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Fiscal Spending, Economic Growth and Entrepreneurship Development in Sub-Saharan Africa

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Abstract
In the attempt to find solution to youth unemployment in Africa, several studies have been conducted. However, while the studies concentrate on how entrepreneurship impact growth, the extent to which growth propels entrepreneurship is overlooked. Thus, it is on this premise this paper examines the impact of fiscal spending and growth in fostering entrepreneurship development over the period 2009-2018 in SSA. By employing the system-GMM technique to estimate a single equation, the results show that each of fiscal spending on education, per capita income, banks credit to the private sector, and economic freedom averagely impacts positively on entrepreneurship development. Therefore, while economic growth is not impactful, it is concluded that fiscal spending fosters entrepreneurship development in SSA. Thus, an increased fiscal spending on education is suggested for youth empowerment in the region.

Keywords: *Education; entrepreneurship; fiscal spending; panel data; youth empowerment*

JEL Classification codes: *H50; 047; R11*

Introduction

The fundamental challenge of jobs and opportunity for young people is consistently a priority in the development agenda of countries across Africa. Incidentally, being the region with world's youngest population, and undergoing demographic transition, Africa is expected to have a median population below 25 years in 2050 as 38 of the 40 youngest countries will be from the continent; and considering its status as the least educated region with world's lowest school enrolment, Africa would be home to the largest

workforce by 2040 (African Development Bank, AfDB, 2014). As it stands, about 70% of Africans are below 30 years and majority of them are either unemployed or underemployed; and 60% of the unemployed are in the age bracket 15-24 years with an average of 72 and 46% living on less than $2 and $1, respectively (AfDB, 2014; 2017). Thus, as engine of growth and catalyst in capacity building (Porter, 1990; Holcombe, 1998), entrepreneurship development is being considered to stir up youth empowerment in Africa.

Imperatively, there have been concerted efforts at youth empowerment in Africa. Among such efforts is the African Youth Charter introduced by the African Union (AU) in 2006. Meant to give substance to AU's commitment to the development of African youth, the Charter prescribes responsibilities to member states in key strategic areas of education and skills development, sustainable livelihoods and employment. Also, towards the achievement of the goals and objectives of the Charter, the African Youth Decade, 2009-2018 Plan of Action (DPoA) was launched in 2011. As a framework, DPoA targets the reform of fiscal policies to engender youth entrepreneurship across member countries. Nonetheless, in its Agenda 2063, AU (2014) foresees an Africa where development is people-driven, and youth potentials are unleashed. To this end, AU aspires that by 2063, African youth will have guarantee of full access to education, economic opportunities, and will contribute significantly to innovation and entrepreneurship. Moreover, there is the Action Plan 2014-2018 strategy introduced by the AfDB in 2014. The strategy is envisioned to harness the potential of one billion Africans by building entrepreneurship skills to facilitate employment opportunities for youth and out-of-school children. In addition, AfDB adopts the Jobs for Youth in Africa (JfYA) strategy to cover the period 2016-2025. While targeting the creation of 25 million jobs and equipping 50 million youth with professional, transferable and soft skills, the strategy sets to enhance the employability and success rate of young entrepreneurs (AfDB, 2017).

Meanwhile, there have been discussions on entrepreneurship. Substantial aspects of the discussions, however, dwell on entrepreneurship-growth relationship with the aim of ascertaining whether, or not, entrepreneurship impact on growth. In this regard, some empirics focus on economies outside Africa and affirm a no effect in developing economies (see, for example, Stam

& Van Stel, 2009) while others, on Africa,[1] claim that entrepreneurship impact positively on growth. But then, growth is not pro-poor in SSA which imperatively calls for studies on the effect of growth on entrepreneurship in the region (AfDB, 2013; Rao, 2017). This follows from the fact that, entrepreneurship is better studied at regional than country level because entrepreneurship is dynamic and not a product of national culture in which entrepreneurs are captives of their environment (Jones & Wadhwani, 2006). As such, to the author's best knowledge, there is no study that has considered the impact of fiscal spending and economic growth in fostering entrepreneurship development in SSA. Incidentally, the consideration of the effect of fiscal spending and economic growth on entrepreneurship will reveal the extent to which governments have been supportive to youth empowerment; and whether, or not, growth is inclusive, in the region. Therefore, while building on Kolawole (2020), the paper examines the impact of fiscal spending and economic growth on entrepreneurship development in SSA.

Very imperative is the fiscal-spending-growth-entrepreneurship relationship in SSA as depicted in Figure 1. The figure shows that, as fiscal spending appears relatively stable around four and five per cent, entrepreneurship tends to be improving even as growth fluctuates below three per cent in the region.

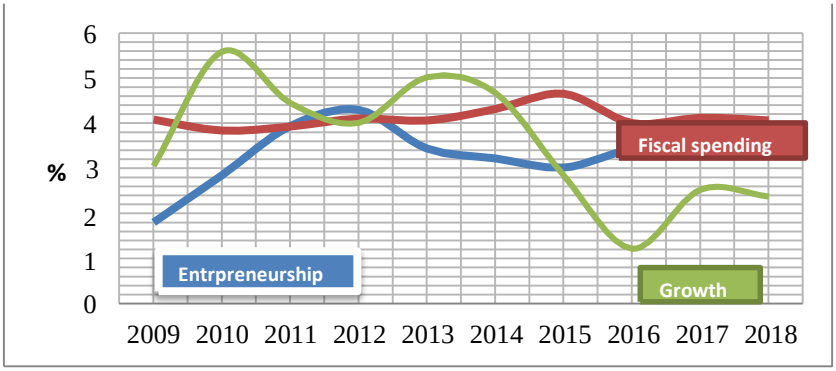

Figure 1: Fiscal spending, growth and entrepreneurship in SSA, 2009-2018
Source: Author's representation using data from World Bank (2019a)

[1] See Omoruyi, Olamide, Gomolemo and Donath (2017) and Nyanzi, Yawe and Ddumba-Ssentamu (2019).

The other aspect of the paper is structured as follows. Section two reviews the literature as analytical framework and methodology are provided in section three. While section four presents and discusses empirical results, section five rather wraps the paper with conclusion and policy implications.

Literature Review

Theoretical and Conceptual Literature

The theoretical and conceptual postulations on entrepreneurship still rage in the literature. As a concept, Rao (2017) sees entrepreneurship as the lifeblood of an economy. However, it is a behavioural characteristic with unconventional social activities requiring organisation, skill, and talent (Carree & Thurik, 2003; Ochonu, 2015). Nonetheless, Runge (2000) sees entrepreneurship to involve exploitation of gaps between market and private values.

Meanwhile, the theoretical views centre mainly on three approaches of the neoclassical market fundamentalism. They are the free-market, the public-choice, and the market-friendly approaches (Todaro & Smith, 2003). The free-market approach sees markets in developing countries to be efficient in providing signals for new investments as imperfection exists only with little consequence. By implication, labour markets respond appropriately to new industries as producers know best what to produce and how to produce efficiently. In addition, prices reflect the current and future values of goods and resources. However, in furtherance to the free-market argument, the public-choice theory holds that since government is inefficient, a minimal government is, therefore, the best. Invariably, the approach claims that economic agents use power and authority for selfish ends which lead to resource misallocation and general reduction in individual freedoms. Meanwhile, the market-friendly approach on the contrary sees the key non-selective intervention role government can play in correcting the imperfection in the product and factor markets of Less Developed Countries (LDC). For instance, market-friendly intervention can take the form of building physical and social infrastructure, as well as providing suitable business environment for private enterprises. In effect, the approach departs from the others by accepting the notion that market failures are more widespread in the areas of investment coordination and environmental outcomes in developing countries. Thus, the approach affirms

problems of missing and incomplete information, amongst others, as rationales for government intervention in LDC markets.

Empirics

Empirical studies on entrepreneurship, as earlier noted, cut beyond, and across, Africa. For instance, while adopting narrative-textual case study, Afolabi (2015) examines the effect of entrepreneurship on growth in Nigeria. As the study finds entrepreneurship driving growth, it suggests educational reform for self-reliance. Also, for Nigeria, Kolawole (2020), however, examines the effect of government spending in propelling entrepreneurship development for the period 1990-2018. The results show that government spending drives entrepreneurship development in both short-run and long-run. As such, an increased spending on education is recommended for entrepreneurship development.

Moreover, considering cross countries in Africa, Omoruyi, Olamide, Gomolemo and Donath (2017) examine the influence of entrepreneurship on growth in SSA. Findings affirm that variation in growth is explained by entrepreneurship across economies. Thus, it concludes that entrepreneurship is instrumental to unlocking growth. Similarly, Nnyanzi, Yawe and Ddumba-Ssentamu (2019) investigate the impact of entrepreneurship on economic performance of 12 African countries during the period 2006-2016. By focusing on sectoral growth, the study establishes positive impacts of entrepreneurship on growth across sectors.

Meanwhile, for studies conducted for economies outside of Africa, Stam and Van Stel (2009) compares the efficacy of entrepreneurship in causing growth in 36 high income, transition and low income countries over four-year period. Findings show that while a no-effect case is obtained for low income economies, a strong positive effect on growth is rather felt in transition and high income countries. Also in a later study covering 34 countries over a 13-year period, Harbi, Grolleau and Bekir (2011) investigate whether it is entrepreneurship that causes growth, or growth provides a prosperous environment for entrepreneurship. Consequently, a unidirectional causality is revealed to be running from entrepreneurship to growth.

Furthermore, Hamdan (2019) tests the relationship between entrepreneurship and economic growth in the Emirati for the period 1996-2015. The study

establishes that growth is impacted positively by entrepreneurial activities. Also, while considering two groups of 60 and 79 students at University of São Paulo (USP), Reis and Fleury (2019) evaluate students' entrepreneurial competences for the second half of 2018. The study establishes that courses assist students in developing entrepreneurial intentions and competences.

In summary, it is evident in the above empirics that there are inadequate studies on the subject matter which invariably calls for further research. Nevertheless, none of the empirics considers the impacts of fiscal spending and economic growth on entrepreneurship development in SSA.

Analytical Framework and Methodology

Analytical Framework

The analytical framework considers neoclassical market-friendly theory. Thus, the basic relationship follows Solow (1957) in a Cobb-Douglas function as,

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

where, *Y* is output, *K* is capital, *L* is labour, *A* is technology, knowledge or efficiency of work, such that *AL* is effectiveness of labour, and *t* denotes time. By invoking the condition of constant returns to scale which implies that if equation (1) is divided by *L* it gives,

$$\frac{Y}{L}= f\left(\frac{K}{L}1\right) \quad (2)$$

where, $\frac{Y}{L}$ is per capita output or income, and $\frac{K}{L}$ is capital-labour ratio. Thus, if $y = \frac{Y_t}{L}$, and $k = \frac{K}{L}$, then equation (2) can simply be written as,

$$y = f(k) \quad (3)$$

As such, if entrepreneurship is a factor in the macroeconomic production function (Audretsch & Keilbach, 2004), it can therefore be introduced while equation (3) transforms functionally to,

$$y = f(k, e) \quad (4)$$

where, *e* is entrepreneurship.

Furthermore, as Stam and Van Stel (2009) note that entrepreneurship creates wealth by combining existing production inputs in new ways, then development process can follow Nelson and Pack (1999), Rodrik (2007), and Gries and Naudé (2008) on structural change in describing entrepreneurship as organiser who creates and operates business enterprise. In this light, equation (4) modifies to express the causal effect of per capita income and capital-labour ratio on entrepreneurship over a time period as,

$$e_t = f(y_t, k_t) \qquad (5)$$

That is, entrepreneurship is influenced basically by per capita income and capital-labour ratio.

Methodology

In the attempt to analyse the relationship linking fiscal spending, economic growth and entrepreneurship development across countries, the panel data technique is adopted. Thus, a single equation is estimated and entrepreneurship development serves as the dependent variable. The independent variables include per capita income and institution, among others. However, due to several limitations inherent in previous measures of entrepreneurship (Stam & Van Stel, 2009), disclosure index is rather employed. Also, using the 12 measures[2] of economic freedom, an institution index[3]is constructed to suit the

[2] The 12 measures are property rights, judicial effectiveness, government integrity, tax burden, government spending, fiscal health, business freedom, labour freedom, monetary freedom, trade freedom, investment freedom, and financial freedom (Miller, Kim & Roberts, 2019; The Heritage Foundation, 2019).

[3] Because the paper focuses on entrepreneurship and job creation, the new index is constructed to suit the purpose. Thus, the index is the average of the four measures that are directly relevant to entrepreneurial activities. They are *property rights* which indicate the ability to accumulate private property and wealth as the central motivating force for workers and investors; *business freedom* as measure of individuals ability to establish and run an enterprise without undue interference from the state; *labour freedom* as indicator of individuals' ability to find employment opportunity and work; and *investment freedom* which measures a free and open investment environment that provides maximum entrepreneurial opportunities and incentives for expanded economic activity, greater productivity, and job creation (Miller, Kim & Roberts, 2019).

purpose of the study. However, owing to data constraint and indiscriminate[4] approaches of several entrepreneurship programmes, 45 countries[5]are considered. Furthermore, in order to ascertain governments' fiscal efforts at supporting youth empowerment as prescribed in the African Youth Decade, the period covered is 2009-2018.[6] Nonetheless, due to the nominal nature of disclosure index, per capita income and institution data, the variables are transformed to their natural logarithms so as to place them on a uniform scale of measurement with other variables whose data are in percentage. As such, the transformation serves to ease the interpretation of the resulting relationship between variables. Imperatively, as institutional quality could be social, political, or economic, however, this paper considers economic institution. Imperatively, economic institution helps to allocate resources to their most efficient uses and determines who gets revenues, profits and residual rights of control (North & Thomas, 1973; North, 1990).

Variable Description, Measurement and Data Source

Entrepreneurship Development refers to a condition in which, when attained, entrepreneurial activity becomes innovative and qualitatively independent. It describes the mental state of an entrepreneur regarding decision making. As proxy for entrepreneurship development, business extent of disclosure index measures the extent to which an entrepreneur is protected through disclosure of ownership and financial information; it ranges between 0 and 10 as values closer to 10 indicate more disclosure; and the data are sourced from World Bank (2019a) World Development Indicators (WDI).

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4 That is, all countries are considered irrespective of economic status regarding low-, middle-, or high-income.

5 Angola, Benin, Botswana, Burkina Faso, Burundi, Cape Verde, Cameroon, Central African Republic, Chad, Comoros, Democratic Republic of Congo, Republic of Congo, Cote d'Ivoire, Djibouti, Equatorial Guinea, Eritrea, Ethiopia, Gabon, Gambia, Ghana, Guinea, Guinea-Bissau, Kenya, Lesotho, Liberia, Madagascar, Malawi, Mali, Mauritania, Mauritius, Mozambique, Namibia, Niger, Nigeria, Rwanda, Sao Tome and Principe, Senegal, Seychelles, Sierra Leone, South Africa, Tanzania, Togo, Uganda, Zambia, and Zimbabwe.

6 The paper is a follow-up on AU's (2011) African Youth Decade, 2009-2018 Plan of Action to assess likely macroeconomic factors/variables that are impactful on the development of youth entrepreneurship in the decade.

Economic Growth refers to annual percentage growth rate of GDP at market prices based on constant local currency; the aggregates are based on constant 2010 U.S. dollars, and data are sourced from WDI (World Bank, 2019a). Imperatively, the theoretical and empirical opinions on entrepreneurship-growth nexus are succinctly provided by Wenneckers and Thurik (1999), Audretsch and Keilbach (2004), and Rodrik (2007). Also, the role of entrepreneurship as the driving force of economic growth is rooted in Schumpeter's theory of long waves (UNCTAD, 2005). Moreover, GEM data suggest that countries with high levels of entrepreneurship do not have low levels of economic growth, and as such entrepreneurship associates significantly with economic growth (Reynolds, William, Bygrave, Larry, & Michael, 2000; 2002). Nonetheless, Stam (2008) affirms mixed evidence from empirical studies on the role entrepreneurship plays in economic growth.

Per capita income refers to GDP per capita, and it is GDP divided by midyear population; data are in constant 2010 U.S. dollars and are taken from WDI (World Bank, 2019a). The conditional convergence effect of per capita income is analysed by Abramovitz (1986).

Fiscal Spending, as government expenditure on education, incorporates current, capital, and transfers. Imperatively, fiscal spending on education improves access to education which in turn enhances inclusive growth by increasing productivity and facilitating the movement of poor people from low-paying jobs in agriculture to higher-paying jobs in industry and services; as percentage of GDP, data are sourced from WDI (World Bank, 2019a). In different corroborating studies, OECD (1998) and UNCTAD (2005) affirm that government incentives create an environment conducive to entrepreneurship. Also, as preference to developing countries, fiscal incentives reduce burdens on entrepreneurial undertakings (UNCTAD, 2000; Zee, Stotsky & Ley, 2002), compensate for other government-created obstacles in the business environment (Well & Allen, 2001), and provide employment generation and skills development benefits (Zahir, 2003).

Institution refers to the sets of formal and informal working rules that determine the behaviour of individuals and organisations; it describes the procedures to follow, and what information to provide (North, 1990; Ostrom, 1990; North, 1993). Thus, the institution index describes the fundamental right

of an individual to control his or her own labour and property; it is graded on a scale of 0 to 100: the closer to 100 a score is, the higher the liberty an enterprise has to use labour and finances without undue restraint and interference from government (Miller, Kim & Roberts, 2019). Data are taken from The Heritage Foundation (2019). Meanwhile, Baumol (1990) provides the causal explanations on how institutions affect entrepreneurship.

Domestic credit to private sector by banks refers to financial resources provided to the private sector by other depository corporations aside from central banks; it is measured as percentage of GDP and data are taken from WDI (World Bank, 2019a). Essentially, the relationship between entrepreneurship development and banks' financial support is discussed in Carnevali (2005).

Gross capital formation consists of outlays on additions to the fixed assets of the economy plus net changes in the level of inventories: these are stocks of goods held by firms to meet temporary or unexpected fluctuations in production or sales, and work in progress; it is measured as a percentage of GDP and the data are sourced from WDI (World Bank, 2019a). Nonetheless, capital formation as stock of infrastructure is identified by Arnold, Mattoo and Narciso (2006), among others, to be important for fostering entrepreneurship.

Empirical Model

In furtherance to equation (5), the stimulating effect of fiscal spending on entrepreneurial activity is recognised in Keynesian postulations, and implied in Baumol (2014), and thus expressed in a panel form as,

$$_{it} = f(_{it}, k_{it}, _{it}) \tag{6}$$

where, *F* represents fiscal spending.

Meanwhile, experience shows that commercial banks finances, institutions, and growth rates drive entrepreneurship (Baumol, 1990; Boettke & Coyne, 2003; Powell, 2008). As such, the following expression includes finance from banks, *Fn*; institution, *I*; and growth rate, *gr*. That is,

$$_{it} = f(_{it}, k_{it}, _{it}, Fn_{it}, _{it}, g_{it}) \tag{7}$$

Thus, in line with Baltagi (2008) in the general, the empirical model follows,

$$Ent_{it} = \gamma Ent_{i,t-1} + \beta X_t^{'} + u_{it} \qquad i = 1, \ldots, N; \text{ and } t = 1, \ldots, T \qquad (8)$$

where, γ is a scalar, β is $K \times 1$ as for country i at time t, *Ent* is entrepreneurship development index, $X_t^{'}$ is $1 \times K$, a vector of time varying independent variables, and u is error term.

Therefore, expression (9) is the empirical model for estimation. It states that entrepreneurship development in SSA is averagely impacted by each and every variable on the right-hand-side. Hence,

$$lnEnt_{it} = \beta_0 lnEnt_{i,t-1} + \beta_1 lnPci_{it} + \beta_2 Cap_t + \beta_3 Fis_t + \beta_4 Crp_t + \beta_5 lnI_t + \beta_6 Grt_{it} + \varepsilon_{it} \qquad (9)$$
for all i = 1, …, 45 and t = 2009, …, 2018.

where, for country i at time t, *Pci* is per capita income, *Cap* is gross capital formation, proxy for capital-labour ratio, *Fis* is fiscal spending, *Crp* is domestic credit to private sector by banks, *Inst* is institutional quality, *ln* is natural logarithm, *Grt* is growth rate, and ε is the error term.

The apriori expectation is that $\beta > 1$, for all i = 1, …, 6

Estimation Techniques

The estimation of expression (8), and hence (9), is possible by applying Ordinary Least Squares (OLS), Fixed Effects (FE), Random Effects (RE), First Difference (FD), and Generalised Method of Moments (GMM) estimators. However, according to Baltagi (2008), the estimation is characterised by two sources of persistence over time. These are autocorrelation resulting from the inclusion of a lagged dependent variable among explanatory variables and the unobserved main effects, as well as interaction effects characterising the heterogeneity among the countries (Nickell, 1981; Judson & Owen, 1999). However, Green (2011) alludes to the fact that in a situation where *T* is small and *N* is large, as in the present case (*T*=10; *N*=45), then Arellano and Bond (1991) GMM as well as Blundell and Bond (1998) system-GMM estimators are appropriately applicable. But then, Arellano-Bond estimator is constrained by the fact that lagged levels are poor instruments for first differences if the variables are close to a random walk. Accordingly, by rather assuming that the

differences are uncorrelated with unobserved individual effects, the Blundell-Bond system-GMM estimator is therefore the most suitable to resolve the problem. Thus, the system-GMM estimator is adopted. Meanwhile, in order to correct for endogeneity, instrumental variable estimation is used in avoidance of potential bias that may arise from simultaneity.

Results and Discussion

The descriptive statistics of the variables, as presented in Table 1, show an average growth of about 4% while entrepreneurship development measures average score of 1.6 in SSA. Also, fiscal spending appears averagely low at 2.34% which invariably tells the manner in which governments fund education in the region.

Table 1: Descriptive statistics

Variable	Obs	Mean	Standard Dev.	Min.	Max.
LEnt	446	1.60	0.45	0	2.30
LPci	434	7.13	1.06	5.35	9.90
Cap	450	22.78	12.00	0	58.83
Fis	450	2.34	2.44	0	10.68
Crp	450	21.79	24.67	0	241.74
LInst	450	3.96	0.16	3.47	4.38
Grt	450	4.27	4.2	-36	20.7

Source: *Author's computation*

Incidentally, the outcome is succinctly buttressed by the negative relationship revealed between capital stock and each of per capita income and fiscal spending, as well as between per capita income and growth in the correlation matrix in Table 2.

Table 2: Correlation Matrix

	LEnt	LPci	Cap	Fis	Crp	LInst	Grt
Lent	1.00	0.03	0.11	0.04	0.02	0.07	0.31
LPci	0.03	1.00	-0.08	0.06	0.13	0.16	-0.11
Cap	0.11	-0.08	1.00	-0.14	0.09	0.01	0.17
Fis	0.04	0.06	-0.14	1.00	0.13	0.43	0.21
Crp	0.02	0.13	0.09	0.13	1.00	0.36	0.18
LInst	0.07	0.16	0.01	0.43	0.36	1.00	0.41
Grt	0.31	-0.11	0.17	0.21	0.18	0.41	1.00

Source: *Author's computation*

Furthermore, the pre-estimation results of the Levin, Lin and Chu (2002) unit-root tests in Table 3 show that all variables are stationary at level.

Table 3. Results of Levin-Lin-Chu unit-root tests

Variable	*LEnt*	*LPci*	*Cap*	*Fis*	*Crp*	*LInst*	*Grt*
Statistic	-10.543	-13.572	-8.377	-11.593	-8.803	-5.964	-11.064
P-value	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Source: *Author's computation*

Imperatively, Table 4 reports a reverse causality between entrepreneurship development and per capita income. On the contrary, however, a one-way causality is reported to run from entrepreneurship development to growth, as against other variables which individually cause entrepreneurship development. Meanwhile, as Figure A1 in the appendix shows the line plots of variables employed for analysis, the estimation results are presented in Table 5. Thus, as presented, per capita income conforms to expectation by propelling entrepreneurship development. Specifically, the result suggests that 100% point increase in per capita income leads to 13% improvement in entrepreneurship. Imperatively, the mild effect of income on the development of entrepreneurial activity reflects the low, and subsistence, level of income in SSA. As such, because majority of the employed are underemployed, their income appears good only for food, and probably transportation. This shows that very few of the youths that are engaged either in wage employment, household enterprise, or family farm could improve their entrepreneurial skill with the little earnings they receive. The situation supports World Bank (2013) report that each one per cent increase in per capita consumption associates with 0.69% reduction in poverty in the SSA, as against over two per cent elsewhere. In corroboration, lack of social protection is affirmed in Cote d'Ivoire where, according to AfDB (2017), 91% of the youths are engaged in the informal sector with low income.

Table 4: Extract of results of panel causality tests

Null Hypothesis	Obs	F-stat	P-value
LPCI does not Granger Cause LENT	450	4.603	0.013
LENT does not Granger Cause LPCI	450	4.545	0.021
CAP does not Granger Cause LENT	450	5.381	0.004
LENT does not Granger Cause CAP	450	1.102	0.097
FIS does not Granger Cause LENT	450	4.531	0.028
LENT does not Granger Cause FIS	450	0.125	0.701
CRP does not Granger Cause LENT	450	4.541	0.023

LENT does not Granger Cause CRP	450	0.722	0.224
INST does not Granger Cause LENT	450	4.588	0.017
LENT does not Granger Cause LINST	450	0.687	0.181
GRT does not Granger Cause LENT	450	0.116	0.601
LENT does not Granger Cause GRT	450	5.443	0.002

Source: *Author's computation*

Furthermore, fiscal spending drives entrepreneurship development. The estimator reveals 17% rise in entrepreneurship development from 100% point increase in spending. By implication, it shows that spending on education and other vocational trainings have little impact on entrepreneurial activities in SSA. By extension, it reflects the fact that irrespective of the size of spending, many educational systems in Africa prepares candidates for employment in already-established businesses and not for starting new ones or what Pauli, Buchelt and Pocztowski (2019) refer to as self-employment. The result, while corroborating AfDB (2014), no doubt, reflects the condition of Africa as the least educationally achieved region. Nonetheless, the positive impact of spending yet supports Adegboye (2018) and World Bank's (2019b) view that investment in African youth is the key to prosperous future for the continent.

Moreover, domestic credit to the private sector is impactful on entrepreneurship development. In effect, a 100% point rise in the credit from banks brings about a 15% improvement in entrepreneurship in SSA. This corroborates the suggestions of Ladzani and Van Vuuren (2002) and Omoruyi et al (2017) that entrepreneurship requires supportive and accessible financial institutions as, banks play crucial roles in financing the development of entrepreneurial activities (Carnevali, 2005). Also, the result aligns with the reasoning that external financing is needed by high growth potential entrepreneurial firms (Gompers & Lerner, 2000; 2005). However, the not-so-encouraging effect probably indicates what World Bank (2014) refers to as entrepreneurs' inaccessibility to bank credit due to underdeveloped financial institutions coupled with outrageous collaterals. Ordinarily, the inability of entrepreneurs to afford minimum collateral of around 200% might imply that entrepreneurial activities in SSA are financed from internal or personal funds. In line with Rodrik (2007), personal funds, no doubt, spur entrepreneurs to invest in their home economy thereby stimulating growth. Invariably, the problem of insufficient bank credit necessarily calls for the support of Multilateral Development Banks (MDBs). Although AfDB provides support to self-

employment programmes for youth and women (Ighobor, 2017), yet more financial assistance is needed for entrepreneurship development in SSA.

In conformity to expectation, institution positively impacts entrepreneurship development. A 19% development is brought to entrepreneurial activities due to 100% point improvement in institutional quality in SSA. Although the effect is minimal, however, the statistical significance yet reveals the importance of institution in fostering entrepreneurship development. The result corroborates the opinion of Miller, Kim and Roberts (2019) that economic freedom adds benefits of individuals to create goods and services that meet the needs and desires of the society. Thus, institution matters for entrepreneurship development.

Table 5: Result of system-GMM model for entrepreneurship development in SSA

Dependent variable: Log of entrepreneurship development	
Independent variables	Estimation
Log of entrepreneurship development$_{t-1}$	(0.32)0.000***
Log of per capita income	(0.13)0.000***
Capital formation	(0.22)0.102
Fiscal spending	(0.17)0.011**
Banks domestic credit to private sector	(0.15)0.023**
Log of institution	(0.19)0.004***
GDP growth rate	(0.26)0.148
Prob Chi^2	0.000***
AR1	0.002
AR2	0.544
Sargan	0.861
Hansen	0.598
No of Obs.	460

Note: Values in parentheses are coefficients, while *** and ** indicate 1% and 5% levels of significance, respectively.

Meanwhile, contrary to expectation, the results reveal that capital formation does not impact entrepreneurship development. The insignificant stance of capital formation shows that stock of infrastructure is grossly inadequate in SSA. Ideally, infrastructural facilities in the form of electricity, good roads, communication, among others, are needed to foster entrepreneurship development. The result essentially supports Bissola, Imperatori and Biffi's (2017) opinion that entrepreneurs face a complex and problematic environment,

as well as the view of Arnold, Mattoo and Narciso (2006) that most closure of manufacturing outfits is attributed to high costs of infrastructure.

Finally, the results also establish that growth could not affect entrepreneurship development in SSA. Aside been positive and relatively higher, the insignificant coefficient affirms the non-pro-poor, or non-inclusiveness, of economic growth across countries in SSA. Imperatively, the result lends credence to World Bank (2013) and AfDB's (2014) positions on the overall growth and youth unemployment in SSA.

Conclusion and Policy Implications

This paper examines the efficacy of fiscal spending and economic growth in fostering entrepreneurship development during the period 2009-2018 in SSA. Imperatively, previous related studies mainly examine the effect of entrepreneurship on growth without considering whether, or not, fiscal spending and growth impact entrepreneurship development. As such, by employing the system-GMM estimator, it is established that investment in African youth through spending on education is important for improving entrepreneurial activities and empowerment. Thus, it points to the fact that governments in SSA have been supportive, but need to give more support, to youth entrepreneurship development, and empowerment, in the region. Also, it is revealed that despite consistent growth over the years yet, it does not translate to entrepreneurship development and empowerment in SSA.

Meanwhile, the findings bear policy implications which arise from the fact that entrepreneurship development is a multidimensional challenge requiring multidimensional solutions. Basically, the start-up and development of an enterprise is strongly determined by the social, economic, and entrepreneurial qualities availing the entrepreneur. As such, the public, private, and institutional concerns have more to do in addressing the problem of entrepreneurship development in SSA. For instance, given that fiscal spending on education is effective for entrepreneurship development, it implies that if governments allocate more funds to youth education alongside manpower training programmes, then substantial number of youth will be engaged as self-employed entrepreneurs or as skilled productive workers in large firms.

Moreover, as findings show that domestic credit to private sector positively impacts entrepreneurship development, it therefore implies that if financial assistance is provided by banks to existing as well as young prospective entrepreneurs, productive activities will improve with the hope of leading to economic expansion in SSA. Imperatively, banks are required to assist SMEs with low-collateral loans in order to encourage small manufacturing enterprises. But then, since small businesses rarely meet the conditions for getting access to bank loans and other traditional debt financing instruments, governments can increase access to loans for firm start-ups by introducing, for instance, loan guarantee schemes. More importantly, young Africans can be empowered financially by MDBs through commercial banks. In this regard, MDBs can make the required funds available by depositing directly with commercial banks which in turn will provide same as loans at very low interest, if not zero interest, to SMEs.

Furthermore, given that institution propels entrepreneurship development, it implies that national governments should ensure an institutionally friendly business environment for entrepreneurs and youth empowerment in general. To this end, youth should be able to accumulate private property and wealth; establish and run an enterprise without undue interference from the state; find employment opportunity and work; and have entrepreneurial opportunities and incentives for greater productivity, and job creation in SSA.

In summary, the public, private and institutional concerns should provide supports that can enhance per capita income, with enough financial assistance, and institutionally friendly environment. If these factors are adequately available across economies in SSA, youth will not only be empowered and find jobs, their entrepreneurial activities will also develop.

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Appendix

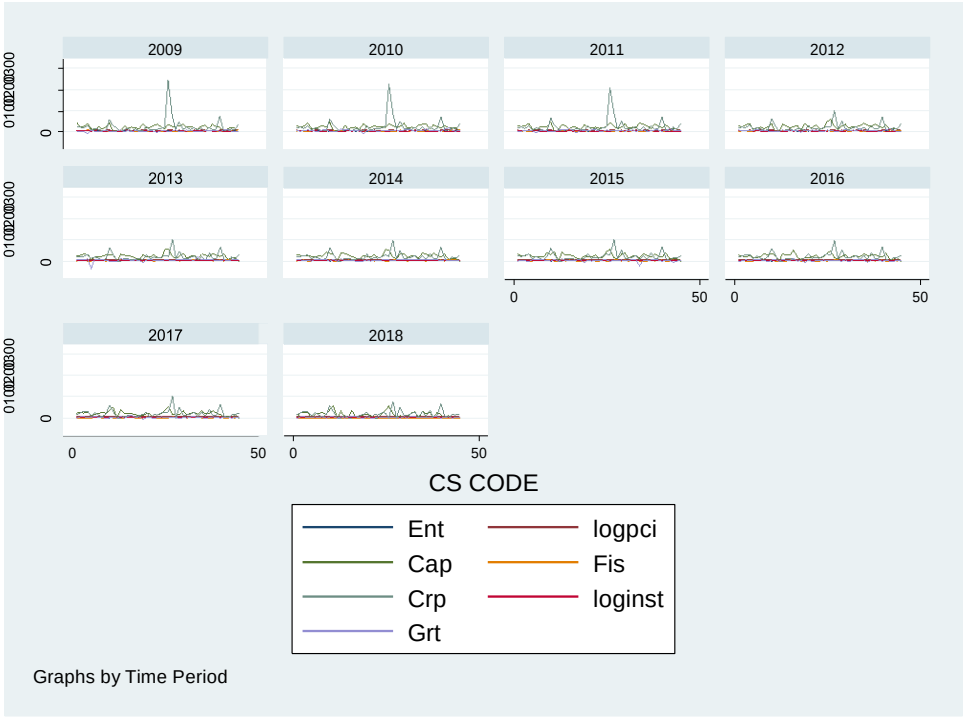

Figure A1: Graphical line plots of all variables employed for estimation covering the period 2009-2018

Source: *Author's representation using data from World Bank (2019a) and Heritage Foundation (2019)*