).

The stock market and an efficient financial system which includes banks is essential to foster economic development (Laopodis, papastamou, Alon, & Zakamulin, 2016). Stock markets give firms further options to raise capital which is not as risky as bank credit. Well-developed stock markets can reduce the cost of mobilizing savings and thereby facilitate investment. Financial sector development is desirable because firms can raise substantial amounts of capital through the stock exchanges and investors can easily trade their shares. The bond market also promotes business growth by facilitating financing for both the private sector and the government.

Firms in regions with poorly developed financial sectors are likely to have difficulties in raising capital for expansion. Demirgüç-Kunt and Maksimovic (1999) and Rajan and Zingales (1998) discovered that financial institutions are essential for firm and industrial growth. The size of banks and the amount of deposits channelled towards lending activities presents opportunities for firms to increase debt and expand business operations. Financial markets have also been recognized to perform a pivotal role in the financing decision of firms, especially for listed firms (Abor & Biekpe, 2006; Agarwal & Mohtadi, 2004). Stock markets and money markets help firms to link with investors without the need of an intermediary institution such as a bank. As the financial sector develops, it turns out to be less costly for firms to raise capital. It should be noted that low cost of capital increases projects that can be accepted when a firm makes investment appraisal.

Companies ought to depend on financial markets for information about which venture projects to choose and how such ventures should be financed. Financial sector development is related with the capability of the financial sector to obtain information, administer contracts, enable dealings and generate encouragements for the development of specific types of financial contracts, markets and intermediaries, and all this cheaply (Levine, 1999; Rajan & Zingales, 2003). This occurs when financial instruments, markets and intermediaries reduce information costs, advance enforcement of contracts and diminish transaction costs. Without well-organized financial markets, these roles are likely to be performed less well and living standards will be lower than they might otherwise would have been (Herring & Chatusripitak, 2007). The availability of cheap capital will therefore enable firms to minimize financing costs and pursue growth opportunities.

Financial sector development also increases investment through the distribution of funds to the private sector (Akinboade & Kinfack, 2015). The

financial system should have allocative efficiency to promote investment within an economy. Firms compete for capital and businesses with growth opportunities appeal more to providers of capital. Availability and improved access to capital is crucial for firms pursuing growth opportunities. The second leading limitation on entrepreneurship after taxes and regulation is capital (Batra, Kaufmann, & Stone, 2003). Lack of capital is an inevitable constraint for firm growth. Batra et al. (2003) ranks the unavailability of capital as the major restriction in Africa and China. Finance is the most important constraint on firm growth hence the need for financial sector development. Rajan and Zingales (1998) also find that the number of firms in an industry grows faster in economies that have greater financial sector development and the quantity of firms in sectors that rely on external capital grows faster in countries with better financial sector development. Thus, with greater access to capital, firms can grow rapidly (Akinboade & Kinfack, 2015).

Economies like China, and other emerging economies in the BRICS group require well-developed financial sectors, specifically with complete financial intermediation and liberalized interest rates, all of which are crucial for the efficient distribution of capital, which, in turn, can assist in maintaining viable high economic growth (Liang & Jian-Zhou, 2006). Firm growth is a vital factor necessary to promote a country's economic growth. Good economic conditions usually lead to more capital projects which lead to improved corporate borrowing. Corporate finance theory advocates that market deficiencies such as underdeveloped financial system may inhibit firms' capability to fund operations and growth opportunities (Bokpin, 2010). Finance managers must understand the level of development of the financial sector to make the best choice of financing source.

3. RESEARCH METHODOLOGY

Data sources

The study probes the association of financial sector development and firm growth amongst listed firms in BRICS countries that is listed firms on the BM&F Bovespa for Brazil, the Saint Petersburg Stock Exchange for Russia, the National Stock Exchange of India (NSE) for India, the Shenzhen Stock Exchange for China, the Johannesburg Stock Exchange (JSE) for South Africa. Published financial statements of listed firms sourced from Bloomberg provided data for total liabilities-to-total assets for the period 2001-2013. Listed firms are chosen because they are relatively large and therefore face less capital constraints compared to small businesses and are in better position to take advantage financial sector development. Table 1 below is an outline of the population and sample drawn from listed firms in BRICS.

Table 1. Population and Sample

Country	*Stock Exchange*	*Population*	*Sample*
Brazil	BM&F Bovespa	366	347
Russia	St Petersburg Exchange	275	122
India	National Stock Exchange	1319	983
China	Shenzhen	1799	1652
South Africa	Johannesburg Stock Exchange	394	249

Source: Own construct based on financial statements data 2001-2013

The World Bank maintains the Global Financial Development Database a broad data sheet of financial sector attributes for 203 countries. The database consists of indicators of size of financial institutions and markets. The measures include the ability of the financial sector to channel funds from savers to investors in an economy. Financial intermediation role of the financial sector helps firms to access capital which is necessary for firm growth.

The empirical study is based on non-financial services listed firms in BRICS countries. The data used is taken from published financial statements sourced from Bloomberg. The Bloomberg online database provides financial statements for firms listed on the world's stock exchanges. All non-financial firms were drawn through purposive sampling from each stock exchange and the firms were followed for a period of 13 years from 2001-2013. Firms with data for less than 5 years were dropped from the sample. Financial firms are excluded because they are part of the financial sector which act as intermediaries and provide finance to non-financial firms.

General Method of Moments

The General Method of Moment (GMM) which was formalized by Hansen (1982) is an important and extensively used method of estimation in finance. GMM applied herein follows the footsteps of Kwenda and Holden (2014) who used the GMM methodology developed by Arellano and Bond (1991) to develop a trade credit targeting model. The GMM technique is applied because it is an econometric method that pools observed economic data with an aim to produce estimates of the unknown parameters. BRICS economies are at similar stage of economic advancement therefore population moment conditions are assumed. The GMM estimator is used because it is the best way of exploiting information from population moment conditions. Therefore, the GMM technique in first differences should yield more dependable estimations.

The BRICS total liabilities to total assets equation is a dynamic panel data model. The model includes lagged total liabilities to total assets which is the dependent variable as a regressor. The first-difference of the model removes the fixed effects and lags of the dependent variable total liabilities to total assets is used as instruments for the differenced lags. GMM technique uses all the undeviating moment restrictions that satisfy the hypothesis of no serial correlation in the errors (Arellano & Bond, 1991). The equation model used contains individual firm effects, lagged dependent variable of total liabilities to total assets and no

strictly exogenous variables. The estimation of the dynamic error constituents is incorporated to make the results more robust.

There is no sole measure for financial sector development hence the use of principal component analysis to decrease the variables used in this study to a single measure. Ten variables were chosen namely bank concentration, bank credit to bank deposits, bank deposits to GDP, liquid liabilities to GDP, stock market capitalization to GDP, stock market value traded to GDP, stock market turnover ratio, domestic credit to private sector to GDP, domestic public debt securities to GDP and private debt securities to GDP. Principal component analysis is applied altogether on three classifications of financial development that is banks, stock market indicators and money market.

Firm's total assets has been chosen as an indicator of growth because it increases the firm's productive capacity through the acquisition of machinery, labor and other resources. An increase in output will in turn increase sales and revenue which are also indicators of growth. Firms with more growth prospects will demand more capital from the financial sector to fund their expansion opportunities. Firm growth can be either favorable or adverse depending on whether a firm is growing or declining. Total asset growth can either be progressive or adverse, therefore a variable $growth = \frac{(total\ asset - l.total\ asset)}{total\ asset}$ is applied to denote growth. Firm size is used to measure access to capital market as large firms can easily raise capital from the financial sector compared to small firms which face a lot of constraints. Firm size is measured by $\ln size = \ln(total\ asstets)$. Huge firms have more solvency and hence they can access more credit than small and medium enterprises. Huge firms can appeal to capital from extensive sources; hence, they can fully benefit from financial sector development.

Firms strive to maintain a target capital structure and they change from actual to their target debt-equity ratio (Ozkan, 2001). Total liabilities encompass short-term and long-term debt and by consequence, firms ought to have a target level of liabilities to total assets. If firms make a deliberate policy on the level debt-equity levels, this has implications for financing choices. The investigation here is to test if firms in BRICS countries pursue a target level of total liabilities and whether they use debt to pursue growth opportunities. The real debt levels might not permanently equal the preferred levels, and firms with limited access to capital are delayed by constraints to change from present to their target debt-equity ratios. Therefore, financial sector development or lack of it may have the effect on firm's speed and cost adjustment. The existence of market imperfections due to limited financial sector development might impact on financing decision.

When investment in debt is no longer advantageous, financiers will pressure firms to reduce leverage to mitigate opportunity cost and financial risk. That is firm value rises with debt up to a point and then starts declining with increased debt. Therefore, equity capital becomes necessary and the development of the financial sector should help firms to access capital markets such as stock markets. There is an optimal debt level and by implication, firms must always adjust towards their target level in order minimise the costs of debt and maximizes the benefits.

The estimation model does not have strictly exogenous variables and is an autoregressive specification of total liabilities to total assets $TLTA_{it}$. The model is applied because there is a sample of firms and N individual time series ($TLTA_{it}$ ...., $TLTA_{iT}$) is available. T is small (13 years) and N is large (3353).

$$TLTA_{it} = \alpha + \beta_0 TLTA_{it-1} + \beta_1 fd + \beta_2 lnsize + \beta_3 growth + n_i + \eta_t + \varepsilon_{it} \quad (1)$$

Where $TLTA_{it}$ is total liabilities to total assets; fd is financial sector development estimated using pc1 from principal component analysis; $lnsize$ is the size of the firm approximated by the natural logarithm of total assets; $growth$ represent positive and negative asset growth; n_i denotes unobservable heterogeneity; η_t are the time dummy variables and ε_{it} is the error term.

4. RESULTS

Descriptive statistics

The mean total liabilities to total assets for BRICS countries is 0,60, the mean firm size 6,24 whilst the mean growth rate of all firms is 0.16 (See Table 2 below).

Table 2. Descriptive statistics for BRICS

Variable	*Obs*	*Mean*	*Std, Dev,*	*Min*	*Max*
fd	36882	3,80E-09	1,971135	-3,284799	3,295056
TLTA	29989	0,6040528	3,766913	-4,294117	459,25
lnsize	29988	6,242967	2,001749	0	12,92016
gr	29006	0,1645389	2,730425	-328	2,882353

Source: Own construct based on BRICS panel data 2001-2013

Panel unit root tests

As the use of non-stationary data yields spurious regression results Granger and Newbold (1974), it is essential to test for stationarity. The data was verified for stationarity using the Augmented Dickey-Fuller Fisher-type technique for panel unit roots and the results of the tests are presented in Table 3 below. The Augmented Dickey-Fuller Fisher type checks for stationarity under the null hypothesis that all panels comprise unit roots; that is, the series is not stationary.

Table 3. Fisher-type unit root test results

Variable	*P*	*Z*	*L**	*Pm*	*Order of integration*
lnsize	9812***	-50.9613	-52.0467	62.7126	0
gr	9305***	-50.4490	-50.0221	57.4483	0

, ** and * indicate significance at 10%, 5% and 1%, respectively.*

Source: Own computations using BRICS listed firms panel data from 2001 to 2013. Data sourced from Bloomberg.

The use of non-stationary data yields unreliable regression outcomes, hence investigations for stationarity of size and growth were done using the Fisher-type panel unit root test. The results presented above P=0.0000 based on this the null hypothesis is rejected. Therefore, the panels are stationary.

This paper uses both generated and real data and Arellano and Bond (1991) recommend the Sargan test to be appropriate in such specifications. Correctness of the instruments is verified by means of the Sargan test, which is an investigation for overidentifying restrictions. The m2 test for verifying second order serial correlation was also computed. The model is considered appropriate only if both tests are satisfied.

Table 4. Specification test results

	BRICS	
	m^2	Sargan test
Lags	1	1
TLTA	0.2562	0.0787

Source: Own construct published financial statements data 2001-2013

Table 4 above report the results of the m2 test and the Sargan test which were used to test for instruments validity. The tests are valid for total liabilities over total assets (TLTA) for all BRICS countries. The instrumental variables are uncorrelated to the residuals and are acceptable.

Table 3. Regression results

	(1)
	TL/TA
L.TL/TA	0.356***
	(353.23)
pc1	0.0417**
	(2.95)
lnsize	0.127**
	(2.92)
gr	-0.521***
	(-111.58)
_cons	-0.278
	(-1.20)
N	20280

t statistics in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Source: Own construct published financial statements data 2001-2013. Data sourced from Bloomberg.

The coefficient of $TLTA_{it-1}$ is accurately defined in model 1, which backs the primary proposition of this paper. $TLTA_{it-1}$ is valid at 99% level of significance in equation 1; for all BRICS countries. Hence, the dynamic methodology used in this paper is not discarded. BRICS firms have a target ratio of total liabilities to total assets and this ratio is consistent over the period of study. BRICS firms partly re-balance the debt component to achieve the desired target ratio of total liabilities to total assets. The capital rebalancing coefficient, is computed by the following formula: (1 – L.TL/TA). The coefficient of capital rebalancing for BRICS is (1 – 0.356) is 0.644. The coefficient of capital rebalancing is close to one giving some indication that the promptness of rebalancing capital by firms towards their target total liabilities to total assets level is relatively fast.

Size which is used to measure the firms access to financial markets was significant at 1% level, therefore firm size helps firms to access credit markets. Growth was statistically significant which therefore imply that firms re-balance total liabilities to total assets in pursuit of growth opportunities. Financial sector development helps firms increase investment in total assets and increase their borrowing to maintain their target ratio of total liabilities to total assets.

5. DISCUSSION

BRICS countries have high speed of adjustment for total liabilities because of increased financial sector development. The growth of the financial sector gives firms greater access to sources of finance therefore they can increase debt to pursue growth opportunities. When firms are above their target of total liabilities they can increase their equity capital or retire debt. Therefore, financial sector development has implications on speed of adjustment. There are costs involved for staying off target and financial sector development gives firms improved access to finance and lower cost of capital. Firms with superior access to sources of capital can substitute expensive debt with lower cost debt. The cost of capital can be reduced and more capital investment in profitable projects results in firm growth.

Financial sector development helps firms adjust towards their target debt-equity ratios which is an important capital structure decision. The traditional capital structure postulates that there is optimum capital point above which the advantages of financing a firm with debt will be offset by the costs. Financial sector development helps firms to gain better access to financial markets such as stock markets. Therefore, banking sector development helps firms to increase leverage and stock market development will help firms to reduce leverage if they are above the target.

Financial sector development helps firms to reduce cost of capital which is critical to the long-

term success of the firm. The cost capital is the percentage of return a given project must produce to be a worthwhile investment. Therefore, financial sector development can result in firm growth due to increase in acceptable projects. Growing firms have shortage of internally generated funds to finance new profitable ventures therefore they either need to access credit from financial institutions or raise capital from financial markets. Firms that grow increase their total assets whilst increasing their leverage if they are below their optimal level of debt-equity whilst those above the target can raise capital from stock markets. Financial sector development helps firms to maintain a target capital structure, which is the preferred optimal combination of debt and equity financing. If firms are above their target they incur costs therefore, financial sector development has implications on speed of adjustment. Firms operating in countries with poorly developed financial sectors incur more costs by staying off-target and they also have lower speed of adjustment due to limited alternatives of capital.

6. CONCLUSION

A GMM approximation method was used in this study, the findings exposed that listed firms in Brazil, Russia India, China and South Africa have target total liabilities to total assets and they partially adjust towards target levels. The speed of adjustment towards the target level is aided by financial sector development and is reasonably fast for all BRICS countries. The financial sector plays a crucial role in enabling firm growth by mobilizing savings, facilitating payments, trading of goods and services, and promoting the effective allocation of resources. Firms with enhanced access to external capital grow faster in economies with superior financial sector development. Debt that is both short-term and long-term is very imperative for firms to pursue growth opportunities. Financial sector development advances firm's access to finance and supports growth through increased investment in total assets.

The present study, is limited by its reliance on data from published financial statements whose quality may vary. In some countries, for instance, accounting standards have been molded predominantly by the needs of private creditors, while in other nations the requirements of tax authorities or central planners have been the predominant influence. Audit requirements may not be appropriately developed in some nations to deliver the level of improved reliability that is like other countries. The study's findings are also limited by the time frame for investigation. It is conceivable that the findings reported here are an artifact of the period from which financial results were examined. One dimension of growth based on total assets was used in this investigation which is more applicable to manufacturing and high technology firms and less applicable to service industries and firms with greater investment intangible assets such as intellectual property. It should be further noted that firm growth is dynamic and broader than the definition applied in this study.

There is no common indicator of financial sector development therefore the findings are limited by the chosen variables for this investigation. The association of financial sector development and firm growth merits further investigation focusing on banking sector development and stock markets. Such investigation should distinguish the role of debt and equity in firm growth. This study focused on speed of adjustment for target total liabilities to total assets however the model can be further extended to investigate the effect on debt-equity ratio. Financial sector development and speed of adjustment of capital structure which include the cost of staying off target and the costs of adjustment can expose the phenomenon in a more comprehensive way.

Further studies should focus on differences in financial sector development between countries to make a comparison which provides more perspectives on the influence on firm growth. Future research should study and analyze financial sector development and cost of capital stressing on its role in investment appraisal and firm growth. Despite same level of financial sector development access of individual firms to capital differs from one firm to another future investigation should include other firm specific factors that influence access to capital apart from firm size. Firm growth is dynamic, therefore, inclusion of control variables which influence growth apart from the resource based perspective which focuses on investment in total assets will help streamline the net influence of financial sector development on firm growth.

REFERENCES

1. Adnan, N. (2011). Measurement of financial development: A fresh approach. *8th International Conference on Islamic Economics and Finance*. Doha. Retrieved from the World Wide Web: http://conference.qfis.edu.qa/app/media/234
2. Agarwal, S., & Mohtadi,H. (2004). Financial markets & the financing choice of firms: Evidence from developing countries. *Global Finance Journal, 15,* 57-70. https://doi.org/10.1016/j.gfj.2003.10.004
3. Aivazian, V. A., Ge, Y., & Qiu, J. (2005a). Debt maturity structure and firminvestment. *Financial Management, 34*(4), 107-119. https://doi.org/107-119. /10.1111/j.1755-053X.2005.tb00120.x
4. Aivazian, V. A., Ge, Y., & Qiu, J. (2005b). The impact of leverage on firm investment:Canadian evidence. *Journal of corporate finance, 11*(1), 277-291. https://doi.org/10.1016/S0929-1199(03)00062-2
5. Akinboade, O. A., & Kinfack, E. C. (2015). Financial development, economic growth and millennium development goals in South Africa: Is there a link? *International Journal of Social Economics, 42(5),* 459-479. https://doi.org/10.1108/IJSE-01-2013-0006
6. Akinlo, O. O. (2012). Effect of working capital on profitability of selected quoted firms in Nigeria. *Global Business Review, 13(3),* 367-381. https://doi.org/10.1177/097215091201300301
7. Anderson, T. W., & Hsiao, C. (1981). Estimation of dynamic models with error components. *Journal of the American Statistical Association, 76(375),* 598-606. https://doi.org/10.1080/01621459.1981.10477691

8. Arellano, M., & Bond, S. (1991). Some tests of specification for panel data: Monte Carlo evidence and an application to employment equations. *The review of economic studies*, 58(2), 277-297. https://doi.org/10.2307/2297968
9. Barclay, M. J., & Smith, C. W. (1995). The maturity structure of corporate debt. *The Journal of Finance, 50*(2), 609-631 https://doi.org/10.1111/j.1540-6261.1995.tb04797.x
10. Batra, G., Kaufmann, D., & Stone, A. H. (2003). The firms speak: What the world business environment survey tells us about constraints on private sector development *Pathways Out of Poverty Springer* 193-214. https://doi.org/10.1007/978-94-010-0009-3_9
11. Becchetti, L., & Trovato, G. (2002). The determinants of growth for small and medium sized firms. The role of the availability of external finance. *Small business economics*, *19(4),* 291-306. https://doi.org/10.1023/A:10196784 29111
12. Beck, T., Demirgüç-Kunt, A., & Levine, R. (2000). A new database on the structure and development of the financial sector. *The World Bank Economic Review, 14(3),* 597-605. https://doi.org/10.1093/wber/14.3.597
13. Beck, T., Demirguc-Kunt, A., Laeven, L., & Levine, R. (2008). Finance, firm size, and growth. *Journal of Money, Credit and Banking, 40*(7), 1379-1405. https://doi.org/10.1111/j.1538-4616.2008.00164.x
14. Blundell, R., & Bond, S. (1998). Initial conditions and moment restrictions in dynamic panel data models. *Journal of econometrics, 87(1),* 115-143. https://doi.org/10.1016/S0304-4076(98)00009-8
15. Blundell, R., & Bond, S. (2000). GMM estimation with persistent panel data: An application to production functions. *Econometric reviews*, *19(3),* 321-340. https://doi.org/10.1080/07474930008800475
16. Bokpin, G. A. (2010). Financial market development and corporate financing: Evidence from emerging market economies. *Journal of Economic Studies*, 37(1), 96-116. https://doi.org/10.1108/01443581011012270
17. Bonin, J., & Wachtel, P. (2003). Financial sector development in transition economies: Lessons from the first decade. *Financial Markets, Institutions & Instruments*, 12(1), 1-66. https://doi.org/10.1111/1468-0416.t01-1-00001
18. Byoun, S. (2008). How and when do firms adjust their capital structures toward targets? *The Journal of Finance, 63*(6), 3069-3096. https://doi.org/10.1111/j.1540-6261.2008.01421.x
19. Christopoulos, D. K., & Tsionas, E. G. (2004). Financial development and economic growth: Evidence from panel unit root and cointegration tests. *Journal of development Economics*, *73(1),* 55-74. https://doi.org/10.1016/j.jdeveco.2003.03.002
20. Cook, D. O., & Tang, T. (2010). Macroeconomic conditions and capital structure adjustment speed. *Journal of corporate finance, 16(1),* 73-87. http://dx.doi.org/10.2139/ssrn.1101664
21. Demirgüç-Kunt, A., & Maksimovic, V. (1999). Institutions, financial markets, and firm debt maturity. *Journal of financial economics,* 54(3), 295-336. https://doi.org/10.1016/S0304-405X(99)00039-2
22. Demirgüç-Kunt, A., & Maksimovic, V. (1998). Law, finance, and firm growth. The Journal of Finance, 53(6), 2107-2137. https://doi.org/10.1111/0022-1082.00084
23. Diaz Hermelo, F. (2007). The determinants of firm's growth: An empirical examination. 1-23. Retrieved from the World Wide Web: http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.538.267&rep=rep1&type=pdf
24. Drobetz, W., & Wanzenried, G. (2006). What determines the speed of adjustment to the target capital structure? *Applied Financial Economics, 16*(13), 941-958. https://doi.org/10.1080/09603100500426358
25. Evans, D. S. (1987). The relationship between firm growth, size, and age: Estimates for 100 manufacturing industries. *The journal of industrial economics*, *35(4),* 567-581 https://doi.org/10.2307/2098588
26. Fisman, R., & Love, I. (2003). Trade credit, financial intermediary development, and industry growth. *The Journal of Finance*, *58(1),* 353-374. https://doi.org/10.1111/1540-6261.00527
27. Flannery, M. J., & Rangan, K. P. (2006). Partial adjustment toward target capital structures. *Journal of financial economics, 79(3),* 469-506. https://doi.org/10.1016/j.jfineco.2005.03.004
28. García-Teruel, P. J., & Martínez-Solano, P. (2010). Determinants of trade credit: A comparative study of European SMEs. *International Small Business Journal*, 28(3), 215-233. https://doi.org/10.1177/0266242609360603
29. Ge, Y., & Qiu, J. (2007). Financial development, bank discrimination and trade credit. *Journal of Banking & Finance, 31(2),* 513- 530. https://doi.org/10.1016/j.jbankfin.2006.07.009
30. Granger, C. W., & Newbold, P. (1974). Spurious regressions in econometrics. *Journal of econometrics*, *2(2),* 111-120. https://doi.org/10.1016/0304-4076(74)90034-7
31. Greenwood, J., & Jovanovic, B. (1989). Financial development, growth, and the distribution of income. *National Bureau of Economic Research. 3189,* 1-42. https://doi.org/10.3386/w3189
32. Greenwood, J., Sanchez, J. M., & Wang, C. (2013). Quantifying the impact of financial development on economic development. *Review of Economic Dynamics*, *16(1),* 194-215. https://doi.org/10.1016/j.red.2012.07.003
33. Gupta, P. D., Guha, S., & Krishnaswami, S. S. (2013). Firm growth and its determinants. *Journal of Innovation and Entrepreneurship*, *2(15),* 1-15. https://doi.org/10.1186/2192-5372-2-15
34. Haas, R., & Peeters, M. (2006). The dynamic adjustment towards target capital structures of firms in transition economies. *Economics of Transition, 14(1),* 133-169. https://doi.org/10.1111/j.1468-0351.2006.00237.x
35. Hall, B. H. (1986). The relationship between firm size and firm growth in the US manufacturing sector: *National Bureau of Economic Research Cambridge, Mass.*, USA.35(4), 583-606 https://doi.org/10.2307/2098589
36. Hansen, L. P. (1982). Large sample properties of generalized method of moments estimators. *Econometrica: Journal of the Econometric Society*, *50(4),* 1029-1054. https://doi.org/10.2307/1912775
37. Hartmann, P., Heider, F., Papaioannou, E., & Lo Duca, M. (2007). The role of financial markets and innovation in productivity and growth in Europe. *ECB occasional paper* (72). Retrieved from the World Wide Web: https://www.ecb.europa.eu/pub/pdf/scpops/ecbocp72.pdf
38. Hassan, M. K., Sanchez, B., & Yu, J.-S. (2011). Financial development and economic growth: New evidence from panel data. *The Quarterly Review of economics and finance*, *51(1),* 88-104. https://doi.org/10.1016/j.qref.2010.09.001
39. Herring, R. J., & Chatusripitak, N. (2007). The case of the missing market: the bond market and why it

matters for financial development. *Recent Financial Crises: Analysis, Challenges and Implications*, *(11),* 1-36. http://hdl.handle.net/11540/4839
40. Heshmati, A. (2001). The dynamics of capital structure: Evidence from Swedish micro and small firms. *Research in Banking and Finance,* 2(1), 199-241. http://swopec.hhs.se/hastef/abs/hastef0440.htm
41. Hymer, S., & Pashigian, P. (1962). Firm size and rate of growth. *Journal of political economy, 70*(*6*), 556-569. http://dx.doi.org/10.1086/258716
42. Jalilvand, A., & Harris, R. S. (1984). Corporate behavior in adjusting to capital structure and dividend targets: An econometric study. *The Journal of Finance, 39*(1), 127-145. https://doi.org/10.1111/j.1540-6261.1984.tb03864.x
43. Kar, M., Nazlıoğlu, Ş., & Ağır, H. (2011). Financial development and economic growth nexus in the MENA countries: Bootstrap panel granger causality analysis. *Economic Modelling, 28(1-2),* 685-693. https://doi.org/10.1016/j.econmod.2010.05.015
44. Khan, A. (2001). Financial development and economic growth. *Macroeconomic dynamics, 5*(3), 413-433. http://econpapers.repec.org/scripts/redir.pf?u=http%3A%2F%2Fjournals.cambridge.org%2Fabstract_S1365100500020046;h=repec:cup:macdyn:v:5:y:2001:i:03:p:413-433_02
45. Kwenda, F., & Holden, M. (2014). Trade credit in corporate financing in South Africa: Evidence from a dynamic panel data analysis. *Investment Management and Financial Innovations, 11(4),* 268-277 https://businessperspectives.org/component/zoo/trade-credit-in-corporate-financing-in-south-africa-evidence-from-a-dynamic-panel-data-analysis
46. Laopodis, N. T., Papastamou, A., Alon, I., & Zakamulin, V. (2016). Dynamic interactions between stock markets and the real economy: Evidence from emerging markets. *International Journal of Emerging Markets*, *11(4),* 715-746. https://doi.org/10.1108/IJoEM-12-2015-0253
47. Levine, R. (1999). Bank-based and market-based financial systems: Cross-country comparisons, *World Bank Publications.* https://doi.org/10.1596/1813-9450-2143
48. Liang, Q., & Jian-Zhou, T. (2006). Financial development and economic growth: Evidence from China. *China economic review*, 17(4), 395-411. https://doi.org/10.1016/j.chieco.2005.09.003
49. Love, I. (2003). Financial development and financing constraints: International evidence from the structural investment model. *Review of Financial studies*, 16(3), 765-791. https://doi.org/10.1093/rfs/hhg013
50. Liang, Q., & Jian-Zhou, T. (2006). Financial development and economic growth: Evidence from China. *China economic review, 17(4),* 395-411. https://doi.org/10.1016/j.chieco.2005.09.003
51. Nickell, S. (1981). Biases in dynamic models with fixed effects. *Econometrica: Journal of the Econometric Society*, 49(6), 1417-1426. https://doi.org/10.2307/1911408
52. Niskanen, J., & Niskanen, M. (2006). The determinants of corporate trade credit policies in a bank-dominated financial environment: The case of Finnish small firms. *European Financial Management, 12(1),* 81-102. https://doi.org/10.1111/j.1354- 7798.2006.00311.x
53. Ozkan, A. (2001). Determinants of capital structure and adjustment to long run target: Evidence from UK company panel data. *Journal of Business Finance & Accounting*, *28(1-2),* 175-198. https://doi.org/10.1111/1468-5957.00370
54. Öztekin, Ö., & Flannery, M. J. (2012). Institutional determinants of capital structure adjustment speeds. *Journal of financial economics, 103(1),* 88-112. https://doi.org/10.1016/j.jfineco.2011.08.014
55. Pagano, P., & Schivardi, F. (2003). Firm size distribution and growth. *The Scandinavian Journal of Economics, 105(2),* 255-274. https://doi.org/10.1111/1467-9442.t01-1-00008
56. Rahaman, M. M. (2011). Access to financing and firm growth. *Journal of Banking & Finance, 35(3),* 709-723. https://doi.org/10.1016/j.jbankfin.2010.09.005
57. Rajan, R. G., & Zingales, L. (1998). Which capitalism? Lessons form the east Asian crisis. *Journal of Applied Corporate Finance*, *11(3),* 40-48. https://doi.org/10.1111/j.1745-6622.1998.tb00501.x
58. Rajan, R. G., & Zingales, L. (2003). The great reversals: The politics of financial development in the twentieth century. *Journal of financial economics, 69(1),* 5-50. https://doi.org/10.1016/S0304-405X(03)00125-9
59. Saugat, B., Heshmati, A., & Wihlborg, C. (2000). The dynamics of capital structure. *SSE/EFI Working Paper in Economics and Finance (333),* 1-20. Retrieved from the World Wide Web: http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.203.2451&rep=rep1&type=pdf
60. Sehrawat, M., GiriI, A., Alon, I., & Hobdari, B. (2016). The impact of financial development on economic growth: Evidence from SAARC countries. *International Journal of Emerging Markets*, *11(4),* 569-583. https://doi.org/10.1108/IJoEM-11-2014-0172
61. Storey, D. J. (1994). New firm growth and bank financing. *Small Business Economics, 6(2),* 139-150. https://doi.org/10.1007/BF01065186
62. Westhead, P., & Storey, D. J. (1997). Financial constraints on the growth of high technology small firms in the United Kingdom. *Applied Financial Economics, 7(2),* 197-201. http://dx.doi.org/10.1080/096031097333763
63. Zhang, J., Wang, L., & Wang, S. (2012). Financial development and economic growth: Recent evidence from China. *Journal of Comparative Economics*, *40*, 393-412. https://doi.org/10.1016/j.jce.2012.01.001