check for updates

CAPITAL CONTROLS, ENTREPRENEURSHIP AND ECONOMIC GROWTH IN SELECTED DEVELOPING COUNTRIES

Check for updates

🔟 **Folorunsho M. Ajide**[1+]
🔟 **Rufus A. Ajisafe**[2]
🔟 **Olabode P. Olofin**[3]

[1,2,3]*Department of Economics Obafemi Awolowo University, Ile-Ife, Osun State, Nigeria*
[1]*Email:* ajide2010@gmail.com *Tel:* +234(0)8133260660
[2]*Email:* aoluwatoyin2011@yahoo.com *Tel:* +234(0)8037009809
[3]*Email:* opolofin@oauife.edu.ng *Tel:* +234(0)33809505

(+ Corresponding author)

ABSTRACT

This paper presents the role of capital controls in the relationship between entrepreneurship and economic growth in developing countries. Data of forty-four (44) developing countries for the period of 2005-2014 were sourced and analysed using panel generalized method of moments and two stage least square. The result revealed that entrepreneurship had a robust, positive and significant effect on economic growth. In addition, the study confirmed that the intensity of capital controls matter could further strengthen the relationship between entrepreneurship and economic growth in developing countries. These results were not only consistent with intuition and experience, but also with empirical findings of the previous studies. Theoretically, it confirmed the view of Keynesian economists that promote the use of capital controls in an economy.

Contribution/ Originality: This study is one of the few studies to provide a comparative analysis between African and other developing countries. It answers the following questions: What is the effect of entrepreneurship on economic growth in developing countries? Are there any dynamic effects of capital controls on economic growth in selected developing countries?

1. INTRODUCTION

Controversies abound in the new studies concerning the issue of capital control and economic growth through entrepreneurship (Alfaro and Charlton, 2008; Hartwell, 2014). Allowing capital to move freely across borders can have many benefits. A policy that favors free capital movement of capital into an economy can fund entrepreneurial activities, thereby raising per capita growth and sustainable development. The inflow of capital (for instance, foreign direct investment) often brings improvement in technological spillover into the domestic management technique and accessibility into the international networks which further raises entrepreneurial productivity in the economy. Capital inflows may encourage both individual and corporate entrepreneurs to earn more returns and diversify risk thereby reducing consumption and income volatility (Forbes, 2007). It may improve the discipline in the capital markets, thereby leading to a more efficient allocation of resources and higher per capita growth. Capital controls' implementation may diminish a country's ability to enjoy these benefits. In another sense, assessing the

191

impact of capital controls may be difficult because of a number of factors, including the various forms in which they can be organized. For instance, countries that rely on foreign financing may be more vulnerable to shock or constraints in the inflows of capital, which can cause financial crises and in some cases major currency depreciations. This may eventually lead to sudden shocks in the entrepreneurship settings and delays in the process of growth and development (Prasad *et al.*, 2003).

Meanwhile, the outcomes of entrepreneurship have been well documented in the literature. First, in the traditional economic theories of growth, an entrepreneur does not hold an explicit position in the models. This is because economists believe he or she undertakes an elusive character in economic theory which can be explained with an accurate description. Hence, not all economists grant entrepreneurs a central role to explain economic growth. For instance, the economic output of a country is seen as a function of capital and labor inputs, combined with technological change (Solow, 1956). This model does not elucidate any roles of an entrepreneur in economic growth theory. However, recent theoretical models have tried to connect purposive and profit-seeking investment into knowledge to the persons performing the role of entrepreneurial activities (Grossman and Helpman, 1994).

There are many empirical studies that examine the relationship between entrepreneurial activity and per capita growth. Studies (Stam, 2008; Thurik, 2009) on the role of entrepreneurship in economic growth processes show conflicting evidences. Some of the results of these studies suggest that entrepreneurship affects economic growth differently in low income countries compared to high income countries (Bunyasrie, 2010). Studies such as Hawkins (1973); Thomas and Mueller (2000); Acs and Storey (2004) revealed that there is positive effect of entrepreneurship on economic growth which is only true in developed economies; therefore, it has no significant effect in low income countries. This is because transition and high income countries have growth-oriented entrepreneurial activities which strongly contribute to their macroeconomic growth.

In addition, some studies such as Alfaro and Charlton (2008); Hartwell (2014) revealed that relaxed capital control policy can improve the level of entrepreneurship in a country, thereby enhancing economic growth and development. A reform pointing towards capital controls may dry up the risk premium of businesses which eventually increases cost of capital to deter firm entry. This action could endanger per capita growth of an economy (Yamawaki, 1990). Most developing countries still remain underdeveloped and intend to fetch foreign capital. Capital controls could constrain this flow into the economy. Furthermore, limiting fund accessibility could affect small firms disparately. Larger firms may find it easier to secure bank loan or use internal funds. However, researchers have found that countries with less capital controls tend to have more small firms than those that do not (Beck and Demirguc-Kunt, 2006). Given the potential harm that can come from capital controls in entrepreneurship, this study contributes to the literature in many ways. It is the first paper to provide a comparative analysis between African and other developing countries to answer the following questions: What is the effect of entrepreneurship on economic growth in developing countries? What is the dynamic interaction between capital control and economic growth in selected developing countries? It also examines the role of capital controls in the entrepreneurship-growth nexus.

Our motivations for this study stem from the fact that majority of countries in Africa are classified as low-income countries in addition to other developing nations in Latin America and Asian regions. Realizing the importance of entrepreneurship as an ingredient of economic growth and development, governments in African and other developing countries have enacted various policies to promote growth-oriented entrepreneurship, innovation and employment levels. These policies focus on microeconomic incentives such as favorable tax regimes, subsidies, growth and innovation funding, or simplified business regulations for small and medium-sized enterprises. In addition, another policy in this vein is capital controls. A sample of developing countries has adopted one or more capital control policies. For example, some Latin American countries from 1997-2010 continued introducing control. In Eastern Asian countries such as India, Malaysia, South Africa, and Nigeria International Monetary Fund (IMF) advised implementing such policies. In addition, the IMF's Annual Report on Exchange Arrangements and

Exchange Restrictions (International Monetary Fund, 2010;2011) shows that about 144 countries adopt capital controls on capital market securities, 124 on money market instruments, 94 on derivatives, 86 on commercial credits, and 120 on financial credits (IMF, 2010). This contrasts with 1995, where only 119 nations reported capital controls of any kind to the IMF (Helleiner, 1998). While studies have investigated the possible effect of capital controls on the economy with mixed results, however, the possible relationship among capital control, entrepreneurship and economic growth is largely absent in developing nations.

Therefore the main objective of the study is to examine the effect of capital controls and entrepreneurship on economic growth in developing countries. To do this, we first investigate economic growth in selected developing countries, examine the dynamic effect of capital controls on economic growth in developing countries, and finally determine the effect of capital controls and entrepreneurship. This is necessary because every government of a developing nation is anxious to promote the culture of entrepreneurship among its citizens and provide soft loans to entrepreneurs while various macroeconomic policies are enacted to safeguard the economy. Some of these policies normally have adverse effects. One of them is capital controls which are used for a variety of purposes. Capital controls can be used to correct balance of payment problems, prevent potential volatility of inflows or correcting real appreciation of the exchange rate. Restrictions placed on access to external finance may delay business operation in an economy that is experiencing scarcity of finance from microeconomic perspective. Furthermore, capital controls may have some hidden relationship with other factors affecting entrepreneurial activities such as rent-seeking and corruption (Dreher and Siemers, 2009). It may foster oligopolistic market structures which may deter new firm entry in the long run (Luiz, 2002). The question of capital controls and their effect on the microeconomics of entrepreneurship has been given added importance in recent years with the accelerating trend globally in favor of capital controls (or at least in the closing of formerly open capital accounts). In this case, this study examines the relationship that may emerge between capital control intensity, entrepreneurship trends and the consequences on economic growth in developing countries.

This paper is organized into 6 sections. Section 2 discusses literature review. Section 3 provides the link between the three variables. Section 4 provides the data and methodology of the study. Section 5 provides the results and discussion of the empirical results. In section 6, we provide conclusion of the study and suggest recommendations.

2. BRIEF REVIEW OF LITERATURE

From the review of the literature on the nexus between capital controls and other variants of macro/microeconomic variables, few studies have examined the relationship between capital controls as a determinant of other macroeconomic variables (Gallego and Hernández, 2003; Noy and Vu, 2007; Hartwell, 2014). However, Tables 1, 2 and 3 summarize the key empirical related studies. A country may design policy favoring capital restrictions through its central bank at national level. This may be necessary especially to reduce volatility of exchange rate and safeguard the domestic currency. Because of this, it might be an ideal policy but one that does not favor capital controls may increase efficient allocations of scarce capital within the economy. This means there is trade off on the part of policy makers. Every country's capital account policies need to consider potential costs and benefits. In April 2010, IMF suggested the use of capital account policies normally called capital controls. Capital controls relate to restrictions to movement of cash flows in and out of a country. Current trends show that countries with extensive capital controls have displayed a wide range of growth rates.

Table-1. Capital Controls and Entrepreneurship

Author(s)	Objectives	Scope/sample	Methodology	Conclusion
Gallego and Hernández (2003)	Impact of capital control on cost capital	Chile	Pooled OLS	Capital control increase cost of external finance
Alfaro and Charlton (2006)	Examine the relation between financial integration and entrepreneurial activity	100 countries (24 million firm) (1999 – 2004)	Pooled OLS and Tobit regression	Positive relationship
Noy and Vu (2007)	Impact of capital account policies on FDI	83 countries (1984-2000)	Pool OLS, FE/RE	Positive relationship
Alfaro and Charlton (2008)	Capital control as a determinants of entrepreneurship	98 countries	OLS	Negative effect
Hartwell (2014)	Capital account openness effects on the creation of firms	112 countries (2004-2011)	GMM and Bayesian model (Averaging (BMA)	Avoid capital controls
Alfro et al. (2016)	Effect of capital control, on firm's level stock and real investment	Brazil	Panel OLS	Capital control increase firms cost of capital

Table-2. Entrepreneurship and Economic Growth

Author(s)	Objectives	Scope/sample	Methodology	Conclusion
Acs and Storey (2004)	The relationship between entrepreneurship and growth	U.S practice sector	OLS	Positive relationship
Wong et al. (2005)	Effect of entrepreneurship on growth	37 countries (only years 2002)	OLS	Positive
Van Praag and Versloot (2007)	Effect of entrepreneurship on growth		OLS	Positive relation but not all entrepreneurship are innovation
Koster and Rai (2008)	Link between entrepreneurship and development	India	OLS	Positive
Matejovsky et al. (2014)	Effect of entrepreneurship on regional development	Canada 1987 – 2007	VEC	Positive effect
Adusei (2016)	Effect of entrepreneurship on growth	12 African countries	OLS	Positive

Table-3. Capital Controls and Economic Growth

Author(s)	Objectives	Scope/sample	Methodology	Conclusion
Hermes and Lensik (2005)	The relation between financial liberty and growth	25 developing countries (1973-1996)	OLS	Positive relationship
Satyanath and Berger (2007)	The role of political institution in the relationship capital controls and growth	Panel of countries	GMM	Negative relation between capital controls and growth idle institution is insignificant
Versteeg (2008)	Effect of capital controls on growth			Positive effect
Saidi and Aloui (2010)	Correlation between capital account liberally financial growth	60 countries (1984-2007)	Panel methodology	Positive negative
Alley (2017)	The linkage between private capital flow and growth	SSA	Panel method	Insignificant relationship

From the empirical review, it is evident that various studies have linked capital controls to many variants of economic development such as economic growth, poverty reduction, level price volatility (inflation), industrial growth among others (Satyanath and Berger, 2007; Alley, 2017). Some studies link capital controls to other macroeconomic variables such as exchange volatility while others take it as one of the determinants of microeconomic variables like entrepreneurship (Alfaro and Charlton, 2006; Hartwell, 2014). Entrepreneurship has been recognized as an engine of growth and as means of job creation in both developed and developing countries. However, our survey of literature shows that most studies in the developed and developing countries have focused on the relationship between entrepreneurship and economic development which yielded mixed results. Some authors sit on the fence as they confirmed a U-shaped relationship between the two variables (Wennekers et al., 2005; Acs, 2010; Naudé, 2010; Naudé et al., 2013).

In developing countries, there has been limited research. In particular, some researchers report positive relationships, while others confirm negative relationships. Meanwhile, a crucial look at African countries shows little research relating to entrepreneurship with economic growth (Adusei, 2016). In addition, we find it difficult to identify (in both developed and developing countries) any study that considers the issues of capital control in the entrepreneurship process which may affect economic growth. In this respect, this study fills this gap by investigating the effect of capital controls and entrepreneurship on growth using African and other developing countries as a case study.

3. CAPITAL CONTROL, ENTREPRENEURSHIP AND ECONOMIC GROWTH: THE LINK

The link is based on the framework given by Wennekers and Thurik (1999) as shown in Figure 1. Wennekers and Thurik (1999) explained that entrepreneurship has remained implicitly defined concept in economics. They provided few *intermediating variables* to explain how entrepreneurship affects growth in an economy, such as innovation, exist and entry of firms. They also provided *conditions* for entrepreneurial processes. Individual traits are the origin of entrepreneurial progresses. Furthermore, entrepreneurship and the intermediate links may depend on a country's ruling cultural conditions and institutional conditions.

Figure-1. Entrepreneurship and Economic Growth
Source: Wennekers and Thurik (1999)

With little modifications to accommodate the key variable (e.g. capital control) of the present study, an extension of the framework proposed by Wennekers and Thurik (1999) is provided in Figure 2. Capital controls are applied to moderate the adverse effects of macroeconomic variables including stabilizing the financial system. In doing so, individual firms are benefited negatively or positively (Hartwell, 2014). Capital control is any restriction imposed by the government to moderate the free flow of funds into an economy. It limits the availability of foreign funds to businesses in the nation and raises the borrowing costs. In another direction, it can increase foreign

currency debt carrying on the balance sheet of firms without foreign revenues, hindering the possibility of currency hedging exercise (Prati *et al.*, 2012). The opinion to place (or relax) controls can create revenue volatility to a firm, which is harmful for investment decisions. This can especially affect control of foreign investment approval which can be highly discretionary resulting in the political allocation of capital and thus fostering uncertainty among investors.

Many developing countries have under-developed capital markets (since many developing countries are facing the low pool of savings and financial intermediation for the private sector to draw upon). As a result, they look for other means such as sourcing for funding abroad. Capital controls can deter this flow of finance to developing countries. It could limit access to finances which could negatively impact a firm, especially small firms; larger firms find it easier to secure bank lending (or use internal funds). Researchers (e.g. Beck and Demirguc-Kunt (2006)) have discovered that countries with less capital account restrictions have more small firms than those that do not (Alfaro and Charlton, 2008; Hartwell, 2014). Therefore, a country with more relaxed capital controls or a higher volume of foreign capital is likely to experience greater entrepreneurship (Alfaro and Charlton, 2008) which will improve economic growth.

4. METHODOLOGY

Levine (2001) suggests that a relaxed capital control may strengthen an economy's financial system by giving room for more efficient allocation of finances to firms and/or entrepreneurs. A policy that ensures free flow of foreign capital provides financing for high-return investment, thereby raising growth rates. It does that in form of investment in real sector which brings improved technology, management techniques, and access to international networks, all of which further raise productivity through entrepreneurship, hence economic growth. In contrast, it may lead to financial instability in the country causing problems of monetary policy independence which may retard growth process.

The Solow growth model is relevant for the purpose of this study. It expresses that an economy has some amounts of capital accumulation, labor, and knowledge, which are combined to produce output. In particular, the quantity of output obtained from given quantities of capital and labor rises over time and also there is technological progress only if the amount of knowledge increases. Thus, in this study an entrepreneur is considered a special form of human capital in an economy that (through trait and special skill) discovers new business opportunities.
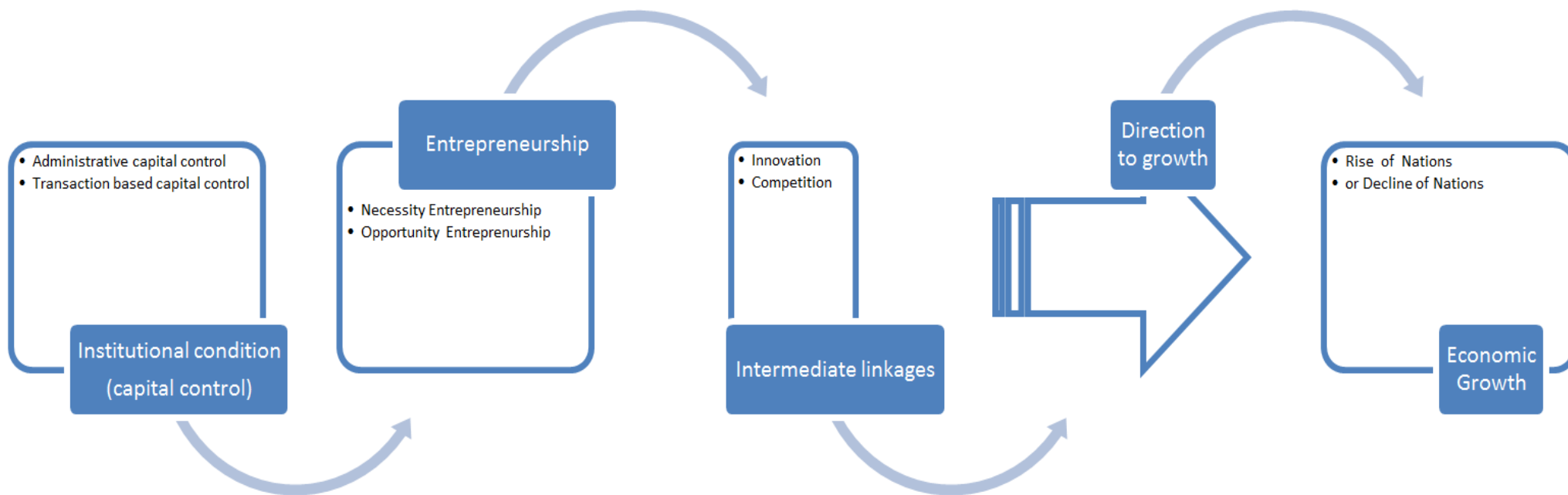
Figure-2. Linking Capital control, Entrepreneurship and Economic Growth

Source: Author's modification to Wennekers and Thurik (1999) framework

The Solow growth model is given below:

$$Y_t = A_t K_t^{\propto} L_t^{1-\propto}$$

$$(1)$$

Y_t=Output, A_t =Technology, K_t =Capital input, L_t=Labour, α =elasticity of Capital input, 1-α= elasticity of Labour. Assume that α=1, we will arrive at another variant of the growth model normally called *AK* model as specified thus;

$$Y_t = \quad AK$$

$$(2)$$

We have removed the subscript t for simplicity, where *K* is capital stock and *A* is the level of technology which is taken as given in an economy. If we assume that aggregate savings transform into capital stock, the capital stock can be generated from the banking sector's activities which are affected by capital control in the economy. The banking sector performs its financial intermediation functions. Equation (2) serves as the basis for our model.

4.1. Model Specification

Our main objective is to examine the effect of capital control and entrepreneurship on economic growth.. However, the estimating procedure for such a model is done in several steps. We first investigate the effect of entrepreneurship (firm creation) on economic growth and establish the effect of capital controls on economic growth. We then proceed to estimate the effect of capital controls and entrepreneurship on economic growth for the whole sample and two sub-samples, namely African and other developing countries by combining all the variables as expressed in the theoretical model, thus:

$$Y = F(EN, BC, CC, GC)$$

$$(3)$$

This systematic introduction of variables is interesting as it differentiates both direct and indirect effects of the key variables and their relationship with economic growth (Papyrakis and Gerlagh, 2004). In econometric forms, we have:

$$Y_{it} = \gamma_0 + \gamma_1 EN_{it} + \gamma_2 BC_{it} + \gamma_3 CC_{it} + \gamma_4 GC_{it} + \mu_{it}$$

$$(4)$$

Where economic growth (Y) is determined by entrepreneurship (EN) financial development (BC), Capital Control (CC) and Gross Capital Fixed Capital Formation (GC). Also, γ_0 = Intercept, γ_i $(i = 1, 2, ..., 4)$ = Coefficients.

A country-specific fixed effect is assumed for the error term, that is $u_{it} = \varepsilon_{it} + v_i$. Where u_{it} is the error term which contains v_i represents country-specific fixed effects that are time-invariant, whereas ε_{it} is assumed to be independent and identically distributed with mean 0 and variance σ_v^2 both over time and across countries.

4.2. Variables and Their Measurements

The following are the variables of the study with their measurements:

1. **Economic Growth (Y):** The primary position of economic growth stems from the fact that it generates the funds needed for development as a nation's incomes rise. In this connection, the study measured economic growth as increase in Gross National Income (GNI) per capita.

2. **Entrepreneurship (EN):** It can be noted that entrepreneurship means the manifestation, ability and willingness of an individual or group of individuals to enter an industry or market in pursuit of economic opportunities. The entrance is done in the form of a business with legal process of starting a business

(Wennekers and Thurik, 1999; Klapper and Love, 2011; Hartwell, 2014). Therefore, we empirically measured this arrangement as New Business Entry Density (NBD) as a proxy for entrepreneurship.

3. ***Capital controls (CC):*** The Chinn-into approach is a measure of capital control which includes a comprehensive approach that combines both administrative and transaction-based controls, with a heavy weight towards administrative controls but with the inclusion of a transaction-based control. We have used this variable to be more rigorous in measuring capital account openness restrictions as the index measured the intensity of capital controls (Hartwell, 2014). Chin-into index can also be called *KAOPEN* constructed by Chinn and Ito (2008).

4. ***Financial Development (BC):*** This is measured by the ratio of private credit by Deposit Money Banks to GDP. This measure isolates credit issued to the private sector as opposed to credit issued to governments and public enterprises.

5. ***Gross fixed capital formation (GC)-*** This is a proxy for investment activities. It is measured as gross fixed capital formation as a percentage of Gross Domestic Product (GDP).

4.3. Data Sources

This study makes use of secondary data covering 2005 to 2014. Data was sourced from the World Bank Data, International Monetary Fund (IMF) and other related bodies in each country. Chinn and Ito index is regularly updated and available online at (http://web.pdx.edu/_ ito/Chinn-Ito_website.htm). The period of the study covers the period when preference is given to the importance of entrepreneurship policy as a fast tracking policy of development and growth which seems to be very high in terms of implementation in most developing countries. Forty-four (44) developing countries have been considered which covers twenty-two (22) African countries and twenty-two (22) other selected developing countries. The list of countries can be found in the appendix.

4.4. Technique of Analysis

The study conducts panel unit root test, co-integration test and also adopts two stage-least-squares (2SLS) and the dynamic generalized method of moments (GMM) panel estimator. The estimation technique is suitable for handling the endogeneity problem and capable of providing consistent and unbiased estimates. This is because in an attempt to analyze the relationship between capital control, entrepreneurship and economic development, it is posited that entrepreneurship may be determined by the performance of the economy and performance of the economy might in turn be determined by entrepreneurship. Growing economies should see more firms entering to take advantage of greater opportunities (that is, entrepreneurship) while higher level of entrepreneurial activities can improve economic development. This situation might result in the potential endogeneity problem. Moreover, it is expected that this endogeneity would carry over to choice of capital account openness, as the decision to be open internationally may also be influenced by businesses within a country as well impacting the development of firm entry (Hartwell, 2014).

5. RESULTS AND DISCUSSIONS

5.1. Preliminary Analyses

The results of the panel unit root tests are presented in Table 4. In Table 4, all the variables are stationary at first except one variable (Y) that is stationary at level. Therefore, we conclude that all the series are non-stationary and integrated of order one except economic growth (Y). Hence, we proceed to test for the existence of long-run relationships among the variables.

Table-4. Panel Unit Root Test Results

	Y	Remarks	EN	Remarks	BC	Remarks	CC	Remarks	GC	Remarks
LCC Test	-5.14268*	I(0)	-17.8143*	I(1)	-15.0242*	I(1)	-17.4302*	I(1)	-12.9803*	I(1)
P-Value	(0.0000)		(0.0000)		(0.0000)		(0.0000)		(0.0000)	
ADF-Fisher Test	131.772*	I(0)	328.502*	I(1)	259.559*	I(1)	111.332*	I(1)	231.999*	I(1)
p-value	(0.0018)		(0.0000)		(0.0000)		(0.0000)		(0.0000)	
PP-Fisher Test	147.488*	I(0)	413.328*	I(1)	293.554*	I(1)	194.512*	I(1)	344.156*	I(1)
p-value	(0.0001)		(0.0000)		(0.0000)		(0.0000)		(0.0000)	

Source: Authors' Computation
NB: assumption is without trend and intercept
*1%; **5%; ***10%. This indicates rejection of null hypothesis of unit root.   EN stands for Entrepreneurship
Probabilities for Fisher tests are computed using an asymptotic Chi-square distribution   CC stands for Capital control
All other tests assume asymptotic normality. LLC—Levin, Lin and Chu,   BCstands for Financial development
ADF—Augmented Dickey Fuller, PP—Phillip Peron   Y stands for Economic growth
The probability values are shown in parenthesis.   GC stands for gross fixed capital formation

After the unit root test, panel co-integration test was performed to confirm the existence of long-run equilibrium among the variables of the study. This is necessary to determine whether the regression results are not spurious. Given the results of the panel unit root tests, it becomes appropriate to conduct panel co-integration test using pedroni-residual co-integration test as reported in Table 5. This test rejects null-hypothesis of no co-integration when they have large negative values. Therefore, Table 5 confirmed that co-integration of the multivariate models exists and is strongly supported.

Table-5. Pedroni Residual Cointegration Test

Series: Y EN BC GC	Trend assumption: No deterministic intercept or trend					
	Within-dimension				**Between-dimension**	
	Statistic	**Prob.**			**Statistic**	**Prob.**
Panel v-Statistic	0.936387	0.1745	Group rho-Statistic		3.347736	0.9996
Panel rho-Statistic	-0.046943	0.4813	Group PP-Statistic		-20.4129*	0.0000
Panel PP-Statistic	-10.3194*	0.0000	Group ADF-Statistic		-5.64721*	0.0000
Panel ADF-Statistic	-4.299737*	0.0000				
Series: Y BC CC GC						
Panel v-Statistic	-1.64056	0.9496	Group rho-Statistic		4.914814	1.0000
Panel rho-Statistic	2.298717	0.9892	Group PP-Statistic		-22.1280*	0.0000
Panel PP-Statistic	-12.9177*	0.0000	Group ADF-Statistic		-6.20295*	0.0000
Panel ADF-Statistic	-6.20252*	0.0000				
Series: Y EN BC CC GC						
Panel v-Statistic	0.274651	0.3918	Group rho-Statistic		5.274038	1.0000
Panel rho-Statistic	2.023493	0.9785	Group PP-Statistic		-20.7029*	0.0000
Panel PP-Statistic	-13.1938*	0.0000	Group ADF-Statistic		-3.80050*	0.0001
Panel ADF-Statistic	-4.11122*	0.0000				

NB: Null Hypothesis: No co-integration
* 1% significance level

Table 6 presents the descriptive statistics where we classified the sample countries into two: African countries and other developing countries. The table further gives the descriptive statistics of the whole sample countries. From Table 6, it can be observed that firm entry rate is on average of 1.45 per 1000 working population in Africa. The figure is below 2.15 per 1000 working population of other developing countries. This shows that over the period of 2005-2014, entrepreneurship in Africa is still below the rate at which entrepreneurship is growing in other developing regions. On average, the firm entry rate in the whole samples is 1.8 per 1000 working population. Also, the maximum firm entry density is 13.11 per 1000 working population with a minimum of 0.00 in Africa. Compared to other developing countries, the maximum is 21.49 with minimum of 0.03 per 1000 working population. The volatility of new business entry density is 2.57 while other region experienced 3.67 per working population which is higher than African region by 1.11 per working population. Capital controls intensity in Africa is on average -0.42,

while the maximum is 13.11 with minimum of -1.894. Compared to other developing countries, African countries impose more restrictions on the movement of inflow into countries. The average figure of other developing countries is 0.153; this means to some extent, other developing countries' degree of financial openness is high. Fewer restrictions on the movement of funds are imposed compared to Africa with -0.42.The maximum degree of capital control is 13.11 in Africa with a minimum of -1.894, the volatility is 2.506. By considering other developing regions, the maximum degree of control is 2.421 which are the same as what we have in African region, while the minimum is -1.894, but the volatility rate is 1.574. The volatility rate of capital control in African countries is high compared to other developing countries. The average growth rate in Africa is 5.49% which is more than other 4.707% of other developing counties with maximum of 21.02% (Africa is 20.71%) while minimum in African countries is -7.65% (other regions is -12.03%).

Table-6. Variables Descriptive Statistics

Variables	Mean	Median	Max	Min	SD	OBS
Africa						
EN	1.469361	0.560000	13.11000	0.000000	2.506730	219
CC	-0.420672	-1.17503	2.421764	-1.894798	1.417236	219
BC	29.55508	15.81700	160.1240	2.097239	33.39296	219
Y	5.498387	5.277100	20.71500	-7.65231	3.267782	219
GC	23.87113	23.51120	41.53801	5.458900	6.790204	219
Other developing countries						
EN	2.149406	0.880000	21.49000	0.030000	3.677845	219
CC	0.151319	-0.817302	2.421764	-1.894798	1.574598	219
BC	38.46918	35.88407	91.76887	1.556177	24.78672	219
Y	4.707543	4.742064	21.02064	-12.036	4.182823	219
GC	25.44826	23.80550	68.02270	6.756400	9.070007	219
Whole Samples						
EN	1.809384	0.685000	21.49000	0.000000	3.162014	438
CC	-0.134677	-1.17503	2.421764	-1.894798	1.523419	438
BC	34.01213	23.61239	160.1240	1.556177	29.70972	438
Y	5.102965	5.108000	21.02064	-12.036	3.769838	438
GC	24.65969	23.54735	68.02270	5.458900	8.041289	438

Source: Authors' Computation
EN standS for Entrepreneurship
CC stands for Capital control
BCstands for Financial development
Y stands fro Economic growth
GC stands for gross fixed capital formation

Table 7 shows the correlation between the variables. It can be observed that positive relationship exists between capital control and entrepreneurship while in developing countries a positive relationship was observed between growth and entrepreneurship. Meanwhile, positive relationship exists between capital control and growth in Africa.

However, in all cases, we do not find evidence of multicollinearity among the variables. The highest relationship coefficient is 50% which is still permissive for our analysis. Hence, we proceed to estimate our model for proper possible relations between capital control, entrepreneurship and economic growth.

5.2. Empirical Results

Table 8 presents the estimated results for the effect of entrepreneurship on economic growth in developing countries. Generalized Method of Moments (GMM) technique was used to control potential endogeneity issues from measurement error and omitted variable bias, as well as reverse causality. Another instrumental variable estimator called two stage least square estimates (2SLS) was also used to further confirm the results of GMM estimator.

Table-7. Correlation Matrix

Africa	EN	CC	BC	Y	GC
EN	1.000000	0.508526	0.355827	–0.16616	0.182402
CC		1.000000	0.026849	0.068639	0.102107
BC			1.000000	–0.254956	–0.034963
Y				1.000000	0.058782
GC					1.000000
Other developing countries					
	EN	CC	BC	Y	GC
EN	1.000000	0.395173	0.554463	0.060513	0.037175
CC		1.000000	0.341914	–0.179613	–0.054525
BC			1.000000	–0.128493	0.165341
Y				1.000000	0.159842
GC					1.000000
Whole samples					
	EN	CC	BC	Y	GC
EN	1.000000	0.444322	0.442745	–0.029308	0.095811
CC		1.000000	0.189316	–0.094881	0.026755
BC			1.000000	–0.199024	0.075809
Y				1.000000	0.110946
GC					1.000000

Source: Authors' Computation
EN standS for Entrepreneurship
CC stands for Capital control
BCstands for Financial development
Y stands for Economic growth
GC stands for gross fixed capital formation

Table-8. Effect of Entrepreneurship on Economic growth in Developing Countries

Dependent Variable: Y		
Method	**2SLS**	**GMM**
Variable	**Coefficient**	**Coefficient**
Constant	9.801501*	-
	[5.539962]	-
Y(-1)	-	-0.426357*
	-	[-5.439216]
EN	0.980435*	5.278212*
	[3.663695]	[4.037622]
BC	-0.246267*	-0.627986*
	[-4.226046]	[-4.55975]
GC	0.077364	-0.323601
	[1.570682]	[-1.698157]
F-statistic	22.74825*	-
Prob(F-statistic)	[0.000000]	-
J-statistic	-	37.2818
Prob(J-statistic)	0.774699	0.112775
No. of Countries	44	44

Source: Authors' computation
NB: EN standS for Entrepreneurship
Fig. in [ ] t-Statistic   BC stands for Financial development
* , ** indicate significant at 5% and 10% respectively
 GC stands for gross fixed capital formation
 Y stands for growth

The results of both estimation techniques showed that entrepreneurship has significant positive effect on economic growth in developing countries. The sign of the coefficient estimated supports previous literature (Adusei, 2016). For instance Baumol (1990) concisely projects entrepreneurship as an alternative means of stimulating economic growth that may hold greater appeal for today's policy makers. This is because new businesses creation leads to job creation. By creating jobs for citizens, entrepreneurial activities enhance economic welfare, efficiency and productivity (Baumol, 1990). Jobs also promote innovation, accomplishing business ideas, and transforming

economic structures (Fritsch, 2008). Our results are not consistent with the submission of Van Stel *et al.* (2005) who report that entrepreneurial activity has a negative relationship with per capita GDP growth in developing (poor) nations. Similar results have also been reported by Reynolds *et al.* (1999). Based on our results, we affirm that entrepreneurship contributes to economic performance in developing countries.

In addition, the results of the estimations indicate that the correlation between financial development and economic growth is negative and statistically significant. This is in line with the previous empirical evidence for developing countries (Adusei, 2016). Studies show that the financial sector of the developing countries is fast growing, but a fast-growing financial sector is detrimental to aggregate productivity growth (Cecchetti and Kharroubi, 2012). Two important conclusions can be drawn from the estimated results which show negative relationship between financial development and growth. First, the growth of countries' financial sector hinders productivity growth. That is, higher level of growth in the financial sector reduces real sector growth. Financial booms are not growth-enhancing in general because the financial sector competes with the rest of the economy for resources. Second, according to another study by Cecchetti and Kharroubi (2015) they used sectoral data to examine the distributional nature of this effect and find that credit booms harm what we normally think of as the engines for growth. With this evidence, in addition to the recent experience during the financial crisis, it is imperative to re-examine the relationship of finance and real growth in modern economic systems. Recent findings provide further evidence that the finance-growth nexus is sensitive to the proxies used to measure financial development (Ehigiamusoe *et al.*, 2017). The lagged value of the dependent variable (economic growth) is negative and statistically significant at 1%. This further proves that appropriate techniques have been employed for the study. Also, to show the validity of the instruments used in the GMM technique, we report J-statistic results with a value of 37.2818(P-Value of 0.112775). The J-statistic tests normally reveal whether model built for the study is well specified and ensure validity of the instruments. The result shows that the J-statistic test of over-identifying restrictions does accept the null hypothesis at any level of significance. This implies that the model has valid instrumentation.

Our review of the literature clarifies that the question of whether entrepreneurship stimulates economic growth seems to have been largely answered in developed economies but few studies have tried to answer this question in developing economies.

Table-9. Effect of Entrepreneurship on Economic growth in Africa and Other Developing Countries

Dependent Variable: Y		
Method: Panel Generalized Method of Moments		
	Africa	**Others**
Variable	Coefficient	Coefficient
Y(-1)	-0.521093**	-0.380705**
	[-5.111523]	[-5.179699]
EN	1.994601**	2.382105**
	[3.112926]	[2.022672]
BC	-0.673674**	-0.346416**
	[-5.564794]	[-2.907778]
GC	0.16157	-0.13045
	[1.492502]	[-0.825278]
J-statistic	44.91493	31.18665
Prob(J-statistic)	0.146448	0.70607
No. of Countries	22	22

Source: Authors' computation
NB: EN stands for Entrepreneurship
Fig. in [ ] t-Statistic   BC stands for Financial development
Y stands for Economic growth
GC stands for gross fixed capital formation
* , ** indicate significant at 5% and 10% respectively

The general point is that in most developing countries replicative entrepreneurs abound. Therefore, entrepreneurs are immaterial for economic growth (Naudé, 2010). However, this assertion has been watered down by Adusei (2016) who prove that entrepreneurship promotes growth in African countries. This empirical evidence seems to be very weak. Apart from the methodological issue, the submission of Adusei (2016) may not be generalized because the study only focuses on twelve African countries. To avoid the notion of weak evidences and to test for the stability of the dynamic model across developing countries, we further provide a comparative analysis between Africa and other developing countries in the world. We divide our sample into two: African countries and other developing countries making twenty (22) in each case and regress using GMM (see Table 9). Contrary to the position of Naudé (2010) we provide evidence that entrepreneurship has a strong positive effect on economic growth in developing countries. This positive impact of entrepreneurship on economic growth strikes a chord with evidence from other parts of the developed and developing world (Mueller, 2006).

Furthermore, continual injection of capital inflows into the economy can cause a real appreciation of a domestic currency. In turn, this movement of inflows could destabilize competitiveness of a country and slowdown growth. Based on this, monetary policy could become ineffective as unexpected movement of in inflows could impose either higher inflation, or an excessive nominal appreciation. Government intervention is now necessary either to limit inflows, or to cope with exchange rate appreciation pressures arising from large capital inflows. These government interventions can come in many forms, but the generic name given to these interventions is known as Capital controls; which a selective policies to cushion the inflows of fund in and out of a country; such as taxes, licensing, sterilization and so on (Liard-Muriente, 2007).

In this case, we expand the existing literature by examining the effect of these capital controls on economic growth in developing countries. The findings on this relationship vary and are contradictory. While some researchers (Forbes, 2007) believe that capital control can hurt growth others document its positive effect on growth.

Table-10. Effect of Capital Control on Economic growth in Developing Countries

Dependent Variable: Y		
Method	**2SLS**	**GMM**
Variable	**Coefficient**	**Coefficient**
Constant	10.90386*	–
	[4.946961]	–
Y(-1)	–	–0.446078*
	–	[-4.334129]
CC	0.669091**	19.75019*
	[1.897822]	[2.334747]
BC	-0.248805*	-0.185136
	[-3.768206]	[-0.716981]
GC	0.112054*	-1.315272*
	[1.972692]	[-3.003812]
F-statistic	23.20456	–
Prob(F-statistic)	0.000000	–
J-statistic	–	16.24003
Prob(J-statistic)	0.727605	0.366281
No. of Countries	44	44

Source: Author's computation
NB: CC standS for Capital Control
Fig. in [ ] t-Statistic BC stands for Financial development
(*) (**) Sign at 5%,10% Y stands for Economic growth
GC stands for gross fixed capital formation

Therefore, we present Table 10 showing the estimated results concerning the effect of capital controls on economic growth in developing countries. We use two-stage-least square to further confirm our results after reporting GMM results on this issue. Our results show that capital controls have positive and significant effect on

economic growth in developing countries. This result supports the submission of Quinn (1997) and Edwards (2001) who have reported positive relationship. In addition, financial development has negative and significant effect on economic growth. We are not surprised with this result because various studies have reported similar results (see Adusei (2012)). They provide evidence that banking development has an unfavorable effect on growth. The table also shows that our instruments are valid and the model is significance in explaining effect of capital controls on growth.

To further confirm the consistence of the results across regions, we classify our data into two: African countries and other developing countries. We then estimate for each region based on the regional data collected. Table 11 shows that our results are not different from the earlier results reported in Table 10.

Table-11. Effect of Capital Control on Economic growth in Africa and Other Developing Countries

Dependent Variable: Y		
Method: Panel Generalized Method of Moments		
	Africa	**Others**
Variable	Coefficient	Coefficient
Y(-1)	−0.424081*	−0.347302*
	[−5.179699]	[−3.361254]
CC	5.582124*	21.62511*
	[2.508738]	[2.425313]
BC	−0.215904**	−0.309424*
	[−1.720791]	[−2.110851]
GC	0.026833	0.48635
	[0.25351]	[1.299223]
J-statistic	28.79586	19.85773
Prob(J-statistic)	0.422936	0.098815
No. of Countries	22	22

Source: Authors' computation
NB: CC stands for Capital Control
Fig. in [ ] t-Statistic BC stands for Financial development
(**) Sign at 5%, 10% Y stands for Economic growth
 GC stands for gross fixed capital formation

Based on our results, we confirm that capital controls are beneficial by improving the level of growth of the economy. This happens especially when they facilitate governments in confronting the interest rates and nominal exchange rate trade off. That is, central banks cannot set nominal exchange rates and domestic interest rates independently if controls are not implemented. However, it is important to note that an area of concern is the effect of controls over macroeconomic policy. For instance, Liard-Muriente (2007) state that if a set of controls does not hurt foreign direct investment (FDI) and other long-term finance, they should be adopted for proper management of the economy. Also, our results favor controls as a protective tool from the unstable international economy and protection against possible capital flight, which may lead to a decrease in potential growth, erosion in the tax base, and redistribution from poorer to richer groups. In general, capital controls in form of taxes on international flows will raise revenue, reduce the exchange rate volatility, and enhance the independence of policymakers and defend the exchange rate system.

Finally, the channels by which capital controls influence the relationship between entrepreneurship and economic growth may be well developed, but the empirical evidence is largely absent in developing countries. Part of the reason for this state of affairs is that examining the effects of capital controls on entrepreneurship is a difficult task on one hand and examining the effect of capital control and entrepreneurship on growth may also prove difficult, as it is often hard to disentangle the effects of the controls themselves from other macroeconomic variables and policies. This is because countries that tend to institute controls have other distortions that can also exert an influence on entrepreneurship. This issue can be complicated by the fact that, capital controls are generally instituted to influence macroeconomic variables (Hartwell, 2014). In this case, we examine the effect of capital

controls and entrepreneurship on economic growth in developing countries. Table 12 reports our estimated model on this relationship.

.

Table-12. Effect of Entrepreneurship and Capital Control on Economic growth in Developing Countries

Dependent Variable: Y		
Method	**2SLS**	**GMM**
Variable	**Coefficient**	**Coefficient**
Constant	9.484035*	-
	[5.545656]	-
Y(-1)	-	–0.46515*
	-	[–7.337157]
EN	1.017691*	2.419647**
	[3.823011]	[1.816236]
CC	-0.321165	–0.143511
	[-1.270716]	[-0.030603]
BC	-0.238116*	–0.280451*
	[-4.246417]	[-2.090497]
GC	0.074297	0.012317
	[1.550409]	[0.053668]
F-statistic	17.42477	-
Prob(F-statistic)	0.000000	-
J-statistic	-	24.81935
Prob(J-statistic)	0.760457	0.129974
No. of Countries	44	44

Source: Authors' computation
NB: CC stands for Capital Control
Fig. in [ ] t-Statistic BC stands for Financial development
(*) (**)Significant at 5%, 10%
GC stands for gross fixed capital formation
EN stands for Entrepreneurship
 Y stands for Economic growth

After using a dynamic panel estimator that allows us to exploit the time-varying characteristics of the data and to control for omitted variable biases and endogeneity issues in the data and after controlling for financial development and gross capital fixed formation, it is well cleared from Table 12 that entrepreneurship influences economic growth significantly and remain positive as reported earlier while the effect of capital controls on economic growth is insignificantly. There are many factors that could be responsible of for the results, these factors could include but not limited to: differences in macroeconomic policies, human capital policies, physical capital accumulation, stock market size, financial sector development, institutional factors and minimal political risks among others. Most of these factors are situated within the context of socioeconomic, cultural, and political dimensions. For instance, the tax system varies from countries to countries and regions to regions. Alfaro and Charlton (2008) show that the benefits of capital controls tend to be preconditioned on the existence of sufficient levels of institutional quality, including better bureaucracy, higher levels of law and order, and lower levels of corruption. Perhaps not surprisingly, these same institutional attributes are varied across regions. Therefore, taking capital controls to be uniformed across regions many not have meaningful effect and not instrumental in the relationship between entrepreneurship and economic growth. Meanwhile, developing countries is an interesting place to test the effect of capital controls and entrepreneurship on economic growth for several reasons. First during the 2000s increasing inflows of both, direct and foreign investment arrived to the region. Also the region underwent substantial liberalization throughout the nineties, however after a period of relative openness governments started to follow different strategies towards inward investment. By 2010, different measures of capital controls show that on average liberalization processes stopped and in some cases even reversed. The political trends within countries are different and the ways flows are channeled are as well different.

Capital controls' policies in states are partly influenced by the behavior of other states in the international system, particularly neighbors or regions. As diffusion of studies have shown (Simmons and Elkins, 2004) financial

liberalization is more likely when other similar countries are also liberalizing. The same applies to capital controls in similar regions and countries. Degree of capital controls is among the institutional tools used by various governments to control the inflows in and out a country. Since, developing countries are, however, known to be plagued with poor track record with respect to institutional frameworks. Thus, undertaking any insight into the developing countries' level of entrepreneurship and its effect on economic growth without information on the institutional environment within which other socio-economic and political dimensions operate could impinge on the usefulness of such analysis.

Following our discussion, we further divide our samples into two: African region and other developing countries. This is necessary to provide an insight into how the capital controls and entrepreneurship affect economic growth in different regions of the developing countries.

Table-13. Effect ofEntrepreneurship and Capital Control on Economic growth in Africa and Other Developing Countries

Dependent Variable: Y		
Method: Panel Generalized Method of Moments		
	Africa	**Others**
Variable	Coefficient	Coefficient
Y(-1)	–0.534596*	–0.403623*
	[–5.198589]	[–3.953525]
EN	1.650181*	2.784171**
	[2.515375]	[1.802323]
CC	6.095739*	18.9519*
	[2.868033]	[2.262407]
BC	–0.60631*	–0.303175*
	[–4.909789]	[–2.199626]
GC	0.147596	0.326621
	[1.386291]	[0.903694]
J-statistic	36.02181	19.54277
Prob(J-statistic)	0.467627	0.107212
No. of Countries	22	22

Source: Authors' computation
NB: CC stands for Capital Control
Fig. in [ ] t-Statistic BC stands for Financial development
(*)(**) Significant at 5%, 10%
GC stands for gross fixed capital formation
EN stands for Entrepreneurship
Y stands for Economic growth

Table 13 shows that in African countries and other developing countries; entrepreneurship and capital controls significantly affect economic growth. By implication, taking capital controls to be uniformed among all developing countries may not work in a meaningful analysis. The distribution is not equitable among the countries. Therefore, selective capital controls are used by countries and implementation varies across regions. The pertinent issue at this point is to query the likely factors that might have been responsible. Of the factors, we can say that differences in governance settings, political and differences in fiscal and monetary policies probably affected the results. Our results show that capital controls and entrepreneurship have significant effect on economic growth in developing countries. Therefore, we conclude that effective capital controls that would encourage entrepreneurial development will promote economic growth significantly.

5.3. Discussion of Results

We noted along with many authors that the dearth of analytical models of studying the roles of entrepreneurship in economic progress can be attributed to the neglect of this phenomenon in the neoclassical growth model. This neglect is based on the focus of the neoclassical tradition on static equilibrium and its joint assumptions of prefect competition. This phenomenon leaves little to no room for the role of entrepreneur as an economic agent in the process of growth. In a more specific, equilibrium is a situation in which agents have no

incentive to change their behavior or in which they have exploited all opportunities known to them. But entrepreneurship is concerned with dynamic and change or discovery of opportunities, exploitation of such opportunities by venture into firm creation to make profit. Therefore entrepreneurship is a discovery agent as described by Neo-Austrian and agent of creative disruption in the process of economic equilibrium as described by Schumpeterian (Keyhani *et al.*, 2015). The assertion of Schumpeterian school has made various authors to investigate how the phenomenon called entrepreneurship affect economic growth in which their results have become debatable.

Coming down to developing country's studies, the much debates here is that entrepreneurship practices in the developing regions are repetitive and replicative by nature; hence, are not growth oriented. Another set of studies document that entrepreneurship practices in developing countries are necessity entrepreneurship therefore does not promote economic growth and development.

However, the current trends of studies have watered down this orientation about developing countries as documented by Adusei (2016) who shows that entrepreneurship promotes economic growth in Africa. To further confirm this submission, we expand the scope of the study and incorporate other developing countries which consist of twenty-two African countries and twenty-two other developing countries, our results is consistent with this submission when pooling the forty-four countries and also making comparative analysis between the group of developing countries in a dynamic panel framework. Hence, we further correct and emphatically state that entrepreneurship in developing countries improves growth. This observation does not support (Acs, 2006) who argues that need-based entrepreneurship has no effect on economic development.

Furthermore, one of the objectives of our study is concerned with the effect of capital control on economic growth. Capital control intensity is the policy to control or place restrictions on capital inflow or outflow of a nation. This is necessary because of the adverse effects of higher degree of financial integrations or openness experienced by developing countries during recent financial crises. Most of developing countries are financial dependent on developed countries. A stop to financial flows to developing countries may slow down the economic growth in these countries especially where the financial system is underdeveloped. Also, in the presence of high international financial integrations, Central Bank of developing countries may not have independent controls over its monetary policies. This gives reason for introducing capital controls by many developing countries: a policy promotes by IMF.

As a result, we investigate the effect of capital controls on economic growth of developing countries using dynamic panel data techniques. We show that placing restrictions and adequate monitoring the movement of the international capitals in an economy improves the level of productivity of the economy. This results support the rethink of capital controls as prescribed by the IMF which has now formally suggested that there may be situations when developing countries can gain from placing regulations on the inward flow of foreign capital. Our results do not support the submission of Kraay (1998) and Fratzscher and Bussiere (2004) in contrast, our submission support the study of Alley (2017) who examine the roles of capital controls in the capital flows' surges – growth nexus. Our results do not support the position of Satyanath and Berger (2007) who authoritarian countries, while growth in democratic countries is insignificantly. Unlike previous studies, with this new study, we are able to clarify the position of developing countries in this relationship. Therefore, capital controls being limits on the level or composition of foreign private capital that can enter or leave a nation which are often deployed to manage exchange rate volatility, avoid maturity mismatches, limit speculative activity in an economy, and provide the policy-space for independent monetary policy. We encourage such policies for all developing countries to put the economy in the right directions in order to avoid over dependence of the domestic financial system on international environments.

Finally, we further investigate the roles of capital controls on the relation between entrepreneurship and economic growth. Having realized the type of capital controls adopted may vary from one region to another, we

separate our sample into two: African and other developing regions in our estimation. Our results further confirm that capital controls play a positive and significant role in the relationship. Furthermore, the results suggest that in a developing economy, there should be more government involvement in supporting businesses and targeting certain movement of foreign capital to selected industries. This is because in the movement of international flows, market imperfections are common and entrepreneurial arbitrage activities may not necessarily lead to a perfect competitive market.

6. CONCLUSION AND POLICY IMPLICATIONS

The extent to which the potential growth affects entrepreneurship has been linked to the intensity of capital controls especially in developing countries. To empirically pursue this line of reasoning, this study examined the influence of capital controls on entrepreneurship and economic growth in a sample of forty-four (44) developing countries over the period of 2005-2014.Panel data estimation techniques-GMM and 2SLS-were employed to address the key questions. The following conclusions were drawn. First, our estimated results show that there are positive and significant effects of entrepreneurship on economic growth in developing countries. Capital control intensity varies across regions and, it has positive and significant effects on economic growth in developing countries. More specifically, capital controls further strengthen and promote entrepreneurship on economic growth. In this regard, both capital control intensity and entrepreneurship should be included in the production function of the economic growth model as important variables. Overall, these conclusions are not only consistent with intuition and experience, but also in accordance with empirical findings of the previous studies. They also align with Keynesian economists who promote capital controls as a protective tool from the unstable international economy and the possibility of capital flight, which, among other things, causes a decrease in potential growth, erosion in the tax base, and redistribution of economic wealth from poorer to richer groups.

There are a number of policy implications. It can be noted that capital control intensity plays a vital role in improving and strengthening the positive relationship between entrepreneurship and economic growth. Therefore, decision makers need to ensure that appropriate or selective (not necessarily full) capital controls are put in place. The empirical evidence shows that an entrepreneurial environment policy needs to be created and formulated to encourage entrepreneurial activities as a strategy to battle unemployment. The greatest gains in entrepreneurship would be realized by reducing government-imposed burdens on entrepreneurs and through programs encouraging entrepreneurial activities i.e., subsidies and tax breaks.

REFERENCES

Acs, Z., 2006. How is entrepreneurship good for economic growth? Innovations: Technology, Governance, Globalization, 1(1): 97-107. Available at: https://doi.org/10.1162/itgg.2006.1.1.97.

Acs, Z. and D. Storey, 2004. Introduction: Entrepreneurship and economic development. Regional Studies, 38(8): 871-877.

Acs, Z.J., 2010. Entrepreneurship and economic development: The valley of backwardness. Annals of Innovation & Entrepreneurship, 1(1): 5641. Available at: https://doi.org/10.3402/aie.v1i1.5602.

Adusei, M., 2012. Financial development and economic growth: Is schumpeter right. British Journal of Economics, Management & Trade, 2(3): 265-278. Available at: https://doi.org/10.9734/bjemt/2012/1865.

Adusei, M., 2016. Does entrepreneurship promote economic growth in Africa? African Development Review, 28(2): 201-214. Available at: https://doi.org/10.1111/1467-8268.12190.

Alfaro, L. and A. Charlton, 2006. International financial integration and entrepreneurship. 7th Jacques Polak Annual Research Conference, Washington DC: IMF Publication.

Alfaro, L. and A. Charlton, 2008. International financial integration and entrepreneurial firm activity. Harvard Business School Working Paper, No. 07-012.

Alfro, L., A. Chari and F. Kanczuk, 2016. The real effects of capital control taxes: Firm-level evidence from a policy experiment. Working Paper No. 15-016, Harvard Business School.

Alley, I., 2017. Capital flow surges and economic growth in sub-Saharan Africa: Any role for capital controls? Abidjan: African Development Bank Publications, Working Papers 252. Available from http:/www.afdb.org/.

Baumol, W.J., 1990. Entrepreneurship: Productive, unproductive, and destructive. Journal of Political Economy, 98(5 Part 1): 893-921.

Beck, T. and A. Demirguc-Kunt, 2006. Small and medium-size enterprises: Access to finance as a growth constraint. Journal of Banking & Finance, 30(11): 2931-2943. Available at: https://doi.org/10.1016/j.jbankfin.2006.05.009.

Bunyasrie, V., 2010. The role of entrepreneurship on economic growth. Executive Journal, 14(01): 149-156.

Cecchetti, S. and E. Kharroubi, 2012. Reassessing the impact of finance on growth. BISWorking Papers, No 381.

Cecchetti, S.G. and E. Kharroubi, 2015. Why does financial sector growth crowd out real economic growth? BIS Working Papers No. 490.

Chinn, M.D. and H. Ito, 2008. A new measure of financial openness. Journal of Comparative Policy Analysis, 10(3): 309-322. Available at: https://doi.org/10.1080/13876980802231123.

Dreher, A. and L.-H. Siemers, 2009. The nexus between corruption and capital account restrictions. Public Choice, 140(1-2): 245-265. Available at: https://doi.org/10.1007/s11127-009-9423-1.

Edwards, S., 2001. Capital mobility and economic performance: Are emerging economies different? Technical report, NBER Working Paper No. 8076.

Ehigiamusoe, K.U., H.H. Lean and R.A. Badeeb, 2017. Finance-growth nexus in Cote D'Ivoire and Nigeria: Does the proxy of financial development matter? Pertanika Journal of Social Science and Humanities, 25(1): 401 − 416.

Forbes, K.J., 2007. One cost of the Chilean capital controls: Increased financial constraints for smaller traded firms. Journal of International Economics, 71(2): 294–323. Available at: https://doi.org/10.1016/j.jinteco.2006.03.005.

Fratzscher, M. and M. Bussiere, 2004. Financial openness and growth: Short-run gain, long-run pain. ECB Working Paper, No.348.

Fritsch, M., 2008. How does new business formation affect regional development? Introduction to the special issue. Small Business Economics, 30(1): 1-14. Available at: https://doi.org/10.1007/s11187-007-9057-y.

Gallego, F.A. and F.L. Hernández, 2003. Microeconomic effects of capital controls: The Chilean experience during the 1990s. International Journal of Finance & Economics, 8(3): 225-253. Available at: https://doi.org/10.1002/ijfe.207.

Grossman, G.M. and E. Helpman, 1994. Endogenous innovation in the theory of growth. Journal of Economic Perspectives, 8(1): 23-44.

Hartwell, C., 2014. Capital controls and the determinants of entrepreneurship. Czech Journal of Economics and Finance, 64(6): 434-457.

Hawkins, S.J., 1973. Theory of the firm. London: Macmillan Press Ltd. pp: 17-56.

Helleiner, G.K., 1998. Capital account regimes and the developing countries. London: Macmillan.

Hermes, N. and R. Lensik, 2005. Does financial liberalization influences saving, investment and economic growth?. Research Paper No. 2005/69. Helsinki: World Institute for DevelopmentEconomics Research.

IMF, 2010. World economic outlook -recovery, risk and rebalancing. Washington D.C: IMF.

International Monetary Fund, 2010;2011. World economic outlook. Washington D.C: IMF.

Keyhani, M., M. Lévesque and A. Madhok, 2015. Toward a theory of entrepreneurial rents: A simulation of the market process. Strategic Management Journal, 36(1): 76-96. Available at: https://doi.org/10.1002/smj.2203.

Klapper, L. and I. Love, 2011. The impact of the financial crisis on new firm registration. Economics Letters, 113(1): 1-4. Available at: https://doi.org/10.1016/j.econlet.2011.05.048.

Koster, S. and S.K. Rai, 2008. Entrepreneurship and economic development in a developing country: A case study of India. The Journal of Entrepreneurship, 17(2): 117–137. Available at: https://doi.org/10.1177/097135570801700202.

Kraay, A., 1998. In search of the macroeconomic effects of capital account liberalization. Washington D C: World Bank Group.

Levine, R., 2001. International financial liberalization and economic growth. Review of International Economics, 9(4): 688-702. Available at: https://doi.org/10.1111/1467-9396.00307.

Liard-Muriente, C.F., 2007. Capital control: Theory and practice. Journal of Business and Publcic Affairs, 1(1): 1-8.

Luiz, J., 2002. Small business development, entrepreneurship and expanding the business sector in a developing economy: The case of South Africa. Journal of Applied Business Research, 18(2): 53-68. Available at: https://doi.org/10.19030/jabr.v18i2.2115.

Matejovsky, L., S. Mohapatra and B. Steiner, 2014. The dynamic effects of entrepreneurship on regional economic growth: Evidence from Canada. Growth and Change, 45(4): 611-639. Available at: https://doi.org/10.1111/grow.12055.

Mueller, P., 2006. Exploring the knowledge filter: How entrepreneurship and university–industry relationships drive economic growth. Research Policy, 35(10): 1499-1508. Available at: https://doi.org/10.1016/j.respol.2006.09.023.

Naudé, W.A., 2010. Entrepreneurship, developing countries and development economics: New approaches and insights. Small Business Economics Journal, 34(1): 1–12. Available at: https://doi.org/10.1007/s11187-009-9198-2.

Naudé, W.A., E. Amorós and O. Cristi, 2013. Surfeiting the appetite may sicken: Entrepreneurship and the happiness of nations. Small Business Economics, 42(3): 523-540. Available at: https://doi.org/10.1007/s11187-013-9492-x.

Noy, I. and B.T. Vu, 2007. Capital account liberalization and foreign direct investment. Working Paper No. 07-8.

Papyrakis, E. and R. Gerlagh, 2004. The resource curse hypothesis and its transmission channels. Journal of Comparative Economics, 32(1): 181-193. Available at: https://doi.org/10.1016/j.jce.2003.11.002.

Prasad, E., R. Kenneth, W. Shang-Jin and M. AyhanKose, 2003. The effects of financial globalization on developing countries: Some empirical evidence. International Monetary Fund, Occasional Paper No. 220.

Prati, A., M. Schindler and P. Valenzuela, 2012. Who benefits from capital account liberalization? Evidence from firm-level credit ratings data. Journal of International Money and Finance, 31(6): 1649-1673. Available at: https://doi.org/10.1016/j.jimonfin.2012.03.005.

Quinn, D., 1997. The correlates of change in international financial regulation. American Political Science Review, 91(3): 531-551. Available at: https://doi.org/10.2307/2952073.

Reynolds, P., M. Hay and P.H. Camp, 1999. Global entrepreneurship monitor. Babson Park, MA: Babson College.

Saidi, H. and C. Aloui, 2010. Capital account liberalization and economic Growth: GMM system analysis. International Journal of Economics and Finance, 2(5): 122-131. Available at: https://doi.org/10.5539/ijef.v2n5p122.

Satyanath, S. and D. Berger, 2007. Capital controls, political institutions, and economic growth: A panel and cross country analysis. Quarterly Journal of Political Science, 2(4): 307–324. Available at: https://doi.org/10.1561/100.00006044.

Simmons, B.A. and Z. Elkins, 2004. The globalization of liberalization: Policy diffusion in the international political economy. American Political Science Review, 98(1): 171-189. Available at: https://doi.org/10.1017/s0003055404001078.

Solow, R.M., 1956. A contribution to the theory of economic growth. The Quarterly Journal of Economics, 70(1): 65-94.

Stam, E., 2008. Entrepreneurship and innovation policy. In B. Nooteboom, and E. Stam (Eds), Micro-foundations for innovation policy. Amsterdam: Amsterdam University Press.

Thomas, A.S. and S.L. Mueller, 2000. A case for comparative entrepreneurship: Assessing the relevance of culture. Journal of International Business Studies, 31(2): 287-301. Available at: https://doi.org/10.1057/palgrave.jibs.8490906.

Thurik, A.R., 2009. Entrepreneurship, economic growth and policy in emerging economies. World Institute for Development, Economic Research. No. 2009.

Van Praag, C.M. and P.H. Versloot, 2007. What is the value of entrepreneurship? A review of recent research. Small Business Economics, 29(4): 351-382. Available at: https://doi.org/10.1007/s11187-007-9074-x.

Van Stel, A., M. Carree and R. Thurik, 2005. The effect of entrepreneurial activity on national economic growth. Small Business Economics, 24(3): 311-321. Available at: https://doi.org/10.1007/s11187-005-1996-6.

Versteeg, R.J., 2008. Capital controls and economic growth: How controls on inflows and outflows are different. SSRN Electronic Journal. Available from http://ssrn.com/abstract=1098261.

Wennekers, S. and R. Thurik, 1999. Linking entrepreneurship and economic growth. Small Business Economics, 13(1): 27–55.

Wennekers, S., A. Van Wennekers, R. Thurik and P. Reynolds, 2005. Nascent entrepreneurship and the level of economic development. Small Business Economics, 24(3): 293-309. Available at: https://doi.org/10.1007/s11187-005-1994-8.

Wong, P.K., Y.P. Ho and E. Autio, 2005. Entrepreneurship, innovation and economic growth: Evidence from GEM data. Small Business Economics, 24(3): 335-350. Available at: https://doi.org/10.1007/s11187-005-2000-1.

Yamawaki, H., 1990. The effects of business conditions on net entry: Evidence from Japan, in P.A. Geroski and J. Schwalbach (eds.), Entry and Market Contestability: An International Comparison. Oxford: Basil Blackwell.

APPENDIX

Forty-four samples of developing countries included in the study

Africa countries		Other developing countries	
Northern Africa	**Western Africa**	Afghanistan	Haiti
Algeria,	Burkina Faso	Albani	India
Morocco	Ghana	Antigua and Barbuda	Iraq
South Sudan	SieriaLoane	Argentina	Jamaica
Tunisia	Niger	Bangladesh	Jordan
Eastern Africa	Nigeria	Belarus	Kazakhstan
Ethiopia	Senegal	Belize	Lesotho
Kenya	Togo	Bhutan	Bolivia
Malawi	**Central Africa**	Bolivia	Panama
Mauritius	Republic of Congo	Brazil	
Rwanda	Gabon	Bulgaria	
Uganda	**Southern Africa**	Dominic	
Zambia	Botswana	Grenada	
	South Africa	Guatemala	