Training by the Unemployed and Employed Prior to the Implementation of the NSDS: Evidence from the Mesebetsi Labour Force Survey 1999 - 2000

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ABSTRACT

This study is an investigation into the training by the unemployed and employed in the South African labour market prior to the implementation of the National Skills Development Strategy (NSDS) in 2001. The study uses the Mesebetsi Labour Force Survey 1999-2000 to conduct the investigation. This investigation was prompted by the pervasive nature of unemployment in the labour market. This research will set the benchmark for future research that aims to establish the impact of the NSDS on the labour market through the use of household surveys. However, the fact that recent household datasets do not contain as rich information on training will complicate analysis that aims to compare findings and such a task may require a second round of the Mesebetsi Survey.

Four probit models are developed to determine the probabilities of training for the economically active population as a whole, the unemployed and the employed respectively. Both the third and fourth probits determine the probability of training for the employed. However, the difference between the fourth model and the others is the fact that it determines the probability of employer funded training while the other three probits determine the probabilities of training regardless of the source of funding.

It was found that among the unemployed only 15% went on training. The probability of training for the unemployed showed that women, Africans, the youth (15-24 years) and those with no or low levels of education were less likely to engage in training. These results imply that the employment/reemployment prospects of the unemployed will be negatively affected. Thus the discouraged worker problem will be compounded and the severe poverty and inequality will remain a troubling feature of South African society.

On the other hand, about 38% of the employed went on training and the regression analysis confirms that the employed are indeed more likely than the unemployed to go on training. Specifically, among the employed, individuals that are relatively more likely to train are men, non-Africans, those employed in large firms, those employed in high skilled occupations, those with high levels of education and those individuals that are union members.

The findings of this research make very clear the areas where the NSDS can make a significant impact in terms of redressing the impact of past iniquitous policies. Further research is thus called for in order to determine what the impact of the NSDS has been on the labour market and to make adjustments to the strategy accordingly.

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I would also like to extend my thanks to my brother, Thumbiko, and my entire family for their love and support. I hope I have made you proud.

Lastly, my thanks also go to all my friends.

DECLARATION

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ATUSAYE KAJERA MUGHOGHO

NOVEMBER 2006

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LIST OF ACCRONYMS AND ABBREVIATIONS

ASGISA	Accelerated and Shared Growth Initiative of South Africa
DoL	Department of Labour
GEAR	Growth, Employment and Redistribution
NGO	Non Governmental Organisation
NSDS	National Skills Development Strategy
OJT	On-the-job training
ILO	International Labour Organisation
RSI	Randomly Selected Individual
SARS	South African Revenue Service
SETA	Sector Education and Training Authority

1 INTRODUCTION

1.1 Subject

This paper describes an investigation into the training by the unemployed and employed in the South African labour market prior to the implementation of the National Skills Development Strategy (NSDS) in 2001. Specifically the study determines the probabilities of training for the economically active population, the unemployed and employed.

The study uses the Mesebetsi Labour Force Survey of 1999-2000 and was motivated by the chronic and involuntary nature of unemployment in the South African labour market. The relevance of this research lies in the fact that it will establish a benchmark on which further research on the impact of the NSDS on the labour market can build upon. However more recent datasets do not contain as rich information about training as the Mesebetsi survey which may complicate analysis that aims to compare findings. Given this problem the DoL might be required to commission a second round of the Mesebetsi Survey to allow for the comparison of findings.

1.2 Background to Investigation

This section provides the background to the investigation at hand. At this point it is important to bring to the attention of the reader that what is mentioned in this section, as well as other sections within this chapter, are all discussed in further detail in the chapters that lie ahead.

South Africa is unique given its apartheid history. This history makes it hard to decisively categorise South Africa as a developed or developing country and as such, South Africa has been classified as a middle-income country. South Africa has the features of a developed country such as, well developed institutions and infrastructure, a sound financial sector and a broad and sophisticated industrial base. However, developed country features are marred by developing country characteristics that

include chronic unemployment, mass poverty, a huge pool of unskilled labour, an unregulated informal sector and poor service delivery. A perfect example to reflect the dualistic nature of South Africa is the state of the economy over the last couple of years. In the past couple of years the economy has been buoyant given the benign interest rate and inflation conditions that prevailed. However, only the few people in the formal sector have benefited from these favourable conditions, while a majority of the population has remained marginalized from the fruits of the economy. This duality in the structure of the economy is manifested in the extreme income inequality that exists in South Africa. The level of income inequality in South Africa is the second highest in the world after Brazil.

Despite a significant proportion of the economy being marginalized, some progress has been made in redressing the impact of apartheid over the past decade of democracy. Prudent fiscal and monetary policies have led to a stable macroeconomic environment that has gained government policy credibility. Since September 1999 the economy has experienced the longest period of economic expansion in the country's recorded history (SouthAfrica.info reporter, 2005). Accordingly tax revenues have increased dramatically due to a wider tax base and the increased efficiency of tax collection by the South African Revenue Service (SARS). For instance, in 2006 tax revenue was in excess by R25 billion (Richardson, 2006). This gives government sufficient scope for further tax cuts and more spending power for the benefit of the economy. These and other labour related developments have led to a significant rise of the black middle class which has been responsible for the strong consumer demand that has significantly contributed to South Africa's strong growth performance. Furthermore, the social grant programme has given some impetus to poverty reduction and income redistribution.

In spite of the government's achievement in the stabilization of the macro economy, and the recent strong growth performance, the government still faces huge social challenges that are not in line with South Africa's middle-income country status. Chronic unemployment and mass poverty are identified as the two major problems in the economy facing the incumbent government. In fact the levels of unemployment

and poverty are at crisis levels and need to be dealt with urgently and decisively by government to improve the welfare of those affected by them.

Unemployment in South Africa is so widespread and remarkably high. In September 2005 unemployment was 26.7% using the official unemployment definition that excludes discouraged workers (Labour Force Survey 2005). This is the definition that has been officially adopted and conforms to the International Labour Organisation's (ILO) standards. Using the broad definition of unemployment, the September 2005 Labour Force Survey puts unemployment at about 46%. The consensus is that the broad measure of unemployment is more appropriate for South Africa given that unemployment is so pervasive. Both measures will be discussed at length in the literature review and data analysis sections.

Unemployment being at levels that are at least five times the world average is a matter of grave concern and demands an explanation as pointed out by Kingdon and Knight in their 2001 research. They point out the fact that unemployment has drastic consequences not only on the economic welfare of society, but also through the fact that it reduces production, erodes human capital and leads to social exclusion and crime. Ultimately unemployment can lead to social instability.

Therefore government has to implement policies to reduce unemployment which will in turn reduce poverty to the benefit of a majority of the population. Oosthuizen (2006) correctly states that the performance of the South African labour market holds the key to the success of government strategies aimed at raising incomes and reducing inequality.

1.3 Problems to be Investigated

As will be shown in the literature review, unemployment in South Africa is structural in nature. This means that there is a mismatch between the skills that people have, or do not have, and those skills that are demanded by the labour market. In South Africa this mismatch stems from the fact that a majority of the population is unskilled while the labour market demands skilled labour. This lack of skills for the majority of the

population is a direct consequence of apartheid policies that denied Africans access to quality education and training. On the other hand, the high demand for skilled labour is a consequence of the growth trajectory that the economy has embarked on, that favours the use of more high skills relative to low skills.

Given that unemployment is such a huge concern in South Africa together with the fact that unemployment is the primary cause of poverty, this research is a good starting point for government if its goal of halving unemployment and poverty by 2014 is to be met. The main thrust of the paper is to determine the probabilities of training for the unemployed and employed in the South African labour market prior to the effects of the NSDS. The paper builds up to this point by first reviewing GEAR, ASGISA and the NSDS strategies. A brief review highlighting the performance of the labour market as well as the extent of the skills shortage is also provided. Lastly, the build up also provides an analysis of the unemployed and employed in terms of their racial characteristics and incidence of training.

1.4 Objectives of the research project

The primary objective of this research is to determine the probabilities of training for the unemployed and employed prior to the implementation of the NSDS. However in the endeavour to meet this objective, secondary objectives also had to be met. These secondary objectives are as follows:

- Determine the South African labour market's performance.
- Ascertain the extent of unemployment and its cause(s).
- Establish the racial characteristics of the unemployed and employed.
- Establish the extent of training of the unemployed and employed.
- Ascertain the performance of training in the labour market.

1.5 Sources of information

Information was mainly obtained from two sources.

- The first source of information was from various literature sources which formed the qualitative section of this research.

- The second source of information was from the Mesebetsi Labour Force Survey of 1999-2000. This data formed the basis for the descriptive data and regression analysis sections of this paper. A brief description of the data is provided prior to the descriptive data analysis section of the paper.

1.6 Scope and limitations of project

One major limitation of this research is the length of time that has elapsed between the time of writing of this paper and the time that the survey was conducted. The choice to use the Mesebetsi Labour Force Survey was primarily based on two reasons. The first and most important reason was the fact that the Mesebetsi survey has more information on training as compared to the more recent Labour Force Surveys. The second reason was due to the fact that very little research, if any, has been conducted using this particular survey. In fact there has generally not been much microeconomic research into training using household surveys. Therefore this paper will add great insight into the subject.

Since no significant reduction in unemployment has been made till date, it might be safe to assume that some findings from this research will still be relevant. However, the relevance of these findings should not only be judged in terms of their policy applicability. Relevance can also be viewed simply as knowledge creation. That is, these findings are adding to the existing, and continuously growing, knowledge of the labour market.

1.7 Plan of Development

The format of the paper is as follows.

Chapter Two analyses the South African policy environment. Firstly, the performance of the South African economy under GEAR is examined. This is followed by an examination of the ASGISA policy, as a successor to GEAR, and how it is expected to cater for GEAR shortfalls and impact the economy. The chapter finally highlights South Africa's skills shortage and analyses skills development strategies in the labour market aimed at reducing the skills shortage in the labour market. In particular the NSDS is studied. The NSDS is an ambitious innovation in active labour market policy-making designed to address the differentiated skill needs of the labour market. Given that the NSDS was only implemented in February 2001, the critical analysis of this strategy is limited to conceptual, structural and institutional issues that may limit the implementation of the strategy

Chapter Three presents the literature review. The literature review begins by presenting research highlighting the various causes of the declining labour absorption capacity of the labour market which have hindered the effective performance of the labour. This is then followed by an extensive examination of unemployment and the skills shortage in the labour market. Finally the chapter presents some training literature that essentially highlights the importance of training and the outcomes for training participants.

Chapter Four presents the descriptive data analysis. The data analysis begins by providing an examination of the racial characteristics of both the unemployed and employed. The data analysis scrutinises the training characteristics of the unemployed and employed. Given the objective of the paper this is where the main interest lies. The chapter concludes by making a comparison between some of the training characteristics of the unemployed and employed.

Chapter Five of this research presents the regression analysis. Four probit models are developed in this chapter. The first three probits determine the probabilities of training for the economically active, the unemployed and the employed. This training is sponsored by various sponsors including employers. The fourth probit model also determines the probability of training of the employed, however the training is funded by the employer only.

Finally, Chapter Six concludes accordingly and makes policy recommendations where appropriate.

2 SOUTH AFRICAN POLICY ENVIRONMENT

This chapter aims to provide some policy background to the reader. The chapter specifically examines the GEAR framework and identifies its shortfalls. These shortfalls are to be addressed through the ASGISA policy initiative recently launched by government as the successor to GEAR. Therefore the ASGISA initiative is also examined here. Lastly, given the pervasive skills shortage, the issue of skills development is analysed in the context of the NSDS.

This chapter undoubtedly is macroeconomic in nature while the research in its entirety is microeconomic. This has the potential to throw the reader off and therefore this note was deemed necessary. The current chapter is critical in terms of the build up to the research objective of determining the probabilities of training for the unemployed and employed. That is, the content of this chapter essentially provides the necessary policy background within which this research is based.

2.1 Growth, Employment and Redistribution (GEAR)

In 1994 the democratically elected government inherited a poorly performing economy from the apartheid regime. The economy was characterized by faltering growth and the twin problems of rising inflation and unemployment. The economy was such due to the politically motivated economic policies of the apartheid government as well as the political turmoil resulting from the oppression of the majority of the population by this form of government. Both these factors led to sanctions being imposed on the apartheid government by the international community. The ultimate result was low investor confidence that adversely affected the South African economy (McCord 2003:33-34).

With the economy being on a low growth and low employment growth trajectory, it was imperative for the African National Congress (ANC)-led government to reverse this orientation for the benefit of the majority of the population. To this end the government in 1996 launched the Growth, Employment and Redistribution (GEAR)

strategy. The purpose of this macroeconomic framework was to restructure the economy to stimulate economic growth which would in turn spur more employment prospects. In addition, higher growth levels were also meant to allow government to redistribute the proceeds of growth in the form of income grants and economic opportunities, to those previously disadvantaged by apartheid policies (GEAR Policy Document, 1996 & Biggs, 1997).

In an attempt to meet the challenges of stimulating growth and employment, the GEAR strategy was premised on attaining macroeconomic stabilization and liberalization in order to propel the economy onto the higher growth path of six percent as set out in the GEAR strategy. The basic notion of the GEAR strategy was to achieve macroeconomic stabilization (through fiscal and monetary restraints as policy levers) and thus attain policy credibility in the international community. This was viewed as the essential prerequisite for economic growth, employment and redistribution. Stabilization was to be complemented by trade and financial liberalization and privatization which was meant to rid the market of any distortions in order to promote market efficiency (GEAR Policy Document, 1996 & Biggs, 1997).

GEAR was meant to stimulate the economy by increasing both international and domestic investment. However, the contractionary fiscal and monetary policies undertaken by government to attain macroeconomic stabilization, have instead limited investment in the economy as interest rates did not fall to the required extent. Without sufficient levels of investment economic growth has not been forthcoming. With the absence of economic growth, employment and redistribution were not achieved to the required extent to redress the impact of apartheid (McCord, 2003).

Lewis (2001) in his analysis correctly describes government achievements till 2001 as 'stabilisation without growth.' The GEAR strategy has managed to achieve macroeconomic stabilization but for most of the post 1994 period this has not been sufficient to propel the economy onto a trajectory of higher growth. However, an improvement in growth has recently been noted. In the first decade of democracy, which coincides with GEAR implementation, growth averaged about 3%. Since 2004 growth has tended to exceed 4% per year and reached about 5% in 2005. This recent

increase in growth can be attributed to sound economic policies, positive domestic sentiment and a favourable international environment (ASGISA Media Briefing: Background Document, 2006:2)

The limited employment growth that has occurred under GEAR has been biased towards skilled workers. Therefore unemployment remains high at above 26%, using the strict unemployment definition, as a majority of the population remains unskilled.

In 2004 government realized the limitations of GEAR in delivering on its objectives and the challenge of skills development. A specific challenge that government has been facing is maintaining that delicate balance between inflation targeting while simultaneously trying to embark on an expansionary fiscal policy to boost economic growth. Given these challenges government has recently launched a successor to GEAR known as the Accelerated and Shared Growth Initiative for South Africa (ASGISA). ASGISA is designed to fulfill on GEAR's promise of attracting the necessary investment to catapult the economy onto a high growth, high employment, growth trajectory for the benefit of all South Africans, but especially for those unemployed and in the grip of poverty.

2.2 Accelerated and Shared Growth Initiative for South Africa (ASGISA)

Despite the gains made by the current government in terms of the benefits of macroeconomic stability, unemployment and poverty remain significantly high due to growth being elusive. In 2004 government's core objective was to halve poverty and unemployment by 2014. Through extensive consultations with ministers of various government departments, organized labour, business, religious leaders, women and the youth, the task team formulated the ASGISA strategy to meet its objectives. In order to meet its objectives research has shown that an economic growth rate of about five percent on average is required between 2004 and 2014. Taking into account the capabilities and deficiencies of the economy and the international environment, the task team established a two phase target. Between 2005 and 2009, an average annual

growth rate of 4.5% is required. An average annual growth of six percent is required in the second phase between 2010 and 2014 (ASGISA Media Briefing Background Document, 2006:2).

To meet its growth targets of sustainable growth at the targeted rates, the task team through a diagnostic analysis approach, identified the various binding constraints to government objectives as well as the means to addressing them. The constraints have intentionally been kept short and focused enough in order to allow for a coherent and consistent set of policy responses (ASGISA Media Briefing Background Document, 2006:3)

The binding constraints were identified as follows:

- The volatility and level of the currency.
- The cost, efficiency and capacity of the national logistics system
- Shortage of suitably skilled labour amplified by the cost effects on labour of apartheid spatial patterns.
- Barriers to entry, limits to competition and limited new investment opportunities.
- Regulatory environment and the burden on small and medium businesses.
- Deficiencies in state organisation, capacity and leadership.

The initiatives of countering these constraints were organized in six categories:

- Macroeconomic issues.
- Infrastructure programmes.
- Sector investment strategies (or industrial strategies).
- Skills and education initiatives.
- Second economy interventions.
- Public administration issues.

The idea behind this diagnostic approach to determining growth constraints is a radical shift away from the conventional 'Washington Consensus' which advocates an 'all-size-fits-all' approach of neo-liberal policies that are meant to rectify any nation's economic woes. The South African government realizes that South Africa faces unique challenges that need to be addressed for the country to build a successful economy. At the same time the government does not disregard the importance of pragmatic fiscal and monetary policies and a competent government administration which are common factors of all successful economies (ASGISA Media Briefing Background Document, 2006:3).

2.3 Skills shortage, unemployment and the National Skills Development Strategy (NSDS)

2.3.1 The skills crisis and unemployment in post-apartheid South Africa

Unemployment being at about 26% undoubtedly makes it one of the most critical concerns of the incumbent government. As mentioned in the previous chapter, unemployment is a direct consequence of the apartheid segregation policies that limited the skill development of the majority of the population. Without the necessary skills required by the labour market, a significant proportion of the population, through joblessness, is subjected to abject poverty which has contributed to the country's severe inequality.

Due to the apartheid legacy, unemployment is biased predominantly against unskilled Africans. Furthermore, unemployment falls disproportionately on females and the youth (Mlatsheni & Rospabe, 2002 and Casale, 2004). In South Africa, unlike in developing countries, subsistence agriculture and the informal sector are a minor part of the labour market and thus do not absorb excess labour (Fallon & Lucas 1998:5-6).

The combination of the marginalization of the majority of the population by the apartheid regime, and the structural and technological changes that have taken place in the last three decades, created an economy of low employment demand. Production processes in the economy have become more capital intensive and the

necessary skills absent. Thus unemployment has persisted at exceptionally high levels (Altman & Mayer, 2003, McCord & Bhorat, 2003). A brief review of the both the performance of the labour market and the extent of the skills shortage will be provided in the literature review section.

In order to alleviate poverty, unemployment needs to be addressed. As unemployment has been identified as structural in nature, that is people lack the necessary skills and qualifications to match the available jobs in the economy, there is need for supply-side interventions to improve employment prospects of those adversely affected by unemployment. A skills development strategy needs to be employed that can equip workers with the appropriate skills required by the labour market. Education standards, in terms of quantity and quality especially in mathematics and science, also need to be drastically improved especially for those previously disadvantaged by apartheid. A multi-pronged human resource development approach has been suggested by Kraak (2005). Such an approach entails a joint high-skill and intermediate-skill strategy on the supply side which is underpinned by a demand-driven strategy (Kraak, 2005: 57). The process of human resource development in South Africa is discussed below.

2.3.2 Skill development strategies in Apartheid South Africa

From above it is evident that South Africa faces a severe skills shortage that can only be remedied through an appropriate skills development initiative. Without such an initiative a majority of the population will remain unemployed and in abject poverty as is currently the case. Sustained economic growth and job creation can only be achieved through the successful training of the population. A skillful population is more resourceful and productive as witnessed in highly developed economies.

This section aims to provide the reader with a brief background of training strategies prior to the inception of democracy. The Apartheid government realized the importance of a skilled labour force in the performance of the economy. However the training strategies were based on racial segregation that left the majority of the population unskilled and thus contributed to the poor performance of the economy.

The notion of a national training strategy is not unique to the democratic South Africa. The apartheid government during its reign developed a National Training Strategy (NTS). However, the industrial training regime of the apartheid era was characterized by 'low skill' features such as, a weak institutional environment; racially-exclusionary labour market and education and training (ET) institutions among others. Various reforms, mainly through two Commissions of Inquiry, were proposed in an attempt to move away from this 'low skill' base. A free market training framework was adopted which entailed, among other things, employer voluntarism and a new institutional environment set around Industry Training Boards (ITBs) (Kraak, 2004 :46).

The proposals put forward, despite some being promising, were destined to fail for a number of reasons. First and foremost the political climate in the late 1980s was not conducive for such reform; secondly, the proposals were too voluntarist; thirdly, the proposed institutions were too weak; fourth, the qualification structures too fragmented; and finally, there was 'low trust' between key social partners in the employment environment (Kraak, 2004:47). Given the political change in 1990, the reformist agenda of the late apartheid era was replaced by policy formulation processes of the anti-apartheid movement and later in 1994 was consolidated with the transfer of power to the democratically elected ANC led government (Kraak, 2004:47). This was the basis of the NSDS.

2.3.3 The National Skills Development Strategy (NSDS)

The ANC-led government has realized the need to comprehensively address this ubiquitous skills shortage and accordingly the Department of Labour (DoL) launched the National Skills Development Strategy (NSDS) in February 2001. The NSDS is an ambitious innovation in active labour market policy-making'

The purpose of this section and the next is as follows: The current section assesses the existing provisions of the NSDS in South Africa while the following section suggests possible modifications to the existing NSDS policy where deemed necessary. However, this section does not discuss the problems that the NSDS has encountered given that the focus of this study is prior to the implementation of the NSDS.

The NSDS is a training policy that seeks to overcome the 'low skill' nature of the previous government's training regime. The DoL through its Green Paper of 1997 argued it necessary to create an enabling institutional and regulatory environment to determine the direction of training initiatives in South Africa. Thus the *Skills Development Act* of 1998 was passed. Two key components of this legislation were the establishment of 25 Sector Education and Training Authorities (SETAs) and the National Skills Authority (NSA). The main function of the latter was the development of the NSDS (Kraak, 2004:117-118).

Under the more conducive environment provided by the legislation, the main vehicle of training delivery is provided through 'learnerships.' The overall purpose of learnerships is to provide relevant training for a significant proportion of the population in the most structured and systematic manner, which will eventually lead to a nationally recognized qualification for the training participant (Kraak, 2004: 120-121).

A vital element of the new training initiative was the introduction of a funding system. The previous system failed to stimulate the required amount of training which called for state intervention. The new system is based on a compulsory national levy-grant system that is currently funded on one percent of payroll. Tax breaks are also offered for companies offering learnerships. Such a system is seen by government as the most efficient mechanism of training delivery, but more importantly, it provides government with the most leverage on training (Kraak, 2004: 124-126).

The initial focus of the NSDS has been supply side orientated. The implementation phase of the strategy was only effected in early 2001 and there is little evidence on the performance of the strategy on the demand side. Such evidence will emerge with the future assessment of dimensions such as the increased volume of skills training taking place, training quality, gains in average productivity and earnings of skilled workers, returns to employers from investments in skills acquisition, the training performance of small, medium and micro enterprises (SMMEs), and the income generation goals of the strategy for all parties engaged in skills training. At this stage, the paper

attempts to raise conceptual, structural and institutional issues that may limit the successful implementation of the NSDS.

2.3.4 Some rethinking of the National Skills Development Strategy

The DoL identified six success indicators by which to gauge the performance of the NSDS. These were to be fulfilled by March 2005 and among others include, a minimum of 80,000 people to have entered learnerships; a minimum of 15% of workers have to have embarked on a structured learning programme; and at least 20% of new and existing registered small businesses have to be supported in skills development initiatives. These objectives and the extent of success as of March 2004 are provided in Appendix 1. The data used derives from information collected by the DoL and published annually in the National Skills Development Strategy Implementation Reports (DoL, State of Skills 2005). It is important to note the likely partiality of this data. That is, the DoL is likely to overstate the success of the NSDS in order to give the impression that the department is efficient and that significant progress is being made in meeting their targets.

Although significant headway has been achieved in introducing a new and improved training regime in South Africa, there is a need for greater state intervention if the NSDS is to remove impediments to training and close the training gap and meet its March 2005 objectives. Thus the progress made so far by the NSDS will be insufficient to result in skills development, employment creation and economic growth to the required level (Badroodien, 2004: 142-143). Evidence from the State of Skills report would also agree with Badroodien (2004). That is, overall results are positive in the main, but some areas need improvement if progress is to be made in the second phase of the NSDS (DoL, State of Skills 2005:43)

To achieve its goals, the NSDS needs to encourage employer participation in training by improving the networking between all stakeholders. This is not an easy task and will depend on the successful alignment of incentives, which is no easy feat. Also, employers need to be convinced that training is an asset that can increase productivity and not an additional cost. This will see an increase in employer investment in

training to the benefit of all employees, especially lower level staff (Badroodien, 2004:156-157).

Secondly, there is a need for firms to move their focus away from in-house training that is generally more short term and unstructured and therefore does not equip the employees' with adequate skill development. Furthermore, training in firms tends to reinforce the segmented labour market of the apartheid era which is precisely what the NSDS is meant to correct (Badroodien, 2004:156-157).

The international literature on training has promoted high skills formation as the solution to the loss of jobs from globalization. However such a focus is inappropriate for two reasons. First, some countries (the Asian Tigers) have managed to achieve phenomenal growth in a short period of time by initially promoting low skill development and thus gaining a competitive advantage in the global market before moving into high skills development. Secondly, such a high skill emphasis is inappropriate for most developing countries that do not have the required skilled workforce base on which to build such a strategy, let alone the industries that require high skills (Ashton, 2005).

South Africa finds itself in a unique position in terms of skills development. South Africa has differentiated skill requirements that need to be catered for simultaneously. This differentiated skills need is both a legacy of apartheid that racially segregated education and labour market access for a majority of the population, and the advent of globalization that has further reinforced this differentiated skills need (Kraak, 2004 & Ashton 2005).

The relevant question then is whether the NSDS can deliver on the differentiated skill requirements of the economy. In its current form the NSDS can meet the differentiated skill needs of the economy. However there are several challenges that the NSDS faces. These challenges broadly are, the adverse elements of globalization; capital-intensive production and import substitution in the economy; and an inherent weakness of the new institutional regime. For the NSDS to fulfill the economy's skill requirements, it is necessary for the government to show the necessary political will.

Government needs to introduce policies that work towards boosting growth, foreign direct investment (FDI), job creation and skill development (Kraak, 2004).

A critical area for policy focus is the informal sector or what has been termed the 'Second Economy.' A significant proportion of the population is involved in informal activities and if there is to be any progress in stimulating growth and reducing unemployment and poverty, the informal sector needs to be natured accordingly. This sector presently does not absorb sufficient levels of workers and thus there is need to bolster its labour-absorbing ability otherwise a majority of the population will remain marginalized (Kraak, 2004).

2.4 Conclusion

The following conclusions can be drawn from the above.

It is apparent that the apartheid regime placed the economy on a low growth and low employment growth path. The same regime also intentionally marginalized a majority of the population from benefiting from the economy. The result was faltering economic growth. Thus the new democratic dispensation set out redress the impact of the apartheid era.

The ANC-led government initiated the GEAR and ASGISA strategies in 1996 and 2006, respectively. The latter was in response to the limitations of its predecessor. Since the democratic government had inherited a poorly performing economy these initiatives were meant to catapult the economy onto a higher growth trajectory the fruits of which would benefit all South Africans.

The government has so far managed to achieve macroeconomic stability but growth and employment have by and large been elusive. This has been the case as government has engaged contractionary fiscal and monetary policies that have not brought about the necessary investment spending to stimulate the economy. Furthermore, unemployment has persisted due to lack of a skilled pool of workers. In this regard government has to carefully manage the delicate balance between

maintaining macroeconomic stability, specifically inflation targeting, while simultaneously employing expansionary policies to boost economic growth which will improve the employment performance of the economy.

Reducing unemployment and poverty alleviation should remain government priorities as their economic, social and political repercussions are unthinkable. Unemployment, due to a shortage of skilled labour, is the cause of poverty which is in turn responsible for the severe inequality in South Africa. Unemployment can be reduced through an appropriate skills development strategy that gives workers those skills required by the labour market. Such a policy is the NSDS. In addition, the quantity and quality of education needs to be improved especially for those previously disadvantaged under the previous government. Such an approach will see a significant proportion of the population developing the necessary skills and benefiting from the fruits of the economy. All of this however needs the necessary political will.

In closing, it is important to realize that no matter how well formulated any initiative is, but without the necessary 'buy-in' from all stakeholders, the initiative is bound to fail. The government, with the ASGISA strategy, has realized this need and has consulted with a wide range of stakeholders in the strategy formulation process and intends to do the same during the implementation stage. In fact I would further recommend ongoing consultations throughout the lifespan of ASGISA. It is only through ongoing consultations that ASGISA will be seen by all as a truly national shared growth initiative rather than just a repackaging of GEAR or simply another government initiative that does not take into account other stakeholders positions.

After the presentation of the policy environment above, the following chapter presents the literature review. The review initially presents South African literature that identifies the causes of the poor employment performance of the labour market. Thereafter literature on unemployment and the extent of the skills shortage in the South African labour market is presented. Lastly, the chapter reviews both local and international training literature that essentially highlights the importance of training in terms of increasing the reemployment of the unemployed or increasing wages of training participants.

3 LITERATURE REVIEW

3.1 Introduction

As has been well established above, unemployment in South Africa is so widespread and remarkably high. Using the 2005 Labour Force Survey, unemployment was 26.7% under the official unemployment definition that excludes discouraged workers. This is the definition that has been officially adopted and conforms to the ILO standards. Using the same survey, the broad measure of unemployment, which includes discouraged workers, is about 46%.

As was mentioned in the first chapter, unemployment being at levels that are at least five times the world average is a matter of grave concern and demands an explanation as pointed out by Kingdon and Knight (2001). Kingdon and Knight (2001), through their research, further point out the fact that unemployment has drastic consequences not only on the economic welfare of society but also through the fact that it reduces production, erodes human capital that leads to social exclusion and crime. Ultimately unemployment can lead to social instability.

Government therefore has to formulate appropriate strategies to reduce unemployment in the labour market. A reduction in unemployment will allow higher economic growth. Thus the performance of the South African labour market is key to the success of government strategies aimed at raising incomes and reducing inequality. Currently South Africa has high levels of poverty and inequality not in line with its 'middle-income country' status. South Africa has about 32% of households that live below the poverty line and has a gini-coefficient, which is a measure of differences in income between individuals, of 0.61, which is the second highest level of inequality in the world after Brazil (Oosthuizen, 2006).

Policy makers have tasked economic growth with reducing both poverty and inequality in society which is in fact a misconception. Evidence has gone to show that the relationship between economic growth and poverty and inequality

respectively are different. Increased economic growth leads to a significant reduction in poverty levels in both the short and long run. That is, poverty is very sensitive to small changes in economic growth. On the other hand, the relationship between economic growth and inequality is a weak one. That is, the impact of growth reduces inequality by only small quantities and over long periods of time (Bhorat, 1998).

Given the above, the results of economic growth can really only be evaluated in terms of its effect on poverty. Therefore South Africa for a long time to come will continue to exhibit the stark inequality levels that currently exist. The persistence of income inequality will give the impression that the government is not redressing the impact of the apartheid regime and therefore social ills such as strikes, crime and the now common and increasingly violent demonstrations, will continue in the future. However, economic growth, through the improved performance of the labour market, will bring about a significant reduction in poverty which will work to abate social ills as people will have jobs that will ensure them incomes and improved welfare. Moreover, other state transfers such as income grants, child income grants and pensions will also work towards further uplifting the lives of the masses.

This chapter initially provides reasons behind the declining labour absorption capacity of the economy which has led to the underperformance of the labour market. Following this, extensive literature on unemployment in South Africa is presented. The chapter then presents research that examines the extent of the skills shortage that is regarded as the major cause of unemployment and ultimately poverty. Finally, the chapter presents training literature that highlights the importance of establishing an enabling environment for the provision of training to reduce unemployment and enhance workers productivity, all with the aim of achieving a higher economic growth.

Lastly, before proceeding any further with this paper it is important to point out the unique nature of the labour market. This uniqueness stems from the fact that the labour market deals with people as opposed to goods and services as is the case with other markets. This makes the labour market a diverse and complex market.

Nonetheless the principles of supply and demand still apply in the same manner (Barker, 2003:2-3).

3.2 The South African labour market

3.2.1 Declining labour absorption capacity of the South African economy

A 1996 ILO Review established that the effective performance of the South African labour market is hindered. This review identified poverty, income inequality, unemployment and the combination of high labour costs and low productivity as the culprits. The poor performance of the labour market is manifested in the poor employment environment that currently prevails. Ultimately the poor performance of the labour market in terms of employment has capped the level of economic growth (Barker, 2003).

Various reasons have been established for the current poor employment performance of the labour market. Among them are the increased labour intensity in production, trade liberalization, high wages and other labour costs, increased productivity and HIV?AIDS (Barker, 2003 & Nattrass, 1998 & Bhorat, 2000, Bhorat, 2003, Oosthuizen, 2003, Bhorat & Hodge, 1999, Edwards & Behar, 2005).

This section analyses the various reasons for the declining labour absorption capacity of the economy. Presented below are the findings of various studies on employment trends and the subsequent performance of the labour market. Essentially employment trends have been biased towards skilled workers over unskilled workers. Furthermore the employment capacity of the labour market has been poor given the additional burden of a dramatic increase in the economically active population. Also, the adoption of new technologies and increased capital intensity in production by firms in the bid to remain globally competitive has negatively impacted the labour market. These developments in the labour market have considerably restrained economic growth in South Africa to the detriment of a majority of the population (Barker, 2003).

3.2.1.1 Increased capital intensity in production

Nattrass (1998) holds the economy's weak long-term growth and the steady increase in capital intensity in the methods of production responsible for the employment crisis. Weak growth is due to poor apartheid economic policies that were based on racial segregation as opposed to economic soundness and pragmatism. These included poor trade and industrialization policies; restricted education and training of Blacks; inefficient state intervention in the economy and the obstacles placed in the path of Black entrepreneurs (Nattrass, 1998:1).

The structural shift in favour of capital intensity has also had a negative impact on employment creation capacity of the labour market. Fewer jobs have been created in the economy for every unit of capital invested. Bowles (1995) in Nattrass (1998:1) finds that almost two million jobs have been lost in the last two decades as a result of investment being increasingly directed to capital-intensive sectors and technologies. This is to such an extent that South African manufacturing is far more capital-intensive than other middle-income countries such as Brazil, Mexico, Korea and Malaysia (Kaplinsky (1995) in Nattrass (1998:1).

Such a trend goes against South Africa exploiting its comparative advantage which lies in cheap and unskilled labour-intensive production. Tsikata in Nattrass (1998:10) finds South Africa's export structure paradoxical in that it has a low and declining share of exports that use unskilled labour and a relatively high share that use skilled labour. She goes on to say that even Korea, which is far from being labour abundant, has a higher share of unskilled labour-intensive exports than South Africa. This is attributed to South Africa's comparatively high wage level relative to productivity which puts the country at a comparative disadvantage in low-wage, unskilled-labour-intensive activities.

There has been debate regarding the reasons behind the structural shift towards capital-intensive production as opposed to labour-intensive production. Arguments put forward include distorted wages, capital subsidies and negative interest rates, and of course globalization (Nattrass, 1998: 2).

Nattrass concludes with the following. The fact that there is no social security for the unemployed further marginalizes them from the fruits of the economy and puts a huge burden on households. Therefore South Africa needs to make clear choices. If the existing labour market and trade policies are to remain, then the tax regime must change to accommodate those that are or become unemployed. If the current welfare system, or lack thereof, is to remain in place, then either trade liberalization should be slowed down, or wage setting made more flexible, or both (Nattrass 1998:18).

3.2.1.2 Skill-biased labour demand shifts

Bhorat (2003) identifies the defining feature of employment trends in South Africa as being the mismatch between demand and supply since the 1970s. This mismatch has been marked by the skills-biased labour demand shifts. In his study Bhorat aims to establish firstly whether these trends have continued in terms of scale and direction and secondly, to identify features that are peculiar to the specified time period (1995-1999) (Bhorat, 2003:1).

The popular notion of 'jobless growth' was ruled out and employment creation has in fact occurred. However the extent of this job creation has been inadequate given the growth of the economically active population. In this regard a better notion to describe the labour market performance would be 'weak employment growth' (Bhorat, 2003:3-5).

With the skills-biased labour demand shifts in the economy the perception is that under these conditions skilled labour demand increases at the expense of semi-skilled and unskilled labour. However a growing industry that is skills-intensive will not only increase the employment of skilled labour but also the employment of semi-skilled and unskilled labour. Thus growth is good for all occupations, but continues to be better for the skilled (Bhorat 2003:9).

Given the skills bias in the economy the government's aim to achieve six percent growth will essentially benefit skilled labour however it will not necessarily result in

the complete loss of semi-skilled and unskilled labour in the economy. Thus economic growth will benefit the entire skill spectrum of the labour force but to varying degrees. The government can improve the benefit levels of the semi-skilled and unskilled labour through appropriate skill training initiatives.

Nonetheless the post-apartheid period of 1995 to 1999 shows a domestic economy with an insufficient job creation capability particularly for unskilled workers. This is as a result of a large increase in the population of the economically active relative to the number of jobs created. The skills-biased employment trajectory has been brought about by the adoption of new technologies. Other determinants of this trajectory are due to a combination of greater out-sourcing and higher capital acquisition. Therefore the South African labour market environment is one of a growing demand for skilled and in some cases semi-skilled labour but a decline in employment of unskilled labour. The restructuring of the public sector which is the biggest employer in the economy has been one single exogenous factor that has marked this period of change (Bhorat, 2003:17)

Oosthuizen (2003) concurs with Bhorat regarding the mismatch between labour supply and labour demand as being one of the factors that contribute to the poor employment performance of the labour market. Oosthuizen looks at a Human Sciences Research Council (HSRC) study that forecasts formal sector non-agricultural labour demand between 1998 and 2003. It is through such efforts to predict future labour demand that policies can be developed in order to address the omnipresent skills mismatch. One shortcoming of the HSRC study noted by Oosthuizen is the omission of the informal sector participants which makes the estimation of future labour demand only a partial view of reality as the informal sector is of particular importance in South Africa due to the lack of a comprehensive social security system and extremely high unemployment rate.

South Africa's reintegration into the global economy has meant that firms face fierce competition. Firms have responded to this increased level of competition by altering either the quantity of labour, or the quality of labour demand, and in some cases both. This is with the aim to remain competitive. This change in labour demand has

occurred concurrently with government initiatives, mostly in education, aimed at increasing employment and economic opportunities for the previously disadvantaged. However given the length of study and the problem of access to quality education, skills shortages exist in some skill categories. However skill surpluses occur in other categories. The mismatch in the supply of and demand for labour needs to be minimized in order for the South African economy to realize its full growth potential for the benefit of the entire population (Oosthuizen, 2003:1).

In general Oosthuizen (2003) forecasts the continuation of previous labour market trends as those found by Bhorat (2003). That is, the forecast predicts the increased labour demand for higher-skilled occupations and in the non-government tertiary sector. Between 1998 and 2003 employment in the non-agricultural sector grew relatively rapidly. All skill levels have exhibited a rise in employment levels with growth for highly skilled workers being the most rapid. Trade, Finance and Construction sectors have been the drivers of employment growth and only one sector has shown a net job loss. Again the notion of 'jobless growth' is not the reality in the South African labour market (Oosthuizen, 2003:4).

The main reasons behind the projected jobs cuts are numerous and include flatter management structures, capital intensification, introduction of new technology, rising productivity and the increasing popularity of outsourcing. The most important factors of slower employment growth and job cuts are the computerization of administrative tasks and the implementation of labour saving technologies. It is recommended that policy makers are aware of these developments threatening certain occupations and to ensure that re-skilling occurs before individuals are rendered redundant (Oosthuizen, 2003:15).

3.2.1.3 Trade liberalization, global integration and the adoption of new technology

Bhorat (2000) reiterates the importance of the labour market in terms of the long term growth prospects of the South African economy. Changes in the industrial structure and trade flow movements were key elements to South Africa's economic performance in the last 25 years and have impacted the labour market. The paper aims to assess the impact of South Africa's trade regime and its sectoral development on the demand for labour (Bhorat, 2000: 437-438).

From formal employment trends since 1970, Bhorat (2000) finds that the primary sectors have lost a majority of the jobs while there has been employment growth in the service sectors. On the other hand occupational trends show a decrease in the demand for unskilled labour and a significant increase in the demand for skilled labour. Thus the occupational trends corroborate the sectoral trends. African workers have been at a loss from these trends while non-Africans have benefited

Bhorat (2000) further finds that technological change within individual sectors as the main cause of employment trends that favour skilled workers. Increased capital intensity and greater computerization have led to the higher demand for highly skilled workers. In terms of unskilled workers, the importance of technology remains but diminishes. Rather the altering shares in national output of different sectors had a more significant role in understanding relative employment shifts for unskilled labour. The relationship between international trade and employment has been positive. That is, the employment of all workers by occupation, race and education level grew as a result of trade in the economy between 1970 and 1995. However, generally gains from trade were greater for skilled individuals with high educational qualifications and these were mostly non-African (Bhorat, 2000).

Skill-biased technological change is in fact the prime cause of widening wage differential between skilled and unskilled workers in virtually all countries for which the relevant data exists. There is a large international literature that brings to the fore

the complexity of establishing empirical tests for this hypothesis. However there has been limited research of this nature in South Africa.

In an attempt to further explore the impact of skill-biased technological change on relative wages in South Africa, Abdi and Edwards (2002)surprisingly find that the relative wage of less skilled labour has risen from the 1970s right through to the 1990s. This result can be attributed to non-market forces such as the decline in racial wage discrimination and the emergence of unions.

With continued trade liberalization the above labour demand trends are set to continue. In this regard future job generating capacity of the economy will be skewed towards those with high levels of human capital. Bhorat, as Nattrass (1998), thus recommends more comprehensive state policies to deal with job losses experienced in the economy (Bhorat 2000:460). Probably this could take the form of more income transfers for the unemployed. However the fiscal implications of such policies need to be carefully considered.

Bhorat and Hodge (1999) attempt to fill the research gap by using a simple decomposition technique to measure the extent to which changes in production methods used within each sector of the economy and changes in the structure of the economy itself, help explain the shifts in the structure of labour demand for the South African economy from 1970 to 1995. This is an area that had received little research as prior research focused more on the supply of and demand for labour.

Long run economic growth is driven by either the increase in the stock of factor inputs, that is investing to increase capital or population growth to increase labour, or by improving the productivity of these factor inputs through technology change. These forces will always influence the level of labour demand, but will only influence the structure of demand if they favour one set of skills over another. This is possible in two ways. The first way is through the process of capital deepening or technological change which results in a change in production methods that changes the skill mix of production (Bhorat & Hodge, 1999:349).

The second way of causing changes in the structure of labour demand is from changes in the output structure of the economy. Different sectors of an economy use different proportions of each skill group in production and therefore changes in the structure of output will feed through to a change in the composition of labour demand. Changes in the output structure reflect differences in sectoral growth rates which in turn reflect differences in the amount of profitable opportunities for investment and rates of productivity and output growth (Bhorat & Hodge, 1999:350).

The study finds that within-in sector, as opposed to between-sector employment changes, are behind the labour demand patterns observed. Put simply, the driving force of labour demand patterns in South Africa over the past 25 years has been the adoption of new technology and capital accumulation that has changed production methods that favour one set of skills over another (Bhorat & Hodge, 1999:367-368). The authors find that the demand for labour in the medium term can be defined clearly and specifically. There is therefore a need to meet the demand to break the skills-race overlap, and the male concentration in the labour market. This should be combined with ways to deal with the people that are rendered jobless through the adjustment process in the short term. This will need creative policies, beyond the provision of general skills. The authors further recommend appropriate policies to be put in place to absorb the large pool of the unemployed into productive employment (Bhorat & Hodge, 1999:379-380). This can be achieved through improving the human capital of such individuals through education and training. However as mentioned above the problem is the length of time involved to see results as well the problem of access to quality education and training.

Finally, Edwards and Behar (2005) assess the impact of the increased integration of the South African economy into the global economy on labour demand. This is due to the fact that increased integration has coincided with job-shedding, the rising skill and capital-intensity of production. However results from prior research of this type has been inconclusive (Edwards & Behar, 2005:2)

The authors find some evidence that trade liberalization and technological change has affected the skill structure of employment. Firms that are export focused, or import

large shares of raw materials and those that have low tariff levels, tend to be relatively skill intensive. Training, investment in computers and age are all indicators of technological change and also positively related to skill intensity of production. Furthermore, through their mandated wage equations, the authors find that tariff liberalization has raised the return to capital relative to labour, but that the negative impact on labour is concentrated on semi-skilled workers. Unskilled workers are mandated a real increase in factor returns (Edwards & Behar, 2005:16)

3.2.2 Unemployment in South Africa

Unemployment is the main cause of deep poverty and inequality in South Africa and from directly above, it can be seen that little in the form of job creation has been done to reduce the level of unemployment. Accordingly unemployment has become government's highest policy priority (Barker, 2003:200). This high priority is concurred by Kingdon and Knight (2001) after they determine the 'nature of the beast' (unemployment) in South Africa.

Kingdon and Knight state that the definition used to measure the unemployment in a country affects the perceptions in that country. The appropriate measure of unemployment depends on whether unemployed people who say they want work but are not actively searching should be regarded as part of the labour force. In the case of South Africa there is a huge gap between the broad and narrow (strict/official) definitions of unemployment (Kingdon & Knight, 2001).

South Africa uses the strict definition of unemployment. This definition states that a person should not be in paid employment or self-employment, should want to work and be available for employment, and should have taken active steps to find employment. However this definition is not very realistic for a developing country and more so for a country such as South Africa which has chronic levels of unemployment. The component that the jobseeker should have actively looked for work is highly unrealistic in South Africa given widespread unemployment stemming from poor employment growth. This therefore leads to jobseekers being discouraged

due to unfavourable labour market conditions. This then leads us to the broad definition of unemployment (Barker, 2003:208-209).

There is evidence in support of the broad definition of unemployment in South Africa (Kingdon & Knight, 2001). The broad definition caters for the shortcoming of the strict definition by having the potential jobseeker show the desire to work and to take up employment within a specified amount of time. Thus the broad unemployment definition includes discouraged workers and increases the number of unemployed. This increase in South Africa is considerable given that discouraged workers mostly reside in rural areas, where they have a financial support base, but where they find it difficult to engage in active job search and thus find employment. These people are not counted as unemployed under the strict definition (Barker, 2003:208-209).

A shortfall of both definitions of unemployment is that underemployment is not considered. That is a person that works less than normal working hours. This can take the form of visible or invisible underemployment. The former involves the worker wanting to work more hours and the latter is when labour is underutilized and it thus of low productivity (Barker, 2003:208-209). Underemployment in South Africa must be extensive as people are involved in informal and casual employment activities.

Unemployment in South Africa is involuntary in nature due to the fact that unemployed people are worse off than those formally employed and the informally employed. In fact unemployed people are worse off than informally employed people using any indicator of wellbeing. People may not enter the informal sector due to the fact that wages are too low. However this act of choice, as much as it may seem voluntary, is effectively involuntary (Kingdon & Knight, 2001:5, 12).

The informal sector in South Africa is small for developing country standards and only absorbs a small proportion (19%) of the workforce (Kingdon & Knight, 2001). The small informal sector stems from apartheid policies that restricted the expansion of this sector. The limited presence of the informal sector and opportunities therein combined with the barriers to entry into this sector adds to South Africa's

unemployment woes. Furthermore job search is restricted by poverty which increases the duration of unemployment. Therefore unemployment can be regarded as involuntary (Kingdon & Knight, 2001:5-9).

What makes unemployment seem voluntary is the reporting of reservation wages. A reservation wage is the lowest wage that a potential worker would be willing to work for. Kingdon and Knight (2001) find that a huge number of the unemployed reported a higher reservation wage than their potential wage. However this cannot be believed to be a reliable criterion of judging the willingness to work. This is for a number of reasons. Firstly, people who reside in rural areas are ignorant of the prevailing labour market conditions. Secondly, those that have never worked before and the less educated are less aware of their labour market worth and thus report high reservation wages. However this is not as convincing as they could also then report significantly low reservation wages given their labour market ignorance (Kingdon & Knight, 2001).

Another reason for the unemployed to report higher than expected wages is due to adherence of social norms that prevent undercutting. Also responsible for the reporting of high reservation wages is the fact that the unemployed assume a bargaining position. That is, they start off with a higher wage but only expect, and are willing, to get a lower wage. Lastly, people report higher reservation wages for work in a geographical area other than the one in which they live (Kingdon & Knight 2001:10-12).

If on the other hand unemployment was of a voluntary kind, then unemployment would have to be de-prioritised from the national agenda. That is, money would be better spent in other critical areas such as infrastructure development, health and service delivery among other things.

Priority should thus be given to reducing unemployment given the involuntary nature of unemployment and also due to the importance of employment income in total household income in South Africa. The varying incidence of unemployment across different groups has important implications for the distribution of income and the

incidence of poverty (Bhorat et al., 2001:1). The consequences of neglecting unemployment are catastrophic and some of the reasons for tackling unemployment are given by Barker (2003:200-201) and are presented below.

- Individuals losing their dignity and through frustration resorting to crime and other social ills such alcohol and drug abuse etc
- Employment of any form is the source of economic growth and higher standards of living
- Employment growth will reduce inequality in society through economic growth due to an increase in labour productivity and real wages. However as mentioned before, the relationship between economic growth and inequality is weak and is a long run one (Bhorat 1998).
- The unemployment problem could jeopardize South Africa's young democracy due to crime and social unrest due to the high levels of poverty and inequality
- High unemployment will render the market economy not only unsuccessful in dealing with the problem but also the cause of it. This will see calls being made for a more planned and socialist economy of which the global results have been disastrous.

Unemployment in South Africa can be classified as being structural in nature. That is, there is a mismatch between the skills required by employers and those that job seekers have, or more appropriately, don't have, in the case of South Africa. Structural unemployment could also refer to the geographical mismatch between locations of job vacancies and those of the jobseekers (Barker, 2003:203). This is in fact the case in South Africa as most African job seekers reside in rural areas while a majority of the jobs are in urban areas. This aspect of the labour market is examined in the data analysis chapter.

However, HHunemployment data can exaggerate the unemployment problem. Unemployment data includes people who want to work but choose not to because the vacancies that are available do not interest them. This data can also include people that are dishonest about their willingness to work and the extent to which they have

gone to secure employment. Furthermore, people can also have unrealistic expectations of the labour market and remain unemployed until a job they believe they are qualified for comes up. This then does not give a true reflection of unemployment in a particular society (Barker, 2003:203).

Unemployment being exaggerated for the above reasons is likely to be small in South Africa. This is could be due to the fact that unemployment is so widespread that job seekers cannot afford to be 'voluntarily' unemployed, be it because of unsuitable jobs or dishonesty or whatever the reason may be. Also, the fact that Kingdon and Knight (2001) establish that unemployment in South Africa is involuntary further supports the position that unemployment is not exaggerated.

However, Schlemmer and Levitz (1998:3) in Barker (2003) surprisingly argue that unemployment may be over estimated in South Africa. They provide three reasons for their position. The first is that 5% of the unemployed were in fact not fit for work and not economically active. The second reason is that it is likely that the unemployed are selected for interviewing over others, for instance the employed, in the economy. Last but not least, is the fact that at least 20% of those that claimed to be unemployed were in fact somehow involved with informal or casual employment activities (Barker, 2003:210)

Fallon and Lucas (1998) find that unemployment is biased against Africans and women than other race groups and males respectively. The most at risk of unemployment are African women with no educational background and living in rural areas (Barker, 2003:205).

From the above it is established that unemployment is involuntary and chronic, the relevant question then becomes: With the chronic levels of unemployment in South Africa, how do the unemployed support themselves? This is in fact a very important question given the fact that South Africa has no comprehensive social security system.

Erasmus (1999) in Barker (2003:210) identifies the various coping strategies of the unemployed. Unemployment benefits only accrue to those that have worked before

which is a small proportion (5%) of the unemployed. The majority (60%-80%) of the unemployed survive on the remittances from employed family or friends or pensioners. Others (19%-53%) survive through some form of income generation. Some of the unemployed benefit from government training and employment initiatives but the impact of these is minimal. Lastly, at least 20% of the unemployed depend on the informal sector which goes to show the importance of developing this sector in addressing unemployment and poverty (Barker, 2003:210).

Future unemployment scenarios are not that encouraging. A significant rate of economic growth is required to accommodate new entrants into the labour market and an even higher rate of growth is required to reduce the existing levels of unemployment.

In hindsight it is clear that GEAR failed on its promise of job creation rather miserably. GEAR predicted that economic growth would grow at an average of 2.8% per annum from 1996 to 2000 which would result in employment growth of 1% on average per annum, or 100 000 new jobs per year. However, there were 450 000 new entrants to the labour market every year which is why unemployment increased rapidly (Barker, 2003:214).

However GEAR did manage to meet its other objectives such as the macroeconomic ones, which firmly anchored the South African economy within the global economy. Barker (2003:214) suggests that GEAR's employment objectives were not achieved due to a lack of labour market reform. It is hoped that ASGISA will build on the foundation established by GEAR in terms of the sound macroeconomic policies and enhance job creation through comprehensive and innovative labour market reforms.

In 1998, prior to ASGISA, the general concern about South Africa's unemployment led the government to hold a job summit. The summit led to the adoption of an employment strategy to create jobs and fight poverty through various initiatives. These initiatives firstly aimed to increase the demand of labour by raising both output and the labour absorption capacity of the economy. This was to be achieved through increased investment levels and promotion of small, micro and medium-sized

enterprises, just to name a few programmes. The second aim of these initiatives was to strengthen the employability of labour. This was to be achieved by improving training and education levels, labour market reforms, just to name a few (Barker, 2003:218-219). ASIGISA will build on this employment strategy to improve the employment potential through economic growth, labour market reform, active labour market polices, a strong skills base and small enterprise development (Barker, 2003:242).

3.2.3 The South African skills crisis

It has been established above that the labour market performance has been poor relative to the number of new labour market entrants. Furthermore labour demand has been such that it is biased against unskilled labour. Thus a majority of the population, mostly Africans and women, find themselves unemployed due to a lack of the necessary skills demanded by the labour market.

This section intends to briefly assess the extent of the skill shortage in the labour market that has emerged from the skill biased labour demand trajectory that the economy has embarked on. The skills shortage has led to the marginalization of the majority of the population into a life of poverty and has essentially put a cap on the level of economic growth that the South African economy can achieve.

Since the inception of democracy the South African economy has undergone a major structural transition. As much as this change has been political and social, the liberalization of the economy, in order to become globally competitive, has also played a significant part in this development. The competitiveness of the South African economy has relied mainly on the adoption of new technology which has led to a high demand for a skilled workforce and a significant loss of low skill jobs. This has resulted in a majority of the population, 7.8 million people in 2002, being unemployed and subjected to poverty. In 2001 the South African Institute of Race Relations (SAIRR) reported a shortage of between 350 000 and 500 000 people in the managerial and technical sectors (Woolard, Kneebone & Lee, 2003:459).

Kraak (2003) analyses evidence presented in chapters 2 to 27 in the Human Resources Development Review. He is of the view that the economy is multi-layered. That is, the economy has three skill bands with three differentiated economic sectors, which are structurally separated by different technology needs, product markets and skill utilization. Theses skill bands are namely high, intermediate and low. Kraak (2003) rejects the thesis and the over emphasis on the development of high skills at the expense of intermediate and low skill development.

Given the current skills crisis that currently faces South Africa, Kraak (2003) suggests an integrated and multi-pronged human resource development strategy. Such a strategy should simultaneously address the expansion of all skill levels – high, intermediate and low. This approach is appropriate for a country such as South Africa which has a low skill workforce base. Furthermore this approach will invigorate economic growth if applied with a demand-driven strategy which would seek to stimulate large scale labour-absorbing employment growth supported by appropriate inputs of low-level skills training (Kraak, 2003:661).

Fascinatingly, in reviewing the evidence presented in the selected chapters of the Human Resources Development Review, Kraak (2003) finds that the skills problem is found at all three levels: high, intermediate and low. He suggests that solving these shortages requires 'joined-up' government policy with multi-faceted solutions which go beyond departmental demarcations. South Africa needs a differentiated skills formation system that incorporates all three skill bands. He further suggests a development strategy that needs to be built around the integration and interlocking of these skill bands (Kraak, 2003:662-663).

This reaffirms the fact that unemployment in South Africa is thus structural in nature in that people lack the skills required by the labour market. Woolard *et el* point out the fact that in the Labour Force Survey of February 2002, only eight percent of the working age population fell into the high-level human resources category. This pervasive high skill shortage is not conducive for sustained economic growth which has limited the redressing of the impact of apartheid. This has led to the need for human resources forecasting (Woolard et al 2003:460).

The focus of the Woolard et al's study is on the demand for high-level human resources between 2001 and 2006. That is, the study forecasts the number of new positions arising and the replacement demand over the specified period. In forecasting the demand for high-level human resources for the period 2001 to 2006, the authors base their model on a study conducted by the HSRC in (Whiteford, Van Zyl, Simkins & Hall 1999) and modify it accordingly (Woolard et al 2003:459-460).

The five year forecast period is in line with a general consensus of a move away from long term to medium term forecasting. Results derived from the latter are more accurate. This is the approach taken by Canada and the Netherlands who are considered pioneers in the field of human resources forecasting. Furthermore, a medium term period is more desirable firstly because industrial growth is hard to predict over a longer time period and secondly technology is changing too rapidly to expect the occupational structure of employment to remain unchanged over longer periods of time (Woolard et al 2003:461).

A labour demand model is utilized to estimate the number of new jobs that will materialize due to industrial growth. Industrial growth is determined exogenously. Only the 'industrial effect', where the level of employment of a particular occupation changes due to the industries in which it is concentrated grows or declines, is considered. The bias that this causes is limited due to the short forecasting period (Woolard et al 2003: 460).

In addition to net changes in occupational employment which is only one aspect of future demand, replacement demand is also considered. Replacement demand is employment needed to offset outflows of labour due to retirement, emigration and inter-occupational mobility. Replacement demand is calculated using the particular characteristics (demographic and skills level) of each occupation (Woolard et al 2003: 460-461).

Other studies pertaining to the forecasting of human resources have been conducted in the recent past. The HSRC study by Whiteford *et al* in 1999 found that between 1998 and 2003, despite an estimated growth in output of 2.7 percent, less than 50 000 jobs

would be created. This was attributed mostly to the trade sector as the largest employment creator followed by the finance and construction sectors. The highest growth in occupational demand was found in the information technology (IT) sector. Accounting and financial professions were also expected to show strong growth. Demand for electrical and chemical engineers was also expected to be solid over the period (Woolard et al 2003:462).

Van Aardt's study in 2001 found that the number of people in the South African labour market appointed in high-level human resources occupations dramatically increased between 1965 and 1994 from 296 000 to 1.11 million. The fastest growth in demand was seen for engineers and engineering technologists, engineering technicians, accountants and auditors, specialist managers, computer programmers, system analysts and software engineers (Woolard et al 2003:462).

Van Aardt 2001 study concludes that higher education in South Africa needs to focus on producing more IT specialists, electronic and specialist managers. In addition he makes the argument that there is a need for an alignment between the educational system and the skill needs of employers (Woolard et al: 462).

The study by Woolard *et al* (2003) found the following results: In terms of the demand side, demand for engineers and scientist is due to be strong. Information Technology professionals will also be in demand. The growth in the number of educators and nurses will depend on government's fiscal stance which is expected to relax in coming years. This implies a growing demand for educators and nurses. Lastly, the demand for managers is expected to be small as firms try to be globally competitive. Nonetheless managers with financial and people skills have a higher demand (Woolard et al, 2003).

In terms of supply side results, the point is made about how problematic human resource data is. This is due to a number of reasons. Firstly, the private college sector has almost no data but huge numbers of students enroll. Enrollments at technikons are volatile and unpredictable. Secondly, graduates of some fields of study end up

employed in totally different professions. Lastly, the supply of managers cannot be accurately estimated (Woolard et al, 2003).

Shortages due to a lack of supply are expected in basically all professions but to varying degrees. Given the apartheid history some critical professions, such as engineering, lack professionals from the previously disadvantaged groups. The impact of HIV/AIDS is also another huge concern and where this is expected to lead to a shortage is in the nursing profession (Woolard et al, 2003).

The issue of 'brain drain' has been a major topic in South Africa and is also a worrying phenomenon. Where this is of concern is in the shortage of doctors that are expected to emigrate overseas probably for better pay and better working conditions. Another reason for this emigration is due to the negative perception that people have of South Africa. Such factors as crime, black economic empowerment and affirmative action are responsible for South Africa's negative image (Woolard et al, 2003).

Woolard et al's (2003) study concludes that South Africa should expect a shortage in high-level human resources. Such resources are vital for the growth and development of the country. Woolard et al (2003) further concludes that the demand for high-high level human resources is expected to be low over the forecast period. Only engineering technologists and computer-related professions will increase in annual demand in excess of 2%. Furthermore, replacement demand is set to be strong due to mainly the impact of HIV/AIDS as well as retirement, emigration and mortality (Woolard et al, 2003).

As far as the supply side is concerned, interventions are required to address the high-skill shortage. As mentioned previously, this is seen as the limiting factor to economic growth and development. Such interventions should include improving the quality of mathematics and science in schools, stemming emigration and enticing young people into the teaching and medical profession where shortages are expected to be severe (Woolard et al, 2003).

On the other hand, Kraak (2003), through his analysis of the Human Resources Development Review, finds that there is not a severe high skills shortage. Shortages in key professions range between 3% and 4% of the existing workforce in those professions. These shortages are mainly driven by replacement demand and low projections of new jobs needed. However, if economic growth were to increase then a severe high skills shortage may well emerge (Kraak, 2003:671,674)

Kraak further finds that there is a high dependence on intermediate skills in the economy which makes this an important skill band for the economy. Intermediate skills are in great demand in the Information Communication and Technology sector, nursing and the informal sector. Indicators of high levels of intermediate skills provision on the supply side are technikons and colleges, learnerships and enterprise training.

In terms of low skills, the development of this skill band is identified as the solution to unemployment and poverty in South Africa (Kraak, 2003:682-683). Given the low skill base of the workforce, this is an area that needs to be given priority by government if unemployment and poverty goals are to be achieved.

From his analysis Kraak (2003) draws the following conclusions. He finds that there are shortages at all three skill levels which therefore calls for a multi-faceted response from government. This multi-faceted response will essentially mean the development of all three skill levels simultaneously (Kraak, 2003:683).

In terms of high skill development, there is a need to expand high value-adding manufacturing production in niche areas, improve the science base, reverse skills emigration and finally expand output of graduates and diplomats of high skills.

For intermediate skills, the output from technikons and colleges in key hard areas such as engineering needs to be improved. What is also required is to increase the demand and consumption of South African basic and intermediate goods and services. Last but not least, the flow of information in the labour market for these skills needs

to be improved in order to align supply and demand (Kraak, 2003:683). As mentioned above, intermediate skills are vital for the economy.

To address the development of low skills in the economy there is need for large-scale job creation schemes through public sector initiatives. Supply-side institutions need to respond to such schemes accordingly by producing the required basic skills (Kraak, 2003:683). Success in the low skill development will go a long way to reduce unemployment and poverty.

The above responses to the skills crisis require greater 'joined-up' efforts by government in order to find the multi-faceted solutions. Furthermore greater co-ordination and planning between departments will also be required to solve the skills crisis. This can be achieved through a management information system (Kraak, 2003:683).

3.3 Skill gaps and the need for training

Stark differences exist in labour productivity across countries. Even among developed nations these differences are quite remarkable. The United States (U.S.) lags well behind its counterparts in Europe and Japan in terms of labour productivity. Average annual growth rate in Gross Domestic Product (GDP) per person was 1.3% in the U.S., 2.4% in Germany and France, and 3.4% in Japan in the 1980s. In order for firms and countries to compete internationally there is need to initiate reforms in their respective education and training systems to stimulate skill development (Lynch, 1994: 1).

Today there is a great need for a highly skilled population that is able to adapt itself to new and ever-changing technologies designed to increase productivity. Firm emphasis now predominantly lies on achieving high quality standards which means that employees need to possess cross-functional competencies and problem solving skills. Such attributes are common in university graduates. This phenomenon can be seen in the huge wage differential that has emerged between skilled and unskilled labour globally. Gone are the days that workers could enter the workforce with

limited skills and acquire the necessary skills through 'learning by doing' (Lynch, 1994: 1-2).

Skills shortages lead to slow growth and low productivity as mentioned above and it is essential that the state intervenes in the market to correct for market failures that are obstacles to training (Booth and Snower, 1996 and Archer, 1997). Despite the advantages of a skillful population such as increased wages for employees and higher firm productivity, it is still found that not everyone is training. The reason for this is that some institutional systems are more able to cater for market failures and it is not merely a matter of transplanting such systems to adapt to another context (Booth and Snower, 1996). Therefore, the attainment of a 'training equilibrium' requires a mix of both laissez faire processes and state interventions to counter the prevailing market failures in that environment (Archer, 1997).

Evidently the free market does not provide sufficient incentive for training to be undertaken. However different countries have had varying experiences regarding training depending on the existence, or non-existence for that matter, of institutions that support training. In the United States and the United Kingdom huge wage disparities exist, among other things, between the skilled and unskilled workers due to the flexible nature of their labour markets relative to those of Europe and Japan. In this respect unskilled labour is a burden on the rest of society as the risk of being unemployed is high and therefore training provision is essential. However, the state cannot be expected to effectively and efficiently intervene to correct for market failures due to the shear magnitude of the exercise and the huge fiscal costs involved (Booth and Snower, 1996 and Archer, 1997).

Furthermore, firms are reluctant to provide general training due to high turnover costs and poaching by other firms once training of the employee is complete. Given this, firms are more willing to invest in firm-specific training where training costs incurred can be fully recouped by the firm as poaching in this case is less likely. On the contrary, Germany and Japan have developed effective institutional systems that include firms, banks, schools, and unions which support training (Lynch, 1994: 3-4, 15).

Empirical evidence internationally is at odds with the classical human capital theory that predicts that general training (that benefits a number of firms) is entirely financed by workers, while firm-specific training (useful only to one firm) is financed by the firm. Many studies have gone to show that firms fully finance general training for their workers. This has led to the development of a new training literature as researchers attempt to explain this challenging result.

General skills training initiated and financed by employers may be the case in the South African labour market however the necessary research has not yet been undertaken. Such research is necessary to determine whether South African firms finance general skills training as is the case with their peers in other labour markets.

Much of the literature on training presented here focused on specific programmes established in a particular country and analyses the outcomes of these programmes in terms of the participants subsequent employment experience in terms of, for example, probability of finding a job and the duration of unemployment.

The training literature is admittedly very large and the choice to focus on the literature that deals with training programmes was made with South Africa in mind. That is, in reviewing this literature there are lessons to be learnt for South Africa in terms of best practice in developing a training equilibrium ideal for South Africa.

Zweimuller and Winter-Ember (1994) investigate the impact of Manpower Training Programmes (MTPs) on subsequent employment experience in Austria. MTPs are designed to impact on a whole range of factors from preventing skills depreciation, to assisting in job search, and providing training for specific jobs among other things. The unemployed, or those that are on the brink of unemployment, are eligible for participation.

Zweimuller and Winter-Ember's investigation looks at the subsequent employment experience of training participants in terms of duration of unemployment and stability of employment after training participation. The intention is that these factors will reflect the short and long term effects of training. The main conclusion of the paper is

that MTPs offer a 'catching-up' strategy in that priority of participation is given to the unemployed and discouraged workers and that their participation improves their ensuing employment stability.

Using the 1976 Comprehensive Employment and Training Act (CETA) programme in the United States, Card and Sullivan (1988) study the effect of participation in the programme in terms of employment probability. Specifically, two effects are modeled in order to capture the full effect of training. The first is the labour market status of the individual on the completion of the programme and the second is the probability that the participant remains employed, or moves from unemployment to employment.

Their results show positive effects of training participation on the probability of employment that range between two to five percentage points. Furthermore, despite classroom training and on-the-job training both having positive effects on participants, the former produced significantly higher training effects for participants.

Beenstock (1997) investigates the decisions of unemployed Israelis on whether and when to train and the duration of training. In this regard the study focuses on the demand for training by the unemployed as opposed to the conventional attention on the effects of training on labour market outcomes for training participants. Beenstock's findings are discussed below.

The propensity to train was found to be affected by several factors. It was found that being a woman, married and having children lowered the propensity to train respectively. In addition, replacement ratios varied directly with income in that the benefit received from training by trainees prolongs the benefit period and therefore the propensity to train varied directly with the level of benefit (Beenstock, 1997)

Training duration was found to vary directly with the income replacement ratio. Furthermore, women and married persons were found to have a smaller demand for training duration. As far as married people were concerned, if the spouse of the unemployed was employed then training duration declined (Beenstock, 1997).

Lastly, the decision on when to train was also investigated using a model that explained the lag time in days prior to the commencement of training. Women were found to delay training commencement. There was also an inverse relationship between commencement of training with age and the number of children among other findings.

Lee and Hsin (2004) find that the advent of globalisation has increased the competitiveness of the Taiwanese economy. This has been for the benefit of consumers who now face lower prices on a wide range of products. However, the authors also recognise the downside of the globalisation process. That is, globalisation has brought about both an increase in unemployment and an accompanying increase in the instability of employment. The government has responded to this negative development through several policies aimed at mitigating both the increase in unemployment and the instability of employment. One of three policy responses embarked upon by government was the Employability Enhancement Program (EEP). The EEP was concerned with the setting up of employee training and retraining programs by private sector employers. The overall goal of the EEP was to upgrade the skills of one and half million workers over three subsequent years and thus increase the overall employability and employment of the workforce (Lee & Hsin, 2003). The current EEP is a pilot program which, if successful, will be expanded by government to become one of the leading measures for increasing the flexibility and employability of Taiwan's workforce (Lee & Hsin, 2004:362-363).

Lee and Hsin realise that such labour market policies give rise to many questions that need to be addressed. These questions include: whether employee training programs can really provide Taiwan's workforce with sustainable employability, if these programs can effectively reduce the probability of unemployment, whether employee training can assist unemployed workers shorten their unemployment spells, and if these programs can lead to the increase in overall income levels for successful trainees (Lee & Hsin, 2004: 363).

The above questions are in fact the questions that the authors investigate in their paper. In their view, the importance of addressing these questions lies in the fact that

if employee training programmes in the human development process prove to be effective in improving employability, then government will be able to rely more on these programs and less on legislation to provide Taiwan's workforce with much-needed job security. In this regard the authors conclude that strengthening legislation to protect workers is not an effective solution as it is self-defeating, since flexibility is an essential prerequisite in the highly competitive international market (Lee & Hsin, 2004:363,375).

Having stressed the importance of flexibility in the international market, the authors are not entirely in favour of the US approach of maximum flexibility but rather show preference for the 'flexisecurity' labour market policy approach of European countries. One element of flexisecurity is the vast amount of opportunities for the workforce to receive employee training and to constantly upgrade these skills and knowledge. This is clearly a very effective way of employees to maintain a level of flexibility with lifelong employability. The government of Taiwan is also in favour of the European approach of labour market policies and there is sufficient scope for the government to embark and expand on employee training programmes as Taiwan only spends 0.03 per cent of GDP on employee training which is in stark contrast to many European nations that spend considerably larger amounts of their GDP on employee training (Lee & Hsin, 2004:363,375).

The study confirms that employees training programs are effective in improving the ability of trainees. However the study finds no indication that these programs will necessarily improve the likelihood of trainees to secure greater wage increases or higher reemployment rates. These unexpected results have also been found in other empirical studies carried out in other countries. These results have been explained as either 'lock-in' or 'post-program' effects. The former is when during the period of training, a participant cannot effectively engage in job search as intensively as a non-participant, which therefore reduces the reemployment rate for training participants during this period. However, the lock-in effect is expected to decrease after training is complete. On the other hand, the 'post-program' effect is when a participant after completing a training program may believe that they have specific skills, which therefore necessitates the narrowing of the scope of their job search. The result is that

they may aim for the specific type of job for which they have been trained whilst ignoring all other possibilities (Lee & Hsin, 2004:373,375).

Lastly, Lee and Hsin call for further research to assess whether training programmes improve the likelihood of securing greater wage increases or higher reemployment rates by correcting the problem of 'selection bias.' Selection bias arises from the fact that workers' personal characteristics are often correlated with both training choice and earnings. For example a highly-motivated worker may have a greater desire to participate in a training program and may also have a much greater probability of securing a wage increase, as well as a greater probability of gaining reemployment. Therefore correcting for selection bias, which the current study does not, will provide a more accurate assessment of the impacts of employee training programs (Lee & Hsin, 2004:375).

Finally, Ballot and Taymaz (2001:312) are concerned with the role training plays in determining the performance of firms and the economy as a whole. The belief by most governments and scholars is that training policies do influence macroeconomic performance.

Ballot and Taymez (2001:314-315) present the now familiar debate on training. The debate centres on the question of why governments should intervene in providing training when there are private benefits and private costs, which means that the market should provide some training. However, the provision of training by the market is not the case due to various market failures that occur. These market failures lead to the under investment in general training as well as specific training. This happens because firms can be faced with high turnover for some exogenous reason and also due to the lack of access to capital for potential trainees.

The reasons for the under investment in training by both firms and individuals is provided by Snower and Booth (1996) in (Ballot & Taymaz, 2001:315). Some of the reasons are that workers have a low incentive to invest in training when the number of skilled workers is already high compared to the number of skilled jobs, and the opposite case, known as the 'low-skill bad-job', where there are only a few skilled

workers that firms have little incentive to create skilled vacancies. Training under investment may also occur through the interactions with innovation. That is, firms may not innovate because they lack a skilled workforce, and the workers do not invest in training since innovating firms are too few (Ballot & Taymaz, 2001:315).

Given the above market failures, Ballot and Taymez conclude that government intervention is justified (Ballot & Taymez, 2001:315). They go on to say that different categories of market failures may require different remedies to correct the under investment in training by both workers and firms alike. They suggest three remedies which include (1) a government set minimum training requirement and an imposition of a levy if this requirement is not met, (2) a subsidy given to firms for training which financed through tax revenues and, (3) a subsidy for firms that is conditional on them hiring the unemployed. Ballot and Taymaz realise that there are other remedies to correct the training under investment but restrict their study to the above three policies which have been implemented in various European countries to varying extents and in various forms.

Ballot and Taymaz attempt to embed the effects of systems of these policies in a model of the aggregate economy. The essential feature of such an economy is the endogeneity of technical progress which it was established as being influenced by the level of human capital, and in turn, influences the demand for skills. However, the policies affect the behaviour of firms which are heterogeneous, and may react differently, so that some will grow while others will fail. The analysis of these complex dynamics was undertaken through an evolutionary model (Ballot & Taymaz, 2001:316).

By running 101 experiments for each policy, increasing the parameter value step by step, the impact of training policies on macro-economic performance (e.g. manufacturing growth rates and unemployment rates) was tested. Policy elasticities were estimated through econometric techniques. The results suggest that some subsidy policies are effective in improving the long-run performance while a minimum requirement to train set upon firms is not (Ballot & Taymaz. 2001:Abstract).

After the comprehensive literature review the next chapter presents the data analysis. The data analysis chapter will provide the characteristics of both the broadly unemployed and employed. Given the objective of this paper, the main interest lies in the training of the unemployed and employed. Thus the training characteristics of these two groups are also examined prior to the modelling component of the study.

4 DESCRIPTIVE DATA ANALYSIS

4.1 Introduction

This chapter uses the Mesebetsi Labour Force Survey 1999-2000 to present the data analysis. The purpose of this chapter is to draw out as much information from the data that can provide useful insight into the training of the unemployed and employed in the South African labour market. The insight gained here can help in understanding some of the results that are produced in the modelling section of the paper.

The format of the chapter is as follows. Firstly, a brief introduction of the dataset is presented as a form of background. Thereafter, the analysis commences with a look at the characteristics of the unemployed by race followed by a look at the characteristics of the employed, also by race. This is in the build up to the analysis of the training of the unemployed and employed which is the main area of interest of this paper. The last section of this chapter makes a comparison between the training of the unemployed and employed in terms of certain aspects of training.

4.2 A brief introduction to the Mesebetsi Labour Force Survey 1999-2000

The Mesebetsi (meaning 'work' in Sesotho) was designed to fill in some of the knowledge gaps of the labour market. Given the importance of the performance of the labour market on the welfare of society, the survey was conceived with the overall aim of shedding light on important aspects of the labour market relating to the mandate of the Department of Labour that are not normally addressed in surveys conducted by Statistics South Africa and others (Mesebetsi Labour Force Survey User Guide 1999-2000:5).

Given South Africa's appalling racial past, much of it which was centred on the restricted access of Blacks to the labour market, the need for reliable and updated labour market statistics is critical for policy-formulation and monitoring to redress the past racial imbalance in the new South Africa. Despite the fact that huge strides have been made in terms of the wealth of information being generated from a combination of a range of sources (such as the Population Census of 1996 at the time) and new and revised data collection systems, at the time there were still large and unexplored territories in the knowledge of the labour market (Mesebetsi Labour Force Survey User Guide 1999-2000:5). In fact this lack of knowledge of the labour market is relevant even today given the existing level of poverty and unemployment in the economy and the wealth of information about the labour market still being produced.

Furthermore, some of the existing statistics (especially concerning the unemployment rate and wages) have raised some controversy amongst politicians and academics. The Mesebetsi Survey was seen as a means of resolving some this controversy in order to formulate pragmatic policies to enhance the performance of the labour market to the benefit of the participants of the labour market which are predominantly previously disadvantaged groups (Mesebetsi Labour Force Survey User Guide 1999-2000:5).

The survey was conducted nationally between the end of 1999 and the beginning of 2000. Approximately 10 000 households were interviewed. The core section of the interviews focuses on employment, demographics, and wages and covers all household members which relates to about 50 000 individuals. One person of working age (15 – 65) from each household was then randomly selected for more comprehensive interviews. Among other things, these individuals were asked about their work status, time period in (or outside) the labour market as well as basic conditions of employment, labour relations, wages, occupation and organization of work for those in employment (Mesebetsi Labour Force Survey User Guide 1999-2000:5

The Mesebetsi Survey comprised of two data files i.e. one corresponding to the household component of the Survey and the other to the randomly selected individuals (RSI) from each household. These data files were merged into one data file using the household number and the personal number variables. The merged dataset thus included information from both the household and RSI components of the survey. The analysis that follows as well as the modeling in the following chapter uses the merged dataset.

4.3 Unemployment

South African authorities have chosen to use the strict definition of unemployment as the official definition. This definition requires that the potential worker is currently not working, should have been available for formal or self-employment in the seven days prior to the interview and most importantly, he/she should have taken active steps to find (self) employment in the past month (Labour Force Survey, September 2005 Statistical release P0210:xxi).

'Statistics South Africa (Stats SA) uses the following definition of unemployment as its official definition. The unemployed are those people within the economically active population who: (a) did not work during the seven days prior to the interview, (b) want to work and are available to start work within two weeks of the interview, and (c) have taken active steps to look for work or to start some form of self-employment in the four weeks prior to the interview. The expanded definition of unemployment excludes criterion (c)' (Labour Force Survey, September 2005 Statistical Release P0210: xxi).

'The expanded definition therefore includes persons who said they were unemployed but had not taken active steps to find work in the four weeks prior to the interview (i.e. discouraged work-seekers)' (Labour Force Survey, September 2005 Statistical Release P0210:xxi).

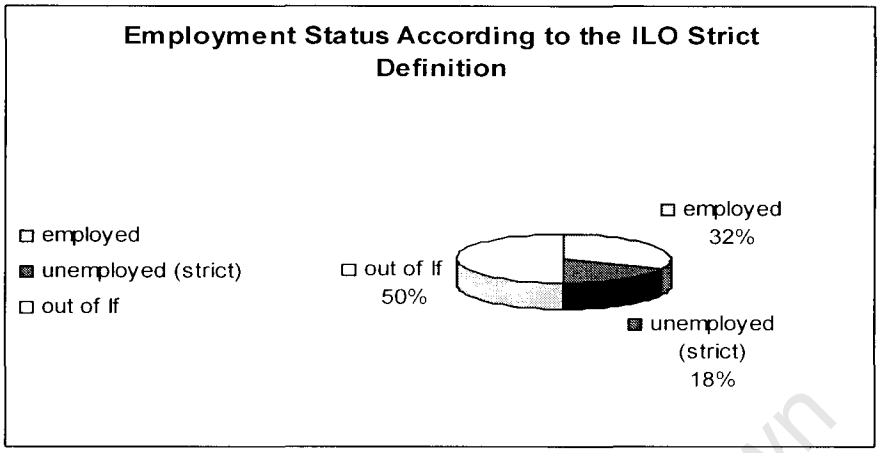
Using the Mesebetsi Labour Force Survey the official unemployment rate stands at about 18%. This is shown in Figure 1 below. This statistic needs to be looked at in relation to other estimates around 1999 and 2000. The official unemployment rate using the 1999 October Household Survey was about 23% (October Household Survey Statistical Release PO317:iv) while it was about 25% using the September 2000 Labour Force Survey (Labour Force Survey September 2000 Discussion Paper 1:iii). Using the September 2005 Labour Force Survey this figure stood at about 27% (Labour Force Survey September 2005 Statistical Release P0210:ii).

It can be seen that there is some variance between the official unemployment figures around 1999 and 2000 in the three surveys. This variance can most probably be attributed to survey design and sampling issues. Seeing that the focus of this study is on training rather than on unemployment itself the decision was taken to use the Mesebetsi survey because of its richer training data. In fact others have also found these differences across surveys precisely because of these sampling issues.

The unemployment rate using the Mesebetsi Survey produces the lowest official unemployment rate of the three surveys. Furthermore, the statistics from the Labour Force Surveys show that unemployment has only increased by 2% between 2000 and 2005. This is surprising given the poor employment performance of the labour market as discussed in the literature review. On the contrary, this goes to show that the notion of 'jobless growth' is incorrect as was established in the literature review.

The South African government has been criticised for using this measure of unemployment given the pervasive nature of unemployment in the economy. Government's justification for the use of this measure is that it is in line with international standards. However, a more obvious reason for the use of this measure would be for government to be perceived in a more positive light due to a lower unemployment rate as opposed to a higher rate.

Figure 1 Employment status according to the ILO strict definition

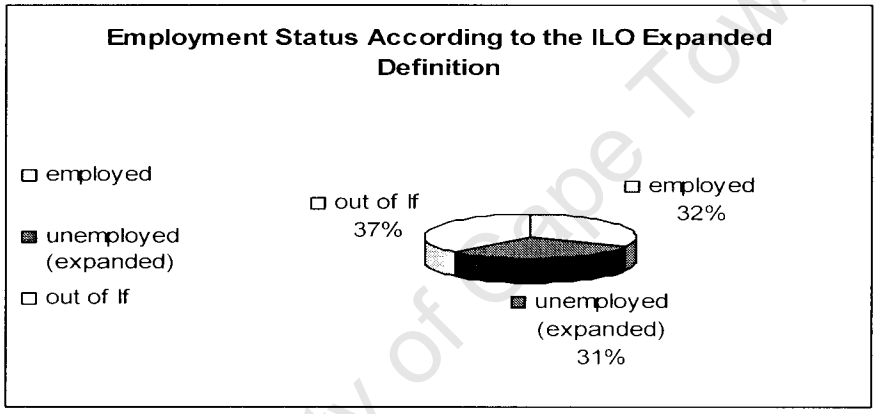


As is established in the literature review above, the more appropriate measure of unemployment in South Africa is the broad measure. The broad definition of unemployment simply excludes the active search criteria that the strict definition imposes. The reasoning for this is to cater for discouraged workers. Given the poor performance of the labour market, a huge presence of discouraged workers is expected in the economy. These are workers that have simply given up on searching for jobs as none are forthcoming but would jump at the opportunity of employment if an offer was made to them. The strict definition on the other hand disregards such individuals and classifies them as being out of the labour force.

Thus using the broad measure of unemployment, the Mesebetsi Labour Force Survey puts unemployment at about 31% which is almost double the unemployment rate found using the strict definition using the same survey. This is shown in Figure 2 below. The 1999 October Household Survey puts the broad unemployment at about 36% (October Household Survey 1999, Statistical Release P0317:vii) while using the September 2000 Labour Force Survey, the broad unemployment is about 36% (Labour Force Survey September 2000 Discussion Paper 1:ix). Again this slight variation can be attributed to sampling issues. A more recent broad unemployment figure can be obtained from the September 2005 Labour Force Survey. This survey

puts the broad unemployment at about 46%[1] which is extremely high by any standards and exposes government's true reasons for its preference for the strict definition of unemployment. To the extent that these surveys are comparable it would seem that unemployment increased by at least 10% in about five years. This significant increase in unemployment and the current high unemployment rate makes it very clear that unemployment is indeed at crisis levels in South Africa and thus needs to be addressed urgently.

Figure 2 Employment status according to the ILO expanded definition



4.4 Characteristics of the broadly unemployed

This section describes the characteristics of the broadly unemployed. As mentioned earlier, this section and the next are there as a build up to the analysis of training for the unemployed which is the main interest of this paper. The reason for looking at the broadly unemployed is due to the fact that the consensus is that the broad measure of unemployment is the appropriate measure for South Africa as was established in the literature review.

[1] Ue = Unemployed in the labour force/EAP i.e. 4,484,000 (unemployed) + 3,312,000 (discouraged)/16,788,000 (EAP). Figures from the LFS Sept 2005, xvii

Table 1 shows various interesting characteristics of the unemployed by race. Given South Africa's history, an analysis by race is unavoidable. The aim of Table 1 is to provide insight into the characteristics of the unemployed. Some of the characteristics examined below have an impact on the probability of training for this group as will be seen in the next chapter.

Table 1 Racial characteristics of the broadly unemployed

Characteristic	African	Coloured	Indian/Asian	White
Unemployment (%)	87.24	8.15	1.99	2.62
Gender (%)				
Male	31.51	27.31	18.59	10.86
Female	35.25	27.05	12.97	10.36
Married				
Yes	24.20	30.33	54.34	46.45
No	75.80	69.67	45.66	53.55
Mean age (to the nearest year)	31	30	31	36
Mean number of children <15 in household (to the nearest child)	2	2	1	1
Mean household income from previous month (Rands)	1485.75	2255.39	3361	7232.6
Location				
Urban	51.42	94.70	99.88	96.34
Rural	48.58	5.30	0.12	3.66
Highest level of education (%)				
No education	5.52	1.56	0.48	0.00
Primary school	25.10	34.87	6.16	0.95
Incomplete secondary	29.60	38.91	32.23	33.12
Complete secondary	36.64	22.29	54.79	50.29

Post-matric	3.14	2.38	6.35	15.64
Province (%)				
Western Cape	1.48	59.12	2.43	5.33
Eastern Cape	14.65	6.82	0.22	7.03
Northern Cape	1.21	8.69	0.43	5.27
Free State	5.10	0.00	0.00	5.87
KwaZulu Natal	20.88	9.92	87.34	18.33
Northwest Province	9.69	1.26	0.00	0.55
Gauteng	24.87	13.05	9.57	47.57
Mpumalanga	9.17	0.17	0.00	6.66
Limpopo	12.95	0.97	0.00	3.38

Unemployment

Table 1 initially presents unemployment figures by race. It is evident that unemployment is biased against Africans and this is expected given the history. From Table 1, about 87% of the unemployed are Africans, which is practically all of the unemployed. Coloureds, Indians and Whites form about 8%, 2% and 3% of the unemployed respectively. This pattern further justifies our racial analysis of the unemployed.

Gender

It is an established fact that women and the youth are two groups that are worst affected by unemployment. In Table 1 unemployment in terms of gender is examined. The table presents unemployment of males and females within each race.

From Table 1 unemployment of males and females is almost equal for both Coloureds and Whites. For Africans, unemployment for females is higher than for males as is expected. As far as Indians are concerned, surprisingly unemployment for males is 6% higher than female unemployment.

Table 1 clearly shows that African women are the worst hit by unemployment with about 35% of them being unemployed. This is mostly due to the fact that African

women are in the majority and also the fact that they were most marginalised from the apartheid regime in terms of access to education and ultimately the labour market.

Coloured women have the second highest level of unemployment at about 27%. However this is almost 10% lower than the level experienced by African women. White and Indian women experience yet lower levels of unemployment at 10% and 13% respectively. What should be noted here is that the non-African groups are a minority of the population.

Unemployment of males follows the same pattern of women and this is as expected. African men are the most prone to unemployment with about 32% of them rendered unemployed. Coloured men have the second highest level of unemployment with about 27% being unemployed. White and Indian men still have lower levels of unemployment at about 10% and 13% respectively.

Marriage

Being married implies that one has responsibility for a spouse and children where these are present in a household. Therefore unemployment would be more of a burden for these people. From Table 1 above, apart from unemployed Indians, the majority of the unemployed are not married. Specifically, about 76% of Africans, 70% of Coloureds, 45% of Indians and 54% of Whites are unemployed and unmarried respectively.

These results are understandable as the unemployed would not want to get married as they have no means of supporting a family. This is most likely to be the case for men, as men are considered bread-winners in most cultures. The fact that unemployment is partly a youth phenomenon also helps explain the absence of marriage among the unemployed. That is, the youth are less likely to be married. However, in the case of Indians most of the unemployed (54%) are married.

These results suggest that the burden of unemployment is not that high given that people only need to support themselves. However these people are likely to attach

themselves to households where there is a source of income and thus are a burden in this regard. This attachment to households that have some source of income is due to a lack of a comprehensive social security system in the country. Furthermore, as was discussed in the literature review, the unemployed are worse off by any welfare measure and thus there is an inherent burden of being unemployed.

From the above it would seem that employment status is related to marital status. In fact this is the case when you compare marriage percentages for the unemployed and employed. As will be found in the next section, the majority of the employed across all races, except for Coloureds, are married.

Mean number of children less than 15 years in the household

The presence of children under the age of 15 years in a household is a possible sign of a worker's responsibility for their dependents. Having children in this age category may also serve as an indication of how earnestly an unemployed individual looks for work. In this regard the mean number of children below the age of 15 years in a household was looked at. Africans and Coloured have about 2 children each below the age of 15 in their household while Indians and Whites have only one child each in their households. This shows that the burden of unemployment is felt more by Africans and Coloureds.

Mean age

As mentioned earlier, one group most affected by unemployment is the youth. Therefore the mean age of the unemployed is examined in Table 1.

In terms of the mean age of the unemployed Whites have the highest mean age of about 36 years. The mean age of the unemployed for the other races is about 30 years. If one classifies the youth as being between the ages of 15 to 35, then it can be concluded that unemployment is indeed a youth phenomenon. Furthermore these youth are African given that the incidence of unemployment is high among this racial group. This poses a huge challenge on the government to develop policies that can

abate the youth unemployment phenomenon as quickly as possible. This is especially so for Africans.

Mean household income from previous month

Despite being unemployed, the unemployed still need to support themselves and their dependents. Thus their mean household income from the previous month was studied. Whites have the highest mean income of the unemployed (R7233), followed by Indians (R33601), Coloureds (R2255) and finally Africans (R1486).

Thus unemployed Africans are found in households with the lowest average income. This is a huge burden for these households given the fact that unemployment is greatest for Africans. This burden is further compounded by the fact that Africans have a higher number of children under the age of 15 years as shown above.

Location

The location of the unemployed was also studied. It is a known fact that more employment opportunities exist in urban areas as opposed to rural areas. This is due to the fact that more firms are located in urban areas and thus there is more economic activity in these areas and therefore a higher demand for labour. However, the unemployed, who are mostly African as has been established, often resort to residing in rural areas with extended family that can support them during their unemployment spell. This clearly creates a mismatch between where the unemployed reside (labour supply) and where jobs are available (labour demand), and thus does nothing to improve the unemployment situation in the country.

Examining Table 1 above, 49% of Africans reside in rural areas. This is probably not as high a percentage as we would expect given the high unemployment rate for this group and the lack of a comprehensive social security system in the country. At the same time we should also expect this figure as the unemployed would want to be in urban areas as this is where their job search efforts are most likely to be successful.

As far as the other race groups are concerned, practically all the unemployed live in urban areas. This is due to the lack of association of these race groups with the rural areas. Again this allows their job search to be more successful which might partly explain their lower unemployment rates.

Province

Directly related to location is the province where the unemployed reside. As is well known, some provinces are more urbanised than others. For instance Gauteng is one of the more industrialised and urbanised provinces in South Africa. Given this Gauteng attracts huge numbers of both national and African immigrants in search of 'greener pastures.' It is therefore interesting to see the incidence of unemployment by race in the nine provinces.

By examining the results in Table 1, unemployed Africans are mostly found in Gauteng (25%), KwaZulu Natal (21%), Eastern Cape (15%) and Limpopo (12%). These results are expected given that Africans are in the majority in these provinces.

Due to a high Coloured population in the Western Cape, 59% of the unemployed Coloureds are in the Western Cape. This is almost two thirds of unemployed Coloureds. Other provinces where there is a significant number of Coloured unemployment are Gauteng (13%), KwaZulu Natal (10%) and Northern Cape (9%).

Almost 90% of the unemployed Indians are found in KwaZulu Natal. This is also attributed to the fact that there is historically a huge Indian presence in KwaZulu Natal. About 10% of unemployed Indians are also found in Gauteng.

White unemployment is mostly found in Gauteng (48%), KwaZulu Natal (18%) and Eastern Cape (7%).

Highest level of education

Education is a very important criterion in terms of the employability of an individual. As was established earlier in the paper, unemployment is structural and therefore it can be expected that those with little or no education are rendered unemployable given the structure of the economy and thus resigned to unemployment.

Most unemployed Africans (37%) have complete secondary school education while about 30% have an incomplete secondary school education. About 25% of Africans have primary school education, 6% have no education at all. Only 3% of unemployed Africans have post-matric education.

About 39% of unemployed Coloureds have incomplete secondary education, 35% have only primary education, and 22% have complete secondary education. Lastly, about 2% of unemployed Coloureds have either no schooling or post-matric education.

About 55% of unemployed Indians have complete secondary school education. This is higher than the other three race groups. On the other hand 32% have incomplete secondary education while about 6% have either primary or post-matric education. Unemployed Indians with no education are practically non-existent. This is probably from the fact that Indians/Asians take education very seriously in their cultures.

Unemployed Whites with no education or just primary education are practically non-existent. This is also due to the importance that Whites place on education but also because of the preferential education policies for Whites under the apartheid system. This goes to explain the low incidence of unemployment for this group. This can be further substantiated by the fact that about 50% of unemployed Whites have complete secondary school education. About 33% have incomplete secondary education. Lastly, 16% of unemployed Whites have post-matric education. This is about four times larger than the average number of unemployed people with post-matric education in the other three races. This is surprising as these are the skills the economy requires. There is talk of 'reverse apartheid' and this could be a case of it.

'Reverse apartheid' is how White people are denied employment due to affirmative action policies despite being qualified and there being a glaring skills shortage.

4.5 Summary of the characteristics of the broadly unemployed

The following conclusions can be drawn from the above analysis of the unemployed:

- Both African men and women are worst affected by unemployment.
- Majority of the unemployed are unmarried.
- Unemployed Africans and Coloureds have about two children under the age of 15 in their households while Indians and Whites have only one on average.
- Unemployment incidence is very high for Africans. Furthermore, unemployment is a youth phenomenon given the mean age of the unemployed.
- Unemployed Africans and Coloureds have the lowest mean household income from the previous month
- In comparison with other races, relatively more Africans reside in rural areas due to their close association with the rural areas
- Where a certain race has a high unemployment rate in a certain province it is attributed to the high population of that race in the concerned province.
- Previously disadvantaged groups have the lowest levels of educational attainment.

4.6 Characteristics of the employed

This section follows the same approach as the previous section. However, the focus is now on the characteristics of the employed. These characteristics are again examined in terms of race. The analysis of the employed is useful in that it includes information about sectors, industries, occupations, firm size and job tenure, all of which form part of the modelling in the next chapter.

Table 2 Racial characteristics of the employed

Characteristics	African	Coloured	Indian/Asian	White
Employment (%)	69.85	11.34	5.42	13.39
Gender (%)				
Male	33.52	45.90	57.55	64.63
Female	23.66	34.22	32.29	48.12
Married (%)				
Yes	51.20	49.05	64.97	70.20
No	48.80	50.95	35.03	29.80
Mean age (to the nearest year)	39	36	37	39
Mean number of children <15 in household (to the nearest child)	2	1	1	1
Mean household income from previous month (Rands)	2593.04	3994.46	7374.84	12278.37
Location (%)				
Urban	52.45	83.59	99.45	92.09
Rural	47.55	16.41	0.55	7.91
Union member (%)				
Yes	29.18	27.87	33.43	23.72
No	70.82	72.13	66.57	76.28
Highest level of education (%)				
No education	10.34	5.35	0.26	0.00
Primary school	27.84	24.26	3.92	0.41
Incomplete secondary	26.36	37.22	32.52	16.29
Complete secondary	25.21	25.58	46.51	42.40
Post-matric	10.24	7.59	16.78	40.91
Province (%)				
Western Cape	3.61	68.84	9.93	14.27
Eastern cape	20.43	9.12	0.41	4.73
Northern Cape	0.91	4.44	0.46	2.50

Free state	5.45	0.13	0.00	6.26
KwaZulu Natal	21.68	9.01	66.33	14.06
Northwest Province	10.00	0.44	0.00	2.43
Gauteng	21.19	7.42	22.84	41.81
Mpumalanga	8.26	0.23	0.02	9.47
Limpopo	8.48	0.38	0.00	4.47
Job tenure in years (%)				
0 - 10	73.88	68.22	73.50	74.21
11 – 20	20.21	21.40	20.16	19.19
21 – 30	4.44	9.26	6.02	4.43
30>	1.46	1.12	0.32	2.16
Firm size (%)				
Small firm	89.03	71.62	77.53	80.76
Medium firm	7.50	20.65	15.85	8.98
Large firm	3.47	7.73	6.62	10.26
Public Sector (%)				
Yes	16.05	15.56	14.71	18.82
Nature of job (%)				
Permanent	75.27	78.02	88.18	89.95
Non-permanent	24.73	21.98	11.82	10.05
Occupation (%)				
Managers	2.18	2.76	9.89	12.43
Professional	5.47	4.33	7.43	14.19
Technicians	3.41	4.87	8.76	16.23
Clerical	6.13	10.32	22.56	19.20
Servicesales	11.18	14.20	17.95	13.79
Skilledagriculture	12.44	1.58	0.00	3.54
Craft	12.75	17.83	11.15	13.47
Operators	10.80	11.14	15.65	3.05
Elementaryocc	35.54	32.94	6.60	4.03
Armed forces	0.11	0.03	0.00	0.08
Industry (%)				
Agrifish	13.66	17.94	0.75	6.85
Mining	1.81	0.43	0.00	2.30
Manufacturing	9.77	14.69	20.85	12.15
Elecwater	0.72	2.35	0.00	0.98
Construction				

Retail	5.52	2.27	4.26	3.70
Hospitality	23.27	17.71	25.41	16.57
Storagecom	1.35	1.63	0.65	2.18
Financial	5.05	3.35	13.22	5.40
Realestate	1.24	3.44	3.16	5.40
Publicadmin	5.03	4.79	7.89	13.84
Education1	4.45	7.98	1.16	7.51
Socialwork	6.18	3.93	4.72	7.96
Personalservices	4.93	5.37	10.68	7.13
	2.67	4.64	6.12	6.88
Second Job (%)				
Yes	3.98	3.28	2.82	6.63
No	96.02	96.72	97.18	93.37

Employment

Similar to Table 1, Table 2 gives the general employment rates for each race. It is evident from the figures that the majority of the employed are Africans. This is primarily due to the demographics of the country where Africans are in the majority.

Table 2 shows that of the employed, about 70%, 11%, 5% and 13% of Africans, Coloureds, Indians and Whites respectively are employed.

Gender

Gender is an important aspect of the labour market. Historically women the world-over have been marginalised from the labour market due to mostly discrimination. However with the increased levels of education that are leading to the increased participation of women in the labour market and their attachment thereto, the status quo is changing.

Table 2 provides the employment of each race by gender. It is clearly evident that male employment is higher than that of females for each race. Discrimination could be a possible reason for this trend.

Table 2 shows that about 34%, 46%, 58% and 65% of African, Coloured, Indian and White males, respectively, are employed. On the other hand, about 24%, 34%, 32% and 48% of African, Coloured, Indian and White females respectively, are employed.

Table 2 also points to the fact that employment is least for Africans than any other racial group.

Marriage

The reason for examining whether the employed are married or not is the same reason as given for the unemployed. The employed are expected to be married as they are in a position to support a spouse and a family. A relationship between employment status and marital status was observed in the previous section and the results in Table 2 confirm this relationship.

With the exception of Coloureds the majority of the employed are married. Specifically, about 51%, 49%, 65% and 70% of employed Africans, Coloureds. Indians and Whites respectively, are married. The figures for Indians and Whites are much higher than for Africans and Coloureds probably due to the fact that the incidence of employment is higher among Indians and Whites.

Mean Age

The mean age of the employed is examined next. The mean age for the employed is higher than that of the unemployed. This is expected as we have established that unemployment is a youth problem. Employed Whites and Africans have the highest mean ages of about 39 years while employed Indians and Coloureds have a mean age of 37 and 36 years respectively. These results go to confirm the conclusion from the previous section that unemployment incidence is high among the youth.

Mean number of children less than 15 years in the household

In this case the number of children under the age of 15 years may serve as an indication of an individual's incentive to look for work and retain work. That is, holding all else constant, a worker who has children and other dependants in their household has more incentive to look for work and once they have a job, they are more likely to retain that job because of this need to support dependents.

Employed Africans have about 2 children under the age of 15 years in their households. Employed people belonging to the other three races have about 1 child falling into this category. Therefore Africans have to support more children than the other races. Therefore, given what was discussed directly above, Africans have a greater incentive to look for work and to retain work.

Mean household income from previous month

Mean household income from the previous month is significantly higher for the employed than for the unemployed and this as expected. The pattern of income of the employed is the same as for the unemployed. That is, Africans have the least household income (R2593), Coloureds (R3994), Indians (R7375) and Whites with the highest household income (R12278).

Employed Africans have the lowest incomes and yet have a greater burden of supporting more children and, as was established in the previous section, this burden is likely to be higher as unemployed people will attach themselves to household where there is an income.

Location

As discussed previously, we would expect the employed to mostly reside in urban areas as this is where most employment opportunities can be found.

The results of the location of the employed are similar to those of the unemployed. In line with our expectations, the majority of the employed are located in urban areas and this is more so for Coloureds, Indians and Whites, who have no links with rural areas

and are literally all located in urban areas. Employed Africans are almost evenly located between urban and rural areas though.

Province

Directly related to the location of the employed is the province in which they are located. Examining Table 2, employed Africans are mostly found in KwaZulu Natal (22%), Gauteng (21%), Eastern Cape (20%) and Northwest Province (10%). This is a result of a high population of Africans in these provinces as well as the fact that more employment opportunities are on offer in these provinces.

Coloureds are mostly employed in the Western Cape representing about 70% of Coloured employment which is significant. This is as result of the Western Cape being a predominantly Coloured province. Other provinces where Coloured employment is relatively significant are Eastern Cape, KwaZulu Natal (9%) and Gauteng (7%).

In terms of population, KwaZulu Natal is for Indians what the Western Cape is for Coloureds. From Table 2, over two thirds of Indian employment is in KwaZulu Natal. Gauteng represents 23% of Indian employment and Western Cape represents 10%.

The most Whites are employed in Gauteng (42%). This is followed by the Western Cape and KwaZulu Natal, both representing 14% of White employment. These provinces are highly urbanised which confirms the result that Whites, as well as Indians and Coloureds, are mostly located in urban areas due to a lack of an association with rural areas. Mpumalanga also represents relatively significant White employment (9%).

Union membership

Unions have a long history in the South African labour market and have played a significant role therein. It is interesting in this regard to analyse union membership of the employed.

Given the above we would expect the majority of the employed, and especially the previously disadvantaged groups, to be union members. However this is not the case from the results in Table 2. Across all races more than two thirds of the employed are non union members. These people could be employed due to their non union membership as employers probably see these workers are less of a 'burden' than union workers that are more likely to continuously demand higher wages.

Highest level of education

Since education determines an individual's employability, we would expect the employed to have had at least some form of education. However we find that there are employed people with no education whatsoever and the majority of this group are Africans (10%). This should not be that surprising given the history but more importantly, it also goes to show the importance of experience in the labour market. However, despite being employed these people are most probably employed in low skilled jobs where conditions of employment are far from ideal.

The structure of the economy requires intermediate to high skills which can be attained from secondary education and beyond. Examining these levels of education by race we find that employed Indians and Whites are in the majority in terms of secondary and post-matric education. That is, about 17% and 41% of employed Indians and Whites respectively, have post-matric education. This is compared to only 8% and 10% of employed Coloureds and Africans with a similar educational attainment level. This goes to show why Whites and Indians face a lower incidence of unemployment. The low incidence of unemployment by these two race groups can be further substantiated by the fact that employed Indians and Whites with no, or only, primary school education, represent a very small proportion of the employed.

Complete secondary education follows the same pattern as that for post-matric education. With complete secondary education, there are now significantly higher numbers of employed Africans and Coloureds with this level of education.

In terms of incomplete secondary education, employed Africans, Coloureds, Indians and Whites represent 26%, 37%, 33% and 16%, respectively, of this level of educational attainment.

Job tenure

The importance of experience as mentioned directly above cannot be taken for granted in the labour market. Therefore we look at the job tenure of the employed. Over two thirds of the employed across all race groups fall under the first job tenure category. That is, they have had labour market experience for up to ten years. This also goes to show that the South African labour market is relatively young.

About 20% of the employed in each race group have labour market experience between 11 and 20 years. Beyond this level of experience the numbers of the employed for each race are small. The only exception is with Coloureds (9%) and Indians (6%), with 21 to 30 years of experience.

Firm size

Firm size is determined in terms of the number of employees the firm employees. Small firms are firms that employee up to 99 people. Medium firms employ between 100 and 499 employees while large firms are those firms that employee 500 or more employees.

The size of the firm in which workers are employed matters for two reasons. The first is that, it is small firms that are seen as the solution to the unemployment problem in this country. In this regard government aims to promote the rapid emergence of such firms through, among other policies, lower taxes and easier access to credit. The second reason is more directly related to this paper. The size of the firm matters in terms of the probability of training its workers. The larger the firm the more likely it is to train its workers as it is likely to have formal training structures in place as well as the financial resources to support training.

Over 70% of the employed across all race groups are employed in small firms. Referring to what was said directly above; this is both good and bad. It is good in the sense that small firms are seen as a viable solution to the unemployment crisis. On the hand it is bad in that small firms are unlikely to train their workers, which does nothing to improve the skills shortage and ultimately the unemployment situation.

Large firms employ the least number of workers across all race groups. These firms employ 3%, 8%, 7% and 10% of Africans, Coloureds, Indians and Whites respectively.

Public sector

As far as solutions to unemployment are concerned, the private sector is also seen as a solution. In the past the public sector has been responsible for most of the employment in the economy. This merely bloats the public sector and works to only make the government even more sluggish and inefficient.

Table 2 shows those employed in the public sector by race. As is clear from Table 2, the majority of the employed across all races are employed in the private sector. This is welcome given what was discussed above. The further development of the private sector will help reduce unemployment in South Africa.

The results show that only about 16%, 16%, 15% and 19% of employed Africans, Coloureds, Indians and Whites respectively, are employed in the public sector.

Nature of job

In addition to whether one works in the public or private sector, the type of job, permanent or non-permanent, one holds also matters. As briefly discussed in the literature review, some people despite reporting being employed, are actually underemployed. This is partly as a resort of having a non-permanent job. To avoid both unemployment and underemployment, it would be ideal for everyone to have a full-time job. However, this is a first best situation that cannot be expected to easily occur, if ever.

Three quarters of the employed across all races have permanent jobs. In this regard the underemployment cannot be argued. However this depends on the reporting of respondents. Due to the mere fact of holding a job and the general lack of other jobs, a respondent is likely to report to being permanently employed.

About 25% of employed Africans and 22% of employed Coloureds are non-permanently employed. This is expected as these are two groups that are most affected by unemployment and individuals from these groups are likely to take up non-permanent employment in order to support themselves and their families. This is concerning for this group as they are subject to the insecurity associated with a non-stable income inflow. This is a major problem for these people and leads to a hand-to-mouth survival strategy that is not ideal.

Occupation

In the same vein as examining the nature of a job in which people are employed, the type of occupation that the employed fall under is also of interest.

Africans are predominantly employed in the low skilled occupations such as craft and trade (13%), skilled agriculture and fishery workers (12%), service and sales workers (11%) and in elementary occupations (35%). This is a direct reflection of the low educational attainment of Africans.

Coloureds are also employed in the low skilled occupations for the same reason as Africans. The majority (33%) are employed in elementary occupations, 18% are employed as craft and trade workers, 14% as service and sales workers and 11% as machine operators and assemblers.

The pattern for Indians is slightly different to that of Africans and Coloureds. The majority of Indians (23%) are employed in clerical positions, 18% as service and sales workers, 16% as machine operators and assemblers.

What is different in Indian employment in terms of occupation is the slightly higher number of Indians employed in higher skilled occupations. This is due to their relatively higher human capital. About 10% are employed as managers and senior officials, 9% as technicians and associate professionals and 7% as professionals.

As far as White occupations are concerned the effects of apartheid can be seen vividly. Whites are mostly employed in high skill occupations. Specifically, about 43% of Whites are employed as senior officials and managers, professionals, and technicians and associate professionals. Only about 4% of Whites are employed in elementary occupations. Surprisingly, about 13% of Whites are employed as craft and trade workers. This figure even exceeds that of Africans.

Industry

In terms of the industry in which people are employed, the pattern is the same as that for the type of occupation which is what we would expect. Therefore we can expect that Africans and Coloureds are mostly employed in industries that require low to intermediate skills while Indians and Whites are employed mostly in industries that require intermediate and high skills. This can be confirmed by examining Table 2 above.

Second job

People usually have a second job in order to supplement their income from their first job. In other cases people hold second jobs because their other job is not permanent as was mentioned earlier. Clearly from Table 2 above the vast majority of employed do not have a second job. This most probably because most of the employed have permanent jobs as was found earlier in the current analysis.

However, for the previously disadvantaged groups there is a need to supplement their income as most of the people in these groups are employed in low-paying, low-skilled jobs. These people do not have second jobs due to the fact that there is a lack of jobs in the economy and one job is a luxury enough.

4.7 Summary of the characteristics of the employed

The following conclusions can be drawn from the analysis of the characteristics of the employed:

- Most of the employed are Africans due to the demographics of the country.
- Majority of the employed are married.
- The employed have a higher mean age than the unemployed.
- Employed Africans have on average two children under the age of 15 in their households while the other races have one on average.
- Mean household income from the previous month is higher for the employed than it is for the unemployed. Furthermore, African households have the lowest mean income and have to support more people.
- The employed mostly reside in urban areas.
- High employment figures for certain races, in certain provinces, is as a result of the higher proportion of that population group in the concerned province.
- More than two thirds of the employed are non-union members.
- Whites and Indians have higher educational attainment levels than Africans and Coloureds.
- Over two thirds of the employed have up to 10 years of labour market experience and therefore most of the employed are non-youth.
- Small firms are responsible for the employment of over 70% of the employed.
- 80% of the employed are employed in the private sector.
- Three quarters of the employed have permanent jobs.
- Africans and Coloureds are mostly employed in low-skilled occupations and industries while White and Indians are employed in occupations and industries requiring intermediate and high skills.
- Most of the employed do not have a second job

4.8 Training of the broadly unemployed

After examining the characteristics of the unemployed in Section 4.4, this section analyses the training experience of the unemployed. The aim is to unravel the training incidence among the unemployed and compare it to that of the employed. The analysis of the training of the employed is carried out in the following section. The analysis into the training of the unemployed and employed is critical given the objective of this research.

There is one caveat relating to the training of the unemployed. It is actually possible that those respondents that are currently unemployed at the time of the survey, and have trained, could have received this training while they were still employed. Given this possibility there was a possible need to separate out the labour market status of training recipients at the time of training. However, after analysing Table 5, only about 30% of the currently unemployed were likely to have received their training while employed. Therefore the separation of labour market status was deemed unnecessary.

Table 3 Main reason for stopping working

Main reason stopped working	Percent
Sickness, injury, disability	6.94
Care for family	9.47
Retired, old age	1.64
Left for school or training	2.47
Unsatisfactory wages	12.09
Retrenched	34.93
Dismissed	8.05
Seasonal or casual work	21.47
Not satisfied with location	1.66
Camera or equipment stolen	1.29
Total	**100**

Before embarking on the examination of the training experience of the unemployed, it is important to consider the reasons why the unemployed who held jobs before stopped working. Table 3 has a sample size of about 4 million people in this category. From Table 3 it can be seen that the most popular (35%) reason given for stopping work was retrenchment. This shows one of two things about the economy.

The first is that the economy is not performing well and hence firms are shedding jobs in response to these conditions. The second reason is the increased capital intensity in production and other initiatives by firms in the effort to remain globally competitive. These issues are discussed in the literature review.

The second most popular reason given for stopping work by the unemployed who had held jobs before is that they were temporarily employed (21%). The third most popular reason for stopping work is unsatisfactory wages (12%). Unsatisfactory wages as a reason for stopping work is a little surprising given that unemployment is so widespread. In such a labour market environment it is not expected of the employed to complain about wages as they are likely to consider themselves as being lucky to even have a job in the first place. Union representation probably has a part to play in this voluntary quit from employment.

Given widespread unemployment and its structural nature, it is expected that the people would stop working to upgrade their education and skills for better future employment prospects. In Table 3 only about 2% of the population, who had held jobs before, stopped working to go to school or to train. This does not put the national human resource development initiative at the time in a positive light. From this it would seem that people are not taking up the available training opportunities. One reason for this lack of uptake would be people having insufficient information about such opportunities. Another reason would be that people are reluctant to commit to training programmes due to costs, both financial and psychological, of education and training as highlighted in the human capital literature. However, this figure being low could also be that people, who do take up further schooling or training, do not actually quit their jobs first, but improve their human capital while still working.

Table 4 Training of the unemployed for work skills/new job

Received any training for work skills/new job	Percent
Yes	15.1
No	84.9
Total	**100**

Table 4 above looks at whether the unemployed received training. The variable as defined in the survey is whether the individual being asked the question 'received any training for work skills/new job.' From a sample size of about 9 million, only 15% of the unemployed had gone on training. This obviously limits the re-entrance of the unemployed back into the labour market as their skills depreciate over time. This essentially means that the unemployed are marginalised into either self or informal employment, in the best case scenario, or continued unemployment and the hardships associated with it.

Table 5 Source of skills training

Source of skills training	Percent
Apprenticeship program	5.61
Technical college	22.09
Workers college	7.23
Academic secondary school	1.77
Technikon diploma course	6.3
University institution	7.2
Commercial school, ngo or government	16.13
Training at work	5.16
On-the-job training	5.13
Training received on previous job	19.65
Correspondence course	2.2
Other	1.54
Total	**100**

Table 5 presents the source of training of the unemployed. The most frequent sources of training for the unemployed are technical colleges (22%), training received from a previous job (20%) and training received from commercial schools, NGO's or government (16%). The sample size is about 1.3 million.

The emphasis of the NSDS is the delivery of training through learnerships. These learnerships can essentially be classified as work related training. In Table 5 it can be noticed that there is not a significant number, only about 5% for both training at work and on-the-job training, of unemployed people that report undertaking work related training. However, about 19% of the respondents indicate receiving training from a previous job. The more of this type of training through learnerships under the NSDS will equip training participants with marketable skills that are extremely valuable in the labour market.

Table 6 Year in which most recent training was received

Year received most recent training	Percent
still in training	17.49
1998	17.58
1997	12.49
1996	7.44
1995	5.92
1994	8.82
1993 or before	30.27
Total	**100**

Having established the source of skills training it is also important to establish how recent this training was, as recent is a relative term. This is important because despite training, skills can depreciate rapidly if training is not a continuous process. This is more so in today's labour market.

At this point it should be noted that the Mesebetsi Survey was conducted between the end of 1999 and the beginning of 2000. From Table 6 above, it can be seen that a significant proportion of the population (30%) received training prior to the new democratic dispensation.

A considerable proportion of the population (48%) reported themselves as either still being in training or having been in training two years prior to the Survey being conducted. On the other hand, only a small proportion of the population (22%) reported having gone on training between 1994 and 1996. This low number should be expected given that this was a transition period given the change of government. This is probably why we see the number of people increasing from 1997 onwards as mentioned at the beginning of the paragraph.

Table 7 Monthly duration of training for the unemployed

Training duration (months)	Percent
1	34.14
2	6.94
3	9.59
4	2.02
5	0.25
6	11.02
7	0.41
8	0.71
9	2.07
10	1.09
11	0.68
12	10.2
16	0.14
18	0.95
24	5.4
26	0.11
30	0.5
36	11.05
38	0.15
48	1.91
60	0.41
98	0.25
Total	**100**

The survey gave respondents three options in terms of reporting their duration of training. That is, the duration of training could be reported in days, weeks or months. This study reports training duration in months. Accordingly, training reported in days or weeks was converted into months. Table 7 shows the monthly duration of training of the unemployed.

Measuring training duration in months is appropriate given that training programmes that are expected to impart invaluable marketable skills should run for at least several weeks.

From Table 7 it is clear that the majority (34%) of the respondents spent about a month in training. This is in line with our expectations given the training sources (technical colleges, NGOs, on-the-job training) reported by respondents. That is, these sources of training are likely to offer shorter programmes compared to other sources of training such as universities, schools and apprenticeship programmes for instance.

Given what is said above about the length of training determining the transfer of valuable skills to participants, the majority of the respondents having been on training for about a month does not say much about the impartation of valuable labour market skills. This possibly explains the respondents' current unemployment status.

A significant number (11%) of respondents indicated having gone on training for either six months or three years. In the case of three years this is likely to be formal education at a school, technikon or university. Furthermore, Table 7 shows that about 10% of the respondents had trained for about a year.

Table 8 Training sponsor

Who sponsored training	Percent
Self or family	52.09
Employer	32.39
Government	8.54
Unions	0.21
Charitable, ngo	5.73
Other	1.05
Total	**100**

A barrier to training is the cost of the training. Table 8 above shows the sponsor of training. A majority (52%) of the unemployed were sponsored either by themselves or their family. A considerable proportion (32%) of the unemployed was sponsored by their employers. This sponsorship was most probably when these individuals were still employed. From the human capital theory we assume this training was employer-specific otherwise the firm would have no incentive to sponsor the employee in fear of not being able to recoup their training costs. This is then the reason why about half the population sponsored themselves as firms are reluctant to make such commitments where their cost recovery is not guaranteed.

Table 9 Whether paid during training

Paid during training	Percent
Yes, full-time wage	29.15
Part-time wage	3.43
Training wage or allowance	5.64
Not paid during training	61.78
Total	100

In addition to the direct cost of actual training there is also opportunity costs suffered by the participant during the duration of training. That is, full time training might require an employed person to quit their job. They will either take a pay cut or forego their pay entirely. Someone with a family and other responsibilities simply rules training out due to these reasons.

However training programmes are also designed for the unemployed. Unemployed people also face opportunity costs during training. When the unemployed go on training they forego effective job search and potential job offers as they are busy with their training. Lee and Hsin (2004) call this the 'lock-in effect'. This is discussed in the literature review. This might cause the unemployed to be slightly reluctant to committing to training programmes.

Table 9 shows about 62% of those that went on training were not paid. Surprisingly about 29% were paid a full time wage and about 9% were paid a part time wage or given a training allowance. We would expect more people in this latter group than those who got paid the full wage during the duration of their training. However this is probably more of an indication of training of the unemployed who have subsequently lost their jobs. Furthermore we should not assume the cost of paying employees during training was massive for the employers. Firms will only make such commitments where it is in their best interests. In this case the costs to the firm should not have been that high as the duration of training, as we saw in Table 7, is not that long with the majority of respondents indicating having trained for about a month.

Table 10 Benefits received or training paid for as part of severance package

Benefits received, training paid	Percent
Yes	4.01
No	95.99
Total	**100**

In addition to being paid during training the survey also asks what benefits people received after leaving a job. There were various options for the respondents to choose from but the one this paper is interested in is whether the worker received benefits in the form of the employer offering to pay for their training on becoming unemployed.

The results are shown Table 10. A meagre 4% of the unemployed were offered to be trained, at a cost to the employer, once unemployed. This low number is expected as the employer has no reason to invest in the workers training once that worker is unemployed. The sample size here is about double that in the prior analysis due to the fact that all the unemployed, including those that had never worked, were asked this question and not just those who had gone on some form of training.

Table 11 Whether training leads to some form of certification

Training leads to some certification	Percent
Yes	79.06
No	20.94
Total	**100**

It is one thing for the employee to go on training and totally another in terms of what the employee gets out of the training. Thus Table 11 looks at whether the training undertaken led to some form of certification. Certification is very important as it shows that this person undertook a particular course and has qualified. Put simply it is proof of the successful completion of a programme. This is why the government, or governments in general, put so much emphasis on accreditation institutions.

The training that a majority (79%) of the unemployed undertook led to some form of certification. The concern would be the others whose training does not lead to certification. This training is most likely to be on-the-job training where the company does not and probably cannot produce certification. One reason for this is that the training could be of an informal nature especially in terms of structure. It could also

be that these people, who responded that training did not lead to certification, did not go on any training.

Table 12 Training outcomes

	YES (%)	NO (%)
Training Helped to Find a Job	32.63	67.37
Training Helped to Start a New Career	21.00	79.00
Training Helped to Get a Promotion	21.93	78.07

There are also other training outcomes apart from certification. These are shown in Table 12. Training is expected to lead to one of the following three outcomes or a combination of the three. Training is expected to (1) help find a job, (2) help start a new career and (3) help get a promotion.

Given the prevalence of unemployment in South Africa, the first outcome would be what is of most interest to the unemployed. Unfortunately training only helped 33% of the unemployed get a job. This could be due to a number of reasons ranging from the training being in skills that are not required by the labour market, the poor performance of the labour market and the increased use of capital in production. This low figure could also be due to the fact that these people are already employed.

In the case that training did not help people to get jobs then it is highly unlikely that it helped them embark on a new career path. A significant proportion of the population (79%) responded that training did not lead them to begin a new career. The same applies to training leading to a promotion at work. For a majority (78%) of the population training did not lead to a promotion.

Given the above, training of the unemployed did not lead to the expected outcomes. This is disappointing especially for the trainees as the least they expect on the completion of training is to get a job. If this does not occur it literally defeats the purpose of going on the training course in the first place. However as pointed out, it

could be that respondents were already employed and could not really expect training to lead to a new job or career path.

The above results of training outcomes reflect a poor performance of training but are in the least encouraging. It should be obvious from the above that it is not enough to merely train people if they are not going to be employed. Therefore government needs to put in place policies that will absorb trained people into the labour market. One simple way of doing this is by training people in those skills required by the labour market. However this cannot be achieved by government alone, if at all. The private sector needs to be brought on board. It is the private sector that most needs skilled labour and are therefore in a position to know exactly what skills are in shortage and to what amounts they are required.

Table 13 Obstacles faced in finding work

Obstacles faced in finding work	Percent
No obstacles	5.59
Difficult to get information	30.52
Few employment opportunities	44.84
My education dont fit available jobs	10.09
Dont have personal connections	4.74
Discrimination due to age	2.14
Dont have proper working papers	0.3
No resources to start my own enterprise	0.61
Other	1.17
Total	**100**

It has been shown that training of the unemployed does not lead to their employment. Table 13 above shows the obstacles faced by the unemployed in finding work. The sample size is about 7 million given that this question was asked of all the unemployed. The biggest obstacle in finding work for the unemployed is given as the few employment opportunities available in the labour market. About 45% of the population report this as an obstacle. This goes to show two things. One is the poor performance of the labour market in absorbing market entrants and secondly, it supports the consensus that the broad unemployment measure is indeed the correct measure for the South African context.

Other obstacles in finding work reported by the unemployed include the difficulty in accessing job labour market information (31%), unsuitable educational qualifications (10%) and lack of personal connections (5%). It is clear why all three would be obstacles. Without the necessary educational qualifications one cannot expect to find a job. Furthermore the lack of access to appropriate information coupled with the lack of 'connections' in the labour market makes the job search process much harder than it already is.

Table 14 Chance for the unemployed to acquire new skills

Chance to acquire new skills	Percent
Never	53.36
Seldom	14.52
Sometimes	19.96
Regularly	12.16
Total	**100**

Finally we look at how often the unemployed have a chance to acquire new skills. The sample size is about 700,000 given that this question was asked of those who are working or temporarily absent from work. In this analysis we restricted this to the unemployed. That is, these people are those that were once employed but are at the time of the survey unemployed.

In the world that we live in today it is imperative that one continuously upgrades their skill set at each opportunity they get. However the problem would be the availability of such opportunities and this is an issue that the NSDS will need to address.

From Table 14 it can be seen that the majority (53%) of the unemployed never get the opportunity to acquire new skills. This probably explains their unemployment status. Only 12% of the unemployed regularly get the opportunity to acquire new skills. As mentioned above the NSDS needs to increase this number significantly in order to reduce the number of unemployed by reducing the duration of the unemployment which can lead to a depreciation of skills and other psychological and social problems for those affected.

4.9 Summary of training of the unemployed

From what has been described above the unemployed stopped working mostly due to retrenchment, temporary employment coming to an end or unsatisfactory wages. This applied to about 4 million people who had worked before. Given the levels of unemployment and the fact that it is structural in nature, it was expected that a significant number of people would stop working in order to pursue further education and training. However, only 2% of the unemployed fell in this category.

Furthermore only 15% of the unemployed population had gone on training to acquire new skills. This does not help their re-entrance prospects into the labour market. The most frequent and recent sources of training were technical colleges, training from work and training received commercial schools/NGOs/government. Unfortunately 30% of the unemployed had received this training prior to 1994. This helps explain their unemployment status as skills depreciate over time. However the number of people training from 1997 showed an increase.

Training was sponsored by either the trainee or his/her family or otherwise by the employer. In the case of the employer-sponsored training, the training is assumed to be firm specific otherwise the firm would have no incentive to make such commitments as the return on their investment is not guaranteed.

A majority of the unemployed were not paid during training nor did their firms offer to pay for their training on becoming unemployed. The former highlights the opportunity cost of training. Before embarking on a training course people have to consider the opportunity cost of foregone income and this can be quite high, especially for those with family responsibilities, and therefore deter people from training. The latter shows that firms only invest in training if they can recoup their investment.

For 79% who went on training, it led to some form of certification which is a very critical issue in the training arena and the labour market. On the completion of training one is expected to find a job, start a new career or get a promotion.

Unfortunately training of those unemployed did not really help in these areas which is highly disappointing and in essence defeats the purpose of going on training in the first place. However this is possibly because respondents were at the time employed and have subsequently become unemployed.

Government and the private sector need to coordinate efforts to improve the absorption of the successful trainees into the labour market. This is the least that can be expected once someone has trained. This can be done by training people in those skills required by the labour market.

Government and the private sector can also help in reducing, or removing entirely, obstacles faced by the unemployed in finding work. Some of the obstacles identified include few employment opportunities and a lack of relevant labour market information. This can be achieved through the better performance of the labour market from higher economic growth and the dissemination of relevant information through job centres.

Lastly, it was shocking to find that a majority of the unemployed who previously held jobs never got the opportunity to acquire new skills. This is shocking in the sense that in today's ever changing world, there is need to update ones skills continuously otherwise one will be marginalised into unemployment. Again this is an area that the NSDS needs and aims to address adequately.

4.10 Training of the employed

The section below follows the same approach as Section 4.8. The only difference with this section is that it is the training of the employed that is considered. Training of the employed is expected to be different from that of the unemployed hence the different employment status of the two groups. However this might not be the case given what we established in Section 4.8. That is, the unemployed who trained most likely undertook this training when they were employed. On the other hand, we did establish that this only applied to about 30% of the unemployed which was considered as insignificant.

Table 15 Training of the employed for work skills/new job

Received any training for work skills/ new job	Percent
Yes	38.14
No	61.86
Total	**100**

From Table 15 it can be seen that only 38% of the employed had received any training for work skills or for a new job. This is as the variable is defined in the survey. Despite the level of training for the employed being double that of the unemployed, it is still low given the prevalence of unemployment and thus leaves a lot to be desired from the NSDS.

This training question was asked of all randomly selected individuals (RSIs), both unemployed and employed. The sample size in Table 15 is about 10.5 million while in Table 4 the sample size was about 9 million. The discrepancy is probably due to the fact that those that responded 'yes' in Table 15 are both the currently employed as well as those who went on training when they were employed but have subsequently lost their jobs. Those that responded 'no' in Table 15 are less (6.5 million) than those that responded no (7.6 million) in Table 4. This is because in the latter case this figure included people that have never worked before.

Table 16 Source of skills training

Source of skills training	Percent
Apprenticeship program	3.45
Technical college	9.32
Workers college	5.06
Academic secondary school	1.65
Technikon diploma course	7.28
University institution	22.73
Commercial school, ngo or government	10.82
Training at work	8.61
On-the-job training	22.4
Training received on previous job	5.84
Correspondence course	2.34
Other	0.52
Total	**100**

The sources of the training that the employed undertook are shown above in Table 16. The majority (23%) of the employed received training from a university institution. This is closely followed by on-the-job training (22%). Other significant sources of training were: commercial school, NGO or government (11%), training at work and training at a technical college both at 9%.

Training on the job is likely to be firm specific training and is unlikely to be structured or leading to some form of certification. University training is of vital importance. This is the form of training that employers are in high demand of. University graduates through their training are deemed to be versatile and adaptable to any situation and these are attributes that are needed in this ever-changing global economy. In fact there is such a shortage of skills in various sectors in the South African economy that graduates in fields such as engineering, financial services and information technology are literally guaranteed employment as there is a 'vacancy galore' in these fields (Ntuli, 2006).

Table 17 Year in which most recent training was received

Year received most recent training	Percent
Still in training	21.04
1998	12.46
1997	8.58
1996	4.63
1995	5.67
1994	5.64
1993 or before	41.99
Total	**100**

How recent is recent training? Table 17 shows the actual year in which the most recent training was undertaken. As was the case with the unemployed, the majority of the training of the employed was prior to 1994. This is expected given that at the time of the survey the new government had only been in power for about five years. Having said this, there is about 21% of the population that was currently in training at the time of the survey. This is rather a remarkable feat given the relatively short time period that the new government had been in power. This shows the seriousness with which the government takes the issue of training and skills development in redressing the injustices of the apartheid regime.

Table 18 Monthly duration of training for the employed

Training duration (months)	Percent
1	33.52
2	6.24
3	7.08
4	1.18
5	0.62
6	8.92
7	0.16
8	0.52
9	0.39
10	0.4
11	0.28
12	9.54
18	0.83
20	0.07
24	6.64
26	0.07
28	0.15
30	0.17
32	0.03
33	0.08
36	13.43

37	0.24
42	0.07
46	0.09
48	6.1
60	1.3
72	0.54
84	0.15
90	0.02
96	0.28
98	0.89
Total	**100**

The structure of the training duration variable was discussed in Section 4.8. This time the duration of training for the unemployed is studied. As reasoned in Section 4.8, the duration of training is examined in months as opposed to days or weeks.

Table 18 presents the number of months the employed spent in training. A majority (34%) of the employed spent a month in training. About 10% of the employed spent a year in training while about 13% spent about three years in training. This is a similar pattern to that found for the unemployed.

Table 19 Training sponsor

Who sponsored training	Percent
Self or family	39.54
Employer	44.08
Government	11.48
Charitable, ngo	2.9
Other	2
Total	**100**

The importance of sponsorship of training was mentioned in Section 4.8. The majority of training sponsorship was between self or family (40%) and the employer (44%). Government sponsored only about 11% of the training. This shows that government needs to increase its role in the training of the population. But more importantly Table 19 shows the important role that employers play in training. In this regard government's role can be in providing the appropriate 'climate' in which more training can take place. In fact this is the role that government should play rather than the direct role of training provision. This is after considering government efficiency or lack thereof.

Table 20 Whether paid during training

Paid during training	Percent
Yes, full-time wage	54.62
Part-time wage	5.99
Training wage or allowance	4.73
Not paid during training	34.66
Total	**100**

About 55% of the employed were paid a full time wage during the course of their training. This is vitally important as it means the participant is not facing any opportunity cost in terms of foregone income. This type of training as seen from above is likely to be firm specific and therefore on-the-job training. In this way firms are sure to recoup their investment.

Quite a large proportion (35%) of the employed was not paid during their training duration. This type of training is likely to be the general type which firms will not sponsor as they are not assured of making a return on their investment.

Table 21 Training leads to certification

Training leads to some certification	Percent
Yes	78.49
No	21.51
Total	**100**

As mentioned in the previous section, certification is a critical issue in training. Training led to some form of certification for about 78% of the employed. For those who did not get any certification, the training was likely to be of an unstructured nature such as training at work learning a new position.

Training is expected to assist in finding a job, starting a new career or assisting in getting a promotion. Without these incentives there would be no training. Table 22 below provides information regarding training outcomes.

Table 22 Training outcomes

	YES (%)	NO (%)
Training Helped to Find a Job	57.68	42.32
Training Helped to Start a New Career	38.30	61.70
Training Helped to Get a Promotion	51.81	48.19

Training led to 58% of the employed getting a job. This is likely to be their current job. However training only helped 38% start a new career. In terms of getting a promotion at work, training helped about 52% of the employed get a promotion. These results are much better than was the case for the unemployed and this is expected. Furthermore, these results go to show that the training in the country has great potential and will make that difference in people's lives. That is, people will be able to get jobs, promotions and start new careers which will greatly improve their welfare. However, this is for those that are employed. Therefore, strategies to improve training outcomes for the unemployed are needed.

Table 23 Chance for the employed to acquire new skills

Chance to acquire new skills	Percent
Never	30.49
Seldom	17.45
Sometimes	29.04
Regularly	23.03
Total	**100**

Table 23 shows the opportunity that the employed face in acquiring new skills. This is of vital importance for the survival in today's labour market. About 30% of the employed never get the opportunity to acquire new skills. On the other hand, about 23% of the employed regularly get presented with opportunities where they can acquire new skills.

4.11 Summary of training of the employed

In terms of the training of the employed only 38% trained. The major sources of training were from university institutions, on-the-job training, training at work, training from commercial schools/NGOs/government and training from technical colleges. Furthermore, the most recent training was prior to 1994. However about 21% of the employed were currently in training at the time the survey was being conducted.

In particular university training is of vital importance to the South African economy. The labour market is in high demand of university graduates that are deemed to be more versatile and adaptable to changing conditions through their training. However it has to be ensured that these graduates are graduating in the required fields such as financial services, engineering, and information technology.

Training sponsorship was, as was the case for the unemployed, shared between self/family and the employer. Government through the NSDS should aim to establish a 'training equilibrium' where firms will be able to train more people. Under these conditions firms will have an incentive to train as compared to current conditions where training investments are not ensured to be recouped.

About 55% of the employed where paid during training which means they do not face an opportunity cost financially. This training is likely to be firm specific and particularly on-the-job training as this is the only type of training where firms will be assured of recouping their investment.

Training led to some form of certification and also assisted people in finding jobs and getting promotions. However training did not do much in helping people starting new careers. Nevertheless the results of training outcomes are promising for human resource development in this country.

Only 23% of the employed have the opportunity to acquire new skills. This does not seem like much given that people need to be presented with opportunities to update their skill set in order to remain competitive in the global market.

4.12 Comparison between training of the broadly unemployed and the employed

This section makes a comparison between the training of the broadly unemployed and those employed. This is simply done in Table 24. The information highlighted in the table has all been addressed above.

Table 24 Comparison of training of the broadly unemployed and the employed

	Broadly unemployed	Employed
How many went on training (%)	15	38
Sources of training (%)	Technical college Training from previous job Commercial schools/NGO/Government	University institution Commercial schools/NGO/Government Technical college
Still in training or trained two years prior to survey (%)	48	43
Training duration (months)	34% trained for 1 month 11% trained for 6 months 11% trained for 3 years	34% trained for a month 10% trained for 1 year 13% trained for 3 years
Sponsor of training	52% self or family 32% employer	40% self or family 44% employer
Paid full time wage during training (%)	29	55
Training led to some form of certification (%)	79	78
Training helped find a job (%)	33	58
Training helped start a new career (%)	21	38
Training helped get a promotion (%)	22	52
Chance to regularly acquire	12	23

new skills (%)		

The following chapter deals with the modeling aspect of the study. The chapter develops four probit models that are used to determine the probabilities of training for the economically active population, the unemployed and the employed respectively. The last probit determines the probability that an individual would have undergone employer-funded training while the other three probits consider funding for training from any source. The fourth probit is of most interest in terms of establishing a benchmark with which to compare the impact of the NSDS on the labour market since its implementation.

5 REGRESSION ANALYSIS

5.1 Introduction

Given the descriptive analysis of the dataset in the previous chapter, this chapter now focuses on modeling. The same dataset is used. The current chapter develops four probit regression models (probits). These probits determine the probabilities of training for the economically active population, the unemployed and employed respectively. That is, the first probit determines the probability of training for both the unemployed and the employed as a build up to the other three probits. The second probit determines the probability of training for just the unemployed while the third probit determines the probability of training for the employed only. Useful insight is gained by running separate probits for the unemployed and employed in that industries, occupations, firm size, job tenure and union membership can be introduced in the employed probit. The funding of training in these three probits can be from any source while the fourth and last probit determines the probability of employer funded training only. In terms of public sector funding, this funding is specifically for civil servants. This probit will be the benchmark with which future research will make their comparisons with in terms of establishing the impact of the NSDS.

The format of the chapter is as follows. First, a brief justification for using a probit model is given followed by a simple description of the probit model. This is to serve as a form of background. Thereafter the estimation results of the four models are each analysed in turn. The models are analysed in the order given above. That is, first the probability of training for economically active population, then the probability of training for the unemployed only, this is then followed by the probability of training for the employed only. Lastly, the probability of employer funded training is determined and this is strictly for those employed by an employer either in the private or public sector.

5.2 The linear probability model

Training in the dataset below is defined as someone 'having received training for work skills or a new job.' The dependent variable, the probability of training, in this investigation is thus qualitative and binary in nature. That is, a person could either have gone on training (1) or not (0). Thus, a linear probability model (LPM) could essentially be used to determine the probabilities of training for the various groups of people in the labour force. The biggest advantage of the LPM is its simplicity. However, despite its simplicity, the LPM has various shortcomings. These shortcomings include: non-normality of residuals, hetroscedasticity, conditional probabilities of an event occurring can exceed the 0 and 1 bounds, and the co-efficient of determination (R^2), as a measure of the model fit, is questionable. These concerns can be addressed by logit and probit models (Gujarati, 2003: 582-587). In this paper the probit model is chosen and is described below.

5.2.1 The probit model

Gujarati (2003: 608-609) describes the use of the probit model as an alternative to the LPM. The probit model makes use of a latent variable, I*i*, which is unobserved and is determined by one or more variables. The higher the value of I*i*, the greater is the probability of that event occurring. This is expressed as follows:

$$Ii = \beta_1 + \beta_2 X_i \qquad (1)$$

It is assumed that that the latent index has a threshold level, I*i**, such that if I*i* exceeds I*i**, that event will occur, otherwise not. This threshold is also not observable and is normally distributed.

The probability of I*i** being less than or equal to I*i* is calculated as follows:

$$Pi = P(Y=1 \mid X) = P(Ii^* \leq Ii) = P(Z \leq \beta_1 + \beta_2 X_i) = F(\beta_1 + \beta_2 X_i) \qquad (2)$$

Pi = P(Y=1 | X) means the probability that an event will occur given the values of the explanatory variables.

To get information on I_i and β_1 and β_2 the inverse of (2) should be taken i.e.

$$Ii = F^{-1}(Ii) = F^{-1}(P)$$
$$= \beta_1 + \beta_2 X_i \quad (3)$$

5.3 Analysis of estimation results

As mentioned above, a total of four probit models were developed in this chapter. The purpose of running these probits was to determine the different probabilities of training for the entire economically active population as well as the probabilities of training for the unemployed and employed separately. This is seen as one way of establishing the training environment in the South African labour market at the time the survey was conducted. The reader is provided with the reasoning behind each model before the reporting of the results. Only results significant at the 5% and 1% level are discussed.

5.3.1 The probability of training for the economically active population

The first probit aims to assess the probability of training for the entire economically active population before the training probability of the unemployed and employed are looked at separately. The economically active population includes people that are both employed and unemployed and thus in the labour force. People outside the labour force are excluded.

Table 25 The probability of training for the economically active population

Independent variables	Marginal effects
Employed	0.1125461 **
Female	-0.0776419 **
Coloured	0.2093736 **
Asian	0.1545813 **

White	0.3906659 **
Children under 15 years	0.0222437
15-24 years	-0.1085346 **
35-65 years	0.01165
Urban	0.0812826 **
Primary education	0.1738172 **
Incomplete secondary education	0.3520255 **
Complete secondary education	0.4461838 **
Post matric education	0.8356259 **
Eastern Cape	0.1035992 **
Northern Cape	-0.0426076
Free State	0.0917623 *
KwaZulu Natal	0.1134884 **
Northwest Province	0.0764956
Gauteng	0.1833449 **
Mpumalanga	0.123887 **
Limpopo	0.1240165 **
Observed probability	0.2759751
Predicted probability (at x-bar)	.2221945
Number of observations	7404
Prob > chi2	0.0000
Pseudo R	0.3751

Source: Mesebetsi Labour Force Survey 1999-2000

Notes: * Significant at the five per cent level.

** Significant at the one per cent level

From the Table 25, the employed are 11% more likely to train than the unemployed. This result is highly significant at the 1% level. Furthermore this result is in line with our expectations as the employed have more access to information regarding training opportunities as well as the financial resources to undertake training. The employed are also more likely to be better educated than the unemployed and thus more likely to succeed on training.

Females are about 8% less likely to train than their male counterparts. This is significant at the 1% level of significance. This result could be due to discrimination

in the labour market. Discrimination in this regard can take two forms. The first is employer discrimination, where employers prefer to hire men due to the fact that men are more attached to the labour market. That is, women's labour market participation is likely to be interrupted by child bearing. The second source of discrimination is from the family and society. Female children are not encouraged to study given the poor prospects that await them in the labour market. Women are therefore not likely to get jobs that require them to train. Also, it is possible that women see that employers are discriminating against them and respond accordingly by either acquiring education that is suited for jobs that require low training levels or by only getting temporary jobs where training is not really required (Oaxaca, 1973).

However, female discrimination should decrease given the Employment Equity Act in the case of South Africa. This Act encourages gender equality in the workplace. Furthermore education levels of women are increasing and are comparable to those of men and this is increasing their participation in, and attachment to, the labour market (Casale, 2004).

At the 1% level of significance, Coloureds, Asians and Whites are about 21%, 15% and 39% respectively more likely to train than Africans. This is obviously a result of past iniquitous policies in South Africa. Africans, as seen from the last chapter, have low levels of education and therefore can only get low-level jobs that do not require much, if any, training.

The 15-24 age group is about 11% less likely to train than 25-34 age group. This could be because youth in the 15-24 age group are employed in jobs that do not require training. This result is significant at the 1% level of significance.

Living in an urban area, as compared to a rural area, increases the probability of training by 8%. This result is significant at the 1% level of significance. A possible reason for this was given in the data analysis chapter. There is a higher training probability in urban areas as this is where most economic opportunities exist. The type of jobs that exist in urban areas are also probably more likely to be the ones that need some form of training as compared to those found in rural areas which are most

likely to be at the subsistence level (i.e. agriculture). Another reason for a higher training probability in urban areas is that the training providers, assuming training is outsourced, are more likely to be located in urban areas as opposed to rural areas where there is a higher demand for them.

The level of education determines the type of job that one gets and therefore the amount of training to be acquired. For instance, the higher one's education, the higher the level of occupation one will obtain and ultimately the better one's training prospects. This is precisely the case with the results above. Increasing levels of education result in the increased probability of training.

Specifically, those people that have attended primary schooling, incomplete secondary schooling, complete secondary schooling, and post-matric education are 17%, 35%, 45% and 84% respectively, more likely to go on training as compared to those people with no education. All these results are significant at the 1% level.

The above results show the importance of post matric education in the economy. Currently the economy is facing a severe shortage of high skills. The education and training arenas need to respond appropriately and provide the labour market with such skills. However this will take time and therefore not do much to alleviate poverty by half by 2014. The short term response would be for the economy to grow sufficiently and thus create jobs for even those that have low levels of education. These jobs, it is hoped, will be permanent and provide the necessary training for people to acquire vital skills to improve their welfare and at the same time benefit the economy in terms of further economic growth.

Provinces in South Africa are very uneven in terms of poverty and income distribution. Gauteng, Western Cape and KwaZulu Natal are three provinces that have huge economic might and are well developed in terms of infrastructure. Some provinces are therefore more urbanized than others. Similar to what was discussed above regarding urban and rural locations, some provinces are more rural than others and hence have less economic activity, and therefore few training opportunities can be expected in such provinces.

The base province in the output above is the Western Cape. The economically active in the Eastern Cape, KwaZulu Natal, Gauteng, Mpumalanga, and Limpopo are 10%, 11%, 18%, 12% and 12%, respectively, more likely to train than the economically active in the Western Cape. These results are significant at the 1% level. The results for the Free State are significant at the 5% level. The economically active in the Free State are about 9% more likely to go on training than the economically active in the Western Cape. The reason behind this could be that these provinces are more industrial than the Western Cape and therefore there is a high demand for labour and thus higher training opportunities.

5.3.2 The probability of training for the broadly unemployed

Table 26 below produces the results for the probability of training for the broadly unemployed. From the previous chapters it was established that the broad measure of unemployment is appropriate given the high number of discouraged workers in the labour market.

It is important for the unemployed to have the opportunity to train as this will, in the least, reduce the depreciation of skills as well as speed up their re-entrance into the labour market. Without such training opportunities the number of discouraged workers will tend to increase as people once unemployed will not bother looking for employment after a certain point as job search proves to be unfruitful.

Table 26 The probability of training for the broadly unemployed

Independent variable	Marginal effects
Female	- 0.0749345 **
Coloured	0.1182389 **
Asian	0.2811044 **
White	0.4288756 **
Children under 15 years	0.0240655
15-24 years	- 0.0706538 **
35-65 years	0.0122086
Urban	0.0206662
Primary education	0.0909841

Incomplete secondary education	0.2253511 **
Complete secondary education	0.2667293 **
Post matric education	0.905064 **
Eastern Cape	0.0522495
Northern Cape	0.0634146
Free State	0.0703201
KwaZulu Natal	0.0285062
Northwest Province	- 0.0093826
Gauteng	0.1361566 **
Mpumalanga	0.0377881
Limpopo	- 0.0005672
Observed probability	0.1510529
Predicted probability (at x-bar)	0.098154
Number of observations	3247
Prob > chi2	0.0000
Pseudo R	0.3045

Source: Mesebetsi Labour Force Survey 1999-2000

Notes: * Significant at the five per cent level.

** Significant at the one per cent level

Women are one of two groups worst affected by unemployment. From Table 26, unemployed women are about 7% less likely to train than their unemployed male counterparts. This result is highly significant at the 1% level. This result would explain why unemployment affects women worse than it affects men. As mentioned above, without the opportunity to train the duration of unemployment is further prolonged.

The probability of training of the unemployed in terms of race again clearly reflects the racial history of the country. That is, unemployed Coloureds, Asians and Whites are more likely to engage in training as compared to unemployed Africans. In particular, unemployed Coloureds, Asians and Whites respectively have a 12%, 28% and 43% higher probability to train than their unemployed African counterparts. These results are significant at the 1% level.

Whites have the highest probability to train due to higher education levels and higher income levels that can afford them the training. This has led to the view that White unemployment is probably voluntary in nature as Whites can afford to remain unemployed due to their relatively higher income levels that can be used to support them through unemployment spells. Affording training is also in the sense of opportunity cost. That is, Whites can afford to forgo income in the labour while pursuing a training programme.

The unemployed that are between 15 and 24 years old are about 7% less likely to train than the unemployed that fall between the ages of 25 and 34 years. This result is highly significant at the 1% level. This result is in line with our intuition. The unemployed that are between the age of 15 and 24 years have a lower probability to train because they are less inclined to do so as they are unlikely to have any huge responsibility at this tender age. Furthermore, these people can easily return to school to improve their educational qualifications and therefore do not need to go on training per se. Another reason for this age group's lower probability of training could be the combination of the nature of jobs this group holds and their relatively short job tenure.

Educational qualifications of the unemployed are important in the sense that they play a part in determining re-entrance into the labour market. That is, the higher one's educational qualifications are, the more likely they are to train and therefore improve their chances of being re-employed on the completion of their training as they would have upgraded their skill set.

The results confirm the above hypothesis. That is, higher levels of education increase the probability of training. Specifically, the results show that the unemployed with primary education, incomplete secondary, complete secondary and post matric education respectively have a 9%, 23%, 27% and 90% higher probability of training than the unemployed with no educational background. Apart from the primary school coefficient, all the results are significant at the 1% level.

The importance of education beyond matric is again shown in these results. People that possess diplomas and degrees can more easily go on training programmes which

can then quickly move them back into employment. However such people are not in the majority. Given these results the education system should aim to increase the levels of education of the populace especially at the post matric level. As mentioned before, increasing the number of educated people beyond the matric level will take time to accomplish and is thus a longer term strategy.

In terms of the probability of training of the unemployed in the nine provinces, Gauteng is the only province that produces a significant result. The results for the other provinces are not even significant at the 10% level.

In Gauteng the unemployed are about 14% more likely to train than their unemployed counterparts in the Western Cape. This is most probably due to Gauteng being historically more economically active than the Western Cape and therefore offering more training opportunities to maintain the supply of labour (in terms of skills) for the various industries.

5.3.3 The probability of training for the employed

The following probit model determines the probability of training for the employed. Given their employment status their training probability should be higher than that of the unemployed. This is because the chances of training, especially job-related training, are higher when one is employed especially from an informational point of view. That is, when someone is employed they are more likely to be aware of the skill shortages and the training opportunities available. The opportunity to train is vitally important and cannot be stressed enough as people are able to build marketable skills that they can use in the labour market indefinitely. Marketable skills put people in a better position to negotiate with employers regarding terms and conditions, especially in terms of wages, of employment.

Table 27 The probability of training for the employed

Independent variable	Marginal effects
Female	-0.0626741
Coloured	0.3704726 **
Asian	0.1822664 *
White	0.4759342 **
Children under 15 years	-0.0089011
15-24 years	-0.065607
35-65 years	0.008608
Urban	0.0697471
Medium firm (100-499 employees)	0.073377
Large firm (500 + employees)	0.1367143 *
Primary education	0.0878762
Incomplete secondary education	0.2141285 *
Complete secondary education	0.3490564 **
Post matric education	0.7271278 **
Professionals	-0.2162409 *
Technicians and associate professionals	-0.1663392
Clerical	-0.1461798
Service and sales workers	-0.1532536
Skilled agricultural & fishery workers	-0.2059502 *
Craft and trades workers	-0.1674255 *
Machine operators and assemblers	-0.2604168 **
Elementary occupations	-0.2991616 **
Eastern Cape	0.0646426
Northern Cape	0.0646426
Free State	0.1305877
KwaZulu Natal	0.2062543 *
Northwest Province	0.1886501
Gauteng	0.2279539 **
Mpumalanga	0.169646
Limpopo	0.2332653 *
Job tenure 2 (11-20 years)	-0.101454
Job tenure 3 (21-30 years)	-0.0590174
Job tenure 4 (30+ years)	-0.0183957
Permanent job	-0.0590619
Second job	0.1224068
Union membership	0.1141174 *

Observed probability	0.3806356
Predicted probability (at x-bar)	0.3703631
Number of observations	1568
Prob > chi2	0.0000
Pseudo R	0.4022

Source: Mesebetsi Labour Force Survey 1999-2000

Notes: * Significant at the five per cent level.

** Significant at the one per cent level

Race also plays an important role in the probability of training of the employed as expected. Employed Africans have the lowest probability of training relative to the other races. Coloureds have a 37% higher probability of training than Africans while Asians and Whites are 18% and 48% respectively more likely to train than Africans. The coefficient on the Asian variable is significant at the 5% level while the other two coefficients are both significant at the 1% level.

Being employed in a large firm that employs more than 500 people increases the probability of training by about 14%. That is, employees of large firms are 14% more likely to train than employees of small firms that only employ up to 100 employees. This is expected since large firms have the greater need for training as well as the financial resources to provide workers with training. Furthermore, large firms are expected to be the well established corporations that may even be listed on the Johannesburg Stock Exchange while the small firms are more likely to be sole traders or partnerships that are not that well established in the market.

Education beyond primary schooling also plays a vital role in determining the probability of training of the employed. Those with incomplete secondary education are 21% more likely to train than those without any formal schooling. However this result is only marginally significant at the 5% level.

Complete secondary schooling and post matric education result in an even higher probability of training. Specifically, complete secondary education results in a 35% higher training probability than those employed people but without any education.

The employed with post matric have a 72% higher probability of training relative to the employed without any education. Both these results are highly significant at the 1% level.

These results again highlight the importance of education in this country. Those people who attain secondary education and beyond are more likely to be trained as they are in higher occupations. People with such educational qualifications are also the most likely to succeed in training programmes and are thus in high demand in the labour market.

The probability of training is also determined by the occupation in which one falls under. This can be illustrated by a simple example. For instance, people in higher occupations such as managers and professional are expected to go on more training than people employed as machine operators. Machine operators once they learn how to operate a particular machine have literally done all the training they can expect unless there is a technological change. On the other hand, managers and professionals are expected to keep abreast of developments in their respective fields or else risk being made redundant and therefore regular training is essential.

The results presented in the Table 27 confirm this hypothesis. Managers and senior officials are the highest occupation level and thus all people employed in the other occupations are found to have a lower probability of training than managers and senior officials. The base variable is thus managers and senior officials. Those employed as professionals are 22% less likely to train as compared to managers and senior officials however this result is marginally significant at the 5% level. This is most probably because there is not a huge difference between the two occupations.

Service and sales workers are about 15% less likely to train than managers and senior officials. Again this result is marginally significant at the 5% level. At the 5% level of significance, skilled agricultural and fishery workers and craft and trade workers are 21% and 17%, respectively, less likely to train than those employed in the base category.

At the 1% level of significance, machine operators and assemblers and elementary occupations are respectively 26% and 30% less likely to engage in training than managers and senior managers.

In terms of the employed in the various provinces, the only significant results at the 5% and 1% levels are KwaZulu Natal, Gauteng and Limpopo. Those employed in these provinces are 21%, 23% and 23%, respectively, more likely to train than those employed in the Western Cape. Given what was said about occupations, these provinces probably have a higher number of occupations that require training as compared to the Western Cape. It should also be bourn in mind that KwaZulu Natal and Gauteng are very important provinces for South Africa economically and thus such results should be expected.

Lastly, being employed and a member of a union, increases the probability of training by 11% as compared to those employed that are non-union members. This result is significant at the 5% level and is in line with our intuition as discussed earlier.

5.3.4 The probability of employer funded training for the employed

The final probit determines the probability of the employed going on employer funded training. The interest in employer funded training is due to the NSDS framework. The NSDS is funded by a one percent payroll levy provided by employers that goes to Sector Education and Training Authorities (SETAs) for the provision of learnerships to training participants. Employer funded training in our context is meant to proxy these learnerships and thus try to establish the impact of employer funded training on the labour market prior to the actual implementation of the NSDS. However, it should be noted that it is probably the employer that chooses the employees that can go on training and thus an element of discrimination can be expected in this process.

Employer funded training was structured in the following manner. Firstly, only those industries where training is likely to take place were considered. Thus three industries/categories were removed. These categories/industries were: (1) people who had never worked, (2) those working in private households i.e. domestic workers and

(3) those that work in their own households and engaged in subsistence activities. It is clear why training is unlikely to occur in these industries.

Furthermore, only those employed, and thus of working age, were considered in the analysis. This left out the unemployed and those out of the labour force from the analysis. This is because we only wanted those that were employed at the time of the survey.

Lastly, the analysis only considers those people that have received training and are employed by an employer (private or public sector employer), and this training was sponsored by this employer. Government sponsored training was for public sector employees only.

Table 28 The probability of employer funded training for the employed

Independent variables	Marginal effects
Female	-0.058337 *
Coloured	0.2664287 **
Asian	0.1295765 *
White	0.4516596 **
Children under 15 years	0.0228709
15-24 years	-0.0709265
35-65 years	0.0189729
Urban	0.0662973
Medium firm (100-499 employees)	0.1013968 *
Large firm (500+ employees)	0.1569593 **
Primary education	0.0530829
Incomplete secondary education	0.1292758
Complete secondary education	0.181873 *
Post matric education	0.2302672 *
Professionals	-0.1911901 **
Technicians and associate professionals	-0.1333261 **
Clerical	-0.1451407 **
Service and sales worker	-0.1464479 **
Skilled agricultural and fishery workers	-0.1735992 **
Craft and trades workers	-0.184212 **
Machine operators and assemblers	-0.1909265 **

Elementary occupations	-0.2082518 **
Eastern Cape	-0.0131188
Northern Cape	0.1095648
Free State	0.0355991
KwaZulu Natal	0.1787565 **
Northwest Province	0.0689512
Gauteng	0.102837
Mpumalanga	0.1114233
Limpopo	0.2032205 *
Job tenure 2 (11-20 years)	-0.0532182
Job tenure 3 (21-30 years)	0.0041615
Job tenure 4 (30+ years)	0.0838002
Permanent job	0.0180211
Second job	0.0610787
Union membership	0.0764759 *
Observed probability	0.2454458
Predicted probability (at x-bar)	0.1886013
Number of observations	1525
Prob > chi2	0.0000
Pseudo R	0.2805

Source: Mesebetsi Labour Force Survey 1999-2000

Notes: * Significant at the five per cent level.

** Significant at the one per cent level

Employed females are about 6% less likely to go on employer funded training. This result is marginally significant at the 5% level. Despite this, however it is interesting to consider why women are less likely to go on employer funded training. The obvious reason would be due to gender discrimination in the labour market.

There is in fact quite a huge literature on gender discrimination in the labour market. As mentioned earlier discrimination in this context can be considered as being from two sources. The first source is from employers. That is, employers prefer to put men through employer funded training because they are most likely to recover their investment both relatively quickly and fully. Women with their child bearing role, are expected at some point in their lifetime to have a child and thus withdraw from the

labour market on a temporary basis at the least. Employers see these as reasons enough not to put women through employer funded training (Oaxaca, 1973).

The second source of discrimination arises from society itself. That is, women see how they are being discriminated against in terms of occupations, training and other labour market outcomes. Women therefore respond in way that tends to avoid such discrimination but at the same time perpetuates discrimination. For instance, women get educated in areas such as home economics where further employer training is not really required. Or, women only apply for temporary jobs where again training is not expected (Oaxaca, 1973).

The NSDS should aim to correct such issues in the labour market. That is, the provision of training should not depend on the gender of the prospective participant. However, the Employment Equity Act is more likely to make this change in the labour market. Furthermore, with increased women education levels there is an increasing number of women participating in the labour market and thus their attachment to the labour market has also increased. Thus there is no need for employers to discriminate against women when choosing employees to go on employer funded training.

The race variable follows the same trend as in the other models above. That is, Africans are less likely to go on employer funded training than the other three races. Specifically, Asians are 13% more likely to go on employer funded training than Africans. This result is significant at the 5% level.

Coloureds and Whites are 27% and 45% respectively, more likely to go on employer funded training than their African counterparts. These results are both significant at the 1% level.

Whites exhibit such a high probability to train due to the fact that they have the highest education levels and are thus are also employed in the highest occupation levels. This is obviously an element of the labour market that the government needs to address in order to reflect the demographics of the country.

The size of the employer in terms of the number of employees again seems to matter in determining the probability of employer funded training. Employees from both medium firms (100 – 499 employees) and large firms (more than 500 employees) have a higher probability of going on employer funded training as compared to those employed in small firms (1 – 99 employees). In particular, employees in medium firms are 10% more likely to go on employer funded training than employees from small firms. This result is significant at the 5% level.

On the other hand, employees from a large firm have are 16% more likely to go on employer funded training as compared to their counterparts in small firms. This result is highly significant at the 1% level.

The reason for employees from larger firms having a higher training propensity is because these firms have both the need and financial resources to put employees through training. In terms of the NSDS, it is also these larger firms that are mandated to pay the one percent payroll levy for training provision. If a firm is paying the levy it is therefore in their best interest to make use of the funds and provide training for their employees.

In terms of educational levels, only the complete secondary schooling and post matric education produce significant results at the 5% level. Those with secondary school qualifications are 18% more likely to go on employer funded training than those without any education. Post matric education increases the chances of employer funded training by 23% when compared to those employed with no education. These results again reflect the importance of education, especially of post-matric education, in the labour market.

The importance of occupation in training is also reflected in results of this model. All the results are highly significant at the 1% level. The base variable is still managers and senior officials which is the highest occupation level. As explained earlier all the results show that people employed in the other occupations are less likely to go on employer funded training than those employed in the base occupation.

Professionals, technicians and associate professionals, clerical workers, services and sales workers, skilled agricultural and fishery workers, craft and trade workers, machine operators and assemblers and elementary occupations are, respectively, 19%, 13%, 15%, 15%, 17%, 18%, 19% and 21% less likely to go on employer funded training that managers and senior officials.

As far as provinces are concerned, those employed in KwaZulu Natal and the Limpopo are 18% and 20% respectively, more likely to train than those employed in the Western Cape. These results are significant at the 1% and 5% levels respectively.

Being a union member also helps in ensuring employer funded training. The results show that an employed union member is about 8% more likely to go on employer funded training than an employed non-union member. This is because unions negotiate with employers for their members to go on training and this is for the benefit of both parties.

5.4 Conclusion

This chapter analyses the probability of training in the South African labour market. This is achieved through the use of probit models. The probit model was preferred over the linear probit model despite the latter's simplicity. The linear probability model has various shortcomings that the probit model overcomes.

A total of four probit models were ran and each of these determined the probabilities of training for the economically active population, the unemployed, the employed, and lastly, the probability of employer funded training for those employed respectively. Training in the dataset was defined as 'training for work skills or a new job.'

In terms of the economically active population, the unemployed, females, Africans, those with no or low levels of education have a lower probability of training than the employed, males, non-Africans and those with higher levels of education respectively. Furthermore, the economically active that reside in urban areas, in the Eastern

Cape, Free State, KwaZulu Natal, Gauteng, Mpumalanga and the Limpopo are more likely to engage in training than the economically active that live in rural areas and in the Western Cape respectively.

The probability of training for the broadly unemployed also showed that women, Africans, the youth (15 – 24 years), and those with no or low levels of education were less likely to engage in training. Furthermore, the unemployed in were more likely to engage in training than the unemployed in the Western Cape.

Training for the employed is expected to be relatively higher than for the unemployed as the employed have higher chances of training due to their employment status. However this cannot be established from the probit models under consideration. The results show that for the employed, non-Africans, those employed in large firms with high levels of education and in high occupations have a higher probability of training than Africans, those people employed in smaller firms, with no or low levels of education and in low occupations respectively. The employed in KwaZulu Natal, Gauteng and the Limpopo and union members are also more likely to engage in training than the employed in the Western Cape and non union members respectively.

Employer funded training was meant to proxy learnerships that form the core of training delivery in the NSDS. The aim of this was to try and establish the impact of training funded by employers prior to the implementation of the NSDS in 2001.

The analysis group under consideration was those people that are employed in industries where training is likely to be provided or required. This sponsor of the training was the employer. In the case of government funded training, this would be for civil servants only. The results were essentially the same as for employed above.

Men, non-Africans, those employed in larger firms with high levels of education and employed in high occupations, are more likely to train than females, Africans, those employed in small firms with no or low levels of education and employed in low occupations respectively. Furthermore, those in KwaZulu Natal and the Limpopo and

union members are also more likely to go on employer funded training as compared to those employed in the Western Cape and non-union members respectively.

The results above highlight three key aspects of the South African labour market. First, Africans under each model are less likely to go on training than the other three race groups. This is obviously due to the racial past that has already been stressed more than enough during the course of this paper. Africans have the lowest levels of human capital which makes it difficult for them to qualify for training programmes or to acquire high level jobs that would require them to train. This is obviously a situation the government needs to urgently address through its education and training policies.

Secondly, the importance of education in this country can clearly be seen from the results presented above. Higher levels of education, especially at the complete secondary school and post-matric level, increase the probability of training enormously. People with secondary and tertiary education are the ones that are likely to get the high occupations that require training. The education results confirm the skills shortage in the country especially at the tertiary level. The labour market requires people with tertiary qualification and thus the supply side needs to respond accordingly. However this will take time to achieve. A shorter term strategy would be for the government to grow the economy sufficiently to create jobs for those people with low skill levels. This will lead to higher economic growth.

Lastly, women are also less likely to train than men. This goes to show that there is an element of discrimination in the labour market. Discrimination arises from the employer as well as society. Women thus end up either not being chosen by the employer to go on training and enter jobs where training is not essential. The Employment Equity Act aims to increase women representation in all sectors of the labour market. Furthermore, the increased education of women has led to an increase in female labour market participation in, and attachment to, the labour market. This trend is set to continue and should thus result in an increased number of women training in the labour market.

6 CONCLUSIONS

This paper thoroughly studied unemployment and training in the South African labour market using the 1999-2000 Mesebetsi Labour Force Survey. The main objective of the paper was to establish the training probabilities for both the unemployed and employed. This was motivated by the pervasive nature of unemployment and the resultant poverty levels. The relevance of this paper was to establish a benchmark for future research aimed at determining the impact of the NSDS on the labour market since its inception in 2001. However more recent data does not have as rich information on training as the Mesebetsi Survey which might complicate analysis aimed at comparing findings. For direct comparisons of findings to be made, the DoL may have to commission a second round of the Mesebetsi Survey. This chapter concludes by highlighting some of the important findings of this paper and makes recommendations where appropriate.

The performance of the labour market in terms of generating enough jobs to meet labour supply has been poor hence the extremely high unemployment rate that currently exists in the economy. Unemployment has resulted in mass poverty and severe inequality and is therefore one of government's top priorities. This poor employment performance of the labour market is as a result of sufficient economic growth being elusive as well as a shortage of the necessary skills required by the labour market, given the economy's growth trajectory. Furthermore, increased labour supply, and in particular the increased number of women in the labour market, has exacerbated the poor employment performance of the labour market.

Unemployment in South Africa is structural in nature. That is, people lack the skills required by the labour market. This is why human capital is of such importance in the labour market and this is shown in the findings in of this paper. Structural unemployment can be addressed through human resource development by the provision of education and skills training. This paper was concerned with the latter. Training, as the literature review highlighted, is meant to improve the

employment/reemployment prospects of the unemployed that participate in training programmes.

This research finds that of the unemployed, only 15% went on training. Furthermore, of the unemployed, women, Africans, the youth (15-24 years), and individuals with no or low levels of education have a lower probability of training. Also, only the unemployed in Gauteng had a higher probability to train than the unemployed in the Western Cape. The employment/reemployment prospects of these groups of the unemployed are likely to be negatively affected. This will compound the discouraged worker effect and as a result, chronic unemployment and poverty levels will remain a troubling feature of South African society.

On the other hand, about 38% of the employed reported having gone on training. Indeed, the regression of the economically active indicates that the employed are 11% more likely to train than the unemployed. Among the employed, it is men, non-Africans, individuals employed in large firms, individuals in high skilled occupations, individuals with high levels of education and union members that are more likely to train. This finding holds for both employer funded training and training sponsored from any other source.

In terms of training by location, the employed in KwaZulu Natal, Gauteng and the Limpopo are more likely to go on training than their counterparts in the Western Cape. This finding is true for training that is funded from any source. For employer funded training, the employed in KwaZulu Natal and the Limpopo were more likely to go on employer funded training than the employed in the Western Cape.

This research makes clear the way forward for government. First and foremost, there is a need for government to boost growth in the economy to improve the labour absorption capacity of the labour market. A higher growth rate will create the necessary labour demand for the benefit of people at all skill levels, and not only those with intermediate and high skills.

The democratically elected government realized the need to increase the rate of economic growth. As early as 1998, government launched the GEAR strategy to achieve the necessary economic growth and to improve the employment performance of the labour market. GEAR managed to bring about macroeconomic stability but failed to deliver its intended annual growth rate of 6%, as well as its employment promise of 100,000 new jobs annually between 1996 and 2000. In 2006, Government subsequently launched the ASGISA initiative which is meant to build on the macroeconomic stability of GEAR in order to attain 6% economic growth which is required in order to halve unemployment and poverty by 2014. ASGISA is essentially a comprehensive macroeconomic strategy that has diagnostically identified the constraints to economic growth and the necessary interventions to overcome these constraints

Secondly, there is a great need for government to create an enabling environment which can increase the amount of training for unemployed Africans, women and youth. These groups are worst affected by unemployment and its ills. It is essential that any growth strategy in South Africa should be accompanied by an appropriate human resource development strategy in order to equip people with the necessary skills required by the labour market.

In 2001, the government launched the NSDS to address human resource development in South Africa. The NSDS is an ambitious innovation in active labour market policy-making. The NSDS was developed to address the differentiated skills needs of the labour market previously neglected by the Apartheid government. As this paper was concerned with the training by the unemployed and employed prior to the implementation of the NSDS, future research can determine to what extent the NSDS has been a success in terms of providing training for the unemployed and employed. In particular, the extent to which the NSDS has provided training for Africans, women and the youth among the unemployed and employed. To achieve this, the current paper can be used as the benchmark.

In addition to increasing the amount of training, there is also a need to increase the provision of education and improve the educational standards. This is especially so

for the previously disadvantaged. The importance of education in the South African labour market is shown in this paper. Education reduces the probability of being unemployed. That is, people with higher levels of education are more likely to be employed in high skilled occupations where they are more likely to train to further improve their human capital. In particular, educational improvements are required in mathematics and science. Having sufficient quality education will dramatically improve the employment/reemployment prospects of the unemployed who are mostly Africans, women and the youth. Both education and training should be focused on areas that produce skills that the labour market requires. However, education is a much longer term strategy than skills training.

Lastly, the NSDS should ensure that training is undertaken by as many people as possible for it to be a success. The findings in this research indicate that training is likely to be restricted to the employed, men, non-Africans, non-youth, individuals employed in large firms, educated individuals, individuals in high skilled occupations. Again, further research will be able to determine the impact of the NSDS in terms of its reach in the provision of training.

In closing, South Africa has made significant strides in its transition to democracy to the extent that it has set the standard for other countries that are going through internal strife, in whatever form, and are seeking a peaceful resolution to their strife. However, for South African's democracy to flourish further, there is an urgent need for government to significantly reduce unemployment and inequality in order to redress the existing racial imbalances. As has been highlighted at various points in this research, the only way that government can do this is by pursing policies that simultaneously encourage economic growth and skills development which will drastically improve the welfare of the majority of the population.

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8 APPENDICES

Appendix 1 Training success against NSDS objectives and indicators, March 2004.

Table 4.4 Training success against NSDS objectives and indicators, March 2004

	Indicator	Achievements by March 2004	Proximity to the target by March 2004	Beneficiaries		
				NSDS Target for Blacks:	NSDS Target for Women:	NSDS Target for people with disabilities:
				85%	54%	4%
1	**NQF LEVEL 1:** 70% of workers must have at least a NQF level 1 qualification by March 2005.	About 5.6 million workers in South Africa presently have a NQF level 1 qualification and a further 904 993 workers still need to be assisted if this 70% goal is to be achieved before March 2005. A total of 433 437 workers have completed training towards a NQF Level 1 qualification between March 2001 and June 2004. This represents 48% of the target that has to be reached by March 2005	Only half way there	87%	33%	0.1%
2	**Large firms:** At least 75% of enterprises with more than 150 workers have to be receiving skills development grants by March 2005.	In March 2004 about 67% of enterprises in this category were providing workers with access to skills training. This percentage is high because although only 0.7% of all enterprises were large firms in 1999, they employed 42.7% of all workers.	Closely approximating the target	-	-	-
3	**Medium firms:** At least 40% of enterprises employing between 50 and 150 workers should be receiving skills development grants by March 2005.	By March 2004 about 53% of levy-paying medium-sized firms were accessing grants through developing workplace skills plans, thereby exceeding in advance the target set of 40%.	Exceeded the target	-	-	-

	Indicator	Achievements by March 2004	Proximity to the target by March 2004	Beneficiaries		
				NSDS Target for Blacks:	NSDS Target for Women:	NSDS Target for people with disabilities:
				85%	54%	4%
4	**Small firms:** At least 20% of new and existing registered small businesses have to be supported in skills development initiatives by March 2005.	By March 2004, 67 461 small firms were supported by skills development initiatives out of a total of 181 842 small firms paying the levy. This yields a success rate of 37% which is almost double the target of 20% set for March 2005.	Exceeded the target, nearly doubling the number of small firm beneficiaries	-	-	-
5	**Structured learning:** A minimum of 15% of workers must have embarked on a structured learning programme by March 2005.	The target for this indicator is for 1 398 033 workers to be engaged in structured learning by March 2005 and for 699 016 to have completed this training. A total of 3 067 192 workers (out of a total workforce of 9.3 million people) had embarked on some form of structured learning programmes, and 2 165 418 had completed such training during the period April 2001 up to March 2004. These cumulative figures far exceed the 15% target, approaching almost 38% of the total workforce of 9.3 million workers trained in a structured way over a three-year period..	Exceeded target by more than double	84%	35%	0.4%
6	**Learnerships:** A minimum of 80 000 people have entered learnerships by March 2005.	By March 2004, a total of 69 306 learnerships (including 19 951 apprenticeships) were registered. Most were previously unemployed and under the age of 35. This number had reached 72 908 learnerships by August 2004 – a figure very close to the target of 80 000 by March 2005	Attained 91% of target by August 2004	59%	29%	2%

Source: Department of Labour 2005a