

# **Taking appropriate measures: Employment and unemployment as indicators of development and the state of the economy**

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## SUMMARY<sup>1</sup>

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This paper consists of two parts: the first takes a critical look at the decision by Statistics South Africa to increase the frequency of the Labour Force Surveys (LFSs) from bi-annual to quarterly, while the second looks at new ways in which the information on employment and unemployment collected in the LFSs can be presented and analysed.

As far as the doubling of the number of LFSs conducted yearly is concerned, the approach is to examine the usefulness of the indicators that emerge from surveys similar to the LFS in much-developed countries like Canada, the US and the UK. Posing the question of why it is considered appropriate to ape the data-gathering patterns of such countries, it is concluded that the ‘user demand’ which prompted the increase in the frequency of the survey, is unlikely to have been based in any rigorous analysis of the slight (and possibly misleading) contribution the resulting figures may make to policy formation or business decision making. If either the business community or government wants information of this sort, it is argued, they should commission research which shows why and how it is more useful than other urgently-needed surveys.

In place of the quarterly LFS, two steps are proposed. The first is the emulation of a survey of business enterprises in the US which measures labour demand (this would replace the present inadequate questions on hires and separations sought in the Quarterly Employment Statistics). The second is a closer alignment of the two LFSs currently conducted with the General Household Survey (GHS), a step which would not only go some way towards meeting a demand for more frequent labour market information, but one that would also improve the quality of the information available for understanding poverty and inequality in South Africa.

Taking a critical look at the employment and unemployment figures published by Statistics South Africa, mainly in the bi-annual Labour Force Surveys (LFSs), the paper suggests new ways in which the information collected can be presented and analysed. The aim is to reduce the frequency of misleading and/or exaggerated responses to aggregate movements in both sets of indicators.

The paper proposes as well, improvements in the collection of data on networking and educational attainment, both apparently significant determinants of the probability of obtaining employment.

A device for integrating the analysis of employment and unemployment performances is proposed. It is intended to act as a guide, offering a set of provisional judgements of the various possible outcomes, judgements which need to be qualified by detailed analysis of all of the relevant aspects of any particular outcome. By all 'relevant aspects' is meant a movement from the highly aggregated to the disaggregated, where one understands the latter to mean broken down by type of household becoming employed or unemployed, by gender, and by type of work obtained, and by any other variable or characteristic that may be suggested.

The paper concludes with a set of specific recommendations drawn from the analysis.

An appendix, containing selected 'Inflation outlook' predictions made by the South African Monetary Policy Committee, a group whose unenviable task it is to help thrash out a consensus position on the desired level of the repo rate, shows that in recent times, their optimism in the efficacy of this tool (the repo rate) in driving inflation into the target range of 3-6 percent per annum, has been somewhat less than justified.

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## INTRODUCTION

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In 1999, the last of the October Household Surveys, an instrument that not only provided comprehensive labour market and other information, but which was also intended to enable questions of poverty to be addressed, was conducted. Its place was taken by two surveys, the Labour Force Survey and the General Household Survey. The first round of the LFS (a rotating panel survey) took place in February 2000 and the first GHS was conducted in July 2002. At the time of writing Version 4 of the paper (April 2008), results (and data) for the LFSs for the period February 2000 to September 2007 (16 rounds in all) had been published. Matching of households in the LFS, which, because of confidentiality requirements, must be carried out by Statistics South Africa, lags quite a long way behind the publication of the survey results. This means that (longitudinal) analysis of labour market dynamics, the ostensible reason for the switch from the OHS to the LFS, could at present be too out-of-date to be of much use to policymakers.

Statistics South Africa plans to increase the frequency of the LFSs from two to four each year. Such a step, it is argued, is not justified—the expected gains from the additional data to be gathered are likely to be far outweighed by the cost of collecting them. An alternative is proposed which would see two LFSs each year, conducted in February and October. If the questions on labour market status, income and expenditure in the LFSs and the GHS are properly aligned, Statistics South Africa could, with minimal sacrifice of quality of information, provide users with a much better service than that proposed under the new arrangements. In addition to improved service on the labour market information front, critical questions for poverty and inequality in the LFSs could be addressed using the pooled data of two large, independent household surveys.

Whatever use employment and unemployment statistics may have as instruments to help formulate policy or to inform business decisions, readers should hardly need reminding that such numbers are intensely political. In the highly-charged atmosphere of the debate over South Africa's growth path, and in particular, in the light of government's commitment to the achievement of the 'social objectives' of halving unemployment and poverty by 2014 (AsgiSA, 2006, p.2), labour market statistics have acquired an importance well beyond their modest ability to assist in decision-making.

In recent times, the official statistics on employment have been a comfort to the ruling party in South Africa. In his 2007 State of the Nation Address, for example, the President said that:

‘Over the past three years, the economy has created some one-and-half million jobs. It is encouraging that in the year March 2005 to March 2006 alone, 300 000 of the jobs created were in the formal sector outside of agriculture...’

In similar vein, the Minister of Finance, delivering the 2007 Budget (on 21<sup>st</sup> February 2007), claimed that: ‘... the economy is creating about 500 000 jobs a year...’ (Budget Speech, 2007, p.9).

The problem with these claims is that at the time they were uttered, they were not supported by the available evidence. When the speeches from which the statements above are taken were delivered, the latest available Labour Force Survey employment figures were for March 2006 (Statistical release P.0210, 26<sup>th</sup> September 2006). Examining performance over the period 2000-2007 in greater detail below (see Table 3), we will see that the average is buffeted this way and that by the erratic behaviour of the estimates of employment in the informal economy, especially in subsistence and/or informal agriculture. If one ignores these figures altogether, the best performance that can be wrung out of the LFSs was job growth averaging 407 000 a year over the period September 2002 to September 2005. The March 2003 to March 2006 average for the economy as a whole, excluding subsistence or informal agriculture was 297 000 jobs per annum.

Unwarranted though the claims were when made, more positive news lay in the future—the September 2006 to September 2007 figures, for example, saw an encouraging 630 000 extra jobs in the economy as a whole, of which just over 400 000 were in the formal sector. Growth in employment was sufficient to bring the official unemployment down from the level of 25-26 percent where it had hovered since September 2004, to 23 percent. The expanded unemployment rate, which peaked at 42.4 percent in March 2003, fell to 35.8 percent by September 2007. If growth at this rate could be maintained, hopes of meeting the country’s modest goal of halving the official unemployment rate by the year 2014,<sup>2</sup> could be entertained. Assuming that the base year from which the unemployment halving was to take place is 2003, and the variable in question is the official rate of unemployment, neither of which can necessarily be taken for granted, then to achieve a rate of 14 percent in 2014 (half of the 28 percent at which it stood in September 2003), the

number of jobs to be created in each year after 2007 is about 550 000.<sup>3</sup> Despite repeated assertions that the ‘macro-fundamentals are sound’, extrapolating the growth experienced in South Africa in the past couple of years into an increasingly fragile-looking future is the sort of game that only the terminally optimistic should play.

Not long after the celebration reported above of the economy’s fine growth performance, news of a more sobering sort began to fill the press. It came on a variety of fronts—financial sector woes; the energy crisis; inflation, a slowdown in manufacturing, and increased political uncertainty, being the most significant.<sup>4</sup> South Africa’s financial sector may be shielded from some of the wilder excesses that are threatening the stability of the international financial system, but even so, growth is expected to slip to about three to four percent from the five percent per annum achieved in recent years.<sup>5</sup> With recession in the US<sup>6</sup> a strong likelihood (the UK may escape with a mere slowdown in the rate of growth),<sup>7</sup> the danger of the contagion spreading worldwide is apparently staved off only by strong growth in emerging giants China and India. A combination of slack regulatory systems,<sup>8</sup> and the growth of ever more complex derivative instruments, seems to have encouraged some banks to treat lending as if it were taking place in an accountability-free zone (Gieve, 2008, p.6).<sup>9</sup> Direct intervention by the Federal Reserve Bank in the US, and the Bank of England in the UK, to save a few of the less prudent (because the cost of allowing them to collapse is perceived as unacceptable), although defended as ‘exceptional’, carries with it the risk of encouraging further permissive behaviour, if bankers believe they will be ‘rescued’. No doubt capitalism will ultimately pull itself up by the bootstraps (ready to lurch on to the next crisis), but the consequences for South Africa, although not easy to predict, could be dire.<sup>10</sup>

While greed, hubris and folly of truly staggering proportions were busy creating the pre-conditions for economic crisis in capitalism’s heartlands, not all South Africans were idle. Some, in positions of authority, were busy (passively) undermining the much-vaunted fundamentals by failing, amongst other things, to invest in the electricity-generating capacity required to support the aimed-for growth rate of six percent per annum. The implications of the gross mishandling of electricity supply, from provision of capacity from sustainable sources, to procurement of coal supplies, and to the application of employment equity (affirmative action), will be felt for many years to come.

Inflationary pressures, exacerbated by increases in the price of petroleum, have pushed the inflation rate well outside the Reserve Bank’s target of 3-

6 percent per annum (and will soon make themselves felt in electricity supply as well, if the rate hikes applied for by Eskom are granted). The February 2007 to February 2008 change in the CPIX (the CPIX is a monetary policy target), was 9.4 percent. Leading the way were increases in food and transport prices of 14.1 percent each (Statistical release P0141, 26 March 2008, p.3). Undergirding the increases in the CPI were even larger increases in the production price index (PPI). For the same period, the PPI grew at the rate of 11.2 percent, dragged upwards by, amongst other things, imported commodities, whose prices rose by 15.9 percent over the year (Statistical release P0142.1, 27 March 2008, p.1). Although the South African Reserve Bank's Monetary Policy Committee has been persistently optimistic, inflation has apparently been impervious to the increases in the repo rate that have been made since renewed pressures started to make themselves felt in mid-2006 (the rate has been pushed up from seven percent in April 2006 to 11 percent in December 2007).<sup>11</sup>

Manufacturing output, having started to grow after 2003,<sup>12</sup> appears to be faltering. Responsible in 2006 for about 18 percent of gross value added and a bit less than 14 percent of total employment in the same year,<sup>13</sup> the sector might have contracted for the second month in a row, according to analysts using the Investec Purchasing Manager's Index (PMI). In February 2008, this fell to the lowest level it had seen since June 2003 (see the article 'Manufacturing activity at lowest in five years' by Mariam Isa in *Business Day*, online edition, 2 April 2008).<sup>14</sup> The article, a generally gloomy piece, also points out that business confidence slipped to a seven-year low in the first quarter of 2008. Its growth forecast for 2008 for the economy as a whole is 3-4 percent. A few years of that sort of performance will put paid to any dreams of halving unemployment, less still, poverty.

Since animal spirits enter importantly into investment decisions, the political upheaval at Polokwane has added to the gloom. That event, which saw ANC party activists (the ANC in conference) effectively created a second centre of power to challenge the ANC in government, turned a press on guard against 'populism', into one that is actively suspicious of much of the ANC's new leadership, further complicating the investment climate. Much of the pressure on the leadership of the ANC in government turned on the argument that not enough was being done about poverty and unemployment. What lies ahead for the poor is, however, not clear. One commentator on Zuma's ascendancy to the Presidency of the ANC, observed that 'In South Africa, the official opposition is not the Democratic Alliance, it's the financial markets' (see



Meth, 2008, pp.23-24). Repeated claims that policy is not about to change in the post-Polokwane period have done little to reassure that opposition.

Politicians, it can be claimed with some confidence, are probably never pessimistic about matters over which they exercise, or aspire to exercise, control, unless it is expedient to for them to be so. It falls therefore, to external critics (or courageous underlings) to speak out when indicators that are capable of measuring socio-economic performance are pushed beyond their elastic limits. If employment (and unemployment) statistics are to function as trustworthy indicators of development, or the lack thereof, rather than as the means for creating sound bites, then serious engagement with the form in which the numbers collected by the regular household surveys, in particular, the Labour Force Surveys (LFSs), are presented, is necessary. This paper offers some suggestions as to how the survey results may be used so as to convey as much useful information as possible to users. Revisions to improve the quality of the information collected in the LFS on job search and education are also presented.

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## **PART I: IS A QUARTERLY LFS IN SOUTH AFRICA NECESSARY?**

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Statistics South Africa is increasing the frequency of the LFS from two to four each year. There is an obvious need for more debate than has so far taken place, on the question of the contribution that indicators drawn from the proposed quarterly LFSs can make to the policy-making and business decision-taking climate. A few ways to engage this debate exist, none of them ideal. The most desirable: direct evidence of the incremental improvement that quarterly (or even more frequent) labour market information makes to the suite of indicators on which decision-makers act, is extremely hard to find. The approach adopted here is, perforce, roundabout. After looking at the reasons offered for the change, we speculate as to the identity of those most likely to demand quarterly LFS figures, and move from there to a consideration of the potential uses of such figures. Two are identified: (i) as inputs into inflation forecasting models, and (ii) as inputs into composite economic indicators.

Two reasons for increasing the frequency of the surveys have been advanced:

1. The need for ‘exceptionally’ timely data on changes in the state of the economy. This has two components:
  - An increase in the frequency of the survey.

- A reduction in the lag between collection of data and publication of the survey results. The timely appearance of indicators such as those churned out by the LFSs will, it is claimed, facilitate policy responses to changing economic (and social?) conditions. Both changes are said to be in response to user demands, although some users objected that the resources and energy to be devoted to the proposed ‘improvements’ could be better spent elsewhere.<sup>15</sup>
- 2. To improve survey quality by creating stable employment conditions for its team of enumerators—the change from two short spells each year to full-time employment will improve the quality of the surveys, as the enumerators gain skills and experience.

There is merit in the second of these arguments, although whether a quarterly LFS is necessarily the way to achieve the desired goal, is a matter for debate, one to which we shall return below. As far as the first is concerned, it could be argued that in a matter as important (and costly) as this, that it is not unreasonable to call upon the official statistics producer to explain in more detail, why it is felt necessary to agree to user demands that it take this step. Defending the decision, an internal Statistics South Africa document,<sup>16</sup> asserts the increased relevance of the more timely results for policymaking. The author of the document claims that:

‘In countries with timely quarterly or monthly labour force surveys, these surveys are widely taken by business, government and organized labour as trusted leading indicators<sup>17</sup> of changes in the direction of the labour market and hence in the economy.’

No evidence is offered of how the survey results actually enter the process of decision making in these countries, nor with what effect. In the absence of this, and not having been present at the Statistics South Africa user workshop in March 2006, it is necessary to trawl through the literature to see how defensible a ‘user demand’ position is. We begin by asking who the users might be who will make use of such indicators, leading or otherwise, that emerge from the surveys.

Implicit in the notion of ‘use’ are several meanings: someone who reads the survey results with the sole intention of being informed is a statistics user; so too is a policymaker, who, in response to the information presented (with or without other corroborating evidence) introduces, or changes existing policies. Between these extremes lie users, like trades unions, for example, who can attempt to mobilise constituencies around trends they detect in the numbers.

Given that the scarce resources at the disposal of a national statistics office have many claims upon them, to which user demands should the office pay most attention? While a well-informed citizenry is a national asset, meeting their probably limitless demands (wouldn't it be interesting if we knew more about this, that or the other?) cannot rank above those of other actors whose decisions may have significant welfare implications for the populace at large. Clearly, government has a prior claim. Not far behind government is the business community. We need, however, to be more specific, posing the questions: what arms of government? what sectors of the business community?

Dealing with the latter first, it could be argued that the business community needs two types of labour information from a survey such as the LFS. The first is information of employment patterns by industry; the second, a set of aggregate figures that provide an indication of the overall health of the economy. As far as the first of these goes, the sectoral employment estimates in the LFS are almost certainly too highly aggregated to provide detailed guidance to employers in any particular sector. Whether or not aggregate employment and unemployment changes can satisfy the second requirement is a matter we address in the second half of the paper—to jump ahead in our story, the answer is—probably not.

In the case of government, it would be comforting to think that between them, the Departments of Labour, of Trade and Industry, of Social Development, and the National Treasury (and possibly a few other departments) had the capacity to respond to adverse (cyclical?) conditions, to whose detection the LFSs are expected to contribute.<sup>18</sup> Scanning the Accelerated and Shared Growth Initiative for South Africa (AsgiSA) documents, probably the most complete catalogue of government and other initiatives, it is difficult to see where policy could be adjusted to cope with, say, an anticipated increase in unemployment.<sup>19</sup> Beyond certain planned limits (e.g., the expansion of the police services) government is opposed to the creation of public sector employment. The Expanded Public Works Programme (EPWP), boasts about its achievements notwithstanding, is trivially small by comparison with the problem it seeks to address, and could not, in any event, be expanded much further, given existing capacity constraints.<sup>20</sup> It is difficult to imagine how the programmes of the Department of Labour, concerned as they are primarily with skills training and the fostering of learnerships, could be expanded at relatively short notice.

Social grants in South Africa are categorical (e.g., the child support grant, the old age pension, disability grants); their reach could not be expanded without legislative changes. Discretionary increases in the grants to the indigent (a municipal responsibility) are possible but difficult, given the huge numbers that qualify as indigent (van Ryneveld *et al*, 2003). In any event, with certain exceptions, government is as strongly opposed to the extension of the social grant system (ANC, 2007)<sup>21</sup> as it is to allowing itself to slip into the role of employer of last resort.

Nothing said above may be taken as suggesting that certain politicians and senior officials in a few departments are not avidly interested in the LFS results—they almost certainly are. Rather, the point of the argument is to suggest that there is precious little they can do in response to the figures—making these into a report of conditions a mere month, rather than six months ago, as is presently the case, will not alter their ability or capacity to intervene in any significant way.

One policy-making body does, however, stand out as being capable of using information from the LFSs as an input into its policy-making processes, the South African Reserve Bank (SARB).<sup>22</sup> In line with contemporary practice, the bank, whose mission statement proclaims that:

‘It regards its primary goal in the South African economic system as *‘the achievement and maintenance of price stability’*. (Emphasis in original)

enjoys a significant degree of autonomy in the wielding of the most important policy tool at its disposal, the ability to set interest rates. A brief examination of the way in which central banks go about doing so, offers us a rare insight into the way that policy is actually made, using statistics.

Before we turn to that, it is worth mentioning that the bank drags behind it, on its coat-tails as it were, that part of the business community involved in money markets. Hanging on to every utterance made by the Governor of the Reserve Bank (an almost universal phenomenon), the financial sector places its bets on varying combinations of the advice from the models which it too constructs, some of them also presumably using labour indicators, and the hunches of its dealers. How important ‘timely’ LFS figures are to them is difficult to determine. Let us look instead at the Reserve Bank.

### **Forging consensus out of a suite of model results**

A recent paper by Smal *et al* (2007), describes the core model on the basis of which the Monetary Policy Committee (MPC) arrives at its recommendations on the desired level of the ‘official nominal short-term interest rate’, the major tool through which the monetary policy of inflation targeting is pursued. Our concern here is not so much with the details of the core model, but rather with (a) the performance of the Bank’s core model relative to other models that are available and (b) the extent to which the forecasts of any or all of the models compare with actual experience. When we move away from South Africa to look at the similar processes that take place in Britain and the US, we will also be able to compare the performance of complex models which make use of labour indicators as inputs, with simple models that do not.

The core model has to satisfy the following conditions:

- ‘It must ‘provide a *reasonable* representation of the South African economy,
- [T]he set of equations describing the economy should enable the preparation of internally consistent forecasts (i.e. true structural interdependencies) and externally consistent forecasts (i.e. reflecting the actual course of macro processes in the South African economy).
- In addition, the model’s structure should also allow information from outside the model (i.e. expert judgement) to be incorporated.’ (Smal *et al*, 2007, p.2. Emphasis added)

The only LFS result used by the Bank in its core model is the unemployment rate. This enters the model via a wage equation which makes use of an expectations-augmented Phillips-curve approach to the problem (Smal *et al*, 2007, pp.11-12). Two other pieces of labour market information are used in the model. One is the level of formal non-agricultural employment; the other is average remuneration per worker at current prices. Commenting on the information available to the model’s builders, Smal *et al* observe that:

‘Lengthy, uninterrupted and compatible time series data on the overall South African labour market are unavailable, as coverage of especially the informal and agricultural sectors is limited. The data used in the model cover the enterprise-surveyed formal nonagricultural sectors, as published by Statistics South Africa.’ (2007, p.6)

It does not seem unreasonable to ask whether an LFS (of whatever frequency) can ever deliver satisfactory estimates of informal and agricultural employment? It is also reasonable to ask whether reliable income estimates can be obtained from household surveys, for those sectors of the economy not reached by enterprise surveys, especially the informal economy? The answers to these questions are of some importance in determining whether or not the expenditure entailed in conducting a quarterly LFS is justifiable.

On the first of the two aspects of the performance of the core model in which we are interested, Smal *et al* provide a table showing the errors in a four-quarters ahead forecast of the consumer price index from the core model, based as it is on quarterly data, and three others, all based on monthly data (Table 2, p.23). The forecasts were all upwardly biased, those of the core model least so. To the unschooled observer, however, the differences, seem small. To evaluate the core model's performance against actual reported inflation, the authors present, in Figure 4 of their paper, an ex-post simulation (a retrospective forecast) of inflation over nine quarters. For seven of these the core model does remarkably well, but by the eighth quarter the forecast is about half a percentage point above actual, and in the ninth quarter, almost a full percentage point (Smal *et al*, 2007, p.24). Two exogenous factors throw it off-balance, assumptions about the oil price and the real effective exchange that do not accord with actual conditions.

What would be of great interest is the results of a set of sensitivity tests which compare the effects of being wrong about a variety of inputs into the model, both those which use locally-generated data, as well as those about which assumptions have to be made (like the oil price). If that were done, it would be possible to make a rational evaluation of the relative importance of the inputs which could be extracted from an LFS.

So much for the South African Reserve Bank's core model—let us travel now to the UK and the US where similar approaches to monetary policy are used. Given that the modeling techniques used by central banks is relatively young, having developed since the vogue for granting central bank's an autonomy which places them beyond the reach of democratic forces,<sup>23</sup> the literature is only now starting to reflect on the performance of the models. The Bank of England, for example, published an article evaluating the performance of its suite of models in May 2007 (Kapetanios *et al*, 2007). Some of the models in the suite (there were 21 models in its 2006 version, p.27) were constructed or modified after a 2003 review pointed to the fact that although well suited

to policy analysis, existing models were less suited to inflation forecasting (Kapetanios *et al*, 2007, p.6). Excellent reading though the article makes for anyone interested in how statistics enter into this important aspect of policy formation (the model's results are pooled to yield a 'fan' of results from which members of the UK Monetary Policy Committee can select what seems to each of them the most likely outcome), our interest here is restricted to a few observations drawn from the piece. The first of these is reproduced in the longish passage below:

'It has to be noted ... that forecasting macroeconomic variables is hard: beyond a few quarters, it is difficult to beat the unconditional mean. Data typically has some obvious short-run cyclical variation which has to be accounted for, but (as already observed) it is often possible to capture this with a simple AR [autoregressive] process. This is easy to understand. Stock and Watson (2005) point out that the well-documented move towards macroeconomic stability, sometimes referred to as the "Great Stability", has made forecasting more easy in the sense that macroeconomic variables stray less far from the unconditional mean than in the past; but more difficult in the sense that it is hard to outperform naïve models. Stock and Watson (2005) examine this for US inflation.

On the one hand, inflation ... has become much less volatile, so the root mean squared error of even naïve or relatively poor forecasts had declined since the mid-1980s. ... Inflation has become easier to forecast. On the other hand, the relative improvement of standard multivariate forecasting models, such as the backwards-looking Phillips curve, over a univariate benchmark has been smaller ... since the mid-1980s than before. ... It has become much more difficult for an inflation forecaster to provide value added beyond a univariate model.

The message is that a good test of a forecasting model is whether it can beat a simple regression.' (Kapetanios *et al*, 2007, pp.6-7)

When it comes to evaluating the performance of the models, the very simplest of them, the *Unconditional Mean*, which, *a priori*, is 'unlikely to perform well at short horizons' (p.9), is excluded from the comparison exercise—the fact that it uses 'different information sets' from the other models in the suite render comparisons invalid (p.26). The benchmark against which the tests are performed is 'a simple autoregressive (AR) process (where the model is a combination of past values of the variable being forecast).' The authors report that:

‘Over our sample the AR forecasts are hard to beat, especially for inflation, with most of the models doing worse for most periods, although two non-linear models do better at most horizons. However, the benchmark combinations can beat the AR at many horizons for both growth and inflation.’ (Kapetanios *et al*, 2007, p.5)

Producing the combinations from among the vast array of models produced by the Bank of England (BoE), is an elaborate business, involving much experimentation (Kapetanios *et al*, 2007, pp.22-26). If more is better, then the BoE approach is superior to that of the SARB, which appears to be using a single core model (capable, of course, of accommodating a multitude of assumptions). The SARB core model outperforms an ARIMA (autoregressive integrated moving average) model based on monthly data, but we are given no information on the ARIMA model. The obvious question to ask is whether the removal of the single piece of LFS data that now resides in the SARB core model (unemployment rates) would significantly alter this performance. As will be shown in the second part of the present paper, the (official) unemployment rate, by itself, is not a particularly meaningful indicator.

In the US (and presumably elsewhere as well), a debate on the virtues of combined forecasts (and the means of combining models) similar to that referred above has taken place. A recent paper by Clark and McCracken (2007), for example, treading over some of the same ground as Kapetanios *et al*, looks at the ‘analytical, Monte Carlo, and empirical evidence on the effectiveness of combining forecasts from nested models.’ Their analytic approach, they observe a little further on:

‘... captures the practical reality that the predictive content of some variables of interest is often quite low.’ (p.1)

Our purpose here is not to consider the virtues of combined forecasts, it is to inquire whether the addition of certain variables improves model performance. If the official unemployment rate (in South Africa) is one of those variables whose ‘predictive content’ is low, then the effort expended in collecting more of the same is wasteful.

It is as well to avoid the literature on the relative merits of different ways of forecasting, if one can. The verdict at which Kapetanios *et al* (2007) and Clark and McCracken (2007, pp.20-21) arrive on the merits of combined forecasts is not the subject of universal agreement. A paper published the year before by Ang *et al* (2006) claims that in the US,



surveys outperform a host of models, both single and combined. Three surveys are considered; the Livingston, which polls economists from government, business and academia twice yearly, the Society of Professional Forecasters (SPF), mainly from business, on a quarterly basis, and the Michigan, a monthly survey which asks householders ‘to estimate expected price changes over the next twelve months’ Ang *et al* (2006, p.5). SPF participants are likely to be modellers themselves, as will some of those taking part in the Livingston. Ang *et al* say, however, that the way in which they make the evaluation creates a bias against the surveys (2006, p.8). Yet they conclude, in an exuberant manner not often seen in academic work, ‘Surveys consistently deliver superior inflation forecasts!’ (2006, p.28).

What one is to make of this is not all that clear. If it is true that in South Africa, the users with the greatest interest in indicators that could be drawn from the LFSs on a quarterly basis, are the SARB and the business community, and that their over-riding interest is that of forecasting inflation, then one would like to see evidence that they have applied their minds to the question of the contribution that such additional information could make to their forecasts.

It turns out to be the case though, that the Reserve Bank has not demanded that Statistics South Africa increase the frequency of the surveys. Quite a bit of the other information of which the Bank makes use, e.g., the national accounts, appears on a quarterly basis, so the Bank is not antipathetic in principle to the idea of quarterly LFSs. The Bank’s head of economic research has, however, offered the assurance that there has been no pressure from his office for a change to quarterly surveys.<sup>24</sup>

Apart from government departments that may be indulging in the delusion that more frequent surveys would put them in a better position to design and implement policy, that leaves only the business community as the possible source of demand for more frequent LFSs. My initial judgement on this matter still holds—if this (or any other) group is the primary source of pressure for a shift to a quarterly cycle, then they should be required to produce evidence, of suitable academic standard, that shows how such data would improve their performance. Once such information is to hand, the relative costs and benefits of devoting scarce resources to this, as opposed to other, competing uses could be addressed.

Continued reliance on a single tool, interest rate manipulation, as the major instrument of monetary policy, may be unavoidable in the current international political climate. It seems to be generally agreed that this

relatively crude tool operates with a lag of at least 12-18 months. As the selection of ‘Inflation outlooks’ culled from statements by the South African Monetary Policy Committee and presented below in Appendix 1 suggests, the actual course of inflation has been incorrectly predicted in the past year or so. It may well be that in the fullness of time, the prediction of inflation made by the Committee in the most recent of its statements to be published before the present article was completed, namely, that for 17<sup>th</sup> January 2008, that ‘... CPIX inflation is ... expected to decline to below the upper end of the target range by the final quarter of 2008’, comes to pass. Then again, it may not—the performance at this point in its history, of the model responsible for the forecast, could hardly be described as encouraging. Whatever the model’s performance, it is unlikely that either blame (or credit) can be attached to the labour market data that go into its manufacture.

Making a good economic case for the conducting of the additional surveys looks as though it would be difficult to do. My reading of the literature, presented in the brief survey conducted above, suggests that the game is not worth the candle. Let us, however, not abandon the quarterly surveys before looking at another of the justifications offered for the conducting of additional surveys, namely, the claim that they could make a significant contribution to composite leading indicators.

### **How much can the LFS contribute to composite indicators?**

In a world in which perceptions of the future are so important, leading indicators have a prophetic role to play—a good leading indicator may be worth its weight in gold. Accepting that that is so, let us take a look, if we can, at what the implications might be of having to work with bi-annual, rather than quarterly labour market data, when it comes to the construction of composite leading indicators.

If we take as our inspiration, Statistics Canada, one of the leading producers of official statistics in the world, then following them slavishly would see South Africa attempting to produce (as they do) a monthly labour force survey. The Canadian LFS uses a rotating panel sample, the size of which is 53 000 households among a total population of about 33 million (Statistics Canada 2007, p.20). Each household stays in the panel for six months. It looks as though two indicators from their LFS make their way into the Composite Leading Indicator (CI), constructed from ten indicators, four of which originate outside of Statistics Canada (a housing index, stock price index, M1, and the US Conference Board Leading Indicator). The components drawn from the LFS are ‘employment in personal and business services, the average workweek in

manufacturing from the labour force survey'. A description of the way the CI is constructed may be found on the Statistics Canada website,<sup>25</sup> for our purposes here, the important point is that the '... composite index is the simple, unweighted average of the standardised components.' That means that the significance of any error in the estimate of a particular indicator, is only one-tenth of what it is for the indicator itself.

Because Statistics Canada captures the requisite information every month, it should be possible to estimate the effects of reducing the periodicity of the survey (assuming the reliability of the surveys does not change). The results of a (rough and ready) attempt to do so for average actual hours worked per week in manufacturing are presented in Table 1 below. The top panel of the table contains the data available from Statistics Canada. It is not adjusted for seasonal variation, so presumably will overstate the swings in the length of the workweek.

**Table 1 Actual average hours worked per week in manufacturing in Canada**

	2000	2001	2002	2003	2004	2005	2006
January	38.7	38.7	38.5	38.6	38.2	38.3	38.7
February	38.4	38.8	38.2	38.3	38.3	38.0	38.3
March	38.7	38.1	38.1	37.5	38.0	37.7	37.8
April	39.1	36.5	38.7	33.1	36.4	38.9	33.9
May	38.6	38.4	38.6	38.0	38.9	37.9	38.4
June	38.7	38.5	38.7	38.0	38.4	38.4	38.7
July	34.7	32.2	32.1	32.7	34.3	34.0	35.4
August	36.6	35.9	35.8	34.0	36.1	36.1	36.2
September	38.9	38.5	38.6	38.8	38.7	38.4	38.6
October	36.6	33.4	33.2	33.3	33.0	33.4	32.8
November	38.8	38.6	37.4	37.4	36.9	37.2	38.2
December	39.2	38.7	39.0	38.5	38.9	39.1	38.5
Mean excl July	38.4	37.6	37.7	36.9	37.4	37.6	37.3
Mean Mar & Sept	38.8	38.3	38.4	38.2	38.4	38.1	38.2
% Difference	1.1	1.7	1.7	3.5	2.4	1.2	2.5
Excl July & Oct	38.6	38.1	38.2	37.2	37.9	38.0	37.7
Mean Mar & Sept	38.8	38.3	38.4	38.2	38.4	38.1	38.2
% Difference	0.6	0.6	0.5	2.5	1.2	0.1	1.2

Source: Statistics Canada, Table 282-0021 - Labour force survey estimates (LFS), by actual hours worked, class of worker, North American Industry Classification System (NAICS) and sex, unadjusted for seasonality, monthly

The month of July, as the briefest glance at the data will confirm, differs significantly from the others, with the probable explanation being that it is vacation month for many workers.<sup>26</sup> Estimates of mean actual hours worked excluding the month of July, as well as the mean for the months of March and September, and the percentage difference between them,

are given in the second panel of the table. A similar set of figures are given in the third panel of the table for the ten months that exclude October as well.

Looking first at the 11-month figures, it may be seen that the worst error (the largest difference) occurs in 2003. Scanning the results for each month in that year, April soon stands out as a possible candidate for investigation (as it is in 2004 and 2006). The hypothesis that suggests itself is that the reference week included all or part of the (non-fixed) Easter vacation. This turns out to be only part of the explanation (Galarneau *et al*, 2005, p.9), but that is not our concern here. The main point is that even under the worst conditions, the observations for March and September would not affect the Composite Leading Indicator (CI) by as much as half of one percent. Removing October (vacations again?), makes the two-observation approach look even better. The mean error for the seven years for which data are presented is under one percent, or less than one-tenth of one percent of the CI. An error of this magnitude, it is submitted, is probably smaller than the noise in the other components of the CI.

It may well be that hours worked in manufacturing is a sensitive leading indicator. By the time its contribution to the CI has been diluted to one-tenth of the (nominal) significance it has when viewed in isolation, the justification for its collection on a quarterly basis in a country like South Africa looks more than a little slender.

The monthly data have been used in Canada to analyse the apparently paradoxical coincidence of falling average hours coinciding with rising employment (Galarneau *et al*, 2005). Among the suggested causal factors to which the authors point are:

‘... population aging, shifts in industrial structure, the business cycle, natural disasters, legislative changes, or simply personal preference.’ They note as well that: ‘Others originate from the survey’s conceptual frame-work, which should be re-examined periodically to see that it is still measuring what it is supposed to.’ (2005, p.5)

While legislative changes like alterations to the social security frameworks that determine, say, working conditions, and the incentive structures that help to determine personal preferences may be informed by analysis conducted on LFS data, it is not obvious that quarterly, rather than bi-annual (or indeed, even annual) surveys are required.

### **What labour market information goes into South African composite indicators?**

Ten years after they were last revised, South Africa's composite leading and coincident indicators, constructed by the Reserve Bank, were given a comprehensive overhaul in 2004 (Venter and Pretorius, 2004). No labour market result enters directly into the new leading indicator. One set of employment figures, those for manufacturing, enter indirectly into the indicator as the denominator of the sectoral labour productivity estimates. Prior to 2005, employment totals would presumably have been drawn from the Surveys of Employment and Earnings (SEE), a quarterly survey of businesses. Discontinued in June of that year, they were replaced by the Quarterly Employment Statistics survey (QES), with a sample of about 22 000 business enterprises. The pre-2004 composite leading indicator used to include estimates of the ratio of output prices to unit labour costs in manufacturing. On the labour side, these compound indicators use wage and employment data. Their place appears to have been taken by the simpler productivity estimates.

Another contribution to the pre-2004 leading indicator was data on 'Overtime hours as percentage of ordinary hours worked in manufacturing'.<sup>27</sup> The series lost its place in the indicator because of 'non-comparability of the series over time'. It has been replaced by '... an opinion survey of the average hours worked per factory worker in the manufacturing sector'. The surveys are conducted by the Bureau for Economic Research in the University of Stellenbosch (Venter and Pretorius, 2004, p.69).

The composite coincident business cycle indicator used to have in it, estimates of employment in manufacturing, mining and construction (the latter, a singularly difficult sector to measure). The revised indicator now uses estimates of total formal non-agricultural employment. Presumably, these originate in the QES, although the LFS also supplies estimates of this variable. Let us spend a few moments looking at the differences between the figures generated by household surveys, as opposed to those that emerge from surveys of business enterprises. The discrepancies found between the two surveys in South Africa are not unique—to demonstrate this, reference is made to similar problems in the UK and US.

### **How good are the surveys anyway?**

As we have seen above, both Quarterly Employment Statistics (QES) and LFS numbers enter the Reserve Bank's core model, while some numbers from the QES make their way into both the composite leading and

coincident business cycle indicators. Apart from the fact that the QES does not attempt to measure the size of the informal economy, there are major differences between the estimated numbers of formal economy workers in the LFS and QES. The use, by commentators in the financial press of the most recent QES numbers to suggest that manufacturing employment was declining when LFS estimates show it to be rising has been referred to above (see Footnote 12). This raises interesting questions about which of the employment estimates is held in greater esteem by financial analysts. The rationale for the introduction of quarterly LFSs is user demand. The incident related above shows what at least some users do when confronted with conflicting statistics—in the case considered here, a choice appears to have been made to suit the argument being advanced: obviously, not a happy state of affairs.

Statistics South Africa offers a battery of explanations for the differences between the QES and LFS in each issue of the latter. The explanations, although important, are not at issue here—what is of interest are the answers to two sets of questions. The first of these is concerned to discover whether or not the differences within and between sectors are consistent, and if not, whether the respective estimates show any sign of convergence. The second set of questions relate to the differences, if any, between year-on-year changes reported by the two surveys. The first of these is illustrated below in Table 2, which shows the differences, first in percentage terms, then in thousands, for the sectoral and total figures obtained respectively from the two surveys. Figures to illustrate the second are given in Table 3.

Although the series have not been running long enough to permit definitive answers to the questions posed, some interesting, and possibly significant patterns, are beginning to emerge. So far, the LFS total has always been larger than the QES total—for convenience, the differences in Table 2 are expressed as LFS figure minus QES figure, and the percentages as this result, divided by the LFS number. Although there is considerable dispersion around mean error size, there is at least some consistency to the pattern of differences. The largest differences in percentage terms occur in electricity (also called utilities in some releases). Since the sector is tiny, this is not terribly important. In other sectors, however, some of the differences may be statistically significant, and hence, may matter, even when they are relatively small in percentage terms. Manufacturing, trade, finance and community services are all large. Even construction, employing about half-a-million workers is not inconsiderable. Variations in the reported differences between the two sets of employment estimates in these sectors, and in the estimates for

total employment, may be too large to permit access to the usual claim that while absolute numbers may not be correct, trends are being accurately detected.<sup>28</sup>

**Table 2 Differences between LFS and QES employment estimates**

	March 2005	Sept 2005	March 2006	Sept 2006	March 2007	Sept 2007
<i>Percentage differences</i>						
Mining	-9.4	-8.6	-12.6	-17.0	-7.1	-12.5
Manufacturing	14.1	17.1	21.1	19.1	11.6	15.8
Electricity	63.6	54.1	54.0	62.4	41.3	49.1
Construction	19.6	23.6	16.6	22.9	26.0	30.2
Trade	7.4	22.6	28.4	28.4	13.9	12.3
Transport	24.8	27.1	26.3	31.8	17.6	25.3
Finance (incl business services)	-52.6	-22.8	-38.3	-31.6	-43.8	-47.8
Community services (excl domestic)	9.0	6.7	7.4	11.3	1.0	8.9
Total (excluding agriculture, private households, other and unspecified)	3.1	9.9	9.9	11.8	2.0	4.7
	March 2005	Sept 2005	March 2006	Sept 2006	March 2007	
<i>Actual differences (1000s)</i>						
Mining	-39	-35	-50	-67	-32	
Manufacturing	193	247	319	284	173	
Electricity	77	53	54	73	38	
Construction	93	137	91	133	165	
Trade	108	408	553	563	276	
Transport	103	124	109	149	77	
Finance (incl business services)	-491	-277	-431	-386	-554	
Community services (excl domestic)	176	132	147	237	21	
Total (excluding agriculture, private households, other and unspecified)	221	787	791	986	164	

Sources: LFSs for the relevant months. The figures on which these comparisons are based (presented as a special table in each LFS) are adjusted by Statistics South Africa to make them comparable.

Note: Differences between the LFS and QES are described in some detail in the LFSs. See, for example, Statistical Release P0210, 27 March 2008, p.xv (the September 2007 LFS). That points out that the LFSs include employment in the formal and informal economy, whereas the QES counts only the former.

Table 3 discloses an altogether more alarming set of differences. If we assume that differences between sectoral estimates are not statistically significant (although they may well be, trade seems to fare particularly badly), the differences between the totals (even if they are not statistically significant either) should certainly stop us in our tracks. The importance of these figures lies not so much, one imagines, in their statistical significance, as in the interpretations made of them by those who deploy them—one seldom, if ever, sees an employment or unemployment

estimate in the financial press complete with upper and lower confidence interval limits—the estimate is the thing. In that spirit, we may ask what should be made of the apparently different economic performances registered by the LFSs and QESs. The March 2005 to March 2006 increase in formal economy employment detected by the relevant LFSs was 870 000—the QESs say it was 300 000. For the period March 2006 to March 2007, fortunes change. This time, the QESs report an increase of over a million in the employment total, while the LFSs find less than 400 000. The September to September figures behave equally strangely. For the earlier year, employment growth reported by the LFSs is slightly larger, while for the second, QES growth of almost one million is larger than the LFS total by almost the same amount as it was in the March to March figures.

**Table 3 Year-on-year changes in employment, LFS and QES (1000s)**

	Mar 2005-Mar 2006		Mar 2006-Mar 2007	
	LFS	QES	LFS	QES
Mining	-18	-7	56	38
Manufacturing	142	16	-17	129
Electricity	-21	2	-8	8
Construction	74	76	87	13
Trade	481	36	36	313
Transport	-1	-7	23	55
Finance (incl business services)	192	132	139	262
Community services (excluding domestic)	22	51	61	187
Total (excluding agriculture, private households, other and unspecified)	870	300	379	1006
	Sep 2005-Sep 2006		Sep 2006-Sep 2007	
	LFS	QES	LFS	QES
Mining	-14	18	54	43
Manufacturing	42	5	81	118
Electricity	19	-1	-9	11
Construction	2	6	99	26
Trade	177	22	3	322
Transport	12	-13	10	38
Finance (incl business services)	3	112	32	245
Community services (excluding domestic)	136	31	145	183
Total (excluding agriculture, private households, other and unspecified)	380	181	414	985

Source: LFSs for the relevant months.

It is not obvious that the problems which these results pose for those bent on using labour market figures, either on their own, or as inputs in composite indicators, are to be solved. Except for the hoped-for improvement in the quality of the numbers gathered, the decision to



conduct the LFS on a quarterly basis does not, in and of itself, offer much hope. Those improvements, as will be seen below, can, in any event, be obtained by a different route. So serious is this problem that it ought to be the subject of a full-scale inquiry. Let us leave it for the moment, to seek reassurance in the occurrence of similar, problems of the same type elsewhere (albeit of lesser magnitude).

In the US, the surveys that correspond to Statistics South Africa's LFS and QES are respectively, the Current Population Survey (CPS) —a household survey,<sup>29</sup> conducted by the Bureau of Census for Bureau of Labor Statistics (BLS), and the Current Employment Statistics (CES)—a survey of business enterprises, conducted by state employment security agencies in co-operation with the BLS. In May 2005, the BLS asked the Federal Economic Statistics Advisory Committee (FESAC) to investigate discrepancies between the employment trends reported variously by the CPS and the CES (FESAC, 2005). These were large enough to cause some consternation among users.<sup>30</sup> It is not the intention to look in any detail at the discrepancies, suffice it to say that the investigation serves as a model for a similar enterprise in South Africa. Statistics South Africa, as noted above, draws attention to the causes of the discrepancies. It is perhaps heartening to note that several of the problems that bedevil statistics gathering in South Africa, also plague the much-more well-endowed statistics agencies in the US. Among these are problems with population estimates, especially over immigration data; problems with informal and self-employment, the inherent noisiness of the CPS.

In the UK, the two surveys that yield employment figures are respectively, a monthly LFS and a survey known as Workforce Jobs (WFJ), a survey of businesses.<sup>31</sup> As in the US, problems with the results generated by the surveys have led to a review.<sup>32</sup> In the UK:

‘[The] review was set up to investigate the large revision to the business surveys estimate of jobs, known as Workforce Jobs (WFJ), that arose as a result of benchmarking the Short Term Employment Surveys (STES) results on the 2005 Annual Business Inquiry (ABI1). It also examined the difference in the annual growth in jobs as measured by the Labour Force Survey (LFS) and WFJ.’ (WFJ Review, 2007, p.1).

Once more, the details do not concern us—it is comforting, however, to note again that the Office for National Statistics (ONS) in the UK, with its substantial resources, also has difficulties with *inter alia*, migrants

(temporary foreign workers); the self-employed; mis-reporting, and non-response (WFJ Review, 2007, p.2).<sup>33</sup>

An ONS article (Walling, 2006) comparing the LFS and WFJ discloses that the difference between them in June 2006 was 1.036 million, or 3.3 percent of WFJ employment estimate for that month. Once adjustments have been made for survey coverage and response issues in the two surveys, the difference falls to 152 000, or 0.5 percent of employment, hardly a figure about which to lose sleep. Response issues, however, involve some fairly hefty corrections: double-counting due to over-reporting of self-employment in the WFK – 340 000; LFS non-response bias – 230 000; LFS proxy response error (main jobs) – 150 000; LFS proxy response (second jobs) – 100 000; ABI/STES response errors – 100 000 (Table 1, p.374). These errors are present in the UK surveys—they are also present in the South African surveys. Among them, only non-response is discussed in the LFS news releases.

The lesson to be drawn from this analysis is that if folk wish to use labour market indicators either alone or in combination with other indicators, in the hope of uncovering credible stories about the economy, then a much more rigorous process than a user consultation (with no apparent trace in the form of supporting documents made publicly available), and discussion with overseas experts, is required. It is recommended that between them, the Statistics Council and Statistics South Africa draw up the terms of reference for an urgent inquiry into this matter.

In the meanwhile, there are certain other steps that may be taken to bring about improvements in the quality of labour market information. Two of these are discussed below.

**Suggested steps: (i) Measure labour demand more accurately**

Unlike their South Africa counterparts, the CPS and CES in the US take place each month. Commenting on the suite of surveys, Clark and Hyson (2000, p.1), observe that:

‘When combined with other economic indicators, the unemployment rate serves as a *reasonable* measure of labor market activity, general economic conditions, and labor supply. A parallel measure of labor demand is required to allow thorough analysis of the U.S. labor market and to show how changes in labor supply and demand affect the overall economy.’ (Emphasis added)<sup>34</sup>

To fill this gap in the labour market information available to analysts, the BLS started developing a survey that could measure excess demand for labour. Although South Africa is not blessed with the good fortune of having an aggregate excess demand for labour, measuring excess demand where it exists, as well as demand in those areas for which there is surplus supply, would seem like a thoroughly worthy undertaking. The survey instituted in the US is called the Job Openings and Labor Turnover Survey (JOLTS). As its name implies, it does more than merely ask a panel of employers whether or not they had difficulty obtaining the supplies of labour they required—information is collected on job openings, hires and total separations. The latter are:

‘... the sum of three components: quits (or voluntary separations); layoffs and discharges (involuntary separations); and other separations resulting from retirements, deaths, and disability.’ (Clark, 2004, p.14)

The first results were published in 2002, and a couple of years later, the BLS published an article (Clark, 2004) discussing the survey’s early results. It is not the intention here to delve into the results in any detail, nor indeed to engage with the discussion in the earlier paper (Clark and Hyson, 2000) of the potential uses of the survey (JOLTS) for policymakers and academics. One aspect of the survey worth commenting on is that when a sufficient number of observations has been collected, the results can be tested against the Beveridge curve hypothesis, namely that there is an inverse (concave) relationship between the vacancy rate and the unemployment rate. Cyclical movements should give rise to movements along the curve, while structural changes, say in labour market matching, should cause the curve to move closer to, or further from, the origin. The South African situation is complicated by the greater duality of its labour markets, but that only serves to make the survey potentially more interesting.

Clark notes that the JOLTS does not differentiate:

‘... between full- or part-time openings, and neither includes occupational information or a measure of “good” jobs versus “bad” jobs or for low-wage versus high-wage positions. As the JOLTS program expands, questions related to these issues may be added to the survey.’ (2004, p.18)

Statistics South Africa’s Quarterly Employment Survey (QES), the product of careful deliberation about how to extract the optimum amount of information (carefully balancing the need for data against respondent

burden), includes information on hires (Question 1.2: New Appointments), and separations (Question 1.3: Resignations, transfers, retrenchments and dismissals).<sup>35</sup> Missing from the survey are questions on job openings,<sup>36</sup> and a breakdown of the causes of separation.<sup>37</sup> The QES is a sample survey that covers about 22 000 enterprises (as noted above), whereas the JOLTS is a relatively small (16 000 establishments) rotating panel survey, with establishments spending about 18 months participating in the survey (recall here that the JOLTS is a monthly survey).

It is suggested that Statistics South Africa give consideration to instituting something like the JOLTS. What use there may be for the information presently gathered in the QES on hires and separations is not obvious—it would seem that an understanding of labour market dynamics demands that at least the JOLTS questions be asked. In addition, however, the ‘good jobs, bad jobs’; ‘high-skilled, low-skilled’ ‘duality’<sup>38</sup> of the South African labour markets, which nettle, as of 2004, the BLS had not grasped, cannot be ignored. Acute shortages of skilled labour coinciding with unemployment are by no means unique to South Africa. The extent of that unemployment, does, however, set it somewhat apart. The nature of the unemployment, dubbed ‘structural’, for want of a better name, is not very well understood. Its mass character demands that every effort possible be made to do so.

### **Suggested steps: (ii) Pooling LFS and GHS data**

There is a way around some of the problems discussed above which appears to have much to recommend it, namely, aligning the LFSs and GHSs so that for certain critical questions, the data could be pooled. If the survey cycle is changed from the present March LFS, July GHS and September LFS, to a February, July and October cycle, then a smaller number of survey enumerators could be employed on a full-time basis, without any sacrifice in survey quality. As matters presently stand, it appears that the proposed work plan for the LFS will leave no space for the LFS enumerators to carry out the GHS as well. If, however, the February, July and October cycle were adopted, the same team could do both surveys, thus effecting even more improvements in survey quality, but at a very substantial savings in cost, savings that would be all the larger, because there would be no need to employ a special team to conduct a single survey (the GHS). Such a cycle, with its slightly more relaxed working pace, should allow time for ‘bolt-ons’ or ‘piggyback’ studies on both surveys, and in addition, could even allow for the

possibility of training interviewers in the far more demanding task of conducting qualitative surveys.

Aligning the income and expenditure data collected by the LFS and GHS, and improving the quality of both (reducing lead times as well, by the use, where possible, of direct electronic data capture) raises the possibility, again as I have suggested elsewhere (Meth, 2006b), of using both the GHSs and LFSs to measure poverty and inequality. Without having to pilot anything, future surveys could be made to yield numbers suitable for generating such estimates. Information from these two surveys could be used to check the results of the proposed poverty survey, as well as the 2006 Income and Expenditure Survey (IES) for consistency. The migrant module in the September 2004 LFS, containing 15 questions (which worked quite well, except for the migrant number identifier), could be bolted onto the 2005 GHS questionnaire, which could easily lose the ‘green’ questions (4.50 to 4.62 in the 2005 GHS). Other questions could possibly be dropped as well. It maybe that the income question can be tightened up along the lines I have suggested previously (Meth, 2006b), with more rigorous consistency checking at interview time to reduce implausible zeroes. If the reference period for work can be extended to the past 30 days instead of the seven days currently used, (as is done for discovering whether or not a person has taken any active steps to find work or start a business), it may be that significant increases in the numbers working, albeit for very small amounts of money, may be found.

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## **PART II: CHANGES IN EMPLOYMENT AND UNEMPLOYMENT**

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Table 4 reproduces the official employment estimates for the period 2000-2007. Year-on-year figures (March to March, and September to September) for each of three employment series.<sup>39</sup> The first of them is a measure of total employment that includes estimates for formal agriculture, but which excludes the estimates of informal agricultural employment. The second set gives the formal sector employment figures, excluding agricultural employment. The last set of figures is that for informal agricultural employment. Measuring the growth in small-scale farming, as part of the programme of land reform, is very important. So too, is measurement of subsistence production. The LFS does not appear, however, to be capable of doing either task very well. As may be seen, apart from a hint of seasonality, the results in Table 4, which show no particular trend, yield an implausibly small total of people working on the land among a genuinely rural population that probably exceeds ten

million. Noise in the first series may, therefore, be reduced by removing the informal agricultural workers.

Some effort was devoted in the introductory section of the present paper to claims by the President, and the Minister of Finance of 500 000 jobs a year being created. It was pointed out that when the 2007 State of Nation address was delivered (9<sup>th</sup> February 2007), the latest available employment figures were for March 2006 (Statistical release P.0210, 26<sup>th</sup> September 2006). If by ‘the past three years’ the President was referring to the period March 2003 to March 2006, the annual changes may be seen to have been estimated at 200 000, 340 000 and 350 000. The average of these three figures is a little less than 300 000. If the President had in mind the period September 2002 to September 2005, then the relevant numbers would have been 310 00, 160 000 and a whopping 750 000 for September 2004 to September 2005, a figure that can lend an interesting twist to stories about employment creation.<sup>40</sup> It helps to get the average up to 400 000 a year. Whatever one does with the series in Table 4, if one concedes that informal agricultural employment figures do not sit comfortably in the employment estimates,<sup>41</sup> then one can extract from them neither the President’s ‘million and a half’, nor the Minister of Finance’s ‘500 000 jobs a year’, from the figures available at the time the claims cited above were made.

It was meet and just, as noted above, for the President to have celebrated the creation of 300 000 formal sector jobs in the period March 2005 to March 2006. The March 2007 LFS results, released at the end of September 2007, confirmed the trend of solid if unspectacular growth in the formal economy. Employment stood at 8 059 000 in March 2006. By March 2007, this had risen to 8 423 000, a jump of 364 000, with the bulk of the new jobs located in Construction (87 000) and Finance (139 000). The September 2005 to September 2006 results provided even greater cause for satisfaction than the March figures—with 400 000 jobs being created in the formal sector over the period, a performance that was to be repeated in the following year. Between September 2006 and the same month in 2007, manufacturing grew by 81 000, construction by 99 000 and community, social and personal services by 145 000.

While formal economy employment performance may be some cause for celebration, it is far from obvious how much significance one ought to attach to total employment estimates. Informal agricultural employment is not the only source of noise in the employment estimates. A further glance at the figures for 2001 in Table 4, shows that the March figure (the LFS was actually conducted in February in that year) exceeded the

September figure by more than 700 000. A decline of 370 000 in total employment between September 2000 and September 2001 is plausible, a fall of 780 000 between March (February) 2001 and March 2002 is probably not.

**Table 4 Employment in South Africa, 2000-2007 (1000s)**

<i>September estimates</i>	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>
Total excluding informal agriculture	11 170	10 800	10 750	11 060	11 220	11 970	12 270	12 900
Change from previous September	-	-370	-50	310	160	750	300	630
Formal economy excluding agriculture	7 091	7 027	7 181	7 373	7 692	7 987	8 384	8 785
Change from previous September		-64	154	192	319	295	397	401
<b><i>March estimates</i></b>	<b><i>2000</i></b>	<b><i>2001</i></b>	<b><i>2002</i></b>	<b><i>2003</i></b>	<b><i>2004</i></b>	<b><i>2005</i></b>	<b><i>2006</i></b>	<b><i>2007</i></b>
Total excluding informal agriculture	-	11 540	10 760	10 860	11 060	11 400	11 750	12 190
Change from previous March	-	-	-780	100	200	340	350	440
Formal economy excluding agriculture	-	6 807	7 097	7 228	7 483	7 749	8 059	8 423
Change from previous March	-	-	290	131	255	266	310	364
<b><i>Employment in informal agriculture</i></b>	<b><i>2000</i></b>	<b><i>2001</i></b>	<b><i>2002</i></b>	<b><i>2003</i></b>	<b><i>2004</i></b>	<b><i>2005</i></b>	<b><i>2006</i></b>	<b><i>2007</i></b>
September	1080	390	560	370	430	340	480	350
March	-	750	870	450	350	520	710	460

Source: Labour Force Surveys (P0210) for the relevant periods

The interaction between formal and informal economy estimates above suggests that the two need to be separated. Total employment growth over the year September 2004 to September 2005 is reportedly 750 000, of which 295 000 jobs were in the formal economy. The following year, informal economy performance pulls overall performance down—formal employment increases by almost 400 000, while total employment rises by only 300 000.

In February 2001, in addition to the February LFS, Statistics South Africa conducted a ‘follow-on’ survey, the Survey of Employers and Self-Employed 2001 (SESE), in which:

‘... more probing questions about self-employment and small businesses were asked ...’

This, they note:

‘... may have led to a larger number of respondents than usual classifying themselves as employed’ (SR P0210, 26 March 2002, p.v).

The problems caused by the outlier generated by the follow-on survey have never been satisfactorily resolved—indeed, given the frequent expressions of surprise at the relatively small reported size of the informal economy in South Africa, it has been suggested that the February 2001 informal economy employment estimate is ‘correct’, while all other estimates are outliers.<sup>42</sup>

It were an excellent idea if Statistics South Africa were to repeat the follow-on survey (SESE) it carried out after the February 2001 LFS. Without knowing precisely what the plans are for the quarterly LFSs, it is a little difficult to guess how good the surveys will be at picking up informal economy activity. If they are ‘simply more of the same’, carried out in the hope that (large-scale?) seasonal changes will be detected by the more frequent surveys, then the possibility of disappointment should be faced. Better than waiting for such an outcome, it is suggested, would be an attempt to settle the question posed so long ago by the follow-on survey.

### **Gauging the significance of the employment figures**

Job creation figures such as those set out in Table 4 above, cited in isolation from other information required to understand development, do not contribute much to an understanding of the workings of the economy. Several analytical steps need to be taken to make them meaningful. One of them is to offset employment creation estimates against estimates of increases in the size of the labour force and the working age population. There is no necessary correspondence between the latter two, the one (participation rates) being mainly the outcome of perceived economic conditions, the other of demographic forces (births, deaths), which although not immune to economic forces, operate at several removes from them.<sup>43</sup> How participation rates are determined is difficult to say with precision. It has been observed, for example, that official rates of unemployment can rise with improving economic conditions, as formerly discouraged workers begin actively seeking work. Increasing employment may thus be consistent with rising participation rates<sup>44</sup> and rising unemployment rates and numbers (this happened between September 2004 and September 2005). It is also possible, however, for



rising participation rates to coincide with rising employment and falling unemployment (falling in either/or absolute and relative terms).

Interpretation of the published figures is what is at issue above. There are, however, other problems to be confronted when dealing with South Africa's employment and unemployment numbers. One of them concerns the question of the size of the working age population. Some confusion about its magnitude has arisen (at least in the minds of statistics users), following the discovery by Statistics South Africa (SSA) that population growth rates had not fallen as quickly as had been believed.<sup>45</sup> The combination of this and the erratic behaviour of the (official) participation rate, makes it difficult to peer into the future. Having peaked at an implausible 59.4 percent in 2001 (the year of the Survey of Employers and Self-Employed, which took place in February), the rate stood at a possibly less unlikely 58.3 percent in March 2002. It then fell to its lowest value of 53.8 in September 2004, only to claw its way back to 57.1 percent in September 2006. Since then, it has slipped a little, to 56.5 percent in September 2007.

In our earlier discussion of the number of jobs required to halve unemployment, it was pointed out that the estimates are sensitive to the assumptions made about the rate of growth of the economically active population (labour force). If the labour force grows at the same rate as the working age population, and if the working age population grows at roughly the rate that it did over the period 2003-2007 (about 1.27 percent per annum), then about 400 000 jobs a year would be required between 2007 and 2014 to halve the September 2003 unemployment rate of 28 percent. There would be 2.6 million unemployed, down from 4.4 million in September 2003. Any increase in the participation rate pushes up the number of jobs that have to be created, and leaves the total number of unemployed higher. If the rate of growth of the labour force rises to 1.8 percent per annum, so that the participation rate climbs to 58.6 percent in 2014, up from its September 2007 value of 56.5 percent, then 500 000 jobs a year would be needed to halve the official unemployment rate, leaving 2.7 million unemployed in 2014.

As far as the expanded unemployment rate is concerned (which the authorities do not deign to publish, on the grounds that doing so causes confusion), if the roughly stationary behaviour of the expanded participation rate observed over the period 2003-2007 were to continue to 2014, then about 650 000 jobs a year would be required to bring the September 2003 unemployment rate of 41.8 percent, to half of that value

by 2014. If that were achieved, there would be 4.7 million unemployed, as opposed to 8.2 million in September 2003.

On the basis of the figures cited above, it is clear that if the trends observed between 2005 and 2007 were to continue, less faith would be required to believe that (official) unemployment could be halved in the seven years between the present and the year 2014, than was the case when I first wrote on the topic of halving unemployment (Meth, 2006a). A slowdown, which looks as though it cannot be avoided, has, however, taken the shine off the good performance of the recent past. If this lowers net job creation to about 300 000 a year for a couple of years, growth in the remaining period (five years) will have to deliver at least 600 000 jobs per annum without faltering.

Speculative though the calculations above undoubtedly are, they provide a backdrop against which to assess labour market performance. Updated on a regular basis, the simple calculating engine on which they are based, should form an integral part of the apparatus for analysing labour market information as it becomes available. A careful watch on the behaviour of the participation rate, and research into its determinants is indicated. We do not know enough about the dynamics of labour market transitions. It may well be that qualitative research is required to bolster the quantitative material available. Given relatively large standard errors, the tale that the figures have to tell may be too broad brush to offer much insight into the workings of the labour market.

### **Routes out of poverty: Getting behind the aggregates**

In the discussion above, attention has been paid mainly to the aggregate figures. If most jobs are going to those with skills (who are unlikely to be found in households that are poor), aggregate figures could mask a worsening in the conditions of the poor. To reduce poverty, not only must jobs be created at a brisk rate—some substantial proportion of the jobs that are created must go to households that are workerless at present, or to those that are home to the working poor. Rather obviously, the more ‘decent’ the jobs going to the poor, especially (but not only) in terms of the wage paid, the more rapid the reduction in poverty.<sup>46</sup> The question of who gets such jobs as are created, is thus of paramount importance.<sup>47</sup> It is common cause that those who are best placed, either by qualification, social location (ability to network), and/or geographical location (proximity to employment possibilities) are likely to be first in the queue for jobs. People with such characteristics are not usually to be found at the bottom of the income distribution. Banerjee *et al* (2006) offer support for this proposition, arguing that those most likely to find paid

employment will have a matric (grade 12) plus some post-matric qualification (p.26) and will not face excessive job-search costs (p.47). If true, this would rule out, more or less, the poorly-educated, especially in areas remote from the major metropolises.

Since education (and training) are the cornerstones of long-term anti-poverty policy in South Africa (and elsewhere), and since it is widely believed that education (and training) are the only sustainable routes out of poverty (they are necessary, but not sufficient), analysis of the efficacy of education as a means of gaining employment is urgently required. In addition, since networking is known to be crucial (Schöer and Leibbrandt, 2006; Magruder, 2007)<sup>48</sup> but difficult to understand, it is recommended that the LFSs be revised so that a proper understanding of these phenomena becomes possible.

In principle, the question of who benefits from job creation should be capable of being answered by the LFSs—they are, after all, quasi-panel studies (20 percent of the sample is ‘rotated’ out of the panel at each round). The labour market paper by Banerjee *et al* (2006), one of a number written by members of the ‘Harvard panel’ convened to study constraints and opportunities confronting the state’s AsgiSA (Accelerated and Shared Growth Initiative for South Africa), is among the very few based on longitudinal analysis on the LFS data. Its conclusions are pessimistic, although this may be due to the fact that the authors were apparently constrained to looking at changes between wave 6 (September 2002 ) and wave 7 (March 2003), a period when total employment rose by a trivial 8000 (from 11.296 million to 11.304 million).<sup>49</sup> This, in turn, is because the matched data for this period were the latest that were available at the time from Statistics South Africa, the institution responsible for (and the only institution capable of) matching respondents from different waves of the survey.<sup>50</sup>

For purposes of understanding the poverty-reducing impact of growth via job creation, it would be more interesting to see what happens when employment actually grows by relatively large numbers, as it appears to have done between September 2004 and September 2005. As a matter of urgency, it is recommended that up-to-date matched data sets be made available as soon as possible after the release of the key LFS in any year.<sup>51</sup>

**Table 5 Employment by occupation, March 2001-March 2007 (1000s)**

Occupation	2001	2002	2003	2004	2005	2006	2007	Increase 2002 to 2007	Increase 2004 to 2007
Legislators, senior officials & managers	633	708	708	834	798	852	906	198	72
Professionals	463	477	554	534	533	603	590	113	56
Technical & associated professionals	1 185	1 207	1 131	1 132	1 129	1 176	1 179	-28	47
Plant & machine operators & assemblers	1 168	1 160	1 198	1 158	1 172	1 095	1 164	4	6
Craft & related trades workers	1 559	1 417	1 405	1 417	1 642	1 708	1 770	353	353
Clerks	1 071	1 108	1 100	1 172	1 198	1 207	1 266	158	94
Plant & machine operators & assemblers	1 168	1 160	1 198	1 158	1 172	1 095	1 164	4	6
Service, shop & market sales workers	1 670	1 325	1 291	1 347	1 460	1 557	1 631	306	284
Elementary occupations	2 679	2 241	2 561	2 624	2 670	2 738	2 771	530	147
Domestic workers	843	877	884	847	850	850	936	59	89
Unspecified/Other	52	43	44	15	24	20	17	-26	2
Total, excluding agricultural workers	11 323	10 563	10 876	11 080	11 476	11 806	12 230	1 667	1 150
Skilled agricultural and fishery workers	951	1 055	428	311	432	644	417	-638	106
Total	12 275	11 617	11 304	11 392	11 907	12 451	12 648	1 031	1 256

Source: P0210, 26 September 2007, p.viii.

Note: The category Unspecified/Other has been omitted. The numbers involved are small (52 000 at most). Employment numbers are for workers in both the formal and informal economies.

For a country in rapid transition, and in which the rate of job creation has speeded up in recent times, the critical task of matching does not enjoy the priority it should. There is an urgent need to discover who it is that is becoming employed (or to use development-speak, we need to know whether or not growth is ‘pro-poor’). In the absence of up-to-date longitudinal analysis, one way of looking at this question is to examine the distribution of jobs by occupation, proceeding on the assumption that skilled jobs, in general, are not filled by the poor, or the untrained. The pattern that emerges over the period 2001-2007 is shown below in Table 5.

The troublesome February 2001 figures have been left in the table. For the purposes of the discussion of whether or not jobs are going to the poor, one way around the ‘outlier’ problem caused by the February 2001 figures, is to assume that the bias in the collection of informal economy data is constant. Accordingly, changes in employment by occupation are estimated for two periods in Table 5—those that took place between March 2002 and March 2007, and those between March 2004 and March 2007. Broadly speaking, jobs in the economy decrease in skill content as one makes one’s way down the table. The occupations in the table have been re-arranged from the order in which they appear in the LFS statistical release to accord with the (popular) perception of the time necessary to acquire the relevant skills. Thus craft and related workers, many of whom serve an apprenticeship or pupillage which may last for a few years, should rank above clerks. There is an inescapably arbitrary element to this procedure, but not so much so as to invalidate the exercise. At a guess, Plant and machine operators and assemblers would probably be ranked ahead of Service, shop and market sales workers.<sup>52</sup> Mean skill levels (if one can conceive of such a notion) are probably similar.

If they could obtain employment at all, many of the would-be workers without prior work experience, and consequently with no workplace skills,<sup>53</sup> some large proportion of whom one would expect to find in poor households, would, it is contended, be fortunate to obtain entry-level jobs in Elementary occupations, or as Domestic workers (skilled work which is not always recognised as such). With luck (and good social networks) some will find work in the retail sector as sales workers, while a few will be absorbed into routine factory work. Adding up the work opportunities that might have gone to members of poor households, we see a trivial increase in the number of domestic workers, while the number in Elementary occupations rises by 530 00 for the period as a whole (2002-

2007). If the figures are to be believed, this slows to a mere 150 000 over the years 2004-2007. If half of the Service, shop and sales jobs went to the poor, jobs flowing their way would have numbered about 30 000 or so per annum. A total of about 80-90 000 jobs a year for the poor is not an impressive performance.

### **Networking**

Re-engineering of the LFS has meant that a series of changes have taken place in the survey with which it has not been easy to keep pace. For purposes of the discussion which follows, I shall make reference to the questionnaire for the September 2004 LFS. Issues of the precise wording and numbering of the questions, and of the way in which these have changed (and indeed the issue of whether or not the required questions have been removed from the surveys), are not important for the argument that follows: what matters is the design required to obtain the necessary information.

The question in the September 2004 LFS on mode of job search was aimed at those who have not succeeded in obtaining work (question 3.8), rather than those who have (the target group was: 'All household members aged 15 and above who are willing to accept jobs if offered and have tried to look for work in the four weeks prior the interview'). Six alternatives were offered, among them, one which would elicit information on networking. A question like 3.8 could easily be aimed at all who have recently become employed. Isolating them would be a simple matter because Question 4.5 asked when workers started with current employer, making it possible to catch all 'new' employees. If the survey were to be re-organised along the lines suggested here, it would be possible to understand job search methods without having to wait for matching of records, although that, of course, is still highly desirable.

Networking, as noted above, appears to be extremely important, but poorly understood. Instead of restricting itself to the revisions suggested above, Statistics South Africa might want to consider making job search the subject of an add-on module to the LFS. If this were done, it would be possible to probe more deeply into areas such as networking, where density and geographical location seem to be important determinants of efficacy.

### **Education**

Administrative records on educational attainment are quite good. Although fairly long historical series based on these data are available, they obviously cannot provide information on the huge range of variables

dealt with in the household surveys. Information on education must, therefore, continue to be collected in the latter. Since the connection between labour market performance and education, although complex, is known to be crucial, the Labour Force Surveys are an obvious vehicle for collecting information on education. That being so, some thought ought to be given to ways in which the usefulness of the education data can be improved. There is a possibility that what long ago used to be called the matriculation exemption certificate (a pass in grade 12 which made it unnecessary to write a university entrance examination), and which is now apparently called a university endorsement, may act as a signalling device to potential employers. The education module could be used to probe into issues around the grade 12 results. Performance differs strikingly along what would conventionally be described as race lines, but what are, in addition, and more importantly, socio-economic status (SES) lines.<sup>54</sup> Understanding the labour market performance of the different population groups, sorted along SES lines rather than merely along race lines, is of self-evident importance. The significant overlap of the two (race and SES) down at the bottom end of the distribution is likely to persist for a long while, but towards the top end, this correspondence has already started to weaken significantly. It would be useful to be able to tie grade 12 performance (plus information on performance in mathematics and science at the higher grade) to household conditions (especially income and expenditure levels), and thence to success or otherwise in the labour market (or success in tertiary education). As the LFSs (GHSs) currently stand, this is not possible—the data that would enable one to do so are not collected.

### **Collecting and disseminating LFS income and expenditure data**

Mention of socio-economic status takes us back to a problem with the Labour Force Surveys that I have raised elsewhere, namely the removal, after September 2004, of the household section of the surveys, and with it, the collection of information on social grants and household expenditure (Meth, 2006b). Without comprehensive information on all sources of income, any understanding of labour market dynamics, the ostensible reason for running the LFSs in the first place, must be but partial.

There was talk that income was also slated for removal from the LFS on the grounds that it was either under-reported or mis-reported to the point where it was thought to be misleading. There is a simple way to check this, namely, to compare the income figures gathered in the LFSs with those collected in the General Household Surveys (GHSs). Given a sufficient number of shared characteristics, inconsistencies should

become immediately apparent. In any event, the presentation in the September 2007 LFS of estimates of income by sector (Table 3.5, p.18) means that at least for the moment, income is still there. For users who are not able to gain access to the data provided by Statistics South Africa (website and/or CD ROM),<sup>55</sup> the usefulness of the information would be greatly enhanced if the widths of the income categories were reduced. Published results are sorted into only four categories: doubling this number, if possible, and pushing up the level at which the open category begins (presently at R8001 per month plus) would not damage the readability of the table. It is particularly important to narrow the categories below R1000 per month, for that is where many of the working poor are to be found (about 1.2 million formal economy workers, the same number of informal economy workers, and almost 700 000 domestic workers earned R1000 or less per month in September 2007).

The usefulness of the employment figures would also be increased if the approach recommended above on earnings were applied to that part of the statistical release reporting monthly income by main industry (sectors of the economy at the single-digit SIC classification). Difficult as they are to estimate, the earnings of informal economy workers should also to be published. If, instead of the present approach (see Table 3.9 on p.24 of the September 2007 LFS) of assigning workers to one of only three income categories (R0-2500: R2501-8000, and R8001 plus), the multiplicity of income categories suggested above, were used, the information would be of much greater value to users.

If, to ensure that the estimates of numbers in each category are large enough to be reliable (>10 000) a cut-off level of, say, 300 000 workers in a sector were adopted, only utilities would be excluded from the formal sector. In the informal sector, agriculture, construction and trade would be picked up. Presented in this manner, the income estimates would cover more than 98 percent of workers in the formal sector, and almost two-thirds of informal economy workers. It is not necessary to include domestic workers among the latter, because information on earnings for this group of workers (1 075 000 in September 2007) is presented along with earnings for formal and informal economy workers. Nearly two-thirds of all domestic workers earn less than R1000 per month (P0210, 27 March 2008, Table 3.5, p.18). Since there is a minimum wage set in this sector, it would be interesting to see how many full-time workers earn less than the minimum.

A complaint one quite frequently hears at conferences and workshops attended by organisations representing workers and the poor is that very



large numbers of people work long hours for low pay, and conversely, that large numbers of people are classified as ‘employed’ even though they may only have worked for one hour during the week. The surveys tend to bear out the former, but do not offer much support to the latter. It would help matters if a table reporting hours of work by monthly income were presented in the news release. Another concern expressed is that some significant number would work longer hours if they had the opportunity to do so. The survey collects this information as well, so that presenting tables of such persons, by income level, would present no difficulty at all.

Examples of how this information may be presented are given below in Tables 6 and 7. Estimated from the data set for the September 2004 LFS, the figures both for the distribution of workers by income category and number of hours worked, and for the distribution of those who wished to work for longer, again by income category, are given with two sets of values. The first of these assumes that earned incomes are accurately reported in the survey. The second assumes (unrealistically) that every worker under-reported their income by 75 percent (i.e., to obtain their ‘true’ incomes, reported incomes have been multiplied by 1.75). Income categories used also differ from those used by Statistics South Africa. R310 per month in 2004 was roughly equivalent to R250 per month in 2000 prices—R250 per capita per month is the poverty line used in the two studies contending for the position of more reliable poverty estimate for 2004 (van der Berg *et al*, 2005; Meth, 2006b).

As one would expect, the zero-error figures paint the more sombre picture. Also as one would expect, however, the total numbers of people reporting that they work a given number of hours does not vary. What changes is their distribution among the various income classes. A peep at the results suggests that of the 72 000 people working less than five hours per week, less than half wish to work longer hours.

**Table 6 No. of hours usually worked (including overtime) by monthly income – Sept 2004**

Total monthly individual income by category, zero under-reporting											
Number of hours usually worked including overtime	R1-149	R150-309	R310-399	R400-799	R800-1199	R1200-1799	R1800-2499	R2500-4999	R5000-9999	R10000+	Total
0-<5	9 700	20 200	900	17 800	9 200	5 400	2 200	1 800	600	3 700	72 200
5-<10	23 700	49 700	4 200	35 500	13 100	3 600	4 700	5 700	2 700	2 900	145 500
10-<20	28 400	76 900	22 500	129 000	42 600	20 200	7 700	17 800	8 200	5 700	358 500
20-<30	28 400	63 900	24 900	157 400	59 200	37 900	24 900	29 600	33 200	19 000	477 900
30-<40	21 300	72 200	37 900	204 700	123 100	108 900	65 100	140 800	215 300	73 400	1 063 500
40-<50	50 900	147 900	72 200	640 000	595 000	843 400	746 400	1 385 200	1 251 500	630 500	6 367 500
50-<60	24 900	62 700	37 900	339 500	216 500	223 600	164 500	246 100	160 900	158 600	1 636 000
60+	36 700	105 300	60 400	359 600	213 000	240 200	153 800	246 100	142 000	145 500	1 703 400
Column total	222 400	599 800	261 500	1 885 600	1 272 800	1 483 400	1 169 900	2 073 600	1 815 800	1 039 800	11 828 800
Cumulative proportion (%)	1.9	7.0	9.2	25.1	35.9	48.4	58.3	75.9	91.2	100.0	

  

Total monthly individual income by category, allowing for 75% under-reporting											
Number of hours usually worked including overtime	R1-149	R150-309	R310-399	R400-799	R800-1199	R1200-1799	R1800-2499	R2500-4999	R5000-9999	R10000+	Total
0-<5	4 700	6 300	15 400	5 600	15 400	10 900	1 800	6 000	1 800	4 300	72 200
5-<10	3 200	27 300	27 300	26 100	26 100	16 600	1 800	7 700	5 800	5 100	145 500
10-<20	4 500	35 500	39 100	82 900	74 600	58 000	11 100	21 300	20 200	10 700	358 500
20-<30	5 700	30 800	33 200	80 500	97 000	76 900	28 400	43 800	40 300	39 100	477 900
30-<40	2 100	28 400	32 000	119 500	108 900	143 200	84 000	124 300	195 200	226 000	1 063 500
40-<50	5 800	59 200	72 200	222 400	344 300	682 600	576 100	1 389 900	1 518 900	1 494 000	6 367 500
50-<60	4 700	24 900	28 400	121 900	185 800	269 700	178 700	306 400	239 000	274 500	1 636 000
60+	2 200	41 500	45 000	177 500	198 800	262 600	173 900	317 100	242 500	242 500	1 703 400
Column total	32 000	253 200	293 400	838 700	1 050 400	1 520 000	1 055 200	2 219 100	2 262 900	2 298 400	11 828 800
Cumulative proportion (%)	0.3	2.4	4.9	12.0	20.9	33.7	42.7	61.4	80.6	100.0	

Source: Estimated from data for September 2004 LFS.

Note: As Statistics South Africa points out, 'for values of 10 000 or lower, the sample is too small for reliable estimates'

**Table 7 No. of people who wish to work longer hours by income category by number of hours usually worked per week – Sept 2004**

Total monthly individual income by category, zero under-reporting											
Number of hours usually worked	R1-149	R150-309	R310-399	R400-799	R800-1199	R1200-1799	R1800-2499	R2500-4999	R5000-9999	R10000+	Total
0-<5	4 900	9 900	300	7 000	1 700	1 000	1 000	300	0	3 800	29 300
5-<10	9 500	20 700	3 300	7 600	3 900	0	1 400	800	400	300	47 600
10-<20	6 400	32 000	14 400	60 600	12 300	5 600	1 900	3 600	1 000	1 300	138 600
20-<30	15 100	18 900	9 300	61 400	19 800	14 100	10 400	2 900	9 400	3 900	164 800
30-<40	8 900	23 600	20 900	65 900	27 400	29 100	17 500	16 800	22 500	16 100	248 300
Column total	44 500	104 700	47 900	202 400	65 000	49 800	32 000	24 300	33 200	25 100	628 500
Cumulative proportion (%)	7.1	23.7	31.3	63.5	73.9	81.8	86.9	90.7	96.0	100.0	
Total monthly individual income by category, allowing for 75% under-reporting											
Number of hours usually worked	R1-149	R150-309	R310-399	R400-799	R800-1199	R1200-1799	R1800-2499	R2500-4999	R5000-9999	R10000+	Total
0-<5	1 900	3 800	8 600	1 100	6 100	1 900	300	1 900	300	3 800	29 300
5-<10	1 200	11 200	9 600	13 900	3 600	5 400	300	1 400	800	700	47 600
10-<20	1 200	12 900	15 800	39 100	31 300	25 400	3 600	3 900	3 600	2 200	138 600
20-<30	1 700	16 600	9 300	26 700	37 900	28 500	13 600	14 900	5 300	10 700	164 800
30-<40	0	13 900	10 200	46 100	31 200	40 000	20 300	33 300	22 400	31 300	248 300
Column total	5 800	58 200	53 300	126 700	110 000	101 000	37 900	55 400	32 200	48 400	628 500
Cumulative proportion (%)	0.9	10.2	18.7	38.8	56.3	72.3	78.4	87.2	92.3	100.0	

Source: Estimated from data for September 2004 LFS.

Among the 146-odd thousand working between 5-10 hours weekly, about one-third want to work for longer, while a slightly larger proportion of the 358 000 people working between 10-20 hours would like to do so. Viewed in the context of the 12 million people working, the problem of people working fewer hours than they would like, is relatively small—only about five percent of the employed who work less than a standard (40-hour) week, want to work more hours. That does not mean that it can be ignored, about 40 percent of the 600 000 people concerned are likely to be very poor.

The problem posed by the fact that some people work fewer hours than they would wish to is, however, dwarfed by the problem of low incomes. Somewhere between 3-6 percent of workers, for example, do not earn enough to support one person at the exceedingly modest level of R309 per capita per month. Somewhere between 20 and 35 percent are earning less than the amount required to support three people and so on. Clearly, by making the income category boundaries equal to multiples of whatever poverty line is accepted, one could say interesting things about the relationship between earnings and poverty.

So much for employment—let us turn now to the unemployment numbers.

### **How should changes in unemployment be evaluated?**

Unemployment rates are the captives of the two variables that go to make up the economically active population, the employed, and those deemed to be unemployed. As has been noted above, unemployment can rise during periods of fairly rapid job growth. Between September 2004 and September 2005, if we exclude informal agricultural workers, employment grew by 750 000 and the number of officially unemployed went up by 350 000. The official unemployment rate that corresponds to this definition of employment would have gone from 26.9 to 27.3 percent. Clearly, viewed alone, the latter two measures do not provide much useful information about labour market conditions.

When to this is added the problems of deciding how to treat informal economy workers, especially those engaged in agriculture (there are almost as many problems involved in simply omitting them from the picture, as there are when they are included), it is clear that ways of supplementing the meagre information embedded in unemployment rates and headcounts need to be found.

What is required is a way of thinking about changes in both the numbers of officially unemployed and discouraged<sup>56</sup> workseekers recorded by the Labour Force Surveys that begins to address the inadequacies of these numbers, as currently presented. The three-by-three table in Figure 1 below offers an approach to the problem which relegates unemployment rates to their appropriate (low priority) status, focusing instead on the relationship between changes in the absolute numbers of officially unemployed, and discouraged workseekers.

Complicating the issue is the fact that changes in unemployment levels, whether measured as changes in rates or changes in absolute numbers, do not lend themselves to simple interpretation. Paradoxically, an increase in the official unemployment rate and the number of officially unemployed may be regarded as positive under certain circumstances. If employment is growing quite rapidly, and the number of discouraged workseekers is falling, presumably because the previously discouraged have received information that search activity may now be worthwhile, a surge in the number of officially unemployed could point to an increase in that activity.<sup>57</sup> If, by contrast, employment levels are static, then a change of the sort just described should be viewed as negative, one possible explanation being that while some of the discouraged simply give up altogether, increasing levels of desperation drive others among them to seek work despite the difficulties of doing so.<sup>58</sup> In short, we need a way of incorporating changes in the levels of employment into the set of outcomes captured in the nine cells that go to make up Figure 1.

**Figure 1 Acceptability of changes in unemployment levels**

		<i>No. of officially unemployed</i>		
		<b>Rises</b>	<b>Stationary</b>	<b>Falls</b>
<i>No. of discouraged workseekers</i>	<b>Rises</b>	1. Worst case	2. Unacceptable	3. Less tolerable?
	<b>Stationary</b>	4. Unacceptable	5. Undesirable	6. Acceptable
	<b>Falls</b>	7. Tolerable	8. Acceptable	9. Most desirable

What is required of whatever means chosen to present the unemployment information, is some way off assisting users to form a judgement as to whether the outcome is good, bad or indifferent. There are few certainties in Figure 1—to begin the proceedings, a set of provisional judgements of the outcomes in the nine cells of the figure is offered. Agreement that the

outcome depicted in the top-left-hand corner (cell 1) is the worst possible would probably not be difficult to secure. It is unclear, however, that the two outcomes labeled ‘Unacceptable’ (cells 2 and 4) are always so. If, for argument’s sake, employment levels were falling, to be able to hold unemployment (either official or expanded or both) stationary might be a considerable achievement. It is also not obvious that under conditions of rapidly falling employment levels, the outcome in the bottom right-hand corner, labeled ‘Most desirable’ (cell 9), actually merits that title. If both the searching and the non-searching unemployed had given up hope of finding a job, and were making a transition to not economically active, then the outcome would certainly not be the most desirable (although what could be regarded as desirable under such circumstances is not easy to say).

Outcomes in other cells are also difficult to interpret (and hence, to be given an initial label). That in cell 3 is described as ‘Less tolerable’. It is so, in the first instance, by comparison with that in cell 7 which is labeled ‘Tolerable’. Reference has been made above to a cell 7 outcome, showing how it is rational for previously discouraged workseekers to begin searching for work, driving the number of officially unemployed up, and the number of discouraged down. It is not easy, by contrast, to think of reasons to celebrate an increase in the number of discouraged.

Clearly, to place the set of judgements offered in Figure 1 on a firmer footing, some means needs to be found of incorporating into the picture, employment changes and changes in participation rates. Since only one outcome per period is possible, the qualification of the judgement of the outcome has only to be made in the box in which that outcome is depicted. That qualification will (may) take the form of the supersession of the initial judgement by a more nuanced conclusion, after an analysis of all the relevant conditions has been performed.

**Table 8 Changes in employment & unemployment, Mar 2003-Sept 2007 (1000s)**

Period	Employment	Officially unemployed	Discouraged	Cell
March 2003 to Sept 2003	200	-680	530	3
Sept 2003 to March 2004	0	-20	-10	9
March 2004 to Sept 2004	160	-280	190	3
Sept 2004 to March 2005	180	150	-130	7
March 2005 to Sept 2005	570	200	-510	7
Sept 2005 to March 2006	-220	-210	370	3
March 2006 to Sept 2006	520	120	-470	7
Sept 2006 to March 2007	-80	-60	290	3
March 2007 to Sept 2007	710	-390	-80	4

Source: Estimated from Labour Force Surveys for the relevant periods.

Using this approach, we can quickly develop a rough-and-ready analysis of the performance of the economy. Table 8 above presents the required basic data for doing so, from the survey for the period March 2003 until that of September 2007.

Over the period, official unemployment falls on six out of nine occasions, so the outcomes must be in cells 3, 6 or 9 of Figure 1. It rises on three occasions, implying that the outcomes will be in cells 1, 4 or 7. We need not look at each movement; a few illustrations will be sufficient to make the point. Let us assume, even though we know it not to be so, that each movement is statistically significant. Between September 2003 and March 2004, both official unemployment and the number of discouraged fell, a performance that is located in cell 9. Employment growth, however, was zero. Both official and expanded participation rates fell. That being so, would one still want to describe the performance as ‘Most desirable’? One rather suspects not—‘Acceptable’ or ‘Tolerable’ in the short-term, are possibly more appropriate ways to describe it. A repeat performance of this nature would be cause for some alarm.

The half-year that follows (March 2004 to September 2004) sees growth picking up, official unemployment falls, and the number of discouraged rises, but by less than the number of officially employed falls, leaving us in cell 3, with a nominally ‘Less tolerable’ rating. The relative sizes of the movements in unemployment would incline us to qualify our judgement, and pronounce the performance ‘Acceptable’.

Performance for the period from September 2004 to March 2005 lands us in cell 7 ‘Tolerable’, a judgement that we may wish to qualify to acceptable, if we could say with some certainty that that ‘new’ officially unemployed were drawn from the ranks of the existing discouraged.

After a fairly dismal performance between September 2006 and March 2007, during which a fall in the number employed and much larger increase in the number of discouraged workers is only slightly offset by a small fall in the number of officially unemployed, the improvement over the next period brings welcome relief. Not only do the numbers of officially unemployed and discouraged workseekers fall, the former by a whopping 390 000, but employment spurts by more than 700 000. The participation rate rises by a shade under one percentage point, while the absorption rate goes up by two percentage points.

Two warnings have now to be issued. Both have been hinted at above. The first of them turns on the question of the statistical significance of

changes such as those depicted in Table 8. Where, say, for example, an upward change in employment numbers is significant, and the changes in unemployment levels are not, it is probably safe to conclude that the change is desirable. In effect, we would be qualifying the outcome in cell 5. If neither the changes in employment nor those in unemployment were statistically significant, we could apply the cell 5 provisional judgement of 'Undesirable' to the outcome. Statistically significant changes in unemployment, accompanying non-significant changes in employment would each have to be treated on their own merits.

The second warning has to do with the question of who gets the jobs, and the kind of jobs they get. Although optimists might want to argue that for every skilled job created in the economy, there is a multiplier effect that sees, say, 2.7 semi-skilled or unskilled positions come into being (to pluck a figure out of the air), possibly with a lag, assertions of this kind often rest on shaky foundations. If our concern is with poverty eradication, we ought possibly to be much less impressed with 200 000 skilled jobs finding their way into not-so-poor households, than we might be with the same number of unskilled jobs finding their way into poor households. In addition, since poverty is gendered, we ought as well to be looking for signs of gender bias in the jobs created among the poor. Finally, the question of whether or not the jobs are 'decent', in the sense that the ILO uses the concept (ILO, 2004), ought to be taken into consideration. Looking at just one aspect of 'decent' work, a secure, 'living' wage, it is clear that the acquisition of low-wage, low productivity employment, though preferable to unemployment, can still leave the worker and his or her household mired in poverty with little chance of escape.

Starting life as a relatively simple device for classifying various employment and unemployment outcomes, the analytical tool proposed above has grown in complexity *pari passu* with the complex reality it seeks to understand. Although sound-bites to meet the needs of those with short attention spans probably cannot be eliminated (some commentators will inevitably pander to this market), the analysis of developments in the labour market is too important to abandon to sensation seekers. If an analytical device such as that sketched above were to hand, it might be possible to stop politicians and others from saying unjustifiable things about the progress being made in the fight against unemployment.



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## CONCLUSION

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From each of the two parts of this paper, a major conclusion may be drawn: from the first part, that Statistics South Africa's decision to switch from bi-annual to quarterly collections of the LFS data is probably not a good idea, from the second, it may be concluded that a great deal could be done to improve the way in which the LFS (and GHS) results come to be collected, analysed and interpreted. Apart from a few general comments, the arguments offered in the text will not be rehashed below, instead, the recommendations made at various points will be listed. To justify any particular recommendation (there are many of them), it is necessary to refer to the appropriate points in the text.

### **Part I**

That the quality of the information yielded by the LFSs needs to be improved, and can be so by improvements in the working conditions of the people who collect the raw data, admits of no doubt. The same cannot be said of the method proposed by Statistics South Africa of effecting these improvements. The attempted justification of the step as being in accordance with user needs has not been publicly defended by the release of any user documents that show how the additional information will contribute to policy-formation or decision-making.

It is recommended that:

The SARB and business economists who are modeling inflation be requested to write short papers describing what they believe the effect of a quarterly LFS data might be on the predictive capacity of their models, citing evidence of how improvements, if any, might take place.

The SARB write a short paper showing how sensitive their composite indicators are to errors known to be present in the labour market indicators (discrepancies between LFS and QES figures, for example) they are presently using.

In the near future that a review of the differences between the LFS and QES results be commissioned by the Statistics Council, and further, that the Statistics Council request from Statistics South Africa, a report on the health of the QES. The review of the QES should consider the implications, if any, of the differences in aggregate employment growth estimates in the QES and LFS.

Research into the use of labour market indicators in the private sector, and in the financial press should be commissioned.

Statistics South Africa place on their website all documents relating to the re-engineering of the LFS, including plans for the future of the surveys, along the lines of the information made available by the ONS when it responded to the review of its surveys.

That in place of the occasional media release, Statistics South Africa describe in detail, the progress made in updating the business register. Analysis of the impact of the implications of not benchmarking the QES annually (as is done in the US) should also be conducted, and the results placed on the website.

Statistics South Africa describes the technique for dealing with non-response problems. It should discuss as well, how it deals (or intends to deal) with proxy response errors (which may be as large as non-response errors).

A survey similar to the Job Openings and Labor Turnover Survey (JOLTS) conducted in the US be introduced in South Africa. The two questions on hires and separations in the QES are not adequate. The proposed survey should take into account the special conditions of the SA labour market, viz., mass unemployment coinciding with serious skill shortages.

The bi-annual LFSs and the GHS be modified so that enough overlap to permit pooling of certain critical labour marker data is possible, and then to be carried out in a cycle, February (LFS), June (GHS), October (LFS). A review of the GHS questionnaire, aimed at discovering which questions can (should) be deleted and what additional questions are necessary, should be conducted. The household expenditure and social grants questions, deleted from the LFS, must be restored. The social grant questions need to be improved upon. The migrant module (suitably revised) in the 2004 LFS, should be tacked on to the GHS.

## **Part II**

It is recommended that:

More prominence must be given to non-farm total employment estimates in the LFS releases and media packs. The practice of including the wildly fluctuating 'informal' agricultural employment figures should cease

forthwith. A revised set of official employment estimates, excluding these figures, should be published.

The revised series should also present an up-to-date set of estimates of the size of the total and working-age populations. As better information has come to hand, Statistics South Africa has changed its mind on population growth rates in present times. There is no published series that backcasts the effects of these changes on population estimates over the period since the 2001 population census.

Informal economy employment estimates are weak and there is no guarantee that quarterly LFSs will do anything to improve their quality. Statistics South Africa should re-introduce the Survey of Employers and Self-Employed (SESE), carried out in 2001. In the process, it might be possible to discover whether or not the considerably higher informal employment numbers posted by that survey were an outlier. New ways of measuring informal agricultural activity have to be discovered. The LFS is not an appropriate vehicle for doing so.

Ways also need to be found to measure informal (and subsistence) agricultural activity. The LFS does not appear to be a satisfactory instrument for doing so. Consideration should be given to a re-run of the 1997 Rural Survey, redesigned to suit today's conditions. The focus should still be the former bantustan areas, but the survey should not be limited to these regions if that is found to be inappropriate.

As a matter of extreme urgency, the task of matching survey responses so that up-to-the-minute longitudinal analysis becomes possible, must be carried out, and it must be done so out on a continuing basis. The ostensible reason for conducting the LFS as a quasi-panel study, is to permit analysis of labour market dynamics. Among the most urgent questions that presently cannot be answered is that of who has been obtaining employment as economic growth has speeded up in recent times.

Qualitative research into the determinants of labour force participation should be conducted.

Greater use could possibly be made of educational data collected by the LFSs. A review aimed at discovering how this may be done should be commissioned.

Similar considerations apply to networking, believed to be an important determinant of successful job search. Ways need to be found to probe this area.

Electronic publishing is rendering old methods of disseminating information obsolete. A review of the information published in the LFSs and the manner in which that is distributed should be undertaken. This should take into account the differing needs and capacities of the various users of the information. Innovative ways of making a limited, but essential subset of the information available to users should be sought.

Finally, consideration should be given to the institution of structured ways of understanding the significance of the related changes between unemployment, employment and economic participation. The device suggested in the last section of the paper offers a starting point for discussion of this issue.

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## **APPENDIX 1 INFLATION OUTLOOK: APRIL 2006-JANUARY 2008**

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### **Selected statements by the Monetary Policy Committee of the South African Reserve Bank**

**2006-04-13**

#### **The outlook for inflation**

The inflation outlook remains benign, although there are significant risks. The most recent central forecast of the Bank is similar to that seen at the February 2006 meeting of the MPC. According to the forecast, inflation is expected to peak at a level just below 5 percent in the first quarter of 2007, and then decline to a level of around 4,6 percent, and remain there till the end of the forecast period in 2008.

**2006-06-08**

#### **The outlook for inflation**

Compared to the previous forecast of the Bank, the latest forecast shows a marked deterioration in the inflation outlook, particularly in the short term. Whereas the previous forecast projected CPIX inflation to peak at a level just below 5 percent in the first quarter of 2007, it is now expected to breach the upper end of the target range and to peak at a level of 6,2 percent at that time. CPIX inflation is then expected to fall back below the upper end of the target by the next quarter, and by the third quarter it is projected to decline further to 5,2 percent. Inflation is then expected to continue to moderate gradually to reach 4,8 percent by the end of 2008.



The main reason for the deteriorating outlook is a significant upward revision of the international oil price assumptions.

The most recent inflation expectations survey of the Bank conducted by the Bureau for Economic Research at the University of Stellenbosch shows that expectations for 2006 have remained more or less unchanged, although there has been a slight deterioration in expectations for 2007 and 2008. The revisions were mainly a result of an upward adjustment of expectations of trade unionists, and this brought them in line with the expectations of analysts and business executives. Inflation is now expected to average 4,9 percent in both 2007 and 2008, compared to expectations in the first quarter of 2006 of 4,6 percent and 4,8 percent for these two years respectively. These expectations are in line with the inflation expectations as indicated in the long-term break-even inflation rate, measured as the yield differential between conventional bonds and inflation-linked bonds, which measured 4,8 percent at the end of May 2006.

**2007-12-06**

### **The outlook for inflation**

The most recent central forecast of the Bank indicates a further deterioration in the inflation outlook, particularly in the short term, when compared to the previous forecast. CPIX inflation is now expected to peak at around 7,8 percent in the first quarter of next year. Thereafter CPIX inflation is expected to decline to below the upper end of the target range by the final quarter of 2008. A gradual downward trend is expected to persist and to measure 5,2 percent in the final quarter of 2009. The higher trend is a result of higher administered price assumptions, particularly for petrol and electricity over the forecast period.

**2008-01-31**

### **The outlook for inflation**

The most recent central forecast of the Bank indicates a further deterioration in the inflation outlook in the short term when compared to the previous forecast. CPIX inflation is still expected to peak in the first quarter of 2008 but at an average of around 8,5 percent. In line with the previous forecast, CPIX inflation is then expected to decline to below the upper end of the target range by the final quarter of 2008 and to remain around the 5,6 percent level for most of 2009. The higher near-term

projections are a result of slightly higher inflation outcomes, and further revisions to assumptions about administered prices.

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## ENDNOTES

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<sup>1</sup> Thanks are due (once more) to Anna McCord for giving generously of her time to make critical comments on Version 2 of the paper. Making the corrections she suggested took quite a while longer than she said they would, due in no small measure to the confusion (of mine) that she uncovered. Ideas in the paper were also shared with Murray Leibbrandt and Ingrid Woolard, both of whom made useful suggestions. Dori Posel read the Version 4 final draft, offering a stream of pertinent comments, not to mention the many typos she discovered. As ever, the errors that remain are my responsibility.

On 13<sup>th</sup> July 2007, Version 2 of the paper was presented to the Executive Committee of Statistics South Africa, senior staff members and a member of the ‘triumvirate’ of consultants who advise Statistics South Africa on economic statistics, amongst them, the Labour Force Surveys. I am deeply grateful to the Statistician-General, Mr Pali Lehohla, and to those who attended (all of whom face extreme demands on their time) for making that meeting possible, and for responding to the criticisms offered in the paper in such a positive way.

Thanks go as well to Johan van der Heever, head of economic research at the South African Reserve Bank, who read and commented on Version 3. His assurance that the Bank is not the source of pressure for an increase in the frequency of the LFS, leaves the claim by Statistics South Africa that the move is in response to user demand looking more than a little threadbare. No doubt certain users have been vociferous in the clamour for more frequent labour market information. Mere noise, however, cannot justify the expenditure of the very large sums of money involved.

<sup>2</sup> In a paper published last year, I argued that: ‘The goals of halving unemployment and poverty by 2014 are both too modest and too ambitious. They are too ambitious because the policy tools proposed to achieve them are unlikely to succeed. They are too modest because even if they are achieved, levels of poverty and unemployment will still be unacceptably high.’ (Meth, 2007, p.104) There does not seem to be much reason to alter this conclusion.

<sup>3</sup> This estimate was produced by projecting the 2003-2007 labour market performance, using the September 2007 LFS results as base. The results

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are sensitive to variations in the assumed rate of growth of the labour force, but less so to differences in assumptions about the rate of growth of the working age population. Chopping the former from the 2.083 percent per annum observed over 2003-2007, to 1.5 percent per annum, reduces the number of jobs required to about 450 000 per annum. At the end of the period (2014), there would still be between 2-7-2.8 million officially unemployed. Halving the rate of unemployment would thus mean reducing the number by 37-40 percent.

<sup>4</sup> See the article “Mboweni: Inflation remains a key challenge” (picked up from Reuters) in the *Mail & Guardian* online version, 4 April 2008.

<sup>5</sup> Treasury’s 2008 prediction for growth in the medium-term is 4.3 percent per annum. See *Budget Review 2008*, p.2. The Harvard team looking at growth constraints as part of AsgiSA, concluded that potential output growth is in the region of 3-4.5 percent per annum (Frankel and Sturzenegger, 2008). As conditions worsen, short-term predictions become more dire. Debating whether or not the economy was sliding into recession (negative growth for two successive quarters), economists disagreed, as usual. An article by Roy Cokayne, under the headline “Recession to hit by October - FNB” (*Business Report*, Thursday, July 3 2008, p.17), records dissenting views with some arguing that it is sliding into full recession, while others claim that fixed investment will cushion the economy into a mere slowdown. One of the optimists forecast growth of 2.7 percent this year, compared with last year’s five percent.

<sup>6</sup> After testimony by US Federal Reserve Bank Chairman Ben Bernanke before the Joint Economic Committee, U.S. Congress, on 2<sup>nd</sup> April 2008 (see <http://www.federalreserve.gov/newsevents/testimony/bernanke20080402a.htm>), articles appeared in the financial press noting that Bernanke had conceded for “the first time [that] the U.S economy may slip into recession”. See, for example, the Reuters piece by Mark Felsenthal “Bernanke: Recession possible, growth to rebound”, Downloaded from [http://biz.yahoo.com/rb/080402/usa\\_fed\\_bernanke.html?.v=15](http://biz.yahoo.com/rb/080402/usa_fed_bernanke.html?.v=15), 6<sup>th</sup> April 2008. Earlier reports of deteriorating economic conditions pointed to a ‘slashing of growth forecasts, along with a raising of the unemployment forecast. In February 2008, for example, the article “US Fed slashes growth forecasts” run by the BBC on 20<sup>th</sup> February 2008 (<http://news.bbc.co.uk/2/hi/business/7254969.stm>),). The Bernanke testimony on 2<sup>nd</sup> April 2008, explains why it was deemed appropriate to

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rescue Bear Stearns bank. The statement is worth repeating verbatim—Bernanke said that:

“The company’s failure could also have cast doubt on the financial positions of some of Bear Stearns’ thousands of counterparties and perhaps of companies with similar businesses. Given the current exceptional pressures on the global economy and financial system, the damage caused by a default by Bear Stearns could have been severe and extremely difficult to contain. Moreover, the adverse effects would not have been confined to the financial system but would have been felt broadly in the real economy through its effects on asset values and credit availability. To prevent a disorderly failure of Bear Stearns and the unpredictable but likely severe consequences of such a failure for market functioning and the broader economy, the Federal Reserve, in close consultation with the Treasury Department, agreed to provide funding to Bear Stearns through J P Morgan Chase.”

<sup>7</sup> For a review of the prospects, see the article “Banks retreat from risk as credit crunch spreads”, by [Ashley Seager](#) in the *Guardian* (online version) Thursday April 3 2008; or “The week the crisis hit home”, by Graeme Wearden, also in the *Guardian* (online version) Thursday April 3 2008.

<sup>8</sup> In the aftermath of the collapse of Northern Rock in the UK, it was pointed out that “Financial Services Authority [the regulatory authority] admits it did not have a clue” (article by Phillip Inman in the *Guardian*, Thursday, March 27 2008). Inman notes that the “bank’s business model ... has been described as reckless”.

<sup>9</sup> Gieve does not talk so bluntly—he refers instead to the need to “alter the adverse incentives that had developed”.

<sup>10</sup> Views on prospects for the SA economy are, however, mixed. According to Wiseman Khuzwayo in an article headed “Deficit puts SA at risk World Bank says”, (*Business Day* online edition, March 30 2008), notwithstanding the warning about the deficit, the Bank expects growth of 5.1 per cent this year and 5.3 percent next year.

<sup>11</sup> As Appendix 1 to the present paper shows, the Reserve Bank’s Monetary Policy Committee believed that by the final quarter of 2008, inflation would be below the upper bound of the inflation target. It is not obvious that the Committee’s over-riding optimism, expressed with each increase in the repo rate, is entirely appropriate. At the time of writing

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(shortly before the April 2008 meeting of the Bank's Monetary Policy Committee), columnists could be seen offering advice to the committee and/or making predictions. Some, like Alex Pestana in *Business Day* (online version, 31 March 2008) urged courage "Not time for Bank to blink in its battle with inflation". Others, like Mariam Isa in the same paper, trying to guess at how the committee may tackle a difficult task, argued that the "Rates decision [was] too close to call" (*Business Day* online version, 7 April 2008).

<sup>12</sup> According to the South African Reserve Bank's figures (Series KBP7085J), percentage changes in output volume from the previous year were as follows: 2003, -1.9; 2004, 4.3; 2005, 3.9; 2006, 4.9; 2007, 4.1.

<sup>13</sup> Contributions to total output and employment were estimated respectively from the *South African Reserve Bank Quarterly Bulletin*, December 2007, p.S-105, and the Labour Force Survey for September 2006, Statistical release P0210, 29 March 2007, p.vi.

<sup>14</sup> In support of this claim, the article says that official data show that the sector lost 22 000 jobs in 2007, 7000 of them in the final quarter. The figures cited here must be those from the Quarterly Employment Statistics (QES) survey for December 2007 (Statistical release P.0277, 27 March 2008, p.9). Measuring formal sector employment only, this total is contradicted by the Labour Force Survey estimates of the change in formal sector manufacturing employment between September 2006 and September 2007. As opposed to the QES's 1 322 000 and 1 311 000, the LFSs offer us totals of 1 484 000 and 1 565 000, an increase of 81 000 (Statistical release P0210, 29 March 2007, p.16, and 27 March 2008, p.16).

<sup>15</sup> News of these demands was reported by Ms Yandiswa Mpetsheni, who has overall responsibility for ensuring that the surveys take place, at a user workshop organised and presented by Statistics South Africa in Gordons Bay, 7 June 2007. One forum in which these demands were articulated was a user workshop held in March 2006. The claim that user demands lay behind the decision, was repeated by several of those who attended the presentation I made to Statistics South Africa, on 13<sup>th</sup> July 2007.

<sup>16</sup> Supplied to me by Dr Rashad Cassim, DDG, Economic Statistics, Statistics South Africa, 3<sup>rd</sup> April 2007.

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<sup>17</sup> In a footnote in the document, a leading indicator is defined thus: “... the phrase “leading indicator” is intended to refer to the fact that the RLFS [Re-engineered LFS] will enable policy makers to anticipate what the subsequently available data from other sources will show.”

<sup>18</sup> It may be easier for government to respond to an overheating of the economy caused by growth outstripping supply capacity.

<sup>19</sup> Elsewhere, even if fairly significant swings in the labour market are detected, apart from monetary policy changes, there is precious little scope for policy intervention in the short-term (stabilisation policy). Even when there is scope for intervention, the time that elapses before any impact is felt, could be very long. Svensson (2000, p.1), for example, argues that:

“Because of the lags in the effects of monetary-policy actions on aggregate demand and inflation, the Eurosystem cannot affect current inflation and output, nor inflation or output in the near future. A rough benchmark is that monetary policy affects output in about a year and inflation in about two years.”

If South Africa is anything like the European Union in this regard, then, unless it can be shown that one or more of the labour market indicators performs exceptionally well, there would seem to be little virtue in attempting to pump up the LFS to use as a guide.

<sup>20</sup> See McCord and Meth, 2007 for an analysis of the limitations of the EPWP.

<sup>21</sup> Displaying a fine disregard for evidence the ANC’s claim that “We are building a developmental state and not a welfare state given that in welfare state (*sic*), dependency is profound.” (ANC, 2007, paragraph 36, p.13), ignores the fact that properly designed welfare benefits do not create dependency.

<sup>22</sup> For a review of labour market indicators that could be used by monetary authorities for understanding inflationary pressures, see Cassino and Joyce (2003).

<sup>23</sup> The substitute for democracy, the Monetary Policy Committees found in several countries, may not be all that inferior. A literature is starting to emerge on the nature of the interactions of the members of such committees. See, for example, Österholm, 2006.

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<sup>24</sup> *pers. comm.* Dr Johan van der Heever, South African Reserve Bank, 26<sup>th</sup> November 2007.

<sup>25</sup> Go to [www.statcan.ca/cgi-bin/imdb/p2SV.pl?Function=getSurvey&SDDS=1601&lang=en&db=IMDB&dbg=f&adm=8&dis=2#b2](http://www.statcan.ca/cgi-bin/imdb/p2SV.pl?Function=getSurvey&SDDS=1601&lang=en&db=IMDB&dbg=f&adm=8&dis=2#b2)

<sup>26</sup> Fixed-date vacations can have a “major impact” on the (Canadian) LFS results. Galarneau, Maynard and Lee (2005, p.9) point out that construction worker vacations in Quebec were picked up in the 2003 but not in the 2000 LFSs, thus accounting for some of the apparent differences in the length of the work week.

<sup>27</sup> The origin of the estimates of overtime hours could not easily be tracked down. One possible source is the LFSs, which ask for total hours worked including overtime. By assuming a standard week of some duration, say, 40 hours, an estimate of overtime hours may be obtained.

<sup>28</sup> Upper and lower limits of the confidence intervals for total employment (about 13 million people) and official unemployment (about four million individuals) in September 2007 are respectively about 3.3 and six percent. See Statistical release P0210, 27 March, 2008, p.xxviii.

<sup>29</sup> When the apartheid regime finally got round to taking the problem of unemployment seriously (in 1978), it too, conducted a monthly current population survey. Despite attempts to refurbish the surveys in the early 1980s, its results were so clearly out of touch with reality that it was abandoned in about 1986.

<sup>30</sup> An indication of how hard it is to produce good statistics is provided by the fact that the CES is benchmarked each year! Some of the sectoral changes are quite large. See Eickman, 2007.

<sup>31</sup> Differences are also found between survey and administrative data. See, for example, the paper by Næsheim and Pedersen (2007) on this phenomenon in Norway.

<sup>32</sup> There are also significant differences in the UK between population census and LFS indicators. See Heap (2005).

<sup>33</sup> The response of the ONS to the recommendations in the review was to publish for comment, a set of intended changes to the surveys (ONS,

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2007a). Some of them are quite radical, e.g., changing the WFJ from a monthly to a quarterly survey. This was followed a little while later by an implementation programme for the proposed changes (ONS, 2007b). The contrast between the ONS's handling of this review, and the way in which Statistics South Africa has handled the re-engineering of the LFS, following the review of that survey, does not cast the latter institution in a very favourable light.

<sup>34</sup> It is interesting to note that the measure is merely 'reasonable', not robust, or outstanding, or anything more exalted. Given the problems in the surveys referred to above, such modesty is fitting.

<sup>35</sup> See QES questionnaire. The most recent consulted was that for March 2006 (on the Stats SA website). According to Mr Sagaren Pillay of Statistics South Africa (*pers. comm.*, 8<sup>th</sup> October 2007), the questionnaire design has not changed since then.

<sup>36</sup> In its composite leading indicator, the South African Reserve Bank makes use of "Job advertisements in the *Sunday Times* newspaper: Six-month smoothed growth rate" (Venter and Pretorius, 2004, p.68). Faberman (2005, p.2) is eloquent on the fact that the 'job openings' question in the JOLTS has removed dependence on similar indicators in the US, with their selection and measurement issues.

<sup>37</sup> The BLS considered disaggregating 'hires' into new hires, rehires and recalls, but did not do so because the added respondent burden was held to outweigh the benefits of collecting the extra information.

<sup>38</sup> One deploys the term 'duality' with more than a little reluctance, lest it lead to endorsement of hard-to-pin-down distinctions like the 'first economy' 'second economy' so beloved of the Presidency.

<sup>39</sup> There is something odd about the aggregate employment figures in the September 2006 LFS. For no obvious reason, they exceed by 60 000, the total of industry employment estimates drawn from the same source. This does not occur in any of the other September LFSs.

<sup>40</sup> End point selection is a problem, as ever, especially in the early days of the survey's life, when informal sector employment estimates danced merrily to no particular melody (the February 2001 results, for example, are completely out of line with all other estimates).



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<sup>41</sup> Informal agriculture employment estimates really have no place in the total employment series—all they do is cause confusion. The press release for the March 2007 LFS, Statistics South Africa, by taking informal agriculture into account, downplays the job creation record (see Media Statement, 26<sup>th</sup> September 2007). The reported fall in informal agricultural employment from 704 000 in March 2006 to 460 000 in March 2007 (it stood at 473 000 in September 2006), may be a sign that further research is required—it cannot sensibly be incorporated into an analysis of the performance of the economy, its undoubted importance to those who rely on its outputs notwithstanding.

<sup>42</sup> For a critical user response to the quality of the informal economy employment estimates see the article “Stats SA must plug holes in labour force survey” by Neva Makgetla in *Business Day* (online version), 10<sup>th</sup> October 2007.

<sup>43</sup> Migration, the third of the demographic forces, is susceptible to current economic forces, and also to political forces.

<sup>44</sup> Disaggregating aggregate participation rates, one discovers changes within and between groups, some of which can be in opposite directions, as has been the case in many countries where, for example, men’s participation rates have fallen while those for women have risen.

<sup>45</sup> For details of the changed estimates of population growth rates see Statistical Release P0302, 31 May 2005, Table 7, p.10, and P0302, 1 August 2006, Table 5, p.6. The changes, caused mainly by revised assessments of the impact of the AIDS epidemic, are substantial. Growth rates for the year 2004-2005 in the two publications respectively, are 0.92 and 1.17 percent.

<sup>46</sup> For a discussion of the concept of ‘decent work’, and of South Africa’s performance in this regard, see Chapter 11 of ILO (2004).

<sup>47</sup> In order to understand the impact on poverty of job creation, it is necessary to know who moves out of unemployment or economic inactivity into work. This poses formidable problems for modeling. For an example of how this may be tackled, see Filho and Horridge (2004, pp.6ff). The model they use is more complex (by several orders of magnitude) than the simple device I built for looking at the halving question. Even so, they must still make heroic assumptions.

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<sup>48</sup> The form that networks take is known to be crucial. Wahba and Zenou (2003) build and test models of various types. These suggest that network density is an important determinant of success in job search.

<sup>49</sup> If subsistence agricultural work is excluded, as is done in Table 1 above, employment grows from 10.745 million to 10.86 million, an increase of 115 000. Of these jobs, 35 000 were in the formal economy, 50 000 in the informal economy, with the remainder being ‘Unspecified or Other’. None of these changes are significant at the 95 percent level. The confidence interval for the estimate of formal economy employment in March 2003 (7.322 million) ranged from 7.142 to 7.574 million (SR P0210, 23 September 2003, p.vii).

<sup>50</sup> *pers comm.*, Ingrid Woolard, 19<sup>th</sup> April 2007.

<sup>51</sup> At present, users probably experience difficulty deciding which of the two surveys in each year, the March or the September, is ‘better’, whatever is understood by such a description.

<sup>52</sup> The ranking in Table 5 matches the distribution obtained by expressing the numbers of workers in the various income categories in Table 3.10 of the March 2007 LFS (P0210, 26 September 2007, p.25) as (row) percentages of the total number in that occupational category. Perhaps surprisingly, plant and machine operators and assemblers seem to be better paid, on average, than craft and related workers, who, in turn, appear to be better paid than sales workers.

<sup>53</sup> Among 4.3 million officially unemployed in March 2007, about 60 percent, or 2.6 million had never ‘worked’ before. For the age cohort 15-30 years of age this rises to 72 percent—1.97 out of 2.7 million. See P0210, 26 September 2007, Table 5.2, p.40.

<sup>54</sup> About 11.4 percent of African grade 12 candidates in former African schools obtain university endorsements, as opposed to 26.3 percent of Africans in other schools. The endorsement rate is highest among Indians (53.3 percent), followed by whites at 51.7 percent (van der Berg, 2004, p.31).

<sup>55</sup> Talk of improving the quality (amount) of information presented in the news releases raises the question of how many users still rely on (expensive?) paper copies of the survey results. Using Statistics South Africa’s Interactive data website facility, it is now possible to make

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detailed cross-tabs of unpublished LFS results, while those who seek to dig even more deeply, can use the data CDs which now appear promptly (if anything, researchers are faced with an almost overwhelming flow of information). While any suggestion that paper copies no longer be published must discriminate against those without access to the internet (and broadband), it might be possible to disseminate the main results, e.g., employment and unemployment figures through the media, in sufficient detail to satisfy the immediate needs of those without computer access. Translation into some of the country's other official languages could even increase the number to whom the information becomes available.

<sup>56</sup> There is an interesting terminological debate here which although it may sound a trifle pedantic, should, in the interests of rigour, be resolved. In the LFSs, Statistics South Africa refers to the non-searching unemployed as 'discouraged workseekers' (see, for example, P0210 27 March 2008, pp.xixff). As Prof. Posel points out, however, the two are not the same. It is possible to infer 'discouragement' from the reasons given to the question in the LFSs about why people have not looked for work (or tried to start a business). Typically, three of these reasons: 'No jobs available in the area'; 'Unable to find work requiring his/her skills', and 'Lost hope of finding any kind of work', are given by more than three-quarters of all the non-searching unemployed. In what follows, the term 'discouraged' will be used, but it should be borne in mind that the term 'non-searching unemployed' is the more precise way of describing people who want to work but have not taken action to find it.

<sup>57</sup> Up-to-the-minute information on transitions is required, so that we can check to see if it is the previously discouraged who have changed status (have made a transition) to actively seeking employment, rather than dropping out of the labour market altogether, their place in the job queue being taken, possibly by others who were previously not economically active, e.g., because they are new entrants (school-leavers, graduates etc) to the labour market.

<sup>58</sup> In such circumstances, the absorption rate (number of workers divided by working age population), could fall. The participation rate as measured by the expanded definition, could fall as well. Actual outcomes depend on relative changes in the numbers of searching and non-searching unemployed.