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Department:  
Agriculture, Forestry and Fisheries  
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# **ESTIMATE OF THE CONTRIBUTION OF THE AGRICULTURE SECTOR TO EMPLOYMENT IN THE SOUTH AFRICAN ECONOMY**

***Compiled by:***

***Directorate: Economic Services***

***Department of Agriculture, Forestry and Fisheries***

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## Abstract

*This study analyses the contribution of agriculture, forestry, fisheries and hunting to decent employment in the South African economy. The descriptive analysis, using Stats SA data, shows that employment in the sector is declining at a high rate and that its relative contribution to the total employment is decreasing. The literature provides implicit evidence that the adoption of production technologies and the regulatory environment (laws and policies) are behind the declining contribution of the sector to the country's total employment. On average, farm workers are paid above the minimum wage, although African farm workers earn less than white farm workers. The literature also reveals that farm workers are working under questionable conditions.*

## 1. Introduction

The first non-racial democratic government in South Africa inherited a stagnant economy with high levels of unemployment (Hodge, 2009). Kgafela (2009) indicates that during the first year of non-racial democratic government, South Africa's unemployment rate was 20% according to the strict definition and 31,5% according to the broad definition. Burger and Von Fintel (2009) argue that the country has, since then, witnessed an acceleration of its already high unemployment rate. The South African Institute of Race Relations (2008) indicates that this increase in the unemployment rate peaked in 2003 at 25,5% and 38,3% according to the strict and the expanded definitions respectively. In 2007, Statistics South Africa showed that the unemployment rate decreased to reach 22,7% in September 2007. However, as a result of the economic recession, the unemployment rate again increased to reach 25,2% during the first quarter of 2010. Burger and Von Fintel (2009) point out that South Africa currently has one of the highest unemployment rates globally.

Stats SA (2010) shows that most economic sectors, including the agriculture sector<sup>1</sup>, have shed a substantial number of jobs between 2008 and 2010 as a result of the recession. Apart from job losses that the agriculture sector experienced as a result of the recession, it had already experienced substantial job losses between 2001 and 2007 (Stats SA, 2007). These job losses in the sector came as no surprise since Kirsten and Vink (2001) and Aliber

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<sup>1</sup> In this paper, "agriculture sector" or "agricultural sector" refers to the broad economic sector including agriculture, forestry, fisheries and hunting.

*et al.* (2007), using regression analysis<sup>2</sup> and base scenario estimates<sup>3</sup>, forecast that the number of jobs in the formal agriculture and agro-processing sectors would decline over time.

Kingdon and Knight (2001) argue that the high level of unemployment is potentially a matter of serious concern, and may have potentially negative effects on economic welfare, production, erosion of human capital, social exclusion, crime, and social instability. On the other hand, Simbi and Aliber (2000) argue that trends in agricultural employment threaten to deepen the poverty crisis in South Africa's rural areas, in which the incidence of absolute poverty is much higher, because as Armstrong *et al.* (2008) show, the poverty rates of households and individuals in the rural areas were 54,2% and 67,7% respectively.

While increasing agriculture unemployment arguably deepens poverty in the rural areas, some authors do not see agriculture employment being effective in helping farm workers to secure a minimum living standard. For example, Jacobs (2009) argues that the low agricultural wages are inadequate to lift wage-dependent rural households permanently above a socially acceptable deprivation threshold, because the largest share of it is spent on staple agro-foods, which means that their food security status is very sensitive to food price shocks. According to the Department of Labour (2001) and Pekeur (2010), the farm workers earn the lowest wages among those formally employed in the country.

The government has committed itself to dealing with the unemployment crisis in South Africa through its plans to create decent work (Mohamed, 2009). The Department of Economic Development *et al.* (2010) indicate that the creation of decent jobs is one of the government's top five priorities for the current Medium Term Strategic Framework (MTSF). Previous studies have not researched the issue of decent employment in the agriculture sector and as such, it becomes justifiable to understand the position of agriculture, forestry and fisheries with regard to its contribution to decent employment by answering the following questions: (i) Is the agriculture, forestry and fisheries sector contributing substantially to reducing the level of unemployment in the country? (ii) How "decent" is the work in the sector? (iii) Can the sector be one of the priority sectors for creating decent employment?

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<sup>2</sup> Using Ordinary Least Squares (OLS), however, the variables of the equation were not stated. The estimates were produced mainly focusing on the available land, coupled with coefficients regarding the numbers of farmers or employees of different categories per hectare.

<sup>3</sup> The base scenario assumed the continuation of current trends and failed redistributive land reform' as well as continued stagnation of former homeland agriculture over the period 2005 to 2020.

According to the Presidency (2010), creating decent employment, through inclusive economic growth, is possible through a focus on improving income levels, labour absorption, improving equality, and GDP growth. This issue of decent employment is not only important to South Africa, but it is also one of the key aims of the International Labour Organisation (ILO).

Section 2 briefly describes the objectives of this study while section 3 reviews the definition of unemployment and types of unemployment. Section 4 provides an historical background of employment in the agricultural sector in South Africa. Section 5, entitled “study approach,” presents the methodology applied in this study. “Empirical studies on agriculture employment” (section 6) discusses findings by other authors in terms of drivers of employment in the agricultural sector. It also provides some information in terms of the working conditions of employees in the agricultural sector. Section 7 provides the descriptive results and discussion on the trends in employment and wages in the agricultural sector. Section 8 summarises the results of this study while section 9 consists of the conclusion. Section 10 outlines the scope for further research and the last section is a list of references used in this study.

## **2. Objectives**

The overall objective of the study is to assess the contribution of agriculture, forestry and fisheries to decent employment in South Africa.

Specific objectives of the study are:

- To assess and analyse the contribution of agriculture, forestry and fisheries sector to total employment in South Africa over time
- To identify drivers of employment in the agriculture, forestry and fisheries sector
- To assess the decency of jobs in the agriculture, forestry and fisheries sector

### **3. Definitions**

This section provides the definition of unemployment, decent employment and types of unemployment.

#### *3.1 Definition of unemployment and decent employment*

In South Africa, two definitions of unemployment are used, namely the broad and the narrow definition. According to Statistics South Africa (2010), the narrow definition refers to the number of people who were without work during the reference week and have taken active steps to look for work or tried to start a business in four weeks preceding the survey interview and were available for work. The broad definition includes those without work in a given time period, typically a week or month prior to the inquiry and are available for work but did not take active steps to look for it during the reference period. South Africa adopted the former as an indicator of official unemployment in line with the definition adopted by the International Labour Organisation (ILO) at the 13<sup>th</sup> International Conference on Labour Statistics in 1982 (Bhorat, undated).

However, some scholars (Kingdon and Knight, 2000) argued against the adoption of the narrow definition as an indicator of official unemployment. Their argument is based on the fact that (i) in South Africa the non-searching unemployed are, on average, significantly more deprived than the searching. This view was supported by their findings which suggest that job-searching is hampered by poverty and by the cost of living in remote rural areas, (ii) the non-searching unemployed are not significantly happier than the searching unemployed; and (iii) evidence on the wage-unemployment relationship indicates that local wage determination takes non-searching workers into account as genuine labour force participants. In general they argue that the narrow unemployment definition carries the assumption that the non-searching unemployed are not part of the labour force. In his article published on the Business Report on 14 October 2004, the South African Statistician General (Mr P. Lehohla) indicated that South Africa adopted the narrow definition as an official measure of unemployment even though the government is aware that in countries with high rates of unemployment and uneven economic development between and within regions and provinces, the official definition is likely to exclude substantial numbers of discouraged job seekers. For this reason, Statistics SA collects and reports data using both the narrow and the expanded definition.

Jones and Riddell (1999) observed the controversy with regard to the use of the definition of unemployment and its associated definition of participation rate. The authors accentuate the fact that complications in the use of these definitions also stem from the fact that other countries (such as the United States of America) further differentiate the methods used to search for a job. For instance, they make a distinction between “passive” and “active” job search. The former entails only looking at job adverts while the latter uses multiple methods. Their findings provided some support for distinguishing between passive and active job seekers but no support for treating passive searchers as nonparticipants.

Although the notion of unemployment as defined above is fairly clear, the concept of decent work is less so especially in the agriculture sector in South Africa. Draham (2003) defines the concept of decent work as not only referring to workers in the formal economy, but also to unregulated wage workers, the self-employed and home workers, and most importantly, it embraces safety at work and healthy working conditions. Mohamed (2009) states that the ILO’s definition of decent work takes into account the aspirations of people in their working lives and involves opportunities for work that is productive and delivers a fair income, security in the workplace and social protection for families, better prospects for personal development and social integration, freedom for people to express their concerns, organise and participate in the decisions that affect their lives and equality of opportunity and treatment for all women and men. However, for the purposes of this study, we will use the definitions adopted by Statistics South Africa for employment and unemployment.

### *3.2 Types of unemployment<sup>4</sup>*

Mafiri (2002) draws a distinction between four different types of unemployment, namely frictional unemployment, cyclical unemployment, structural unemployment and seasonal unemployment. They are summarised as follows:

- Frictional unemployment: “This arises as a result of the normal employee turnover and the turnaround time it takes for companies to fill their vacant posts.”
- Cyclical unemployment: “This arises from periodic downswings in the business cycle which may be caused by an autonomous decrease in consumption, investment, or export and reinforced by an attendant degree of wage rigidity.”

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<sup>4</sup> This section draws heavily on Mafiri (2002).



- Structural unemployment: “Occurs when the economy is unable to provide employment for the total labour force even when the economy is at full employment. It can occur as a result of skills and location mismatch.”
- Seasonal unemployment: “Occurs as a result of normal and expected changes in the economic activities during the course of a single year. A typical example would be the end of harvesting season in agriculture.”

#### **4. Historical background of the agricultural sector employment in South Africa**

In 1992 there were 1,1 million people employed in commercial agriculture, and they supported approximately four million dependents (Newman *et al.*, 1997). By 1996, the number of people employed in the commercial agriculture decreased to 914 000 employees, of which 67% were employed on a regular basis while 33% were engaged as casual/seasonal workers. The number of employees engaged in regular work on commercial farms decreased by 15,7% from 724 000 in 1988 to 610 000 in 1996. Of the 2,2 million employed people in the former homelands, 37% reported that they were engaged in subsistence farming (Statistics South Africa and National Department of Agriculture, 2000).

Statistics South Africa and the National Department of Agriculture (2000) show that in 1996, full-time employment in the agriculture and hunting subsectors was the highest among white men and the lowest among African and coloured women. Among white men employed in the agriculture and hunting subsectors, 97% had full-time jobs compared with 83% among African women and 75% among coloured women. Among the relatively few coloured people employed in agriculture, 82% were found in elementary jobs such as fruit picking and weeding. Among the preponderant group of Africans employed in the agriculture and hunting subsectors, 58% were in jobs classified as elementary compared with 22% among Indians and only 12% among whites. At the higher end of the occupation hierarchy, 15% of Indians and an equivalent proportion of whites (15%) were employed as managers, professionals or technicians compared with only 1% of either Africans or coloureds.

Simbi and Aliber (2000) argue that the commercial farming sector shed a staggering 140 000 regular jobs during the 11-year period from 1988 to 1998, a decline of roughly 20%. The authors further spot a trend away from employment of regular, permanent workers, and a simultaneous increase in the use of casual labour. According to them, this would mean jobs of less security and consistency, and if the decline in the sector employment continues

in this fashion, then the already grave problem of rural unemployment will become graver still.

Many authors provide different reasons for declining employment in the agriculture sector. Newman *et al.* (1997) argue that higher labour costs could lead to the substitution of personally owned machinery, contract machinery or contract labour for permanent labour. Simbi and Aliber (2000) argue that the adoption of labour-saving technologies does not appear to be motivated by the relative increase in the cost of labour, but rather it represents cost savings that farmers find practical and attractive. The authors further indicate that seasonal workers are being made redundant by the agricultural machinery and chemicals that are affecting aspects of the production cycles.

Townsend *et al.* (1997) states that large machinery-using biases in technology have been developed with minimal labour-using biases and these biases have not contributed to alleviating the unemployment problem currently facing the labour-surplus economy of South Africa. According to the authors, the biases have largely been caused by policies favouring the large-scale capital-intensive production model. However, during the first year of non-racial democratic government, the African National Congress (1994) indicated it would change the situation by prioritising investment in the labour-intensive agricultural sector including investment in infrastructural projects such as the creation of roads and irrigation systems using labour.

According to Vink and Kirsten (1999), the decline in the number of people employed in the agricultural sector over the past decades has been exacerbated by bad policies that inhibited export opportunities, discouraged the development of labour-saving technology, and actively encouraged the adoption of capital-intensive farming practices.

Another important issue to consider when looking at employment in the sector is the wages and livelihoods that farm workers derive from agriculture. According to Newman *et al.* (1997), the farm workers are not only remunerated with cash payments. The aggregate remuneration package normally includes cash wages, rations, housing, grazing and cultivation rights, clothing and other benefits. The cash wage would usually be paid on a weekly or monthly basis and often includes a bonus at the end of the year. The perquisites would be offered differently depending on farm types. For example, on livestock farms labourers generally receive milk and may be assigned rights to graze a limited number of

animals on the farm. Cultivation rights allow a worker to cultivate a certain area of land; the farmer may also provide seed and fertiliser. Rations generally include maize meal, meat, tin foodstuffs and vegetables. Housing may be provided by farmers, or they may allocate an area for their labourers to build their own dwellings.

The findings of the Women on Farms Project (WFP) and the Centre for Rural and Legal Studies (CRLS) (2009) show that female workers receive lower wages and fewer benefits and are less likely to be permanent workers than are male workers. The average wage was found to be R667 per month for men, while the average wage paid to women was about R458 per month. The authors indicate that these are not absolute remunerations, as a quarter of the wages paid to farm workers are “in-kind”.

According to Statistics South Africa and the National Department of Agriculture (2000)<sup>5</sup> the average monthly remuneration of employees in the commercial farming sector more than tripled, in nominal terms, over the period 1988–1996, from R142 in 1988 to R524 in 1996. The remuneration levels among casual workers in 1996 were still substantially lower than among regular workers. By 1996, the remuneration received by casual workers in the commercial farming sector was only around a quarter (26%) of that received by regular employees (up from 19% in 1990). The level of remuneration among Africans was barely 12% of the level among whites, even though over the period 1994–1996 their remuneration increased by 28,9% compared to 14,9% among white employees (Statistics South Africa and National Department of Agriculture, 2000).

According to Newman *et al.* (1997), minimum wages have been advocated as a way of improving farm workers’ remuneration. However, Brown-Luthango (2006) argues that the minimum wage is completely inadequate to afford farm workers and their children a decent standard of living as they cannot even afford the basics such as housing, clothing and education for their children. When the minimum wage policy was introduced in 2003, many people feared that it would result in job losses. For example, Simbi and Aliber (2000) argue that the perceived impact of legislation on the total wage bill and hence on the demand for labour has resulted in fears that extending minimum wage regulations to the agricultural sector will aggravate the employment crisis already prevalent in rural areas. The authors further quote Bhorat (1999) arguing that the minimum wage will impact negatively on

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<sup>5</sup> This is the latest, most comprehensive study on employment trends by the DAFF (the NDA) and Stats SA.

employment in the sector. On the other hand, Newman *et al.* (1997) argue that the respondents in their study mentioned that labour would be replaced with machinery and contractors if the minimum wage was set above the wages paid during the time of study (1997).

Apart from the legislation on minimum wages, a number of statutes (labour laws) exist and apply to the agriculture sector. Newman *et al.* (1997) indicate that, from 1993, labour legislation was extended to agriculture with the expectation that it would have a significant effect on labour transaction and wage costs in South Africa's commercial farming sector. During the same year (1993), the Basic Conditions of Employment Act No. 3 of 1983 (BCEA) and the Unemployment Insurance Act No. 30 of 1966 (UIA) were extended to agriculture, with some amendments. These Acts were followed by the Agricultural Labour Act No. 147 of 1993 (ALA). The BCEA provides for minimum conditions governing working hours, leave, overtime, etc., the UIA provides for contributions to the Unemployment Insurance Fund and the ALA provides for the application of the Labour Relations Act (1956) and the further application of the Basic Conditions of Employment Act (1983) to farming activities and employers and employees engaged therein. According to Newman *et al.* (1997), the vast majority of the respondents to their study perceived the present legislation to be time-consuming and costly, and wanted the legislation to be less ambiguous and more flexible and to have reduced powers.

## **5. Study approach**

All the data on employment were sourced from Stats SA, while data on the average earnings of the people working in the agriculture sector and the minimum wage for farm workers were sourced from Department of Agriculture, Forestry and Fisheries and the National Agricultural Marketing Council respectively. The data on employment were reported on a six-monthly basis, i.e. first quarter and third quarter (March and September) of each year, while data on income were reported on a yearly basis.

Because the data only start from 2000 and in some cases from 2001, the literature was also used to determine how the sector contributed to employment in South Africa during the period before 2000, i.e. during the 1990s. The important variables used in the analysis include employment in the agriculture sector, total employment in the country, sector employment with respect to gender, sector employment with respect to provinces,

employment in other sectors, the minimum wage and the average agriculture employee's wage.

In this study, a descriptive analysis was used to determine the contribution of the agriculture sector to overall employment within the economy of South Africa. The first step was to graph the total employment and agriculture sector employment figures over a period of time to show trends. Secondly, employment in the agriculture sector was calculated as a percentage of the country's total employment, and agriculture's share of the total employment was also graphed to depict its trend between 2000 and 2010. The trend in the agriculture sector employment was graphically compared to employment trends in other economic sectors. The semester-on-semester percentage changes in the total employment and the sector employment were calculated and annualised and the trends in the annualised percentage changes were also depicted graphically. The provincial sector employment distribution was tabulated and the employment distribution with respect to gender was graphed.

The data on the minimum wage and the average earnings of the people employed in the agricultural sector were used to assess the deviation of the remuneration of people working in the sector from the minimum wage set by the state. Literature was also used to determine the conditions which farm workers are subject to while they are on the farm. The literature review was also used to identify the drivers of employment in the agricultural sector.

The main difficulty in terms of data is that the minimum wage data start in 2003, so that the comparison of earnings from the agricultural sector to the minimum wage start in 2003 as well. The analyses are therefore based on a short period, as are data on employment. Also, there is a limited amount of literature available in terms of agriculture employment, particularly in terms of conditions under which the farm workers have to work.

## **6. Empirical studies on unemployment**

### *6.1 Drivers of employment in the agricultural sector*

The role played by agriculture in employment contribution drew the attention of a number of authors from the 1980s, 1990s and the 2000s. In the 1980s, the debate on unemployment in the agriculture sector focused mainly on the impact of mechanisation in the agricultural

sector (Van Zyl *et al.*, 1987 cited in Kirsten and Vink, 2001). During the 1990s and the 2000s most studies (Vink and Kirsten, 2001, Vink, 2003; Aliber *et al.*, 2007) looked at, *inter alia*, the impact of labour policies on agricultural employment. The debate on employment and employment statistics focused mainly on the adoption of the narrow definition of the term by the South African government in the late 1990s (Kingdon and Knight, 2000). This was arguably attributed to the fact that, as the apartheid era was coming to an end, new legislation was introduced and enforced. This legislation includes the Labour Relations Act, the Basic Conditions of Employment Act and legislation pertaining to the minimum wages introduced by the Department of Labour early in the 2000s.

At the turn of the millennium, the agriculture sector contributed about 10% to total employment in South Africa as compared to the current 5%. It is also clear from the long-term trends identified in Kirsten and Vink (2001), Aliber *et al.* (2007) and Aliber and Simbi (2000) that there is an absolute decline in employment in the agriculture sector. This section explores the drivers of employment in the agricultural sector and the findings will be used for drawing future recommendations on job creation in the sector. A non-exhaustive list of drivers of employment in the agricultural sector is discussed below, and it will be followed by an assessment of the decency of farm work.

#### *6.1.1 Regulatory environment*

Bhorat (undated) argued that the regulatory environment and therefore the cost of doing business in South Africa were relatively unfavourable compared to other countries with more or less the same development status. In line with this, Vink (2003) observed that the introduction of new labour laws and minimum wage rates were the main causes of reduction of employment in the agricultural sector hence an increased trend toward casual workers in the sector during the early 2000s. According to Simbi and Aliber (2000), the casualisation trend is attributed mainly to the fact that seasonal employees are not able to make demands and are not represented by the labour unions. The authors highlight the fact that more or less at the same time when mechanisation was changing from a complement to labour to a substitute for it, government policy on agricultural labour switched from assisting farmers through the old labour-repressive strategies, to assisting them with labour replacement. Factors such as income tax provisions to allow for the accelerated write-off of agricultural equipment, the encouragement of large-scale farming through the Subdivision of Agricultural

Land Act of 1970, and negative real interest rates on agricultural loans were all measures designed to promote the development of a modern, labour-lean agricultural sector.

Hartwig (2004) concludes that together with broader labour legislation changes and a changing economic environment (including technological advancement), among other things, legislation emphasising security of tenure has contributed to misemployment, eviction and urbanisation for a large proportion of agricultural labour in the Free State Province.

Simbi and Aliber (2000) argued that labour shedding in agriculture in the late 1990s was a result of (i) the fear of losing control of one's land to resident farm workers owing to new and possible future legislation and (ii) the sense that farm workers are more difficult to manage than they were prior to 1994.

#### *6.1.2 Adoption of new production methods/technology*

Bhorat and Hodge (1999) measured, through a simple decomposing technique, the extent to which the adoption of new production methods have an impact on labour demand by race and found that Asians and whites benefited from the change and that such change had a negative impact on Africans and coloureds. They argue that these disparities were chiefly because of skills and occupational differentials that exist between these two cohorts of individuals. This is in line with the findings by Siegel (1998), who found that technological change leads to a shift in labour composition and compensation for workers with a higher level of education. A study by Aliber *et al.* (2007) forecasts that the adoption of labour-using technologies such as animal traction rather than mechanical traction can result in a 30% increase in employment in the formal agriculture sector in 2020<sup>6</sup>. However, the authors project that under the same scenario there will not be any percentage change in the number of large-scale black farmers, black smallholders, semi-subsistence farmers and smallholder employees. The main reason as argued by Aliber *et al.* (2007) is that small-scale farmers tend to attempt to reduce poverty through project-based enterprises, requiring effective management which is in short supply.

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<sup>6</sup> This is based on the scenario that envisages the creation of state-run or parastatal-run agricultural estates. The scenario also assumes that 30% of land is transferred and labour absorption is 100% more than the current norm for commercial agriculture. This scenario also assumes deliberate adoption of labour-using technologies, for example, giving priority to animal rather than mechanical traction.

According to Simbi and Aliber (2000), mechanisation and modernisation in the agriculture sector have large repercussions for employment in the sector. The incremental improvements in agriculture chemicals and the means of applying them are also diminishing the role of labour, especially unskilled labour, in agriculture. The use of long-lasting herbicides and more efficient harvesters (harvesters for potatoes and peanuts) also has reduced the need for seasonal farm workers who are traditionally employed for harvesting and weeding. The authors argue that the relatively skilled permanent workers who operate the agricultural machinery are ever more important to the farmer while the demand for the casual labour has declined.

As stated before, Townsend *et al.* (1997) found that large machinery-using biases in technology have been developed with minimal labour-using biases. According to the authors these biases have not contributed to alleviating the unemployment problem currently faced in South Africa and they argue that the biases were largely caused by policies favouring the large-scale capital-intensive production model. Thirtle *et al.* (1995), as cited by Simbi and Aliber (2000), finds evidence that the labour-saving, capital-using nature of technological change in South African agriculture is largely due to the relative increase in the cost of labour.

### *6.1.3 Promoting innovation and entrepreneurship (new business formation)*

Programmes such the Accelerated and Shared Growth Initiative of South Africa (AsgiSA) and Agricultural Black Economic Empowerment (AgriBEE) are aimed at promoting entrepreneurship. AgriBEE's purpose, for instance, is to achieve broad-based economic empowerment for black<sup>7</sup> people throughout the entire value chain in the sector. The impact of these programmes in terms of the creation of sustainable and decent jobs may not be felt in the short run mainly because, as Baptista *et al.* (2008) argue, new firms are unlikely to lead to significant employment growth unless the new firms generate significant positive, indirect supply-side effects. These, according to Fritsch and Mueller (2004) as cited in Baptista *et al.* (2007), include greater efficiency due to increased competition, greater productivity due to faster structural change, increased innovation and greater product variety and quality brought about by new entrants.

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<sup>7</sup> Generic term referring to Africans, Coloureds, Indians and now Asians.



Various recent studies, including Baptista *et al.* (2008) and Van Stel and Storey, (2004), despite using very different methodologies and selection of dependent and independent variables, found a negative relationship between the formation of new firms and job creation implying that new firms did not necessarily translate into job creation. In contrast to this, Fritsch and Mueller (2004) investigated the time lags using the Almon model and found that new firms can have both positive and negative effects on regional employment. The new view, clarified by Fritsch (2008), is that if the establishment of a new firm results in increased productivity then there will be a subsequent decline in employment and that employment may occur because of increased competitiveness. These studies show that the empirical evidence concerning the effects of new firms on job creation is not very clear (see also Fritsch, 2008).

Baptista *et al.* (2008) found that the indirect effects of new firms on subsequent employment growth are stronger than the direct effects and concluded that employment growth is probably dependent on the types and qualities of start-ups. The notation of the type of start-ups in the agricultural sector is of particular importance as it can also determine the economic viability and long-term sustainability of agricultural projects. Machethe and Kirsten (2005) found that, among the reasons why agricultural development projects were failing in the North West Province, was that there was a large number of beneficiaries, which resulted in conflicts and the subsequent abandonment of projects.

The success of agricultural development projects can stimulate employment growth in the agriculture sector. Fritsch (2008) argues that new firms can stimulate employment growth by (i) securing efficiency and stimulating productivity increase, (ii) accelerating structural change, (iii) amplifying innovation, especially with the creation of new markets and (iv) providing a greater variety of products and problem solutions. Smonly (1998) studied the impact of product and process innovation on output, capacity utilisation, prices and employment and found that innovative firms showed higher employment growth than did non-innovative firms.

Although there is a considerable number of international studies which investigated the relationship between the formation of new firms and job creation, such studies have not conducted an in-depth, sector-specific analysis of this relationship, especially in agriculture. However, it seems rather plausible that new business formation will result in job creation in

the agricultural sector given the type and labour-intensity requirements of agricultural projects.

### *6.2 Assessment of decency of farm work*

In 2006 the Centre for Rural Legal Studies conducted a study in the Ceres region of the Western Cape and found that 88% of the farm workers earned above R949,58 per month while 12% earned less. It was also found that the farm workers are generally earning the minimum wage rate. In cases where the wage rate was above the minimum wage, the additional amount did not exceed R5 a month. However, Pekeur (2010) argues that farm workers earn meagre pay that does not keep starvation from the door.

Pekeur (2010) indicates that over the 10 years from 1994 to 2004, one million farm workers were evicted by the farm owners. Of this number, 1% went through legal procedures and 99% were illegal. In May and June 2010 alone, according to Phetoe (2010) there were six prosecutions on issues related to farmers abusing their workers in the North West Province. The prosecutions were linked to issues of ill treatment of workers on farms by the farmers. The ill treatments include rape, brutal assaults, and allowing dogs to bite the workers.

Pekeur (2010) argues that farm workers in South Africa today are deeply exploited and that farm workers' rights are continuously violated in a way that can be compared to slavery. Some farmers have no respect for farm workers and dwellers and often treat them like animals. Workers are forced to live in appalling conditions, sometimes in shacks or pigsties, and often have to deal with highly poisonous herbicides and pesticides without adequate protection. In 2008, workers on a farm called Rust en Vrede were offered R30 000 to leave the farm. According to the author, in February 2010 two unfairly dismissed shareholders were served with an eviction notice by the sheriff of the court and the family had to leave the farm the same day.

Brown-Luthango (2006) found that in 2005 –

- farm workers were paid below minimum wage;
- farm workers were recklessly exposed to hazardous pesticides in orchards;
- farm workers were suffering household food insecurity;
- casual farm workers were trapped in dismal housing; and

- casual workers suffered employment insecurity and were denied employment rights and benefits.

Between March 2010 and July 2010, the Department of Agriculture, Forestry and Fisheries coordinated provincial summits and a national summit with the intention to provide a platform for engagement and dialogue among the stakeholders on issues pertaining mainly to farm workers, farm owners and farm dwellers to develop a common programme with clear goals, give a voice to farm workers and address the challenges they are faced with on a daily basis. During the national summit, long list of challenges, along with resolutions, were established with respect to working condition, social determinants of health, security of tenure as well as empowerment and training. Some examples of challenges faced by farm workers, as noted during the summit, include the persistence of child labour and unfair labour practices, abuse of vulnerable farm workers by labour brokers, farm workers not being informed about their rights in terms of the Labour - and Basic Conditions of Employment Acts, lack access to socio-economic rights, human rights abuse against vulnerable workers in the sectors (which include physical, mental, emotional and economic abuse; as well as gender discrimination), workers in the agriculture sector having no access to basic services (water, electricity, housing, sanitation, and healthcare), etc.

## **7. Trends in employment and wages in the agricultural sector**

### *7.1 Employment trends in the agricultural sector and total employment<sup>8</sup>*

In this section the trends in agricultural employment and total employment within the South African economy are evaluated between September 2000 and March 2010. Special attention is also given to the trends in these variables during the period between 2008 and 2010, when the economy of South Africa was in the recession.

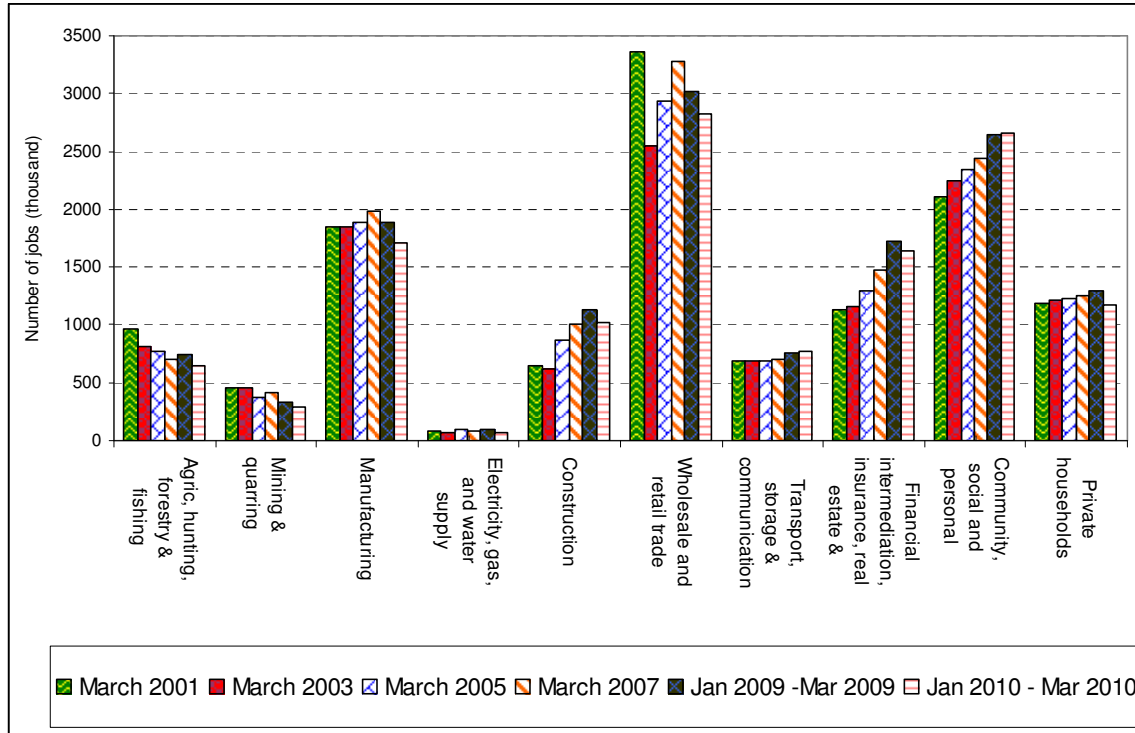
Figure 1 compares agricultural employment to employment in the other sectors of the South African economy. The agricultural sector appears to have been consistently losing a number of jobs with time. In March 2001 the sector employed 969 000 people, but the number decreased by 319 000 (33%) to reach 650 000 in March 2010. Important to note is that not only the agriculture sector but also the mining and quarrying sector lost a significant number of jobs during this time. Employment in other sectors, such as construction, community,

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<sup>8</sup> Total employment refers to employment in all economic sectors.

social and personal services, financial intermediation, insurance, real estate and business services, transport, storage and communication, private households and manufacturing has been increasing. Figure 1, therefore, provides clear evidence that employment in the primary sectors (agriculture, forestry, fishing and hunting and mining and quarrying) has seen a significant decrease between 2001 and 2010. It also shows that the secondary and tertiary sectors of the South African economy have been able to cover for decreasing employment in the primary sector and also create additional employment. The community, social and personal services sector, the financial intermediation, insurance, real estate and business services sector and the construction sector were able to create substantial employment between March 2001 and January to March 2010, i.e. 555 000, 499 000 and 379 000 jobs respectively.

Statistics show that the agricultural sector contributes less to employment compared to most of the economic sectors. Figure 2 shows that in 2001 and 2003, the agricultural sector ranked sixth out of 10 economic sectors. In 2005 and 2007 it ranked seventh and in 2009 and in March 2010 it ranked eighth.



**Figure 1: Trends in employment by sector between 2001 and 2010**

Source: Stats SA

Figure 2 shows that between September 2000 and March 2003, total employment declined from 12,3 million to 11,7 million. From 11,7 million, total employment boomed to reach 13,6 million in September 2007. It stayed at about 13,6 million until March 2009, after which it dropped substantially to reach 12,8 million in March 2010.

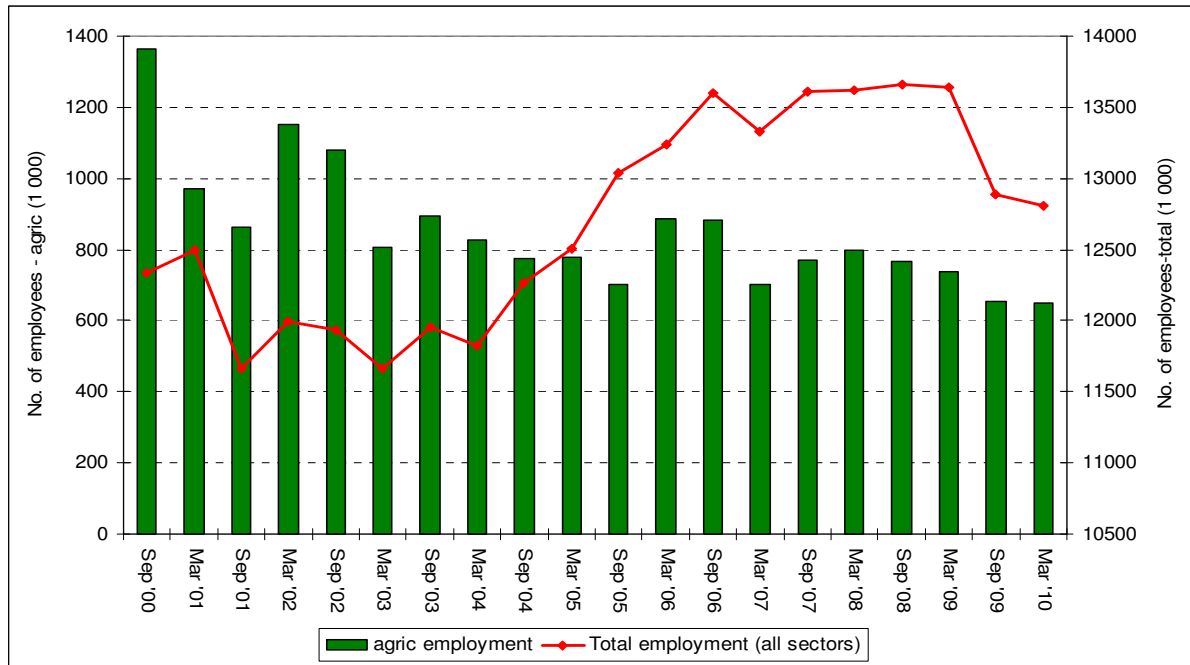
During the period under consideration, substantial job-shedding occurred from March 2001 to September 2001 (834 000 job losses) and from March 2009 to March 2010 (833 000 job losses, attributed to the economic recession). Four quarters before the effects of the economic recession were transmitted to the total employment, the country was unable to increase the total employment significantly as it stood at about 13,6 million for four consecutive quarters.

Between September 2000 and March 2010, total employment increased by 467 000 jobs, i.e. from 12,3 million to 12,8 million jobs. The figure is insignificant, owing to the impact of economic recession. Looking at the increase in the total employment from September 2000 to March 2009 (the period before the effect of the economic recession on employment is factored in), the total employment increased by 1,3 million, i.e. from 12,3 million to 13,6 million.

Figure 2 also shows the trend in employment in the agriculture sector from September 2000 to March 2010. Although total employment increased during the period under consideration, employment in the agriculture sector decreased by more than half, i.e. from 1,4 million jobs in September 2000 to a mere 650 000 jobs in March 2010.

From September 2000 to September 2001, employment in the sector decreased significantly from 1,4 million to 861 000 jobs. The sector employment then increased to peak at 1,2 million in March 2002 after which it fluctuated at a generally decreasing rate to reach 650 000 in March 2010.

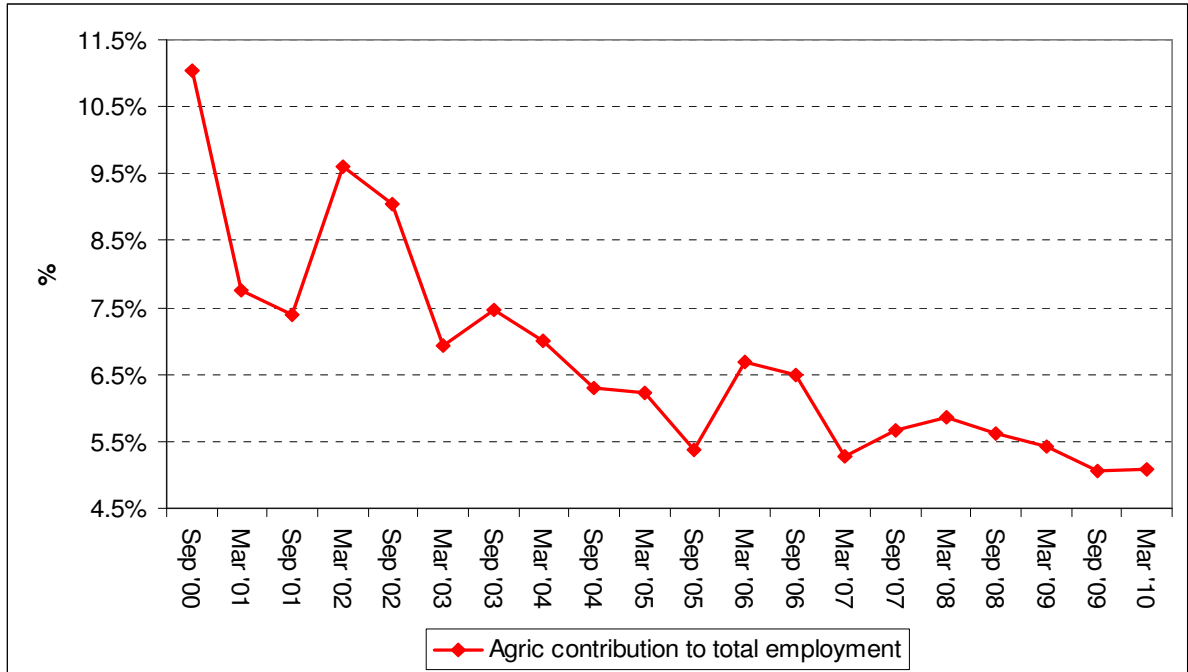
Significant job losses occurred for the periods from September 2000 to September 2001, March 2002 to March 2003, September 2006 to March 2007 and March 2009 to March 2010, i.e. 501 000 jobs, 345 000 jobs, 275 000 jobs and 88 000 jobs respectively. Figure 2 further shows that the recent economic recession had a smaller impact on employment in the agriculture sector than did developments that caused job losses in the sector during the other three periods specified above.



**Figure 2: Trends in agricultural sector employment and total employment between September 2000 and March 2010**

Source: Stats SA

Figure 3 shows the trends in the agricultural sector's share of the total employment in the South African economy between September 2000 and March 2010. Despite a sharp increase in total employment during the mid-2000s, agriculture's contribution to total employment continued to decline. This decline can be attributed to the rapid employment growth in other economic sectors coupled with continuous job losses in agriculture. In September 2000 the agricultural sector was able to contribute 11% to the total employment. However, this contribution dropped steeply to below 7,5% within a year and then increased to 9,6% in March 2002. Since then it has decreased significantly to reach 5,1% in March 2010. Therefore, the agricultural sector's share of the total employment decreased by more than half in about 10 years.

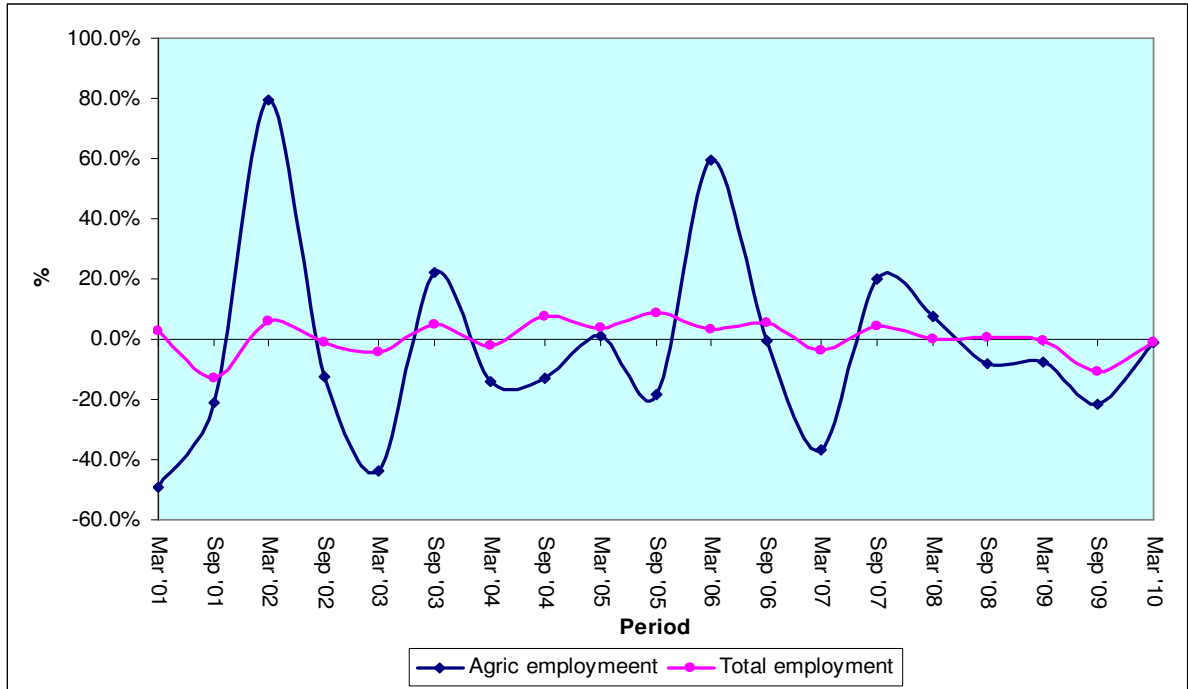


**Figure 3: Trends in the agricultural sector’s share of the total employment between September 2000 and March 2010**

Source: Stats SA and own calculations

Figure 4 shows the trends in the annualised semester-on-semester percentage change in agricultural sector employment and total employment. It is evident that the percentage change in the total employment is more stable than in agricultural sector employment. In most cases the total employment registers a positive annualised semester-on-semester growth while the opposite holds true for agricultural sector employment.

Significant negative growth in total employment occurred from March 2001 to September 2001 and from March 2009 and September 2009, i.e. 12,9% and 10,7% respectively. From September 2000 to March 2010 the annualised semester-on-semester growth in the total employment averaged 0,6%. The change in agricultural sector employment remained in negative territory during most of the period under consideration. Figure 4 shows that growth in the sector employment was relatively unstable. In March 2010 the sector employment decreased by 0,9% following a decrease of 21,7%, which occurred in September 2009. From September 2000 to March 2010 the annualised semester-on-semester growth in the agriculture sector employment averaged 3,0%.



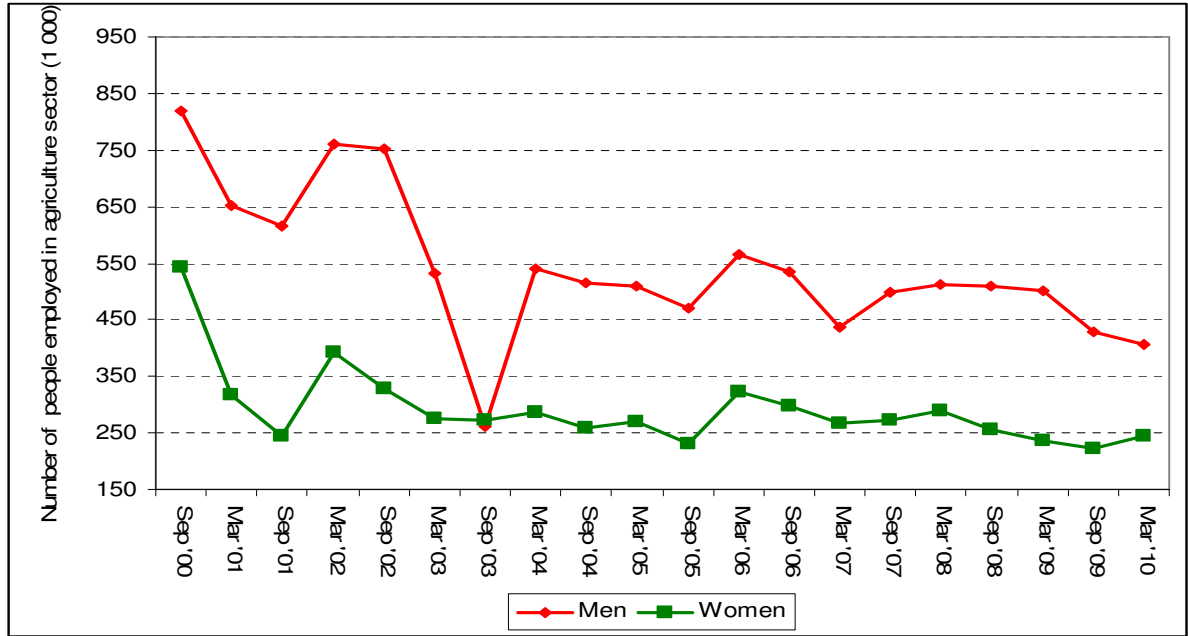
**Figure 4: Trends in the annualised semester-on-semester percentage change in agricultural sector employment and total employment between September 2000 and March 2010**

Source: Stats SA and own calculations

### 7.2 Trends of employees in the sector by gender

Figure 5 shows the trends in the agriculture employment by gender. In September 2000, the sector employed 819 000 men and 543 000 women. However, in March 2010 the sector employment for the two gender groups decreased to 406 000 jobs and 244 000 jobs respectively. During the period under consideration, the number of men employed in the sector decreased by 413 000 while the number of women decreased by 299 000, a decrease of more than half for both.

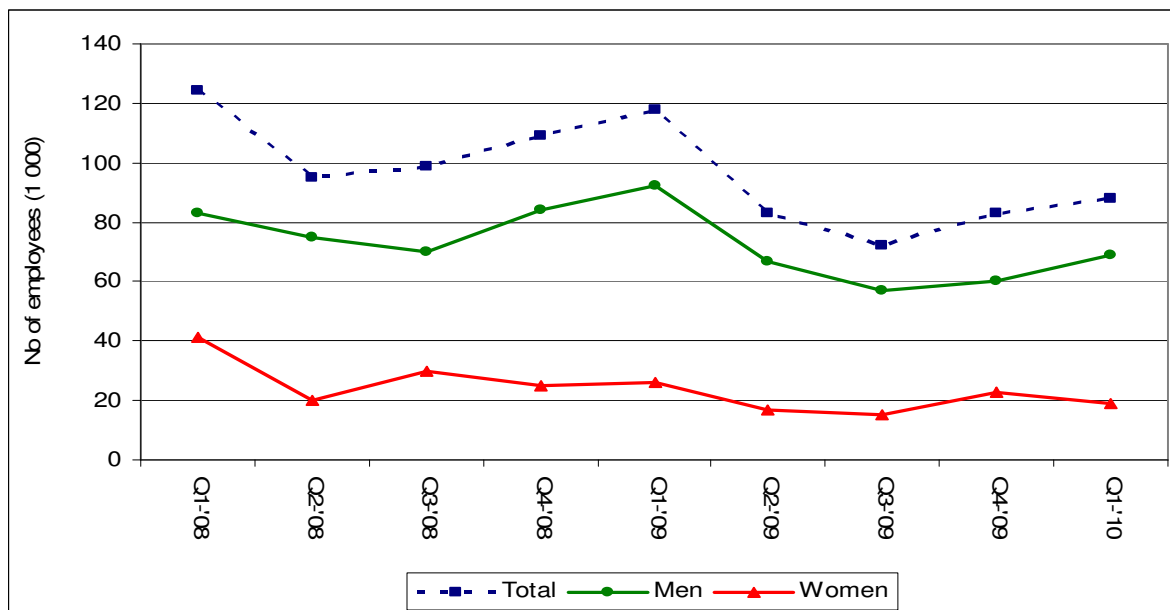




**Figure 5: Trends in agricultural sector employment by gender between September 2000 and March 2010**

Source: Stats SA and own calculations

Figure 6 shows the trends in skilled agriculture employment by gender. Even though employment in the agriculture sector is reported in thousands, it is a worrying factor that less than 20% of the employees in the sector are skilled workers. In the first quarter of 2008, the skilled workers in the agriculture sector totalled 124 000, of which 83 000 were men and 41 000 were women. The number of skilled workers in the sector represented 16% of the sector employment. The number of skilled workers decreased along with a decrease in the sector employment. During the first quarter of 2010 the number of skilled workers stayed at 88 000, of which 69 000 were men and 19 000 were women. During this period, the number of the skilled workers represented 14% of the sector employment.



**Figure 6: Trends in agricultural sector employment (skilled) by gender between March 2008 and March 2010**

Source: Stats SA and own calculations

Table 1 shows the distribution of agricultural employment in South Africa per province. In the first quarter of 2008, the Western Cape and KwaZulu-Natal employed the largest number of workers in the agriculture sector, i.e. 181 000 employees (23%) and 129 000 employees (16%) respectively. The two provinces were followed by the Free State which employed 85 000 people (11%) in the sector. Higher agricultural investments seen in these three provinces could be one of the reasons why they offer the highest number of jobs. For example, according to Stats SA (2007c), the market value of agricultural assets, farm debt, total expenditure by agriculture and gross farm income are higher in these provinces than in other provinces. The provinces that employ the lowest number of workers in the sector are the North West and Gauteng provinces with 59 000 (7%) and 58 000 (7%) respectively. The provinces that lost the highest number of jobs between the first quarter of 2008 and the first quarter of 2010 are Gauteng and Limpopo, which lost 29 000 and 26 000 jobs respectively. The Western Cape is the only province that lost fewer than 5 000 jobs during the same period (it lost 4 000), while other provinces lost more than 10 000 jobs.

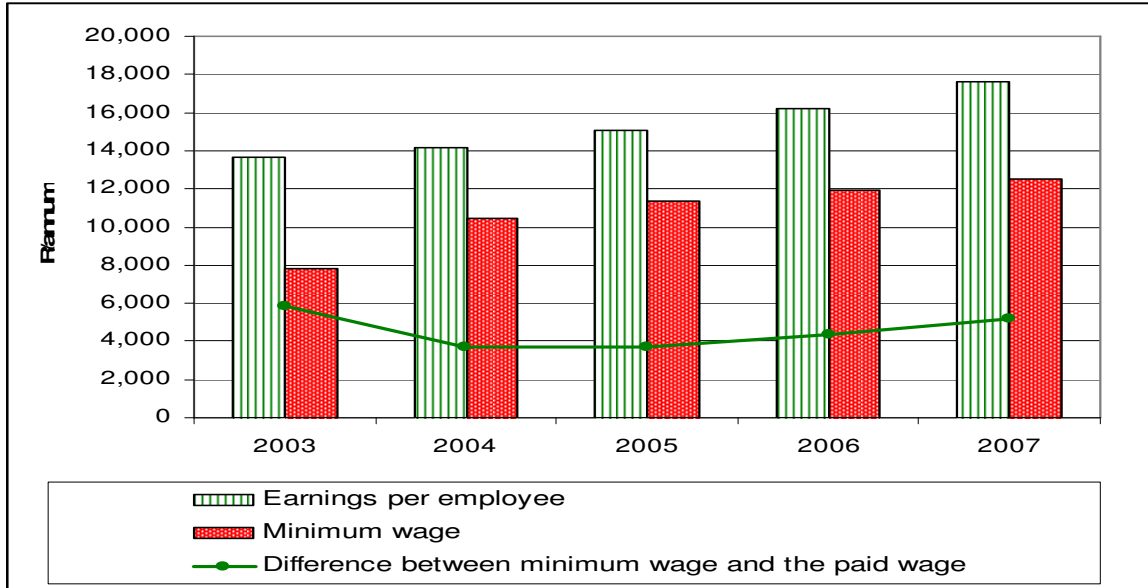
**Table 1: Distribution of agricultural sector employment across the provinces**

Province	'000									
	2008				2009				2010	Lost jobs (Q1 2008 to Q1 2010)
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	
Western Cape	181	162	119	131	145	146	127	132	177	4
Eastern Cape	75	84	74	79	82	86	73	66	61	14
Northern Cape	65	48	64	54	41	57	40	50	44	21
Free State	85	80	83	72	89	87	84	74	75	10
KwaZulu-Natal	129	165	151	163	134	103	113	105	115	14
North West	59	46	59	64	49	45	37	40	41	18
Gauteng	58	63	65	63	56	40	42	24	29	29
Mpumalanga	76	75	82	79	81	79	74	66	65	11
Limpopo	70	65	69	59	60	68	63	57	44	26
<b>Total</b>	<b>799</b>	<b>790</b>	<b>766</b>	<b>764</b>	<b>738</b>	<b>710</b>	<b>653</b>	<b>615</b>	<b>650</b>	<b>149</b>

Source: Stats SA

### 7.2 Average farm worker's earnings versus minimum wage

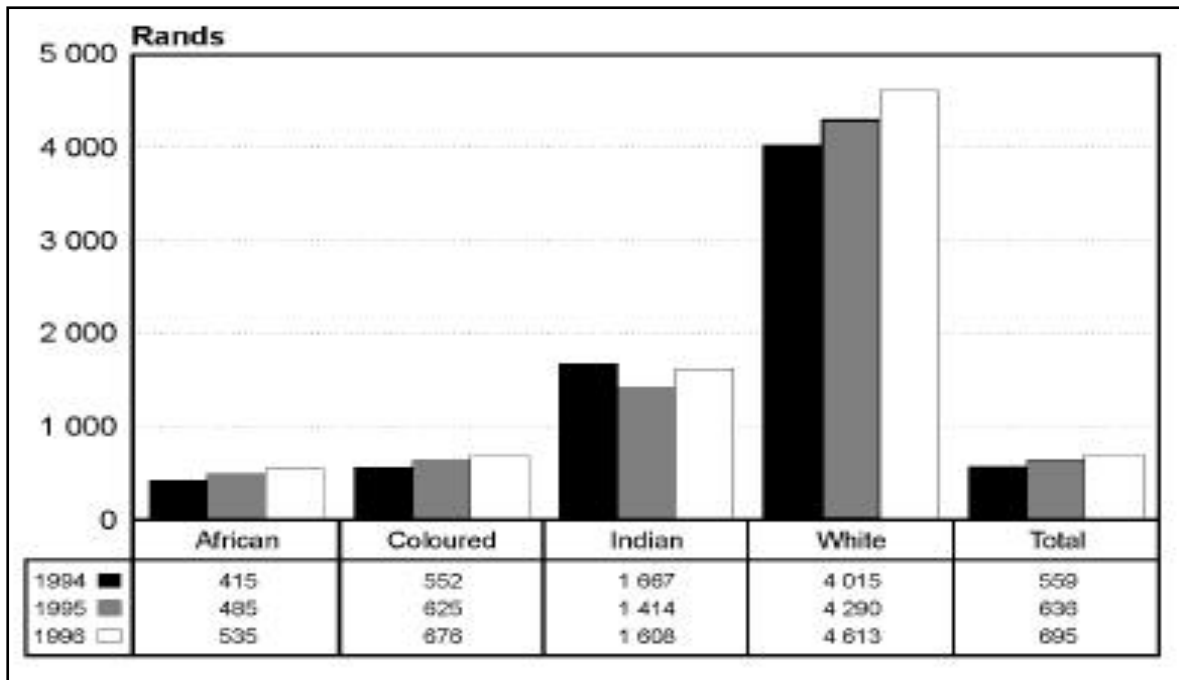
Figure 7 shows the trends in the minimum wage for farm workers set by the government and the earnings per farm employee. It is apparent from the data that farm workers on average do earn more than the minimum wage. In 2003, farm workers earned R13 626,93 per annum and this increased to R17 649,70 per annum in 2007, while the minimum wage rate increased from R7 800 a month to R12 492,00 per annum. The gap between the minimum wage and what agriculture sector employees earn is significant. It was R5 827,00 per annum in 2003 and it decreased to R5 158,00 per annum in 2007. The farm workers are therefore receiving wages in accordance with South Africa's labour laws.



**Figure 7: Trends in the minimum wage rate for farm workers and the average earnings per employee in the agricultural sector**

Source: DAFF and NAMC

Even though Figure 7 shows that farm workers are paid above the minimum wage, African farm workers who constituted 79,6% in 2001, earned less than white farm workers. For example, in 1996, the level of remuneration received by Africans was barely 12% of that received by whites (Statistics South Africa and national Department of Agriculture, 2000). Figure 8 shows that in 1994, African farm workers earned R415 a month while white farm workers earned R4 015 a month. By 1996 the wages of the two population groups had increased by R120 and R598 to R535 a month and R4 613 a month respectively. Over and above average earnings in the agriculture sector, it is important to take into consideration how earnings are distributed among racial groups.



**Figure 8: Farm workers' wages from 1994 to 1996**

Source: Statistics South Africa and the national Department of Agriculture

## 8. Summary of the findings

In this study, data from Stats SA were used to analyse the trends in employment in the agricultural sector. The overall results, based on data from 2000 to 2010, are broadly consistent with studies done locally showing that there is a long-term absolute decline in employment in the agricultural sector coupled with the decline in the sector's contribution to total employment. The descriptive results show clearly that primary sectors (agriculture and mining) are becoming the smallest employers while the secondary and tertiary sectors are showing drastic increases in the creation of employment. The historical trend of lower participation of women employees in the agriculture compared to that of men has not changed. On the other hand, the data show that the majority of employees in the sector are not skilled. The data also show that the Western Cape and KwaZulu-Natal are the leading provinces in terms of ability to create employment in the agricultural sector. The wage comparison shows that, on average, the employees in this sector are paid above the minimum wage set by the state.

The literature indicates that the regulatory environment is considered by many authors to be contributing to the decline in agriculture sector employment, directly or indirectly. For example, some authors argue that policies supporting mechanisation lowered the demand

for labour while others argue that the minimum wage is likely to increase the cost of labour and that this will lead to labour substitution through mechanisation. The literature further identifies two drivers of employment in the agricultural sector, namely (i) the adoption of new production technology, which different authors believe to be lowering the demand for farm labour (for example, the use of chemicals such as weedicides and effective harvesters), (ii) the promotion of innovation and entrepreneurship, which will result in the formation of new agricultural businesses and thus create employment opportunities subject to type and labour intensity.

The literature indicates that the wages received by farm workers is lower than the wages received by workers in all the other sectors. On average, farm workers are paid above the minimum wage, although African farm workers earn less than white farm workers. The literature also reveals that farm workers are working under questionable conditions.

## **9. Conclusion**

South Africa is one of the countries that are characterised by high unemployment levels. In dealing with the high unemployment issue, the government adopted an approach of creation of decent employment through inclusive economic growth. Therefore, a number of questions emerge with regard to agriculture sector employment, i.e. (i) Is the agriculture, forestry and fisheries sector contributing substantially to the reduction of levels of unemployment in the country? (ii) How decent is the work in the sector? (iii) Can the sector be one of the priority sectors for creating decent employment? The analysis of contributions of the sector to decent employment provides the following answers.

Despite increasing production in the agricultural sector, descriptive results show that employment levels in the sector are decreasing at an alarming rate while at the same time its relative contribution to the total employment is decreasing. Therefore, it can be concluded that the sector contributes to the declining total employment in the country. According to the literature, the adoption of production technologies and the regulatory environment (laws and policies) are behind the declining contribution of the sector to the country's total employment. Currently, the agriculture, forestry, fishing and hunting sector ranks eighth in term of ability to create jobs, and therefore it is doubtful whether it can be regarded as a priority sector when interventions to create decent employment are implemented, unless

solutions outside the commercial sector are explored. On average, farm workers are paid above the minimum wage even though they are working under questionable conditions.

## **10. Scope for further research**

Because the literature does not give clear answers to the causes of decreasing employment in the agricultural, forestry, fishing and hunting sector and since each subsector within the agriculture sector is unique, further research should be undertaken to analyse trends in employment at a subsector level so that a deeper understanding can be gained of the underlying factors/drivers for or against employment creation in specific subsectors.

On the other hand, a limited amount of research has been done on the issue of decent employment in the agriculture sector and it is also somewhat difficult to measure using only data sets from Stats SA and literature. More research is therefore needed in this area, for example with regard to farm workers' wages and the quality aspect of work, which according to Draham (2003) also includes safe and healthy working conditions.

Based on the results of the recommended research, it will be crucial to develop an integrated approach linking current programmes and policies to promote employability and employment opportunities thereby creating decent, high-quality and productive jobs for young people and women in the sector.

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