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EFFECTS OF EMPLOYMENT PROTECTION LAWS ON UNEMPLOYMENT IN SUB-SAHARAN AFRICA

BY

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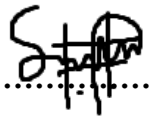
DECLARATION

I, MARK SENANU KUDZORDZI, the author of this thesis, hereby declare that with the exception of references to other studies which have been duly acknowledged, this thesis is the original research undertaken by me towards the award of Master of Philosophy degree in Economics in the Department of Economics, University of Ghana under the guidance of my supervisors. This thesis has neither in part nor in whole been submitted for any academic award elsewhere. I bear sole responsibility for any shortcomings.



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ABSTRACT

Unemployment has been a ben of sub-Saharan African countries over the years and its impact on various facets of the economy is glaring. Some of the causes of these high unemployment rates are poor economic performance, civil unrest and unfavourable labour regulations. With the recent interest in leveraging employment laws, this thesis analyses the link between labour regulations and unemployment in sub-Saharan Africa.

Using the Centre for Business Research Labour Regulation Index (CBR-LRI) database, it has been shown that laws regulating different forms of employment have been increasing over the years but at a lower rate as compared to the World's average. Within the sub-Saharan African block, Francophone countries have higher level of restrictions with regard to different forms of employment than their counterparts. In a similar vein, employment protection laws in sub-Saharan Africa have also seen an increase in their level of protection over the years and are more pronounced than laws regulating different forms of employment.

Using the system generalized method of moments estimation technique on 20 sub-Saharan African countries over the period 2000 to 2013, the study established a positive relationship between unemployment and employment protection laws in sub-Saharan Africa. Also, an insignificant negative relation was found between laws regulating different forms of employment and unemployment.

The study also established a positive link between unemployment and foreign direct investment. However, freedom status of a country and trade openness impact unemployment negatively. Thus, it is imperative for sub-Saharan African countries to put up policies that can mitigate the surge in unemployment through relaxation of employment protection laws.

DEDICATION

This Thesis is dedicated to God Almighty and to my parents, Oslo Wilson Kudzodzi and Matilda Lekettey and my uncle, Emmanuel Dotsey Agbenorto.

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I am most thankful to the Almighty God, for giving me grace and strength to sustain me throughout this period. Indeed, God has been faithful to me and I cannot thank Him enough.

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LIST OF ABBREVIATIONS

2SLS	Two-Stage Least Squares
ADF	Augmented Dickey-Fuller
SBIC	Schwarz-Bayesian Information Criterion
CBR-LRI	Centre for Business Research Labour Regulation Index
CCMA	Commission for Conciliation, Mediation and Arbitration
CMA	Commission for Mediation and Mediation
DFE	Different Forms of Employment
ECOWAS	Economic Community of West African States
EPL	Employment Protection Laws
EWI	Employing Workers Index
FDI	Foreign Direct Investment
FEM	Fixes Effect Model
GDP	Gross Domestic Product
GMM	Generalized Method of Moments
ILO	International Labour Organization
IV	Instrumental Variable
OECD	Organization for Economic Co-operation and Development
OLS	Ordinary Least Squares
REM	Random Effect Model
SSA	sub-Saharan Africa
UNCTAD	United Nations Conference on Trade and Development
WDI	World Development Indicators

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

In recent times, a lot of studies have been carried out to understand the economic performance of sub-Saharan Africa (SSA) countries (ILO, 2017). Factors such as civil conflict, poor export promotion policies, infrastructure inadequacies, low level of foreign direct investment and poor governance were considered to be responsible for the poor economic performance of African countries (Fosu, 2015; Rodrik, 2016). One of the key consequences of this poor performance is high unemployment rate. Other studies have offered various ways of reducing the poor economic performance of African countries. Baah-Boateng (2015b), indicates that a substantial investment in high labour absorption sectors such as agriculture and manufacturing in Ghana could have greater effect of reducing unemployment. Folawewo and Adeboje (2017), also suggested that favourable macroeconomic environment will lead to employment generation in Economic Community of West African States (ECOWAS) countries.

Unemployment rates in SSA stood at 7.2 percent over the period 2016 and 2017, against improvement in economic growth from 1.4 percent to 2.6 percent over the same period (International Labour Organization, 2017). Economists, policy makers and economic managers alike, from time immemorial, have made the unemployment subject a great deal of concern due to its devastating effect on individuals, society and the economy at large by writing and providing solutions to this predicament. Despite the efforts in eradicating the phenomenon, many African countries have continued to battle with the phenomenon of unemployment.

Essentially, one of the requirements of economic development that researchers argue about is labour market flexibility. As indicated, employment protection laws (EPL) can improve

productivity of firms and countries at large, thus enhancing welfare (Altman, 2005). Although, the impact of labour laws on economic growth has been widely debated, Botero et al. (2004) found that unemployment rates, especially among the youth, tend to increase with a more rigid employment laws. In the World Employment and Social Outlook (2015), it was reported that EPL and laws relating to different forms of employment (DFE) have a reducing effect on unemployment, contradicting the initial position by Botero et al. (2004).

The term employment protection laws/legislations (EPL) can be referred to as sets of regulations that put a certain limitation on firms in terms of hiring and firing of workers. These laws may not be grounded in law but may either emanate from negotiation from social partners or outcomes of court rulings (Barone, 2001). The strictness of these laws varies across countries and their impact on economic indicators is not straight-forward. The debate concerning the enactment of labour laws to increase productivity and employment without compromising on protection still lingers on and it is imperative for governments to enact set of labour policies that will efficiently deal with labour market outcomes.

The theoretical view of labour laws operating to distort market outcomes is dying out, as World Bank's *Doing Business Report* (2015), observed that employment laws are 'undoubtedly necessary' and benefit both the employees and the firms and where employment laws are 'sufficient', growth tend to pick up (World Bank, 2015:231).

It is important to note that most of the studies carried out concerning employment laws and its economic significance focused on developed countries with little attention to developing countries, especially African countries. This study seeks to bridge the gap by looking at the effect of employment protection laws (EPL) and regulations relating to DFE on unemployment

in sub-Saharan Africa (SSA) using the newly extended Centre for Business Research Labour Regulation Index (CBR-LRI) dataset.

1.2 Statement of the Research Problem

One of the most important indicators of a good performance of an economy is the level of employment and unemployment rates. Also, the regional average rates reflect how each economy within the region is performing, but due to outliers, this conclusion might be misleading. Although average unemployment rate is 7.32 percent in SSA in 2017, it is lower than other developing regions such as Latin American and Caribbean and Arab States whose unemployment rates stood at 7.75 and 8.5 percent in 2018 respectively. The individual rate for that of SSA countries show a wider gap (ILO, 2017). For instance, unemployment rate in 2017 in Congo is as high as 46.1 percent, 27.2 percent in South Africa, 4.2 percent in Cameroon and as low as 2.4 percent in Ghana (ILO, 2017).

The problem of high unemployment rates is usually attributed to poor economic growth without looking at employment protection laws (Rodrik, 1997). Also, studies that have investigated the impact of employment laws on unemployment focused on developed countries (Betcherman, 2015; Deakin, Malmberg, & Sarkar, 2014). However, the level of unemployment rates in SSA makes it imperative to investigate the sources of this high level of unemployment through various sources, such as employment laws.

Although business cycle has strong relationship with changes in unemployment rates, structural unemployment, which is related to labour market institutions, remains a major component of unemployment. Feldman (2009) showed that in both developed and developing countries, when labour market regulations are stricter, it leads to an increase in unemployment.

The World Bank's *Doing Business* database reports that Africa as compared to other regions, has on average, the highest employment regulations (Africa Economic Outlook, 2012). The SSA region's average employment rigidity indicator in 2008 was 47 while other regions in the world had an average below 32. This implies that SSA countries have high degree of employment protection regulations than in other regions but its effect on employment generation or rates of unemployment has not been widely established. It is important to enact good laws but it is more important to properly enforce them. Generally, regulations enacted by African governments tend to suffer from efficacious enforcement. Labour regulations are not regarded to be an important hindrance to the dealings of a lot of firms in Africa due to poor implementation of regulations (Gwatidzo & Moyo, 2014).

Notwithstanding the issues of implementation, unavailability of literature on how either the de jury or de facto laws impact unemployment in SSA create a literature gap, which this paper seeks to fill. Availability of a quality data to measure the level of protection of labour laws has been in contention since the 1990's when Lazear introduced this study. The CBR-LRI dataset, which measures the degree of protection of labour laws in 117 countries, is yet to be used to analyse the relationship between labour laws and unemployment rates in SSA specifically.

More so, forms of employment are more diverse in SSA, where non-wage activities, including self-employment and family enterprise work constitute a large share of employment. There is also considerable number of wage employees in the informal sector where the coverage and enforcement of labour standards and employment protection laws is weak. The attributes and quality of employment, coupled with modest administrative and implementation capacities,

brings up questions about how regulations of the labour market actually function in developing countries and, thus, how the regulatory framework should be looked at.

1.3 Research Questions

In undertaking this study, we seek to find answers to the following questions.

i. What are the trends of labour laws in SSA?

ii. Do labour regulations have any significant link with unemployment in SSA?

1.4 Objectives of the Study

The main objective of the study is to find out how labour regulations (employment protection laws (EPL) and laws regulating different forms of employment) affect unemployment rates in SSA. Specifically, the study seeks to:

i. show the trends, pattern and degree of labour laws in SSA relative to other regions;

ii. establish a possible empirical effect of labour regulations (employment protection laws and laws regulating different forms of employment) on unemployment in SSA.

1.5 Methodology and Data Source

To fulfil these objectives, the study uses panel data on twenty (20) SSA countries from the period 2000 to 2013 from a secondary source. Due to inadequacy of data availability, all the SSA countries are not studied. The choice of the period is also due to availability of data and on current data. However, relationship patterns can be analysed using this number of countries and the specified period. Secondary data on SSA countries is used for the analysis. Data on employment protection laws, GDP growth rate, foreign direct investments and other relevant variables were extracted for these countries for the analysis. Data for the analysis was sourced

mainly from Centre for Business Research Labour Regulation Index (CBR-LRI) dataset, World development Indicators and Freedom House indicators.

1.6 Justification and Significance of the Study

Unemployment is a very topical issue in the world and very important in policy making in Africa. Its devastative effect, especially on poverty reduction is pronounced. Studies have been carried out globally to ascertain the causes of unemployment and how to possibly reduce it and its impact on other macroeconomic indicators. Rodrik (1997) indicates that one of the main causes of unemployment in SSA is the poor performance of their economies. But due to the democratisation of African countries coupled with the enactment of laws to regulate various sectors of the economy, the economic performance of a country may only be one of the factors contributing to unemployment. One of the main reasons of limited research of employment protection laws and unemployment in SSA is lack of relevant data and its admissibility (Adams et al., 2018). Data collected on labour legislations may not capture the actual implementation of those laws.

Globally, a recent study by Adams et al., (2018), used the updated version of CBR-LRI dataset to analyse how labour regulations impact some economic indicators in 117 countries. A regional breakdown of these countries may provide a clearer view on labour law effects, which this paper seeks to establish. Betcherman (2015), on the other hand analysed the effects of labour regulations on unemployment in developing countries in the world and assumed same effect for SSA due to similar characteristics SSA countries have as compared to developing countries. On a country specific level, Ahmed & Aljane (2014) studied the link between labour market flexibility and unemployment in Tunisia, where they established no linkage.

The findings of this study are expected to redound to the benefit of society considering the devastative effects of unemployment, especially on poverty. The high growth of population in SSA, especially the youth, will create unemployment situations in the future and if not tackled upfront might lead to social upheavals. As attention is being paid to economic growth in order to reduce unemployment rates, laws relating to DFE as well as EPL should also be of much interest in alleviating poverty through job creation, which eventually reduce unemployment rates.

1.7 Organization of the Study

The thesis consists of five chapters. Chapter One is concerned with the introduction of the thesis and covers the background of the study, statement of research problem, research questions, objectives of the study, scope and justification of the study. Chapter two comprises of overview of labour markets of Africa/SSA as well as trends of labour laws in SSA. Chapter Three comprises of the literature review, where both the theoretical and empirical literature were reviewed. Chapter Four deals with the methodology and discussion of empirical results followed by summary, conclusion and policy recommendation in chapter five.

CHAPTER TWO

THE LABOUR MARKET IN SUB-SAHARAN AFRICA

2.0 Introduction

This chapter is divided into four major sub-sections. The first section overviews unemployment in sub-Saharan Africa (SSA), whilst the second section provides a review of labour regulations in SSA and explores the trends of labour laws in SSA.

2.1 An overview of unemployment in SSA

Unemployment statistics in SSA is often sourced from population censuses, labour force survey and other nationally representative living and household budget surveys. Due to the fact that African countries have defective employment centres, data on labour market outcomes, such as unemployment rates are usually obtained from household surveys and population census (Baah-Boateng, 2015a). The periodic nature of conducting the surveys and the population census makes it difficult in accessing unemployment data in a timely manner. Table 2.1 shows unemployment rates in selected countries in SSA as well as the global average from 2016 to 2017. The unemployment rates, on average, in SSA (7.3 percent) are higher than the World's average of 5.5 percent. The rates also differ amongst countries in the region, from a low rate of 1.3 in Rwanda in 2017 to 27 .3 in South Africa and Lesotho for the same year. Largely, countries in West Africa have reported lower rates of unemployment than those in the South and Eastern Africa. This might be due to the higher informality of West African countries than Eastern African countries.

With regard to youth unemployment, countries such as South Africa, Botswana, Gabon, Lesotho and Namibia have the highest rates of youth unemployment in SSA. South Africa in particular has more than half of her youth being unemployed. These high rates of youth unemployment could be as a result of "vulnerability of the youth during economic recessions due to inadequate experience as compared to their adult counterparts. The lack of job search experience and limited labour market information hinders their chances of being employed" (Baah-Boateng, 2015a).

Table 2.1*:* Unemployment rates by region and selected SSA countries (percent), 2017

	All	Adults	Youth

Country/region	Total	Male	Female	Male	Female	Total
World, 2016	5.5	5.2	6.0	12.7	15.2	13.4
SSA, 2017	7.3	6.4	8.3	12.3	16.1	13.9
South Africa	27.3	25.6	29.0	49.3	58.8	53.5
Lesotho	27.3	24.8	30.1	34.5	44.1	38.5
Namibia	23.3	21.8	24.9	38.4	53.4	45.5
Gabon	19.7	14.0	28.2	30.8	42.9	35.9
Botswana	17.4	14.2	21.0	29.5	42.9	35.7
Sudan	12.7	9.1	23.1	21.3	42.9	17.3
Kenya	11.5	7.9	15.3	20.1	33.1	26.2
Angola	8.2	7.7	8.7	18.8	19.0	19.1
Mali	7.9	7.3	8.7	16.8	19.4	18.0
Zambia	7.8	7.3	8.4	14.9	15.8	15.1
Mauritius	7.1	4.9	10.7	19.0	31.5	24.5
Nigeria	7.0	7.6	6.3	11.9	15.3	13.4
Burkina Faso	6.3	4.1	9.1	5.5	12.8	8.6
Ethiopia	5.2	3.1	7.5	5.1	10.0	7.4
Zimbabwe	5.0	4.1	5.7	7.0	9.5	8.2
Senegal	4.9	4.8	5.0	5.2	5.9	5.5
Cameroon	4.2	3.4	5.2	7.5	10.6	8.9
Dem Rep Congo	3.7	3.1	4.3	6.6	7.9	7.3
Cote d'Ivoire	2.6	2.1	3.3	2.8	4.9	3.7
Ghana	2.4	2.2	2.6	4.5	5.3	4.9
Tanzania	2.2	1.7	2.8	3.2	4.7	3.9
Uganda	2.1	1.5	2.8	2.2	3.7	2.9
Rwanda	1.3	1.2	1.4	1.5	2.6	2.1

Source: Constructed from Key Indicators of Labour Market (ILO 2017)

With regard to gender perspective, the rates of unemployment are largely higher among females than their male counterparts. In Table 2.1, apart from Nigeria, the unemployment rates among females in the rest of the SSA countries are higher than males. Thus, the gender difference in terms of youth unemployment is skewed towards the females. In all cases, the rates of unemployment of males are lower than females, ranging from 58 percent in South

Africa for males to 2.6 percent in Rwanda in 2017 for females. This explains the difficulties females go through in accessing employment in the region thus, the need for empowerment and gender equality (Baah-Boateng, 2016). This trend is not far from the World's and SSA's average, where female youths tend to have higher rates of unemployment than males.

Considering the aspect of education, the rates of unemployment at various education levels differ across countries with some reporting higher rates of unemployment with higher education level (Figure 2.1). Interestingly, apart from Tanzania and South Africa, the rest of the countries reported in the figure show increasing rates of unemployment, with at least, secondary school education than basic school education. This raises concern about the importance of education, where knowledge is acquired for efficient delivery in the labour market. Countries such as Senegal, Mali, Cote D'Ivoire and Sierra Leone, which are all West African countries, recorded the highest rates of unemployment among tertiary graduates while those with primary or basic level of education have the lowest unemployment rates. In Rwanda, Mauritius, Ghana and Seychelles, the unemployment rates are highest among those with at least secondary education followed by tertiary level of education.

The unemployment rates are irregular in Tanzania, where those with primary education have unemployment rate of 6.5 percent, 4 percent for secondary school leavers and 8.5 percent for tertiary graduates. The observations from the discussion ensuing is as a result of limited job openings in the formal sector. Individuals with at least secondary education as well as tertiary education tend to look for job opportunities in those formal sectors (Baah-Boateng, 2015a). Those countries with lower level of informality (South Africa and Namibia) and the unattractiveness of the informal sector, tend to have higher rates of unemployment in the lower levels of education.

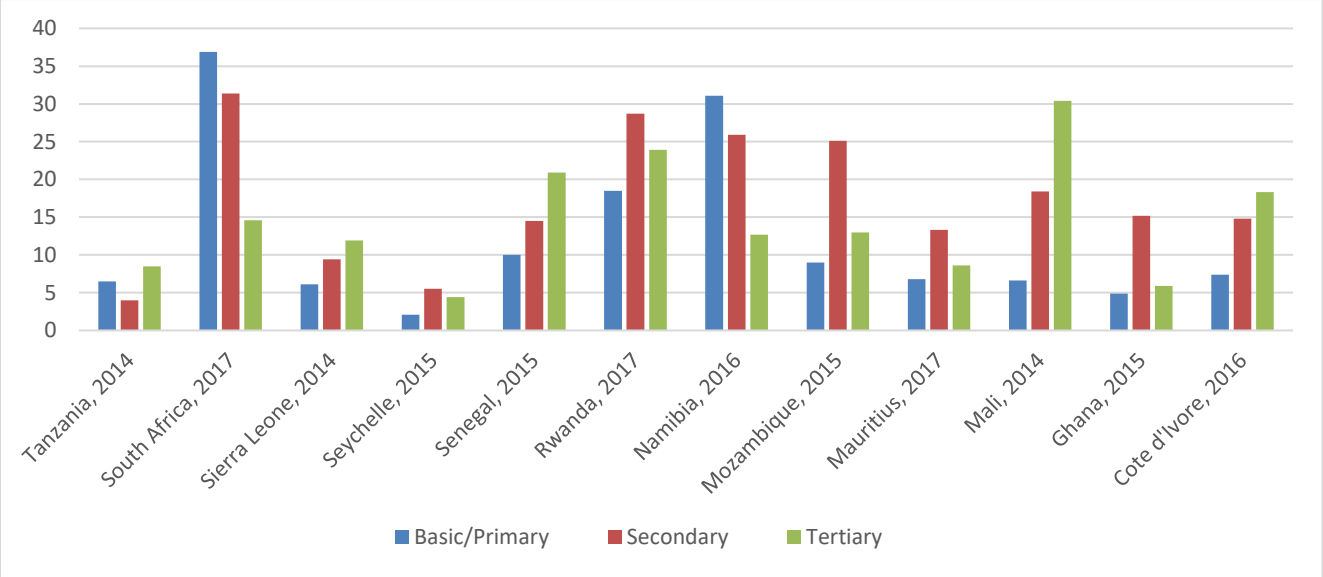

Figure 2.1: Unemployment rates by level of education attained in SSA

Source: Constructed from Key Indicators of the Labour Market (ILO, 2017)

2.2 Review of Labour Laws in Africa

This sub-section reviews the labour laws in SSA. The section is divided into four sub-sections. The first sub-section deals with the collective bargaining and settlement of industrial disputes. The second presents condition of employment, the third sub-section focuses on employment security whereas the last sub-section deals with measurement of labour market regulation. In all the sub-sections, comparison is made among four countries; these are Kenya, South Africa, Tanzania and Uganda.

2.2.1 Collective Bargaining and Settlement of Industrial Disputes

One of the most complex and delicate problems of the industrial society is industrial relations. Without cooperation, it will be impossible for the industry to progress. Thus, harmonious living of both employees and employers should be of great interest. Industrial relation can be considered to be the process through which relationships are expressed and how conflicts are managed in the industry (Export-Import Bank of India, 2013).

However, one of the ways in which disputes can be settled between employees and employers is by collective bargaining. This has been made easy and applicable due to the establishment of unions by both the employees and the employers. The processes and the laws backing collective bargaining varies across countries.

In Kenya, disputes regarding dismissal or termination of employment shall within 28 days be reported to the Minister. After which the Tripartite Committee is consulted by the Minister before drawing conclusions on the dispute. These disputes cannot be referred to the Industrial Court without the approval and referral by the Minister. In South Africa however, any party to a dispute can report the dispute to a council or Commission for Conciliation, Mediation and Arbitration (CCMA) if the jurisdiction of the council is limited. One of the resolution processes used by either the council or CCMA is conciliation. If the dispute is unresolved by the council or CCMA, it is then referred to the Labour Court for adjudication.

In Tanzania, the Commission for Mediation and Arbitration (CMA) established by the Labour Institution Act, 2004, gave it the power to resolve labour disputes. These disputes are only reported to the CMA if they were not resolved at the workplace level. Upon reporting to CMA, it uses various resolution processes in resolving the dispute and when parties are not satisfied with their ruling, they can appeal for a review.

On the other hand, in Uganda, disputes are reported to a Labour Officer or the Commissioner. Disputes that take national interest and can cause havoc to the nation are reported to the Commissioner and the other minimal disputes are reported to a Labour Officer. The Labour Officer has 2 weeks to resolve the dispute, failure of which, any party can refer it to the

Industrial Court. Also, the dispute may be referred to the Chief Judge if the Industrial Court is unable to resolve the dispute.

2.2.2 Condition of Employment Contract

Over the years employment contracts have undergone various changes. As a result of globalization, one needs to treat labour and capital flexibly so as to compete effectively in a fast changing World. The argument about employment contract is that with stringent labour laws, domestic firms are disadvantaged as well as deterring foreign direct investment, hence leading to negative impact on output, investment and employment. Meanwhile most countries in SSA over the past decades have initiated reforms to make their labour laws investment and employment friendly. A classic example in this direction is reforms regarding contract of labour.

In Tanzania, contracts take two forms, oral and written or formal and informal. Employment contracts may be terminated upon expiry. Moreover, oral contracts cannot exceed six months and if going to be renewed, should have the same conditions or better as well as same period as before. Meanwhile, in Uganda and Kenya, no distinction is made between fixed term contracts and their lengths in their respective labour legislations (Exim Bank, 2013).

Table 2.2: Labour Laws Provisions Related to Fixed Term of Contract (Selected Countries in SSA)

Countries	Fixed term contracts prohibited for permanent tasks	Maximum length of a single fixed term contracts (months)	Maximum length of fixed term contracts, including renewal (months)

Kenya	No	No limit for term contracts (excluding casual employees)	No limit
South Africa	Yes	There is no prescribed maximum duration	No limit
Tanzania	Yes	No limit. However oral contracts may not be for a period exceeding six months	No limit
Uganda	No	No limit	No limit

Source: Exim bank

2.2.3 Employment Security: Termination of Contract

An important aspect of employment laws is law relating to employment termination. The unavailability of such laws leads to unfair dismissal of employees. Many employer associations see stricter laws in relation to employment termination to be hampering their effort to innovate by hiring new workers. Notwithstanding, stricter dismissal laws encourage employers to train and develop their workers (Exim Bank, 2013).

Sub Saharan African countries have various forms of employment termination laws and are varied in content. The Acts that deal with dismissal regulations in Kenya are Employment Act, Cap 226, Trade Dispute Act, Cap 234 and the Regulation of wages and Conditions of Employment Act, Cap 229. According to these Acts, an employer in Kenya is expected to respect the notice period in the contract as well as payment in lieu of notice, but this can be

overlooked in cases of gross misconduct that leads to summary dismissal. Similarly, it is applied to fixed term contract workers and specific task contract. Moreover, any dismissed person is entitle to severance pay of not less than 15 days' pay.

In South Africa, laws relating to termination of employment can be sourced from the constitution, legislation, the common law and collective agreements. From these laws, the outmost reasons for dismissal are connected with the conduct, capacity and operational requirements of the employee. Also, engaging in illegal strike may contribute to dismissal of an employee. The employer is also expected to give prior notice of dismissal to the employee in relation to the terms of the contract. Arrangement should also be made on the payment in lieu of notice after termination of the contract. Severance payment of at least one week's pay is required to be paid to the dismissed worker.

On the other hand, laws relating to dismissal in Tanzania can be sourced from Security of Employment Act, 1964, the Employment Ordinance, 1956 and the Severance Allowance Act, 1962. These laws take into recognition of both written and oral contracts. Some of the main reasons for terminating a contract may include misconduct, lack of skill, disobedience of laws and order and continuous neglect of duties. Written contract employees are entitled to not less than 28 days' notice, while oral contract employees are entitled to 24 hours, 14 days and 30 days' notice for contracts less than a week, less than a month and more than a month respectively. All dismissed workers are also entitled to severance pay of at least one week's pay per year of service.

In Uganda, Employment Act 2006 regulates the termination of employment. An employee can be dismissed if he or she continuously breaks regulations at workplace and in the contract of

service. A notice period is expected to be given to the employee according to his or her contract years. Also, at least a day per week should be given to the employee for the purpose of seeking new employment. Dismissed worker is also entitled to four weeks' pay and any additional compensation.

2.2.4 Measurement of Labour Market Regulations

The most important task in measuring empirically the strength or otherwise of regulation of the labour market is to find a method that can efficiently and clearly evaluate developments which are not straightforwardly expressed in numerical forms. Minimum wage legislations, which constitute other form of employment regulations, can be obtained with relative ease because they can be represented in numerical forms, thus, analysing it will not pose a lot of challenges. For many facets of employment protection laws (EPL) and regulation prevailing in other related areas of labour market regulation, such as regulations in relation to different forms of employment (DFE) including part-time, fixed term and temporary agency work, are more complex in assessing the degree of relative protectiveness (Adams, Bishop, Fenwick, Bishop, & Fenwick, 2018). Notwithstanding the difficulty of these concerns, the earnestness of the need to simulate more jobs, couple with methodological developments in investigating cross-country time series data, a lot of interest have been expressed in measuring and predicting the impact of labour regulations.

There are various datasets that document labour laws. One of the earliest was the labour index constructed by Botero et al. (2004). The index codes labour laws for over eighty developed and developing countries and comprises of over forty indicators. Another index was developed by the World Bank called the 'Employing Workers Index' (EWI). It entails three sub-indices: a 'rigidity of employment index'; an index of non-wage labour cost; and an index of firing cost

(Marshall & Fenwick, 2016). The chief substitute for Botero et al. and EWI is the OECD's index of strictness of employment protection regulation. It covers only 28 OECD countries with components: laws affecting dismissal of workers with regular employment contracts; rules governing fixed term and temporary agency work; and collective dismissal procedures.

These indices are deficient in terms of having a consistent time series, thus making longitudinal analysis problematic (Adams, Bishop, & Deakin, 2016). The labour regulation index advanced by the Cambridge Centre for Business Research offers alternate methodology to legal coding which tries to address some of the issues with methodology (Adams & Deakin, 2014).

In an effort to document the variations over a longer period, this study employs the CBR-LRI that was advanced in the mid-2000s and later improved in 2017. It provides longitudinal data on changes in the formal or de jure content of labour law rules. It also offers an exceptionally detailed and inclusive account of changes in the labour laws, covering both developed and developing countries over periods of several decades (ILO, 2015).

2.3 Trends of Labour Regulations in Sub-Saharan Africa

2.3.1 Regulations Relating to Different Forms of Employment

Regulations relating to different forms of employment (DFE) are concerned with rules governing self-employment, part time work, fixed term employment and agency work. From the CBR-LRI, eight sub index are considered to be related to regulations of DFE (Adams, Bishop, Fenwick, et al., 2018; ILO, 2015). These indices express the manner in which DFE contracts are regulated (Table 2.2). Some indicators quantify the level of protection presented to individual workers, such as, the condition that 'a part time worker received equal treatment than is provided to a full time worker'. The strengths of regulations with regard to DFE were

also measured with other indicators, such as the limitations on the operations of temporary worker agencies. Generally, these sub-indices explore how labour laws follow the aim of safeguarding workers, through limitations on the use of regulations relating to DFE and/or by demanding equal protection for workers with regular employment contracts. The overall averages of the eight variables shown in Figure 2.3, portrays that the stringiness of regulations relating to DFE have steadily increased in the 1990's.

Table 2.3: **Indicators Related to Different Forms of Employment in SSA (2000-2013)**

Note: The numbers follow the variable numbers in CBR-LRI database

Indicators related to different forms of employment
1 The law, as opposed to the contracting parties, determines the legal status of the worker.
2 Part-time workers have the right to equal treatment with full-time workers.
3 Part-time workers have equal or proportionate dismissal rights to full-time workers.
4 Fixed-term contracts are allowed only for work of limited duration.
5 Fixed-term workers have the right to equal treatment with permanent workers.
6 Maximum duration of fixed-term contracts.
7 Agency work is prohibited or strictly controlled.
8 Agency workers have the right to equal treatment with permanent workers of the user undertaking

Source: CBR-LRI database

Over the years, the level of protection in Figure 2.2 have been more stringent for North African countries than the global average, while SSA countries' averages are below the world's average. The 1966 adopted Labour Code which was revised in 1994 and 1996 to relax

regulations in relation to hiring and dismissal in Tunisia is accounting for the sharp increase in the level of protection in North Africa in the year 1996 (Ahmed & Aljane, 2014). It is not surprising to observe that SSA countries averages are below the world's average, in that developing countries tend to have lower level of restrictions as compared to developed countries (Adams, Bishop, Fenwick, et al., 2018).

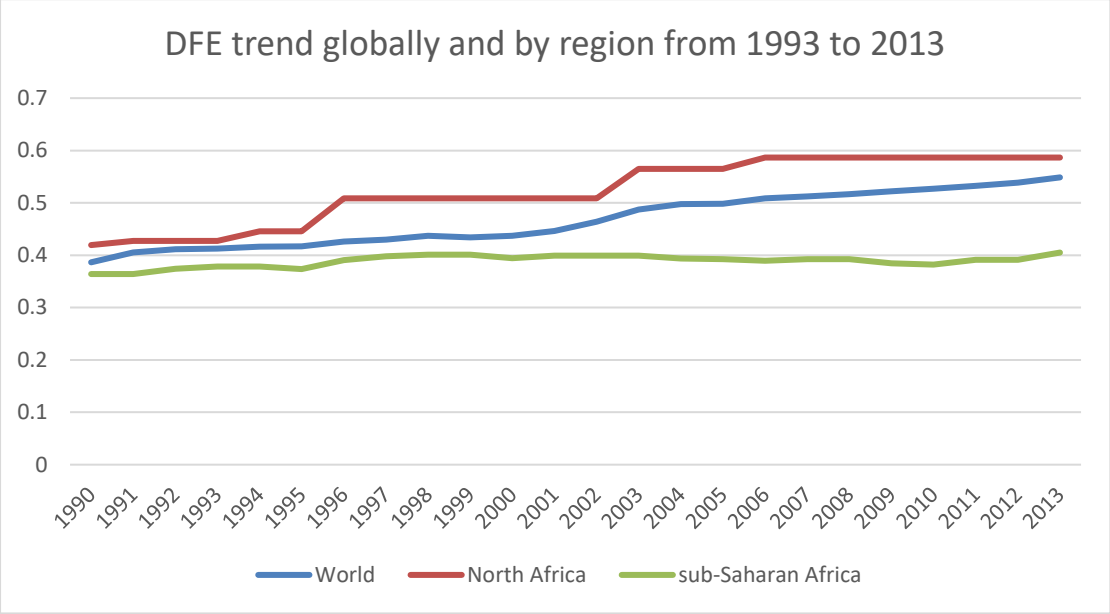

Figure 2.2: Global and regional trend of DFE from 1993 to 2013

Source: Author's computation using CBR-LRI database

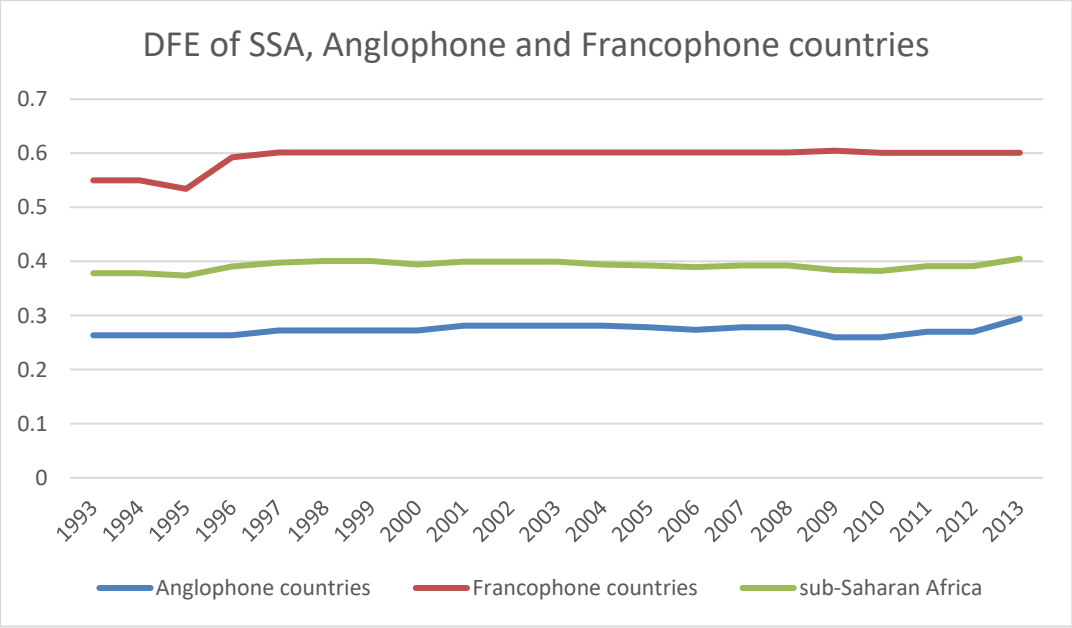

Figure 2.3: Trends of SSA, Anglophone and Francophone countries from 1993-2013

Source: Author's computation using CBR-LRI database

Comparing Anglophone and Francophone countries in SSA, the mean level of restriction in terms of DFE is more stringent towards firms in Francophone countries than in Anglophone countries. The level of protection of workers is relatively stable in Anglophone countries while there was an increase in protection for Francophone countries in 1996 and it has remained relatively the same till 2013 (Figure 2.3). The various countries in SSA in the 1990's had different levels of protection and over the years, the relative level of restriction changes in either direction. From Figure 2.4, the level of protection is approximately to be 0.38 in 1993 for Ivory Coast, 0.43 for Rwanda and 0.65 for Angola in 1993. This means the level of protection is higher or more stringent in Angola than in Rwanda. Labour reforms in Ivory Coast in 1996 saw its level of protection increased to 0.6 and had remained so till 2013. Rwanda also saw some rise and fall of regulation of DFE over the years under consideration.

In an effort to provide more understanding of where (country or variable) the changes occurred, Table 2.4 shows the average of each variable and their country groupings. The years included are 1993, 2007 and 2013. These years were chosen because this study started the analysis from 1993, while 2007 was the beginning of the crisis (ILO, 2015) and 2013 is the recent year with respect to data availability. The table gives a clearer view of where the changes occurred in. A significant change in a country's relative level of protection of work could significantly change the region's average.

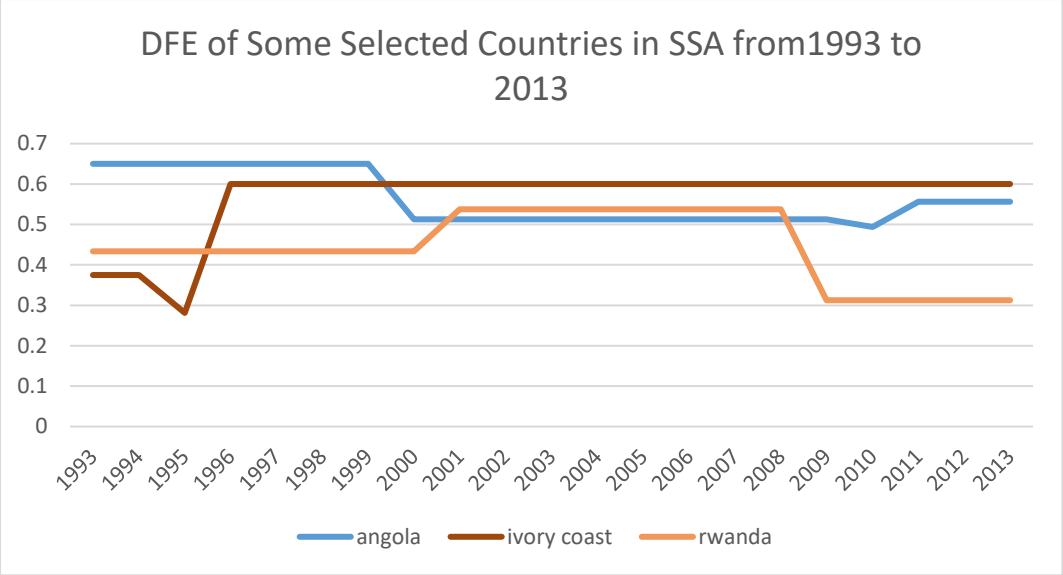

Figure 2.4: Trends of DFE in selected SSA countries from 1993 to 2013

Source: Author's computation using CBR-LRI database

Table 2.4: **Average Score of Different Forms of Employment for Selected Regions in Africa (1993-2013)**

	World			Northern Africa			sub-Saharan Africa		
Indicators	1993	2007	2013	1993	2007	2013	1993	2007	2013
How legal status is set	0.74	0.75	0.78	0.94	0.94	0.94	0.70	0.73	0.73
Part-time: equal treatment	0.30	0.52	0.56	0.13	0.38	0.38	0.17	0.23	0.23
Part-time: equal dismissal rights	0.91	0.92	0.92	1.00	1.00	1.00	0.99	0.92	0.92
Fixed-term: constraints	0.42	0.52	0.51	0.42	0.75	0.75	0.08	0.08	0.08
Fixed-term: equal treatment	0.21	0.40	0.43	0.31	0.31	0.31	0.13	0.16	0.19
Fixed-term: max. duration	0.25	0.37	0.38	0.00	0.53	0.53	0.31	0.34	0.13
Agency: constraints	0.22	0.25	0.31	0.25	0.42	0.42	0.31	0.24	0.23
Agency: equal treatment	0.24	0.35	0.47	0.38	0.38	0.38	0.13	0.14	0.24
Average DFE	**0.41**	**0.51**	**0.55**	**0.43**	**0.59**	**0.59**	**0.38**	**0.39**	**0.41**

Source: Constructed by the author using indicators from CBR-LRI database

Generally, permission granted agency work through the use of legal regulations has seen a steady rise. The same applies to regulations in relation to fixed-term contract durations. However, the magnitude varies across countries and regions.

Globally, there has been a tremendous increase in "Part-time: equal treatment" and "Fixed-term: equal treatment" of jobs from 1993 to 2007. With regards to "Part-time: equal treatment", it is consistent across countries, in that, in 2000 Brazil moved from a scale of 0.25 to 1, 0 to 1 for Belgium in 2002. In the same year, Cyprus also moved from a scale of 0.25 to 1. Over that one and half decades, virtually every country under consideration had seen a relatively higher protection of part-time workers having relatively equal treatment as full-time workers. From 2007 to 2013, the rate of increase has dwindled. Countries such as China, Czech, Tanzania and UAE had seen a marginal increase in their level of protection of part-time workers. Also, the law relating to treatment given to fixed-term workers as permanent workers has risen from a scale of 0.21 in 1993 to 0.4 in 2007 globally. The countries making changes in 1993 were few. Iceland, Norway and the Republic of Korea moved from a scale of 0 to 1 in 1993, thus having impact on the overall average globally. "Agency: equal treatment" and "Fixed-term: maximum duration" are fairly the same but lower than the North African average in exception of 1993 "Fixed-term: maximum duration" where there is no protection at all for North Africa.

Largely, the level of protection of regulations of different forms of employment in SSA countries has seen a marginal increase from 1993 to 2013, that is, from a scale of 0.38 in 1993 to 0.41 in 2013. These levels of restrictions are quite lower than the average of the World and North Africa. Equal treatment of part time, fixed-term and agency workers show how DFE laws have increased in terms of protection over the period. This conforms to the trends in emerging countries as analysed in ILO, 2015.

The level of restriction almost doubled for equal treatment of agency workers although over sixty percent of the SSA countries considered had a score of zero. The improvement in these variables although below 0.5 shows how firms or governments treat part time, fixed term and

agency workers in SSA. This in many ways will have implications on economic indicators. South Africa, Namibia and Angola have seen a positive change in regulation in "Agency: equal treatment" over the period 2011 to 2013. Kenya, South Africa and Ghana also show a change in regulation over the period 2003 to 2013 for equal treatment of fixed term workers as permanent workers. This made the regional average to increase from a scale of 0.13 in 1993 to 0.16 in 2007 and further to 0.19 in 2013. This increases, notwithstanding, are moderate as compared to the average of the World (0.21) and North Africa. Notwithstanding a fall in "Part-time: equal dismissal rights", which can be attributed to negative changes in regulations in Uganda in 200 from a scale of 1 to 0.5 and Angola in 2000 from 1 to 0, the level of restriction in the category of DFE variables remain the highest in SSA region over the period under consideration.

2.3.2 Trends in Employment Protection Laws

In order to understand components of employment protection laws (EPL), the issues of procedural and substantive protection against dismissal from work; fixed term contracts and their regulations; compensation and other benefits in the event of dismissal; and collective employee consultation over dismissal are considered in the analysis. The regulations of different forms of employment are sourced from the CBR-LRI sub-index, which contains indicators in relation to dismissal as pertain to fixed-term employment. In terms of part-time workers, variables were considered and which looked at their determination of employment status as well as rights to access legal protection. Nine other variables in the sub-index, which relates to dismissal laws were used. They account for the procedural and substantive constraints on dismissal, redundancy selection payment and other aspect of regulations in terms of employment termination. With regards to collective dismissal, the cooperation between management and workers at the work place, places a major role in the dismissal procedure.

Thus, another two variables relating to legal regulation of co-determination added. Table 4 enumerates all the 15 variables used in the analysis of the strength of EPL.

The global average of EPL and two regions in Africa are shown in Figure 2.5 for the period 1993 to 2013. Over the past two decades, the magnitude and the strength of EPL has seen a relatively stable growth across the world and SSA. The level of EPL across the globe is slightly above the SSA averages, with 0.48 and 0.43 for the world and SSA respectively in 1993 to 0.54 and 0.5 respectively in 2013.

Table 2.5: Indicators of Employment Protection Laws

Indicators relating to employment protection laws
1 The law, as opposed to the contracting parties, determines the legal status of the worker.
3 Part-time workers have equal or proportionate dismissal rights to full-time workers.
4 Fixed-term contracts are allowed only for work of limited duration.
6 Maximum duration of fixed-term contracts.
16 Legally mandated notice period.
17 Legally mandated redundancy compensation.
18 Minimum qualifying period of service for normal case of unjust dismissal.
19 Law imposes procedural constraints on dismissal
20 Law imposes substantive constraints on dismissal.
21 Reinstatement normal remedy for unfair dismissal.
22 Notification of dismissal.
23 Redundancy selection.

24 Priority in re-employment.
30 Co-determination: board membership.
31 Co-determination and information/consultation of workers

Source: CBR-LRI database

In 1997, there was a modest increase in the level of EPL in SSA from 0.44 to 0.46 and has remain relatively same over the years. In comparison, the level of regulation in North Africa in terms of employment protection is quite higher than the global average. The global average stood at 0.48 in 1993 while North Africa was 0.56. These averages for North Africa have seen increments over the past two decades, the major one was in 2003, where it was 0.71 as compared to 0.62 the previous year.

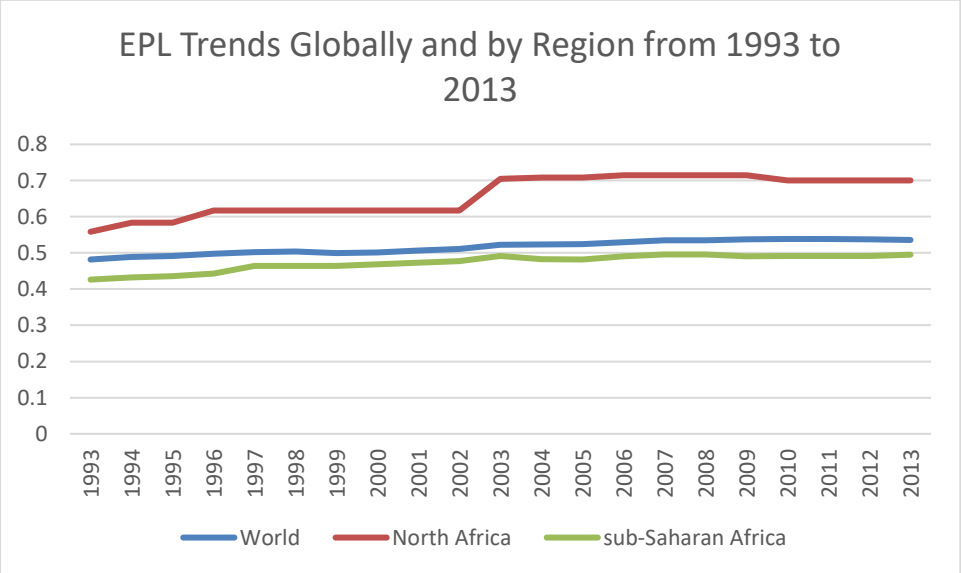

Figure 2.5: Global and regional trends of EPL from 1993 to 2013

Source: Author's computation using CBR-LRI database

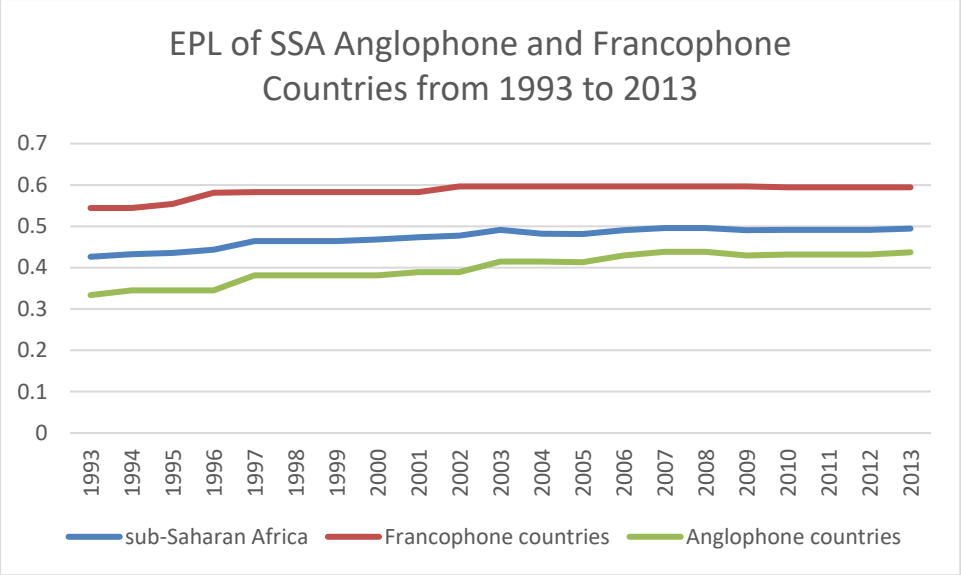

Figure 2.6: Trends of EPL for SSA, Anglophone and Francophone countries

Source: Author's computation using CBR-LRI database

Figure 2.6 looks at the comparison of EPL of SSA, Anglophone and Francophone countries over the period, 1993 to 2013. The level of protection in relation to EPL of Anglophone countries tends to mimic that of SSA countries but lower than SSA countries' averages. The Francophone countries lead the way in Africa when considering the level of protection of regulations relating to employment protection. While the average of SSA countries are stable around 0.5 after 2005 to 2013, Francophone countries show stable average of 0.6 from 2002 to 2013.

In considering some individual country's level of protection, the picture shows a mixed level of protection across the various countries (Figure 2.7). Zambia's level of EPL was 0.12 in 1993 but has increased over the two decades to 0.41 in 2013, which is lower than the region's average of 0.43 in 1993 and 0.5 in 2013. Angola, on the other hand, had its average of variables relating to EPL is higher than the region's average at all levels. Her average is as high as 0.64 in 1993, which is higher than the global mean in that year. Although, the level of protection remained stable and same from 2000 to 2013 at 0.72, it is way higher than the global and SSA averages.

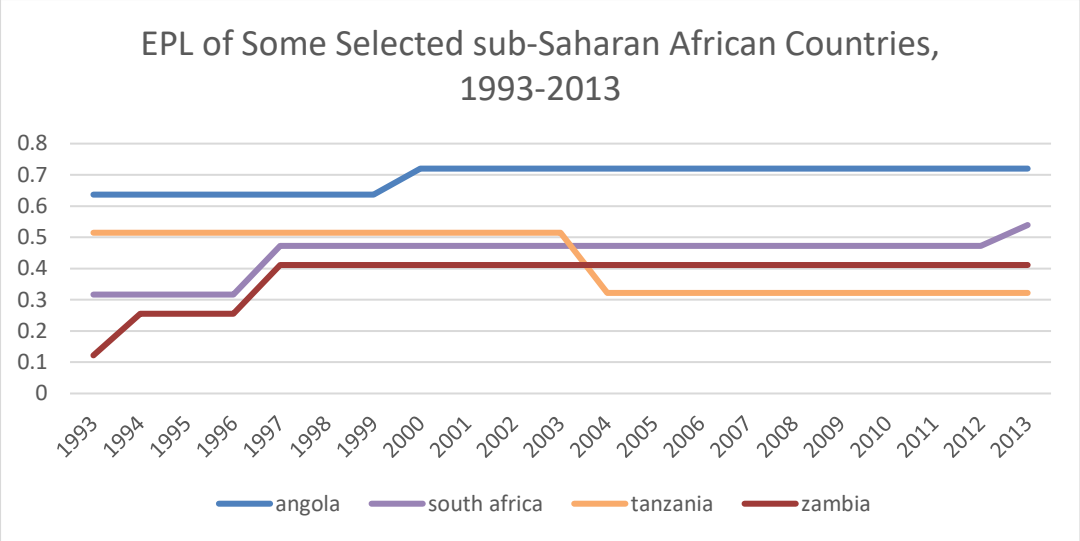

Figure 2.7: Trends of EPL of selected countries from SSA (1993 to 2013)

Source: Author's computation using CBR-LRI database

The overall average of employment protection laws and the components based on the sub-index selected are presented in Table 2.6. From the overall average, it is realized that there has been relatively little change in EPL over the two decades. The global average which stood at a scale of 0.48 in 1993, inched up to a scale of 0.53 in 2007 and finally to a scale of 0.54 in 2013. A significant portion of the change can be seen from 1993 to 2007 compared with moderate change or no change over 2007-2013 period. Variables such as redundancy compensation, procedural constraints and re-employment priority have seen at least a 0.1 increase over the period 1993 to 2007. Apart from the laws imposing substantive constraints on dismissal, and the variable relating to legally mandated notice period, which have an increase in their level of restriction from 2007 to 2013, the rest have either remained the same or have declined. A substantial decline can be seen in reinstatement normal remedy for unfair dismissal, where the level declined from 0.64 in 2007 to 0.61 in 2013.

Table 2.6: **Average Score of Employment Protection Laws for Selected Regions in Africa, 1993-2013**

	World			North Africa			sub-Saharan Africa		
	1993	2007	2013	1993	2007	2013	1993	2007	2013
Notice period	0.33	0.36	0.37	0.17	0.42	0.42	0.31	0.36	0.37
Redundancy compensation	0.46	0.56	0.56	0.69	0.76	0.76	0.27	0.40	0.43
Minimum. qualifying period	0.84	0.85	0.85	0.82	0.94	0.94	0.84	0.85	0.86
Procedural constraints	0.50	0.60	0.60	1.00	1.00	1.00	0.39	0.67	0.67
Substantive constraints	0.50	0.55	0.57	0.67	0.92	0.92	0.43	0.55	0.55
Reinstatement normal	0.58	0.64	0.61	0.42	0.50	0.50	0.50	0.60	0.60
Notice to third party	0.54	0.61	0.60	0.33	0.67	0.67	0.45	0.59	0.59
Redundancy selection	0.35	0.34	0.34	0.75	0.88	0.88	0.38	0.41	0.41
Re-employment priority	0.26	0.36	0.35	0.25	0.50	0.50	0.33	0.33	0.33
Co-determ.: board m'ship	0.16	0.15	0.15	0.33	0.33	0.21	0.00	0.00	0.00
Co-determ./consultation	0.37	0.43	0.43	0.61	0.61	0.52	0.22	0.30	0.30
*Average EPL	0.48	0.53	0.54	0.56	0.72	0.70	0.43	0.50	0.50

Source: Constructed by the author using indicator from CBR-LRI database

Note: * The overall average of EPL includes all 15 variables but the four variables that are covered by DFE are not included in the table.

North Africa has shown a tremendous increase in the overall average of EPL as compared to the global average. Apart from reinstatement normal, all other variables have recorded a higher level of restriction for North Africa than the global average for the three-point year presented. An exception though is notification of dismissal (Notice to third party) where in 1993 the average is 0.54 and 0.33 for the world and North Africa respectively. One interesting observation from the table shows that laws imposing procedural constraints on dismissal (Procedural constraints) are at the highest (100%) level of protection in North Africa. This shows that the employee has all the right or protection when his/her dismissal is necessarily unjust if the employer fails to follow procedural requirements prior to dismissal. The law in

relation to unions and/or workers, the right to nominate board-level directors in companies of a certain size as well as whether the works councils or enterprise committees have legal power of co-decision making have seen a decline from 2007 to 2013, thus impacting on the overall average of EPL for North Africa region.

In the SSA region, there has been relatively small change in level of restriction as compared to the previous years. Variables such as; legally mandated notice period, legally mandated redundancy compensation and minimum qualifying period of service for normal case of unjust dismissal show a consistent increase over the years from 1993 to 2007 and further increased in 2013. Apart from 'priority in re-employment' and 'co-determination: board membership', which remained the same over the years, the other indices increased from 1993 value but remained same till 2013. One key observation from SSA is that no country allows unions and/or workers to nominate board-level directors in any company. The highest significant change is shown by the variable; Procedural constraints, with 0.39 in 1993 to 0.67 in 2007 and 2013. Such can also be said about redundancy compensation.

CHAPTER THREE

LITERATURE REVIEW

3.0 Introduction

This chapter reviews both theoretical and empirical literature on the effects of employment protection laws on unemployment in SSA. It is divided into three sections. Section 3.1 deals with the theoretical reviews, under which definitional and conceptual issues of unemployment and employment protection laws (EPL) are reviewed. The second section reviews empirical literature and the last section presents the summary of the chapter.

3.1 Theoretical Review

This section reviews the theoretical literature concerning unemployment and employment protection laws. The section begins with some definitional and conceptual issues of unemployment and employment laws. Section 3.1.2 reviews labour legislations and some economic outcomes; this has been followed by structural transformation model of employment protection laws and forms of employment protection laws. The final sub-section of this section reviews dismissal cost decisions.

3.1.1 Definitions and Concepts

Unemployment can be considered as a phenomenon of looking for job as a result of being jobless. As per International Labor Organization (1982), unemployed refers to any person who has attained a minimum age of employment and in a reference week was:

- ‘without work’, does not involve in any self-employment as defined internationally to be employed and also does not work in any paid employment for even an hour;
- ‘available for work’, whether self-employment or paid employment; and
- ‘actively seeking for work’, recently put an effort in seeking either paid employment or self-employment,

The implication of this definition insinuates that an individual who is jobless and readily available for work but due to various reasons neglect to seek for work would be considered as a discourage worker but not an unemployed person. Also, a person in an employment who seeks for additional work can be referred to be moonlighting (Baah-Boateng, et al, 2013).

The debate on the computation of unemployment rates in Africa still ranges on. Some studies (Cling, Gubert, Nordman, & Robilliard, 2007; Fares, Montenegro, & Orazem, 2006) point out that the ILO definition of unemployment is inadequate with regard to low income countries' labour market. Some researchers question the unemployment rates in African countries when using it for policy purposes, due to its lower nature. Baah-Boateng (2015) gave three possible reasons for the low rates of unemployment in Ghana as (i) high discourage worker effect (ii) level of informality and (iii) underemployment.

3.1.1.2 Theories of Unemployment

In the literature, a number of theories are used to explain unemployment. From the neoclassical point of view, due to flexible wages and perfect information, unemployment fails to exist as a result of the clearance in the labour market. Hence, individuals become unemployed if they accept the market-clearing wage but rather carry on the search process. Also, unemployment can exist under the neoclassical framework through the job search theory. Here, filling a vacant job with unemployed person brings the problem of efficiency and matching characteristics. Closely related to search model is the frictional unemployment, which emanates from the gap between an individual finding a job and moving into that new job. On the part of the employer, frictional unemployment arises as a result of the time and resources gap in identifying and employing the right person to fill the vacancy. Thus, the description of unemployment under

the neoclassical model or search theories does not require a general excess supply of labour (Baah-Boateng, 2015a).

Another type of voluntary unemployment is structural unemployment. This arises as an individual's current skills become obsolete and it will take a while to acquire new skills thereby making him or her unemployed within that period. The main cause of this type of unemployment is the advancement in technology.

The classical, on the other hand, indicates that involuntary unemployment is created due to imperfection in the labour market. Government interference through the introduction of minimum wage or the presence of labour unions are some of the contributing factors to the imperfection of the labour market leading to the creation of involuntary unemployment. When individuals are unable to acquire a job after his or her preparedness to accept conditions lower than his or her skills and wages, it leads to the creation of involuntary unemployment (Shackleton, 1985).

With reference to efficiency wage model, firms pay worker a wage higher than the equilibrium wage in order to entice them to increase their efficiencies. This kept workers from shirking (Shapiro & Stiglitz, 1984) and also reduce labour turnover (Salop, 1979; Stiglitz, 1974). The payments of efficiency wage also help firms to avoid adverse selection of job applicants (Akerlof, 1970). The payment is also considered as a gift of exchange for higher productivity of workers (Akerlof, 1982). With the efficiency wage model, job seekers find it difficult to get employed because of the cost of firms as well as the level of output being produced by the workers enjoying the efficiency wage. This leads to the creation of unemployment.

Involuntary unemployment can be explained institutionally by looking at the insider-outsider model, where wages are determined by taking into consideration those employed (insider) without those seeking employment (outsider), thus, unemployment (Lindbeck & Snower, 1987).

Unemployment can also be explained theoretically by looking at the implicit contract theorem framework. Here, a rational worker chooses an unstable job, a job with higher probability of layoffs, which offer a higher wage than a stable job with a lower wage. With the existence of social securities, which maximizes lifetime earnings, an increase in benefits such as social security leads to unemployment in the unstable job. There are three main pillars of employment protection laws. They include termination of regular employment, hiring of temporary workers and collective dismissals (Cazes, Khatiwada, & Malo, 2012).

Many studies in Africa have looked at the relationship between unemployment and economic growth. Their results are conflicting, in that, varied conclusions are drown. Alhdiy et al. (2015) showed that there is no long run relationship between unemployment and economic growth in Egypt between 2006 Q1 to 2013 Q2. However, the presence of Okun's law was established in South Africa between the period 1970 to 2015 (Geldenhuys & Marinkov, 2007). Meanwhile Ademola and Badiru, (2016) found a positive relationship between unemployment and inflation on economic growth, using data from 1981 to 2014. Collectively, unemployment is expected to go up in SSA countries despite the projected growth in the economy for 2018 (ILO, 2017). Thus, this study expects a negative correlation between unemployment and economic growth.

Related to economic growth and unemployment is trade openness. The aftermath of global financial crisis led to a more critical look at trade policies and their effects on economic growth. When terms of trade are not favourable, real wage turns to adjust downwards. This could lead to an increase in unemployment if wages do not respond accordingly. Thus, trade openness is expected to have a negative relationship with unemployment. Business activities can be affected negatively by deteriorating trade policies, especially in developing countries. Least developing countries, especially those in SSA depend predominantly on exporting primary products making them susceptible to price changes (UNCTAD, 2008). This implies that openness to trade makes households vulnerable to external shocks and can effectively lead to unemployment through factor markets and wage transmission mechanism (Winters, McCulloch, & McKay, 2004). Although Brecher (1974), Davis (1998) and Helpman et al., (2010) realized a positive link between liberalization of trade and unemployment, a negative relationship was obtained in Felbermayr et al., (2011). This study expects a positive or negative relationship between unemployment and trade openness because of the risk to suffer from any external shocks. Also, African countries that take advantage of the openness of trade generate employment through importation of goods and its value change to the final consumer.

3.1.1.3 Definition of Employment Protection Laws

Employment protection laws (EPL) can be defined as all set of regulations such as collective bargaining by social partners, court rulings, that limits firms in their quest to hire and fire workers (Barone, 2001). The provision of laws that are in support of employment of disadvantaged groups, how temporary and fixed-term contracts are treated and the requirement of firms to train their employees affect hiring policies., Conversely, procedures of redundancy and notification period, severance payments, requirement for collective dismissals and firing procedures for short-term worker influence firing decisions.

3.1.2 Labour Legislation and Economic Outcomes

Employment protection legislation (EPL) refers to the regulations regularising the commencement, expiration and/or termination of employment contracts. Fundamentally, EPL is about ascertaining the level of job security, which are fulfilled in two ways: by curtailing the powers of employers to hire workers literally on short-lived basis and by creating and making dismissal costly (Betcherman, 2015). Governments in the process of providing insurance for workers against the likelihood of job loss and to ascertain that workers are satisfied with their employers, such laws are promulgated. However, the controversies surrounding the sharp difference in perspective about overall efficiency and distributional effects raise an eyebrow. As indicated by Betcherman (2015),

> *" ... these differences reflect the institutionalist-distortionist divide, with the former emphasizing the protection and security afforded to workers and the latter focusing on employment and efficiency losses and privileging "insiders" who are covered by these rules"*

Over the past two decades, the notion of labour laws imposing costs on firms and distorting the market leading to increasing unemployment and informal sector has been the focal point of World Bank policies. The theory underpinning this view is the cost to firms in employing workers, which artificially increases due to labour regulations. Besley and Burgess (2004) suggest that 'labour regulation will typically create adjustment cost in hiring and firing labour and in making adjustment in the organization of production'. The initial response by firms will be to substitute capital for labour. Largely, subject to the characteristics of the regulatory framework, production will shift from the regulated to unregulated sectors of the economy. This will happen if application of labour regulations are different with respect to number of

workers employed by firms or if the firm is located in an industry where the application of labour laws is in stages. Another possible impact of labour regulations as indicated by Besley and Burgess is "*by increasing the bargaining power of workers, labour regulations can increase the importance of holdup problems in investment*"

In the context of SSA where nearly all the countries are considered to be developing, stringent labour laws will impede investment, as workers might deprive the firms and investors a greater portion of their profit or returns, ex post. In this vein, labour laws can be likened to feeble property rights, which do not encourage productivity.

In the literature concerning labour law, justification is given to legal protection of workers on the basis that it reduces the effect of inequality of bargaining power, which is inherent in employment relations. Traditionally, labour laws have been thought of as a means "to ensure a just share of the fruits of progress to all", as the ILO's Philadelphia Declaration put it in 1944 (see Supiot, 2012). The economic effects of labour laws that is dominating the literature is that 'the theoretical effect of firing restrictions on employment levels is ambiguous' (Autor, Iii, & Schwab, 2018).

In a frictionless labour market, protection received by workers through legislation should, in principle, be bargained away. This could happen through a reduction in wages or employment incentives, thus avoiding any inefficiencies (Gruber, 2016). In a realistic way, where labour markets are considered not to be perfectly competitive, additional protection could lead to distortions and raise firms hiring and firing costs (Lazear, 1990). The cost of hiring and firing workers may not necessarily lead to unemployment because these two effects may cancel each other out (Bertola, 2009). The labour market transitions which may slow down, could have a

broader negative effects, such as lack of innovation, due to high severance costs in the event of business failure (Griffith & Macartney, 2014) thus deepening the effects of the economic cycle (Bentolila & Bertola, 1990).

However, if workers value fairness at work, which is under-provided by employers due to adverse selection effects, labour supply tend to increase with dismissal legislation (Summers, 1989). This also helps employment exchanges more efficiently. This has been evidenced by Acharya et al., (2013) that innovation at the firm level increases with stricter employment protection laws. The logic behind this is that if managers are willing to provide job security, workers are also willing to share ideas. In a similar vein, positive correlation between employment protection laws enhanced worker employment cooperation and labour productivity (Bartling, Fehr, & Schmidt, 2013).

Also, during economic downturns, employment protection laws (EPL) make firms to retain more employees than otherwise. The implication is that EPL hinders both job creation and destruction, thus determining a prior ~~the~~ net effects on both employment and unemployment is inconclusive. Actually, the concluding outcome depends on the characteristics of the model being used, such as the schedule of labour demand with respect to its functional form, the premise on which labour demand variations are governed, the discount rate instituted by the employer and the attrition rate of the economy (Barone, 2001).

3.1.3 Forms of Employment Protection Laws

Various countries have distinct EPL forms. These are oftentimes distinguished along an attribute in the ambit of rigid protection and flexible protection. In the rigid protection end, temporary and fixed term employment contracts are curtailed; employment dismissal rights are

cut back; substantial and compulsory severance payments are instituted and layoffs with regards to administrative requirements are significant. At the flexible protection end, rights to dismissal, cost (administrative and monetary) of layoffs and contracts of non-permanent workers are either few or minimal.

The bigger question of the determinants and adoption of job security regulations always lingers. Botero et al. (2004) after analysing labour regulation across 85 countries came to the conclusion that the utmost determinant of job security rules is the legal tradition of the country, not the level of development. Largely, job security protection is more extensive for countries with civil law traditions than common law tradition. Also, the degree of trust and civic moral excellence affect labour market regulations inversely in respect with the country's demand for it (Algan & Cahuc, 2006; Philippe, Yann, Pierre, & Andrei, 2010).

As the literature evolves, the focus has been to elaborate the details of EPL. Fixed-term, part-time and temporary agency work at a time were regarded to be more flexible inherently in the face of contracting than indeterminate-duration and full-time employment and thus to advanced reforms such as selective deregulation (OECD, 1994). But a more current agreement is that enacting other legal regimes that takes care of these contract forms separately may bring about new twist to labour market segmentation (Wölfl & Mora-sanguinetti, 2011).

It has been suggested that depending on the overall level of protection in a given country, employment protection reforms will have varying effects on the economy. The implication of which is EPL having a non-linear relationship with economic indicators. This claim has been supported by the evidence that an increase in EPL leads to a rise in employment when the level of regulation are low; no impact or 'plateau' on employment when the level of regulation is

medium; and declining employment when the level of regulations are high when EPL is increased (Cazes et al., 2012).

3.1.4 Dismissal Cost Decisions

In order to examine the effects of job security regulations, a complicated framework is required due to the dynamic nature of decisions taken by firms. Dynamic partial equilibrium model which measures how dismissal cost are affected by firing and hiring decision of firms was developed by Bertola (1990). Pages and Heckman (2000) states that for a firm to respond optimally to employment policies, it has to dismiss workers, hire workers and lastly do nothing.

The question is how these decisions change the dismissal cost. Due to the compulsory dismissal cost which will be borne by the firm when it dismisses workers as a result of negative shocks and declining marginal value of labour, no or few workers will be fired than without the policy. Alternatively, when there is economic boom, the firm may like to add more workers but due to the unpleasant nature of firing employees in the future when there is economic downturn, it may add no worker at all. This leads to reduction in the creation of new jobs even in positive shocks. The net effect is lower employment or unemployment.

The analysis so far only looks at the unemployment and employment issues as a result of firing cost without considering how firing costs could create or destruct firms. A general equilibrium model was developed by Hopenhayn and Rogerson (1993) which focused on exit and entry of US firms with the policy. With reference to Bertola (1990) model, which postulates the creation and destruction of jobs and firms in every period in accordance with the type of shocks, this model finds that average employment of existing firms increases with an increase in firing cost,

due to reduction in firings. However, firm entry and job creation by new entrants reduces. They then conclude that the net effect is a decrease in overall employment rates.

Employment protection policies may affect employment via its effect on wages. Employment protection laws, when applied to insider/outsider model shows that the powers of the insider increases, leading to a higher wage demand by the insider and a decrease employment rates (Lindbeck & Snower, 1987). A model by Caballero and Hammour (1997) shows that employment protection policies ' increase the appropriability of capital by labour by increasing capital specifity'. As put by Pages and Heckman

> *"... a larger part of the capital invested becomes relationship-specific and become lost if capital separates from labour"* p14.

This indicates that labour extract higher rents from capital in the short run due to higher firing costs, in the long run, its lead to reducing employment demand as a result of the firm investing in less labour-intensive technologies.

3.2 Empirical review

Empirical research on how labour law affects unemployment often focused on developed countries and no clear relationship has been established between labour laws and unemployment. Some empirical studies have shown that worker protective laws in general have no consistent relationship with unemployment (Deakin et al., 2014). According to Betcherman (2015), the impact of minimum wage and employment protection laws are generally becoming smaller than perceived. Research in the 1990's in the developed world, which were based on cross country regression, found that highly protective legislation and generous employment insurance slows job growth and increase unemployment (Betcherman, 2015). Ahmed and Aljane (2014), explored the relationship between labour market flexibility and unemployment

in Tunisia and concludes that there is no link between labour regulations and unemployment but they indicated a direct link between firing and hiring regulation and unemployment. Adams et al., (2018), used the updated data from the CBRLRI database and indicated that over the time, the labour laws in relation to different forms of employment have become more protective. They also concludes that a more stringent employment protection laws and laws regulation various forms of employment lead to an increase in employment generation, increase in labour force participation rate and falling unemployment in the 117 countries considered.

Although there is an overwhelming evidence that hint that labour regulations impact firms, workers and the economy negatively, Almeida and Susanli (2012) posit that the impact of labour laws impact both positively and negatively. They pointed to that fact that it is imperative to compare the benefits and the costs of employment regulations in order to see which one outweighs the other before drawing a conclusion. In analysing the connection between firm size/productivity and EPL, they indicated that employment regulations tend to raise hiring cost of workers, influencing the firm in hiring fewer workers. If the employment by a firm is measured by the number of workers a firm has, then this will affect the firm. Almeida and Susanli (2012) concludes after analysing firms from 63 countries that the higher the labour market laws are regulated in a country, the smaller in size their firms become. This is prominent in labour-intensive sectors of an economy. However, economies with poor governance show a weak relationship, connoting that implementation of labour laws are ineffective when legal environment is poor.

Hijzen et al., (2017), explored the impact of employment protection on temporary employment in Italy at the firm level and concludes that employment protection laws increase worker turnover. This implies that workers are engaged more on temporary basis with stringent

employment protection laws for the firms. More so, Gwatidzo & Moyo (2014), after analysing the effect of restrictive labour legislations on some economic outcomes for 4700 firms from six African countries indicated that the stricter the employment laws the detrimental it is for employment creation and investment generation.

Almeida and Susanli (2012) further indicated that when using sales and turnover as a measure of firm's size, ELP also tend to impact productivity of firms. The economy will be affected largely, if labour laws impact on productivity and size of firms, as new entrants (youths) may not be absorbed. Balance of payment and foreign currency earnings of the country may also be affected if the fall in firm's products impacts their exports. Also, labour market turnover may reduce with stringent employment protection laws, where firing during recessions are restricted and hiring during better economic conditions is not optimal. Almeida and Carneiro, (2009) further corroborated to the evidence on the unfavourable effect of employment laws on the size of firms using data on firms in Brazil. Agell (1999) also indicates that the price tag on wage flexibility is quite high as believed by firms. Wages are more likely to decrease when labour markets are highly flexible. But due to the adverse manner in which morale will be affected when wages are cut, employers find it unpleasant in reducing wages. Some employers are interested in how their workers may interpret a wage reduction as hostile act, which will impact on work effort as well as the quality of future job applications. Employees will lose loyalty to the firm and reduce work effort if wages are low (Agell, 1999). An important positive indicator to consider in labour market is reciprocity. Workers show positive work effort when firms increase their wage but also retaliate when there is a cut in the wage they receive. Keynes (1936) supported this argument in his general theory by indicating that the phenomena of unemployment and inflexible wage are social nature fundamentally and that wage competition is socially inappropriate.

Further evidence is found in Besley and Burgess (2004) which analyses the bearings of labour market regulations on economic outcomes. The study concludes that stricter employment laws have adverse impact on investment, firm productivity and employment after using data on sampled Indian firms. Hopenhayn and Rogerson (1993) also revealed that employment creation as well as firm entry is affected detrimentally when labour laws are highly restrictive. This is further corroborated by Kaplan (2009), who found that employment creation tend to increase when labour markets are flexible, especially through job reallocation. In environments/countries where labour markets regulation are highly regulated, flexible labour market gains are pronounced. In his paper published in the Journal of Economic Perspectives, Siebert (1997) laid out the conventional wisdom as 'Labour Market Rigidities: At the Root of Unemployment in Europe'. The implication of this is to advise countries having perennial unemployment to undertake structure reforms in order to decrease the rigidities of labour market (Howell, Baker, Glyn, & Schmitt, 2007).

Botero et al. (2004) also argued that environments where labour markets are highly regulated, labour market outcomes such as unemployment and labour market participation rates tend to be negatively affected. For instance, in India, Amin (2009) found that employment is adversely affected by rigid labour market. Pages and Heckman (2000) did not only conclude that employment laws affect employment but also suggests that inequality worsen. Kugler (2004) as well as Ahsan and Pagés (2009) also came to conclusion that employment and output tend to reduce with employment regulation, as confirmed by Feldmann (2009).

Trade can also be adversely affected (especially through export decisions by firms) by highly restrictive labour market regulations. As paraphrased by Gwatidzo and Moyo (2014) from

Helpman and Itskhoki (2010), *"Labour market flexibility, by reducing adjustment cost and increasing productivity, is a source of comparative advantage."* Helpman and Itskhoki (2010) argued that firms enter foreign markets as a result of higher profits via flexible labour markets. This is made possible if future exporters are expected to initially grow in size and attain a higher productivity level before entering (Helpman & Itskhoki, 2010). Highly restrictive labour market regulations account for this, which results in the reduction of firm size, firm competitiveness and productivity.

Howell et al. (2007) chronicled several studies on rigid employment laws. The orthodox perspective of these laws having an adverse effect on employment creation was not found in most of them, some showed little evidence. Also, the variable EPL in Nickell's (1997) influential paper, which uses cross-country regression, was found not to be significant. In his conclusion, he argued that *"it is clear that the broad-brush analysis that says that European unemployment is high because European labour markets are "rigid" is too vague and probably misleading"*

Baker et al. (2005) used the same data but with newer versions of institutional variables and had analogous findings on the EPL variable. Howell reviewed 10 papers which were published from 1996 to 2006 and a statistical significant at 5 percent was found in only three of the papers with regards to EPL. But it seems that the findings are very sensitive to variable and model specification.

CHAPTER FOUR

METHODOLOGY AND DISCUSSION OF EMPIRICAL RESULTS

4.0 Introduction

This chapter discusses the methodological approach used in examining the empirical link between employment protection laws and unemployment. The chapter begins with the theoretical framework of the study followed by model specification and the sources of data for the study. This is followed by presentation of empirical results.

4.1 Theoretical Framework

In order to determine the effect of employment protection laws, the study employs the right to manage model as expounded by Scarpetta (1996). This model assumed that firms are profit maximizers, operating in a perfectly competitive market. Also, the firm is assumed to operate in a product market that is exogenously determined as well as a predetermined capital and technology. Moreover, bargaining for wages is the responsibility of the employee and the employer, where the employer determines the level of employment, prices and output after reaching an agreement with the employee on his or her wage. The model can be summarised as:

For labour demand schedule,

$$n = -\alpha(w - p) - \beta Z_n - W^u \quad \text{..... (1)}$$

Where $\alpha > 0$; n = logarithm of employment; w = logarithm of wages; p = logarithm of prices; Z_n = vector of variables influencing labour demand; and W^u = unanticipated wages

For wage-setting schedule; the assumption here is that real wages are decreasing and increasing function of unemployment and wage push factors respectively. Alternatively, we assumed that the wage setting function is linear. Given p^u, which is unanticipated price changes, we have

$$w - p = \delta_1 Z_w - \gamma_1 u - p^u \quad \text{..... (2)}$$

Where $\delta_1 \; and \; \gamma_1 \geq 0$; Z_w = vector of wage push factors; and p^u = unexpected price changes. Factors that are included in the Z_w vector are productivity, the bargaining powers of trade unions, cost of living, cost of training, the prevailing market rates as well as demand and supply factors.

For labour supply, it is assumed to be inelastic to wages. The labour supply is also assumed to be a function of participation decision-making factors, some of which are part of wage push factors. Thus,

$L = \delta_2 Z_p$ ..... (3)

Where: $\delta_2 > 0$; L = logarithm of the labour force and Z_p = factors affecting participation decisions.

Given that $L - n \cong u$, rewriting equation (1) gives

$L - u \cong -\alpha(w - p) - \beta Z_n - W^u$ ..... (4)

After meeting wage and price expectations, the rate of unemployment that solves equations (2), (3), and (4) can be referred to as the structural unemployment (u^*).

$$u^* = \frac{\alpha\delta_1 Z_w}{1 + \alpha\gamma_1} + \frac{\delta_2 Z_p}{1 + \alpha\gamma_1} + \frac{\beta Z_n}{1 + \alpha\gamma_1} \quad \ldots\ldots (5)$$

Thus, $u^* = f(Z_w,\ Z_p,\ Z_n)$

Equation (5) represents the intersections of wage setting and labour demand. The equilibrium unemployment rate will increase when wage push factors or labour demand increases. The increase in the equilibrium unemployment rate as a result of an increase in wage push (which are determined exogenously) will lead to an increase in real wages. On the other hand, real wages will fall due to the increase in unemployment via an increase labour demand.

The policy and institutional factors enter the wage setting equation thereby influencing both the equilibrium unemployment in the long-run, the speed of adjustment as a result of exogenous shocks. Inculcating persistence mechanism in the bargaining equations will thus allow wages

to be a function of both unemployment and change in unemployment. As a result, the wage-setting model of equation (2) will become

$w - p = \delta_1 Z_w - \gamma_1 u - \gamma_2 \Delta u - p^u$…….. (2[a])

Thus, in the short-run, structural unemployment depends on previous year unemployment, u_{t-1} but that of the long-run remains u* because $\Delta u = 0$ as:

$$su^* = \frac{\alpha\delta_1 Z_w + \delta_2 Z_p + \beta Z_n}{1 + \alpha\gamma_1 + \alpha\gamma_2} + \frac{u_{t-1}}{1 + \frac{1+\alpha\gamma_1}{\alpha\gamma_2}} \quad \text{…… (6)}$$

4.2 Model for Empirical Estimation

From the theoretical framework above, equations 5 and 6 can be estimated when considering time series analysis. In order to estimate the effect of employment protection laws as well as laws regulating different forms of employment on unemployment in SSA, the study uses the panel regression model. Arising from the theoretical model and adopting the study by Blanchard and Wolfers (2000), the empirical model for the study is stated as :

$U_{it} = \alpha_i + \beta_0 U_{it-1} + \beta_1 \text{EPL(DFE)}_{it} + \beta_2 lGDPG_{it} + \beta_3 TO_{it} + \beta_4 INF_{it} + \beta_5 FS_{it} +$

$\beta_6 lCPS_{it} + \beta_7 lnGDPPC_{it} + \beta_8 FDI_{it} + \beta_9 UPS_{it} + \varepsilon_{it}$…….. (7)

Where, U_{it} = unemployment rate of country i at time t ; and U_{it-1} = the lagged value of unemployment;

EPL(DFE) is the variable of interest which is employment protection law (Labour laws relating to Different forms of Employment); The model controls for other variables including

$lGDPG$ = lag of GDP growth; TO = trade openness; INF = the inflation rate; FS = freedom Status; $lCPS$ = lag of credit to the private sector; $GDPPC$ = log of GDP per capita; FDI = Foreign direct investment; UPS = Urban population share; α_i = specific effect to each country;

The random error term is represented by ε_{it} = the error term whilst β_s = the coefficients to be estimated.

The choice of these variables is based on literature and availability of data as well as important factors that affect unemployment. The variables considered are unemployment rate, trade openness, inflation, GDP growth, Freedom status and strictness of employment laws (EPL and DFE).

Unemployment Rate measured by the share of the labour force that is without work but available for and seeking employment. This definition cuts across all the countries used in this study. In order to take care of the hysteresis in unemployment, the lag of unemployment was included in the independent variables (Ahmed & Aljane, 2014).

GDP Growth: This is the annual percentage growth rate of GDP at market prices based on constant local currency. GDP growth is one of the important indicators of unemployment directions. According to Okun (1962), there is a negative relationship between unemployment and economic growth. This is later known as the Okun's law. GDP growth captures the influence of economic cycles. When there is low economic growth, demand for goods are less, making the firms to produce less thereby employing fewer workers. Some firms may also go bankrupt during recessions leading to redundancy of workers. Moreover, where there is uncertainty of economic growth, firms are reluctant to employ new workers.

***Trade openness*:** Trade openness is the ratio of the sum of exports and imports to GDP. The trade ratio measure has been used by this study above other measures such as measures proposed by Alcalá and Ciccone (2004) because it is popular and the most commonly used

measure by researches due to its data availability and ease of calculation (Al-Mulali, Ozturk, & Lean, 2015; Shahbaz, Nasreen, Ahmed, & Hammoudeh, 2017).

Inflation Rate: This is measured by the consumer price index. It 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. Inflation as akin to GDP growth also influences the economic cycles of countries. The by-product of Phillips' original hypothesis point to a negative relationship between inflation and unemployment. But a recent paper by Folawewo and Adeboje (2017), shows that inflation has an overwhelming positive impact on unemployment in ECOWAS state. This study thus expects a positive relationship between inflation and unemployment.

***Freedom Status*:** This indicator measures both the political rights and civil liberties of countries. Both the political rights and civil liberties are measured on a scale of one to seven, with one representing the highest degree of freedom and seven the lowest. This study uses the average of both political rights and civil liberties which give the freedom status of a country. This indicator measures the political freedom and human rights in various countries in the world. In order to measure the effectiveness of labour laws in each country, the freedom status (FS) is used as a proxy. The legal environment of a nation helps in attracting investments and have an impact on employment positively. Also, uncertainty about a country's growth is curtailed if laws and rights are respected. This gives a positive signal to firms to innovate and expand, thereby leading to more employment of new workers. Adams et al. (2018), established a negative relationship between freedom status and unemployment in the 117 countries studied. It is expected that countries that are freer are effective in the implementation of laws which

transcends to employment, thus, the freer the country, the lower the unemployment rate. This study also expects a negative relationship of freedom status with unemployment rates.

EPL/DFE measures the stringency of labour laws. EPL is the average of indices that are related to protection against dismissal, compensation in the event of dismissal, fixed-term contract regulations and collective employee consultation in terms of dismissal. DFE on the other hand, constitutes indices, which are related to the regulation of dismissal and legal regulations of codetermination at workplace. The indices that constitute these laws and their measurements are shown in Tables 2.3 and 2.5. EPL/DFE ranges from 0 to 1, where values closer to 0 are considered to have little or no worker protection and closer to 1, higher worker protection. The relationship between EPL (DFE) and unemployment is mixed in the literature. The signs are usually based on the type of data used and the econometrics methodology employed (Adams, Bishop, Fenwick, et al., 2018). In a recent paper by Adams et al., (2018) unemployment falls in the long run as protection of employees in different forms of employment increases and employment protection laws increase in general in the 117 countries considered. However, Ahmed and Aljane (2014) found no link between unemployment and labour regulations in Tunisia. This study therefore expects a negative impact of freedom status on unemployment.

Credit to the private sector: Any financial resource such as trade credits, loans and securities, which are rendered by financial institutions to the private sector and claim of repayment agreed on is deemed to be called credit to the private sector (ILO, 2017). The expansion of businesses thereby leading to creation of employment is usually achieved if credits available for private sector are in a greater proportion. When credit is readily available for firms, they are in position to expand production, in doing so more workers will be employed. Bayar (2016) indicates that credit to the private sector has no significant impact on unemployment in emerging economies

while Gatti and Vaubourg (2009), established a negative relationship between unemployment and credit to the private sector. Similar conclusion has also been drawn by Shabbir et al. (2012). Thus, this study expects to establish a negative relationship between unemployment and credit to the private sector.

***Foreign Direct Investment*:** This additional explanatory variable measures the net inflow of FDI as a percentage of GDP. The inflows of FDI in SSA has been widely viewed to increase over the years and its implication on unemployment have raised some concerns. When a foreign firm either collaborates with a local firm or established a new firm abroad, resources are transferred to the local firm or the existing firm. For existing firms, this gives them the opportunity to expand thus employing more workers. Following Anyanwu (2012), this study expects a positive relationship between unemployment and FDI. Resulting from the fact that much of foreign direct investments to Africa are in the extractive areas, which generates fewer jobs, a direct relationship is expected.

Table 4.1: **Summary of Explanation of Variables and their Expected Signs**.

Definition	Indicator	Expected sign
Unemployment	Percentage of labour force	
GDP Growth	Annual percentage	Negative
Trade Openness	Percentage of GDP	Positive/Negative
Inflation	Percentage change in CPI	Positive
Freedom Status	Mean of political right and civil liberty, indexed 1 to 7	Negative
EPL/DFE	Average of laws in relation to them, ranges from 0 to 1	Uncertain

GDP per Capita	GDP per capita (current US$)	Positive/negative
Credit to private sector	Domestic credit to private sector (% of GDP)	Negative
Foreign direct investment	Foreign direct investment, net inflows (% of GDP)	Positive
Urban population share	Urban population (% of total)	Positive

Source: Author's compilation

***Urban Population Share*:** This is measured by the proportion of urban dwellers to the total population of a country. Urbanization is characterized with a lot of social threats such as insecurity, poverty, unemployment and poor sanitation (Cobbinah, Erdiaw-Kwasie, & Amoateng, 2015). Individuals migrate to the urban centres for better opportunities but due to fewer job openings in those urban areas, they become unemployed. This study expects to generate a positive link between urban population share and unemployment.

GDP Per Capita: This is measured by dividing the GDP of a country by its population in constant US dollars. This variable is used in order to capture the effect of a country's probable demand on unemployment rates. According to Anyanwu (2013), the richer or higher a country and its GDP, the higher the unemployment rate, but this accession is contrary to other works (see Kim, 2011). Thus, a mixed relationship is expected for this variable, that is, either positive of negative.

4.3 Sources and Nature of Data

4.3.1 The CBR-LRI Dataset

The dataset from which both employment protection laws (EPL) and regulations relating to different forms of employment (DFE) is sourced is the Centre for Business Research Labour Regulation Index (CBR-LRI). This dataset codes changes in labour regulations from 1970 to 2013 around the world. In 2016, the data was expanded to cover 117 countries. (Adams, Bastani, Bishop, & Deakin, 2017). Specifically, data was collected on 25 African countries of which 21 of them are from SSA.

The CBR-LRI index is made up of 40 variables grouped into five sub-indices. Each variable has a score ranging from 0 (little or no worker protection) to 1 (high worker protection). The five indices are the regulation of different forms of employment, working time, dismissal, employee representation and industrial action. The sub-indices used by Botero et al. (2004) in his paper informed the choice of CBR-LRI sub-indices, although Botero's indices lacked time series dimension. However, the definition of individual indicators in the CBR-LRI is different from Botero's and are more detailed.

In obtaining the EPL variable, 15 sub-indices are averaged to get an index. The issue of averaging brings about the problem of weighting. In averaging the indices, equal weights were given to each sub-index because of the relative importance of each of them and also follows the literature (Adams, Bishop, Deakin, et al., 2018). On the other hand, regulations relating to DFE is made up of 8 sub-indices. Three of these sub-indices are also part of the EPL and the rest are in relation to treatment given to part-time or temporary workers as compared to permanent or full-time workers.

4.3.2 Other sources

Due to availability of annual data from the World Development Indicators (WDI), this study sourced the dependent variable – unemployment - and some of the control variables - inflation, GDP growth, trade openness, GDP per Capita, Credit to private sector, Foreign direct investment, Urban population share, Domestic investment- for analysis from the database. These control variables are used based on literature and availability of data. In all, the variables covered the period from 2000 to 2013 for the countries used in this study (see Appendix 2 for the countries used). Freedom Status (FS) is used as a proxy for the level of freedom or the level of implementation of laws and it is sourced from Freedom House Indicators Database.

4.4. Estimation Technique

The study adopts panel estimation technique to assess an empirical link between unemployment and employment protection laws in SSA. Before proceeding to panel estimation, the study carries out stationarity test of the data using three distinct stationarity tests on the variables over the period covering 2000-2013; Im, Pesaran, and Shin, ADF-Fisher and PP-Fisher. The IPS, ADF-Fisher and PP-Fisher test depend on the assumption that autocorrelation coefficients vary across cross-sections. Deterministic time trend is included in all test specifications. To reduce the problems that arise from cross-sectional dependence, cross sectional means are subtracted. In determining the country-specific lag length for the ADF regressions, the Schwarz-Bayesian information criterion (BIC) is used.

The study recognises the possibility of encountering, the problem of endogeneity. Based on relevant assumptions, the appropriateness of both Random and Fixed Effects models is considered. Also, the General Method of Moments (GMM) is also employed to improve the efficiency of results after satisfying the relevant conditions.

In order to make the estimates efficient and reliable, some diagnostic test are carried out. Some are employed before the estimation of empirical model specification in equation (7) or in addition with the estimates. The test includes autocorrelation and heteroscedasticity as well as validation of over identification restrictions.

4.5 Presentations and Discussion of Empirical Results

4.5.1 Descriptive statistics

The descriptive statistics of the variables used in this study is presented in Table 4.2. Statistics is provided on the mean, standard deviation as well as maximum and minimum values of the variables on 20 SSA countries from 2000 to 2013. This is to describe the features of the data and variables used in the study.

From the 20 SSA countries under study, average unemployment rate for the period 2000 to 2013 is approximately 10.9 percent with a standard deviation of 8.4 indicating the clustering of unemployment rates around the mean. The minimum unemployment rate though is 0.8 percent and maximum 38 percent. Meanwhile, the minimum unemployment rate in the world is 0.3 percent with a maximum of 50 percent. The mean unemployment rate is about 10 percent for the same period. This maximum unemployment rate of SSA emphasizes the depth of unemployment and why it should be looked at by analysing the possible causes.

Table 4.2: Descriptive statistics of variables from 2000 to 2013

Variable	Observation	Mean	Standard Dev.	Minimum	Maximum
Unemployment rate	280	10.863	8.387	0.775	38.04

EPL	280	0.485	0.133	0.111	0.72
DFE	280	0.386	0.199	0.125	0.768
Freedom Status	280	4.116	1.643	1.5	7
Inflation	275	110.728	1473.227	-9.616	24411.03
Trade openness	273	70.161	27.195	23.729	152.547
Growth Rate	260	4.939	4.387	-17.669	33.736
Credit to the private sector	253	21.692	29.722	0.491	160.125
GDP Per capita	280	6.972	1.009	5.035	9.280
Foreign direct investment	280	3.174	3.157	-5.387	24.009
Urban population share	280	40.249	16.179	14.786	87.156

Source: Authors computation based on data from CBR-LRI

On average, employment protection laws stood at 0.5. As indicated in the previous chapter, the closer the index is to 1, the stricter the labour laws. Therefore, this can be considered as a 'moderate' strictness of employment protection laws. This level of protection is same as the world average of 0.54 but lower than North African average of 0.7. Notwithstanding, the minimum and maximum protection level of 0.1 and 0.7 respectively shows a varying degree of strictness of employment laws in SSA. This highly strictness of EPL in some countries could be the reasons for very high unemployment in those countries. On the other hand, laws relating to different forms of employment averaged 0.4 but with a higher standard deviation than EPL, that is 0.2 as compared to the standard deviation 0.1 for EPL. This indicates that on average the variation of laws in relation to different forms of employment hovers around the mean.

Interestingly, the minimum and maximum sternness of DFE laws are higher than EPL minimum and maximum. This means that SSA countries protect workers who find themselves in short term employments.

The growth rate of SSA countries shows an average growth of 5 percent of their GDP, with a standard deviation of 4.8. Another variable used in this study is the Freedom Status, which measures both the political and civil rights of countries. It shows a mean score of 4. This means that these SSA countries are on average 'partly free'. Its standard deviation is approximately 2, with minimum and maximum value (freeness) as 1.5 and 7 respectively. This maximum value shows that some of the SSA countries are not free, implying difficulty in implementation of rights and responsibilities.

Table 4.3: Pair Wise Correlation Coefficient of variables used the study

	U_t	EPL	DFE	FS	INF	TO	lagGDPG	lagCPS	lnGDPPC	FDI	UPS
U_t	1										
EPL	0.046	1									
DFE	-0.224***	0.747***	1								
FS	-0.394***	0.199***	0.072	1							
INF	-0.047	-0.005	-0.0541	0.098	1						
TO	0.526***	0.263***	0.169***	-0.218***	0.035	1					
lagGDPG	-0.057	-0.028	-0.072	-0.06	-0.13**	0.002	1				
lagCPS	0.399***	-0.1	-0.28***	-0.399***	0.033	0.003	-0.172	1			
lnGDPPC	0.526***	0.176***	-0.021	-0.292***	-0.068	0.394***	0.01	0.445***	1		
FDI	0.168***	0.011	-0.066	-0.109*	-0.035	0.194***	0.142**	-0.109*	0	1	
UPS	0.303***	0.527***	0.419***	-0.097	-0.027	0.404***	-0.119*	0.257***	0.763***	0.015	1

***, ** and * indicate levels at significance at 1%, 5% and 10% respectively

Source: Authors computation from STATA 15

Correlations

This section presents Pair Wise correlation coefficient result for the variables used in the study. The Pair Wise correlation coefficient measures the strength and direction of the linear relationship between two variables. Table 4.3 illustrates the correlations.

From the correlation matrix a positive relationship is established between unemployment and EPL and trade openness. Although the relationship is not significant for EPL, it does for trade openness at 1 percent statistical level. On the other hand a negative relationship is established between unemployment and the variables DFE, Freedom house indicator, inflation and growth rate. While this correlation cannot be conclusive on the problem of multicollinearity, all the coefficients suggest the absence of multicollinearity.

4.5.2 Panel Estimation results

Unit Root Testing

The study employed different tests for stationarity to ensure that the results are not spurious. They include Im, Pesaran and Shin unit root test (IPS) and the two Fisher Types unit root test, Fisher ADF and Fisher Phillips-Perron unit root test. A lagged level of 3 is selected for Fisher-type unit root test while lagged selection based on Schwarz Information Criterion is used for IPS unit root test. In order to minimize cross-sectional dependence problems, we subtract the cross-sectional means. Deterministic time trend has also been included in the unit root testing. The null hypothesis for all the tests is that all the panels contain unit root as against the alternative that at least some of the panels are stationary. Table 5.3 reports on the stationarity tests results and their p-values.

Table 4.4: Stationarity Test Results

Variable	IPS	Fisher-ADF	Fisher-PP
EPL	-0.476	132.553***	60.87**
DFE	3.128	73.856***	12.251
Freedom Status	-0.971	36.72	57.399**
Inflation	-3.119***	44.035	102.449***
Trade openness	-1.979**	104.784***	95.388***
Unemployment	-0.907	58.663**	65.159***
Growth rate	-7.024***	67.57***	197.758***
Credit to private sector	-3.232***	42.793	94.78***
GDP Per capita	-1.959**	120.66***	123.247***
Foreign direct investment	-7.497***	76.396***	307.135***
Urban population share	-3.692***	92.867***	317.103***

***, ** and * indicate levels at significance at 1%, 5% and 10% respectively

Source: Authors computation using STATA 15

. Following Maddala and Wu (1999), Fisher-type unit root tests are more simpler and better than LLC and IPS unit root test, thus, the study concludes on the results that the variables pass at least one of the Fisher-type stationarity test and either LLC or IPS unit root test. From Table 4.4, all the variables, except DFE and domestic investment are stationary with reference to the stated criterion above. Due to the higher strength of Fisher-type unit root test over the others, laws related to DFE and domestic investment are also considered to be stationary. Therefore, all the variables can be used at levels, I(0), without arriving at a spurious results. This section is divided into three subsections, of which the first section presents the results from the random effect (RE) and fixed effects estimations (Table 4.5). The second subsection presents the result to the Hausman test and decides on which of the models, RE or FE, is appropriate.

Table 4. 5: **The Effect of Employment Protection Laws / (DFE) on Unemployment in Random Effect and Fixed Effect.**

Variable	RE (1)	FE (2)		RE (3)	FE (4)
U_{t-1}	**0.9613*** **	**0.7735*** **		**0.9655*** **	**0.7730*** **
	(0.0126)	(0.0532)		(0.0117)	(0.0519)
EPL	**0.8446***	0.0842	**DFE**	0.2324	-2.0251
	(0.4560)	(1.4669)		(0.4718)	(1.6878)
FS	-0.0511	0.0184		-0.0354	0.0234
	(0.0429)	(0.0930)		(0.0465)	(0.0868)
INF	**-0.0019****	-0.0011		**-0.0017***	-0.0012
	(0.0007)	(0.0008)		(0.0009)	(0.0008)
TO	**-0.0095*** **	-0.0101		**-0.0031*** **	-0.0112
	(0.0032)	(0.0080)		(0.0031)	(0.0076)
lGDPG	**-0.0469*** **	-0.0046		**-0.0443*** **	-0.053
	(0.0175)	(0.0139)		(0.0173)	(0.0076)
lCPS	0.0015	-0.0170		0.0016	-0.0170
	(0.0018)	(0.0137)		(0.0017)	(0.0134)
lnGDPPC	**0.4101*** **	**-1.0823****		**0.3539****	**-1.1645****
	(0.1467)	(0.4414)		(0.1509)	(0.4608)
FDI	**0.0703*** **	**0.0930*** **		**0.0693*** **	**0.0919*** **
	(0.0193)	(0.0172)		(0.0185)	(0.0164)
UPS	-0.0119	**-0.1627****		-0.0075	**-0.1412****
	(0.0098)	(0.0623)		(0.0087)	(0.0624)
Constant	**-1.8380***	**16.3507*** **		-1.4062	**16.9825*** **
	(1.1032)	(.9806)		(1.0787)	(4.7435)
Observation	244	244		244	244

The numbers in parenthesis are robust standard errors. ***, ** and * indicate levels at significance at 1%, 5% and 10% respectively. The dependent variable is unemployment. Time dummies are included.

Hausman Test

Due to the dynamic nature of the model and the number of countries under consideration, the study continued to test whether the individual heterogeneity is correlated with the regressors of the model. The Hausman test is used to test the significance of the difference between the

coefficients of REM and FEM, hence the null hypothesis is "no difference in coefficients" (REM is preferred) against the alternate hypothesis of FEM is appropriate. The result presented in Table 4.6 shows that, the p-value is significant thus, we reject the null in favour of the alternate hypothesis. The implication is that the model fit the FEM criteria and estimates from this technique are more appropriate than the REM.

Table 4.6: Hausman Test

H0: difference in coefficients not systematic
Chi2(13)=36.94
Prob>chi2=0.0004

Source: Author's computation using STATA 15

Unemployment and Labour Protection Laws Under Random and Fixed Effect Models

Based on the result from the Hausman test, the discussion of this result is based on the fixed effect model. First, from all the estimations presented in Table 4.5, the lagged dependent variable, U_{t-1} is positive and highly significant at 1 percent. This reflects that unemployment in SSA is highly persistence corroborating our prediction earlier. This finding is in consonance with other findings in the literature (Adamu, Kaliappan, Bani, & Nor, 2017; Ahmed & Aljane, 2014). Ahmed and Aljane (2014) found that there is a high hysteresis effects on unemployment in 115 developing countries while (Adamu et al., 2017) also found a similar results in sub-Saharan Africa.

From the fixed effect estimations, both EPL and DFE are not statistically significant but have positive and negative effect on unemployment respectively. This result might be misleading

due to the presence of endogeneity problem as a result of including the first lag of unemployment as part of the independent variables.

Moreover, natural log of GDP per capita have a significant negative effect on unemployment where a unit increase in GDP per capita will lead to 1.0823 percent reduction in unemployment for model 2 and 0.3539 percent reduction in unemployment in model 4. This finding follows intuition as well as empirical findings such as Anyanwu (2014).

Also, foreign direct investment (FDI) has a highly positive significant effect on unemployment, where a percentage increase in FDI leads to a 0.093 percent increase in unemployment in SSA. This means that foreign direct investments coming into SSA are not geared towards employment generating sectors, such as agriculture and manufacturing, thus, exacerbating the level of unemployment in SSA. This finding contradicts the studies by Jude and Silaghi (1998) and Folawewo et al. (2015) but confirms with Anyanwu's (2014) findings. On the other hand, a negative relationship is established between urban population share and unemployment in SSA. A percentage increase in urban population share leads to 0.2 percent reduction in unemployment. This finding is intuitively accurate and empirically proven by Anyanwu (2014).

From Table 4.7, the study observed that employment protection laws (EPL) is positive and significant at 5 percent. It has also been observed that the coefficients from the estimates are larger in GMM estimation than RE and FE, hence an increase in employment protection laws lead to unemployment in SSA. Thus, the study finds that a percentage increase in employment protection laws will lead to a 1.8316 percentage increase in unemployment. Intuitively, an increase in EPL hinders employer's firing and hiring prowess. Given this high protection of

employees, employers find it imprudent to lay off workers due the cost involved. Also, due to the difficulty of firing a newly employed worker as result of economic downturns or reduction in profitability, it will be ill-considered to employ new workers, hence unemployment.

Unemployment and Employment Protection Laws under GMM Model

Table 4.7: The Effect of Employment Protection Laws / (DFE) on Unemployment for system GMM.

Variable	SYS.GMM (5)		SYS.GMM (6)
U_{t-1}	**0.8787*** **		**0.8717*** **
	(0.0733)		(0.0743)
EPL	**1.8319** **	**DFE**	-0.1419
	(0.8516)		(0.9683)
FS	**-0.0829***		-0.0559
	(0.0812)		(0.0803)
INF	0.0010		0.0013
	(0.0010)		(0.0014)
TO	**-0.0100***		**-0.0066***
	(0.0230)		(0.0236)
lGDPG	**-0.0356** **		**-0.0345** **
	(0.0136)		(0.0134)
lCPS	-0.0050		-0.0056
	(0.0071)		(0.0063)
lnGDPPC	1.0345		**0.8641** **
	(0.4701)		(0.3932)
FDI	**0.1076*** **		**0.1031*** **
	(0.0202)		(0.0206)
UPS	-0.0291		-0.0135
	(0.0256)		(0.0185)
Constant	**-6.0472***		-4.7850
	(3.4711)		(2.7930)

Hansen test(Prob>Chi-squared)	1.000	1.000
Autocorrelation AR(2)	0.558	0.544
Observation	244	244

The numbers in parenthesis are robust standard errors. ***, ** and * indicate levels at significance at 1%, 5% and 10% respectively. The dependent variable is unemployment. Time dummies are included.

This finding is confirmed empirically by Scarpetta (1996), Blanchard and Wolfers (2000) and ILO (2003). They all found a positive relationship between employment protection laws and unemployment but with a smaller coefficient as compared to the findings from this study. Contrary, a more recent study by Adams et al., (2018) shows a rather negative relationship between employment protection laws and unemployment in 117 countries. The positive impact found by this study suggests that countries in SSA which have a highly protective labour laws will experience higher rates of unemployment than those with relatively lower level of employment protection.

Given that the EPL variable is made up of various labour laws in relation to protection, the study further explored the main labour laws contributing to this findings. Out of the 15 indicators or labour laws constituting employment protection laws, only 3 of them are significant at 10 percent significance level at most and thus contributing to the overall significance of EPL variable (Appendix 1). These laws are related to dismissal regulation, namely, laws in relation to legally mandated redundancy compensation; minimum qualifying period of service for normal case of unjust dismissal; and reinstatement of normal remedy for unfair dismissal. Also, they all have positive impact on unemployment. This result conforms to Feldmann (2009), who states that if restrictive level of dismissal regulations are relatively low, employers find it prudent to employ women, young workers and low skilled workers for an indefinite period because they can easily dismiss them if the economy deteriorates or the

firm's profit level reduces. This findings, therefore implies that countries that pay higher redundancy compensation for a worker employed over 3 years will have higher rate of unemployment than those paying lower compensation. Also, in jurisdictions where the period of service required before a worker qualifies for general protection against unjust dismissal are low will lead to higher rates of unemployment. Finally, when remedy for unjust dismissal is highly enforced in terms of reinstatement, unemployment will increase in such countries.

The other variable that measures the laws regulating different forms of employment (DFE), shows a negative impact on unemployment but not statistically significant. The negative sign implies that if these laws (DFE) are more protective, they will reduce unemployment in SSA. A decomposition of this variable does not also show any significant difference for explanation. Adams et al. (2018) also realised same result in their study as well. This means that when part-time, fixed term and agency workers are highly protected by laws, it will impact unemployment negatively in SSA. The insignificance of this measure may be due to the implementation gaps in developing countries as well as high level of employment in the informal sector (ILO, 2015).

Additionally, the study observed that trade openness impacts unemployment negatively in all the estimations and it is highly significant at 1 percent. The implication of which is a reduction in unemployment with a greater openness to trade. It has also been observed that the coefficients of trade openness is relatively larger in GMM estimation than OLS and FE estimations. This might be due to the problem of endogeneity suffered by such estimations because of the inclusion of the lagged dependent variable among the regressors. The result shows that a percentage increase in openness to trade leads to a 0.01 percent decrease in unemployment in SSA. In the empirical literature, Anyanwu (2014) found a similar result, where trade openness impacts unemployment negatively in Africa. Other findings of Dutt et

al. (2009) and Felbermayr et al. (2011) also found a reduction in unemployment with higher trade openness.

Inflation on the other hand is negatively related to unemployment in OLS and FE estimations but positively related to unemployment in GMM estimations. In all the estimations, inflation is only significant in the random effect model. Notwithstanding, the positive relationship implies that unemployment worsens with higher inflation rates. This finding is confirmed by Elliot (2015) and Umoru and Anyiwe (2013). As indicated by Vermeulen (2015), in order to generate adequate employment in Africa, inflation targeting regimes should focus on relatively lower inflation.

Moreover, FDI is observed to have a positive and highly significant impact on unemployment in all the estimates. This result contradicts the expected sign but in consonance with the findings of Anyanwu (2014), who postulates that those investments are not directed toward employment generating ventures. This study found that a percentage increase in FDI leads to a 0.1076 percent surge in unemployment in SSA. This finding also contradicts the study by Folawewo and Adeboje (2017) which was earlier obtained by Jude and Silaghi (1998) and Ogbeide et al. (2015). Most SSA countries are rich in natural resources and a lot of foreign investments are directed towards them, which themselves are not employment generating. This could be the reason for the direct relationship established in this study.

The lag of credit to the private sector has shown a negative relationship in all the estimates in exception of OLS, although not significant. This means that with advancement of more credit to the private sector, unemployment will reduce. However, the insignificant nature could be explained that the allocation of financial resources to the private sectors focus less on

employment generating ventures. Ogbeide et al., (2015) with a similar result argued that multinationals do not invest in employment generating sectors such as agriculture sector, thus leading to the inadequate reduction in unemployment as perceived.

Other insignificant variables in the choice model are log of GDP per capita and urban population share. They all have direct impact on unemployment. On the part of urban population share, as individuals migrate to the urban centres in search of jobs, unemployment rather increases due to unavailability of employment opportunities in those areas as well. This finding contradicts with Anyanwu (2014) as well as general intuition. It thus suggests that urbanization in SSA rather worsens unemployment than otherwise. Log of GDP per capita on the other hand, shows that the higher the per capita income, the higher the unemployment. This also contradicts findings of Kim (2011) and Ogbeide et al., (2015). This could be as a result of non-employment generating sectors such as services and investment in natural resources, contributing to the increase in the GDP per capita.

GDP growth in all the estimates shows a negative significant relationship with unemployment. This study found that unemployment falls by 0.0356 percent with a percentage increase in last year's GDP growth. This finding thus confirms the presence of Okun's law in SSA. This finding is also consistent with that of Kamgnia (2009) in Africa and Doğru (2013) and Levine (2013).

4.5.3 Diagnostic Tests

In this section, the study presents the diagnostic test results. As discussed in the previous chapter, Breusch-Pagan Lagrangian Multiplier test for significance of individual heterogeneity and Hausman test for suitability of REM and FEM are presented. The presence of

heteroscedasticity and autocorrelation are also tested using the modified Wald test for groupwise heteroscedasticity and Wooldridge test for autocorrelation respectively. Finally, in order to ascertain the consistency and suitability of the estimates from system GMM, the Hansen test for over-identification has also been tested.

Breusch-Pagan Test

The Lagrange Multiplier (LM) devised by Breusch and Pagan (1980) is used to test the relevance of REM against the Pooled regression. This test is based on the OLS residuals and follows a Chi-Square distribution with one degree of freedom. It tests the null hypothesis of "Pooled Regression is appropriate", that is, variance across units is zero, as against the alternate hypothesis of "REM is appropriate". The result from Table 4.8 indicates that we failed to reject the null hypothesis. A similar result was arrived at when DFE is used in place of EPL. This implies that there is no individual heterogeneity in the panel.

Table 4.8: Breusch-Pagan Lagrange Multiplier Test

Ho: Constant variances
Chibar2 (01) = 0.00
Prob > chibar2 = 1.0000

Source: Author's computation using STATA 15

Heteroscedasticity

After establishing that FEM is more appropriate than REM using the Hausman test, the study further checked for the presence of heteroscedasticity, which is more prevalent in cross sectional data and with panel data, which combines both time series and cross sectional data. The modified Wald test for GroupWise heteroscedasticity which is available for FEM is

employed. It tests the null hypothesis of homoscedasticity as against the alternate of heteroscedasticity. The result indicates the presence of heteroscedasticity (Table 4.9). This is corrected using robust standard errors.

Table 4.9: Modified Wald Test for GroupWise heteroscedasticity

H0: homoscedasticity
Chi2 (20) = 1596.93
Prob>chi2=0.0000

Source: Author's computation using STATA 15

Autocorrelation

The Arellano-Bond test for serial correlation in first difference errors is employed. The results as reported in Table 4.7 shows an AR (2) p-value of 0.558 for EPL as an independent variable and 0.544 for DFE as a dependent variable. The conclusion therefore is that there is no second order autocorrelation, hence the errors are not correlated with each other.

Over-identification Restriction Test

For the system GMM estimates to be reliable and consistent, the Hansen test is used to test whether over-identifying restrictions are valid. The results as reported with the estimates in Table 4.7 shows that the null hypothesis of "over-identifying restrictions are valid" cannot be rejected, thus implying the validity of all instruments as well as making the system GMM estimates consistent and reliable.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.0 Introduction

This chapter lays out the summary and conclusions of this study. The chapter begins with summary and conclusions. Section 5.2 gives some recommendations for policy purposes and areas for further research. Some limitations encountered in this study is presented in the final section.

5.1 Summary and Conclusions

Unemployment has been the ben for sub-Saharan African (SSA) countries over the years and its impact on various facets of the economy is glaring. The causes of these high rates of unemployment have usually been attributed to poor economic performance (Rodrik, 1997) without a critical look at labour regulations, especially, employment protection laws (EPL). A considerable level of unemployment can propel economic growth, thus, a poverty reduction measure.

Also, the development of interest in labour regulations have been necessary "to protect workers from arbitrary or unfair treatment and to ensure efficient contracting between employers and workers" (World Bank, 2015). These laws are not promulgated externally but are needed internally to guide labour markets for economic growth.

The economic growth patterns of SSA countries and its implications on unemployment is not enough with the presence of nuisance labour regulations. Thus, this study looked at the trends of employment protection regulations and laws regulating different forms of employment in SSA. The study also looked at how these laws impact unemployment in SSA.

In answering the stated objectives, the study used data from the Centre for Business Research at Cambridge University, called the CBR-LRI database, the World Development Indicators (WDI) online database and Freedom House Indicators database over the period 2000 to 2013 for 20 selected SSA countries.

The CBR-LRI index has provided a particular coding of labour regulations which have made it possible to determine how de jure labour regulations are changing over the years. Examining

this index shows that on average, laws regulating DFE have been increasing over the years but at a lower rate as compared to the global average and that of North Africa. This phenomenon has been explained by Adams et al. (2018) that developing countries tend to have lower level of restrictions than developed countries. With regards to Francophone and Anglophone countries, these regulations tend to be pronounced in Francophone than Anglophone countries.

On the other hand, EPL which includes laws regulating hiring and firing have also been increasing over the years but at a higher rate compared to laws regulating DFE. Similarly, the level of protection of these laws are lower than the the average of the World and North Africa. Also, the protection tend to be higher among Francophone countries than Anglophones.

In order to estimate and establish the relationship between unemployment and EPL or laws regulating DFE, the study estimated an unbalanced panel data using static and dynamic panel data estimation techniques. Due to the problem of endogeneity, which was caused by the inclusion of one year lagged dependent variable among the independent variables, as well as a possible endogeneity by trade openness, the study employed the system GMM estimation technique to arrive at consistent and reliable estimates. However, with reference to the static model, fixed effect is chosen over random effect model.

The findings from these estimations indicates that EPL positively affect the level of unemployment in SSA. However, laws regulating DFE negatively impact unemployment, although not statistically significant. The study also established a negative relationship between unemployment and freedom status, trade openness as well as GDP growth. On the other hand FDI and government expenditure impact unemployment positively.

5.2 Recommendations for Policy and Future Research

The major finding from the study is the positive relationship between employment protection laws and unemployment. This implies that the more protective the labour law, the more it contributes to unemployment. This also implies that SSA countries should take a second look at their labour regulations. If the employees are extremely protected using laws, employers find it difficult to employ new workers. Specifically, laws relating to mandated redundancy compensation and reinstatement of unfairly dismissed workers should be modified in order not to exacerbate unemployment.

Policy makers should also, put measures in place to curb and redirect FDI, because according to this study, the FDI inflows are not generating employment but rather leading to unemployment. If policies are put in place to redirect these FDIs to employment generating sectors such as agriculture and manufacturing, it will have a positive impact on employment.

Governments in SSA should also reduce their expenditure or expend in areas that can lead to employment generation. However, SSA countries should encourage trade among themselves as well as with other blocks. Policies regarding tariffs should be reviewed in order to have the full effect of trade openness on unemployment.

Finally, various governments in SSA should holistically encourage growth in various facets of the economy in order to create employment opportunities for her citizens.

This study did not consider the various blocks in SSA, such as West Africa and East Africa. Oil and non-oil producing countries may have different relations, thus future works could analyse that aspect. Also, future studies can also disaggregate unemployment and look at how labour regulations impact them.

5.3 Limitations of the Study

One of the limitation to this study relates to unavailability of data. Out of the forty eight (48) SSA countries, only twenty is used for the analysis partly due to inadequacy of data. Notwithstanding, the selected number of SSA countries used in this study could be considered as significant representation of SSA countries.

Also, the CBR-LRI index measures the de jure laws of the labour market without taking into consideration their implementation in the various countries. Thus, the gap between the formal law and the laws in practice can be taken in to account in future studies.

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APPENDIX

Appendix 1: Estimates of other three indicators

Variable	GMM (1)		GMM (2)		GMM (3)
U_{t-1}	0.8754***		0.8731***		0.8859***
	(0.0694)		(0.0697)		(0.0728)
***Epl17**	0.5057*	*Epl18	1.0803**	*Epl21	1.0523**
	(0.2826)		(0.3912)		(0.4173)
FS	-0.1422*		-0.1259		-0.1181
	(0.0750)		(0.0789)		(0.0745)
INF	-0.0009		0.0006		0.0007
	(0.000)		(0.0004)		(0.0005)
TO	-0.0344**		-0.0344***		-0.0400***
	(0.0133)		(0.0120)		(0.0143)
lGDPG	-0.0217*		-0.0232**		-0.1263***
	(0.0114)		(0.0118)		(0.0113)
lCPS	-0.0015		-0.0036		-0.0068
	(0.0050)		(0.0053)		(0.0055)

lnGDPPC	0.4582	0.5221	0.4326
	(0.4216)	(0.3615)	(0.3646)
FDI	0.1043***	0.1002***	0.0861***
	(0.0187)	(0.0205)	(0.0198)
UPS	-0.0276	0.0224	0.0273
	(0.0198)	(0.0159)	(0.0179)
Constant	-2.5069	-4.1556*	-2.9154
	(2.5606)	(5.9816)	(2.5027)
Observation	233	233	233

The numbers in parenthesis are robust standard errors. ***, ** and * indicate levels at significance at 1%, 5% and 10% respectively. The dependent variable is unemployment. Time dummies are included. *Epl17 is legally mandated redundancy compensation, *Epl18 is minimum qualifying period and *Epl21 is reinstatement normal remedy.

Appendix 2: Countries used in the analysis

Angola	Namibia
Botswana	Nigeria
Cameroon	Rwanda
Congo democratic Republic	Senegal
Cote d'Ivore	South Africa
Gabon	Sudan
Ghana	Tanzania
Kenya	Uganda
Lesotho	Zambia
Mali	Zimbabwe