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**VOICE AND ACCOUNTABILITY, GOVERNMENT EFFICIENCY, REGULATORY QUALITY AND YOUTH UNEMPLOYMENT IN SUB SAHARA AFRICA COUNTRIES**

By

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**Abstract**

*This study seeks to investigate the determinants of youth unemployment in Sub Sahara Africa countries for the period 1991 to 2016. The study used the panel data covering 18 countries. The study employed the autoregressive distributed lag model and generalized least square regression technique, the result depicts positive and statistical significant relationship between government stability, socioeconomic condition, external debt, secondary school enrolment, inflation and unemployment at 1% level of significance in SSA countries. However, GDP growth and corruption posits a negative and significant effect on unemployment. The coefficients Democratic accountability and bureaucratic quality indicates positive although not statistically significant showing poor responsiveness of the government to the people in SSA. There is also a long run causality among government stability, corruption, bureaucracy, investment profile and unemployment in SSA countries. Implication for policy is that is clear most governments in SSA have sustained continuity in office although may not have undertaken fully designed programmes. Thus, it is pertinent to ensure full implementation of blue print to improve the condition of youth employment in SSA countries. A more proactive policy driven towards diversification to improve GDP cannot be underscored alongside with realistic anti craft institutions to reduce the surge of corruption in SSA.*

**1.0 Background of the study**

The experience of sub Saharan Africa shows that youth accounts for about 40 percent of the working age population compared to 23 to 33 per cent of working age population in other parts of developing regions (African Economic Outlook 2012). The share of world youth unemployment has increased dramatically and the most vulnerable employment share of total employment is highest in Sub-Saharan Africa and South Asia, at more than 75% (see Pieters, 2013). In SSA youth participation in labour force in 1998 to 2010 stood at 53.7 and 53.6 respectively. Surprisingly, youth employment rate stood at 13.8 and 12.5 for the years. Although, there were few interventions by the authority to reduce the surge effect especially on the Demand-side by fostering job creation/work opportunities, Smoothing school-to-work transition and job mobility and Supply-side: Fostering skill development and labor market relevance of skills such program includes (Technical and Vocational Education and Training Sector Investment and Maintenance Loan in Zambia in 2001, Emergency Infrastructure Rehabilitation and Living Conditions in Congo in 2002, Poverty Reduction Support Credit Development Policy Loan in Senegal in 2005, Technical and Vocational Education and Training in Mozambique in 2006 among others. In spite of these programmes across sub Saharan African countries at different times, youth employment continued.

Unemployment continued to grow considering the number of secondary school enrollment and fewer decent jobs to sustain the rising population. As a policy initiative, the 2030 Agenda for Sustainable Development in its framework captures to 'promote sustained, inclusive, and sustainable economic growth, full and productive employment, and decent work for all Sub Sahara Africa countries. Specifically, to actualize it, targets were incorporated into this goal, including on achieving full employment for young people on substantially reducing the proportion of youth not in employment, education, or training as well as on developing and operationalizing a global strategy for youth employment by 2020 (UNGA 2015).

While several studies have employed trade openness, FDI, corruption, secondary school enrollment as parameters influencing youth unemployment in SSA countries (see Ebaidalla 2016; Azeng and Yogo (2013 and Nurudeen 2019). However, few studies have used institutional quality parameters. It is in the light of this that this study investigates the impact of voice and accountability, government efficiency and Regulatory quality on youth unemployment in SSA countries. This paper is structured into five sections including this introduction. Section two of this paper covers literature review, section three looks at methodology, section four presents the empirical result and discussion of findings and lastly, section five shows the conclusion and policy recommendations.

**Review of Empirical Literature**

In a recent study, Adjor and Kebalo (2018) use the panel vector autoregressive model (PVAR) to estimate the effect of corruption on unemployment for nine SADC countries spanning the period 2007-2016. The result of the study shows that corruption has a negative effect on unemployment.

**Anyanwu (2014) estimate the impact of Intra-African Trade reduce Youth Unemployment in 46 African**

countries applying the OLS, 2SLS Fixed effect estimation for the period 1980 and 2010. The result of the study indicates a one percent increase in intra-African trade will result in 1.47 percent reduction in overall youth unemployment. Also, a percent increase in intra-African trade will lead to 1.67 percent and 1.46 percent reduction in female and male youth unemployment rates, real GDP per capita is found to be positive and statistically significant on unemployment. The investment indicate positive and statistically significant and institutionalized democracy is negative and statistically significant at the one percent level in both the overall, female and male youth unemployment.

Ebaidalla(2016) examined the causes of youth unemployment in Sub-Saharan Africa (SSA) spanning the period 1991-2012. The study used panel data method for a sample of 30 SSA countries employing pooled, fixed effects (FE) and random effects (RE) models. The result of the study shows that the GDP growth has negative and significant impact on youth unemployment. Inflation is negative but it is not significant. The trade openness is found to have negative and significant impact on youth employment as expected, implying that a country with high degree of trade openness tends to experience low rate of youth unemployment.

Higgins (2003) investigated the effect of Trends in the Youth Labour Market in Developing and transition Countries using panel data spanning 1980 to 2000 panel regressions (with fixed country effects and AR(1)). The result of the study shows that unemployment in developing and transition countries is strongly determined by both demographic factors and aggregate labour market conditions.

Azeng and Yogo (2013) in their study employed fixed-effects regression with instrumental variables to estimate the relationship between unemployment and political instability covering 24 developing countries span the period 1980-2010. The result of the study shows that political instability occurs particularly in countries with high youth unemployment, social inequalities and corruption.

Ball, Jalles and Loungani (2014) in their study examines the consistency of relationship between unemployment and output covering nine countries, the Okun's Law is used to determine if any relationship holds, the time period of the study span 1989 to 2012 and the period 1989 to 2007 applying the pooled ordinary least square OLS and the result of the study indicates that all nine countries under study shows that the relationship between forecasts of changes in unemployment and changes in real GDP growth is negative, in other words, it is consistent with Okun's Law

Schmerer (2012) employed the GMM technique to explore the relationship between foreign direct investment and unemployment in OECD countries between 1980 to 2003, result of the study shows that a one percent increase in net-FDI reduces unemployment by roughly 0.8 percentage points.

Nurudeen (2019) examined the Phillips curve hypothesis (inflation and unemployment trade-off) and its stability in Nigeria from 1980 to 2016 applying the Autoregressive Distributed Lag (ARDL) bounds testing approach and the result of the study shows that higher unemployment leads to lower inflation in the long-run and a unidirectional causality from inflation to unemployment.

In another study, Azeng and Yogo (2015) youth unemployment on political instability in 40 developing countries for the sample period 1991-2009 applying the ordinary least square (OLS), result of the study indicates that the relationship between youth unemployment and political instability is not robust

**Bakare (2011) used Nigerian data to empirically investigate the determinants of urban unemployment in Nigerian economy from 1978 to 2008 and applying ordinary least square (OLS, ADF, cointegration test and ordinary least square (OLS, the result of the study shows that supply of labour, education status has positive and significant effect in short and long run. Inflation and gross fixed capital formation has a negative effect on unemployment in Nigeria.**

Bouzid (2016) employed system GMM technique to estimate relationship between the average corruption index and the youth unemployment rate for 96 countries over the period from 1985 through 2008. The finding of the study posit that corruption practices has a positive and significant effect on the unemployment rate for this segment of the population

### Research Methodology

This section of study covers the methodology of the study. It captures the sources of data and its types, sampling and sampling technique, model specification, variable definition and measurement, technique of data analysis.

### Type and Source of Data

The data used in this paper is panel data collected from several countries in Sub Sahara African countries. The data is retrieved from World Development Indicators and international country risk guide.

### Sample and Sampling Technique

This study covers eighteen (18) SSA countries spanning the period 1991 to 2016, what informed the decision on sample size of countries and observation is the availability of data inform of non-probability sampling technique

The modified model for this study is the demand and supply model of labour used by (Boateng, 2013).

Where  $y$  represents dependent variable,  $\hat{a}_1, \hat{a}_2$  are vectors of explanatory variables of supply factors and demand factors; and  $Z_i$  represents a vector of other control variables that affect the individual's labour market status as employed or unemployed. And  $\mu$  represents the stochastic error term.

$$Y = \hat{a}_1 + \hat{a}_2 S + \hat{a}_3 D + Z_i + \mu \quad \text{.....(3.1)}$$

### Model Specification

ARDL Model for the study is expressed as:

This study will employ the autoregressive distributed lag model, it is important to reiterate that one of the essential factor responsible for employing the ardl model is that series must not be integrated or same order (see Pesaran and Smith, 1995 and Pesaran, Shin and Smith 1997)

The generalized ARDL model is expressed as:

$$\text{.....(3.2)}$$

In this case, mean dependent variable is a vector that are allowed to be purely or cointegrated is the coefficient of lagged dependent variable called scalars; are coefficient of vectors; is the unit specific fixed effects; are optional lagged orders; is the error term or white noise.

There parameter ARDL error correction model is specified as:

$$\text{.....(3.3)}$$

Note:

- i. , group specific speed of adjustment coefficient (expected) that
- ii.
- iii. , the error correction term.
- iv. are the short-run dynamic coefficients.

### Variable Measurement

**Unemployment:** Unemployment refers to the share of the labor force that is without work but available for and seeking employment. It implies labour force minus employed persons (ILO 2019).

**Government stability:** it is the ability of government to undertake fully its declared programs and also its ability to stay in office. The risk rating assigned is the sum of three subcomponents, each with a maximum score of four points and a minimum score of 0 points. A score of 4 points equates to Very Low Risk and a score of 0 points to Very High Risk. The three sub components are Government Unity, Legislative Strength and Popular Support (ICGR, 2016)

**Socioeconomic condition:** it is the pressure at work in the society that could constrain government actions or fuel social dissatisfaction. The risk rating assigned is the sum of three subcomponents, each with a maximum score of four points and a minimum score of 0 points. A score of 4 points equates to Very Low Risk and a score of 0 points to Very High Risk. The key components are poverty, consumer confidence and unemployment International country Risk Guide (ICGR, 2016)

**Corruption:** It is measured as Corruption Perceptions Index (CPI), which is a composite index, or poll of

polls, that ranks countries in terms of the degree to which corruption is perceived to exist among public officials and politicians. This measure is in line with (Jude and Leveuge 2013 and Owusu-Nantwi 2018); ICGR (2016)

Democratic Accountability: it implies responsiveness of the government to its people, on the basis that the less responsive it is, the more likely it is that the government will fall, peacefully in a Democratic society, but possibly violently in a non-democratic one ICGR (2016)

Bureaucratic Quality: it implies institutional strength and quality of shock absorbers that tends to minimize revisions revision of policy when government changes ICGR (2016)

FDI: Foreign direct investment are the net inflows of investment to acquire a lasting management interest (10 percent or more of voting stock) in an enterprise operating in an economy other than that of the investor. It is the sum of equity capital, reinvestment of earnings, other long-term capital, and short-term capital as shown in the balance of payments. This series shows total net FDI. In BPM6, financial account balances are calculated as the change in assets minus the change in liabilities. Net FDI outflows are assets and net FDI inflows are liabilities. Data are in current U.S. dollars (see World Bank, 2014).

GDP growth: Annual percentage growth rate of GDP at market prices based on constant local currency. Aggregates are based on constant 2010 U.S. dollars. GDP is the sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products. It is calculated without making deductions for depreciation of fabricated assets or for depletion and degradation of natural resources (see World Bank, 2014). Natural Resources: Ores and metals comprise the commodities in SITC sections 27 (crude fertilizer, minerals nes); 28 (metalliferous ores, scrap); and 68 (non-ferrous metals) (see World Bank, 2014).

Inflation: Inflation as measured by the consumer price index reflects the annual percentage change in the cost to the average consumer of acquiring a basket of goods and services that may be fixed or changed at specified intervals, such as yearly (see World Bank, 2014).

Secondary school enrollment: Gross enrollment ratio is the ratio of total enrollment, regardless of age, to the population of the age group that officially corresponds to the level of education shown (World Bank, 2014)

### Techniques of Data Analysis

This study employs the fixed effect, random effect model and generalized least square regression approach. The study will also employ the stepwise regression model. The panel ADF and PP stationarity test is employed and the autoregressive distributed lag model approach.

### Result presentation

4.1 Table 1.

variable	OLS	OLS Robust option	FE A(1)	GLS
govstab	1.979569*** (.3830181)	1.979569*** (.3774175)	.6984565*** (.1950911)	1.979569*** (.3694955)
socioeco	2.252372*** (.5658496)	2.252372*** (.6159993)	.8674782*** (.522435)	2.252372*** (.5458721)
Exdebt	9.51*** (3.21)	9.51e-11*** (.08e-11)	-2.52e-11** (2.34e-11)	9.51e-11*** (3.10e-11)
Fdi	2.55* (2.90)	2.55e-12* (3.15e-10)	2.88e-10*** (1.06e-10)	2.55e-12* (2.80e-10)
gdpgrowth	-.3998388*** (.1467412)	-.3998388*** (.1213121)	-.069426** (.057152)	-.3998388*** (.1415605)
natresour	-.0342734** (.0382876)	-.0342734** (.0325693)	-.0348925** (.0254961)	-.0342734** (.0369358)
schenroll	.3932684*** (.0346554)	.3932684*** (0348936)	.1123206*** (.0353858)	.3932684*** (.0334319)
Infla	.1038381*** (.0621591)	.1038381*** (.0527995)	.0074109* (.0306631)	.1038381*** (.0599646)

Salvatore, Authors 21071\* - .1070901\* -.21071\*  
 Notes: \*\*\* \*\* \* (6.095514) 5% 10% statistical significance. Z statistics (6.4209598) (thesis). (.597678)  
 Bureauqua 1.308287\*\* 1.308287\*\* .2943889\* 1.308287\*\*  
 The result of the OLS is indicated in table 4.1 shows the OLS, OLS (with robust option, Panel (a) on  
 with fixed country effects and AR(1) and GLS estimation. The result OLS (with robust option) indicates that  
 government stability, socioeconomic condition, external debt, secondary school enrollment, inflation  
 posit a positive and significant relationship with unemployment at 1% in SSA countries. GDP growth and  
 corruption indicate a negative and significant relationship with unemployment at 1% level of significance.  
 This concurs with findings by Bouzid (2016) and Ball, Jalles and Loungani (2014)

The result for panel regressions (with fixed country effects and AR (1) shows that government stability, Socioeconomic condition, FDI, Secondary school enrollment indicates positive and significant on unemployment at 1% level of significance.

The result for GLS indicates a positive and statistical significant relationship between government stability, socioeconomic condition, external debt, secondary school enrolment, inflation and unemployment at 1% level of significance in SSA countries. However, GDP growth and corruption posits a negative and statistical significant effect on unemployment at 1% level of significance. The coefficient FDI has a positive insignificant relationship with youth unemployment. Bureaucratic quality and Democratic accountability indicate positive non-significant relationship on youth unemployment in SSA countries.

The result in table 4.2 depicts the stepwise regression model. It show that government stability, socioeconomic condition, secondary school enrollment, inflation posit a positive and significant effect on youth unemployment while corruption and GDP growth have negative effect on youth unemployment in SSA.

The result of stepwise regression ardl model in table 3 after employing the ADF and PP panel unit root test and employing the xtpmgpg, pmg and HausmanSigamore, result shows that the pmg model is most appropriate given the rule of thumb If P-value>0.05 then run PMG otherwise MG should be estimated. In this case the pmg is chosen over the mg because Prob>chi2 = 0.1763 is greater than 0.05 percent (see Blackburne and Frank, 2007; Pesaran, Shin and Smith 1997). The result of pmg explains government stability, corruption have positive and significant impact on unemployment, bureaucracy, and investment profile have a negative and significant impact on unemployment in SSA countries. Thus, to infer causality, the aforementioned coefficients have a long run causal impact on unemployment at 1% level. Furthermore, all the coefficients of homogeneous long run coefficients have joint causality effect on unemployment in SSA. There is also a long run convergence to equilibrium at the speed of 31 percent. On the contrary, result posit that short run coefficients and error variances for countries in the panel are not the same.

#### 4.2 Stepwise Regression and ARDL

variables	Stepwise	Cointegration
govstabi	1.689873*** (.3626356)	.3107966*** .1556175
Currupti	-5.96049*** (.7880455)	2.800043*** .4551936
socioecoi	2.571392*** (.516551)	-.2122762** .243834
daccounti	-	-.4881339** .3440614
bureauqai	-	-1.038026***

Source: Authors computation using STATA

Notes: \*\*\* \*\* \* denotes 1% 5% 10% statistical significance. Z statistics (in parenthesis).  
 investpi .471095  
 .7833488\*\*\*  
 .2467586

### Discussion of Findings

The result in table 4.2 specifically on auto regressive distributed lag model shows that government stability, corruption have positive and significant impact on unemployment, bureaucracy, and investment profile have a negative and significant impact on unemployment in SSA countries. Thus, to infer causality, the aforementioned coefficients have a long run causal impact on unemployment at 1% level. Furthermore, all the coefficients of homogeneous long run coefficients have joint causality effect on unemployment in SSA. But the error variances and coefficients for countries or groups in the panel are not the same.

The result OLS with robust option indicates that government stability, socioeconomic condition, external debt, secondary school enrollment, inflation posit a positive and significant relationship with unemployment at 1% in SSA countries. GDP growth and corruption indicate a negative and significant relationship with unemployment at 1% level of significance (see Ball, Jalles and Loungani 2014). In another development, GLS result indicates a positive and statistical significant relationship between government stability, socioeconomic condition, external debt, secondary school enrolment, inflation and unemployment at 1% level of significance in SSA countries. However, GDP growth and corruption posits a negative and statistical significant effect on unemployment at 1% level of significance (see Adjor and Kebalo 2018). The coefficient FDI has a positive insignificant relationship with youth unemployment. Bureaucratic quality and Democratic accountability indicate positive non-significant relationship on youth unemployment in SSA countries

### Conclusion and recommendation

This study examines empirically the effect of institutional and macroeconomic variables on unemployment in SSA countries for the period 1991 to 2016. The study employed the generalized least square regression technique and the result depicts positive and statistical significant relationship between government stability, socioeconomic condition, external debt, secondary school enrolment, inflation and unemployment at 1% level of significance in SSA countries. However, GDP growth and corruption posits a negative and statistical significant effect on unemployment at 1% level of significance. The coefficient FDI has a positive insignificant relationship with youth unemployment. Bureaucratic quality and Democratic accountability indicate positive non-significant relationship on youth unemployment in SSA countries.

It is clear most government in SSA have sustained continuity in office although may not have undertaken fully designed programs. Thus, it is pertinent to ensure full implementation of blue print to improve the condition of youth employment in SSA countries. Democratic accountability and bureaucratic quality indicates positive although not statistically significant showing poor responsiveness of the government to the people in SSA corruption and GDP growth are negative and statistically significant which impede youth employment hence will require a strong anti-craft agencies to curb it.

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#### Sample Countries

1. Botswana
2. Cameroon
3. Congo
4. Codeviore
5. Ghana
6. Kenya
7. Liberia
8. Malawi
9. Niger
10. Nigeria
11. Senegal
12. Sierra Leone
13. South Africa
14. Sudan
15. Uganda
16. Zambia
17. Zimbabwe
18. Gambia