



DBN
Development
Bank of Nigeria

...Financing Sustainable Growth

DBN JOURNAL OF ECONOMICS & SUSTAINABLE GROWTH

VOLUME 1, ISSUE 1, 2018



FINANCIAL LIBERALIZATION AND BUSINESS ENTRY NEXUS IN SSA

To What Extent Does
Resource Dependence
and Institutional
Quality Matter?

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Abstract

This paper examines whether outcome of financial liberalization strategy adopted in the African continent for the past two and half decades promotes new business entrance using data of twenty-two (22) SSA countries from 2006 to 2016.

The findings from the random-effect model, following Hausman selection test preference, shows that, financial development via policy of financial liberalization, is not having a uniform effect on growth in entrepreneurship, with interest rate gap, a measure of financial sector efficiency, significantly undermining entrance of new firms at the 1% level, though ratio of broad money/GDP was positive and statistically significant while real interest rate was observed to have a non-significant effect.

Interaction of interest rate spread and real interest rate with natural resources, for example, confirms it destabilizing effect, although there was evidence suggesting that, natural resources do not directly undermine growth in entrepreneurship. Other results show that, real GDP, domestic credit to private sector and secondary school enrolment rate, have a significantly positive effect, but government expenditure/ intervention, though positive, was not significant. Inflation was negative and not statistically significant in all models.

Corruption and cost of getting electricity (% of income per capita) significantly undermine entrepreneurial development. The study calls for the need to institutionalise the process of financial reforms across SSA countries to reap its growth-inducing effects on economic outcomes, while promoting institutional quality and efficient use of natural resources to achieve a non-declining infusion of SMEs in the African continent.

Key words: Entrepreneurship, Financial liberalisation, Business Entry, SSA

JEL Classification: E61, M13, O14

1.0 INTRODUCTION

It has been increasingly recognised that entrepreneurial development is crucial in achieving an inclusive structural transformation of any economy, as the development of a vibrant small and medium enterprise sector is considered a critical step to attaining broad-based economic development (World Bank, 2003; Muhanna, 2007). This posture stems from the belief that sustained growth in entrepreneurial base of a country promotes innovation and investment, which in turn, causes job creation, growth in output and entrenchment of competitive strategy.

Following this, most African countries adopted the Structural Adjustment Programme (SAP)¹ in the early 1980s aimed at promoting real sector growth, entrepreneurship and inclusive development, especially on the back of growth drag experienced in the continent due to oil price shock (World Bank, 1994; Cavoli, Rajan and Siregar, 2003). Interestingly, financial sector reform was a major component of the broad-based economic reforms inherent in SAP framework to cause a rebound in the real economy and effectively boost average societal welfare.

Average annual growth rate of GDP fell precipitously from 4.9% to 2.2% in the periods of 1976-1980 and 1981-1985, respectively, intensifying the quest for long-term economic adjustments in a bid to reverse the continent's developmental malaise. Hence, the adoption of fine-tuning measures within the SAP framework, and subsequent policies, to attain broad economic liberalisation so as to enhance resource mobilisation, increased productivity through entrepreneurial development, and eliminate macroeconomic instability. Thus, between 1986 and 1996, the pace of financial sector reform evolved tremendously with various restrictions removed in a bid to foster liberalisation of financial markets throughout sub-Saharan African (SSA) countries, and to improve access and availability of long-term credit to the core-poor in the region.

Ever since, the process of financial liberalism has become a very powerful tool to ascertain whether social welfare has been enhanced or stunted through job creation mechanism and establishment of new businesses. This is because financial development², induced by policies of financial reform, affects savings and investment decisions. Recent data have shown that private credit by the banking sector in SSA has risen over figures in the early 1980s and 1990s across most SSA countries, rising from an average less than 15% in those periods to over 26.9% between 2004 and 2016, suggesting increasing tendency for entrepreneurs in the region to rely on credit from the formal financial institutions.

However, after over two and half decades of continued financial reform across SSA, entrepreneurial development has not improved remarkably. This development calls to question the extent to which the financial liberalisation has supported growth in entrance of new firms in the continent. Thus, a key focus of the study would be to examine whether financial reform policy has significantly intensified rate of setting up new firms in SSA and does dependence on natural resources by governments in SSA matter? Also, a number of studies have explored the resource abundance/dependence and economic growth nexus (Sachs and Warner, 1995; Sala-i-Martin and Subramanian, 2003), but the challenge of this study is to examine whether natural resources have innately damaging effects on

¹ The reform package included interest rate liberalization, removal of credit ceilings policy, to develop the banking/capital market. See studies by Demirgüç-Kunt and Levine, (1996), and Levine, Loayza, and Beck, (2000) for discussions on problems leading to finding a suitable measure to capture financial development.

establishment of new firms in the continent and also to investigate the influence of institutional quality, particularly corruption. These aspects of analysis appear to be scanty in the finance literature and this study intends to bridge the gap in explaining impact of financial liberalisation on new firm registration purely from an outcome of financial reforms perspective³.

In light of the ongoing debate regarding the nexus between financial reform and entrepreneurship in SSA, this study seeks to empirically evaluate these issues aimed at improving policy making and inform strategy amongst governments in SSA countries.

The study is organized as follows: Following this introductory session, Section Two discusses relevant literature, while Section Three presents methodology and model specification. Discussion of empirical findings is considered in Section Four while Section Five houses the conclusion and policy recommendations.

2.0 REVIEW OF RELATED LITERATURE

The financial sector forms the structure of economic arrangements in any nation and facilitates the conduct of commercial transactions through the use of money for payments and investment (Lin, Sun and Jiang, 2009). Thus, the financial sector can be very instrumental in achieving both short- and long-run economic performance through its intermediating activities in transforming and channelling deposits from surplus economic units (savers) to the deficit units (investment opportunities).

It is in this regard that some influential studies have shown that the absence of efficient financial structures, markets and institutions are among the factors undermining economic growth⁴ and development in developing countries. On this, King and Levine (1993) show that financial intermediation is a good predictor of economic growth, even after controlling for unique country characteristics and other growth determinants. Most developing economies, especially in the late 1980s to the 1990s, embarked on series of financial sector reforms/ initiatives, tied extricably to the Structural Adjustment Programme (SAP), to effectively broaden the scope of financial intermediation process in the continent. Prior to this era, was the copious employment of directed credits and interest rate ceilings strategy to quicken the pace of entrepreneurial development in respective African states.

However, governments arbitrary control of interest rates, selective credit schemes and large number of state-owned banks were believed to repress the financial system, undermine investment and economic growth path (Soyibo and Adekanye, 1992; Fry, 1997). For example, Mwega, Mwangi and Ngola, (1990) notice that low interest rate, an outcome of financial repression, discourages savings and financial intermediation, but may facilitate government borrowings that can crowd-out private sectors credit and investments.

³ The idea is that a positive real interest rate indicates a country that has a liberalised the financial sector, while a negative real interest rate connotes existence of financial repression (Arestis and Glickman, 2002; Ang and McKibbin, 2007). Others employ liquid-liabilities as a percentage of GDP as proxy for financial intermediation, including King and Levine, (1993); Demetriades and Hussain, (1996); Ang and McKibbin, (2007).

⁴ See Ndulu, O'Connell, Bates, Collier and Soludo (2000); Oyejide, (2000); Iyoha and Oriakhi (2002); Gulde, Pattillo and Christensen, (2006)

The financial liberalisation theory holds that the process of liberalising the domestic financial system enhances monetary policy effectiveness, which should result in improved intermediation efficiency, thereby supporting increased domestic savings, amongst others. McKinnon (1973); Shaw (1973); Nisanke and Aryeetey, (1998) and Guiso, Sapienza and Zingales, (2006) argue that bank deregulation should improve access to credit due to removal of credit constraint, as well as lower interest rate spreads on the back of increased competition, though can lead to higher non-performing loan problems (Nisanke and Aryeetey, 1998).

McKinnon, (1973) and Shaw, (1973), argued that financial intermediaries improve economic development by shifting capital to entrepreneurs, mobilizing savings, facilitating transactions and managing risks. The duo shows that countries with high economic growth also have developed financial markets because higher levels of income may result in increases in savings and also improve efficiency of investments.

Some authors have also identified financial development as a critical factor in inclusive development (Levine, 2005; Beck, 2011), and that by providing higher incentives for saving and investment, financial liberalisation leads to a higher interaction among economic agents (Ahmed and Islam, 2010). In general, the liberalisation theorists believe that financial liberalisation programme leads to higher deposit and lending rates and hence raises the level of domestic savings and credit allocation. There are relatively robust empirical evidences that, financial reform (interest rate liberalization) can directly affect investment (see De Melo and Tybout, 1986).

Researchers like, Schumpeter, (1911); McKinnon, (1973); Shaw, (1973); Greenwood and Jovanovic, (1990); Bencivenga and Smith, (1991); King and Levine, (1993); De Gregorio and Guidotti, (1995) contend that well-functioning financial system can promote overall economic efficiency because it can mobilize higher level of savings, enhance capital accumulation, transfer resources from traditional (non-growth) sectors to modern growth-inducing ones, and also promote a competent entrepreneur response to business opportunities. Increases in access to credit by the private sector, especially to small and medium scale enterprises, could stimulate entrepreneurial development, which should lead to a fall in unemployment and improve societal welfare. In fact, lack of access by households and would be entrepreneurs to credit is often cited as a barrier to development in poorer countries (OECD, 2014)

Specifically, Siregar (1992); and Jaramillo, Schiantarelli and Weiss (1992) found post-liberalization process led to increased flow of funds to more efficient firms. Demircuc-Kunt and Maksimovic (1998) observed that, firms in more financially developed countries grow at a faster rate, relative to a benchmark growth rate that would hold in the absence of external financing. Findings from Galindo, Schiantarelli and Weiss (2002) suggests that, for most countries, the introduction of financial reform raised the share of investment going to firms with a higher marginal return to capital/ level of efficiency. Schmidt-Hebbel and Servén (2002) confirms the theoretical prior of a positive effect of financial liberalization on growth, channeled through higher investment and improved resource allocation leading to an increase in productivity.

Rajan and Zingales, (2003), for example, argued that financial reform may be an important strategy to raise the size of domestic savings channelled through the formal financial

system. They also opined that financial reform improves efficiency of financial intermediation, as well as directly or indirectly enhance the resilience of the macroeconomic environment, especially human development since the volume of credit is enhanced through inclusion of vast majority of previously unbanked public. Beck, et al. (2012) found financial deepening to benefit the poor disproportionately more than the better-off, if it relaxes credit constraints that affects them, while Pagano and Pica (2012) provided evidence that financial development is positively associated with employment growth in developing countries, than advanced countries, due to the existence of large informal sectors.

Aziakpono and Babatope-Obasa, (2003) observed that, when financial liberalisation progresses well and real interest rate is positive, it leads economic agents to reconsider their investment portfolios, since savings in financial assets (which may be more flexible in terms of liquidity) are now more equally rewarding, and hence make more investible funds available within the economy. Some economists are increasingly paying attention to the possibilities that financial sector reform would lead to undesired outcome, like financial crisis and economic uncertainties (see Kose, Prasad and Terrones, 2003; Prasad, Rogoff, Wei and Kose, 2004; Kose, Prasad, Rogoff, and Wei, 2006). But, Eichengreen and Leblang (2003) contended that the effect financial liberalisation on growth is negative. However, recent researchers and empirical evidences show that though financial liberalization results in higher interest rates and financial deepening, it does not necessarily lead to higher savings and investment.

Studies have linked the occurrence of resource curse to the fact that it precedes the advent of rent-seeking behaviour of government officials, which in the process undermine institutional quality. Collier and Hoeffler (1998) opined that the presence of natural resources attracts rent-seeking behavior, which causes a drag on attaining robust institutional quality that destabilizes societal real productive base. This is due to the perceived gains from rent-seeking that exists when sufficiently large discretionary powers are needed even as part of the approval process, as opposed to outcomes of competitive market. Rent seeking outside the productive economy pays off when institutions are bad, and as such Mauro (1998) added that where rent seeking is more rewarding compared to productive activities, talent will be misallocated.

The other closely related concept is the 'grabbing hand' thesis. It holds that the availability of natural resources, for example, in a situation of bad institutional quality would induce bureaucrats to engage in grabbing activities, rather than activities that are productive. Institutional deficiency, like corruption for example, raises transaction costs, lowers efficiency of public spending and hinders investment, business growth and economic growth (Mauro, 1995; Tanzi and Davoodi, 1997).

Meanwhile, Leff (1964) was among the earliest researchers who found evidence that corruption can promote economic growth as some rigid bureaucratic regulations and procedures may be relaxed. Leff highlighted that corruption helps to overcome inefficiencies in government regulations by acting as a way out of cumbersome policies. Thus, corruption allows entrepreneurs to avoid bureaucratic delays. Acemoglu and Verdier (1998) suggested that corruption might be desirable as it may provide a leeway for entrepreneurs to bypass inefficient regulations and hence induce a more efficient provision of government services. Advocates of this view, conclude that corruption introduces

efficiency in the economy and affects economic growth positively, as it helps to circumvent bureaucratic inefficiencies and rigidities. This is the 'greasing the wheel' argument.

Opponents of this view, however, contend that corruption hurts innovative activities because innovators are more in need of government-supplied goods, such as permits and import quotas. Since the demand for these goods is high and inelastic it would provide the prime opportunity for corruption. Fresh investors are often credit-constrained and do not have the required cash to pay bribes or to acquire long-run stock of producible inputs, thereby curtailing aggregate business growth (Murphy et al., 1993). Meon and Sekkat (2005) tested the "greasing the wheels" and "sand in the wheels" hypothesis of corruption and found that corruption is most damaging to economic growth in a state with weak governance structure. Corruption imposes additional costs on the growth process as it diverts scarce resources away from viable investment. It increases the uncertainty and risk associated with investment and drives away new investment (Fabayo et al., 2011). Thus corruption not only distorts the efficacy of capital productivity of executed investments, but also deters viable investments. Moreover, some recent empirical evidences indicated that, resource-rich countries, on average, have lower and unsteady growth rates compared to resource-poor countries (Mehrara and Rezaza, 2011; Sachs and Warner, 1995; 1997). Some authors, like Auty (1994a), noted that, the resource curse thesis is not an iron law, such that resource abundance does not have innately damaging effects on economic performance (Sachs and Warner, 1997; Gylfason, 2004), but a strong recurrent tendency that can be and has been avoided with careful management of mineral windfall. Countries known to have avoided resource-curse are Botswana, Malaysia, Norway, Indonesia, Australia and Canada, as they implemented sound pro-development strategies (Ross, 2001).

3.0 BASIC THEORY, MODEL SPECIFICATION AND METHODOLOGY

The framework for this study begins with the traditional Cobb-Douglas (CD) production function with two factor inputs as represented in equation (1):

$$Y = f(K, L) \quad (1)$$

Labour (L) and capital (K) play significant role as input in generating desired level of output, in this case, new firm entrance in SSA. The CD function was modified by including three (3) monetary indicators as inputs factors that, essentially reflects the outcomes of policies of financial liberalisation, and these are namely real interest rate (RIR), interest rate spread (IRS) and ratio of broad money supply to GDP (M2/GDP). It is believed that, financial reform would push real interest rate to a positive region, while the interest rate gap is expected to narrow with reform and M2/GDP ratio blossom showing higher levels of economic monetisation. Thus,

$$Y = f(RIR, IRS, M2/GDP) \quad (2)$$

The functional equation (2) becomes equation (3) which is our fundamental model for this study that relates new firm entrance in SSA as being explained by financial liberalisation outcomes (real interest rate, RIR; interest rate spread, IRS; and ratio of broad money supply to GDP, M2/GDP), a battery of macroeconomic variables, institutional factors, as well as

some interactions between financial liberalisation terms and key macroeconomic variables. The 22 countries are: Botswana, Burkina Faso, Gabon, Liberia, Madagascar, Malawi, Mauritius, Namibia, Niger, Nigeria, South Africa, Ghana, Kenya, Lesotho, Niger, Rwanda, Sao Tome, Senegal, Sierra Leone, Togo, Uganda, and Zambia. The choice of modelling strategy adopted for this study is based on the fact that financial intermediation is a veritable input that translates into economy-wide benefits. Financial sector, through policies of financial reforms, mobilises savings, and thus, provide fund-seekers with the required credits for investment, thereby improving aggregate demand and supply conditions, which in turn support innovations and entrepreneurial development.

Consequent upon that, financial sector reform⁵ variables are included as input in the CD function as vital in the process of attaining broad-based growth in firm entrants in SSA. Also, the study accounted for the respective economic structure of most SSA countries, and the fact that these countries rely mainly on natural resources (NR) for fiscal sustenance and driver of economic fortunes in the continent. La Porta et al. (1997, 1998) explored the impact of specific institutional variables on economic growth.

$$Y = \partial_0 + \partial_1 RIR + \partial_2 IRS + \partial_3 \frac{M2}{GDP} + \partial_4 \sum_{i=1}^6 \text{Macro} + \partial_5 \sum_{i=1}^4 \text{Inst} + \varepsilon \quad (3)$$

We conducted empirical analysis using the traditional panel methodology, namely fixed- and random-effects modelling. In the situation where the standard random effects assumption holds, and the model contains country-effect, the random-effects model is specified and estimated and the Hausman specification test was used to select between the models. According to Ahn and Moon, (2001), the Hausman statistic may be viewed as a distance measure between the fixed effects and the random effects estimators. Thus, we test null hypothesis, H_0 , that random effects are consistent and efficient, versus H_1 , the alternative hypothesis, that random effects are inconsistent (as the fixed effects will be assumed always consistent).

The data for the dependent variable, obtained from the World Bank's Entrepreneurship Survey and database, is the number of newly registered limited-liability firms during the calendar year. Hence, the study essentially focuses only on growth of the formal private sector since data are readily not available for informal sector of the economy. The other variables included as control were drawn from the Transparency International's Corruption perception index; World Bank's World Development Indicators, with limited data taken from the respective country's Central Bank.

4.0 DISCUSSION OF EMPIRICAL RESULTS

The study reports only the regression results of random-effects model following conclusion drawn from the Hausman (specification) test, which preferred the random-effects model to the fixed-effects model, and results are reported in table 1. The extent of business reforms in the respective countries of study is measured by the number of newly established companies in those jurisdictions.

⁵ Some theorists like Newlyn and Avramides, (1977) believe that financial sector can be ranked *pari passu* with other numerous inputs in the production process.

Each of the models shows the role of financial reforms, macroeconomic variables, institutional variables and the interactions of those variables with broad macroeconomic indicators.

The coefficient of real interest rate was found to have a mixed effect on formal business set-up in SSA, though coefficients of estimated models were not significant at conventional test levels. Real interest rate which measures anticipated opportunity cost of borrowing in terms of goods and services forgone, had an uncertain influence. A high and positive real interest rate, for example, may stimulate higher savings and investment, hence economic growth, but also reduce the level of investment, as higher real interest rate raises cost of funds. Similarly, another measure depicting outcome of financial sector reforms – the ratio of broad money to GDP, exerts a positive and statistically significant influence on entrepreneurial development in SSA. The performance of the ratio of broad money to GDP coefficient, which shows the extent of monetisation in the economy, suggests that, a deepened financial system promotes the flow of investable fund to entrepreneurs through financial intermediation process and demand for goods/ services.

Interest rate spread (IRS) has a negative and statistically significant influence on business entry in the selected SSA countries under study. This suggests that, the wider the gap between the lending rate and deposit rate, the less incentive entrepreneurs are in establishing new firms. This is expected since higher difference of lending rate above deposit rate shows financial sector inefficient (Koivu, 2002), and logically suggests that, the process of financial liberalisation in overall SSA has not been so efficient, and this outcome, would systematically push upward the cost of investment, thereby discouraging the establishment of new firms, especially those that requires external capital for investment.

From result obtained using metrics indicating outcomes of financial liberalisation in selected African countries, it is evident that the policy of financial liberalisation has indeed deepened the formal financial sector in the continent by improving the nexus between financial liberalism and formal entrepreneurial development, but has not done so efficiently, as evidently wide interest rate gap, for example, makes the cost of funds to be relatively more expensive, and could have generated uncertainty about spurring savings, investment and formal entrepreneurial development in the continent. Thus, outcomes of financial liberalisation policy have mixed effects on new firm entrants or entrepreneurial development in SSA. This calls for broader financial liberalisation initiatives in the continent to provoke a higher level of interaction amongst economic agents.

Real GDP, a measure of economic activity level, was highly significant even at the 1% level in estimated models, such that, a unit increase in real GDP would lead a rise in the number of newly registered companies by 1.03 units. This is expected as expanding economic size may provide the incentives to commerce a business. In addition, larger economic size creates more demand for goods and services, which could directly or indirectly encourage the establishment of new firms to cater for such demands.

Inflation rate, which represents macroeconomic policy environment, has a declining effect of growth in new firms' registration, hence entrepreneurial development in the continent. A central macroeconomic challenge facing developing economies, SSA inclusive, is rampant onslaught of inflationary tendencies such that, monetary authorities use of conventional tool (like reserve requirements or adjustment in policy rate) to ensure price

stability may also hurt process of financial intermediation, credit supply, and hence, setting up of new business.

The coefficient of Domestic Credit to Private Sector was positive and significant either at 10% or 1% level, suggesting that, higher flow of funds to the private sector encourages the start-up of formal business outfit in the continent. This result further confirms the notion that credit availability and effective intermediation to potential investors remain a crucial determinant of entrepreneurial development. Government expenditure, a proxy for public sector intervention in the domestic economy, has mixed signs, though the coefficient remained not statistically significant in estimated models, indicating insufficiency and perceived uncertainty around SSA Governments' interventions.

The coefficient representing natural resource rent is positive in all estimated panel models, but only significance in the overall mode at the 10% level. The results suggest that natural resources⁶ can be a blessing because it serves as a veritable source of foreign capital that could be deployed to support domestic entrepreneurship. Revenue from The positive sign gives credence to the Hartwick, (1977) proposition that if owners of non-renewable natural resources convert all income received from the commodity into reproducible capital; it would preserve the production opportunities, and thus would guarantee the attainment of a non-decreasing level of consumption overtime in the economy. Finding in this study can be inferred from the research conducted by Gaitan and Roe, (2005) which held that effect of the non-renewable resource on the resource rich economy's performance can be positive. This is contrary to findings in extant literature that natural resource dependence undermines growth (Sala-i-Martin and Subramanian, 2003; Gylfason and Zoega, 2006; Ploeg and Poelhekke, 2009) and financial development (Gylfason, 2004; Bakwena and Bodman, 2008; Beck, 2011; Kurronen, 2012).

The coefficient representing human capital development and, proxied by secondary school enrolment rate, was positive and highly significant at the 1% level in our estimated models, suggesting that, as more and more people get education increases the likelihood for engagement in productive activities. The result confirms Todaro and Smith, (2011) assertion that education plays a key role in the ability of developing country to absorb modern technology and to develop the capacity for self-sustaining growth. This study adopts Tressel and Detragiache, (2008) interpretation of secondary school enrolment rate to depict competence in risk management capabilities, and hence increasing the number of risk experts enhances entrepreneurial development and opportunities.

For institutional variables considered in this study, corruption coefficient was negative and statistically significant in our models, confirming that corruption acts as sand-in-the-wheel of economic growth in the African continent, and thus undermines entrepreneurial development and misallocating proactive talents, as proffered by Mauro, (1995); Tanzi and Davoodi, (1997); Wei, (1997). This is because corruption leads to the illegitimate diversion of scarce resources away from their most productive activities that promotes the greater good of the citizenry. A high cost of export significantly lead to a decline in number of new firm registration in SSA, while a high cost to import results in a significantly higher number of cases of new firm registration in the continent. These results allude to the tendency for both

⁶ See Stevens, P. (2003). Resource impact: Curse or Blessing? A literature survey. *Journal of Energy Literature*, 9, 3-41. for a discussion on the contribution of natural resources to economic growth and development.

domestic and external dynamism potentially can spur as well as undermine the scope of entrepreneurial development in the continent. The cost of getting electricity (as % of income per capita) variable was found to have a negative and highly significant impact on setting up of new firms in SSA.

Table 1: Entrepreneurial Development Determinants Regression

VARIABLES	MODEL 1	MODEL 2	MODEL 3	MODEL 4	MODEL 5
Outcome of Financial Reform Indicators					
Real Interest Rate (RIR)	-0.001 (0.005)	-0.002 (0.004)	-0.002 (0.004)	0.021 (0.014)	0.015 (0.206)
Interest Rate Spread (IRS)	-0.013 (0.009)*	-0.007 (0.006)	-0.007 (0.006)	-0.031 (0.013)*	-0.035 (0.012)***
Broad Money (% of GDP)	0.047 (0.006)***	0.008 (0.007)	0.015 (0.006)**	0.041 (0.007)***	0.001 (0.007)
Macroeconomic Indicators					
Real GDP		0.920 (0.187)***	1.040 (0.197)***		1.143 (0.225)***
Inflation Rate		-0.002 (0.005)	-0.001 (0.005)		-0.002 (0.005)
Domestic Credit to Private Sector		0.007 (0.006)	0.012 (0.006)*		0.020 (0.006)***
Govt. final consumption expenditure		0.001 (0.160)	0.069 (0.166)		-0.160 (0.174)
Natural Resource Rent (TNR)		0.008 (0.005)	0.007 (0.005)		0.018 (0.009)*
Secondary School Enrolment		0.025 (0.004)***	0.027 (0.004)***		0.028 (0.004)***
Institutional Variables					
Corruption			-0.003 (0.002)*		-0.005 (0.002)***
Cost to export			-0.004 (0.002)*		-0.002 (0.007)***
Cost of getting electricity			-0.002 (0.002)***		-0.002 (0.008)***
Cost to Import			0.001 (0.006)**		0.002 (0.006)***
Interactive Effects					
Real Interest Rate (with Real GDP)				-0.001 (0.001)	-0.001 (0.005)
Interest Rate Spread (with Real GDP)				0.001 (0.007)*	0.003 (0.007)***
Real Interest Rate (with Total Natural Resources)				-0.002 (0.005)	0.008 (0.004)
Interest Rate Spread (with Total Natural				-0.004 (0.006)	-0.001 (0.005)***

Resources)					
Broad Money (% of GDP) (with Total Natural Resources)				0.003 (0.002)*	0.002 (0.001)
Constant	6.069 (0.52)***	-15.279 (2.945)***	-19.655 (3.250)***	6.106 (0.531)***	-17.535 (3.851)***
R squared	0.198	0.494	0.509	0.216	0.546
Adjusted R squared	0.189	0.476	0.487	0.193	0.515
F-stat	23.213***	26.935***	23.590***	9.556***	17.852***
Durbin Watson	0.432	0.579	0.659	0.027	0.070
Hausman	1.265	9.501	7.461	5.475	8.151

*, **, *** indicates statistical significance at 10%, 5% and 1% levels. Standard errors in parenthesis

Source: Authors' Computation

Interacting metrics depicting outcome of financial sector liberalisation shows that, interest rate spread and real interest rate interaction with abundant natural resources endowment, confirms it destabilizing effect, although there are evidence suggesting that, natural resources do not directly undermine growth in entrepreneurship in SSA. Result indicates that natural resources in the presence of inefficient financial sector results in undesirable outcome, which is cause a decline in the registration of new firms. The interaction of real interest rate and real GDP has a distortional effect on business entry, though not significantly, but effect of output size amid wide interest rate gap has a positive and significant effect, cautiously alluding to presence and proliferation of economic inefficiencies in the African continent, and that, economies in the region strives to grow along side with observed dysfunctional economic arrangements in the continent. Moreover, nexus between ratio of broad money/GDP and total natural resources rent is positive and significant at the 10% level, suggesting the monetisation of natural resource proceeds with financial intermediation directly promote entrepreneurial development.

For robustness checks, this study conducted analysis using data on financial reform developed by Abiad, Detragiache, and Tressel, (2010) on fourteen (14) SSA countries listed in the IMF's index of financial sector reform. The countries include Burkina-Faso, Cameroon, Cote d'Ivoire, Ethiopia, Ghana, Kenya, Madagascar, Mozambique, Nigeria, Senegal, South Africa, Tanzania, Uganda and Zimbabwe. The index covers dimensions of financial liberalisation⁷, including ease of restriction in international capital flows and policies to deepen the security markets. We took a simple arithmetic mean of the index, excluding capital account liberalisation as the study focus on domestic financial reform. Results are fundamentally not different from findings when metrics suggesting outcome of financial liberalism were employed.

5.0 CONCLUSION AND POLICY IMPLICATIONS

This study empirically examined the theoretical link between financial liberalisation and entrepreneurial development, measured by the number of newly registered limited liability

⁷These include policies on credit controls/high reserve requirements; interest rate controls; entry barrier; state ownership in banking sector, prudential regulation/banking supervision; securities market; and lastly, external account openness.

companies using a sample of twenty-two (22) African countries, data spanning 2006 to 2016. The theoretical underpinning of this study was predicated on a modified Cobb-Douglass Production Function in a panel data methodology in which outcome of financial sector reform (Real Interest Rate, Interest Rate Spread and ratio of Broad Money to GDP) as input, links development of the financial sector with registration of new firms. The objective of the study was to examine whether policy of financial liberalisation has stimulated entrepreneurial development in the African continent.

Our empirical findings show that, real interest rate has a non-significant effect, with ratio of broad money to GDP having a positive and statistically significant impact on formal business entry in Africa. Interest rate gap, a measure of financial sector efficiency, was negative and statistically significant at the 1% level. Natural Resource Rent, used in the study to capture extent of resource dependence, was positive and statistically significant at the 10% level, suggesting that natural resources do not directly undermine growth in entrepreneurship in 22 SSA countries surveyed. Other results show that, real GDP and secondary school enrolment rate, a proxy to measure level of domestic risk management capabilities, have a significantly positive effect on entrepreneurial development, but the coefficient of government expenditure, a measure of government intervention, though positive, was not a significant determinant of new firm registration in the continent. Domestic Credit to Private Sector was positive and significant in some estimated models, alluding to the central role played by credit availability in firms' growth and establishment in the continent. Inflation, a measure of macroeconomic policy stability/environment, was negative and not statistically significant in all models. Results from institutional variables considered in this study show that, corruption like cost of getting electricity (% of income per capita) significantly undermine entrepreneurial development in SSA. Coefficient of cost of import is positive and highly statistically significant while high cost to export lead to a decline in setting up of new firms in SSA, alluding to the tendency for both domestic and external shocks to influence entrepreneurial development in the continent. Interaction of interest rate spread and real interest rate with natural resources, for example, confirms its destabilizing effect, although there was evidence suggesting that, natural resources do not directly undermine growth in entrepreneurship.

The study recommends that, monetary authorities in the region should re-examine interest rate policy to enhance the growth-inducing effects of formal financial institutions in the region by removing financial intermediation inefficiency. The study calls for the need to institutionalise the process of financial reforms across SSA countries so as to benefit from the growth-inducing effects of financial policy reforms on economic outcomes. From time series data of most SSA countries, the spread between the deposit and lending interest rates remains wide, thereby increasing cost of funds for prospective borrowers, which call for the need for policy makers to enhance competition in the domestic financial system. More so, SSA countries must make conscious effort to reduce or eliminate the effects of corruption and further integrate the harnessing of its natural resources for broader value chain effects on the domestic macro-economy.

There is also the urgent need to improve access to electricity and broaden the growth-inducing link of fiscal policy to encourage influx of newly registered firms in SSA through the implementation of sound pro-development strategies. To this end, policy makers in SSA should improve access to more diversified financial services, promote strong institutions and adopt prudent management of resource wealth that would support inclusive growth,

boost human development, and guarantee the attainment of inter-temporal, non-declining infusion of small and medium scale enterprises in the domestic economies of countries in the African continent.

References

- Abiad, A., Detragiache, E., and Tressel, T. (2010). A new database of financial reforms. *IMF Staff Papers*, 57(2), 281-302.
- Acemoglu, D. and T. Verdier. (1998). Property Rights, Corruption and the Allocation of Talent: A general equilibrium approach. *Economic Journal* 108(450): 1381-1403.
- Ahmed, A.D. and Islam, S.M.N., (2010). Financial liberalisation in developing countries: issues, time series analysis and policy implications, Springer-Verlag Berlin Heidelberg.
- Auty, R. (1994a). Industrial policy reform in six newly industrializing countries: the resource curse thesis, *World Development*, Vol 22, No 1.
- Aziakpono, M., and Babatope-Obasa, S. (2003). Financial liberalisation, currency substitution and savings in Nigeria: Evidence from cointegration and error correction modelling. Paper presented in 8th annual conference on econometric modelling for Africa of the African Econometric Society, July, 1-4.
- Bakwena, M., and Bodman, P. (2010). The role of financial development in natural resource abundant economies: Does the nature of the resource matter? *Botswana Journal of Economics*, 7(11), 16-31
- Beck, T., (2011). Finance and Oil: Is There a Curse in Financial Development? *European Banking Centre Discussion Paper*, No. 2011-004. Tilburg, Netherlands.
- Beck, T., Büyükkarabacak, B., Rioja, F.K., and Valev, N.T (2012). Who gets the credit? Household vs. firm lending across countries. *Centre for Economic Research Series Discussion Paper No 2009-41*. Tilburg University, Netherlands.
- Bencivenga, V.R., and Smith, B.D. (1991). Financial intermediation and endogenous growth. *Review of Economic Studies*, 58(2), 195-209.
- Cavoli, T., Rajan, R., and Siregar, R. (2003). A survey of financial integration in East Asia: Trends, issues and implications. Report prepared for the Asian Development Bank.
- Collier, P., and Hoeffler, A. (2005). Resource rents, governance, and conflict. *Journal of Conflict Resolution*, 49(4), 625-33.

- De Gregorio, J. and Guidotti, P.E. (1995). Financial development and economic growth. *World Development*, 23(3), 433–448
- De Melo, J. and Tybout, J. (1986). The effect of financial liberalization on savings and investment in Uruguay, *Economic Development and Cultural Change*, 34(3), 561-587.
- Demirgüç-Kunt, A., and Levine, R. (1996). Stock market development and financial intermediaries: Some stylized facts. *World Bank Economic Review*, 10, 291-322.
- Demirgüç-Kunt, A. and Maksimovic, V. (1998). Law, finance, and firm growth, *Journal of Finance*, 53, 2107–2137.
- Eichengreen, B. and D. Leblang, (2003). Capital account liberalization and growth: Was Mr. Matahthir Right. *International Journal Finance Econ.*, 8: 205-224.
- Fabayo, J.A., Posu, S.M.A., and Obisanya, A.A (2011). Corruption and the Investment Climate in Nigeria, *Journal of Economic and Sustainable Development* 2(4)
- Fry, M. J. (1997). In favour of financial liberalisation. *Economic Journal*, 107, 754– 770.
- Galindo, A., F. Schiantarelli and A. Weiss (2002). Does Financial Liberalization Improve the Allocation of Investment? Micro Evidence from Developing Countries. Inter-American Development Bank Working Paper 467.
- Gelb, A.H., and Associates. (1988). Oil windfalls: Blessing of curse? Oxford University Press, New York.
- Greenwood, J. and Jovanovic, B. (1990). Financial development, growth, and the distribution of income. *Journal of Political Economy*, 98, 1076-1107.
- Guiso, L., Sapienza P., and Zingales, L. (2006). The cost of banking regulation. *NBER Working Paper No. 12501*. National Bureau of Economic Research, Cambridge, MA
- Mwega F. M., N. Mwangi and S.M. Ngola. (1990). Real interest rates and the mobilization of private savings in Africa: A Case Study of Kenya. AERC Research Paper 2.
- Gulde, A, Catherine, P., and Christensen, J (2006), Sub-Saharan Africa: Financial sector challenges, International Monetary Fund, Washington, D.C.
- Gylfason, T (2004). Natural resources and economic growth: From dependence to diversification, *CEPR Discussion Papers* 4804.
- Gylfason, T., and Zoega, G. (2006). Natural resources and economic growth: The role of investment. *World Economy*, 29, 1091-1115.
- Hartwick, J. (1977). Intergenerational Equity and the Investing of Rents from Exhaustible Resources, *American Economic Review*, 67, 972-974.
- Iyoha, M.A., and Oriakhi, D.E. (2002). Explaining African economic performance: A case of Nigeria. Revised interim report on Nigerian case study prepared for AERC, May 2002.

King, R.G. and Levine, R. (1993). Finance, entrepreneurship, and growth: Theory and evidence, *Journal Monetary Economics*, 32(3), 513-42.

Koivu, T., (2002). Do efficient banking sectors accelerate economic growth in transition countries, *BOFIT Discussion Papers 14/2002*, Bank of Finland, Institute for Economies in Transition.

Kose, M.A., Prasad, E.S., and Terrones, M.E. (2003). Financial integration and macroeconomic volatility. *IMF Working Paper WP/03/50*. Washington, DC: International Monetary Fund.

Kose, M.A., Prasad, E.S., Rogoff, K., and Wei, S. (2006). Financial globalisation: A reappraisal. *IMF Working Paper WP/06/189*. Washington, DC: International Monetary Fund.

Kurronen, S. (2012). Financial Sector in resource-dependent economies, *BOFIT Discussion Papers 6.2012*. Bank of Finland, Institute for Economies in Transition.

Jaramillo, F. F. Schiantarelli, and A. Weiss (1994). Capital Market Imperfections Before and After Financial Liberalization: An Euler Equation Approach to Panel data for Ecuadorian Firms. *Journal of Development Economics* 51: 367 -386.

La Porta, R., Lopez-de-Silanes, F., Shleifer, A., and Vishny, R. (1997). Legal determinants of external finance, *Journal of Finance*, 52, 1131–1150.

La Porta, R., Lopez-de-Silanes, F. Shleifer, A. and Vishny, R. (1998). Law and finance, *Journal of Political Economy*, 106, 1113–155.

Leff, N.H. (1964). Economic development through bureaucratic corruption. *The American Behavior Scientist* 8(2): 8-14.

Levine, R (2005). Finance and growth: Theory and evidence in Aghion, P and S.N. Durlauf. (eds.), *Handbook of Economic Growth*, London: Elsevier 1A, 865-934.

Levine, R., Loayza, N. and Beck, T. (2000). Financial intermediation and growth: causality and causes. *Journal of Monetary Economics*, 46(1), 31–77.

Lin, J.Y., Sun, X., and Jiang, Y. (2009). Towards a theory of optimal financial structure. *World Bank Policy Research Working Paper* 5038.

Mathieson, D.J. (1980). Financial reform and stabilisation policy in a developing economy. *Journal of Development Economics*, 7(3), 359-395.

Mckinnon, R.I. (1973). Money and capital in economic development. The Brookings Institution, Washington, DC.

Mauro, P. (1995). Corruption and growth. *Quarterly Journal of Economics*, 110(3), 681-712.

Mauro, P. (1998). Corruption and the composition of government expenditure. *Journal of Public Economics*, 69(2), 263-279.

Méon P. and K. Sekkat. (2005). Does corruption grease or sand the wheels of growth? *Public Choice* 122(1/ 2): 69-97.

Mehrara, M. and A. Rezaza 2011. Oil revenues, economic growth and resource curse in Iran economy, *Journal of Social and Development Sciences*, 2(2), 73-80

Muhanna E. (2007). Conceptual Analysis of Determinants of Entrepreneurship: A South African Perspective, *Problems and Perspectives in Management*, 5(1), 95-102

Murphy, K.M., A. Shleifer and R.W. Vishny. 1993. Why is rent-seeking so costly to growth? *American Economic Review* (83)2: 409-414.

Ndulu, B.J., A. Stephen, O'Connell, R H. Bates, P. Collier, and C.C. Soludo (2000), *The political economy of economic growth in Africa, 1960–2000*, Cambridge University Press, Cambridge, UK.

Newlyn, W. T., and Avramides, U. (1977). *The financing of economic development*. Oxford: Clarendon Press.

Nissanke, M., and Aryeetey, E. (1998). *Financial integration and development in Sub-Saharan Africa*. London : Routledge.

Pagano, M. and Pica, G. (2012). Finance and Employment. *Economic Policy*, 27(69), 5-55.

Ploeg, F., and Poelhekke, S. (2009). Volatility and the natural resource curse, *Oxford Economic Papers*, 61(4), 727-760.

Prasad, E.S., Rogoff, K., Wei, S.J., and Kose, M.A. (2004). Financial globalisation, growth and volatility in developing countries. *NBER Working Paper No. W10942*. National Bureau of Economic Research, Cambridge, MA.

Rajan, R.G., and Zingales, L. (2003). The great reversals: The politics of financial development in the twentieth century, *Journal of Financial Economics*, 69, 5–50.

Ross, M.L (2004). Mineral wealth and equitable development. A background report for the world development report 2006.

Sala-i-Martin, X., and Subramanian, A. (2003). Addressing the natural resource curse: An illustration from Nigeria. *NBER Working Papers 9804*. National Bureau of Economic Research, Cambridge, MA.

Sachs, J.D. and Warner, A.M. (1995). Natural resource abundance and economic growth. *National Bureau of Economic Research Working Paper*, no. 5398, December.

Senbet, L.W. and Otchere I. (2005). Financial sector reforms in Africa: Perspectives on issues and policies. Paper prepared for the annual World Bank conference on development economics (AWBCDE), Dakar.

Shaw, E.S. (1973), *Financial Deepening in Economic Development*. New York: Oxford University Press.

Siregar, M. (1992). Financial Liberalization, Investment, and Debt Allocation. Manuscript, Boston University.

Soyibo, A. (1994). Financial liberalisation and bank restructuring in SSA: Some lessons for sequencing and policy design. Presented at the plenary session of the workshop of the AERC, Nairobi, December 4-9.

Schumpeter, J. (1911). The theory of economic development: An inquiry into profits, capital, credit, interest and the business cycle. Cambridge: Harvard University Press.

Schmidt-Hebbel, K and Servén, L, (2002). Financial Liberalization, Saving, and Growth: A presentation at the Banco de México Conference on "Macroeconomic Stability, Financial Markets, and Economic Development", Mexico, DF, Nov. 12-13, 2002.

Tanzi, V. and Davoodi, H.R. (1997) Corruption, Public Investment and Growth. Working Paper of the International Monetary Fund, Fiscal Affairs Department, WP/ 97/139.

Todaro, M.P. and Smith, S.C. (2011). Economic development 11th Edition. Pearson Education, New York.

Tressel, T. and Detragiache, E. (2008). Do financial sector reforms lead to financial development? Evidence from a new dataset, *IMF Working Paper WP/08/265*. Washington: International Monetary Fund.

Wei, S. J. (1997). Why is corruption so much more taxing than tax? Arbitrariness Kills. *NBER Working Paper No.6255*. National Bureau of Economic Res. Cambridge. MA.

World Bank, (1994). Adjustment in Africa: Reforms, results and the road ahead. Oxford: Oxford University Press.

World Bank, (2003). *Doing Business in 2004: Understanding Regulation*, Oxford University Press.

OECD (2014). All on board: Making inclusive growth happen. The OECD multidimensional initiative on inclusive growth Project with Ford Foundation, OECD Publishing, Paris.