

Employment & Unemployment Trends in South Africa 1995-2002

*Selected findings of the work of the
"Employment & Unemployment Statistics Working Group"
co-ordinated by
the Employment and Economic Policy Research Programme (EPPR), HSRC*

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April 2004**

We gratefully acknowledge the participation of all those who have attended the "employment and unemployment statistics" workshops at the HSRC. In addition, we thank [INSERT NAMES]...for comments on the first draft of this document. We are grateful to Debbie Lee and Shaam Nieflagodien for assistance in compiling the tables in this report.

Employment & Unemployment Trends in SA, 1995 – 2002
Altman and Woolard, HSRC, April 2004
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Glossary of terms

Working Age Population – all persons aged between 15 and 64
Economically Active Population – all persons aged between 15 and 64 who are working or unemployed
Employed – all persons who engaged in any kind of economic activity for at least one hour in the previous week. This includes unpaid family workers and subsistence farmers.
Strict (official) definition of unemployment – a person is regarded as strictly unemployed if he/she did not work in the previous week, wants to work, is available to begin work within a week and has taken active steps to look for employment or self-employment in the previous 4 weeks.
Expanded/broad definition of employment - a person is regarded as broadly unemployed if he/she did not work in the previous week, wants to work and is available to begin work within a week.

HSRC RESEARCH OUTPUTS
2900

Executive Summary

Purpose of this Paper

In 2002 the HSRC formed a working group to look at employment and unemployment statistics in South Africa. The group is made up of a number of researchers and stakeholders who share the common goal of wanting to understand the dynamics of labour force participation, employment and unemployment in South Africa. During the past 18 months a substantial body of work has been commissioned, discussed and digested by the group. This document summarizes the key findings and raises topics that need further investigation.

The working group was formed to get a better understanding of employment and unemployment trends in South Africa. There is considerable confusion on the issue with many different trends and figures being put out for public consumption, but with little understanding of what they communicate. The complexity stems from two main issues. First, that SA appears to have undergone substantial restructuring over the past 10 years. Second, the national statistical agency has also undergone change, with a new orientation toward poverty and household income measures that has absorbed considerable resources. New measurement instruments were introduced and improved over the 1990s. This results in much more inclusive measurement, but less reliability in trend analysis while the tools were being modified. Third, we find that there is some confusion in the way that employment and unemployment trends are reported, and wanted to make a contribution to developing a meaningful set of indicators.

The purpose of this document is to reduce as much as possible the confusion surrounding employment and unemployment statistics. There is much debate about the merits of the statistics, and often incorrect popular assumptions about trends – this detaches from the substantial debates needed about underlying trends and appropriate policy solutions.

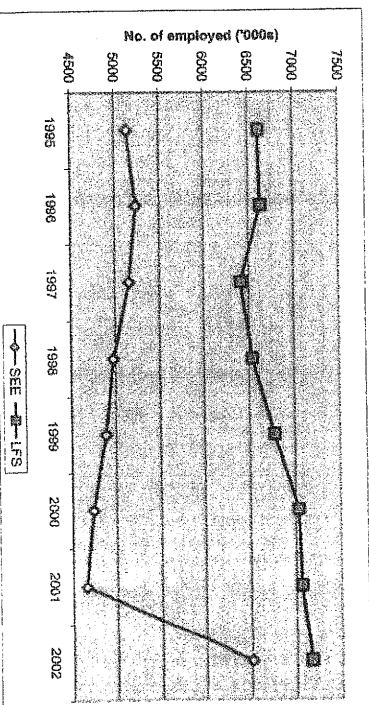
- Explaining why there are variations between the different surveys and censuses, to identify the most appropriate measures.
- Offer as consistent a time series as possible, by focusing areas where measures are inconsistent
- Address common mistakes in reading the data, and de-mystify reporting variations
- Distinguish between trends that are reliable and those that are not.
- Report on employment and unemployment trends, based on this previous groundwork.
- Identify meaningful indicators for tracking employment and unemployment

¹ This paper is the culmination of many discussions and workshops held with the Employment Statistics Working Group, convened by the HSRC in 2002 and 2003. The working group has included participants from National Treasury, Statistics SA and the Statistics Council, SA Reserve Bank, Department of Labour, the dti, and COSATU. The final preparation, and particularly adjustments to the employment data, benefited substantially from the support of a smaller technical group including Neva Makgela, Charles Meki, Peter Buwenbo and Haroon Ehoran.

Data issues

Employment data comes from a range of sources that do not necessarily paint a consistent picture of changes in employment and unemployment. We argue that the household surveys – as opposed to the population censuses or firm-level surveys – remain the best instrument for measuring key employment trends. Over time, Stats SA have improved and refined the way in which they classify the economic status of respondents in the household surveys. Wherever feasible, we attempt to align the definitions over time to make the employment and unemployment data as comparable as possible.

Formal Employment Trends, according to the LFS & SEE



Labour Force Participation

The labour force (consisting of the employed and the unemployed) has been growing more rapidly than the working age population in the post-apartheid period. While the population aged 15-64 increased by 3.7 million between 1995 and 2002, labour supply increased by 4.3 million people over the same period. We argue that this is a consequence of two effects that we cannot disentangle – a change in what is being measured (as a result of methodological changes in the survey instrument) and a “real” underlying trend brought about by sociological and economic changes, especially among women.

After rising rapidly in the 1990s, the labour force participation rate appears to have stabilised over the last 3 years at about 56%. This is not to say, however, that labour force participation would not rise again if employment prospects improved further or average levels of education rise.

² We explain our approach to improving consistency in the data in Appendix A of the report. Unfortunately, the household surveys do not enable an understanding of how employment is linked to other economic variables. For example, the economic surveys of firms are the only way to capture information on productivity.

Much has been made of the fact that the Labour Force Survey includes in the definition of work "marginal activities" such as one hour in the last week tending animals, growing crops, repairing the farm or catching fish for sale or own consumption. In fact, very few people in the LFS are in fact engaged (exclusively) in these "marginal" activities, with the exception of small-scale farming. For example, only 9000 people are in the "catching fish or wild animals" category in the September 2002 Labour Force Survey. It is also interesting to note that the "one hour per week" minimum is not really an issue. In total, only 117 000 people are working less than 10 hours a week in these "marginal" activities.

Finally, we recommend a set of indicators in tracking employment and unemployment, based on their reliability and significance. The Labour Force Survey is currently the best source of employment and unemployment data, but has the limitation that they cannot be directly compared to output figures so that we can not derive economic indicators such as productivity. However, in the absence of comprehensive firm surveys, they are the best indicators of employment. Indicators could include:

- Unemployment
 - Compare number of strictly unemployed to broadly unemployed
 - Non-working as % of working age population. The concern in using this measure is that it could easily be confused with the unemployment rate, although it is a very different measure. It is nevertheless useful as it offers a better indicator of non-participation.
 - Develop measures of vulnerability to determine how excluded or included unemployed are (eg. never worked or worked before? Level of education by age, etc.)
- Employment
 - Total employment, minus subsistence agriculture
 - Private formal non agricultural employment
 - Non-formal economy, including informal sector and private households
 - Separate reporting of subsistence agriculture
 - Earnings in formal and informal economy
 - Working (excl subsistence agriculture) as % of working age population

Employment & Unemployment Trends in South Africa, 1995-2002

1. Background

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The working group was formed to get a better understanding of employment and unemployment trends in South Africa. There is considerable confusion on the issue with many different trends and figures being put out for public consumption, but with little understanding of what they communicate. The complexity stems from two main issues. First, that SA appears to have undergone substantial restructuring over the past 10 years. Second, the national statistical agency has also undergone change, with a new orientation toward poverty and household income measures that has absorbed considerable resources. New measurement instruments were introduced and improved over the 1990s. This results in much more inclusive measurement, but less reliability in trend analysis while the tools were being modified. Third, we find that there is some confusion in the way that employment and unemployment trends are reported, and wanted to make a contribution to developing a meaningful set of indicators.

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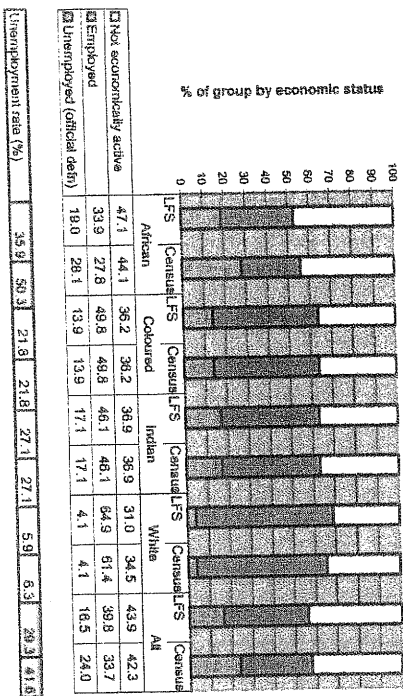
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measuring non-formal economic activity, and respondents had little experience in describing their circumstances.

Figure 1 shows that there are indeed substantial differences in labour market status depending on whether one makes use of the September 2001 Labour Force Survey or the 2001 Population Census conducted a month later. It is clear that the self-description in the Census leads to far fewer people being classified as employed (and far more as unemployed) than the LFS. For example, the census and LFS finds unemployment rate of 41.6% and 29.3% respectively, almost wholly due to the variations amongst African respondents. It must be emphasized that Stats SA make it very clear that the LFS is the official source of labour market information.

Figure 1 Distribution of the working age population by labour market status and race, LFS September 2001 and Census 2001



Household surveys

As a result of the unemployment debate of the mid-1970s, the Department of Statistics (which later became the Central Statistical Service and then Statistics SA) introduced the monthly Current Population Survey. For various reasons, not least the flaws in the sample design of the survey, this survey fell into disrepute and was abandoned in the late 1980s. After a gap of several years, the annual October Household Survey (OHS) came into existence in 1993. The OHS had a detailed labour market module that covered a wide range of issues relating to formal and informal employment and unemployment. However, in order to fulfill the stringent reporting requirements of the IMF, in February 2000 Stats SA introduced a twice-yearly Labour Force Survey (LFS).

The household surveys have a sample size of 30 000 households. Every individual over the age of 10 in the household is questioned about his/her employment status. The samples for the household surveys are drawn so as to be representative of the provinces or the four population groups.

Some of debate on employment figures relates to wide variations or seemingly sudden increases or decreases in labour force participation or economic activity. Since 1999 the household surveys have lightened up methodologically in terms of taking a far broader view of what constitutes "employment" and the questionnaires have probed far more deeply for information on economic activity. As a result, the dramatic increases in measured employment between 1998 and 1999 and again between 1999 and 2000 are at least in part the result of methodological changes. The earlier OHS relied on self-described labour market status. For example, if a person described herself as a homemaker, she would be classified as "not economically active". In the LFS, a long list of questions is asked to determine whether an individual is engaged in any form of gainful economic activity in the 7 days prior to the interview. To continue our example, if this same individual who regards herself as a homemaker had spent an hour tending to her vegetable patch in the previous week she would be classified in the LFS as "employed".

This increase in measured employment also has an effect on the labour force participation rate since some people who would have described themselves as economically inactive in the OHS would be classified as working (and thus economically active) in the LFS. It cannot be sufficiently overemphasized that the OHS total employment figures should not be compared directly with the LFS figures.

It has to be borne in mind that the household surveys are sample surveys and thus the any estimates obtained from these surveys will have a margin of error. The Labour Force Surveys take a sample of 3 000 areas (representative at the provincial level) and then interview 10 systematically sampled households in each area. The sampling errors are quite small because of the large number of clusters (areas) that are selected. Nevertheless, the sampling errors cannot be ignored. For example, we can say with a 95% level of confidence that the true number of workers could be 2.2% (or about 250 000 people) less or more than the point estimate in any given year. Similarly, we can say with a 95% level of confidence that the true number of unemployed could be 4.1% (or about 250 000 people) less or more than the point estimate in any given year. Once one goes beyond the aggregate level and tries to discern trends in components of employment, the sampling errors become much more significant.

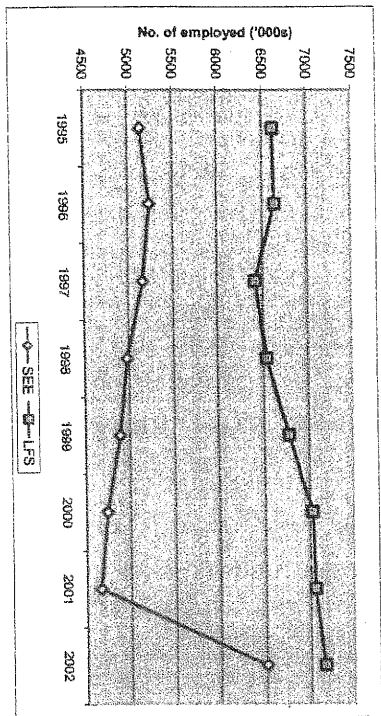
Firm surveys

Considerable confusion arises when employment sources are directly compared, and found to be in widely divergent. These surveys measure different things and are useful for different purposes – but are not interchangeable as sources of information on employment. One of the most common errors has been to report on total employment using the firm-based surveys.

Prior to 1998, Stats SA conducted 17 monthly or quarterly business surveys. In an effort to improve coverage and reliability and to reduce the respondent burden, in 1997 Stats SA consolidated and streamlined its firm surveys by replacing the various business surveys with:

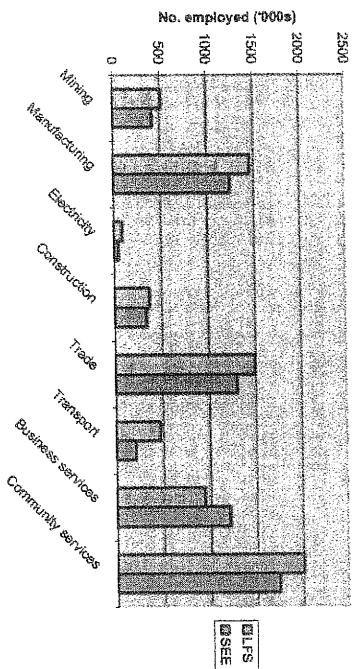
1. The Survey of Total Employment and Earnings (STEE) which was later renamed the Survey of Employment and Earnings (SEE); and
 2. The Survey of Average Monthly Earnings (AME).⁵
- The Survey of Employment and Earnings (SEE) is a quarterly survey covering a sample of 10 183 private and public enterprises in the formal non-agricultural business sector (with a VAT turnover exceeding R300 000 per annum)

⁵ A Survey of Occupations by Race and Gender was also planned but never got beyond the piloting stage.



From 2002, the coverage of sectors in the SEE improved considerably, so that the variation between the surveys is not as great. Figure 4 shows a comparison of non-agricultural private sector employment in the March 2003 SEE versus the March 2003 Labour Force Survey. The LFS figures are generally higher than those of the SEE – which is to be expected given that only employment in VAT-registered firms is picked up in the SEE. Surprisingly, business services come out significantly higher in the SEE which suggests that the LFS and SEE coding methods are not entirely comparable.

Figure 4: Sectoral employment, SEE and LFS (March 2003)

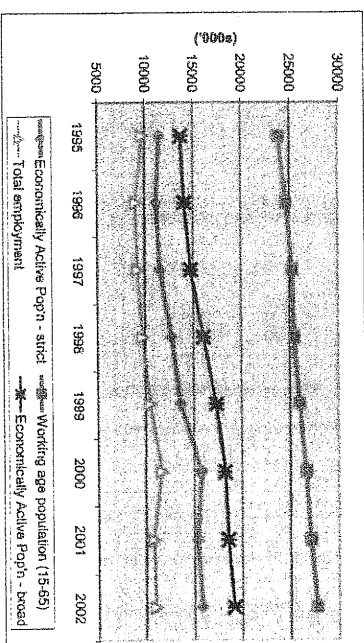


⁶ That is to say that the extent of the difference in the size of business services is statistically significant, the 95% confidence intervals for the LFS and OHS estimates do not overlap.

3. Labour Supply

Some believe that growing unemployment in SA is substantially caused by the rapidly expanded labour force. Figure 5 shows that the labour force did grow faster than the working age population as a whole. The working age population grew by about 2.3% per annum between 1995 – 2002, while the strict labour force grew by an average 5.3%, and the broad labour force grew even faster – at 5.6% average per annum. So, the absolute number of people between the ages of 15 and 64 years (the “working age population”) increased by 3,7 million between 1995 and 2002. Over the same period, the size of the economically active population ostensibly grew by 5,4 million. Labour force participation rates (the proportion of the working age population that participates in the labour force) seemingly increased from 46% to 59% between 1996 and 2000 – then strangely stabilized thereafter⁷. It is difficult to say whether labour force participation rates might rise again – they were certainly very low. A participation rate of 59% is not too far off an international norm (see United Nations 2004).

Figure 5: Labour Force and Employment



Understanding the underlying reasons for growing labour force participation is important, as it can influence future success at bringing down unemployment rates. Unfortunately, there is very little understanding of what drives participation – whether push or pull factors. There may be a number of explanations for the recorded change in labour force participation.

Most of the recorded increase in labour force participation rates over the period has translated into an increase in unemployment. Between 1995 and 2002, the number of people broadly unemployed increased by 4.1 million, representing more than three-quarters of the increase in

⁷ The year-on-year figures can cause considerable problems in efforts to closely track employment trends. In particular, the strict labour force is reported to have increased by about 2 million between 1999 and 2000, and then dropped by about 400,000 between 2000 and 2001. Neither of these scenarios is plausible, and yet these are the denominator used in calculating unemployment rates. The break between 1999 and 2000 might be explained by the use of the OHS and LFS for respective years. We do not understand the drop in the subsequent year.

4. Unemployment

There is some controversy in South Africa over whether it is more appropriate to use the strict or broad definition of unemployment⁸. The "strict" definition requires that an unemployed person be actively engaged in job search, while the broad definition requires only that a person desires to work and is available to begin work within a short space of time. Table 1 presents unemployment trends between 1995 and 2002. While the strict definition is the one used officially, the broad rate has important racial biases since the vast majority of discouraged workers are African. Either way, it is immediately apparent that the unemployment problem is one of epic proportions, regardless of how one chooses to define it.

Table 1: Unemployment trends

	1995	1996	1997	1998	1999	2000	2001	2002
STRICT DEFINITION								
% unemployment	15.9%	19.7%	20.7%	24.4%	23.6%	26.1%	29.8%	30.5%
Number of unemployed	1.8m	2.2m	2.4m	3.0m	3.2m	4.1m	4.6m	4.5m
BROAD DEFINITION								
% unemployment	29.4%	36.3%	37.8%	40.2%	39.8%	35.9%	41.7%	42.5%
Number of unemployed	4.0m	5.1m	5.5m	6.3m	6.8m	6.5m	7.7m	8.1m

Source: OHS 1995-99, IFS Sept 2000, 2001, 2002.

We have not addressed possible concerns in the labour participation data, and yet they do have an important impact on unemployment rates and our ability to understand underlying trends. Below we offer two possible ways of treating unemployment. Figure 7 shows unemployment rates by race. We see rising strict and broad unemployment over the entire period, for all race groups. Because we have difficulty knowing the real versus measured growth in the labour force, we wanted to offer an alternative way of tracking unemployment that does not rely on labour force participation as a mediating factor.

Figure 8 shows the proportion of the working age population (15 – 64) that is *not working*. We see a different trend – for most race groups, the proportion in the working age population that were not working did fluctuate, but was essentially stable. This is particularly surprising for Africans. More than the unemployment figure, the relation to the working age population gives a sense of the extent to which the employed support the rest of the population. Table xxx below pushes this further by calculating two dependency ratios. The first shows the ratio of non-economically active population (non-EAP) to the economically active population (EAP). We see that in 1996, there were 2.6 non-EAPs in the population for every person that was active, using the strict definition. This measure of dependency fell to 2.3 by 2002. The second measure shows the ratio of non-EAPs to those who are working. This measure of dependency falls from 3.26 to 3.07 over the same period using the strict definition (ie. There were 3.07 non-economically active people who relied on working people in 2002)⁹.

⁸ For a discussion of our derivation of unemployment, please see Appendix A.

⁹ Normally, one measures the % of the working age population that is working. This may give us a better sense of economic participation.

¹⁰ see Altman 2004 for further discussion.

Figure 7: Unemployment, by race (strict definition)

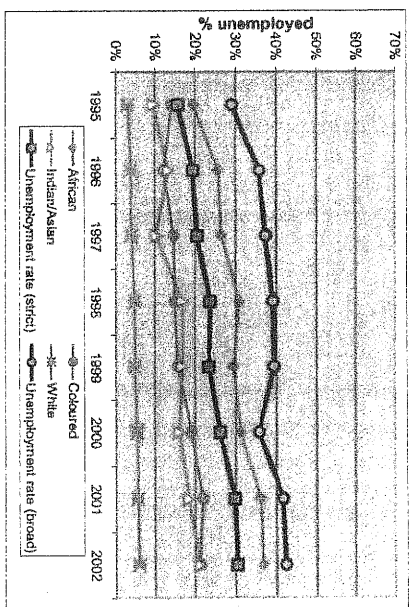
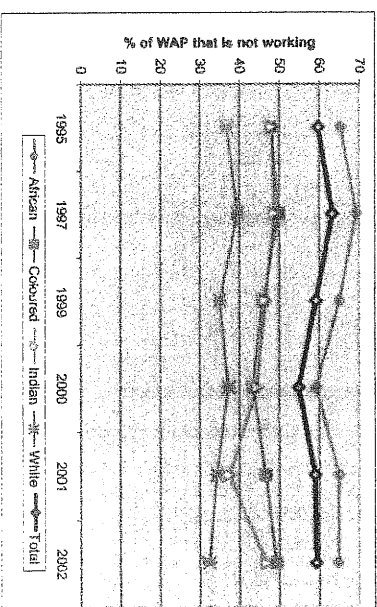


Figure 8: Not working as a % of the working age population, by race



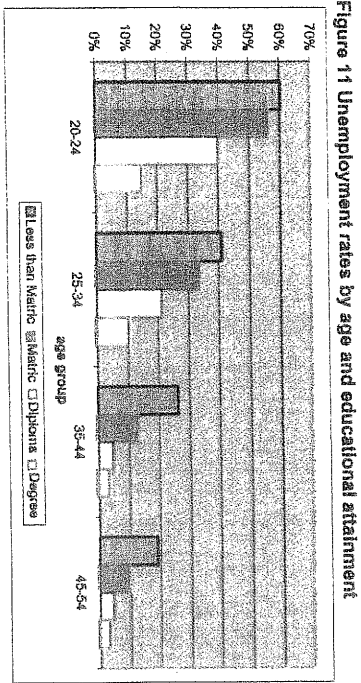


Figure 11 Unemployment rates by age and educational attainment

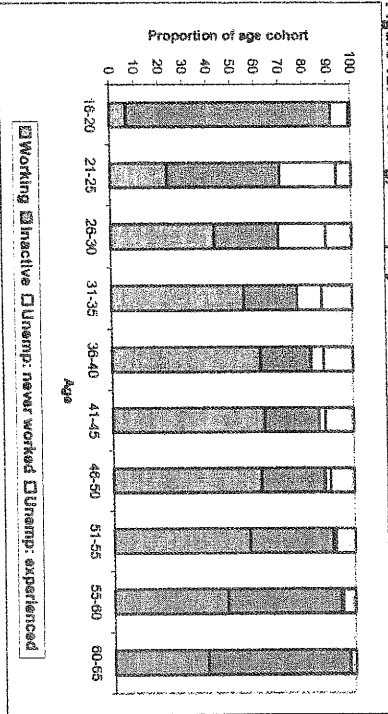


Figure 12: Working, Unemployed and inactive, by age

Source: LFS 7 (March 2003), Statistics South Africa

5. Employment

There is some debate about the interpretation of the employment trends in South Africa from the 1990s¹². Some of this debate arises from the way data is presented – so one aim of this paper is to suggest appropriate measures to track underlying employment trends. There are two central issues:

- It is important to track employment on a year-on-year basis (rather than 6-monthly) with a minimum number of years being used to ascertain whether or not there is an identifiable trend. This is particularly important during a period of structural change, and particularly in the context where data is sourced from a range of surveys that are all in the process of being developed. Essentially, we want to understand the employment generating trajectory of the economy, and this requires a periodisation of trends.

- Different types of employment play different roles in the economy – the preceding discussion on the meaning and definition of employment bears this out. Generally, formal non-agricultural private sector employment is a good indicator of the underlying ability of the economy to create meaningful employment. The public sector grows as a function of budgetary decisions, and can be directly influenced through policy decisions in a way that is not the case for the market. Commercial agriculture is seasonal and can depend on commodity prices – while it can indicate the fate of rural workers, does not offer a marker of real employment trajectories. If the formal sector grows, one might expect the non-formal sector to grow alongside it in some, as yet not well understood, fashion. Formal sector workers earn money that they can subsequently spend on a variety of services near to home, can re-invest in family businesses, and so on. However, should the informal sector grow in a context of stagnant formal sector, this might indicate survivalist activities and not a dynamic virtuous circle.

Figure 13 and Table 2 set out the employment trends from 1995 to 2002¹³ based on the household surveys. These show the importance of periodising employment trends.

Table 2: Summary of net employment creation in SA Economy (’000s)

Jobs created in:	between 1995 - 2002		between 1997 - 2002		between 1995 - 1999		between 1999 - 2002	
	total	per annum	total	per annum	total	per annum	total	per annum
Formal sector	173	25	1 084	217	-285	-71	438	
Non-formal sector	1 109	158	717	143	1 038	260	71	
Non-formal, excluding subsistence agric	648	93	416	83	766	190	-112	
Total	1 282	183	1 801	360	753	188	529	
Total, excl subs agric	821	117	1 500	300	475	119	346	
Labour force growth	4 295	614	4 253	851	2 143	536	2 152	

Source: calculated from electronic data set made available by StatsSA for OHS and Sept LFS.

¹² For a discussion of how we defined employment and allocated workers to different sectors, see Appendix A.

¹³ The household data is supplemented by the SARD data for public sector employment since the OHSs could not be disaggregated into public and private sector employment.

- employment growth slowed between 1999 – 2002, rising by only 1% and creating an average of only 115,000 net new jobs per annum.
- *Formal* employment bottomed in 1997, and grew by an average annual rate of about 3% between 1997 – 2002. This translates into just over 1 million net new formal sector jobs or about 207,800 jobs per annum. About 90% of these jobs were created in private non-agricultural employment – growing by an average 4% per annum. Over the broad period, about 150,000 to 200,000 jobs were lost in the public sector.
- *Non-formal* employment – namely in subsistence agriculture, domestic labour, and informal sectors – is extremely difficult to assess. These sectors are firstly affected by measurement problems in 2000 – where subsistence agriculture and domestic worker employment spikes in a way that does not seem plausible. The most likely trend would see non-formal employment growing by about 1 million between 1996 – 1999, and stabilising thereafter. Within this picture, domestic employment is fairly stable, the informal sector grows until 2000 and declines thereafter, and subsistence agriculture appears to have been overstated in 2000.

Formal Employment

Formal employment trends are best distinguished as private non-agricultural formal sector, commercial agriculture and the public sector. Each of these broad sectors has very different dynamics. Moreover, the ability to measure them varies quite considerably.

Employment in commercial agriculture is exceedingly difficult to measure. The clustered nature of commercial farming implies that the standard errors on these employment estimates would be quite large even if there was not a problem of low response rates among farm workers. It is extremely difficult for Stats SA enumerators to gain access to the commercial farms where many farm workers reside.

Commercial agriculture accounted for about 10% of formal employment and 8% of total employment in 2002. After very large measured declines in commercial agricultural employment in the early and mid-1990s, employment appears relatively stable, creating about 335,000 jobs or an average of about 70,000 jobs per year between 1997 and 2002.

Public sector employment has been contracting slowly over the last decade, with a net loss of about 130,000 to 190,000 jobs since 1995. The public sector accounts for about 20% to 24% of total formal employment (or about 15% of total employment).

The private non-agricultural sector is the most important contributor to formal employment. In 2002, it accounted for 70% of formal employment and 53% of total employment. It is a good marker for underlying trends, as it is less affected by seasonal factors than agriculture, and is not directly determined by government budgets as with the public service. Policy can guide the market, but it can't force it to grow.

It is a good marker of the capability of the economy to create reasonably waged employment. Even where wages are low, equivalent workers – in similar sectors, with similar education, earn substantially less in the informal than in the formal sector. Although not well understood, it is reasonable to assume that some portion of non-formal labour arises as a result of the expansion of workers in the formal sector – who in turn buy more goods and services, employ more domestic help, and effect more intra-household transfers to micro-entrepreneurial lending. If the informal sector grows alongside formal sector expansion, this is some indication of a virtuous circle. However, if the informal sector grows, but the formal sector is not, there is an indication of a vicious circle, of desperation and survival.

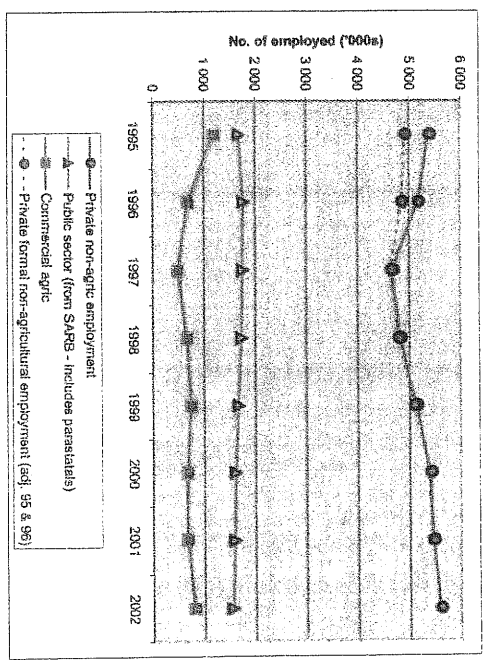
It is also fortunately the most reliable data. The standard error of the aggregate employment estimate is of the order of 1% (Stats SA, 2003 and own calculations), so we can make reference to the overall trend with a 95% degree of certainty.

Adjustments to Formal Sector

The calculation of all employment trends in this paper are sourced from electronic data sourced from Stats SA. The approach to setting up the data is explained in Appendix A. In the first instance, we ensured that the definitions of employment were as consistent as possible. These are the trends represented with solid lines in Figure 14. We then made a number of adjustments to the non-formal sector figures, where there were further inconsistencies. These adjustments are explained in the next section. In some cases, these adjustments resulted in the shifting of recorded employment from the formal to the non-formal sector. The adjustments made to the private agricultural formal sector are seen in Figure 14. The main effect is to reduce formal private non-agricultural employment in 1995 and 1996.

Note also that all workers in 'private households' have been included in the non-formal sector.

Figure 14: Formal Employment by Broad Sector



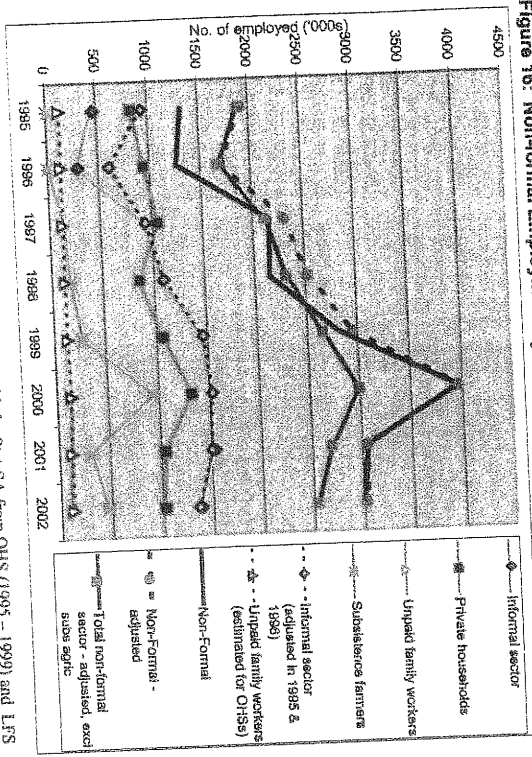
Source: calculated from electronic data made available by Stats SA from CHS (1995 – 1999) and LFS (Sept 2000 – 2002). Public sector figures include the parastatals and are sourced from the SA Reserve Bank.

Non-Formal Employment

Tracking employment outside of the formal economy has been the biggest challenge. This is partly due to on-going changes made to the surveys as Statistics SA builds its capability in measuring the non-formal economy. However we have also found some discrepancies in the data, and have attempted to improve the alignment and consistency in definitions of employment and sector allocations. Figure 16 presents the effect of these adjustments – which are explained in the box below.

We categorise employment outside of the formal sector as “non-formal” employment. This includes: the informal sector’s employment in private households, subsistence agriculture, and other forms of unpaid work. It is useful to separate these forms of employment as they have different underlying dynamics, and the ability to measure them also varies considerably. Non-formal employment accounts for about 1/4 of total employment.

Figure 16: Non-formal Employment by Sub-sector - original vs adjustments



Source: calculated from electronic data made available by StatsSA from OHS (1995 – 1999) and LFS (Sept 2000 – 2002).

Employment in the informal sector

The informal sector includes a wide variety of activities such as street vending, gardening, bricklaying, painting, sewing, driving, caring, operating a shop or spaza, hairdressing, welding, managing, and practising traditional medicine (Skinner, Dewey & Valodia, 2003). It accounts for about 13% of total employment and about 45% of non-formal employment.

More than half of informal sector employment is found in wholesale and retail trade, Manufacturing and construction each account for about 12% of informal sector employment. Stats SA have improved their coverage of the informal sector over time. For example, Sinkins (2003) shows that the first full Labour Force Survey (LFS September 2000) uncovers more women, more poorly educated and more people working shorter hours in the informal sector than the last October Household Survey (OHS 99). Consequently, it is likely that some of the change in the size of the informal sector is the result of better coverage, rather than actual growth in the sector. We do not know (and are not sure it is possible to know) the extent to which this may have influenced the numbers, so we have focussed on evident discrepancies in the data itself.

Adjustments to Non-formal Employment

Do the non-formal employment trends reflect real dynamics? To what extent might the growth found in the 1990s be linked to changes in the measurement instrument? There has been some debate in this regard, and it is likely that it will never be fully resolved. However, we did make an attempt to resolve discrepancies in definitions and coding to enable a better alignment of data, as follows:

- Since 1997, the OHS/LFS questionnaires have asked individuals to classify the firms in which they work as being in the informal or formal sector. We modify this self-definition slightly, according to our definition, a person is regarded as working in the informal sector if all of the following criteria are met:
- No UIF payments are being made on behalf of the worker (or the individual doesn't know if payments are being made);
- No medical aid payments are being made by the employer (or the individual doesn't know if payments are being made);
- The employer is not registered with the Registrar of Companies (or the individual doesn't know); and
- The person regards his/her employment as being in the informal sector (or the individual doesn't know).

Employed people working in the informal sector are measured from 1997 forward, but are not included in 1995 and 1996. Essentially, the 1993 and 1996 October Household Surveys allow for an informal/formal split among the self-employed, but not for the employed. Therefore, we believe that the informal sector is undercounted in 1993 and 1996. We find that in subsequent years, the average ratio of self-employed to employed in the informal sector is approximately 1:1. We therefore adjusted the size of the informal sector accordingly in 1995 and 1996 (ie we doubled the number). These “additional” informal sector workers are then subtracted from the formal sector employment total.

We believe that unpaid family workers were not included as working or as economically active in the October Household Surveys. Based on information from the Labour Force Surveys for unpaid workers in non-agricultural activity, we estimate the size of this sector and add it to the OHSs to enable consistency. Note that these numbers are not large – generally just over 100,000.

We also adjust the informal sector figures by removing all individuals who work for private households and placing them in a separate category. We have grouped domestic workers and workers in formal & informal private household jobs in one category called “private households” – this is described in the next section.

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Despite some variation, it is safe to say that there are approximately one million workers in private households. This accounts for more than 9% of total employment and about 40% of non-formal employment. It is a particularly important source of employment for about 1/4 of African women workers. The wages in this sector are very low. The median reported wage in the September 2002 LFS was R2.50 per hour while only 5% of workers in this sector earned R8 or more per hour. Interestingly, most private household employees work full-time: fully three-quarters of these workers are employed for at least 35 hours per week.

"Marginal" activities

The definition of 'employed' used by Statistics SA is sometimes critiqued for including extremely marginal and unpaid activities. Some questions simply require that the respondent worked for one hour in the last week tending animals, growing crops, repairing the farm or catching fish for sale or own consumption.

Two points need to be noted. Firstly, this definition of employment is in keeping with international practice (Allbet, 2003). Secondly, and more importantly, very few people in the LFS are in fact engaged (exclusively) in non-wage activities, with the exception of small-scale farming. *In total, only 117 000 people are working less than 10 hours a week in these "marginal" activities.*

Table 5: Number of people engaged in "marginal" activities (2002)

Question 2.1 from LFS 6	Number of people who are only engaged in this activity (or combination of these activities)	Number of people working less than 10 hours per week in this activity
2.1.d) Help unpaid in a household business of any kind?	136 000	16 000
2.1.e) Do any work on his/her own or the household's plot, farm, food garden, cattle post or knal, or help in growing farm produce or in looking after animals for the household?	347 000	93 000
2.1.f) Do any construction or major repair work on his/her own home, plot, cattle post or business or those of the household?	19 000	9000
2.1.g) Catches any fish, prawns, abalies, wild animals or other food for sale or household food?	10 000	2 000

Source: Source: calculated from electronic data made available by StatsSA from LFS (Sept 2002).

Notes: This includes only people who were 'employed', but not in waged employment – i.e. They earned in-kind. The left hand column shows the questions in the Labour Force Survey. The middle column shows the number of people that responded affirmatively. The right hand column gives us a subset of the middle column, showing us what number worked less than 10 hours. Note that 2.1.c is simply 'subsistence agriculture'.

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6. Earnings and Employment by Skill Level

Much has been made of the fall in demand for low and semi skilled workers, and the proportionate rise in demand for higher skill workers. Figure 17 presents trends in demand by broad skill category in the formal economy – high skill (professionals), semi skilled (technicians), low skill (elementary occupations), and managers¹⁶. We are not certain what the trends might have been in 1995 and 1996 due to the large and varying number of people who were allocated to an 'unspecified' category. Given the loss in jobs in primary industries over the early 1990s, it would not be surprising that low-and semi-skilled workers were the main losers. The picture seems to change from 1997. The main growth in jobs is found in semi-skilled work, and then for skilled and elementary workers. The growth in demand for professionals and managers is surprisingly flat.¹⁷

It is common cause that low skill jobs are not expanding, partly due to the change in industrial structure, and partly due to the relative rise in low and semi skill wages. The first point is addressed in a separate paper (see Allman 2004), but it is possible that some of the expansion in low-skill work is caused by the expansion of service industries. On the second point, we do look at relative wages below.

It is widely believed that low skill wages have been rising, both absolutely and relative to high skill wages. Historical analysis by Fallon and da Silva (...) and Lewis (...) showed this, focussing their analysis on the period from the 1980s to early 1990s. (discussion to be completed....)

Figure 18 offers data on average hourly earnings in the formal sector by broad skill level. These figures are deflated to 2000 prices. We find that most groups experienced very little change in real earnings between 1995 – 2002. There are some exceptions – in particular female managers became better paid over this period. From an employment promotion perspective, Figure 18 shows that low and medium skill wages are either stagnant or falling over the period.

¹⁶ The International Standard Classification of Occupations (ISCO-88) defines skill as "the ability to carry out the tasks and duties of a particular job". It uses four broad skill levels referenced to levels of formal education. Thus, if a job generally requires a particular level of education, then this is the skill level assigned to people in that occupation. For example, to do the work of a clerk is considered to require a secondary school education (see Table 6), therefore all clerks are categorized as being in skill level 2, regardless of whether they have a grade 1 or a post-graduate degree.

¹⁷ The category of manager is very imprecise rendering occupational classification difficult (ILO, 1990). It does not necessarily denote high skill personnel – only 35% of managers have a tertiary qualification (LFS Sept 2002).

Table 6: Mapping of occupations onto Skill level

Occupation	Skill level	Education level
Managers	4 (highly skilled)	University degree or equivalent
Professionals	3 (skilled)	Non-degree tertiary training
Technicians	1	1
Clerks	2 (semi-skilled)	Secondary school
Service workers	2 (semi-skilled)	Secondary school
Skilled agricultural workers	2 (semi-skilled)	Secondary school
Craft and related	2 (semi-skilled)	Secondary school
Plant operators	2 (semi-skilled)	Secondary school
Elementary occupations	1 (unskilled)	Primary school

¹⁷ Review Haroon's work on this matter. These trends seem strange???

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- The official unemployment rates using the strict definition rose from 15.9% to 30.5% between 1995 and 2002. The number of strictly unemployed (or those that are searching for work) has grown faster than the number of discouraged (those that want to work, but have given up looking).
- Rising unemployment is not simply a function of a too rapid rise in the labour force. It has continued to rise, even though the labour force participation rate stabilised from 2000. This means that there is also a demand side problem.
- Although the absolute number of young people grew between 1995 and 2003, the proportions that are unemployed remains the same. Approximately 75% of the unemployed are still under the age of 35.
- The aggregate data shows rising unemployment amongst those with more education. This masks the age dimension – that younger people are better educated and that they stand in a long queue to find work. We find that education does contribute to employability quite substantially. In each age cohort, people with higher educational attainment are much less likely to be unemployed. However, age (and length in the labour market) has a more pronounced effect on employability – people with the same educational attainment are much more likely to be employed as they get older (or more experienced).
- This figure is substantially influenced by large measured growth in the labour force. Because we are not sure to what extent labour force growth resulted from measurement changes, we eliminated this effect by looking at the proportion of those not working in the working age population. We found that this figure was quite stable – about 60% of the working age population was not working in both 1995 and 2002. This must not be confused with unemployment – only some proportion of the working age population participates in the labour market. We also looked at dependency ratios (the proportion of population dependent on those who work) and found that they have declined.
- On average, about 117,000 jobs were created annually over the period of 1995 – 2002, as compared to an annual expansion in the labour market by about 400,000 to 600,000.
- Between 1997 and 2002, the formal sector was the more important contributor to employment. The majority of new formal jobs were created (in order of importance) in finance, insurance and IT related industries, retail and wholesale, and in community and social services. There were further jobs created in mining and manufacturing.
- The formal and non-formal sectors have contributed about equally to job creation since 1996, albeit at different points.
- The periods of employment growth can be categorised as follows:
 - Falling employment to 1996, particularly with the loss of jobs in agriculture and mining.
 - Fairly consistent increases in non-agricultural private sector employment from 1997, creating about 1.1 million jobs to 2000, and slowing thereafter.
 - Non-formal employment, especially the informal sector, growing in the second half of the 1990s, growing by about 1 million between 1995 – 1999. This sector has not been growing since 2000.

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- Demand for lower and middle skilled workers had grown more rapidly than for other groups between 1997 and 2002. This represents a reversal on trends found in the early 1990s, when many low and mid-skill jobs were lost in mining, agriculture and, to a lesser extent, in some manufacturing industries.
 - The average real wages of low and middle level skilled workers did not rise between 1995 – 2002. This contrasts with the trend found in the 1980s and early 1990s.
- We suggest that set indicators be determined in tracing unemployment and employment trends, to more clearly inform policy-makers and stakeholders. The indicators should be chosen on the basis of the following criteria:
- Reliability
 - Indicative of underlying trends
 - Significant contributors to employment
 - Eliminate seasonal fluctuations
 - We recommend that the methodology for setting up data, as used in this paper.
- We recommend the following indicators be traced, using September Labour Force Survey figures. This has the limitation that they cannot be directly compared to output figures so that we can not derive economic indicators such as productivity. However, in the absence of comprehensive firm surveys, they are the best indicators of employment. Indicators could include:
- Unemployment
 - Compare number of strictly unemployed to broadly unemployed
 - Non-working as % of working age population. The concern in using this measure is that it could easily be confused with the unemployment rate, although it is a very different measure. It is nevertheless useful as it offers a better indicator of non-participation.
 - Develop measures of vulnerability to determine how excluded or included unemployed are (eg. never worked or worked before? Level of education by age, etc)
 - Employment
 - Total employment, minus subsistence agriculture
 - Private formal non agricultural employment
 - Non-formal economy, including informal sector and private households
 - Separate reporting of subsistence agriculture
 - Earnings in formal and informal economy
 - Working (excl subsistence agriculture) as % of working age population

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immediately apparent why someone who did not work last week (but says he/she has a job) because of transport problems should be unemployed.

The definition of informal used here is slightly different to the self-classification used by Stats SA. We impose a definition of "informal" (based on firm characteristics) rather than relying on the information supplied directly by the respondent. This is not necessarily a superior method to that used by Stats SA, but it does have the advantage that it can be used consistently across the surveys. (The first October Household Surveys did not ask respondents whether they regarded their employment as formal or informal. According to our definition, a person is regarded as working in the informal sector if *all* of the following criteria are met:

- The person does not regard his/her employment as being in the formal sector;
- No UIF payments are being made on behalf of the worker (or the individual doesn't know if payments are being made);
- No medical aid payments are being made by the employer (or the individual doesn't know);
- The employer is not central, provincial or local government or a parastatal; and
- The business is not registered with the Registrar of Companies (or the individual doesn't know).

All workers employed by private households were grouped together – i.e. no distinction was made between domestic workers and other employees in private households. All people coded as being domestic workers (9131) or gardeners (6113) were classified as working for private households.

A worker was coded as subsistence farmer if he/she works on his/her own farm, has done any construction work on their farm or attached property or caught fish or animals for food or sale.

Unpaid family workers are people who describe themselves as such.

Notes on sectoral coding

The 1995 OHS used a different industrial coding to subsequent surveys. A new variable thus had to be created to ensure consistency in analysis. This variable was then recoded with a range from 1 to 11, using the OHS95 metadata major industry code list. Codes were set to be in line with industry codes used in the OHS99, thereby enabling ease of comparability with the other datasets.

All people who described themselves as working for private households and/or as domestic workers were included in the category "employees in private households".

The informal sector excludes people who answered yes to question 2.1.a. in the IFS, meaning that they work for a wage in informal agriculture. We have grouped them in subsistence agriculture, rather than the informal sector.

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10. Appendix B

1995

3.1 Now I am going to ask questions about ... activities.

What did ... do most during the last 7 days?

- 1 = Working full-time (Go to 3.3)
- 2 = Working part-time (Go to 3.3)
- 3 = With a job but absent from work (e.g. sick-leave, leave, strike, etc)
- 4 = Going to school/college/university, etc.
- 5 = Unemployed (but looking for work)
- 6 = Not working, not looking for work
- 7 = Housekeeping (including cleaning, cooking, caring for children/disabled/old people in the household, etc.)
- 8 = Retired (pensioners)
- 9 = Permanently unable to work (Go to 3.4)
- 10 = Other (specify in column)

1996

ASK FOR ALL PERSONS WHO DID NOT WORK DURING THE PAST 7 DAYS

3.2 During the past 7 days, did (the person) actually have a full time or part time job even though he/she was absent from work?

- 1 = Yes (Go to 3.3)
- 2 = No

If "No" In which of the following categories does (the person) fall?

- 3 = Going to school/college/university, etc.
- 4 = Unemployed (but looking for work)
- 5 = Not working, not looking for work (Go to 3.4)
- 6 = Housewife/homemaker
- 7 = Retired (pensioner)
- 8 = Permanently unable to work (Go to 3.3)
- 9 = Other (specify in column) (Go to 3.4)

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1999

Ask for all persons who did not work during the past seven days

3.2a During the past seven days, did actually have a full time, part time or a casual/seasonal job even though he/she was absent from work?

- 1 = YES → Go to Q 3.3
- 2 = NO

3.2b In which of the following categories does fall?

- 1 = Going to school/college/university, etc.
- 2 = Not working (but looking for work)
- 3 = Not working, not looking for work but available for work
- 4 = Full time homemaker/housewife
- 5 = Retired (pensioner)
- 6 = Permanently unable to work
- 7 = Not working, not looking for work not available for work
- 8 = Other, specify:.....

Go to Q 3.29

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LFS 2 (Sep 2000) - LFS 5 (Feb 2002)

3.1 Why didi not work during the past seven days?

- 01 = HAS FOUND A JOB, BUT IS ONLY STARTING AT A DEFINITE DATE IN THE FUTURE → Go to Q 3.8
- 02 = LACK OF SKILLS OR QUALIFICATIONS FOR AVAILABLE JOBS
- 03 = SCHOLAR OR STUDENT, PREFERS NOT TO WORK
- 04 = HOUSEWIFE/HOMEMAKER, PREFERS NOT TO WORK
- 05 = RETIRED AND PREFERS NOT TO SEEK FORMAL WORK
- 06 = ILLNESS, INVALID, DISABLED OR UNABLE TO WORK (HANDICAPPED)
- 07 = TOO YOUNG OR TOO OLD TO WORK
- 08 = SEASONAL WORKER, E.G. FRUIT PICKER, WOOL-SHEARER
- 09 = CANNOT FIND SUITABLE WORK (SALARY, LOCATION OF WORK OR CONDITIONS NOT SATISFACTORY)
- 10 = CONTRACT WORKER, E.G. MINE WORKER RESTING ACCORDING TO CONTRACT
- 11 = RECENTLY RETRENCHED
- 12 = OTHER REASON

LFS 6 (Sep 2002) and LFS 7 (Feb 2003)

Why didi not work during the past seven days?

- 01 = HAS FOUND A JOB, BUT IS ONLY STARTING AT A DEFINITE DATE IN THE FUTURE → Go to Q 3.17
- 02 = SCHOLAR OR STUDENT AND PREFERS NOT TO WORK
- 03 = HOUSEWIFE/HOMEMAKER AND PREFERS NOT TO WORK
- 04 = RETIRED AND PREFERS NOT TO SEEK FORMAL WORK
- 05 = ILLNESS, INVALID, DISABLED OR UNABLE TO WORK (HANDICAPPED)
- 06 = TOO YOUNG OR TOO OLD TO WORK
- 07 = SEASONAL WORKER, E.G. FRUIT PICKER, WOOL-SHEARER
- 08 = LACK OF SKILLS OR QUALIFICATIONS FOR AVAILABLE JOBS
- 09 = CANNOT FIND ANY WORK
- 10 = CANNOT FIND SUITABLE WORK (SALARY, LOCATION OF WORK OR CONDITIONS NOT SATISFACTORY)
- 11 = CONTRACT WORKER, E.G. MINE WORKER RESTING ACCORDING TO CONTRACT
- 12 = RETRENCHED
- 13 = OTHER REASON