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Critical evaluation of possible policy options to reduce unemployment in South Africa

by

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DECLARATION

I declare that ***"Critical evaluation of possible policy options to reduce unemployment in South Africa"*** is my own work, that it has not been submitted for any degree or examination in any university, and that all the sources that I have used or quoted have been indicated and acknowledged by complete references.

Jeremy Francisco Hendriks

Signature: .....

Date: 8 February 2016 .....

ABSTRACT

Since the advent of democracy, one of the most serious economic problems facing the South African economy is the persistently high unemployment. Although employment has been increasing in general since the economic transition, the extent of such increase is not rapid enough to absorb the expanding labour force entrants, thereby causing both the level and rate of unemployment to increase. This is indicated by the fact that, despite the increase of employment number from 9.5 million in 1995 to 15.2 million in 2014, the number of unemployed increased from 2.0 million to 5.2 million during the same period, thereby causing the unemployment rate to rise from 17.6% to 25.4%. In fact, the labour market objective of the Accelerated and Shared Growth Initiative of South Africa (ASGISA) to reduce the unemployment rate to 15% by the end of 2014 is not achieved.

The government has been trying to solve the unemployment problem by means of various policies, ranging from the "big" policies like the Reconstruction and Development Program (RDP), Growth, Employment and Redistribution Policy (GEAR), the aforementioned ASGISA, and the recently launched National Development Plan (NDP), to the more specific labour market policies such as the Expanded Public Works Program (EPWP), promotion of small, medium and micro enterprises (SMMEs) to the implementation of the Employment Tax Incentives Bill (also known as the Youth Wage Subsidy) since 1 January 2014.

This study first provides a theoretical framework on various models of unemployment, before the main causes of unemployment in South Africa are discussed. A critical evaluation of the pros and cons of various policy options to alleviate unemployment would be looked at. Some of the policy options have already been implemented in South Africa for years and hence the possible success of these policies would be investigated in detail. Few policies have only been recently implemented (e.g. the Employment Tax Incentives Bill), while other possible policy options have not yet been implemented in South Africa (e.g. job-seeking transport subsidy) but have been adopted in other countries. Hence, the feasibility of these options for South Africa would be investigated, by examining the outcome of these policies in the other countries.

KEYWORDS: Unemployment, labour market policy, job creation, skills mismatch, structural change, South Africa

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LIST OF ABBREVIATIONS

AGR	Actual Growth Rate
ASGISA	Accelerated and Shared Growth Initiative for South Africa
BCEA	Basic Conditions of Employment Act
BIG	Basic Income Grant
CCMA	Commission for Conciliation, Mediation and Arbitration
EAR	Employment Absorption Rate
EEA	Employment Equity Act
EPWP	Expanded Public Works Programme
ETIB	Employment Tax Incentives Bill
FET	Further Education and Training
GEAR	Growth, Employment and Redistribution
ILO	International Labour Organisation
LF	Labour force
LFPR	Labour force participation rate
LFS	Labour Force Survey
LRA	Labour Relations Act
NDP	National Development Plan
NMC	National Manpower Commission
NSF	National Skills Fund
NYDA	National Youth Agency
OHS	October Household Survey
PAYE	Pay As You Earn
QLFS	Quarterly Labour Force Survey
RDP	Reconstruction and Development Project
SACOB	South African Chamber of Business
SETA	Sector Education and Training Authorities
SMME	Small, Micro and Medium Enterprises
Stats SA	Statistics South Africa
TLS	Training Layoff Scheme
TGR	Target Growth Rate
TLS	Training Layoff Scheme
UIF	Unemployment Insurance Fund

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CHAPTER ONE: INTRODUCTION

1.1 Statement of problem

It has been more than 20 years since the demise of apartheid in 1994, yet unemployment remains persistently high in South Africa. Since 1995, the economy has been showing some signs of growth and one would have expected unemployment to decline continuously. Although the South African economy has been showing moderate, positive growth in the past 20 years, employment growth remains relatively slow. Alternatively, it can be said that employment growth is not rapid enough to absorb the new labour force entrants, thereby causing unemployment to go up and remain persistently high.

Being unemployed means that a family has less income for consumption and savings. The consequences of unemployment are bad for a country. Families are in poorer health and their children's academic performances are usually worse than those who are unemployed (Nichols et al., 2013). Other consequences of unemployment include poor self-esteem, worsening poverty and inequality, as well as social problems such as crime, erosion of human capital, social instability, poor nutrition and poor social network (Dollard and Winefield, 2002; Kingdon and Knight, 2004). This also affects the way the international economies perceive South Africa.

Despite government's efforts with the implementation of various 'big' strategies (such as the Reconstruction and Development Program (RDP), Growth, Employment and Redistribution (GEAR), Accelerated and Shared Growth Initiative of South Africa (ASIGSA), National Development Plan (NDP)) and micro-level labour market policies (e.g. promotion of Small, Micro and Medium Enterprises (SMMEs); regional development), along with the post-apartheid legislations such as Affirmative Action, Labour Relations Act (LRA), Basic Conditions of Employment Act (BCEA) and the recently launched Employment Tax Incentives Bill (ETIB) to achieve, amongst others, rapid job creation and greater demand for youth workers, unemployment of the country remains persistently high. Some of these policies worked well in other countries but somehow in South Africa they do not seem to work well. Also, some countries have introduced a transport subsidy policy but, as with many other policies, this policy has not been implemented in South Africa yet. The Basic Income Grant (BIG) was also a considered as a policy option but was abolished and not implemented.

1.2 Objectives of the study

The research questions of the proposed study are as follows:

- Are the past and current labour market strategies being successful in alleviating unemployment, if not generating jobs more rapidly to absorb the labour force entrants?
- To assess the different unemployment policies in different countries and evaluate their successes or failures.
- Are there alternative policy options available to reduce unemployment that have not yet been implemented in South Africa (but they might have been implemented in other countries), and how feasible are these alternative policies?

1.3 Outline of the study

This study will consist of six chapters. Chapter One has discussed the statement of the problem and objectives of the study. Chapter Two presents a literature review of the conceptual framework, theoretical framework as well as main causes of unemployment in South Africa. Chapter Three discusses the methodology and data, before Chapter Four provides a descriptive analysis on the extent and trends of unemployment in South Africa in 1995-2014. The demographic, educational attainment and past work experience characteristics of the unemployed will be looked at. Chapter Five will critically evaluate the success (if any) of the current labour market policies, before examining the feasibility of alternative policy options that have not yet been implemented in South Africa but have been adopted in other countries. Chapter Six concludes the study.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This chapter consists of main parts, namely conceptual framework, theoretical framework and main causes of unemployment. The conceptual framework (Section 2.2) first explains how labour market status is derived (to pave the way for the forthcoming empirical analysis of the labour survey data), the various types of employment, the differences between active and passive labour market policies, as well as the legislative framework in South Africa with regard to the labour market; the theoretical framework (Section 2.3) discusses numerous theoretical models in connection with unemployment. Finally, Section 2.4 highlights the main causes of unemployment in South Africa, ranging from rigidities in the labour market and labour market discrimination to barriers of entry to informal sector and high reservation wage.

2.2 Conceptual framework

2.2.1 Derivation of labour market status

The working-age population are defined as those aged 15 to 65 years. For those who are neither employed nor unemployed, they are defined as inactive. Alternatively, it could be said that those who are either employed or unemployed are part of the labour force (LF) or economically active population. As far as the employed are concerned, according to the labour market status derivation methodology of Statistics South Africa (Stats SA), as long as someone has worked for at least one hour in the past seven days, he/she would be immediately defined as employed.

The unemployed refers to those in the working-age population who were not employed during the reference week; actively looked for work or started a business in the four weeks before the interview; were available for work or started a business in the reference work; had a job or business to start in the future and were available.

In contrast, the discouraged work seekers are those who were not employed during the reference period but wanted to work and were available to work or start a business but did not look for work actively or start a business during the last four weeks. The reasons why they are not looking for work or starting a business are because there are no jobs available in the area, they are unable to find jobs that match their skills or they lost hope in finding work. Note that

discouraged work seekers are excluded under the narrow definition of labour market status, to be discussed below.

Two standard definitions of unemployment are adopted by Stats SA, namely the narrow definition and broad definition of unemployment. Individuals were generally defined as narrowly unemployed if they: (a) did not work during the seven days prior to the interview, (b) wanted to work and would accept a job if being offered one (there was an additional requirement since LFS 2000b that these people must be available to start work within two weeks of the interview), and (c) had taken active steps to look for work or to start a business in the four weeks prior to the interview. Those who only met the first two requirements above were defined as discouraged work seekers, and are classified as inactive under the narrow definition but unemployed under the broad definition (see Table 2.1). Discouraged work seekers are also excluded when the labour force participation rate (LFPR) is derived.

Table 2.1: Derivation of labour force participation rates and unemployment rates

Labour market status (1) Employed (2) Unemployed (3) Discouraged job seeker (4) Inactive
Narrow labour force participation rate = Labour force / Working-age population= $\frac{(1)+(2)}{(1)+(2)+(3)+(4)}$
Broad labour force participation rate = Labour force / Working-age population= $\frac{(1)+(2)+(3)}{(1)+(2)+(3)+(4)}$
Narrow unemployment rate = Unemployed / Labour force= $\frac{(2)}{(1)+(2)}$
Broad unemployment rate = Unemployed / Labour force= $\frac{(2)+(3)}{(1)+(2)+(3)}$

2.2.2 Types of unemployment

(A) Seasonal Unemployment

Seasonal unemployment occurs when people are unemployed during certain times of the year, because they work in industries where they are not needed the whole year (Mourdoukoutas,

1988). In other words, there is a limited need for the type of work to be performed during a particular period during the year. According to Mourdoukoutas (1988) the fluctuations can be regularly anticipated and follow a systematic pattern over the course of the year. Examples of this type of unemployment can be found in agriculture, the fishing industry, lifeguarding etc.

(B) Frictional Unemployment

Frictional unemployment occurs during the time period when people are searching for another job (Barker, 2007:186). These employees move from one job to another due to better opportunities elsewhere, for instance.

Barker (2007:186) is of the opinion that there will always be new entrants to the labour market and existing employees leaving the labour market. Since the information about new employers and employees is imperfect, it takes time for employees to find work and employers to find new employees. This gives rise to frictional unemployment and this explains why full employment cannot be reached.

(C) Cyclical or Demand Deficient Unemployment

Cyclical unemployment is associated with fluctuations in the business activity (Barker, 2007). A decline in aggregate demand in the output market will result in a decrease in the demand for labour. According to Barker (2007) this type of unemployment is normally experienced during economic recession.

(D) Structural Unemployment

Structural unemployment refers to the overall inability of the economy to provide employment due to structural imbalances (Barker, 2007:186-187). This type of unemployment could occur even if the economy flourishes. During economic upswing, this type of unemployment takes place because employment cannot adjust rapid enough to the prosperity of the economy.

Some of the reasons why this occurs according to Barker (2007), include the rapid growth of the labour force, the use of capital- or skills-incentive technology, and an inflexible labour market. This type of unemployment arises when there is a mismatch between the skills demanded and supplied in a given area or an imbalance between the supply of and demand for workers across the areas. Mismatches occur because the demand for one kind of labour falls while the demand for another is rising but supplies do not adjust quickly. This, according to

Chadha (1994), is the most serious type of unemployment in South Africa. According to Barker (2007), the South African labour market is characterised by a small percentage of skilled workers and a large proportion of unskilled workers. The demand for skilled workers exceed the supply of skilled workers while the supply of unskilled workers exceeds the demand for unskilled workers and since unemployment in South Africa is concentrated on the unskilled workforce, this gives rise to higher unemployment.

The determinants of structural unemployment are numerous. Dornbusch and Fisher (1992) are of the opinion that structural unemployment relates to the nature of the labour market as well as the composition of aggregate demand. It is difficult for a work seeker to find work even if the person is willing to work for a lower wage because of the complexity of the labour market. On the other hand, Ehrenberg and Smith (1982) argue that one of the biggest determinants to structural unemployment is the technological change where labour is substituted with capital. There are a number of reasons for this, such as trade union pressure for higher wages, technological development, a structural decrease in economic growth, unemployment benefits.

2.2.3 Labour market policy

Labour market policies refer to measures that directly affect the operations and results of labour markets so as to maximise quality employment and minimise unemployment and underemployment (ILO, 1993). Active labour market policies can be distinguished from passive labour market policies, to be discussed below.

(A) Passive labour market policies

Passive labour market policies help with labour market integration. These policies attempt to replace labour income (ILO, 2010). According to the ILO (2010) passive labour market policies can also be regarded as generosity policies. These policies refer to income support for the period without work, respectively to unemployment benefits granted to workers. They can also be early retirement schemes. In addition, according to Mortensen and Pissarides (1994), passive labour market policies reduce the cost of unemployment and raise the wages of labour. They argue that there is less job creation and more job destruction.

In South Africa, there are two such policies that are pertinent in the eradication of unemployment. They are the Unemployment Insurance Fund (UIF) and the Basic Income Grant (BIG). First, UIF stands for the incentives for employees to engage in temporary layoffs

are also affected by the UIF. This is financed by a payroll tax. The UIF is paid by employers and employees. The UIF is funded from a payroll of one percent on employers plus a levy of one percent on the employee's income. An unemployed worker who has contributed to the UIF is entitled to a benefit that varies according to income, from 38% of the previous remuneration for highly paid workers to 58% for the lowest paid workers (Strydom, 2001).

As far as the BIG is concerned, the Committee of Inquiry into Comprehensive System of Social Security (the Taylor Committee 2002) recommended the introduction of the BIG to alleviate absolute levels of poverty. The Committee argues that at least 22 million people in South Africa fall below the poverty line. On average, they survive on less than R144 per month. Many of the country's poorest households fall through the security net because they do not receive UIF, or qualify for a state old age pension, a disability grant or a child maintenance grant. However, the BIG was eventually not implemented at the end, due to various reasons, amongst others, that the BIG could lead to a reduction of labour supply (i.e. leisure could be preferred over work upon the receipt of the grant income) as everyone is guaranteed some non-labour income.

(B) Active labour market policies

Active labour market policies aim to improve the operation and results of labour markets so as to maximise quality employment and minimise unemployment and underemployment (ILO, 1993). Active labour market policies try to prevent unemployment or remedy it by returning displaced workers to productive jobs. They are policies that aim to improve the operation and results of labour markets and include policies to enrich labour supply, enhance the demand for labour and improve labour market processes (ILO, 1993).

According to Barker (2007), active labour market policies are especially introduced at community level such as households, environment, culture, infrastructure and social care. In South Africa's case, these policies focus on making employment for young people more attractive (Barker, 2007). On the other hand, the International Labour Organisation (ILO) classifies the active labour market policies under three main headings (ILO, 1993) such as: strategies that must be introduced to improve the quantity and quality of labour supply, to change the structure of the labour market, the development of labour market institutions and processes.

Active labour market policies can be sub-divided into demand-side labour market policies and supply-side labour market policies, to be discussed below.

Demand-side labour market policies

Snower (1997) distinguishes two types of demand management policies as: government employment policies where government hires people to work in the public sector; and product demand policies where employment is stimulated by increasing aggregate product demand through tax deductions and increase in government spending or money supply.

Hiring people to work in the public sector will contribute towards the alleviation of unemployment. However this may result in a big increase of the public sector and government spending. This will in turn result in increased taxation to fund these programmes. The other point that Snower (1997) makes, may result in increased inflation.

The South African government has implemented some demand side policy instrument in addressing the unemployment rate. They do that by subsidising training programs for the unemployed. Oosthuizen and Cassim (2014) point out a few programs where the South African government attempt to train the unemployed to acquire jobs. For instance, the Public deployment program (through the National Youth Agency (NYDA)) aims to train the unemployed and unskilled. It is a 12-month training programme where candidates are trained in the field of construction and or enterprise development where labour demand was greater.

Another example of demand-side policies is the Expanded Public Works Programme (EPWP) which was introduced in 2004 (EPWP Unit, 2004), Evans-Klock et al. (1998) point out a few other demand side policies, including employment subsidies, the promotion of SMMEs, industrial recruitment or expansion and area-based economic renewal.

Supply side labour market policies

Supply-side policies according to Carlin and Soskice (2005) refer to policies that affect wages and prices (Carlin and Soskice 2005). The wages will be affected by changes in unemployment benefits, minimum wages, union and employment protection legislation, child-care policy and the participation by government in negotiations with unions and employers associations. According to Carlin and Soskice (2005) the price setting can be affected through the changes in competition policy as well as taxes. These policies attempt to increase a country's productivity.

The South African government also implement lower tax rate to small business enterprises to speed up employment creation (Accountancy SA, 2012). This goes a long way since small businesses mostly employ unskilled workers and the unemployed can find it easier to establish their own business. The government also lowered corporate taxes in 1999 and again in 2005 (Accountancy SA, 2012). This in turn can create employment in the formal sector.

Evans-Klock et al. (1998) point out a few supply-side examples such as the job search assistance which help displaced workers in the job search process by providing the displace workers with the necessary information for job search, counselling for unemployed workers. Another example is support to unemployed workers through job search assistance, training for unemployed workers, apprenticeships, job creation measures, self-employment assistance, public employment and unemployment benefits (Evans-Klock et al., 1998)

2.2.4 Labour market legislations since the advent of democracy

(A) Employment Equity Act

The aim of the Employment Equity Act (EEA) 55 of 1998 is to reduce the labour market inequalities. The Act prescribes positive measures to assist the designated groups who were previously disadvantaged (blacks, females, the disabled) to overcome the inequality gap. According to Barker (2007) the Act stipulates that the employers whose firms have more than 50 employees must have an Employment Equity Plan as employers must hire a certain percentage of the workforce from the designated groups. Since unemployment is concentrated around this designated group, this Act attempts to address the problem. Firms are bound by the Act and they pay heavy fines if they do not abide by the rules.

(B) Labour Relations Act (LRA)

This Act 66 of 1995 provides for bargaining council agreements and promotes unionisation which are involved in negotiations around numerous issues such as wages, work hours, fringe benefits, severance pay, leave and various others (Barker, 2007). This Act further determines if workers are allowed to engage in strike action. Strikes protect worker rights and prevent exploitation from employers. Thirdly, the LRA provides for labour disputes to be settled through The Commission for Conciliation, Mediation and Arbitration (CCMA) which was formed to deal with disputes in the workplace. If it is not possible to resolve the disputes, the matter will be referred to the Labour Court or the Labour Appeal Court.

(C) Basic Conditions of Employment Act (BCEA)

The BCEA Act No. 75 of 1997 was formed to advance economic development and social justice whose primary objectives are to give and regulate the right to fair labour practice in line with the constitution by establishing and regulating variations of the basic conditions of employment, such as a 45-hour work week, leave pay, office space, protective clothing, recruitment costs, education and training, severance pay (Barker, 2007:77). Since South Africa is a member of the ILO, the country is obliged to enforce certain stipulations of the basic working conditions set by the ILO.

The 1997 BCEA also aimed to reduce the working hours to 40 hours. However the 45-hour working week in South Africa is already lower than those in middle income countries such as Turkey, Malaysia and Thailand (Nedlac, 1998). According to the Department of Labour (1996) reduced working hours have social benefits such as increased time for education and training, family and social responsibilities and leisure time.

The BCEA Act of 1997 was revised in 2002. Barker (2007) is of the view that it was done to make provisions for the employment for the improvement of minimum wages and working conditions of the 11 most vulnerable sectors (Republic of South Africa, 2002; Department of Labour, 2013): children in advertising, artistic, and cultural activities; civil engineering; contract cleaning; domestic workers; farm workers; forestry sector; hospitality workers; learner ships; private security sector; taxi sector; wholesale and retail sector.

(D) Skills Development Act

The Skills Development Act (SDA) 97 of 1998 attempts to address the shortcomings in the skills development framework (Mohr and Siebrits, 2006). This Act, according to Mohr and Siebrits (2006) measures the links between education and training and the labour market. According to Mohr and Siebrits (2006), the Act also aims to improve the links between the two sectors through the establishment of a Strategic Planning Unit which assists government with skills development activities in order to identify the problems in the links between skills and employment patterns in the economy. The Act also targets at improving on the job training through learner ship programs (Barker, 2007).

This Act allows money to be collected from employers which is channelled to the National Skills Development Fund. According to Barker (2007) the Act determines that every employer whose annual payroll exceeds R250 000 must contribute 1% of the total payroll to

the South African Revenue Services (SARS). Of the funds collected, 20% goes to the National Skills Fund (NSF). Each Sectoral Education and Training Authority (SETA) may get the remaining 80% of the money paid by the employers in its sector. The SETA uses a certain proportion of this funding (below 10%) to cover its administrative costs; the rest of the money is paid back as grants to firms that comply with criteria determined by the SETA in terms of its sectoral skills plan. These criteria are, for example, the submission of a workplace skills plan and the subsequent implementation report on the training provided (Barker, 2007:233).

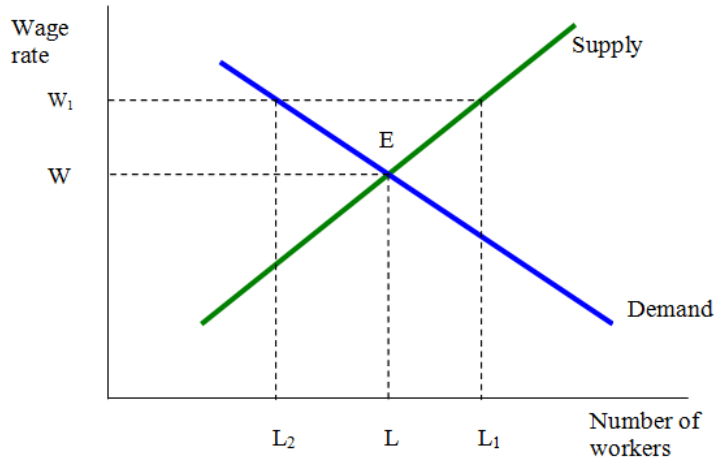
2.3 Theoretical framework

As there are many theoretical models of unemployment, this section would focus on discussing the commonly known models and their impact on unemployment.

2.3.1 Unemployment in a perfectly competitive labour market

Figure 2.1 presents the simple labour demand and labour supply framework in a perfectly competitive labour market. Equilibrium takes place when the labour supply and labour demand curves intersect at point E. The equilibrium wage and employment levels are W and L respectively. The introduction of a minimum wage of W_1, which is above the market-clearing wage level of W, will lead to employment loss because quantity of labour supplied (L_1) exceeds the quantity of labour demanded (L_2). At the end, employment drops to L_2. Alternatively, it could be said that retrenchment of ($L-L_2$) takes place due to the introduction of the minimum wage.

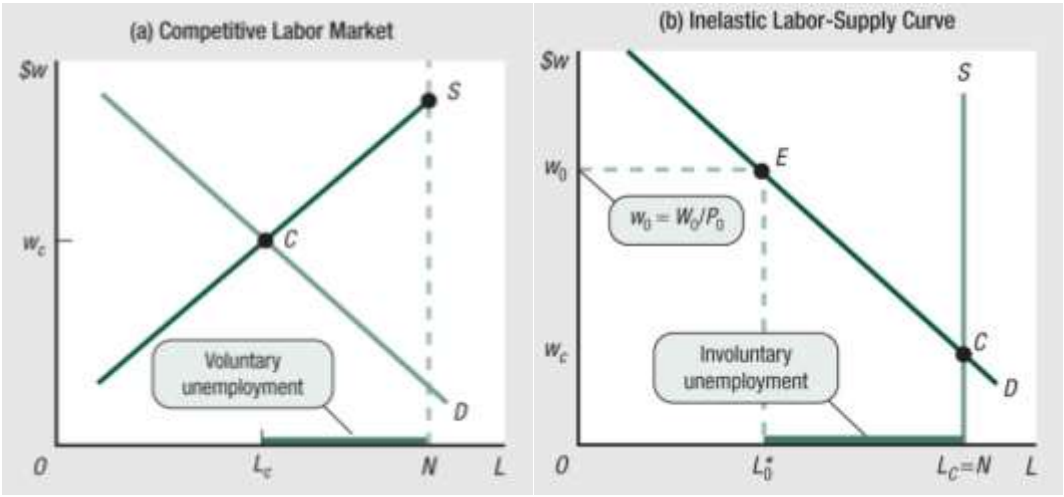
Figure 2.1: Unemployment in a perfectly competitive labour market with the presence of minimum wage



Source: Barker (2007: 4)

In Figure 2.2, the vertical line N represents the LF, L stands for the level of employment, while w stands for real wage (W/P) where $W is the nominal wage and $P is the price level.

Figure 2.2: The competitive framework



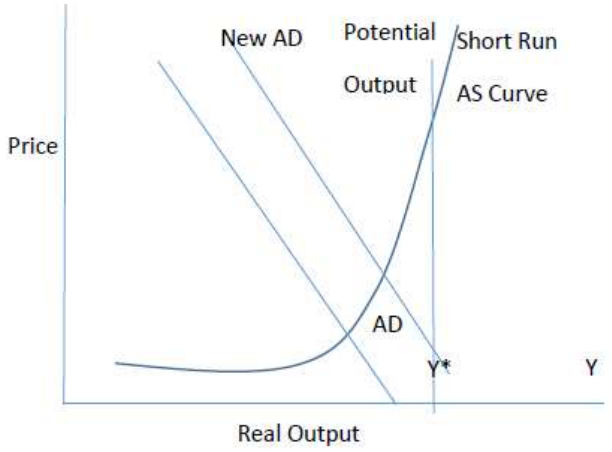
Source: Laing (2011: 766)

In Figure 2.2(a), a total of (N-L) people in the LF do not want to work at the equilibrium wage of w_C, as this real wage level is lower than their asking wage. Hence, (N-L) people are voluntary unemployed. In contrast, in Figure 2.2(b), all N workers supply their labour inelastically resulting in the vertical labour supply curve S_0. This shows that there will be no voluntary unemployment since everyone wants to work for any positive real wage. At the real wage level of w_C, the equilibrium position at point C which indicates full employment, as everyone in the LF is employed. However, if the real wage is stuck at w_0 (e.g. due to the imposition of minimum wage), the employers only hire L^*_0 workers but N workers want to work. This creates a situation that (N-L^*_0) people in the LF are involuntarily unemployed. These unemployed would like to work at any wage level but employers are not willing to hire them.

Figure 2.3 presents the aggregate demand (AD) / aggregate supply (AS) macroeconomic model of Keynes (1936). A higher aggregate price level P translates in lower real wage rates and the urge to produce more output. In the long run however, the nominal wage rate varies with economic conditions. Because high unemployment results in falling nominal wages, the long run supply curve is vertical. In the short run, capital is fixed and wages are sticky. The flat region in the short run aggregate supply curve (SRAS) curve is due to the sensitivity in the price level. The long-run aggregate supply curve (LRAS) is vertical because economists believe that changes in aggregate demand (AD) have only a temporary change on total output.

An increase in the AD curve increase the level of real output as well as the average price level (P) leading to an increase in employment.

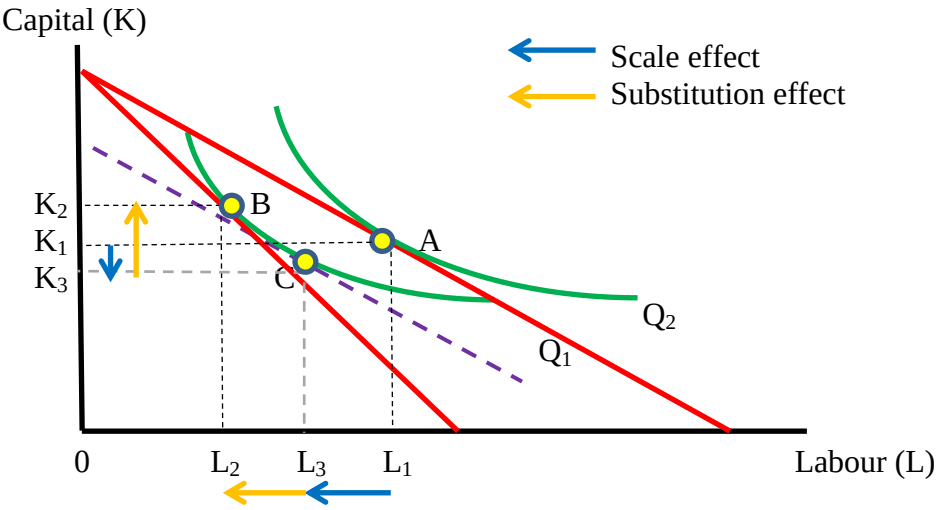
Figure 2.3: The Aggregate Demand (AD) and Aggregate Supply (AS) Model



Source: Glanville (2011: 224)

Figure 2.4 presents the long-run equilibrium of a firm. Initially the equilibrium is at point A, with Q_2 being the output level. $K_1$and L_1 units of capital and labour are used respectively. Assuming wage increases (e.g. due to the imposition of minimum wage), it leads to the swivelling of the isocost line rightwards along the x-axis. The new equilibrium is at point B. Due to the increase of wage, at this new equilibrium point, employment drops from L_1 to L_2 while capital units increase from K_1 to K_2. The dash line is inserted to distinguish the substitution effect from the scale effect, and it can be seen from the figure that both effects are negative when it comes to the labour quantity.

Figure 2.4: Long-run labour demand



2.3.2 Models involving minimum wages and collective bargaining

(A) Efficiency wage theory

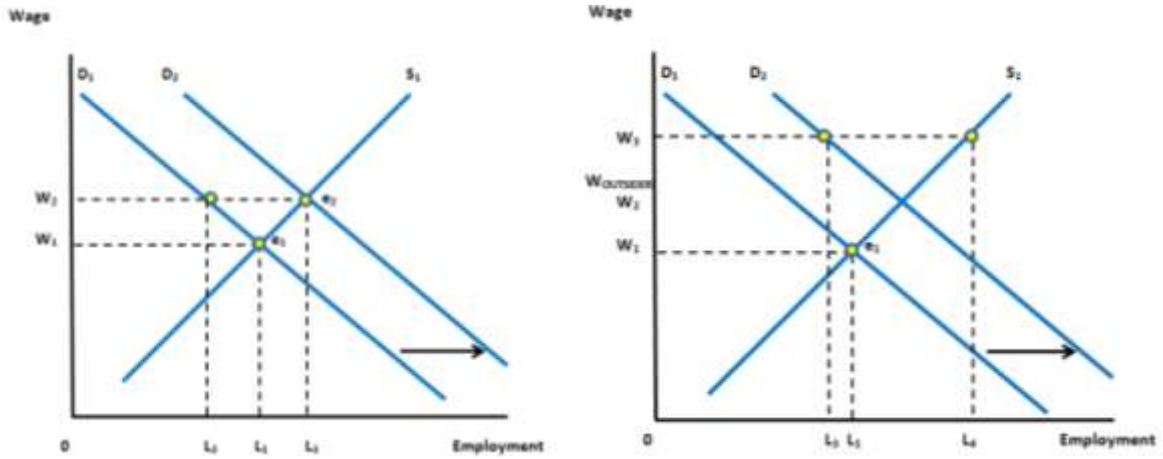
If firms pay employees a wage above the equilibrium wage, it is believed that productivity will increase (Katz, 1986). Another reason why firms would pay higher wages to employees is that workers are union members and firms want to keep the peace with the unions. This efficiency wage theory force workers to keep their jobs at all costs (Katz, 1986). The potential benefits of the efficiency wage are: increased effort and level and reduced shirking by employees (Shapiro and Stiglitz, 1984); lower turnover cost (Stiglitz, 1974); a higher effort of workers (Akerlof, 1982, 1984); choice of the best workers (Weiss, 1980).

Turnover costs provide employees with bargaining power. Insiders can use this bargaining power to raise wages to a level that increase unemployment or keep outsiders out. On the other hand, insiders can pressurise employers and make it costly for employers to accept underbidding by outsiders. The costs of turnover that can be exploited by insiders are direct costs of hiring, training and firing (Solow, 1985) as well as costs that arise when insiders are prepared to withhold effort and harass new entrants (Lindbeck and Snower, 1988).

Figure 2.5 (a) is the good case for employment. At e_1 the market is in equilibrium with W_1 wages and L_1 amount of labour. With an introduction of an efficiency wage above the market equilibrium wage, from W_1 to W_2 will increase demand for employment from D_1 to D_2 because workers are more loyal to employers, less shirking occurs, workers are more productive. This will result in an increase of employment from L_1 to L_3.

Figure 2.5: Efficiency wage theories

Figure 2.5(a) Figure 2.5(b)



In Figure 2.5 (b) however, an introduction of an efficiency wage from W_1 to W_3 which is very high and way above the market equilibrium wage. Although the workers would become more productive and lead to labour demand to increase from D_1 to D_2, such productivity increase is not rapid enough to keep up with the more rapid increase of wage. This implies the increase of unit labour cost. At the end, employment could decline from L_1 to L_3. Note that some of the outsiders actually would not mind to be hired at a wage below W_3 (e.g. at the wage level $W_{INSIDER}$).

(B) Insider-outside theory

Lindbeck and Snower (1986) are of the opinion that there is asymmetry between the currently employed (insiders) and the unemployed (outsiders). They argue that insiders prefer high minimum wages while outsiders could accept a lower wage to obtain employment. These outsiders are not represented when wage negotiation takes place via collective bargaining so high minimum wages are the order of the day and wages are sticky downwards.

Insiders are the workers who are currently employed while the outsiders are the unemployed and mostly unskilled in the case of South Africa. Bargaining councils (BC) bargain for minimum wages among other things. Moll (1995, 1996) is of the opinion that larger firms are more capital-intensive, use skilled labour and pay higher wages than smaller firms. Moll further argues that the labour market is dominated by larger firms and unions.

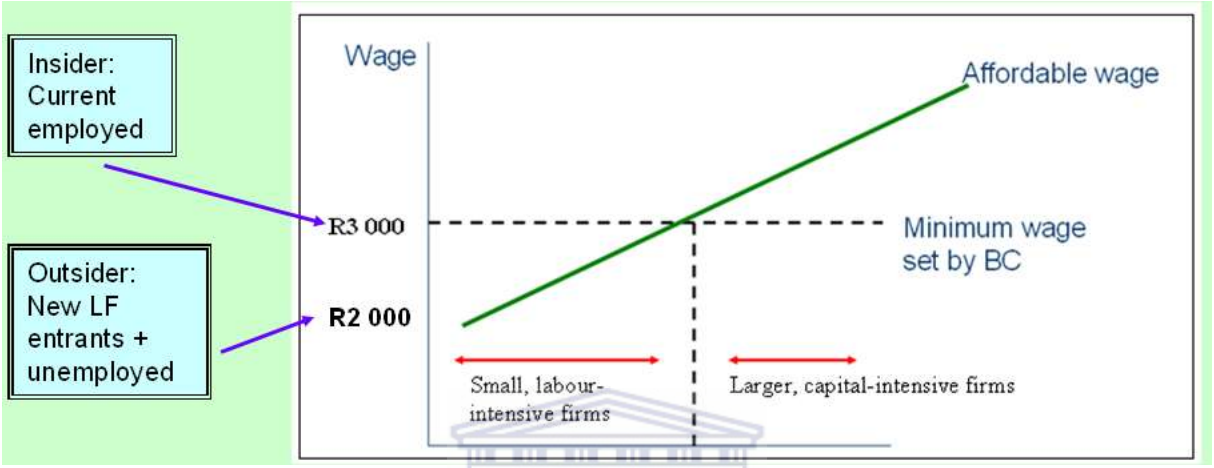
If larger firms want to eliminate their competition and their eagerness to strive for higher productivity, they agree to a higher minimum wage and unions are too happy to fall for that because they want a better deal for their members. Smaller, labour-intensive firms cannot afford to pay such a high minimum wage, so they might close down or retrench a lot of workers to save production cost. Hence, there is an increase in unemployment.

Since wages are sticky downwards, it is highly unlikely that the minimum wage will be decreased. In fact it will rather increase. It means outsiders will find it very difficult to enter the workforce. With new entrants entering the labour market, it is likely that unemployment will increase.

In Figure 2.6, the upward-sloping green line depicts affordable wage of the firms. Assuming the minimum wage is R3 000, for the small, labor-intensive firms, such minimum wage is above the affordable wage, and hence these firms would either retrench a lot of workers or

even close down. In contrast, for the larger, capital-intensive firms, the affordable wage is above the minimum wage. Finally, some of the outsiders who are desperate for employment actually may not mind being paid a wage below the minimum wage, for instance, R2 000. However, this is not possible, because the minimum wage of R3 000 is legally binding to the employers.

Figure 2.6: Insider-outsider theory

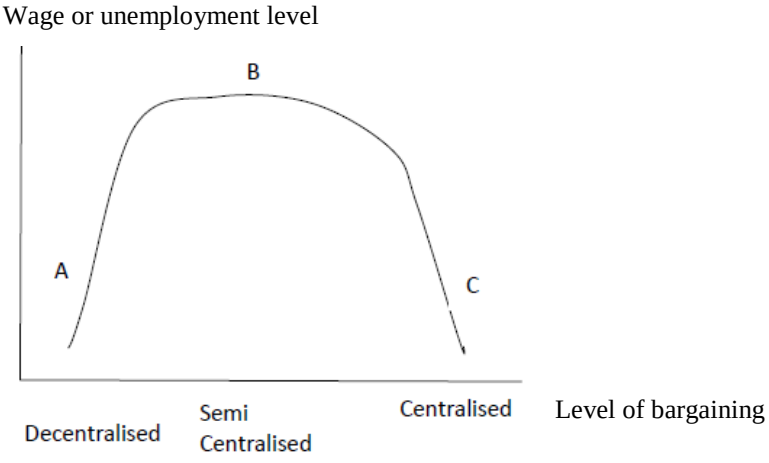


Source: Nattrass (2000: 136)

(C) Calmfors-Driffill model

Calmfors and Driffill (1988) developed a theoretical framework to explain the macroeconomic performance of an economy in correlation with the level of centralisation in wage bargaining structures. They are of the opinion that the level of centralisation in wage bargaining is affecting the ability of job creation for work seekers as illustrated in Figure 2.7.

Figure 2.7: Calmfors and Driffill's hump hypothesis



Source: Calmfors & Drifill (1988:15)

The figure shows that where wage bargaining is centralised at point C there are low levels of real wages coupled with low unemployment. In the case where wage bargaining is semi-centralised as in Point B, real wages and unemployment are high where as in the case of decentralised wage bargaining at Point A wage unemployment and real wages are low. If Calmfors and Driffill's theory is applied in South Africa, it would be at Point B. Wage unemployment and real wages are high.

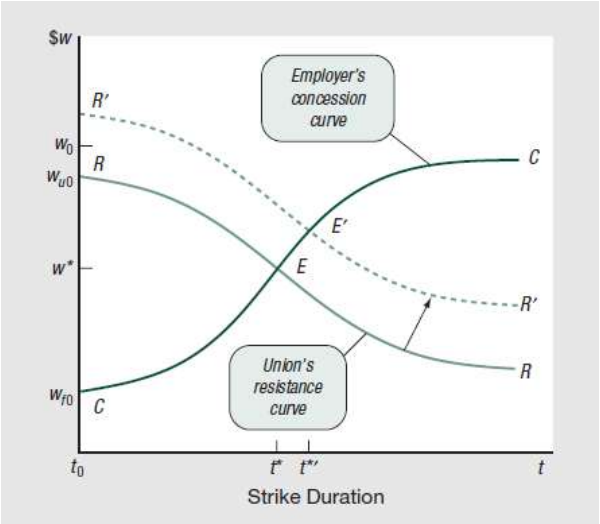
The reason for the inverted U-shaped curve is as follows: if centralisation is high, wage negotiations are bargained by a few large organisations, trade unions will consider the inflationary impact of higher wages and they will lower their demands for higher wages. If the price of real income is higher than the rise in real income, firm will be forced to fire workers to survive. In contrast, if the wage bargaining is decentralised at company level, the wage levels are expected to remain low due to the bargaining processes by the many weak trade unions. Firms face increased costs, competition will then decrease and they will have to fire workers. Hence, unemployment level would become higher.

Currently in South Africa, collective bargaining is semi-centralised at sectoral or industrial level, and this is why it is argued that this lead to worsening of employment.

(D) Hick's model on strikes

Hicks explains his paradox through the mistakes that were made during the bargaining process. These mistakes are could have prevented a strike or the duration of a strike. An agreement could have been reached before a strike. Figure 2.8 gives a graphical explanation of the problem. The vertical axis measures the wages and the horizontal axis measures the duration of the strike. The CC curve is the employer's concession curve which is its maximum offer at each point during the strike. At the start of the dispute t=0, the firm is willing to agree to only the low wage W_{f0}. As the strike continues, the cost of the strike rises. In this case the employer will gradually soften it bargaining stance, so the CC curve gradually rises to an acceptable wage level. On the other hand, the schedule RR is the union's resistance curve. It depicts the lowest wage that is acceptable to the union. Initially the union starts at a high wage, but as the strike continues the union starts to give in to some demands so the employees are worried about retrenchment. This explains why the RR curve is downward-sloping.

Figure 2.8: Hicks model of strike duration



Source: Laing (2011: 14)

If there are changes in the economic environment such as the payment of unemployment benefits to strikers or strong support from the political parties, this will cause the workers to confidently increase the asking wage at each strike duration. In this case the RR curve will shift upwards to a new R'R' curve which increases the duration of the strike. The union's resistance curve increases to R'R' as the strike continues from t' to t''. Unions eventually settle for a higher wage at equilibrium E'. If the strike duration is too long, firms could ultimately replace striking workers with temporary workers who can easily be replaced by capital, thereby resulting in increase of unemployment.

2.3.3 Other models

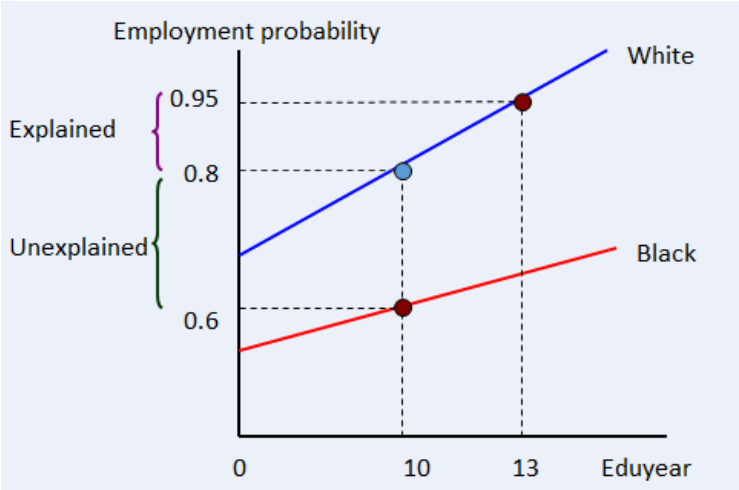
(A) Oaxaca-Blinder decomposition model on employment discrimination

Figure 2.9 presents a simple version of the Oaxaca-Blinder decomposition model (for the detailed econometric explanation which falls beyond the scope of this study, refer to Burger and Jafta 2006), assuming educational attainment is the only factor affecting the likelihood of employment. Given the employment likelihood probit regressions of whites and blacks are follows:

Whites: Prob (Employed) = 0.3 + 0.05 × years of education

Black Prob (Employed) = 0.2 + 0.04 × years of education

Figure 2.9: A simple Oaxaca-Blinder decomposition model on employment discrimination by race



The constant and slope parameters of the probit regressions already suggest the presence of employment discrimination against blacks. Firstly, for a black jobseeker with no schooling, his likelihood of employment is 20% but for a white jobseeker also with no schooling, someone his employment likelihood if bigger at 30%. Secondly, if the black's educational attainment increases by one year, his employment likelihood would increase by 4 percentage points, whilst a white's employment probability would show a greater 5 percentage point increase if his educational attainment also increases by one year.

It is further given that the mean years of education are equal to 13 and 10 years for white and black workers respectively. The probability of whites getting employed is 95% (0.3 + 0.05×13) while that of the blacks is 60% (0.2 + 0.04×10). However, it is unusual that for a white worker with the same years of education (10) as the average black, his employment likelihood is greater at 80% (0.3 + 0.05×10). Hence, it is argued that such 20 percentage-point difference (80%-60%) stands for the unexplained component, which implies employment discrimination against the blacks.

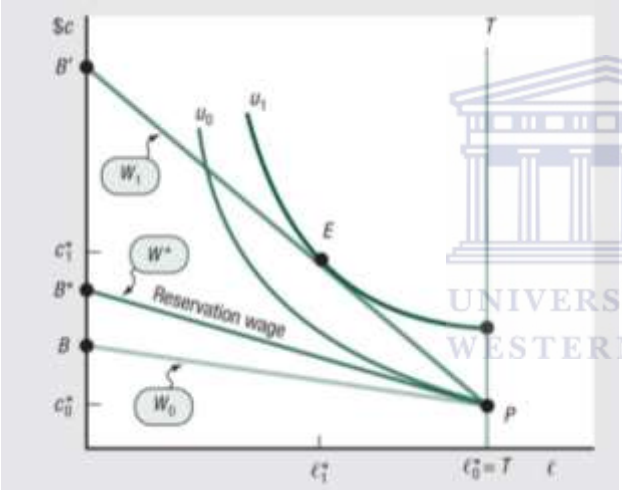
Now assuming that the blacks' employment probit regression is exactly the same as that of the whites. As it was given initially that the blacks have an average educational attainment of 10 years, his employment likelihood would be 80% (0.3 + 0.05×10), while an average white would have an employment likelihood of 95% (0.3 + 0.05×12). This 15 percentage-point difference (95%-80%) stands for the explained component, as it is acceptable for whites to have a greater employment likelihood due to the fact that they are more educated on average.

The unexplained component (0.20) as proportion of the total racial employment probability gap (0.35) is equal to 57.14% (0.20/0.35). In other words, the key message of the Oaxaca-Blinder decomposition result is that blacks are subject to employment discrimination and associated with a greater likelihood of unemployment (or smaller likelihood of employment).

(B) High reservation wage

A person in the LF would choose not to work if the market wage is lower than the reservation wage. In other words, this person will only enter the labour market if the market wage is higher than the reservation wage. In Figure 2.10, a low market wage level of W_0 is not enough to attract someone with a reservation wage of W* to enter the labour market for work, so he would decide to remain inactive or unemployed. In other words, equilibrium is at point P.

Figure 2.10: Impact of reservation wage on labour supply



Source: Laing (2011: 125)

However, if the market wage increases to W_1 which is above W*, the person would be willing to supply his labour services, and at the end, equilibrium takes place point E. The person would reduce his leisure time from T to l^*_1, and work hours would increase from zero to ($T-l^*_1$). Also, utility increases from U_0 to U_1.

2.4 Main causes of unemployment

As there are too many causes of unemployment in South Africa, this section would only selectively highlight some of the main causes.

2.4.1 Rigidities in the labour market

There are two schools of thought: labour market flexibility where enterprises can easily adjust to meet demands of business and labour market rigidities where there is little or no room for adjustment in the labour market (Barker, 2007). According to Barker (2007) labour market rigidities is unproductive in that enterprises are unable to adjust to technological changes, economic circumstances and international competition. This is the reason why the labour market is not effective and productivity so low.

Since pressure is put on employers to employ permanent labour at high wages which increase labour costs, employers are somewhat forced to convert to capital-intensive industries. This in turn has a negative effect on employment (Barker, 2007). Bhorat and Van der Westhuizen (2009) argue that the unions have too much power in South Africa in particular. The unions pressurise the employers for higher wages and better working conditions which eventually increase labour cost. This is further enhanced by the stringent labour laws in South Africa. Due to these factors and more, it is difficult to address the unemployment problem effectively in South Africa. Barker (2007) is of the opinion that these labour market rigidities hamper employment creation.

The effects of the labour market rigidities in South Africa can be seen in the indicators of the World Competitive Report (2015) (Global Competitive Index). South Africa is ranked 113th out of 144 countries in the labour market efficiency index. In the health and primary education sector, South Africa is ranked 132nd, which is an indication of the skills shortage. The skills shortage is further evident in that South Africa is ranked 86th in the higher education and training sector. However everything is doom and gloom for South Africa, the country is ranked 7th out of 144 countries in the financial market development sector.

2.4.2 High reservation wage

A reservation wage is a wage that new entrant to the labour market expects to earn. A high reservation wage is above the market wage. If new entrants find that their reservation wage cannot be paid by the employer, they withhold their labour and do not enter the labour market at all. This is especially the case for the youth in South Africa. Nattrass and Walker (2005) found that in metropolitan areas, the reservation wage of the working class people is too high. The employers are not willing to pay that high reservation wage. Since new entrants to the labour market choose not to work, it increases unemployment and, due to the high reservation

wage, this would become chronic, long-term unemployment. Heintz and Posel (2008) found that "unrealistic wage expectations" account for the levels of persistence of unemployment.

2.4.3 Barriers of entry to informal sector

The informal sector employment in South Africa is small which only accounts for 30% of the total employment in comparison to other developing economies such as India where it is 90% of the total employment (Kulshreshtha and Sign, 1998). The unemployed do not enter this sector because they cannot afford to start their own business according to Kingdon and Knight (2000).It is also argued that there are various barriers that prevent the unemployed from entering the informal sector: crime, the lack of capital, land, credit, and infrastructure and training facilities, especially in the Black townships (Manning and Mashing, 1993; Kaplinsky, 1995; Kingdon and Knight 2000 & 2004).

2.4.4 Skills mismatch

The South African economy is still very much reliant on the primary sector and to a lesser extent on the manufacturing sector. However, according to Bhorat et al. (2014), South Africa has already undergone industrialisation but South Africa still export a substantial amount of raw material and import a huge amount of finished goods.

The economy should produce its own products from its own raw materials Acemlogu and Robinson (2012). In this way the country will also be able to reduce unemployment. In order to achieve this, according to Davies and Van Seventer (2012), industrial parks should be set up near townships and rural areas. Women should also play a bigger role in management positions (Commission on Growth and Development, 2008).

But for the country to produce its own finished goods, South Africa needs more skilled workers. Despite a number of education reforms, like changes to the school curricula, South Africa still face skill shortages. According to Bhorat, Meyer and Mlatsheni (2002), the Centre for the Development and Enterprise (2007b) and Kraak (2008), there is consensus that skills shortages are major obstacles to economic growth and job creation in South Africa. The South African government should try to convert more schools to skilled schools in terms of technology and improve the effectiveness of Further Education and Training Colleges (FET).

Further, Bhorat (2009: 21) argues that the gradual skills-biased labour demand trajectory leads to a dramatic decline in the demand for unskilled workers across most industries,

matched in turn by an increase in the demand for highly-skilled workers. He asserts that the key cause for these altered labour demand preferences is technological changes that occur within firms and industries. As a result, this not only increases unemployment levels for those unskilled workers, but also ensures that new labour force entrants without the requisite skills and qualifications would find it increasingly hardly to find employment.

The extent of skills mismatch structural unemployment in South Africa would be examined in great detail in the empirical analysis, when the characteristics of labour force and employed are looked at.

2.4.5 Employment discrimination

Before 1995 the earnings for Whites were much higher than for the other population groups but the gap has somewhat narrowed after 1995 (Burger and Jafta, 2006).It is further found that after 10 years of democracy, there was still employment and wage discrimination among the different population groups with the Blacks the worst in terms of wage increases. However, according to Burger and Jafta (2006), the skilled employment is concentrated among Whites while unskilled employment is concentrated among Blacks.

Burger and Jafta (2006) conducted thee Oaxaca Blinder decomposition to evaluate employment discrimination and found that Affirmative Action policies, which are supposed to address the inequalities within the workplace between Black and White workers, did not have the desired affect by 2004. Furthermore, they found that since many whites are employed in the skilled labour force and most Blacks in the unskilled labour force, and the mean wage gap between Black workers and White workers remains high. However, when Burger and Jafta (2006) tested the Juhn-Murphy-Pierce decomposition, they found that the wage gap at the top is narrowing between Blacks and Whites. They also found that the government's education policies did not address the quality of education among Blacks and Whites in that Black children are still exposed to low quality education.

2.5 Conclusion

The unemployment problem in South Africa is difficult to understand. In the conceptual framework, it is clear that unemployment is not so easy to explain in general. South Africa's case makes it even worse. The few models that were discussed in the theoretical framework give some kind of explanation, but not the whole explanation. However the causes of

unemployment do give some insight to explain the reasons behind the country's persistently high unemployment. In searching for answers to the unemployment situation in South Africa, more information and data should be explored. The theory discussed above, only scratch the surface. This study tries to look for the answers in more discussions that follow.

CHAPTER THREE: METHODOLOGY AND DATA

3.1 Introduction

This chapter explains the methodology and data for the forthcoming quantitative and qualitative analysis.

3.2 Methodology

In Chapter Four, a quantitative analysis would be conducted to examine the labour market trends in 1995-2014, focusing on the demographic characteristics of the employed and unemployed. On the other hand, a qualitative analysis would be conducted in Chapter Five to evaluate the success of the labour market policies that have been implemented or currently being implemented, as well as the feasibility of alternative policies that are not yet implemented in South Africa.

3.3 Data

For the quantitative analysis in Chapter Four, the following data released by Stats SA would be used:

- October Household Survey (OHS) 1995-1999: this survey took place once every year.
- Labour Force Survey (LFS) 2000-2007: this survey replaced the OHS in 2000 and took place twice a year (in March and September).
- Quarterly Labour Force Survey (QLFS) 2008-2014: this survey replaced the LFS in 2008 and currently takes place four times a year.

The narrow definition of labour market status would be adopted when conducting the analysis in Chapter Four, unless stated otherwise. Finally, for the remainder of the study, the March LFS would be referred to as survey ‘a’ (e.g. LFS 2000a, LFS 2001a, and so forth) while the September LFS would be referred to as survey ‘b’ (e.g. LFS 2004b, LFS 2005b, and so forth). On the other hand, the four QLFSs would be referred to as Q1, Q2, Q3 and Q4 respectively (e.g. QLFS 2008Q1, QLFS 2008Q2, QLFS2008Q3, QLFS2008Q4, QLFS2009Q1, etc.).

CHAPTER FOUR: LABOUR MARKET TRENDS, 1995-2014

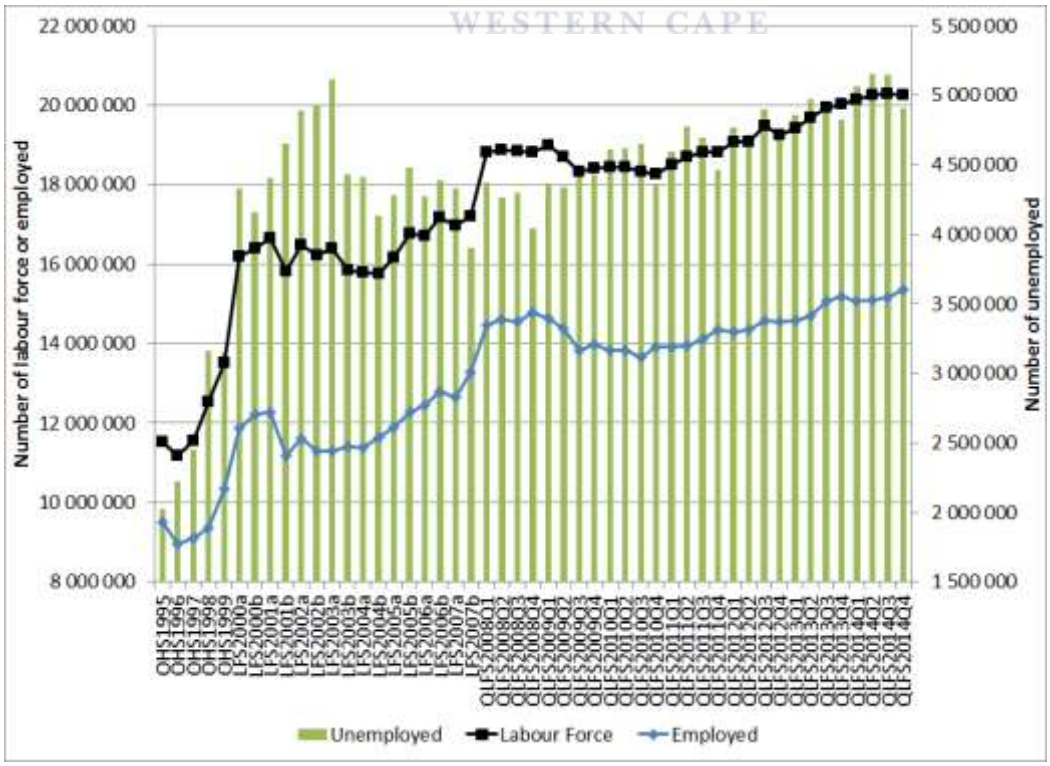
4.1 Introduction

This chapter presents the labour market trends in 1995-2014, focusing on the demographic and educational attainment characteristics of the employed and unemployed, as well as the work activities of the employed.

4.2 Labour market trends in 1995-2014

Figure 4.1 shows that the number of people employed increased rapidly from 1995 to 2000. However at the same time it was also the case for the number of unemployed people. The number of employed then stabilised somewhat from 2001 to 2004, before an upward trend took place again since 2005, with the number peaking at 14.78 million in the last quarter of 2008. The number of employed decreased by 1 million in 2009 due to the global economic recession, before an upward trend took place again since 2010, with the number rising to 15.35 million in the last quarter of 2014.

Figure 4.1: Labour market aggregates under the narrow definition: 1995-2014

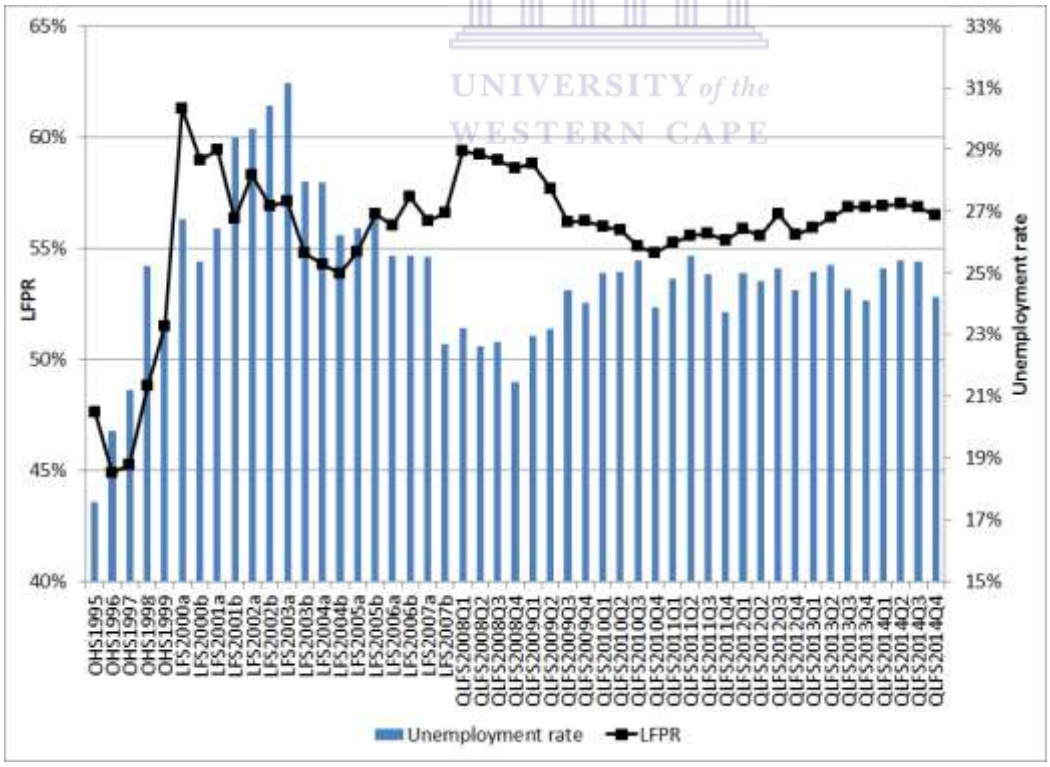


Source: Own calculations using the OHS 1995-1999, LFS 2000-2007 and QLFS 2008-2014 data.

As far as the labour force (LF) is concerned, it shows a very similar trend as the number of employed. A worrying finding is that there is some indicating of the widening of the gap between the LF number and employed number, and this suggests that the extent of increase of employment may not be rapid enough to absorb the net entrants into the LF. This would be explored in greater detail later when the employment absorption rate (EAR) is derived. Finally, the number of unemployed increase since 1995 and peaked at 5.11 million in 2003, before a promising downward trend took place. However, in recent years, an upward trend took place again, causing the number of unemployed to reach an all-time highest level of 5.15 million in the third quarter of 2014.

In Figure 4.2, the labour force participation rate (LFPR) decreased from 1995 to 1996. After 1996 the, it increased sharply until 2000a when it peaked above 60% for the first time. It was then followed by a general downward trend up to 2004 and an upward trend from 2005 to 2008, then a decreasing trend after 2008.From, 2009 the LFPR stabilised between 55% and 57% until 2014.

Figure 4.2: Labour force participation rates and unemployment rates under narrow definition: 1995-2014



Source: Own calculations using the OHS 1995-1999, LFS 2000-2007 and QLFS 2008-2014 data.

Table 4.1 shows the target growth rate (TGR), actual growth rate (AGR) and employment absorption rate (EAR) between 1995 and 2014.

- The TGR is the rate at which employment must grow to provide employment to all the net entrants to the labour market between two time periods (from period X to period Y) which must be consecutive. Oosthuizen (2006) defines the $TGR = \frac{LF_{Y-LF_X}}{E_X}$ where LF is the labour force and E the employed.
- AGR is the growth rate of the number of employed from period X to period Y and is calculated $\frac{E_{Y-E_X}}{E_X}$
- EAR is the proportion of the net increase in the labour force from period X to period Y that find employment during the same period which is calculated as follows: $\frac{E_{Y-E_X}}{LF_{Y-LF_X}} = \frac{AGR}{TGR}$. An EAR of 100% implies the full net increase in the labour force between two periods were employed.

From Table 4.1, it can be seen that for all net entrants into the labour force to find jobs, employment would need to grow by 91.9% between 1995 and 2014. Nonetheless, the actual employment growth rate was only 61.6%, which resulted in the EAR of 67.0%. This means that the employment growth was not fast enough to take care of all the net entrants to the labour market from 1995 to 2014, as out of the 100 entrants to the labour force, only 67 of them were able to find employment. This may explain the recent widening gap of the LF number and employed number, as discussed previously in Figure 4.1.

Table 4.1: Target growth rates, actual growth rates and employment absorption rates, 1995-2014

	Labour force	Employed
OHS 1995	11 527 589	9 499 347
LFS 2005b	16 770 161	12 287 798
QLFS 2014Q4	20 258 059	15 352 782
OHS 1995 vs. LFS 2005b		
TGR	55.2%	
AGR	29.4%	
EAR	53.2%	
LFS 2005b vs. QLFS 2014Q4		
TGR	28.4%	
AGR	24.9%	
EAR	87.9%	
OHS 1995 vs. QLFS 2014Q4		
TGR	91.9%	
AGR	61.6%	
EAR	67.0%	

Source: Own calculations using OHS 1995, LFS 2005b and QLFS 2014Q4 data.

4.3 Characteristics of the employed and unemployed

Table 4.2 shows a general increase in employment between 1995 and 2014. The biggest increase was between 2005 and 2014 of 3 million. The increase for Blacks was 5.1 million between 1995 and 2014. In 2014, the Blacks' share in employment was 73.4%, compared to only 60.9% in 1995. This increase, according to Festus et al. (2015) could be attributed to the increase of educational attainment of the black work seekers and Affirmative Action policies which may have improved the Blacks' employment likelihood.

Table 4.2: Demographic characteristics of the employed: 1995, 2005 and 2014

	1995	2005	2014	1995	2005	2014
	Number of employed			Share of employed		
All	9 499 347	12 287 798	15 352 782	100.0%	100.0%	100.0%
By gender						
Male	5 789 311	7 047 991	8 659 217	60.9%	57.4%	56.4%
Female	3 710 036	5 235 926	6 693 565	39.1%	42.6%	43.6%
Unspecified	0	3 881	0	0.0%	0.0%	0.0%
By race						
Black	6 136 137	8 497 599	11 261 634	64.6%	69.2%	73.4%
Coloured	1 144 836	1 327 511	1 635 627	12.1%	10.8%	10.7%
Indian	358 589	440 182	506 753	3.8%	3.6%	3.3%
White	1 859 785	1 991 480	1 948 768	19.6%	16.2%	12.7%
Unspecified	0	31 026	0	0.0%	0.3%	0.0%
By province						
Western Cape	1 353 355	1 723 524	2 176 934	14.2%	14.0%	14.2%
Eastern Cape	917 098	1 350 414	1 338 227	9.7%	11.0%	8.7%
Northern Cape	212 901	229 547	320 209	2.2%	1.9%	2.1%
Free State	752 051	795 632	771 239	7.9%	6.5%	5.0%
KwaZulu-Natal	1 712 758	2 175 385	2 525 672	18.0%	17.7%	16.5%
North West	749 330	926 800	948 342	7.9%	7.5%	6.2%
Gauteng	2 637 048	3 438 808	4 895 685	27.8%	28.0%	31.9%
Mpumalanga	583 856	777 155	1 140 699	6.1%	6.3%	7.4%
Limpopo	580 950	870 533	1 235 775	6.1%	7.1%	8.0%
By age cohort						
15-24 years	1 124 324	1 414 874	1 290 308	11.8%	11.5%	8.4%
25-34 years	3 275 749	4 149 552	4 800 291	34.5%	33.8%	31.3%
35-44 years	2 858 183	3 248 822	4 739 458	30.1%	26.4%	30.9%
45-54 years	1 586 764	2 372 862	3 123 571	16.7%	19.3%	20.3%
55-65 years	654 327	1 101 688	1 399 154	6.9%	9.0%	9.1%
By education						
Primary	2 309 331	2 282 800	1 440 570	24.3%	18.6%	9.4%
Secondary	3 682 335	4 698 212	5 763 718	38.8%	38.2%	37.5%
Matric	2 093 433	3 348 071	4 854 331	22.0%	27.2%	31.6%
Matric + Cert/Dip	888 596	1 080 437	1 692 230	9.4%	8.8%	11.0%
Degree	444 862	782 937	1 433 436	4.7%	6.4%	9.3%
Unspecified	80 790	95 341	168 497	0.9%	0.8%	1.1%

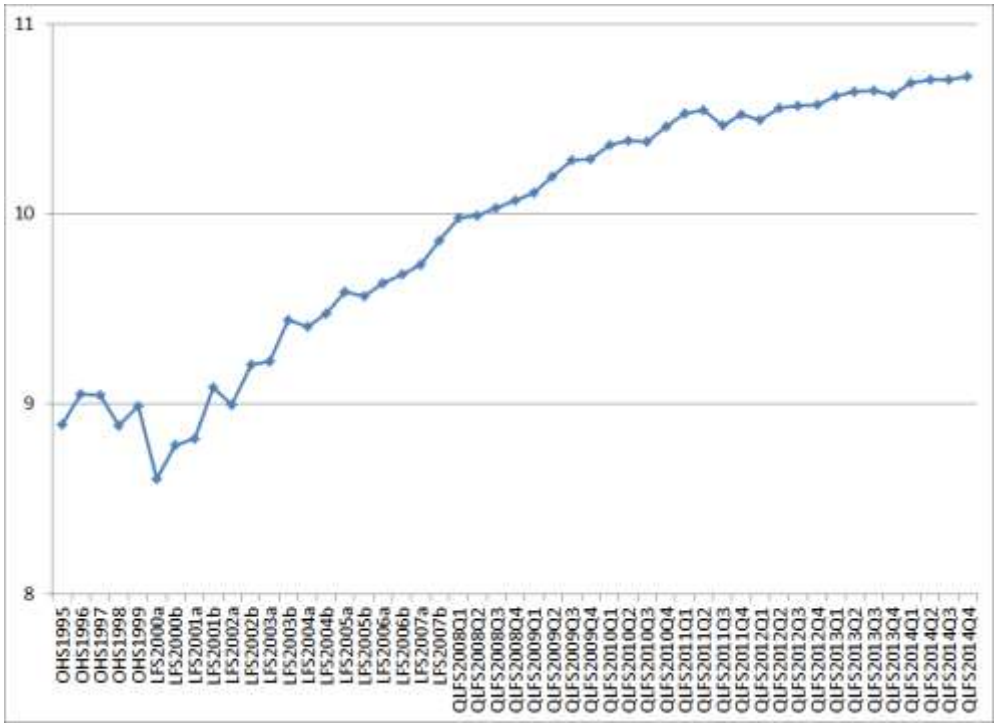
Source: Own calculations using OHS 1995, LFS 2005b and QLFS 2014Q4 data.

The female share of employed increased from 39.1% to 43.6% from 1995 to 2014. The share of employed aged 15 to 34 years decreased from 46.3% in 1995 to 39.7% in 2014. This means that more of the youth joined the unemployment population, rubberstamping the South African's government's policy of the youth wage subsidy.

Looking at what happened by province, Gauteng, KwaZulu-Natal and Western Cape account for the highest share of total employment throughout the years. Gauteng however shows the largest increase of employment of more than 2 million from 1995-2014. However looking at the share of employment there are declines in Eastern Cape, Northern Cape, Free State, KwaZulu-Natal and North West.

Those with Matric or above account for an increasing share of employed, rising from 36.1% in 1995 to 51.9% in 2014. This result suggests the structural change towards the employment of more skilled workers (Festus et al. 2015).Figure 4.3 depicts the mean years of educational attainment of the employed. From 1995 to 1999 the mean years of education were hovering around 9 years until it dropped in 2000 to an all-time low of between 8 and 9 years of schooling. After that, it was increasing at a gradual rate to almost 11 years of schooling. This result once again confirms the structural change of the South African economy, with the more educated, more skilled workers being of greater demand.

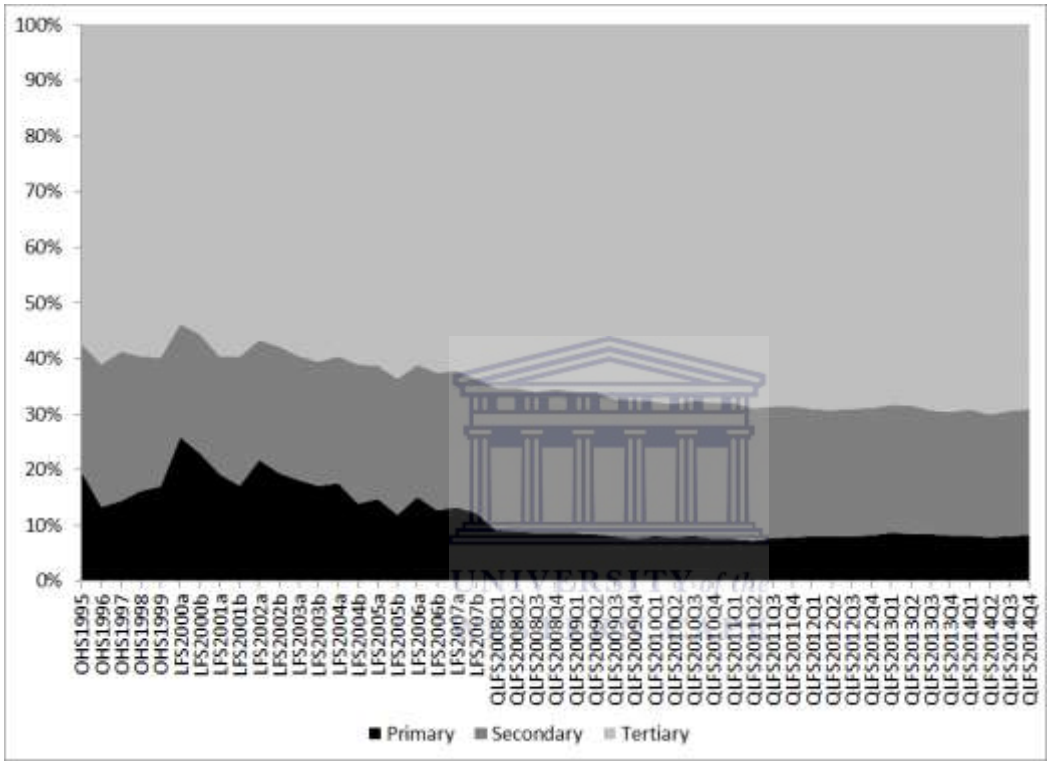
Figure 4.3: Mean years of educational attainment of employed



Source: Own calculations using OHS 1995-1999, LFS 2000-2007 and QLFS 2008-2014 data.

In Figure 4.4, it can be seen that the primary sector's share of employed decreased considerably compared to the secondary and tertiary sectors. This is attributed by the decrease in employment in the mining and agricultural sectors as mechanisation took centre stage as the economy was developing. It is clear that South Africa is very different from other African economies that still rely heavily on the primary sector. The tertiary sector has the highest share in employment, rising from 57% in 1995 to 69% in 2014.

Figure 4.4: Proportion of employed by sector



Source: Own calculations using OHS 1995-1999, LFS 2000-2007 and QLFS 2008-2014 data.

Table 4.3 depicts the demographic characteristics of the unemployed estimates under the narrow definition in 1995, 2005 and 2014. The number of unemployed increased by 2.8 million between 1995 and 2014. Blacks have the highest share of unemployment all the way (hovering around 85%) as well as the highest increase in unemployment in absolute terms (rising from 1.69 million in 1995 to 4.19 million in 2014). In contrast, looking at gender, the number of male unemployed between 1995 and 2005 was less than the female unemployed but is not the case in 2014. The unemployment rate for females have decreased in 2014, and it could be attributed to the Affirmative Action policies where firms are required to hire more female workers (Festus et al., 2015).

Table 4.3: Demographic characteristics of the unemployed: 1995, 2005 and 2014

	1995	2005	2014	1995	2005	2014
	Number of unemployed			Share of unemployed		
All	2 028 242	4 482 363	4 905 277	100.0%	100.0%	100.0%
By gender						
Male	923 658	2 055 067	2 493 248	45.5%	45.8%	50.8%
Female	1 104 584	2 424 925	2 412 029	54.5%	54.1%	49.2%
Unspecified	0	2 371	0	0.0%	0.1%	0.0%
By race						
Black	1 693 162	3 905 601	4 189 897	83.5%	87.1%	85.4%
Coloured	216 804	384 065	485 119	10.7%	8.6%	9.9%
Indian	42 471	82 342	68 514	2.1%	1.8%	1.4%
White	75 805	105 671	161 747	3.7%	2.4%	3.3%
Unspecified	0	4 684	0	0.0%	0.1%	0.0%
By province						
Western Cape	216 463	402 214	642 490	10.7%	9.0%	13.1%
Eastern Cape	294 421	574 657	548 536	14.5%	12.8%	11.2%
Northern Cape	54 544	75 463	128 952	2.7%	1.7%	2.6%
Free State	106 305	345 060	366 078	5.2%	7.7%	7.5%
KwaZulu-Natal	447 701	1 061 485	662 618	22.1%	23.7%	13.5%
North West	155 647	349 184	319 399	7.7%	7.8%	6.5%
Gauteng	492 671	1 013 390	1 592 233	24.3%	22.6%	32.5%
Mpumalanga	115 250	285 804	411 525	5.7%	6.4%	8.4%
Limpopo	145 240	375 106	233 446	7.2%	8.4%	4.8%
By age cohort						
15-24 years	645 657	1 499 287	1 230 416	31.8%	33.4%	25.1%
25-34 years	820 958	1 807 046	2 018 905	40.5%	40.3%	41.2%
35-44 years	365 998	720 796	1 115 228	18.0%	16.1%	22.7%
45-54 years	152 754	355 238	437 306	7.5%	7.9%	8.9%
55-65 years	42 875	99 996	103 422	2.1%	2.2%	2.1%
By education						
Primary	515 612	718 773	375 924	25.4%	16.0%	7.7%
Secondary	999 526	2 274 280	2 548 956	49.3%	50.7%	52.0%
Matric	439 099	1 313 350	1 601 604	21.6%	29.3%	32.7%
Matric + Cert/Dip	50 843	127 336	241 482	2.5%	2.8%	4.9%
Degree	11 459	30 509	101 382	0.6%	0.7%	2.1%
Unspecified	11 703	18 115	35 929	0.6%	0.4%	0.7%

Source: Own calculations using OHS 1995, LFS 2005b and QLFS 2014Q4 data.

Looking at the results by province, Gauteng accounts for the highest share of unemployed in 2014 (approximately one-third). On the other hand, those without Matric accounted for 60% or above of unemployed in all three surveys. A worrying finding is that even the share of unemployed with Matric shows an upward, and this suggests that having a Matric certificate only may no longer be sufficient to guarantee employment (i.e. post-Matric qualifications may be required, due to the structural change of the economy). Finally, those aged 15-34 years account for the greatest share of unemployed. To conclude, the unemployment likelihood is greater for the labour force who are Blacks, aged 15-34 years, residing in Gauteng, and without post-Matric qualifications.

Table 4.4 depicts the unemployment rates by demographic characteristics. The unemployment rate of the LF as a whole increased from 17.6% in 1995 to 24.2% in 2014, meaning the ASGISA goal of reducing unemployment rate to 15% by the end of 2014 was not achieved by the government. Both the male and female unemployment rates exceeded 20% in 2014, while the black unemployment rate has always been the highest compared with those of the other three race groups.

Table 4.4: Unemployment rates by demographic characteristics

		1995	2005	2014
		Unemployment rate		
All	All	17.6%	26.7%	24.2%
Gender	Male	13.8%	22.6%	22.4%
	Female	22.9%	31.7%	26.5%
Race	Black	21.6%	31.5%	27.1%
	Coloured	15.9%	22.4%	22.9%
	Indian	10.6%	15.8%	11.9%
	White	3.9%	5.0%	7.7%
Province	Western Cape	13.8%	18.9%	22.8%
	Eastern Cape	24.3%	29.9%	29.1%
	Northern Cape	20.4%	24.7%	28.7%
	Free State	12.4%	30.3%	32.2%
	KwaZulu-Natal	20.7%	32.8%	20.8%
	North West	17.2%	27.4%	25.2%
	Gauteng	15.7%	22.8%	24.5%
	Mpumalanga	16.5%	26.9%	26.5%
	Limpopo	20.0%	30.1%	15.9%
Age cohort	15-24 years	36.5%	51.4%	48.8%
	25-34 years	20.0%	30.3%	29.6%
	35-44 years	11.4%	18.2%	19.0%
	45-54 years	8.8%	13.0%	12.3%
	55-65 years	6.1%	8.3%	6.9%
Education	Primary	18.3%	23.9%	20.7%
	Secondary	21.3%	32.6%	30.7%
	Matric	17.3%	28.2%	24.8%
	Matric + Cert/Dip	5.4%	10.5%	12.5%
	Degree	2.5%	3.8%	6.6%

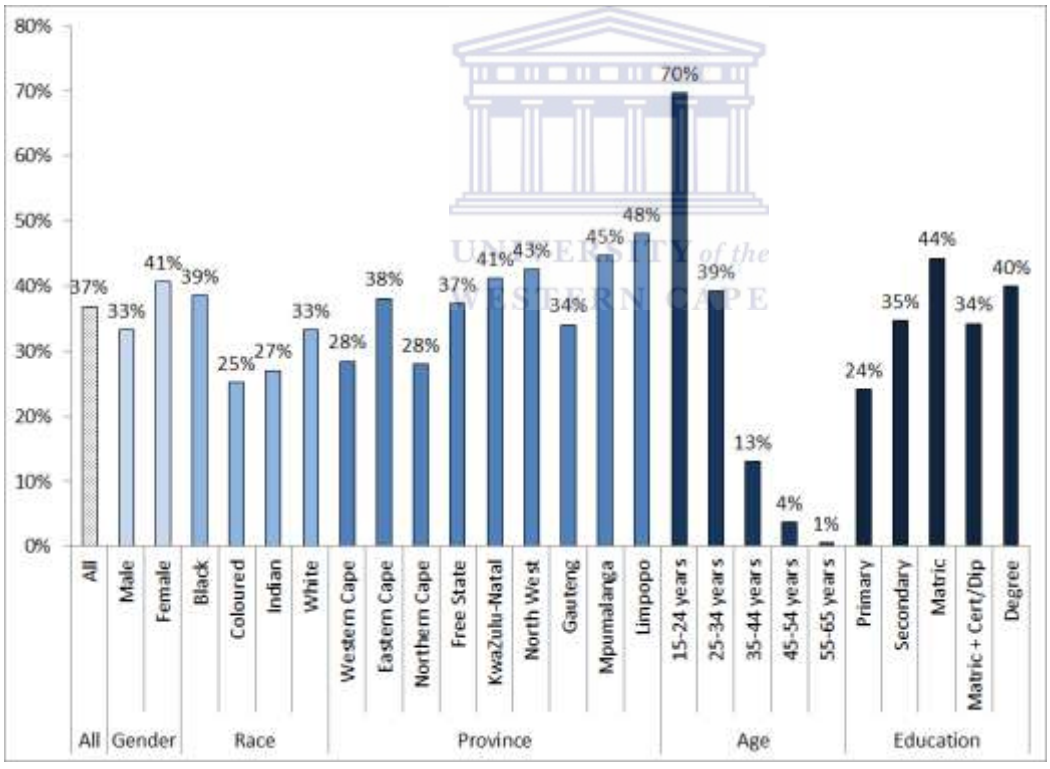
Source: Own calculations using OHS 1995, LFS 2005b and QLFS 2014Q4 data.

Looking at the results by province, it is surprising that in 2014, unemployment rate is the lowest in Limpopo (which is one of the least developed provinces), while unemployment rate is the highest in Free State, followed by Eastern Cape and Northern Cape. Furthermore, as expected, unemployment rate increases as one moves across to the younger age cohorts, with the rate being as high as 48.8% for the 15-24 years cohort, but as low as 6.9% in the 55-65 years cohort in 2014. Finally, those with Degrees only have 6.6% likelihood to be

unemployed in 2014, but this rate is 20.7% and 30.7% for those with primary and secondary educational attainment respectively. Finally, it is worrying that the unemployment rate of those with Matric only is quite high at 24.8%, and this result once again confirms the earlier finding that having Matric certificate does not lead to promising labour market outcome these days.

Figure 4.5 depicts the proportion of the unemployed who never worked before in the fourth quarter of 2014 QLFS. The proportion for the age group 15-24 years is extremely high at 70%. This suggests that people from this age cohort may be struggling badly to find their first job. According to Festus et al. (2015) there is a need for government support in terms of active labour market policies, such as the Employment Equity Bill, Expanded Public Works Program, job-seeking transport subsidy, etc.

Figure 4.5: Proportion of unemployed who never worked before

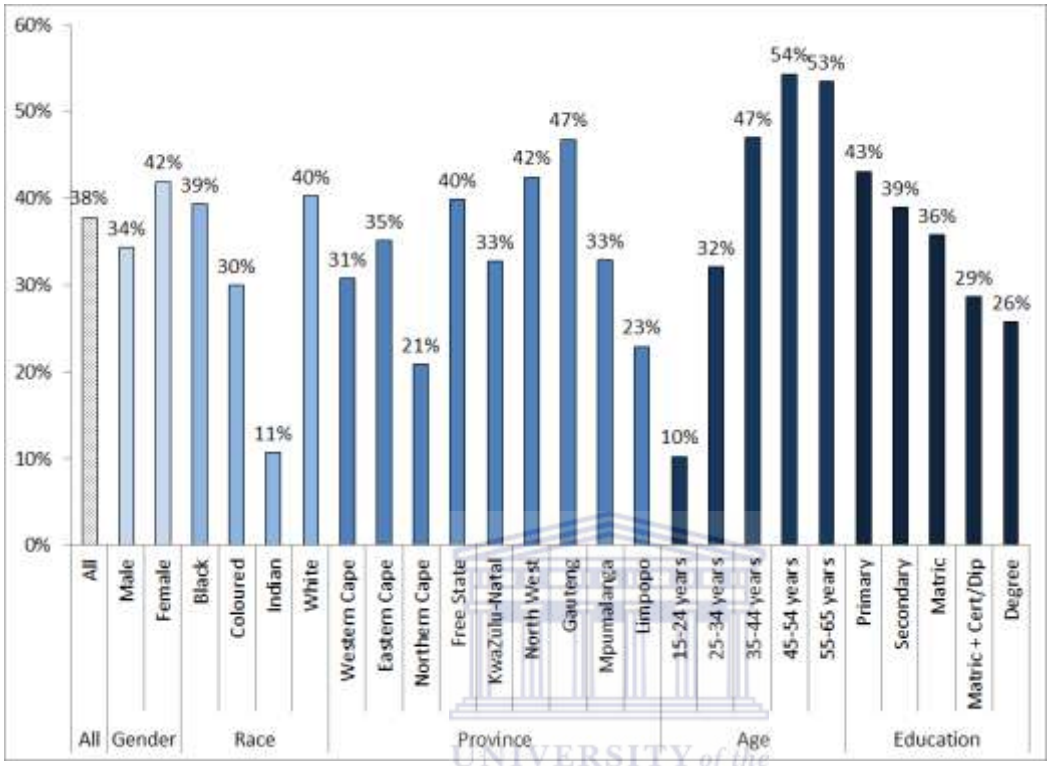


Source: Own calculations using QLFS 2014Q4 data.

As far as those unemployed with previous work experience, Figure 4.6 depicts the proportion of them last worked more than three years ago in the fourth quarter of 2014 QLFS. It can be seen that 38% of them last worked more than three years ago. Also, this proportion was higher for females (42%) compared to males (34%). On the other hand, this proportion was relatively higher for unemployed from Gauteng (47%) and Free State (40%). Finally, the last

five columns of the figure show that a higher educational attainment is associated with a lower likelihood of unemployed having worked more than three years ago.

Figure 4.6: Proportion of unemployed with previous work experience who last worked more than three years ago



Source: Own calculations using QLFS 2014Q4 data.

This chapter concludes by deriving the index of sectoral shift of formal sector employment in selected periods. The index is derived as follows (Suen and Chan, 1997: 28):

$$Index = \frac{1}{2}\sum |s - s'|$$

Where s stands for employment share of the sector in one year, while s' represents employment share of the same sector in another year. The absolute value of the change in employment share represents the minimum fraction of workers who left or joined this particular sector in the interim period.

Looking at the share of formal sector employment in each broad industry category in Table 4.5, it can be seen that the share being accounted for by the two unskilled, primary industry categories (i.e. agriculture and mining) declined throughout the years. For instance, the share accounted for by the agriculture industry dropped from 7.7% in 1997 to 5.44% in 2014, while the mining share decreased from 5.99% in 1997 to 3.88% in 2014. In contrast, the finance

industry's share more than doubled from 6.4% in 1997 to 15.83% in 2014. Finally, the index of sectoral shift was 0.1251 between 1997 and 2014.

Table 4.5: Indices of sectoral shifts of formal sector employment, selected periods

	OHS1997		LFS2002		LFS2003		QLFS2008	
	Number	Share	Number	Share	Number	Share	Number	Share
Agriculture, hunting, forestry and fishing	495 530	0.0776	787 163	0.1063	781 244	0.1044	639 448	0.0630
Mining and quarrying	382 438	0.0599	549 168	0.0742	551 788	0.0737	344 889	0.0340
Manufacturing	1 347 211	0.2110	1 381 096	0.1866	1 318 278	0.1762	1 787 298	0.1761
Electricity, gas and water supply	106 680	0.0167	83 082	0.0112	79 095	0.0106	86 894	0.0086
Construction	319 532	0.0500	319 660	0.0432	338 217	0.0452	844 589	0.0832
Wholesale and retail trade	1 070 663	0.1677	1 166 431	0.1576	1 274 679	0.1703	1 989 562	0.1960
Transport, storage and communication	408 500	0.0640	421 425	0.0569	403 566	0.0539	547 499	0.0539
Financial, insurance and business services	611 883	0.0958	898 770	0.1214	853 475	0.1140	1 497 288	0.1475
Community/social/personal services	1 643 473	0.2574	1 795 466	0.2426	1 883 330	0.2517	2 412 378	0.2377
	6 385 910	1.0000	7 402 261	1.0000	7 483 672	1.0000	10 149 845	1.0000
Index of sectoral shift			**1997-2002:**	**0.0686**			**2003-2008:**	**0.0972**
	QLFS2009		QLFS2014		OHS1997		QLFS2014	
	Number	Share	Number	Share	Number	Share	Number	Share
Agriculture, hunting, forestry and fishing	599 104	0.0598	593 317	0.0544	495 530	0.0776	593 317	0.0544
Mining and quarrying	355 198	0.0355	423 047	0.0388	382 438	0.0599	423 047	0.0388
Manufacturing	1 726 651	0.1724	1 507 404	0.1381	1 347 211	0.2110	1 507 404	0.1381
Electricity, gas and water supply	107 690	0.0108	100 482	0.0092	106 680	0.0167	100 482	0.0092
Construction	809 572	0.0808	766 465	0.0702	319 532	0.0500	766 465	0.0702
Wholesale and retail trade	1 901 251	0.1898	2 060 919	0.1888	1 070 663	0.1677	2 060 919	0.1888
Transport, storage and communication	539 276	0.0538	693 877	0.0636	408 500	0.0640	693 877	0.0636
Financial, insurance and business services	1 557 757	0.1555	1 727 914	0.1583	611 883	0.0958	1 727 914	0.1583
Community/social/personal services	2 418 767	0.2415	3 040 942	0.2786	1 643 473	0.2574	3 040 942	0.2786
	10 015 266	1.0000	10 914 367	1.0000	6 385 910	1.0000	10 914 367	1.0000
Index of sectoral shift			**2009-2014:**	**0.0529**			**1997-2014:**	**0.1251**

Source: Own calculations using OHS 1997, LFS 2002 September, LFS 2003 September, and QLFS 2008Q4, 2009Q1 and 2014Q4 data.

4.4 Conclusion

This chapter provides a review of the South African labour market in 1995-2014, looking at the LF, LFPR, employed, work activities of employed, unemployed, unemployment rate, as well as proportion of unemployed who never worked before and those unemployed with prior work experience but last worked more than three years ago. The general findings are that although employment increased during the period under study, it was not rapid enough to absorb all the net entrants into the labour force. Therefore, this resulted in an employment absorption rate (EAR) of only 67% in 1995-2014, and both the level and rate of unemployment increased during the period under study. Also, the unemployed are more likely to be Blacks, aged below 35 years, residing in Gauteng, without post-Matric qualifications, and having been struggling to look for their first job or last worked more than three years.

CHAPTER FIVE: CRITICAL EVALUATION OF VARIOUS LABOUR MARKET POLICIES

5.1 Introduction

This chapter attempts to critically evaluate various job creation policies. Some of the policies have been introduced in South Africa. Other policies are still under discussion and hence not implemented yet, but may have been introduced in other countries. Hence, the feasibility of these alternative policies for the South African economy would be examined.

5.2 Critical evaluation of policies that are implemented in South Africa

5.2.1 Promotion of SMMEs

The National Small Business Act 102 of 1996 regard SMMEs as economic survival enterprises that are self-owned with very little capital and assets (Turner, Varghase and Walker, 2008:8). The South African government has mandated sector-specific national and provincial departments to deliver on SMME development through the EPWP (Maia, 2006:16). Government also support SMMEs through a reduction of tariffs and exchange controls, offering tax incentives and investment in economic infrastructure (Malefane, 2011). The government also support SMMEs financially through the Khula Financial Enterprise Ltd which establish a fund of R80 million in 2005 to support SMME development (Agupusi, 2007:6). But Turner et al. (2002) reckon that SMMEs also have access to credit through commercial banks.

The South African government started in 1994 with the Reconstruction and Development Programme (RDP) where one of the objectives was to build one million houses in five years' time (Terreblanche, 1999). By building these houses jobs would have been created. In this case some of the SMMEs will be contracted to deliver on this promise and in so doing be able to create jobs.

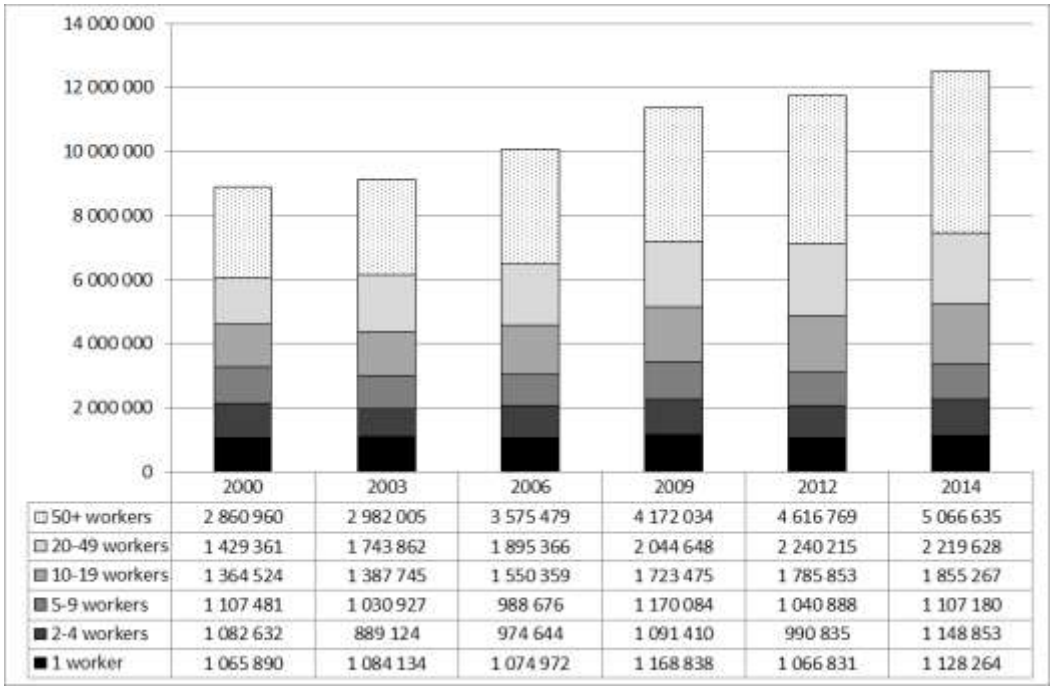
The RDP objectives were not met and the South African government revisited the programme. In 1996 they started a new programme the Growth, Employment and Redistribution (GEAR) programme. The aim was to introduce certain macroeconomic policies so that the economy can grow at 6% per annum by 2000 with one of the objectives to

create jobs (Khamfula, 2004). With the job creation programmes that government would tackle, many of the programmes would have been outsourced to SMMEs.

When the RDP and GEAR did not meet their objectives, the South African government started with the Accelerated and Shared Growth Initiative for South Africa (ASGISA) in 2006 and the National Industrial Policy Action Plan in 2007. The idea of these two policies was to focus on agro processing in order to empower SMMEs by lending capital and awarding government contracts to SMMEs. In this way SMMEs would be able to create significant employment for micro enterprises and poor households especially in the rural remote areas (PCAS, 2006).

Given the continuous government support to promote the SMMEs as already discussed above, it is somewhat surprising, if not disappointing, that there is no indication that more workers work in the SMMEs. This is evidenced in Figure 5.1, which shows that the number of formal sector employees working for firms with fewer than 10 workers has been stagnant at approximately 3 million throughout the years. However, the figure rather shows that the number of employees reporting they work at larger enterprises with at least 50 workers have nearly doubled between 2000 (2.86 million) and 2014 (5.07 million).

Figure 5.1: Total number of workers of the firm that the employees worked at, selected surveys



	2000	2003	2006	2009	2012	2014
50+ workers	2 860 960	2 982 005	3 575 479	4 172 034	4 616 769	5 066 635
20-49 workers	1 429 361	1 743 862	1 895 366	2 044 648	2 240 215	2 219 628
10-19 workers	1 364 524	1 387 745	1 550 359	1 723 475	1 785 853	1 855 267
5-9 workers	1 107 481	1 030 927	988 676	1 170 084	1 040 888	1 107 180
2-4 workers	1 082 632	889 124	974 644	1 091 410	990 835	1 148 853
1 worker	1 065 890	1 084 134	1 074 972	1 168 838	1 066 831	1 128 264

Source: Own calculations using the LFS 2000b, 2003b and 2006b as well as the QLFS 2009Q4, 2012Q4 and 2014Q4 data.

Note: question on firm size has only been asked since LFS 2000.

The SMME entrepreneurs cited various constraints to SMME growth (Lewis, 2001): some SMMEs believe that the demand for their products is low and they are not visible enough. They need a larger customer base to increase employment. The relatively small customer base is due to their financial constraints. The survey also revealed that SMMEs have limited access to capital and they pay high interests on personal loans because South African banks are very strict in lending capital. Another constraint that they highlighted was insufficient government contacts and support programs (Lewis, 2001).

Some SMMEs believe that they can become competitive if government award them tenders and in that way they should be able to create more employment for the unskilled. SMMEs' involvement in international trade is low compared to other countries. This is a major growth strategy that needs to be addressed though. What is of great concern is that 15% of the SMMEs said that they do not want to expand. This could limit growth and employment creation (Lewis, 2001).

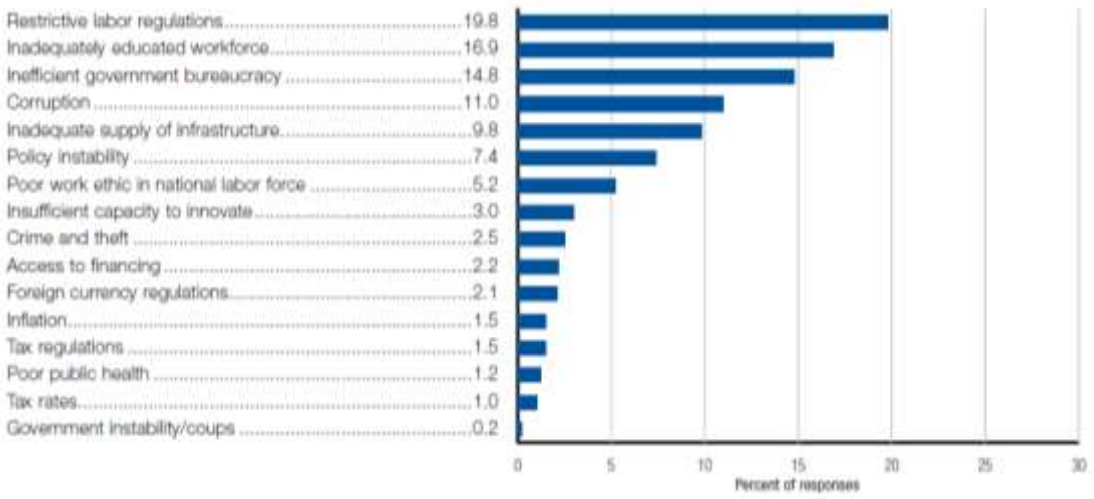
In addition, the owners of some SMMEs are of the opinion that there should be policy stability from government's side, lower interest rate and education and training (Lewis, 2001). If these issues are addressed, according to them, they should be more competitive and able to create more employment. Lewis (2001) is of the opinion that if existing SMME firms have a longer lifespan and are able to expand and new firms mushroom with high turnover, existing firms should be able to create more employment.

The previous discussions in Section 2.3.2 (Insider-outsider theory as well as Calmfors-Driffill model) already suggested that the labour-intensive, small firms are put at a disadvantaged position under the current collective bargaining structure. To make things worse, there are indications that the government policies favour towards the development of large enterprises, but do not provide sufficient support to promote the SMMEs as well as informal businesses (Lewis, 2001).

With job creation such a major problem, the South African government is sitting with a major problem in doing business. In Figure 5.2, it can be seen how difficult it is to do business in South Africa. The restrictive labor regulations in South Africa ranks high and this makes foreign direct investment difficult and even for existing business to remain afloat. Another factor that is disturbing is the high amount of inadequately educated workforce. For forms to

excel, the workers have to be hands on at all times. With an inadequately workforce it is difficult for firm to grow at a fast rate. With slow growth it is difficult to create jobs.

Figure 5.2: The most problematic factors for doing business in South Africa



Source: 2014 World Economic Forum (2014: 340)

Looking at South Africa's global ranking on each labour market efficiency indicator (see Table 5.1), South Africa is ranked last in the category of cooperation in labour-employer relations. Even in the categories of hiring and firing practices, flexibility of wage determination and pay and productivity, South Africa is ranked dismally at the bottom. With such disappointing performance in the area of labour market efficiency, this would have serious negative implications on the country's pace of employment creation.

Table 5.1: South Africa's global ranking on each labour market efficiency indicator

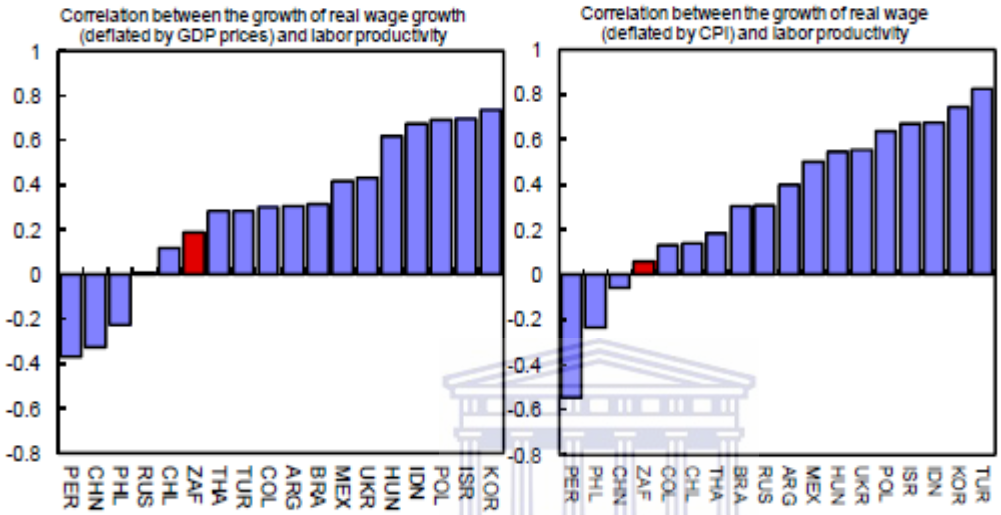
Indicator	Value (10)	Rank (144)
Cooperation in labour-employer relations	2.5	144
Flexibility of wage determination	2.7	139
Hiring and firing practices	2.1	143
Redundancy costs, weeks of salary	9.3	33
Effect of taxation on incentives to work	4.5	15
Pay and productivity	2.7	136
Reliance on professional management	5.5	21
Country capacity to retain talent	3.7	50
Country capacity to attract talent	3.9	39

Source: World Economic Forum (2014: 341)

The labour market rigidities such as the high cost of labour and capital intensive as discussed in Chapter 2 are problematic. Unless the various rigidities are addressed, the policies to support SMMEs are doomed to fail. Furthermore, in Figure 5.3, it can be seen that although

there is a positive correlation between real wage growth and labour productivity for South Africa, the extent of such positive relationship is weaker compared to most other countries. At this rate it is difficult for South Africa to increase job creation, as it is highly possible that the extent of real wage growth is much more rapid than that of labour productivity growth (refer to Figure 2.5b), and this would have negative impact on job creation in the country.

Figure 5.3: Correlation between the real wage growth and labour productivity growth in selected economies



Source: Klein (2012: 16)

5.2.2 Expanded Public Works Program (EPWP)

The Expanded Public Works programme (EPWP) was established to provide social protection to the working-age poor (Hall and Woolard, 2014). According to Phillips (2004) and the Department of Public Works, the EPWP was established to attract the unemployed to productive work. The EPWP was launched in 2004 and aims to provide employment for the unemployed, helping the unemployed through skills development and work experience, help the unemployed through starting small business (Bokolo, 2013).

The EPWP jobs focus is on the building of infrastructure such as road building, public environment projects such as the removal of alien vegetation, public social programmes such as early childhood development and the economic sector which focusses on the development of small businesses and cooperatives (Hall and Woolard, 2014 and Musekene, 2015). Another programme under the EPWP is the Community Works Programme (CWP) which provides jobs for two days per week to the unemployed in selected areas. According to Hall and Woolard (2014), this kind of job allocation is decided by the specific community.

The EPWP was not only established to provide temporary employment, but also to improve skills development (Bokolo, 2013). EPWP focusses on skill development. According to Bokolo (2013) the training provided was not for a long time, so these jobs were not sustainable. The training provided were mostly provided for the unskilled workers to upgrade their skills level, with the training mostly provided in construction, electricity and water supply.

The proposed target of the EPWP was to create one million jobs from 2004 to 2009 in the first phase and 4.9 million jobs in the second phase from 2009 to 2014. The targets were not reached if we look at the employment figures. One of the reasons for this is because these programmes are temporary (Bokolo, 2013).

In Table 5.2, it is evident that the EPWP does create some job opportunities across the different provinces in South Africa. The Eastern Cape province benefits the most from EPWP whilst Limpopo is the worst performer. The rich province of Gauteng is not doing well in the promotion and support of SMMEs as can be seen in Table 5.2.

Table 5.2: Work opportunities created by EPWP in 2007-2008

Province	EPWP Work Opportunities	Number of Unemployed	EPWP work opportunities as % of unemployed
Kwazulu-Natal	109 273	938 000	12%
Western Cape	49 584	368 000	13%
Gauteng	67 363	926 000	7%
Eastern Cape	83 281	449 000	18%
Mpumalanga	26 245	292 000	9%
Free State	24 745	267 000	9%
Limpopo	20 133	331 000	6%
North West	25 241	270 000	9%
Northern Cape	16 549	105 000	16%
Total	440 246	3 945 000	11%

Source: Lieuw-Kie-Song (2009)

According to Bokolo (2013), the skills received were not sufficient enough for proper skilled jobs, however the supply of semi-skilled jobs increased. Other reasons why the EPWP did not have the desired effect, according to Nattrass (2002), are the budget for EPWP is low when compared to the budgets allocated for social welfare, security and institutional constraints relating to the conceptualisation and design of programmes and insufficient project management capacity.

In order for the EPWP to be successful, Bokolo (2013) recommended that both public and private enterprises should drive EPWP programmes. This will ensure that the training for the unemployed will be in line with the current labour demand for the skilled workers. Bokolo (2013) also recommended that schools should become skill institutions and that EPWP projects should be effectively monitored and evaluated. Other recommendations from Bokolo (2013) include that women should be skilled in the formal sector and that programme managers must understand the recruitment process.

5.2.3 Youth wage subsidy

The empirical analysis in Chapter 4 clearly proves that youth unemployment is a very serious problem. While the EPWP may be more suitable to more elderly people with a little bit of work experience (but need to have their skills upgraded before they could find work in the labour market again), the youths' situation is different, as they struggle to find their first job.

In light of the high unemployment rate amongst the youth in South Africa, the government introduced the Employment Tax Incentives Bill or Youth Wage Subsidy on 1 January 2014 which was preceded by numerous controversial debates amongst the different interest groups (Magwaza, 2014). According to Magwaza (2014) it was the priority of the election year that overshadowed the organisation's arguments such as COSATU to avoid this policy implementation.

Treasury announced, in its medium term budget in 2014, that 209 000 young workers were already employed in 23 500 firms (Magwaza, 2014). It is not known if these jobs would have been created irrespective of the subsidy or not. Another factor is that it is not clear if these jobs were created at the expense of others. It seems that the youth wage subsidy did create employment by just looking at the figures released by Treasury. However it is still early days to make a thorough analysis.

Yu (2012) explains how the subsidy works: Only Pay as You Earn (PAYE) registered businesses will be eligible for the youth wage subsidy and it will only be given to full time workers who work no less than 35 hours per week. Only new workers between the ages of 18 and 29 and existing workers between the ages of 18 and 29 who earn less than R60 000 per annum will qualify for the subsidy. The subsidy amount to R24 000 per worker per annum for a maximum of two years for new workers and one year for existing workers. The subsidy is

run through SARS where employers will have one of three options to collect the subsidy in which case they can either pay the net balance of PAYE tax and subsidy every six months. They also have the option of paying the net balance of PAYE tax and subsidy on a monthly basis and reconcile every six months or SARS can collect PAYE tax as usual and allows for a tax credit or rebate to the value of the subsidy.

A youth wage subsidy is associated with certain pros and cons: National Treasury (2011) argues that the financial costs are reduced since employers do not know the people they are employing. The youth wage subsidy could reduce the training costs of young people and make it affordable to small employers. Because of the youth wage subsidy, young active work seekers and even the discouraged work seekers will now be more willing to look for work.

However the arguments against the subsidy: according to National Treasury (2011) are the "deadweight loss" which is a situation where the subsidy is paid to employers who would have been hired anyway. Also, firms can replace unsubsidised (adult) workers with subsidised (youth) workers and by so doing getting rid of the unsubsidised workers. There is also the case of the displacement effect where the firms with subsidised employees outgrow those with unsubsidised workers. Then there is also the case of "destructive churning" where young workers are fired after the period of the subsidy. And also the "stigmatise effect" where subsidised workers are stigmatised by unsubsidised workers.

While it may be too soon to evaluate whether the subsidy is successful in South Africa, the international experiences suggest that it is a success policy to boost youth employment. Ranchhod and Finn (2014) point out that the youth wage subsidy is successful in Europe where employment increases have been experienced in especially Poland (12%) and the Czech Republic (13%). In Latin American countries, the wage subsidy policies in the 1990s resulted in an average 4% increase in employment in countries such as Chile where the Chilean government introduced the Chile Joven subsidy when they trained 100 000 youths in 1991. The youth also received a transport subsidy (Inter-Regional Inequality Facility, 2006). This resulted in an increase of 26 percent increase in employment (Smith, 2006).

Looking at other countries that have implemented this subsidy, the Argentine government introduced a youth training subsidy called the Proyecto Joven in 1997 (Marshall, 1997) where young people between 15 and 24 were trained for six months at the firm provided they keep these youth for another six months. This programme was unsuccessful because there were

substantial retrenchments taking place during the training process. In contrast, in The United Kingdom, the government gave a subsidy of £60 a week for 24 weeks of training for the youth between 18 and 24. The employer received a subsidy of £750 for hiring a young worker. This resulted in 11 percent increase in youth employment (Smith, 2006).

They also found that the youth wage subsidy works better in countries with flexible labour markets and the context of the youth wage subsidy determines the success of it. Smith (2006) on the other hand is of the opinion that supply side subsidies are cost administrative and that had affected employment creation in negatively in Australia for instance. Whereas the supply side programmes were successful in countries such as the USA, Canada and the UK.

Puerto (2007) has done research in Latin American countries, whose economic profiles are similar to South Africa's (Ranchhod and Finn, 2014). Puerto (2007) found that demand side subsidy programmes were more successful in countries such as Venezuela, Paraguay, Peru, Columbia, Panama and the Dominican Republic. But Burns, Edwards and Pauw (2006) found that the demand side programme of the Proempleo Experiment in Argentina led to an increase in unemployment. South Africa can learn a lot from the success in the Latin American countries.

During the first year of the existence of the youth wage subsidy 270 000 youth workers were trained by 29000 firms across the country (Ranchhold and Finn, 2015). After their research of the evidence of the impact of a youth wage subsidy in other countries, Ranchhod and Finn (2014 & 2015) concluded that financing determine the success of a youth wage subsidy. Ranchhod and Finn (2014 & 2015) ran regressions on the empirical evidence of the youth wage subsidy in South Africa in their 2014 and 2015 studies. They adopted an economic approach called the difference-in-differences equation, to investigate if youth employment increased significantly since the implementation of the subsidy in 2014. The empirical findings do not indicate that youth employment increased significantly. This implies that the Employment Tax Incentive (ETI) has no substantial positive effect on aggressive youth employment probabilities in the short run.

Nonetheless, given the short duration of the implementation of the subsidy (only 2 years at the time of this study), it may be too early to evaluate whether the subsidy is a success or not, but from the country experience, it seems the subsidy could be a promising policy to address the chronic youth employment option.

5.2.4 Training Layoff Scheme (TLS)

The Training Layoff Scheme which was introduced by the CCMA was South Africa's response to the global Financial crisis during late 2008 (Roskam and Howard, 2010). The TLS provides a temporary suspension of work for workers who face resignation. They train workers to acquire skills to acquire employment once they exit the training programme. The workers retain their contracts while in training. Workers are being trained for a short period of time and they are remunerated 75% of their wages during training (Department of Labour, 2012). This is funded by Skills Education Training Authority and National Skills Fund. The purpose, according to Roskam and Howard (2010), was to train workers to become more productive and competitive.

After the recession the economy revived and the workers are rehired. Those workers are then more skilled and more productive after the training and the firm gets more returns from those workers (Department of Labour, 2012).The employers save on wages and workers can compete for better job opportunities. This is a necessary tool to address the unemployment problem in South Africa.

In Table 5.3, it can be seen that the CCMA have saved 3 773 jobs in 2011/2012 and 4725 jobs in 2012/2013. It is interesting to note that although the most jobs were saved in wholesale and retail, the jobs saved for mining and quarrying increased quite drastically in 2012/2013. The estimated number of jobs saved is 0.04% for the formal sector employment in 20111/2012 which increased to 0.05% in 2012/2013.

Table 5.3: Number of jobs saved by the CCMA's TLS, 2011/2012 and 2012/2013

Sector	[A]: Number of jobs saved	[B]: Formal sector Employment	[A]/[B] (%)
2011/2012			
[A]: Agriculture, Hunting, Forestry & Fishing	784	538 060	0.146
[B]: Mining & Quarrying	207	334 098	0.062
[C]: Manufacturing	893	1 483 491	0.060
[D]: Electricity, Gas & Water Supply	0	89 626	0.000
[E]: Construction	20	578 126	0.003
[F]: Wholesale & Retail	1 512	1 890 802	0.080
[G]: Transport, Storage & Communication	73	530 004	0.014
[H]: Financial Intermediation	0	1 472 732	0.000
[I]: Community, Social & Personal Services	284	2 547 430	0.011
[J]: Other	0	7 018	0.000
Total	3 773	9 471 387	0.040

Table 5.3 (Continued)

Sector	[A]: Number of jobs saved	[B]: Formal sector Employment	[A]/[B] (%)
2012/2013			
[A]: Agriculture, Hunting, Forestry & Fishing	40	622 790	0.006
[B]: Mining & Quarrying	1 549	364 479	0.425
[C]: Manufacturing	1 365	1 477 614	0.092
[D]: Electricity, Gas & Water Supply	0	113 879	0.000
[E]: Construction	49	644 161	0.008
[F]: Wholesale & Retail	1 567	1 719 921	0.091
[G]: Transport, Storage & Communication	65	548 166	0.012
[H]: Financial Intermediation	0	1 481 094	0.000
[I]: Community, Social & Personal Services	90	2 611 939	0.003
[J]: Other	0	2 013	0.000
Total	4 725	9 586 056	0.049

Source: Bhorat (2014: 9-10)

The concerns about the TLS were that it was only promoted in economic rich provinces. According to Themba (2014) some of the employers in rural areas were not even aware that TLS exist. And those who knew were so discouraged to make use of the services of the CCMA because they have to travel long distances to the offices of the CCMA. The training provided by the CCMA is far from the employees in remote rural areas (Themba, 2014).

5.2.5 Improving the quality of education

The Bantu Education Act of 1953 required that Bantu Education be funded by the taxes of Africans (Bromberger, 1982). This had the effect that the expenditure on Black education fell in per capita terms from 13% in 1953 to 10% in 1961 (Van der Berg and Bhorat, 1999). The National Party's expenditure on education for blacks was the least among the four racial groups.

Under the apartheid regime, the education system was categorised racially into four different departments (De Vos, 2011). The Department of Education and Training (DET) was for Black children, House of Assembly (HOA) for White children, House of Delegates (HOD) for Indian children and House of Representatives (HOR) for Coloured children. The performances of the different departments in Mathematics and English were different for the different racial groups because resources were skewly biased towards White children as can be seen in this Box plot. It is clear that the White children's performance is much better in Mathematics and English.

Although the South African government spend the biggest amount of the national budget on education, South African children still perform poor in international competency tests even with countries with poor education systems (Shepherd, 2011). South Africa was ranked last in the 2003 Trends in Mathematical and Science Studies (TIMSS) tests in Grade 8 of 50 countries for Mathematics Grade Four and Eight. In the Figure A.1 in the Appendix, it can be seen that South Africa was last in the Mathematical Competency Test. Most top jobs that require skilled employment require Mathematics as a pre requisite for studying. With these dismal results in Mathematics, that sector of employment will still have a shortage or rely on immigrant labour meaning that the progress to solve the unemployment crisis will be slow.

Looking at Figure A.2, it can also be seen that South Africa was ranked a disappointing last position in the Science Competency Test for Grade Four and Eight in the 2003 TIMSS. Science is the building block of technology and for growing economy like South Africa it is important that the country must produce many scientists. Science is also important for the construction sector. With more skilled engineers, the unemployment problem in construction for unskilled and semi-skilled workers can be addressed faster. However with test scores such as this, the road to economic success for South Africa is much longer.

As far as the Reading Scores for Grade Four and Eight in the 2006 Progress in International Reading Literacy Study (PIRLS) are concerned, South Africa was once again ranked last. It is clear that the South African education system is failing the economy. With these low scores in Reading it is difficult to produce skilled labour which the country need.

Barker (2007) found that only 13% of the pupils who are doing Mathematics and Science in Matric, are black learners. Another worrying factor is that only a small the learners who enrol for teacher qualifications in tertiary institutions, study Mathematics and Science and that is not sufficient to replace the teachers who resign or retire (Barker, 2007).

The South African economy needs Mathematics and Science graduates to address the skills backlog. Some ways to address the educational backlog especially in Mathematics and Science are: to increase the school year, reduce the absentee rate of both learners and teachers, devote more time to Mathematics and Science, spend more time on repetition and homework (CDE, 2005a). The ineffectiveness stems from the bad performances of historically black schools (Van der Berg, Wood and Roux, 2002:305). The Southern and Eastern Africa Consortium for Monitoring Educational Quality (SACMEQ) report of the reading tests in

2000 showed that South Africa's children performance in historically black schools were dismal (Van der Berg, 2006:5).

On tertiary level, the proportion for engineering qualifications engineering and technology qualifications decreased from 8% in 1992 to 5% in 2003 (Barker, 2007). This does not spell a good future for science and engineering. The National Plan for Higher Education intend to shift the enrolment towards engineering and science within the next five to ten years (Siskins, 2002)

South Africa export raw material and import finished products. If South Africa wants to manufacture its own raw materials, they need to improve the Science component of the education system. The more scientist a country produce, the better the possibility for new technological innovation and manufacturing.

Van der Berg (2007) found that only 44% of the Blacks starting school complete Matric compared to 97% Whites. This results in most young Blacks leaving schools to join the work seeking unemployed. What is more of a concern is that only 25% of the matriculants find employment leaving the other 75% joining the unemployed (Van der Berg, 2007).

The South African government is aware that the unemployment problem can only be addressed if more skilled workers enter the labour market. For this reason the government is trying to improve the quality of education (Van der Berg, 2007). First, the South African government pumped lots of money in education to address the backlogs in education. The number of schools without running water, reduced dramatically from 1996 as well as the number of overcrowded classes (Department of Basic Education, 2011b: 152). The South African government is also addressing the shortage of school equipment in especially disadvantaged schools. This is critical because learners with better equipment perform better according to Bhorat and Oosthuisen (2008). The South African government is also attempting to reduce class sizes because some studies have shown that large class sizes tend to make education dysfunctional (Crouch and Mabogoane, 2001; Simkins and Paterson, 2004; Van der Berg, 2006; De Lannoy and Hall, 2012). The South African government also try to distribute school resources more equally amongst the different schools.

The South African government is trying to improve the management style of leaders, in particular principals, on a national and local level because evidence show that strong

principals achieve good results. According to Van der Berg (2010), the highly skilled South African teachers are worse off than highly skilled South Africans. The South African government is trying to align teachers' salaries with those in the private sector with more or less similar qualifications. The South African government is constantly trying to change the school curriculum to meet the education needs of disadvantage learners.

The South African Council of Educators (SACE) ensures that teachers undergo a certain degree of training over several years. At the moment, the South African government supply most teachers with laptops to assist them in distance education and training. Vocational Education and Training is encouraged among drop out learners and those with poor matric results. To address the unemployment problem, young people are encouraged to join Further Education and Training Colleges (FET) and through the SETAs as well (OECD Economic Survey, 2013).

Enrolment at universities is hampered by limited access to credit. The results of the research conducted by Gurgand et al. (2012) show that enrolment at universities and access to credit at private institutions and banks are positively related. The South African government assist poor students through a national students fund (NSFAS) which is a loan which has to be paid back with small interests (OECD Economic Survey, 2013).

To conclude, as Table 4.2 shows that the employed have become more educated over the years, this implies rapid structural change is taking place in the economy (highly skilled, highly educated people are demanded) since the economic transition. So, it means government must continue to improve the educational quality (in particular addressing the huge variance in students' performance by race, mainly due to the impact of the discriminatory educational policies during apartheid), in order to improve the employment prospects of non-whites in the labour market.

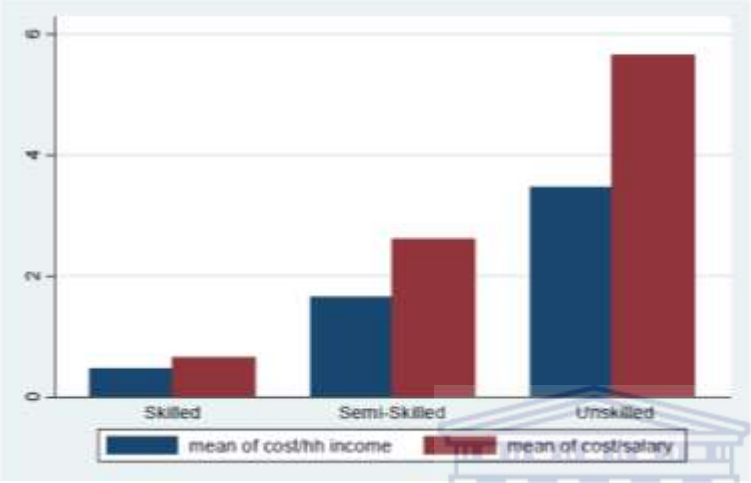
5.3 Feasibility of alternative policy options

5.3.1 Transport subsidy

An analysis made by Bhorat (2012) found that many people travel long distances to and from the cities. Most blacks live far from the cities and in the rural poor areas. The unemployed is concentrated around the young black people. According to Bhorat (2012) it is expensive for the unemployed to travel to the places where the jobs are concentrated. African males spend

more time on average than white males to travel to work (Bhorat, 2012). The lack of cash for job searching can create frictions in the labour market (Card et.al. 2007 and Bryan et.al. 2014). This can be seen in the table below that was researched by Bhorat (2012). Figure 5.4 shows that unskilled and semi-skilled workers spend a significant amount of their income on transport.

Figure 5.4: Mean Transport Cost, Percentage of Household Income and Salary, by Skill Level



Source: Bhorat (2012: 8), using data from the 1995 Income and Expenditure Survey

Bhorat (2012) found that the unskilled employed spend 3.8% of their household income on traveling to and from work which also result in 5.5% of their wage income. He also revealed that most of the discouraged work seekers are living in areas with the lowest job density. They are in outlying rural areas where there is poor network and they lack the skills to access employment opportunities. It is thus extremely costly for these people to look for work.

Bhorat (2012) suggests that government must provide a transport subsidy for the unemployed to look for jobs. The subsidy can be provided in different ways. It can take on the form where the young unemployed could go to the centres of the Department of Labour and access information on job search. The size of the subsidy will be determined by the costs of travelling to and from places of high density jobs. The subsidy can take on different form. It can also be used to create self-employment opportunities. Bhorat (2012) further suggests that the subsidy should not be a once off, but should be continuous for about five months since it is also a learning process for job searching methods. However, the government must be careful that the transport subsidy is not abused. The subsidy could increase non-labour income, so people may prefer leisure over work. This can easily end up discouraging labour supply (Bhorat, 2012).

Transport subsidy has not been considered as feasible policy option in Africa to boost employment. An exception is Ethiopia, as the information for job searching is mostly found in the city centre of Addis Ababa and it is expensive for job seekers from the rural areas to travel there (Franklin, 2015). After testing the impact of a transport subsidy, Franklin (2015) found that a transport subsidy had a positive impact on the labour market in Ethiopia. Job seekers were able to find the most wanted and especially scarce jobs faster than they would have been with no transport subsidy.

5.3.2 Job search subsidy

Another way of reducing unemployment is by subsidising the cost involved in job searching processes. Evans-Klock et al. (1998) explain the job search assistance delivered through the Public Employment Service (PES), as measures to help displaced workers in their job search processes in order to enhance the flow of information between employers and work seekers. The PES must be well managed in order for this programme to be successful so that they can be effective in times of employment crises (Evans-Klock et al., 1998). The aim of this policy, according to Evans-Klock et al. (1998), is to avoid long-term unemployment by identifying the risks soon enough and engage workers in counselling programmes. This policy, according to Evans-Klock et al. (1998), works well in Western Europe where it is characterised by low costs and high pay-offs.

Rankin (2013) believes that job seeker should truly spend the subsidy looking for jobs. It is believed that an inflow of income in terms of government subsidy can encourage unemployed people to look for jobs or move to an area where they can find jobs (Hosegood, et al., 2009 and Posel et al., 2006). Job search can be monitored according to Rankin (2013) like in other countries where job seekers have to provide proof of application letters, proof of registration with agencies and proof of participation in selection procedures. Firms must recruit through the channels that the subsidising job seekers will be using.

After his research in Ethiopia, Franklin (2015) found that the job search subsidy helped work seekers to find jobs. However these jobs were temporary jobs. But the problem is not the type of job but if the job search subsidy is successful in finding job seekers a job. In the case of Ethiopia, the subsidy was successful.

Job search subsidy is a good new policy option. However, government must be cautious as the receipt of the subsidy means increase of non-labour income to the recipient (Franklin, 2015). This means that it can have a negative effect on labour supply (i.e. leisure preferred over work). Hence, Franklin (2015) is of the opinion that the government must ensure that the subsidy is really used productively to seek work.

5.3.3 Stipend paid for volunteers

After 1994 the national government used volunteers to meet people's needs (Hunter and Ross, 2013). These volunteers who are concentrated on the unemployed youth, take part in programmes that address social welfare issues in different communities. For the efforts of the volunteers they are paid a stipend. In this case employment is created. The stipend that is paid to the volunteers is far below the fair market value do formal work in communities which they have no connection with (Tschiarhart et.al. 2001:422).

Many stipend paid volunteers were concentrated in the EPWP programmes where they provided a service and also increase their skills during the program. By the time they exit the programme they should have acquired enough skills to find a semi-skilled or fully skilled job (Plaatjies and Nicolaou-Manias, 2005). Many other NPOs make use of stipend paid volunteers. Since unemployment is so high and it is difficult to find a job, this volunteerism is a way out for many unemployed youth and they become valuable in the different communities.

Akintola (2011) argues that the stipend paid volunteers in the EPWP is a cheap way out. The stipend is, according to Plushnews (2005), a wage subsidy which is equal to a wage needed to attract a work seeker. Plushnews (2005) is of the opinion that the stipend paid volunteers are similar to the efficiency wage theory where workers are more productive and reach out to those who do not share the same perceptions as the activity. Stipend paid workers, according to Akintola (2011), are more motivated to acquire skills than low paid workers because these stipend paid volunteers must fulfil certain functions for government.

Stipend-paid volunteerism does alleviate poverty (Schenck and Louw, 2010). However Biyase and Bromberger (2005) believe that stipend-paid volunteerism is a way of "churning" unemployment and is not a long term solution. But the skills that the volunteers gain can get them permanent jobs.

5.4 Conclusion

There are many ways to reduce unemployment. Each case as discussed above has merits. The way the problem is addressed differs from country to country. There is no exact way to address the unemployment problem. It is a combination of different strategies that may work. Some economists believe that economic growth will lead automatically to reduce unemployment, but that did not happen in South Africa. When that did not happen, it was called jobless growth. In order for South Africa to address the unemployment problem, all the stake holders such as the corporate world, education, NGOs and more should sit together to find a solution.

Table 5.4: Brief summary of various labour market policies

Policy	Primary Tool
Promotion of SMMEs	To promote the development and growth of (labour-intensive) SMMES, and subsequently boost job creation from these enterprises
EPWP	To improve the skills of elderly people with some previous work experience but their current skills may be obsolete, not demanded by employers anymore
ETIB	To increase employment of the youth jobseekers, especially those who struggle to find their first job
TLS	To prevent mass retrenchment, a case of economic recession and low economic profits, via intervention mechanisms by the CCMA
Improvement of quality of education	To increase employment prospects of job seekers and to better match the skills supplied by jobseekers and skills demanded by employers
Transport subsidy	To mainly assist the poor unemployed
Job search subsidy	To mainly assist the poor unemployed
Stipend	To promote temporary work experience of job seekers

CHAPTER SIX: CONCLUSION

6.1 Introduction

This study aimed at critically evaluating the possible policy options to reduce unemployment in South Africa. The data from Stats SA and other sources shows unemployment is concentrated on the Black youth. The South African government has many policy options to their exposal. There is not one best policy. Past experiences and lessons from other countries give guidance as to what policies to engage in.

6.2 Review of findings

Chapter Two provided a review of conceptual, theoretical and legislative framework. The active and passive labour market policies were discussed. The different labour market legislations that affect the study were also discussed in the chapter. The purpose of these legislations is to see to what extent the study is allowed to make recommendations. The main causes of unemployment were discussed to see the origin of the unemployment crisis.

After discussing the data and methodology in Chapter Three, the study moved on by examining the labour market trends of the country in Chapter 4. The main findings were as follows: although employment increased, it was not rapid enough to absorb the net labour force entrants, thereby causing the employment absorption rate to be only 67% between 1995 and 2014; the ASGISA goal of reducing unemployment rate to 15% by the end of 2014 was not achieved (approximately one quarter of the labour force remained unemployed); youths, Blacks, and those without Matric were associated with the greatest likelihood of being unemployed; a lot of labour force entrants have been struggling to find their first job; the number of employees who reported working for firms with fewer than 10 workers were stagnant at about 3 million.

Chapter Five discusses the main labour market policies to boost unemployment. Some of the policies are already in place while other policies are still under discussion. The youth wage subsidy was implemented mainly for the youth without any job experience. The EPWP helps the elderly with some experience but outdated skills. Non-whites in general were affected by past inequalities, more specific educational inequalities. The South African government try to reverse this by implementing some types of legislation.

SMMEs who are supposed to create most of the employment are not working because of the rigidities that were discusses in Chapter 2. The Training Layoff Scheme could prevent large scale of retrenchment during the recession. Other alternative policies are not implemented yet (e.g. transport subsidy, job search subsidy), but the government should consider them as possible labour market policies to boost employment in future.

6.3 Conclusion

This study examined the labour market trends as well as evaluated various labour market policies to create jobs more rapidly in South Africa; these policies target at various groups of unemployed in the labour force, namely youths (Employment Tax Incentives Bill), more elderly people with some prior work experience, but need their skills upgraded to some extent before they could find semi-skilled jobs (Expanded Public Works Program), poor people (transport subsidy, job search subsidy), workers who could be retrenched in SMMEs (Training Layoff Scheme), etc.

Nonetheless, unless the root causes of unemployment are seriously addressed by the government (i.e. skills mismatch, employment discrimination, barriers of entry to informal sector, insufficient to promote the development and growth of SMMEs, wage rigidity, employment rigidity, lack of linkage between real wage growth and labour productivity growth, etc.), the effectiveness of the various labour market policies could be seriously hindered by these factors.

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APPENDIX

Table A.1: Labour market aggregates under the narrow definition, 1995-2014

	Employed	Unemployed	LF	15-65 years	LFPR	Unemployment rate
OHS1995	9 499 347	2 028 242	11 527 589	24 190 583	47.7%	17.6%
OHS1996	8 966 307	2 224 292	11 190 599	24 909 065	44.9%	19.9%
OHS1997	9 093 647	2 450 738	11 544 385	25 505 157	45.3%	21.2%
OHS1998	9 370 130	3 157 950	12 528 080	25 665 233	48.8%	25.2%
OHS1999	10 356 143	3 153 783	13 509 926	26 246 545	51.5%	23.3%
LFS2000a	11 874 409	4 331 234	16 205 643	26 442 663	61.3%	26.7%
LFS2000b	12 224 406	4 156 910	16 381 316	27 774 168	59.0%	25.4%
LFS2001a	12 260 207	4 407 860	16 668 067	28 062 004	59.4%	26.4%
LFS2001b	11 167 541	4 649 836	15 817 377	28 083 997	56.3%	29.4%
LFS2002a	11 603 398	4 890 933	16 494 331	28 298 255	58.3%	29.7%
LFS2002b	11 283 924	4 930 670	16 214 594	28 495 088	56.9%	30.4%
LFS2003a	11 297 621	5 111 408	16 409 029	28 724 521	57.1%	31.1%
LFS2003b	11 411 351	4 429 336	15 840 687	28 906 230	54.8%	28.0%
LFS2004a	11 378 217	4 409 532	15 787 749	29 099 787	54.3%	27.9%
LFS2004b	11 630 196	4 130 884	15 761 080	29 270 403	53.8%	26.2%
LFS2005a	11 894 320	4 278 200	16 172 520	29 489 763	54.8%	26.5%
LFS2005b	12 287 798	4 482 363	16 770 161	29 663 379	56.5%	26.7%
LFS2006a	12 437 963	4 269 990	16 707 953	29 817 824	56.0%	25.6%
LFS2006b	12 787 285	4 386 117	17 173 402	29 972 571	57.3%	25.5%
LFS2007a	12 634 896	4 330 958	16 965 854	30 160 997	56.3%	25.5%
LFS2007b	13 293 327	3 900 871	17 194 198	30 387 402	56.6%	22.7%
QLFS2008Q1	14 450 646	4 368 431	18 819 077	31 700 031	59.4%	23.2%
QLFS2008Q2	14 604 053	4 267 398	18 871 451	31 859 272	59.2%	22.6%
QLFS2008Q3	14 561 398	4 297 826	18 859 224	31 987 108	59.0%	22.8%
QLFS2008Q4	14 784 916	4 045 894	18 830 810	32 141 290	58.6%	21.5%
QLFS2009Q1	14 631 692	4 363 098	18 994 790	32 293 255	58.8%	23.0%
QLFS2009Q2	14 374 908	4 338 482	18 713 390	32 452 436	57.7%	23.2%
QLFS2009Q3	13 841 980	4 473 324	18 315 304	32 590 099	56.2%	24.4%
QLFS2009Q4	13 982 850	4 426 049	18 408 899	32 733 898	56.2%	24.0%
QLFS2010Q1	13 820 568	4 609 906	18 430 474	32 917 597	56.0%	25.0%
QLFS2010Q2	13 834 144	4 618 653	18 452 797	33 062 618	55.8%	25.0%
QLFS2010Q3	13 668 819	4 652 706	18 321 525	33 246 836	55.1%	25.4%
QLFS2010Q4	13 915 884	4 365 474	18 281 358	33 365 615	54.8%	23.9%
QLFS2011Q1	13 917 447	4 595 380	18 512 827	33 508 825	55.2%	24.8%
QLFS2011Q2	13 933 454	4 778 567	18 712 021	33 672 970	55.6%	25.5%
QLFS2011Q3	14 131 609	4 696 073	18 827 682	33 818 983	55.7%	24.9%
QLFS2011Q4	14 349 931	4 464 040	18 813 971	33 974 114	55.4%	23.7%
QLFS2012Q1	14 297 605	4 765 531	19 063 136	34 128 626	55.9%	25.0%
QLFS2012Q2	14 348 370	4 717 459	19 065 829	34 301 187	55.6%	24.7%
QLFS2012Q3	14 583 192	4 898 166	19 481 358	34 456 238	56.5%	25.1%
QLFS2012Q4	14 541 707	4 708 069	19 249 776	34 616 851	55.6%	24.5%
QLFS2013Q1	14 569 906	4 860 906	19 430 812	34 756 987	55.9%	25.0%
QLFS2013Q2	14 706 731	4 970 511	19 677 242	34 908 625	56.4%	25.3%
QLFS2013Q3	15 061 904	4 877 670	19 939 574	35 077 845	56.8%	24.5%
QLFS2013Q4	15 195 491	4 827 260	20 022 751	35 231 309	56.8%	24.1%
QLFS2014Q1	15 073 201	5 064 715	20 137 916	35 404 659	56.9%	25.2%
QLFS2014Q2	15 111 626	5 150 552	20 262 178	35 549 472	57.0%	25.4%
QLFS2014Q3	15 146 354	5 147 978	20 294 332	35 702 828	56.8%	25.4%
QLFS2014Q4	15 352 782	4 905 277	20 258 059	35 869 820	56.5%	24.2%

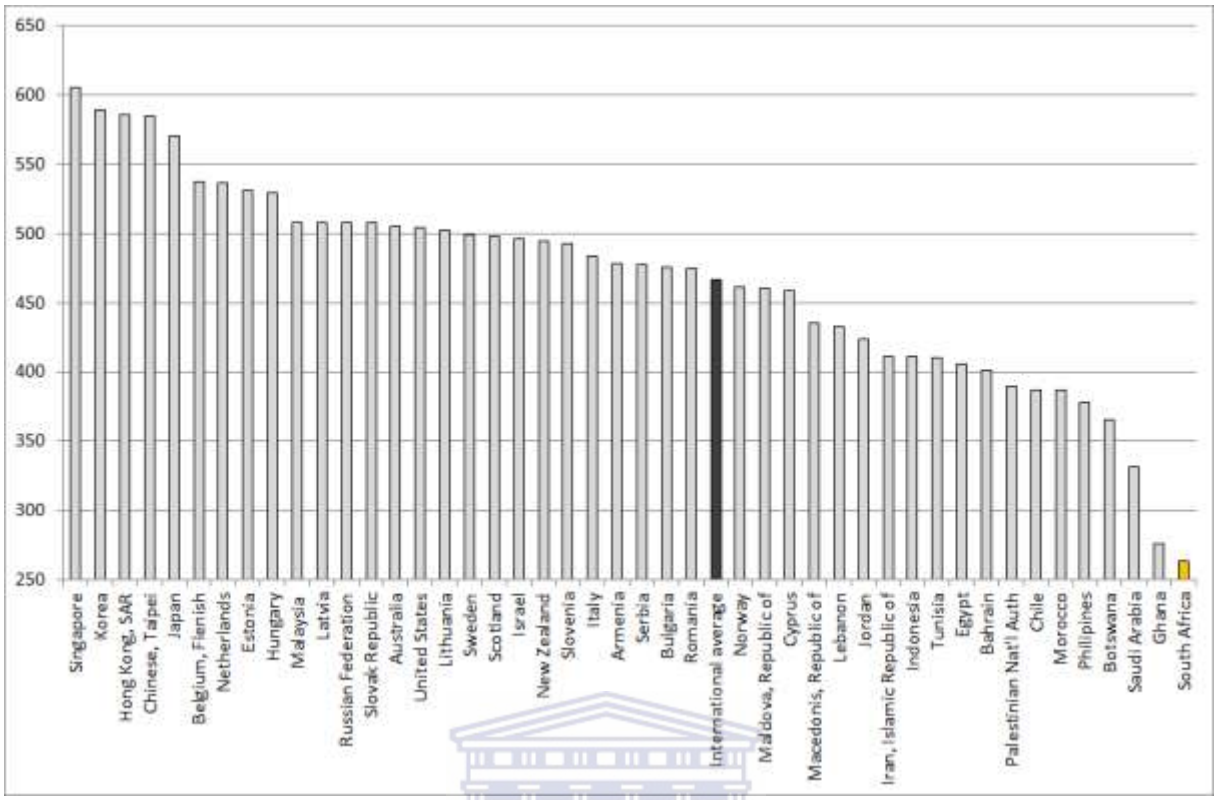
Source: Own calculations using 1995-1999 OHS, 2000-2007 LFS and 2008-2014 QLFS data.

Table A.2: Number of employed by industry, 1995-2014

	Primary		Secondary			Tertiary				Not classified		All
	Agriculture	Mining	Manufacturing	Electricity & Water	Construction	Wholesale & Retail	Transport	Finance	Personal services	Private households	Unspecified	
OHS1995	1 233 552	440 399	1 434 815	84 432	444 844	1 665 345	476 005	579 879	2 171 561	797 949	170 566	9 499 347
OHS1996	758 215	249 872	1 383 762	126 268	421 716	1 373 131	479 535	747 425	2 014 528	804 667	607 188	8 966 307
OHS1997	758 185	394 105	1 520 718	114 999	512 306	1 569 654	529 271	724 950	1 875 918	755 109	338 432	9 093 647
OHS1998	934 070	434 272	1 381 207	112 641	546 417	1 782 514	551 168	853 151	1 843 845	769 365	161 480	9 370 130
OHS1999	1 096 888	475 554	1 496 075	78 324	566 174	2 076 231	538 822	929 823	1 981 523	965 297	151 432	10 356 143
LFS2000a	2 283 670	467 194	1 468 817	87 903	596 134	2 433 395	547 041	837 188	1 898 781	1 186 279	68 007	11 874 409
LFS2000b	1 911 210	601 839	1 576 650	93 792	682 138	2 473 106	581 176	975 149	2 082 172	1 143 881	103 293	12 224 406
LFS2001a	1 574 863	565 642	1 616 849	100 713	637 968	3 048 783	579 503	1 008 449	2 014 914	1 034 372	78 151	12 260 207
LFS2001b	1 175 944	553 389	1 618 419	94 311	633 417	2 451 348	545 774	1 034 336	1 986 460	1 032 217	41 926	11 167 541
LFS2002a	1 737 008	542 715	1 596 147	81 409	577 164	2 315 174	570 900	1 037 319	2 006 627	1 080 040	58 895	11 603 398
LFS2002b	1 417 822	558 601	1 631 160	83 757	603 869	2 191 508	573 468	1 083 400	2 040 370	1 028 021	71 948	11 283 924
LFS2003a	1 288 460	557 038	1 585 987	85 753	592 775	2 325 635	579 226	1 036 679	2 112 838	1 087 995	45 235	11 297 621
LFS2003b	1 210 786	551 612	1 548 157	90 984	663 719	2 426 605	536 775	1 097 155	2 177 950	1 073 954	33 654	11 411 351
LFS2004a	1 257 100	558 416	1 591 319	105 765	658 203	2 351 588	580 551	1 068 036	2 155 810	1 024 056	27 373	11 378 217
LFS2004b	1 060 893	404 288	1 712 449	99 266	822 734	2 539 864	562 628	1 146 395	2 182 449	1 073 570	25 660	11 630 196
LFS2005a	1 167 975	425 142	1 650 777	124 733	811 845	2 646 086	592 278	1 140 031	2 232 103	1 073 963	29 387	11 894 320
LFS2005b	923 010	410 657	1 704 899	99 704	934 063	3 021 277	615 225	1 294 673	2 189 841	1 065 957	28 492	12 287 798
LFS2006a	1 315 196	398 443	1 724 526	102 432	863 178	2 992 907	554 147	1 193 107	2 180 446	1 085 275	28 306	12 437 963
LFS2006b	1 085 614	397 238	1 735 573	118 919	1 023 251	3 051 961	610 009	1 308 623	2 316 690	1 106 332	33 075	12 787 285
LFS2007a	1 072 429	454 636	1 756 914	100 070	964 687	2 958 728	575 550	1 319 191	2 307 769	1 106 729	18 193	12 634 896
LFS2007b	1 038 987	431 716	1 755 478	98 415	1 053 036	2 932 686	695 809	1 480 860	2 557 004	1 194 920	54 416	13 293 327
QLFS2008Q1	842 290	352 452	2 111 008	102 699	1 181 821	3 323 013	807 798	1 779 117	2 716 170	1 234 278	0	14 450 646
QLFS2008Q2	821 649	372 468	2 100 596	108 749	1 225 639	3 277 343	835 340	1 813 605	2 786 797	1 257 121	4 746	14 604 053
QLFS2008Q3	809 705	339 530	2 056 384	107 409	1 184 458	3 342 428	823 356	1 769 858	2 775 830	1 348 845	3 595	14 561 398
QLFS2008Q4	806 695	349 043	2 097 897	94 272	1 279 265	3 337 827	831 783	1 772 772	2 833 855	1 376 368	5 139	14 784 916
QLFS2009Q1	778 951	361 086	2 032 078	112 329	1 221 890	3 208 574	821 269	1 866 126	2 831 049	1 393 306	5 034	14 631 692
QLFS2009Q2	753 063	349 213	2 032 723	103 478	1 207 458	3 159 301	781 512	1 855 683	2 842 931	1 287 201	2 345	14 374 908
QLFS2009Q3	682 523	325 831	1 868 899	93 268	1 153 257	3 038 375	797 641	1 827 390	2 792 579	1 255 181	7 036	13 841 980
QLFS2009Q4	647 161	321 610	1 888 352	109 077	1 177 747	3 080 290	802 080	1 911 914	2 808 854	1 232 144	3 621	13 982 850
QLFS2010Q1	683 752	324 121	1 852 468	78 123	1 106 559	3 024 868	838 976	1 784 348	2 848 469	1 272 107	6 777	13 820 568
QLFS2010Q2	655 070	332 228	1 813 493	103 069	1 098 701	3 061 752	810 707	1 828 914	2 869 769	1 253 274	7 167	13 834 144
QLFS2010Q3	674 524	328 657	1 820 218	101 818	1 116 981	3 092 421	812 424	1 693 824	2 810 322	1 216 336	1 294	13 668 819
QLFS2010Q4	649 521	320 360	1 892 648	96 159	1 115 275	3 129 840	806 608	1 704 742	2 985 972	1 214 133	626	13 915 884
QLFS2011Q1	628 087	335 071	1 907 826	99 613	1 094 594	3 122 634	777 237	1 740 706	2 990 710	1 215 173	5 796	13 917 447
QLFS2011Q2	625 768	301 474	1 832 709	96 799	1 099 386	3 104 837	821 722	1 817 142	3 011 686	1 218 949	2 982	13 933 454
QLFS2011Q3	653 204	346 300	1 839 480	81 092	1 137 332	3 171 987	807 711	1 873 738	3 011 764	1 205 165	3 836	14 131 609
QLFS2011Q4	671 167	352 838	1 910 309	87 038	1 104 972	3 200 122	839 810	1 849 557	3 103 264	1 224 363	6 491	14 349 931
QLFS2012Q1	693 910	362 277	1 836 818	95 521	1 042 119	3 212 003	833 451	1 857 839	3 095 992	1 260 774	6 901	14 297 605
QLFS2012Q2	675 797	383 769	1 784 747	103 548	1 073 021	3 138 122	836 046	1 861 976	3 228 306	1 258 693	4 345	14 348 370
QLFS2012Q3	700 029	374 511	1 836 452	107 812	1 117 265	3 132 224	895 088	1 947 057	3 241 830	1 230 036	888	14 583 192
QLFS2012Q4	719 436	379 821	1 815 950	102 470	1 133 484	3 111 319	877 010	1 952 700	3 255 801	1 191 798	1 918	14 541 707
QLFS2013Q1	765 073	393 369	1 859 408	124 130	1 085 525	3 031 862	871 441	1 916 376	3 298 680	1 221 452	2 590	14 569 906
QLFS2013Q2	742 033	403 000	1 840 224	124 124	1 150 912	3 089 905	900 238	1 968 296	3 266 934	1 216 960	4 105	14 706 731
QLFS2013Q3	741 345	422 237	1 781 067	139 609	1 146 237	3 196 077	929 052	2 062 405	3 375 515	1 265 543	2 817	15 061 904
QLFS2013Q4	714 851	425 956	1 768 479	126 918	1 204 391	3 233 002	963 023	2 039 180	3 471 732	1 245 176	2 783	15 195 491
QLFS2014Q1	709 821	423 881	1 806 667	129 510	1 199 513	3 192 830	896 164	2 048 406	3 430 245	1 232 715	3 449	15 073 201
QLFS2014Q2	669 470	418 612	1 746 980	118 095	1 182 529	3 182 143	950 173	2 016 366	3 533 508	1 291 126	2 624	15 111 626
QLFS2014Q3	685 828	440 760	1 743 328	118 302	1 282 368	3 200 818	932 882	2 037 485	3 518 813	1 182 755	3 015	15 146 354
QLFS2014Q4	743 166	426 875	1 755 221	103 444	1 334 025	3 251 072	953 307	2 047 224	3 508 620	1 223 195	6 633	15 352 782

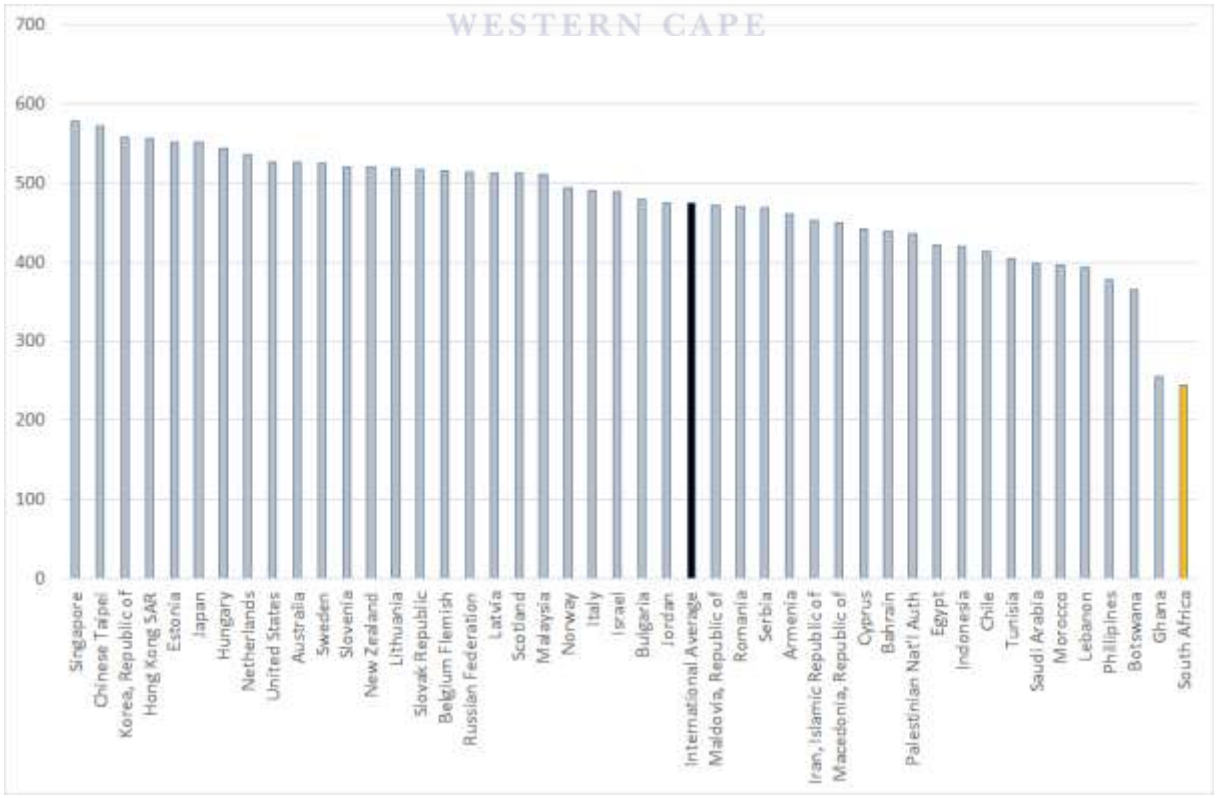
Source: Own calculations using 1995-1999 OHS, 2000-2007 LFS and 2008-2014 QLFS data.

Figure A.1: TIMSS 2003 student average Mathematical test score by participating country



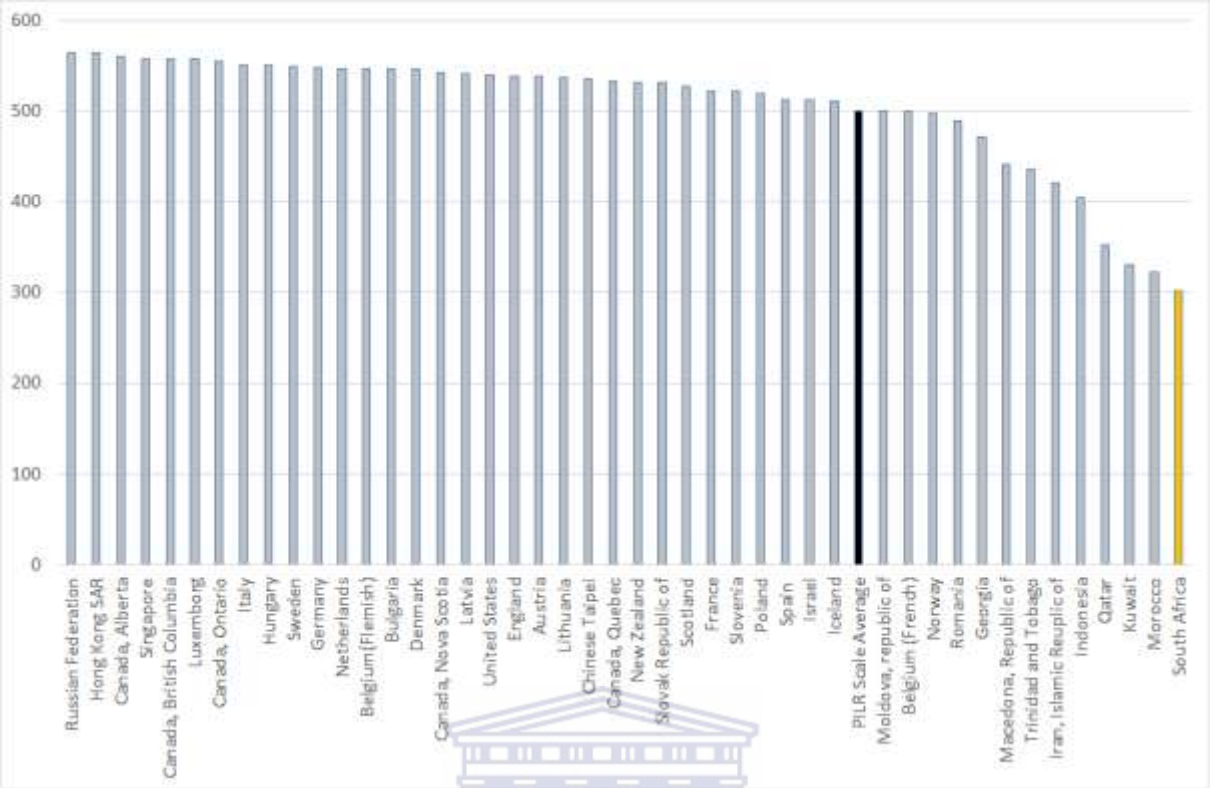
Source: Mullis et al. (2004)

Figure A.2: TIMSS 2003 student average Science test score by participating country



Source: Martin et al. (2004)

Figure A.3: PIRLS 2006 student average Reading test score by participating country



Source: Mullis et al. (2007)