Asian Journal of Economics and Finance. **2021**, 3, 3 : 333-349

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Entrepreneurship, Human Capacity Development and Youth Employment Generation: A Study of Selected Sub-Saharan Africa Countries

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Received: 14 July 2021; Revised: 22 July 2021; Accepted 3 August 2021; Publication: 28 October 2021

Abstract: This study examined entrepreneurship, human capacity development and youth employment generation in 20 selected sub-Saharan African countries from 2005 to 2017. We employed the fixed effect Panel estimator on the secondary annual data sourced for the study. Findings from the study show that entrepreneurial activities and infrastructural development are important determinants of youth employment generation in the selected countries. The implication of these findings is that entrepreneurial activities and infrastructural development should be of concern to policy makers, and well-meaning private individuals as they are observed to be significant determinant of youth employment. More importantly, individual are required to possess refined skills to match the quality of infrastructural facilities in the work place. Therefore, as a matter of policy implication these African Countries should ensure that the conclusion of this study is considered and implemented, and make considerable effort to reduce the large informal sector by putting in place laws and rules that will ensure that the activities of the self-employed people are recognized and accounted for on a large scale.

Keywords: Entrepreneurship; Human Capacity Development; Employment generation

To cite this paper : Feyisayo Oyolola & Adewumi Otonne (2021). Entrepreneurship, Human Capacity Development and Youth Employment Generation: A Study of Selected Sub-Saharan Africa Countries, *Asian Journal of Economic and Finance* 3(3): 333-349.

1. Introduction

Approximately 1.2 billion people live in Africa with about 420 million youths aged between 15 to 35 years of which 67 percent are either unemployed or underemployed (AFDB, 2016). Specifically, in sub-Saharan Africa (SSA), unemployment rate is estimated to be 22 percent while youth unemployment rate stands at 12.8 percent (ACBF, 2017). In spite of the high percentage of youths who are either unemployed or underemployed, about 11 million youths seeking employment enter Africa's labor market yearly, leaving the economy with a glut of labor supply.

Entrepreneurship and human capacity development is vital in reducing unemployment pressures (World Bank, 2006; Africa Commission, 2009). In sub-Saharan Africa skill and knowledge deficiency including poor incentive are major factors that stifles the success of entrepreneurship within this region

(Fox, Senbet, & Simbanegavi, 2016). For example, in sub-Saharan Africa, many youths grow up in poor households with no access to opportunities to build their skills required for transition into the labor market which is revealed by the high ratio of youth-adult unemployment condition in this region (Fox, Senbet, & Simbanegavi, 2016). Not only that, the deficit in the capacity building sectors such as the education and health sectors in terms of limited funding and infrastructure have also contributed to the poor condition of youth unemployment in the region. Deficiency in ensuring human capacity represents opportunities missed to generate employment in SSA. Furthermore, human capacity development can affect entrepreneurship through various channels. One, it can lead to functioning channels, made possible by access to resources which include entrepreneurial opportunities and capital, professional enhancement and organizational consolidation (Sen, 1979 and 1999; Nanfosso, 2011). Several literatures have affirmed role entrepreneurial activities plays in combating unemployment problem through its employment generation ability, improved innovative activities, increased productivity and ability to evolve with the continuous changing labor market landscape (Aggarwal & Esposito, 2001; World Bank, 2006; Africa Commission, 2009).

According to Calvés & Schoumaker (2004) and Langevang (2008) in sub-Saharan Africa, the shrinking public sectors and limited opportunities for gaining wage employment in the private sector have resulted in an increasing number of young people being compelled to create self-employment in the informal sector. For example, Nwazor (2012) found that in Nigeria, the opportunities for paid jobs especially in the private sector are on a decline with the informal sector accounting for about 80 percent of total employment. This observation aligns with the assertion of Langevang& Gough (2012) that "due to the limited possibilities to gain formal sector jobs in the public and private sector, young people are being encouraged to be job creators rather than become job-seekers, thereby becoming self-employed entrepreneurs". Additionally, in comparison to the formal sector, the informal sector in SSA is the largest in the world which also accounts for about 50-70 percent of employment within this region (Schneider, Buehn, and Montenegro, 2010), and houses majority of the entrepreneurial activities (Lindell, 2010; Potts, 2008). There is therefore need to put in structures that fosters development in the informal sector to harness the job creating benefit from this sector.

Several attempts have been made by scholars such as Syed (2012), Sofoluwe *et al.*, (2013), Ojeifo (2013), Martin, McNally, Kay & Michael (2013), John (2012), Allan (2012) to understand the effect of human capital development within the economy. These authors conclusively asserted that human capital development can be achieved through investment in education, and investment in education could foster entrepreneurial education. Ojeifo (2013) specifically asserted that entrepreneurship education will equip students with the skills that will make them self-reliant, and valuable in the work place (Sofoluwe *et*

al., 2013). More specifically studies such as John (2012); Martin *et al.,* (2013); Sofoluwe*et al.,* (2013); Ojeifo (2013) and Syed (2012) focused on education as the primary driver of capacity development. Contrary to this assertion, other studies such as Dae-Bong, (2009); Asaju, Kajang & Anyio, (2013) and Omojimite, (2011) identified other plausible channels in addition to education. Also, Waema (2002) and Sapkota (2014) argued for the imperative role infrastructural development on capacity development. That in addressing the issue of human capital development, infrastructural challenges must be tackled. One general characteristic of the studies above is the use of narrative and survey methodology. Except Gries, &Naudé (2010) and Shuaibu&Timothy (2016) that employed an in-depth empirical analysis majority of the studies in literature applied the narrative analysis technique and survey methods to examine the role of entrepreneurship and capability development in employment generation.

As a result, this study seeks to contribute to the literature on entrepreneurship and youth employment in SSA by focusing on the effect of the multiplicity factor of entrepreneurial activities and human capacity development on youth unemployment, while also controlling for the role of structural improvement[1] using the fixed effect Panel Estimator. The remaining part of the study is structured into five sections: following this introductory section, Section 2 reviews previous literatures. Section 3 describes the methodology and dataset adopted for the study, section 4 presents the discussion and analysis of results while the last section concludes with policy implication.

2. Review of Previous Literatures

2.1. *The Concept of Entrepreneurship, Human Capacity Development and Employment Generation*

Entrepreneurship

Alluding to Iversen, Jorgensen, &Malchow-Moller (2007), entrepreneurship has been described by various authors since it was coined in the 18th century by Richard Cantillon. However, there is no consensus on a single definition of entrepreneurship. Some authors like Schumpeter (1994) have defined entrepreneurship as the ability to identify and pursue business opportunities while taking advantage of scarce resource utilization. Aggarwal & Esposito (2001) on the other hand conceptualized entrepreneurship as the process solutions are provided through skills and responsive tools are created to provide better productivity in different governmental and industrial fields. Similarly, the Organization for Economic Cooperation and Development (OECD) (2009), defined entrepreneurship as "an enterprising human activity in pursuit of the generation of value through the creation and expansion of economic activities by identifying and exploiting new products, processes or

markets". This study adopts the OECD definition of entrepreneurship particularly in consideration of the role entrepreneurship plays in employment generation through expanded economic activities.

Human Capability Development

The United Nations Development Program (UNDP) (2009) provides a comprehensive description of the concept of capability development. Capability development is defined by the UNDP as the process through which societies, organizations and individuals overtime obtain, maintain and strengthen the capabilities to set out and achieve their own development objectives. Human capacity development can thus be referred to as the processes in which African countries can obtain, strengthen and maintain the capabilities of the youth populace in order to create jobs and ultimately achieve economic growth and development. As noted by OECD (2009) report, training and quality institution are the major tenets of capability development.

Employment Generation

Employment Generation is referred to as job creation, can be described as the process of actively engaging labour in productive activities (Yusuf, 2014). The more a country expands her capacity to engage labour in various productive activities, the closer the country is to full employment state. However, Hanson (1996) noted that the state of full of employment does not directly imply having no unemployed person in a labour force, but rather a state where the number of people who are not engaged in any productive activity equals the number of existing vacancies.

2.2. Empirical Review of Literature

A number of studies have been carried out to understand the role of human capital development within an economy. From the review of previous studies three basic facts are observable:

First, human capability development can be achieved through investment in education. Syed (2012), Sofoluwe *et al.,* (2013), Ojeifo (2013), Martin, McNally, Kay & Michael (2013), John (2012) and Allan (2012) all asserted that adequate investment in education triggers and fosters entrepreneurship growth, particularly in Africa. Syed (2012) conducted a study on inclusion of entrepreneurship education in Malaysia's learning institutions and concluded that entrepreneurial educational development is key to the development of human capacity in order to meet political, social and economic development need of the country. Sofolure *et al.,* (2013) agreed with this assertion and emphasized the need for entrepreneurship education as a surety to job creation, youth empowerment and wealth creation. Ojeifo (2013) on the other hand noted that entrepreneurship education will equip students with the skills that will make them self-reliant.

Likewise, the investigation of Martin, McNally, Kay & Michael (2013) revealed that there exist a significant relationship between entrepreneurship education/training and entrepreneurship-related human capital assets. The study concluded that the relationship between entrepreneurship education/ training and entrepreneurship outcomes was stronger for academic-focused entrepreneurship education/training interventions than for training-focused entrepreneurship education and training interventions. John (2012) conducted a study to analyze the impact of entrepreneurship capacity building in Nigeria. The results from this study showed that the educational systems in developing nations particularly Africa have not been structured to foster an entrepreneurship mindset. This flaw according to the study is a contributory factor to the slow pace of entrepreneurship in Africa and in response, suggested that the structure of Africa's educational system should be reviewed. Allan (2002) also argued for a new approach in entrepreneurship education. The study also pointed out that such an approach is unlikely to come from university business schools but rather an organizational revolution which can be managed within a university.

Second, while there are a number of literatures on entrepreneurship, capability development and job creation, studies such as John (2012); Martin *et al*., (2013); Sofoluwe*et al*., (2013); Ojeifo (2013) and Syed (2012) focused on education as the primary driver of capacity development. Contrary to this assertion, other studies such as Dae-Bong, (2009); Asaju, Kajang &Anyio, (2013) and Omojimite, (2011) identified other plausible channels in addition to education such as health and infrastructure as major contributory factors which propel the prospect for human capability development especially in Africa. In the same vein, De Muro&Tridico, (2005); Acemoglu, Gallego & Robinson, (2014); United Nations Development Programme (2009); Binder & Georgiadis, (2011) have pointed out the role of institutions in human capability development. Another group of studies have also argued for the imperative role infrastructural development on capacity development. These studies posit that in addressing the issue of capability development, it is essential to equally address infrastructural challenges if targeted results are to be realized. The studies of Waema (2002) and Sapkota (2014) support this argument.

Third, majority of the studies in literature applied the narrative analysis technique and survey methods to examine the role of entrepreneurship and capability development in employment generation. Some of these studies include John (2012), Zamberi (2012), Ojeifo (2013), Gibb (2002), Sofoluwe (2013), Sule (2013), Unger Rauch, Frese&Rosenbusch (2011), Muazu, Bala & Sagagi (2016) Martin, McNally, Kay & Michael (2013) and Nabi, Liñán, Mitra, Abubakar & Sagagi (2011). Only a few studies such as those undertaken by Gries, & Naudé (2010) and Shuaibu&Timothy (2016) employed an in-depth empirical analysis. Gries, & Naudé (2010) utilized a formal model of entrepreneurship in human development under the Sen's capability approach

framework while Shuaibu & Timothy (2016) investigated the determinants of human capital development in 33 African countries between 2000 and 2013 using the panel co-integration and causality technique.

3. Data Description and Methodology

3.1. Data Description

The variables used for this study are youth employment generation (JCN), Entrepreneurship (ENT), human development index (HDI), institution (INT), macroeconomic stability (STA) and infrastructure (INF). To capture youth employment generation (JCN), employment to population ratio was used as a proxy. Employment to population ratio is the proportion of a country's population that is employed. Working age population is generally considered from age 15 and above. A higher employment rate implies a higher youth employment rate which in turn infers a higher job creation potential. Entrepreneurship (ENT) is measured by self-employment rate. Self-employment rate is defined as the number of self-employed persons relative to total employment. This measure for entrepreneurship has been used by the studies of Parker & Robson (2004) and Blanchflower (2004). HDI denotes the human development index, used as a proxy for capability development. This index measures human development as well as the average achievements in a country in terms of life longevity, decent standard of living and access to knowledge.

The role of institutions and infrastructure denoted by INT and INF is captured by business regulatory environment and accessibility to internet respectively. The business regulatory environment assesses the extent to which the regulatory, policy and legal environments fosters or hinders private businesses in investing, promoting greater productivity and creating jobs. In line with Shuaibu& Timothy (2016), the role of institutions in capability development is particularly important, because it provides a favorable environment that engenders success of the implementation and the sustainability of human capital development programs. Therefore, improved institutional quality is expected to lead to higher human capacity development. On the other hand, the level of infrastructural development defined by accessibility to internet, reflects the number of individuals who through their devices either mobile phones or computer have utilized internet services in the last 12 months. The report from OECD (2006), emphasized that infrastructural development provides that foundation for virtually all modern-day economic activity and contributes significantly to the quality of life and overall improvement of living standards. Finally, to capture the stability of macroeconomic environment, Gross Domestic Product (GDP) growth rate is used as a proxy for economic growth. Basically, an increase in economic growth will translate to more job opportunities. According to Shuaibu & Timothy

(2016), a stable macroeconomic environment reflected by growth in the economy creates opportunities for capability development also.

3.2. Data Sources

To achieve the objective of this study, 20 Sub-Saharan Africa countries (Benin, Ghana, Nigeria, Senegal, Burundi, Cameroon, Central African Republic, Congo Republic, Chad, Kenya, Tanzania, Uganda, Rwanda, Ethiopia, Mozambique, Cote d'Ivoire, Lesotho, Malawi, Zambia and Zimbabwe) were selected as case study countries between the period of 2005 and 2017. The choice for these countries was primarily informed by data availability for the study period (2005-2017). Also, due to the nature of this study, secondary data obtained from World Bank Development Indicator database (WDI), International Labor Organization (ILO) Database and the United Nations Development Program Data (UNDP) were used.

3.3. Theoretical Framework

According to Human Capital Theory, investment in people is economically beneficial to individuals and society (Sweetland, 1996). Human capacity development finds its theoretical underpinnings in Sen's capabilities approach. According to Amartya Sen (1985) capabilities is defined as "the freedom that a person has in terms of the choice of functionings, given his personal features (conversion of characteristics into functionings) and his command over commodities." This viewpoint gives a paradigm shift in the analysis of development from income and nutrition towards education, health and more recently on social inclusion and empowerment (Todaro and Smith, 2009). In line with this perspective, Shuaibu&Timothy (2016) maintained that although education is key, it is insufficient to bring about the desired change to any economy. Factors such as overall policy environment, quality and quantity of investment, choice of technology are all important determinants of economic performance. The study also noted that the capability approach has highlighted the role of institutions for human development. De Muro and Tridico (2008) also show that institutional policies in line with development policies will reduce the uneven rate of development and also create development opportunities, a vital ingredient for entrepreneurial advancement and job creation. The study further argued that quality institutions play a key role in promoting both indirect and direct capabilities of individuals as well as improving individual productivity as good institutions create significant opportunities.

Stemming from the assertion of Shuaibu and Timothy (2016), the relatively weak performance of African economies is traceable to the human capital development gap. Quality education, infrastructural development and strong institution are capabilities development measures which are primary determinants of human capital development. The study of Gries&Naudé (2010)

agreed with the argument of Anand, Hunter, Carter, Dowding, Guala and Van (2009) which was based on Sen's capabilities approach that functioning's are made possible by access to resources, which may include entrepreneurial capital and opportunities. The study also asserted that "being entrepreneurial is a potential functioning, and when turned into an actual functioning, appropriate policy may contribute to the expansion of an individual's capability sets and improve positive freedoms. Therefore, the capability approach provides a framework for linking entrepreneurship with human capability development and job creation which an offshoot of opportunities created in the economy.

3.4. Model Specification

Based on the theoretical framework and drawing strongly from the study of Shuaibu andTimothy (2016) with specific modifications to suit the objective of the study, the model to be estimated is specified in equation (1).

$$JCN_{it} = \beta_0 + \beta_1 ENT_{it} + \beta_2 HDI_{it} + \beta_3 INT_{it} + \beta_4 INF_{it} + \beta_5 STA_{it} + e_{it} \quad (1)$$

JCN= Youth Employment Generation, EDU= Entrepreneurship, HDI = Capability development, INT = Institutions, INF = Infrastructure, STA= Macroeconomic stability, e = Disturbance term.

The presumptive signs of the variable are; $\beta_1 > 0$, $\beta_2 > 0$, $\beta_3 > 0$, $\beta_4 > 0$ *and* $\beta_5 > 0$

*i*represent the selected sub-Saharan Africa countries while the time frame under consideration is denoted by *t*.

4. Results and Discussion

4.1. Panel Unit Root Test Results

Since it is possible for the countries in consideration to be homogeneous, it is essential that the data series be subject to unit root test. The study employs the Levin, Lin and Chu (LLC) panel unit root test, Im, Pesaran and Shin (IPS) panel unit root test, Fisher's Panel ADF and PP tests. The results of the unit root test are shown in table 1. It is observed from the table that all the series are stationary at levels using Levin, Lin and Chu test, Im, Pesaran and Shin test and Fisher's Panel ADF test at 10% level of significance. However, using Fishers PP test, all the series except institutions (INT) are stationary at levels at 5% level of significance. This indicates that institution is stationary after first difference at 1% significance level. These findings show that the series are majorly stationary at levels as revealed by majority of the tests and the Panel Least Square estimator is therefore suitable for the study. As a result, the panel co-integration test is ignored.

4.2. Hausman Test Results

To determine the most appropriate model for the study, the Hausman Test is employed. The Hausman specification test compares the estimates of the fixed

Table 1: Panel Unit Root Test at Level

	Levin, Lin and Chu Test			*Im, Pesaran and ShinTest*		*Fisher ADF Test*			*Fisher PP test*		
Variables	*None*	*Intercept*	*Intercept and Trend*	*Intercept*	*Intercept and Trend*	*None*	*Intercept*	*Intercept and Trend*	*None*	*Intercept*	*Intercept and Trend*
Panel Unit Root Results at Levels											
JCN	-2.86094	-1.00412***	-3.57099***	-0.25702	0.28507	55.0338*	41.1093	42.1894	69.6384***	54.9733*	68.5222***
ENT	-3.28736***	-6.41583***	-1.30031*	-2.96373***	0.46735	79.9436***	73.0268***	51.5235	85.1829***	62.4307**	60.6346**
SDI	-5.81793***	-0.08225	-2.29907***	2.90580	1.14007	151.966***	24.4322	31.6346	237.235***	47.0032	26.2471
INT	0.70113	-2.97362***	-5.20154***	-1.00294	-1.79802**	11.3179	29.3746***	42.5151	27.0158	27.3095	34.2451
INF	13.7935	-13.2183***	-1.94334**	-5.26430***	3.28262	5.96093	109.037***	21.8960	0.06835	175.787***	25.7365
STA	-3.70296***	-7.29560***	-9.72374***	-4.41630***	-4.77446***	71.1831***	83.1104***	86.0634***	67.5578***	85.9484***	117.153***

Source: Authors' Computation, (2020); ***, **, * implies p-value significance at 1%, 5% and 10% respectively.

Table 2: Panel Unit Root Test at First Difference

	Levin, Lin and Chu Test			*Im, Pesaran and ShinTest*		*Fisher ADF Test*			*Fisher PP test*		
Variables	*None*	*Intercept*	*Intercept and Trend*	*Intercept*	*Intercept and Trend*	*None*	*Intercept*	*Intercept and Trend*	*None*	*Intercept*	*Intercept and Trend*
Panel Unit Root Results at First Difference											
JCN	-10.6123***	-5.65520***	-5.43713***	-3.82819***	-1.34536*	150.862***	80.5851***	52.8281*	220.292***	161.403***	154.854***
ENT	-7.51374***	-4.70185***	-6.52481***	-2.78453***	-0.71801	114.850***	63.1084**	43.5882	122.795***	70.2555***	45.3952
HDI	-3.23972***	-5.39082***	-8.83997***	-3.39600***	-2.77737***	85.2081***	71.1789***	66.8763***	85.7323***	71.2920***	78.5474***
INT	-11.1250***	-9.08734***	-9.85519***	-5.40576***	-7.48586***	148.673***	92.2641***	69.5443***	107.182***	149.624***	99.1537***
INF	-5.81288***	-6.42776***	-9.56682***	-3.01448***	-3.99127***	81.1244***	70.9584***	80.6791***	87.2964***	69.1098***	131.063***
STA	-19.2315***	-16.8154***	-14.4048***	-11.9450***	-7.90674***	124.734***	183.218***	299.515***	311.700***	265.297***	221.694***

Source: Authors' Computation, (2020); ***, **, * implies p-value significance at 1%, 5% and 10% respectively.

and random estimators; with a null hypothesis of random effect model and an alternative hypothesis of fixed effect, the test help to decide the appropriate model to use for the study. The result of the test is presented in table 3. The result shows that the null hypothesis of no individual effects (Random effect) was tested against the alternative hypothesis of the presence of individual effect (fixed effect). With the pvalue of the test statistics less than 0.05 the null hypothesis is rejected at 5% level of significance. This indicates that the Sub-Saharan African Countries are not homogeneous; as a result the country specific differences in these countries need to be controlled for. This informed the use of fixed effect model in this study. Therefore, the fixed effects model is employed to examine the relationship between entrepreneurship, capacity development and youth employment generation in 20 selected sub-Saharan African countries.

Table 3: Correlated Random Effect Hausman Test

Correlated Random Effects - Hausman Test				
Chi-Sq. Test Summary	*Statistic*		*Chi-Sq. d.f.*	*Probability.*
Cross-section random	*11.991800*		*5*	*0.0349*
Cross-section random effects test comparisons				
Variable	*Fixed*	*Random*	*Var(Diff.)*	*Probability.*
ENT	-0.096648	-0.040771	0.000341	0.0025
HDI	-0.023788	-0.029286	0.000224	0.7133
INT	-0.187686	-0.178412	0.002772	0.8602
INF	-2.799404	-2.166771	0.351354	0.2858
STA	0.004762	0.006796	0.000001	0.0356

Source: Authors' Computation, 2020

4.3. Panel Fixed Effect Model Results

With the establishment of the suitability of fixed effect model over the random effect model the empirical result is presented in table 4. The results show that in the 20 sub-Saharan African countries selected only entrepreneurship and infrastructure significantly affect job creation. However, the magnitudes of the effect do not conform to a priori expectation. Findings show that there is a negative and significant relationship between entrepreneurship and the percentage of the population formally employed at 5% level. This indicates that an increase in entrepreneurial activities reduces youth employment generation. This may be partly due to the role of the informal sector in the economy. The informal sectors of these economies are larger than the formal sectors, and most entrepreneurial activities falls within the informal sectors. Therefore, the higher the entrepreneurial activities, the higher the percentage of the population that move from paid employment to the less accountable self-employment leading to a reduction in the employment rate as a percentage of the population on record. Another important reason for the observed result may be due to the fact that entrepreneurial activities in Africa are still in their early stage of development, thus they are not recognized officially. Also, Table

4 shows that there is a negatively significant relationship between infrastructural development and employment rate as a percentage of the population at 5% level. This implies that the level of infrastructure drags employment creation in the selected countries. This is against a priori expectation and may partly be due to weak stage of infrastructural development. It is essential that as infrastructural facilities are improved in quality and availability, human capital should also be improved in proportionality as new skills are needed to match up the job created opportunities as a result ofinfrastructural quality. Therefore, in situations where this does not exist, employment rate falls as structural unemployment rate increases. Furthermore, human development index and institutional quality are observed to be positive determinants of Job creation in these economies but they are not statistically significant at 10% level. This further confirms the presence of unrefined human resources and weak institutions in Sub-Saharan African countries. Moreover, macroeconomic stability has shown to be ineffective in promoting job creation in these countries as it records a negative and insignificant effect on Job creation.

Table 4: Corrected Fixed Effect Panel Model
Fixed Effect Panel Regression Estimates

Dependent variable	JCN_{it}
JCN_{it-1}	0.796956***(0.0000)
ENT_{it}	-0.040767***(0.0083)
HDI_{it}	0.004432 (0.7316)
INT_{it}	0.063878 (0.4049)
INF_{it}	-2.136659***(0.0082)
STA_{it}	-0.001053 (0.7840)
	3.430311**(0.0299)
Vital Statistic	
R^2	0.935854
F-stat	124.8861 [0.000000]

Source: Authors' Computation, 2020

4.4. Diagnostic Tests

To ensure validity of the findings and examine if cross sectional dependency exists in the empirical results cross sectional dependency test is carried out. Gujarati & Porter (2009) noted that the presence of cross-sectional dependency in the empirical results makes the estimates inefficient in terms of minimum variance, although they still remain linear, unbiased, consistent and asymptotically normally distributed. Therefore, they suggested that these corrections be made in the presence of cross dependency of the countries.

Employing Breusch-Pagan LM, Pesaran scaled LM, Bias-corrected scaled LM and Pesaran CD tests to check for possible cross dependency in the estimated results. Table 5 presents the results of the dependency test. The results of the tests show that the estimates of the fixed effect model shown in table 4, exhibits cross sectional dependency since the p-values of the test are less than 0.05 which indicates that the null hypothesis of no cross-sectional dependency is rejected. Therefore, there is need to correct for the cross-sectional dependency. Gujarati & Porter (2009) and Green (2007) suggests a rerun with feasible GLS estimator and/or differenced fixed effect model.

Table 5: Cross Sectional Dependency Test

Residual Cross-Section Dependence Test
Null hypothesis: No cross-section dependence (correlation) in residual

Test	*Statistic*	*d.f.*	*Pro*
Breusch-Pagan LM	613.9503	190	0.0000
Pesaran scaled LM	20.72221		0.0000
Bias-corrected scaled LM	19.88888		0.0000
Pesaran CD	4.127582		0.0000

Source: Authors' Computation, 2020

This study however corrected for the cross-sectional dependency by including an autoregressive order one process (AR(1)) before employing the fixed effect estimator. The result is presented in table 4. Investigating the estimates of these results by checking for possible cross-sectional dependency in the model, the test shows that the estimated results are free from cross-sectional dependency since the p-value of the test is greater than 0.1. Therefore, the null hypothesis of no cross-sectional dependency is not rejected. The results of the test are presented in table 6 below.

Table 6: Cross Sectional Dependency Test

Residual Cross-Section Dependence Test
Null hypothesis: No cross-section dependence (correlation) in residuals

Test	*Statistic*	*d.f.*	*Prob.*
Breusch-Pagan LM	207.4935	190	0.1827
Pesaran scaled LM	-0.128583		0.8977
Bias-corrected scaled LM	-1.037674		0.2994
Pesaran CD	0.808176		0.4190

Source: Authors, Computation, 2020

5. Conclusion and Policy Implications

Interestingly, findings from this study have shown that Sub-Saharan African countries have a long way in the quest to eradicate the high and persistent unemployment rate, especially among youth. This study therefore concludes

that based on findings that human capital development, macroeconomic stability and institutional quality are essentially not the first point of call in the combat against the menace called unemployment as they are observed to be insignificant determinants of job creation in sub-Saharan Africa. However, entrepreneurial activities and infrastructural development should be of concern to the government and policy makers as they are observed to be significant determinant of employment. Moreover, for this significant impact to be actualized certain factors should be considered and taken care of. One, the 'unofficiality' of the informal sector. The informal sector of majority of the sub-Saharan African Country is large and not recognized officially. As a result, many self-employed/entrepreneurs are not accounted for in macroeconomic accounting. Two, the skill level of the people to match with the evolving and developing infrastructural quality. This calls for an increased activity of human resources refining in terms of training, education and health. Therefore, as a matter of policy implication/recommendation the government of these African Countries should ensure that the highlighted factors are considered and implemented, increase expenditure on health and education, and make considerable effort to reduce the large informal sector by putting in place laws and rule that will ensure that the activities of the self-employed people are recognized and accounted for on a large scale in these countries.

Note

1. Structural improvement in the form of increased provision of infrastructural facilities and improved institutional infrastructures.

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