Labour Market and Economic Growth in sub-Saharan Africa Countries

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Abstract

Labour market is an important institution for driving sustained and long-term growth in an economy. This study examined the relationship between labour market and economic growth for forty (40) sub-Saharan Africa (SSA) countries over the period of from 1991 to 2020. A dynamic panel data estimation technique was employed in the empirical analysis using the system Generalised Method of Moments approach. The results from the study reveal a strong positive effect of employment rate on economic growth in SSA. This implies that improvement in absorptive capacity of the labour market significantly improves economic activities in the region. There is however indication that inefficiency in the labour markets in SSA in terms of demand and supply of labour in the employment process has tended to derail the effectiveness of labour in the growth process. In particular, there is evidence that labour force participation rate weakens economic growth in SSA. Thus, while the demand side of the labour market appears to align with the broad relationship between the labour market and economic growth, the supply side essentially derails the relationship. The study therefore recommends that countries of the SSA region should strengthen employment growth by eliminating barriers in the productive sector, increasing aggregate productivity and ensuring stable macroeconomic environment. Excessive growth in youth population also needs to be addressed.

Keywords: Labour Market, Economic Growth, Panel Data

JEL Classifications: J21, F43, E24, C23

Introduction

The performance of the labour market pivotal for observing the role of labour in the growth process. In the same vein, sustained long- term growth in country's macroeconomic aggregates often results from increase in workers' productivity.

However, gross domestic growth rate, employment growth and productivity growth are closely related, and changes in economic growth indicators often have corresponding impacts on the growth of labour market performance indicators (Adegboye & Arodoye, 2023; ILO, 2015). According to ILO (2023), the sub-Saharan Africa (SSA) region has the largest working population structure as well as the highest growth in this segment of the population. In particular, 59 percent of the population in SSA falls in the category of working age, while this segment of the population is shown to grow at 2.7 percent annually. Thus, a large proportion of the population (63 percent) participates in the labour market. Thus, the SSA region has one of the largest labour markets in the world.

In spite of the large labour market in the SSA region, the nature of the economies has remained weak and generally unimpressive over the last decades. For instance, the informal sector in the SSA economies has grown extensively and dominates other aspects of the economies in terms of capacity to generate productive employment. Thus, a large segment of the labour force is in the informal and less productive sectors of the labour markets. This has implications for the capacity of the labour markets to provide the template for stimulating long run growth among the economies (AfDB, 2012; Fox & Gandhi, 2021; Fields, 2023). Moreover, the nature and composition of the labour markets in SSA countries has contributed to the slow down of economic growth and adequate structural transformation (Diao et al, 2017; Adegboye & Ighodaro, 2020).

Due to peculiar conditions in the labour markets of many SSA countries as outlined in Fields (2011) and Adegboye, et al (2019), there is no clear direction in literature on the direction of labour market performance indicators and economic growth relationship in SSA countries. This is in spite of several country-specific studies that have been conducted. In particular, there is evidence that labour markets effects on the economies in SSA are generally limited by highly segmented and informal labour markets. However, the outcome of the labour market characteristics is driven by the unique conditions of labour demand and supply in the region. The peculiarities of the labour demand and labour supply aggregates of the region have received little empirical evaluations in relation to the role of labour markets in economic growth among the SSA countries. This is a critical aspect of the relationship which this study intends to cover in the literature. Thus, the broad objective of this study is to examine the relationship between labour market indicators and economic growth in SSA countries. The

study focuses on the labour demand and labour supply equations taking into account the inclusion of the dynamic adjustment effects in the labour market.
The rest of the paper is structured as follows: the first section introduces the paper followed by background issues on labour market performance and economic growth while the third section addresses issues relating to theoretical and empirical literature. Also, section four contains model specification and identification while the empirical results are presented and discussed in section five and the study is concluded in section six.

Labour Market Performance and Economic Growth in SSA

The reports by the International Labour Organization (ILO) in 2019 shows that an estimated 172 million people in the world were identified to be involuntarily unemployed in the year 2018, which may have resulted to an unemployment rate of about 5.0 percent. In the event that many countries are faced with relatively stable economic conditions, the projected unemployment rates of most of the countries will be on the decline. However, the level of macroeconomic risks faced by most African countries often have adverse impacts on the labour markets of SSA countries. Table 1 explains the basic indicators of labour market performance indicators, the unemployment rates of SSA is small as compared to that of the African sub-regions like the Northern Africa and South Africa. However, on the average, the employment rate of SSA is about 3 percent, and this cannot accommodate for the required amount of needed jobs to cushion the adverse consequence of the rising level of labour force on economic growth in the region.

Table 1: Unemployment, employment growth and labour productivity in SSA and other Economies

Regions/ subregions/ country	**Unemployment rate (percentages)**				**Unemployment (millions)**			
	2017	**2018**	**2019**	**2020**	**2017**	**2018**	**2019**	**2020**
Africa	6.9	6.8	6.8	6.8	32.3	33.0	34.0	34.9
Northern Africa	11.9	11.8	11.8	11.7	8.7	8.8	9.0	9.1
sub-Saharan Africa	5.9	5.9	5.9	5.9	24.2	24.2	25.0	25.9
South Africa	27.3	27.0	27.6	27.6	6.1	6.1	6.3	6.4
	Employment rate (percentages)				**Labour Productivity growth (percentages)**			
	2017	**2018**	**2019**	**2020**	**2017**	**2018**	**2019**	**2020**
Africa	3.0	3.0	2.9	2.9	0.4	0.9	1.1	1.4
Northern Africa	1.4	2.0	1.9	1.8	2.9	2.2	2.3	2.5
sub-Saharan Africa	3.3	3.1	3.1	3.1	-0.4	0.6	0.9	1.2

Source: Culled from ILO, 2019

From the aforementioned, there is observed rise in the trend of labour supply in the SSA region (see Figure 1) as compared to those of other regions (like South East Asia and the Pacific) of the world, hence the need to stimulate the growth of economic activities so as to generate more jobs for the rising working-age population. The most striking revelation is the negative and relatively low labour productivity growth in the SSA from 2017 to 2020 as compared to that of the Northern Africa. This low labour productivity growth may not be unconnected with the relatively low annual economic growth rate that has been recorded in the region as compared to some other regions of the world (for example, South Asia) – See Figure 2.

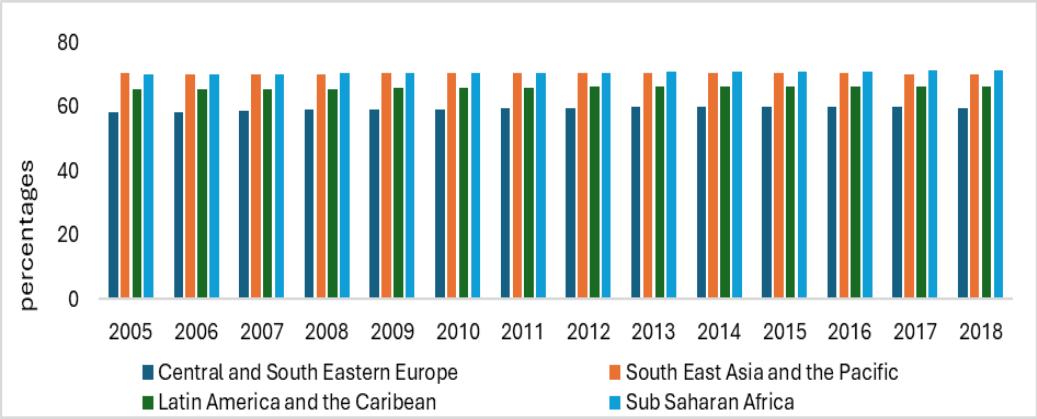


Figure 1: Total Labour Force Participation Rates by Regions (2005 -2018)

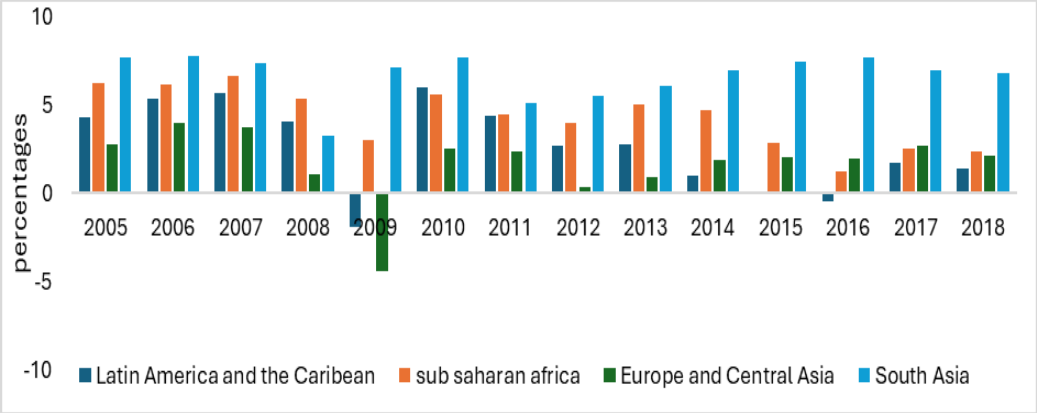


Figure 2: Gross Domestic Product growth rates by regions (2005-2018)

Brief Review of Relevant Literature

Labour markets like other markets refer to places where labour services are bought and offered for sales, and these markets comprise of those of wage employment and self-employment (Fields, 2006). In a related development, labour force participation rate represents the economically active population or labour force as a percentage of the total population aged 15-64 years. Economically active population includes those employed or unemployed (Elezi, Muca & Muraki, 2014). Okun's law has provided a veritable background for much of the studies relating growth with labour market outcomes. In the same vein, Fuch (1980) noted that the sectoral patterns of labour markets particularly influence economic outcomes in terms of aggregate output. Consequently, a large concentration of labour in low-productive sectors is likely to slow doen economic growth for a country. Okun's (1962) research also established an inverse relationship between the unemployment rate and real output growth rate, providing the underlying framework for a positive relationship between an efficient labour market growth in empirical studies. A majority of these studies have focused on estimating employment elasticities to explain how each unit of output growth generates employment yields. On a broad scale, Schalk and Untiedt (2000) examined the link between labour market outcomes and growth in developing countries, focusing on the German economy by estimating and validating an Okun equation for the economy.

Manene at al. (2015) model labour market performance in SSA taking into account the application of a convex optimization approach, and the empirical outcomes from the study revealed that the SSA region recorded the highest level of poverty among labour force measured through economic growth. However, further investigations show that the SSA region is much richer in both human capital and resources. In an earlier study, Kingdon, Sandefur and Teal (2005) demonstrated that inefficiencies and deep segmentation in labour markets in the SSA region has resulted in excess labour supply, especially in regard to a declining productive labour demand sector. The result is widespread open unemployment and low-productive and vulnerable employment outcomes, including a large self-employment sector. McCollough (2017) examines labour productivity and employment gaps in SSA by providing an overview of the key features of structural transformation in four African economies. The author affirmed the relevance of agriculture to structural change in SSA and emphases the productivity gains enjoyed by labourers through structural transformations.

Mbaye and Gueye (2018) explain that there is often imbalance between supply and demand in Africa's labour market and that such imbalance is often associated with high levels of unemployment and underemployment, and few high-quality jobs. In this direction, Adegboye and Arodoye (2023) also found that economic growth among SSA countries promotes total employment, especially in the services sector which has the largest capacity to absorb mainly low-productivity proportions of the labour market. Using a Cobb–Douglas input-output function, Haider et al (2023) developed a model of the labour market with an inefficient employment demand sector to explain how weak demand-side in the labour market influences aggregate output growth. They found that employment in the labour markets responded positively to economic growth irrespective of the share of sectoral output in the economy, although the effects were deeper for high income countries.

Another major literature on the relationship between labour markets and economic growth focuses on the estimation of employment elasticities which show the dimension of labour market employment outcomes that are generated from units of economic growth (Adegboye, 2020). Kapsos (2005) initially estimated employment elasticities for a panel of 160 countries and found that employment responds more intensively to units of economic growth Africa than in the Middle East. Basu and Das (2015) also investigated the patterns of output growth and employment for India and the US with focus on the problem of "jobless growth". Adegboye (2020) found that employment elasticity was more intense for certain sectors among SSA countries, and that employment responses were more pronounced in these economies for years with larger economic growth. The study revealed that while agricultural sector growth drove employment in India, the manufacturing sector growth increased employment in the US. Gorg (2023) also found that strong short and long run employment elasticities among OECD countries.

Methodology

Theoretical Framework

Labour market theories in recent times have emphasised the roles of labour market imperfections and hysteresis in the process of economic growth (Berger & Fourie, 2019). Thus, as Aiginger (2004) noted, fluidity in the labour market (driven by both demand and supply efficiency) appears to be the most important factor that explains the link between the labour market and economic growth on the basis of theory. In particular, the role of the labour input in the determination

of economic growth largely depends on the efficiency of the labour market. The search and matching model, originally formalized by Mortensen and Pissarides (1994), provides a theoretical framework for analyzing how dynamics in the labour market affect employment conditions which spill over to economic growth. The model argues that that efficient labour markets ensure flexibility in the system and help to reduce market frictions. This directly impacts the allocation of labour resources with long term positive implications for economic growth, especially in developing economies. In the model, flexible labour markets allow for the reallocation of labour to high-productivity sectors, enhancing overall economic efficiency.

In the same vein, the flexibility of labour markets facilitate adaptation to technological change which leads to sustainable growth. This is achieved by increasing the endogenous component of aggregate labour input over time. In mismatched labour markets, workers are employed in positions below their skill levels, thereby reducing aggregate productivity. The search and matching model therefore accounts for the dynamics of job creation and destruction, which are critical for understanding short-term fluctuations and long-term trends in economic growth. The model thus complements the endogenous growth theories that emphasize human capital and innovation by linking labour market efficiency with aggregate productivity in the economy.

The theoretical framework demonstrates that the labour market significantly affects economic growth through direct channels (via labour supply, wage determination, and productivity) and indirect mechanisms (via changes in technology adoption and institutional quality). Thus, a well-functioning labour market that is supported sound labour market institutions is essential for fostering long run economic growth. This shows that both the patterns and dynamics of the labour market are essential for providing the basis for sustainable growth. The model highlights the link between short-term labour market fluctuations and long-term economic growth patterns.

Model Specification

The model specified in this section is based on the baseline and alternative model frameworks (see equations 1 to 3), these models rely on the simple two-equation models developed by Singh and Hussein (2003). Also, evidence from literature suggests that labour market may interact with macroeconomic factors and produce effects on employment that may not be similar to those of the direct effects (Blanchard and Wolfers, 2000; Tomassetti, William & Veersma, 2017). Hence,

the following model specifications(equation 1 – baseline specification capturing the relationship between labour market and economic growth is hinged on the aforementioned literature mentioned and reviewed in this section, equation two captures the activities of labour supply and equation 3 represents labour demand activities):

$$gdpgr_{it} = \alpha_0 + \beta_1 gdpgr_{it-1} + \beta_2 labmkt_{it} + \beta' X_{it} + \mu_i + \varepsilon_{it} \quad (1)$$

$$tlfpr_{it} = \alpha_0 + \beta_1 tlfpr_{it-1} + \beta_2 labss_{it} + \beta' S_{it} + \mu_i + \varepsilon_{it} \quad (2)$$

$$tempor_{it} = \alpha_0 + \beta_1 tempor_{it-1} + \beta_2 labdd_{it} + \beta' D_{it} + \mu_i + \varepsilon_{it} \quad (3)$$

where *gdpgr* is growth in real GDP in country *i* at year *t*, *labmkt* is labour market indicator which is proxied by total labour force participation rate (*tlfpr*), *tempor* is total employment to population ratio, *unemr* is unemployment rate, *wagsl* is wages and salary, and *qpwkr* is output per worker which is a measure of labour productivity in a country, X represents a vector of other important factor(s) that either directly affect labour market and or economic growth (for example, population growth rate), u_i represents the unobservable country- specific fixed effect that are time invariant, and ν_{it} denotes the remainder disturbance which are independently and identically distributed.

In the case of the labour supply model, total labour force participation(*tlfpr*) rate represents labour supply while *labss* denotes the labour supply indicators (like, unemployment rate, wages and salary etc) and *S* captires other control variable (for example population rate). In terms of the labour demand model, total employment (*tempor*) represents labour demand while *labdd* denotes labour demand indicators(like, wages and salary, total labour force participation rate) and *D* captures other control variables in the labour demand equation (like population growth rate and real gross domestic product – measure of economic activity). The dataset for this study are for 40 SSA countries for which data is available. All the data on the indicators of labour market and economic growth are based on the dataset from the World Employment and Social Outlooks and the World Bank Development Indicators.

Empirical Results

Descriptive Statistics

The summary statistics of the data series of the various variables employed for the estimations are reported in Table 2. Average gross domestic product growth rate

is 4.38 percent while that of employment rate and unemployment rate are 65.91 and 8.84 percent respectively, suggesting that employment rate relatively high for the SSA region. Among the labour market indicators, labour productivity rate has the highest average score for the countries followed by total labour force participation rate, and this may suggest that on the average, the SSA region has had impressive improvements in both output and productivity during the period under consideration. In addition, the one percent significant levels of the Jarque Bera statistics indicates the rejection of the normality assumption for each of the variables, and this implies the possibilities of heterogeneity in the panel dataset employed for the estimation.

Table 2: Descriptive Statistics

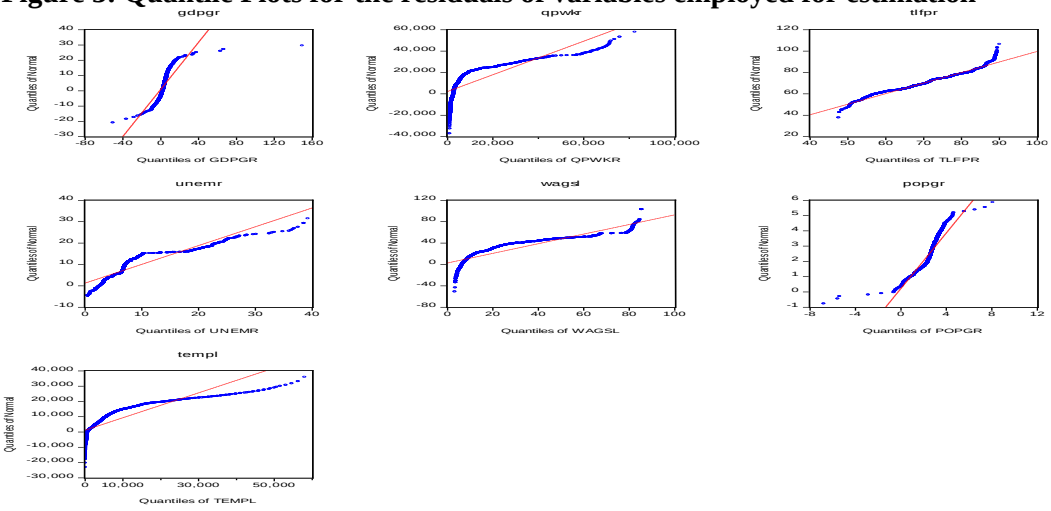
Variable	Mean	Std. Dev.	J-B Stat	Obs.
Gross domestic product growth rate	4.38	7.60	800566.00*	1120
Output per worker	10364.93	14305.16	3251.17*	1120
Total labour force participation rate	72.10	10.35	42.55*	1120
Total employment to population ratio	65.91	11.62	28.83*	1120
Unemployment rate	8.84	6.81	898.38*	1120
Population growth rate	2.55	1.00	12993.08*	1120
Wages and salaries	26.01	23.15	318.17*	1120

*Source: Author's Computation based on data from World Employment and Social Outlook of the ILO and WDI * = 1 percent significant level*

Distribution Patterns of the Density Functions for Residual

This explanation of the distribution of the residuals in the data series employed for a panel data analysis is important for a cross-country study, and this can be achieved by plotting quantiles (see Figure 3). In this study, the quantiles are plotted using the Quantile-Quantile (Q-Q) theoretic plot. The plot for the GDP growth rate indicates that both relatively small negative and positive shocks drive the departure from normality in the variable, this trend is also similar to those of wages and salary, unemployment rate and total employment to population ratio . However, total labour force participation rate series generally lies on the straight line (except for the extreme on the positive dimension that appear to vie off the line) while population growth rate had a relatively stable oscillation along the line but with slight positive deviation at the extreme.

Figure 3: Quantile Plots for the residuals of variables employed for estimation



Correlation Matrix

The preliminary patterns of relationship among the labour market indicators and economic growth in SSA are reported in Table 3. Positive correlation is shown among each of the labour market performance indicators variables (except for unemployment rate). The positive relationship is strongest between population growth rate followed by total labour force participation rate, wages and salaries and economic growth. The negative correlation unemployment rate and economic growth suggests that unemployment rate and economic growth move in opposite directions in the SSA region, and this may imply that high unemployment rate retards economic growth in the region.

Table 3: Correlation Matrix

Variables	GDP growth rate	Output per worker	Employ-ment rate	Labour force participation rate	Unemplo-yment rate	Wages and salaries
Outpout per worker	0.01					
Employment rate	0.10	-0.42				
Labour force participation rate	0.11	-0.32	0.91			
Unemployment rate	-0.04	0.44	-0.62	-0.26		
Wages and salaries	0.07	0.73	-0.50	-0.33	0.60	1.00
Population growth rate	0.21	-0.05	0.21	0.15	-0.24	-0.32

Source: Author's Computation based on data from World Employment and Social Outlook of the ILO and WDI

Test for Cross-Section Dependence in Panel Dataset

The check for cross-section dependence in a panel data analysis is important to ascertain the effect of spatial or geographical patterns on the various residuals of the data series employed in the study, and it will help us make a decision on the choice of panel unit root and co integration approach(es) to be employed(homogeneous or heterogeneous).The results from the Breuch-Pegan, Peseran Scaled and Pesaran CD rejected the null hypothesis of no cross section dependence or correlation in residuals of the data series employed, hence, there are presence of dependence among the residuals employed, and this will necessitate the use of heterogeneous unit root and co-integration approaches while those of homogeneous approaches will be reported for emphasis.(See Table 4).

Table 4: Cross Section dependence test result

(Null hypothesis: No cross-section dependence(correlation) in residuals		
Test	**Statistics**	**d.f**
Breusch-Pegan LM	1002.01*	780
Pesaran scaled LM	4.61*	
Pesaran CD	7.32*	

*Source: Author's computation. * /**/***= 1,5,10 percent significant levels*

Properties of Dataset: Tests for Stationarity and Panel Co integration

In the case of the stationarity test, homogeneous (Breitung, Levin, Lin and Chu) and heterogenous (Im, Pesaran and Shin, Augmented Dickey Fuller-Fisher) unit root approaches were conducted at level and first difference, the homogeneous and heterogeneous approaches at first difference shows that the variables employed for estimation are stationary at 1 percent significance level. However, the homogeneous and heterogeneous unit root approaches at levels show that some of the variables are not stationary. As a result of the first difference stationarity established among the variables, we proceeded to conduct the panel cointegrations among the variables.

Table 5: Panel Unit Root Tests

Variables	Level				first difference			
	Homogenous		heterogeneous		Homogeneous		heterogeneous	
	Llc	**Brt**	**ips**	**adf**	**llc**	**Brt**	**ips**	**adf**
Gross domestic product growth rate	-8.81*	-8.17*	-9.38*	235.67*	-16.17*	-15.5*	-26.03*	625.34*
Total labour force participation rate	-2.87*	4.13	2.23	68.55	-1.89**	-3.98*	-3.56*	142.37*
Total employment to population ratio	-2.56*	2.24	0.53	94.86	-3.97*	-5.64*	-8.78*	246.54*
Unemployment rate	-1.6**	-0.01	-1.96**	116.58*	-11.14*	-11.8*	-16.81*	397.42*
Population rate	-25.3*	-3.11*	-32.9*	1779.24*	-23.61*	-9.97*	-28.91*	1423.1*
Wages and salary	-2.95*	-1.86*	-3.46*	131.17*	-10.89*	-15.7*	-15.22*	360.69*
Output per worker	-2.13*	7.04	2.25	72.43	-9.40*	-8.62*	-12.50*	302.91*

*Source: Author's Computation * /** = 1,5 percent significant levels. Llc=Levin,lin and chu, brt=breitung, ips=im,peseran and shaw, adf=augmented dickey fuller-fisher chi square, pp-f=phillips peron –fisher chi-square*

The panel co integration tests (Kao-homogeneous approach and Pedroni – Heterogeneous approach) shows that there is significant presence of cointegrating vectors among the variables, establishing strong long run relationships among the variables. This result also provides supports for a panel pooling procedures for further estimations (See Table 6).

Table 6: Panel Co integration Test

Homogenous co integration	**heterogeneous co integration**	
Kao residual cointegration test	Pedroni residual cointegration test	
t-statistics	Alternative hypothesis - common AR coefficient	
statistic -8.97*	Within - dimension	
	unweighted statistics	weighted statistics
	panel v-stat 0.22	-1.63
	panel rho-stat 3.82	2.70
	panel PP-stat -6.58*	-15.30*
	panel ADF stat -0.53*	-7.27*
	Between-dimension - Alternative Hypothesis: Individual AR Coefficient	
	group rho stat 4.76	
	group pp stat -21.86*	
	group ADF stat -7.01*	

*Source: Author's computation. * /**/***= 1,5,10 percent significant levels*

Dynamic Assessment of the Relationship between Labour Market and Economic Growth in sub-Saharan Africa Countries

The relationship between labour market performance indicators and economic growth for the SSA region is empirically explored in this section. In Table 7 the results of the effects of labour market indicators and other control variables on economic growth are presented. The diagnostic tests are generally impressive, the Hansen's J over-identifying restriction test results indicate the acceptance of the null hypotheses of the validity of the instruments employed for the baseline specification (labour market) and the alternative specifications (labour demand and labour supply). Also, the non-significance of the second order Arellano and Bond auto-regressive estimates indicate the absence of autocorrelation in our models.

The empirical results from baseline model specification show that there is a negative and significant relationship between total labour force participation rate and economic growth. This suggests that as labour force increases, the economic structure of the region cannot accommodate such increase as a result of the rising macroeconomic risks as well as the global financial crises that hits the region in 2008. The result reveals a significant positive relationship between total employment to population ratio and economic growth. This shows that creation of more jobs to absorb for the growing labour force in the SSA region tends to enhance the economic growth performance. Also, the result provides indication that a larger absorptive capacity of the labour markets in SSA countries also guarantees significant growth prospects. In addition, the results indicate that population growth and wages and salary structure have significant positive effects on economic growth. Surprisingly, labour productivity is shown to exert negative effect on economic growth in the region.

Table 7: Result for Labour Markets and Economic Growth in SSA Countries

Variables	labour market		Labour supply		Labour demand	
	coef.	**t-stat**	**coef.**	**t-stat**	**coef.**	**t-stat**
GDP growth rate (-1)	0.18*	7.09				
GDP growth rate					0.01*	14.7
Output per worker	-0.01	-0.8				
Total labour force PR (-1)			0.88*	481.38	0.52*	86.6
Total labour force PR	-2.19**	-2.03			0.32*	18.72
Total emp. to Pop ratio	2.20***	1.81				
Unemployment rate	0.1	1.43	-0.01*	-33.31		
Population rate	1.65*	2.97	0.02*	10.15	0.03*	2.6
Wages and salary	0.22***	1.9	0.01*	2.31	0.01*	4.62
J-statistics (prob)	0.31		0.36		0.35	
ar(1)	-2.01*		-2.34*		-2.23*	
ar(2)	-0.01		-0.27		-0.53	

*Source: Author's computation * /**/***= 1,5,10 percent significant levels*

For robustness checks, we examine the labour demand and labour supply models to be able to assess the dynamic effects of output growth in the demand and supply outcomes of the labour in the labour market in SSA. The empirical results from labour demand model shows is a significant positive effect of real output growth on labour demand in the region, suggesting that economic growth increases labour demand in the region. This is to be expected since output growth increases demand for input in the productive sectors. Labour force participation rate is also shown to significantly improve labour demand. This outcome is interesting from the model since it indicates that employment rate rises with higher participants in the labour market. Studies like Fields (2011) and Adegboye et al (2019) have explained this results for SSA by showing that the informal employment sector significantly rises with each increase in labour supply. The result also shows that wages and salaries positively influence labour demand in SSA. In general, the labour demand model suggests that the real GDP growth in the SSA region needs to remain strong in comparison with those of other stronger regions of the world to be able to absorb the fast-growing labour force in the region.

In terms of the labour supply model, the empirical results reveal that while labour force participation rate significantly increases labour supply, unemployment rate tends to reduce the supply of labour in the SSA region. Thus, there is evidence that labour supply appears to respond negatively to rising unemployment rates in

the region. This shows that the labour market is more likely effective in terms of curbing supply inflow during periods of chronic unemployment rates even though the large informal sector is willing to absorb more labour.

Conclusion

Labour market plays pivot role in enhancing the economic growth of both developing and developed countries, and the favourable labour market indicators are catalysts to ensuring sustained and long- term growth. This paper examined the relationship between labour market and economic growth using the dynamic panel data estimation technique of system Generalized Method of Moments (sys-GMM) for forty SSA countries for the period ranging from 1991 to 2020. The models for the study reflected the labour market, economic and other control variables that determine the entire labour market impact on economic growth as well as the assessments of the activities of labour demand and labour supply in SSA countries. The results from the study reveal that a rising labour force participation rate significantly improves economic growth in SSA, thereby underscoring the critical role of the labour input in output. Also, there is evidence that increase in employment rate directly promotes economic growth, also emphasizing the place of labour in production in the region. There is however indication from the study that inefficiency in the labour markets in SSA in terms of demand and supply of labour in the employment process has tended to derail the effectiveness of labour in the growth process. On the labour demand side, there was evidence of a positive and significant effect of both output growth and, while the rate of wages and salary was also found to promote demand in the labour market. On the labour supply side, unemployment rate was found to be the leading factor in limiting labour supply in SSA countries.

The results from the study demonstrates a significant connection between labour market indicators and economic growth in SSA countries. In particular, the study shows the need to address labour market inefficiencies, especially in terms of matching supply and demand, in order to further reap significant benefits of the large labour market in SSA countries. Apart from the market-specific issues, the study suggests the need to promote macroeconomic stability and ensure sustained expansion of the productive sector in order to boost labour market demand and ensure long-term equilibrium in labour market. Thus, there is the need for SSA countries to strengthen employment growth to be able to keep up with the rapid expansion of the labour force. There is also need to accelerate economic activities to create the number of jobs needed to reduce the growing rate of unemployment.

Reference

Adegboye, A.C. & Arodoye, N.L. (2023). Structural changes and employment growth in sub-Saharan Africa: Does demographic structure matter? *Journal of Economic Development*, 48(2), 143-166.

Adegboye, A.C. (2020). Macroeconomic policies and sustainable employment yields in sub-Saharan Africa. *African Development Review*, 32(2), 515–527.

Adegboye, A.C. & Ighodaro, C.A.U. (2020). Decomposing employment growth in selected sub-Saharan African countries: The roles of structural changes and demographic transition. *CBN Journal of Applied Statistics*, 11(2), 145-179.

Adegboye, A.C., Egharevba, M.I. & Edafe, J. (2019). Economic regulation and employment intensity of growth in sub-Saharan Africa, in Elhiraika, A.B., Ibrahim, G. and Davis, W. (Eds.), *Governance for structural transformation in Africa*. London: Palgrave Macmillan, pp. 101-143.

African Development Bank (2012). Labour force data analysis: Guidelines with African Specifications. Tunisia: Statistics Department. Accessed via: afdb.org/sites/defaults [9th November, 2019].

Aiginger, K. (2004). Labour market reforms and economic growth: The European experience in the Nineties, *WIFO Working Papers*, No. 232. 1-37

Berger, P. & Fourie, F. (2019). High unemployment and labour market segmentation: A three-segment macroeconomic model. *South African Journal of Economic and Management Sciences*, 1-12.

Blanchard, O. & Wolfers, J. (2000). The role of shocks and institutions in the rise of European unemployment: The aggregate evidence. *The Economic Journal*, 110(March), C1-C33.

Diao, X., Harttgen, K. & McMillan, M. (2017). The changing structure of Africa's economies. *World Bank Economic Review*, 30(2), 412-433.

Elezi, P., Muca, E., & Muraku, E. (2014). Albanian labour market dynamics, 2001 – 2011. Republic of Albania Institute of Statistics.

Fields, G.S (2006). A public lecture: labour markets and economic development. *Journal of Eastern Caribbean Studies*, 31(2), 72-84

Fields, G.S. (2011). Labor market analysis for developing countries. *Labour Economics*, 18(1), S16-S22.

Fox, L. & Gandhi, D. (2021). Youth employment in sub-Saharan Africa: Progress and prospects. *African Growth Initiative (AGI) Working Paper*, No. 28.

Gorg, H., Hornok, C., Montagna, C., & Onwordi, G.E. (2023). Employment to output elasticities and reforms towards flexicurity: Evidence from OECD countries. *Bulletin of Economic Research*, 75(3), 641-670.

Haider, A., Jabeen, S., Rankaduwa, W., & Shaheen, F. (2023). The nexus between employment and economic growth: A cross-country analysis. *Sustainability*, 15(15), 11955.

International Labour Organization (2023). *World Employment Social Outlook: Trends 2023*. Geneva: ILO.

International Labour Organization (2015). *Decent Work Country Diagnostics - Technical Guidelines to draft the Diagnostics Report*. Geneva: ILO.

Kingdon, G., Sandefur, J., & Teal, F. (2005). Labour market flexibility, wages and incomes in Sub-Saharan Africa in the 1990s.Global Poverty Research Group, Working Paper 030

Manene, M.M., Mwangi, M.M., & Pokhariyal, G. (2015). Modelling labour market performance in sub-Saharan Africa. *International Journal of Development Research*, 5(2), 3192-3199.

Mbaye, A.M & Gueye, F. (2018). Labour markets and jobs in west Africa. Working Papers Series No 297, Africa Development Bank, Abidjan, Cote d' Ivoire.

McCollough, E.B. (2017). Labour productivity and employment gaps in sub-Saharan Africa. *Food Policy*, 67, 133-152.

Mortensen, D.T. & Pissarides, C.A. (1994). Job creation and job destruction in the theory of unemployment. *The Review of Economic Studies*, 61(3), 397 415.

Singh, B. & Hussein, S. (2003). Modelling the labour market in Fiji. Fiji: Economics Department, Reserve Bank of Fiji

Tomassetti, P., William, L. & Veersma, U (2017). Collective bargaining and labour productivity in Germany, Italy, the Netherlands, Poland, Spain and the UK: A comparative analysis to unravel the 'productivity puzzle. Commissioned Paper by the European Union DG Employment, Social Affairs and Inclusion, Paper No. VP/2015/004/0099.