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Graduate unemployment in South Africa: A much exaggerated problem[1]

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ABSTRACT

Increasing reference in the media and public discussions to high and rising levels of graduate unemployment in the South African labour market has raised concern about the functionality of South Africa's higher education system and the employability of the graduates that it produces. While such references are generally premised on the findings of a handful of published research studies that have made reference to rising graduate unemployment, the results of those studies are subject to a number of criticisms, ranging from inadequate definitions of "graduates" to the use of incomplete, dated, or unrepresentative data. This paper reviews the existing evidence on graduate unemployment in South Africa and analyses levels of, and trends in, graduate unemployment in the country since 1995. To overcome the deficiencies of previous studies, "graduates" are explicitly defined as individuals with bachelor's degrees or equivalents and higher educational qualifications (honours, Masters, and doctorate degrees) and all of the available nationally representative labour force survey data for South Africa between 1995 and 2011 is exploited. In contrast to what appears to be a growing consensus regarding the extent of graduate unemployment in the country, the analysis conducted shows no evidence of a high level or a markedly upward trend in graduate (i.e. degreed) unemployment. Instead levels and rates of graduate unemployment are found to be quite low in an international context, revealing that there is little cause for concern about broad trends in graduate unemployment.

Keywords: graduate unemployment, higher education, graduate employability
JEL codes: I23, J01, J21

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1. Introduction

1.1 Background to the issue

There are a number of reasons for increasing reference in the media and public discussions to graduate unemployment. Firstly, a few published research studies have made reference to rising graduate unemployment, as will be discussed in this report. Secondly, also, the international financial crisis of 2008-9 followed by the more recent Euro-bloc crisis and the accompanying rising unemployment rates in many developed countries have created an increased awareness of unemployment generally, but particularly of the large impact of strained economic conditions in many countries on unemployment amongst young people, including young graduates. In addition, there is a perception that certain segments of graduates are really struggling to find jobs, particularly black students from historically disadvantaged (and often rural) universities, and students who have majored in Arts and the Humanities.

Against this background it is unsurprising that many people consider graduate unemployment in South Africa a major problem that deserves special attention. Moreover, the issue potentially has important policy implications, as it has a significant bearing on debates around immigration and job permits, affirmative action policies, the role of universities and the selection of appropriate courses. It has also been mentioned in recent debates and a National Treasury Report on the youth wage subsidy – though as will be discussed further, this has also suffered from confusion about the term ‘graduate’. South African discussions also resonate with international debates about how well studies prepare graduates so that their competencies match the requirements of the job market, and what curriculum reforms may be required to improve this match. (Teichler, 2007: 16)

The findings of this study are encouraging. This report will show that graduate unemployment in South Africa (where ‘graduates’ are considered to be those with at least a university degree) is quite low in an international context and that there is little cause for concern about broad trends in graduate unemployment, which has risen extremely modestly even during the current difficult global and domestic economic conditions. Despite a strong increase in the number of graduates in the labour force (narrowly defined) from around 456 000 in 1995 to 1 096 0000 in 2011, this was almost matched by the rise in graduate employment, from around 445 000 to 1 051 000. This led to a modest rise in narrowly defined unemployment, from around 11 500 to 45 000, in the same period, leaving the unemployment rate virtually unchanged at a level that is low by the standard of developed countries even during auspicious economic periods.

It will be shown that the published research on graduate unemployment appears to be more alarming than the situation warrants, for a number of reasons:

- Firstly, some studies use a very broad definition of the term ‘graduates’ to include all those persons who have *some* post-matric qualification, whether it be a degree, a diploma or a certificate. Such inflation of the term ‘graduate’ causes unwarranted alarm about the situation of those with university degrees. A National Treasury discussion paper report on the youth wage subsidy refers to high unemployment amongst ‘tertiary educated’ youth in the age group 20-24 (National Treasury 2011: 13), but only 19 out of the sample of 164 youths that fell into this age category in the Quarterly Labour Force Survey from which they drew their data were graduates; the others were holders of diplomas or post-school certificates. (Elsewhere in this report the term ‘diplomates’’ will be used to refer to this group.)
- Secondly, some estimates of graduate unemployment trends may exaggerate the extent of the rise they observed because they used only two data points to make comparisons, including the 1995 October Household Survey data as the starting point, which showed very low graduate unemployment.
- Thirdly, new data since the publication of these reports (none of which considered the period after 2005) have exhibited more favourable trends, despite the international economic crisis. What this earlier research had observed may simply have been a short run phenomenon rather than part of a long term upward trend in graduate unemployment rates.

1.2 A brief overview of earlier studies on graduate unemployment in South Africa

Despite the extensive literature on unemployment in South Africa since 1994, limited attention has been given to the nature, causes and extent of graduate unemployment and its potential implications in the context of broader labour market challenges. Since 2004, however, four prominent studies have been published on graduate unemployment which raised concerns that it may be an issue deserving of special attention. Much of what is known and has been written about graduate unemployment in the popular press has been premised on the findings of these studies, thus it is useful to summarise and critique them before evidence is presented as to why the situation and outlook may be less alarming than these studies would indicate.

1.2.1 The study by Bhorat (2004)

In the earliest of the four studies, Bhorat (2004) used data from the 1995 October Household Survey (OHS) and March 2002 Labour Force Survey (LFS) to analyse changes in labour force participation, employment and unemployment in the seven years following South Africa’s democratisation. Amidst rising overall unemployment rates, he found that the broad unemployment rate for tertiary-educated individuals had increased by 139% between 1995 and 2002 – by far the largest increase in unemployment for any of the education groups considered. Even more worrying, however, was the fact that the rise in tertiary unemployment rates appeared to have been greatest for individuals with degrees and post-

graduate qualifications, with white and black graduate broad unemployment rates rising by 141% and 280%, respectively, over the 7-year period (Bhorat, 2004:959).

Bhorat (2004) also drew attention to the fact that graduate unemployment rates in 2002 varied substantially by field of study, with individuals trained as teachers or other public sector workers and those with business, commerce and management qualifications being subject to significantly higher rates of unemployment than individuals from other fields of study. The aforementioned changes over the 1995-2002 period and the dimensions along which graduate unemployment rates were stratified in 2002 were argued to provide clear evidence of an emerging graduate unemployment problem in South Africa (Bhorat, 2004:961), though the results regarding field of study were considered puzzling.

1.2.2 The DPRU (2006) study

The DPRU (2006) research report – the most comprehensive of the four studies of graduate unemployment in South Africa since 2004 – followed a similar methodology to that of Bhorat (2004) by drawing inferences mainly from comparisons of the 1995 OHS and the 2002-2005 LFS data. Figures from either the March 2002 LFS, March 2003 LFS, September 2004 LFS, or September 2005 LFS were compared to the 1995 OHS figures. An important departure from the methodology used by Bhorat (2004) was that DPRU (2006:3) defined graduates as *all individuals with post-matriculation qualifications* and only in certain instances distinguished between non-degreed individuals (who comprised 82% of tertiary qualified individuals in 2004) and degree-holders.

The results from the descriptive analysis affirmed those by Bhorat (2004) and showed that the increase in broad unemployment rates for tertiary-educated individuals from 6.6% in 1995 to 9.7% in 2005 was the largest for all education groups, despite levels of tertiary unemployment remaining low in relative terms (DPRU 2006:8). The precipitous rise in tertiary unemployment rates was also shown to have been unequally distributed across age cohorts, with younger cohorts being the most adversely affected (DPRU, 2006: 11). The authors found that approximately 77% of tertiary-educated individuals who were unemployed in 2005 were between the ages of 15 and 34 (DPRU, 2006: 14).

The DPRU report also showed that graduate unemployment rates varied substantially across interactions between race group and field of study in 2005, suggesting that rising unemployment among young graduates could at least partly be ascribed to the poor quality (or the perceived poor quality in the eyes of employers) of many tertiary training institutions in conjunction with the poor performance of the majority of the previously-disadvantaged formal schooling system (DPRU, 2006:18-20). The report argued that the extent of heterogeneity in the quality of tertiary education institutions had eroded employer confidence in the productivity-signalling effect of tertiary qualifications, resulting in a shift in demand towards more experienced rather than more qualified employees (DPRU, 2006: 21). These issues were exacerbated by the fact that many of South Africa's recent young graduates appeared either to have received training in areas for which the existing labour demand in

2005 was low or to have completed courses which failed to instil sufficiently transferrable work-relevant skills (DPRU, 2006: 20-21).

1.2.3 The study by Pauw, Oosthuizen, and Van der Westhuizen (2008)

Like the DPRU report, Pauw, Oosthuizen and Van der Westhuizen (2008)[2] investigated the changes in tertiary unemployment rates between 1995 and 2005 by comparing the 1995 OHS and 2005 LFS data. While their findings regarding the rise in tertiary unemployment rates over the period in question concurred with those from the two studies discussed above, they took care to emphasise that the broad unemployment rate for *university graduates* (individuals with degrees or post-graduate qualifications) increased by only 13% between 1995 and 2005, a figure which was low when compared to the increases in unemployment rates for other education groups (Pauw, Oosthuizen and Van der Westhuizen, 2008:48).

Turning to graduate field of study, the authors interpreted the persistent inequality in unemployment rates across study fields as evidence that prospective students were either unaware of, or appeared to give too little consideration to, prevailing labour market conditions when choosing their field of study (Pauw, Oosthuizen and Van der Westhuizen, 2008:51). Therefore they argued that high and rising levels of tertiary unemployment in South Africa between 1995 and 2005 in spite of persistent skills shortages largely resulted from a divergence between the types of skills that individuals chose to acquire at the graduate level and the skills that employers demanded.

1.2.4 The study by Kraak (2010)

Kraak (2010) synthesised the existing literature on graduate unemployment in South Africa and placed many of the findings on graduate unemployment discussed above in a broader international context. Defining graduates as *all individuals with post-matriculation qualifications*, Kraak (2010:82-84) contended that the structural shift in the South African economy away from low-skill occupations and labour-intensive industries toward high-skill occupations and capital-intensive industries since 1994 coincided with a change in employers' preferences for more experienced, older employees rather than more qualified, younger employees. He asserted that these changes explained the significant rise in tertiary unemployment rates between 1995 and 2005, despite the existence of skills shortages. However, Kraak (2010:84) also emphasised that the broad unemployment rate for individuals with *degrees or post-graduate qualifications* in South Africa in 2005 was comparable to an overall graduate unemployment rate of 4.7% across Europe in the same year, thus the unemployment level was not high.

[2] An earlier version of this article also appeared as a DPRU Working Paper in 2006.

1.2.5 Why earlier studies are not relevant for understanding current graduate unemployment

In the light of the limited existing research on graduate unemployment in South Africa, the findings from the studies discussed above provide a useful context within which to further explore current graduate unemployment levels and movements. However, for informing current debates and policy, these studies suffer from three distinct shortcomings.

Firstly, the studies either explicitly defined 'graduates' to include individuals with post-matriculation diplomas and certificates or did so implicitly by failing to adequately distinguish between so-called 'degree-holding graduates' and 'non-degree-holding graduates' in their analyses. However, all the studies acknowledged that there were substantial differences both in the unemployment rates between degree-holders and non-degree-holders and in the trends in unemployment rates over the period studied for these distinct groups. In fact, it is apparent from all four studies that the rise in unemployment rates among individuals with tertiary qualifications that they found was driven primarily by the rise in unemployment rates for individuals with post-secondary diplomas or certificates but without degrees. Using such an overly broad definition of graduates when analysing graduate unemployment in South Africa potentially obscures the trends in unemployment rates for individuals with degrees and post-graduate qualifications, and in public debates this distinction was often overlooked. As Woolard, Kneebone & Lee (2003: 460) indicated,

> *Significantly, the unemployment rate among those with degrees was less than 5 per cent, in comparison with a rate of 46 per cent among those with Grade 11, and 32 per cent among those with Grade 12. Among diplomates the unemployment rate was 17 per cent, which is low relative to the national average, but still quite high. Thus, even some people with post-secondary qualifications have skills which are in oversupply.*

Secondly, all of the studies drew fairly strong conclusions about graduate unemployment trends using only two data points to make comparisons, usually between the 1995 OHS and one of the 2002-2005 Labour Force Surveys. Comparing graduate unemployment levels and rates between only two points in time, spaced 7 to 10 years apart, ignores intermediate movements in graduate unemployment between those two points and is also subject to major error if either of these data points happens to be an outlier. Moreover, as for all estimates based on sample surveys, these estimates are subject to possible measurements error, so it is common to consider the confidence intervals, which none of these studies considered. Also, one cannot simply deduce from the fact that measured graduate unemployment levels and/or rates were higher in 2005 than in 1995 that graduate unemployment was on a rising *trend*, only that it must have risen over some period between 1995 and 2005. In fact, a comparison of the broad graduate unemployment rates presented in Bhorat (2004) and DPRU (2006) suggests that the rise in graduate unemployment levels and rates that they found had occurred mainly between 1995 and 2002 and either moderated or even reversed between 2002 and 2005.

The third limitation of using these studies for informing current policy and debates relates to the importance of new data. None of the studies discussed above shed any light on the period beyond 2005. Thus even if their initial analysis had been correct, it would be imprudent to continue to use the results from these studies to inform current policy. Fortunately, the existence of data on graduate unemployment between 2006 and 2011 makes it possible to investigate directly what has occurred over the full period 1995 to 2011, as will be done in the next Section of this report, after a brief discussion of the relevance of the graduate unemployment issue for other debates.

1.3 Graduate unemployment and other (South African) debates

Graduate unemployment is linked to a large number of other South African debates, e.g. on the quality of school education and the content of school curricula, university access, university curricula, affirmative action policies, emigration, restrictions on immigration, the nature of South African economic growth, and constraints to such growth, to name but a few. Only a small number of these and other debates will be touched on in this sub-section, and some will be returned to elsewhere in this report.

It has long been recognised that the skills constraint potentially prevents the South African economy from growing faster and consequently creating more jobs (see in this regard two important World Bank surveys undertaken by Chandra et al. (2001a & 2001b)). Education and training remain of crucial importance in this regard, though other policies should also be supportive. Affirmative action policies have been held to create disincentives to the full utilisation of especially skills of young white graduates and thereby to encourage emigration. Though estimates of emigration are problematic, there are clear examples of areas of brain drain that have been detrimental to economic growth (e.g. outflows of engineers and accountants) or to the quality of service delivery (emigration of health professionals). It is not quite clear, however, to what extent affirmative action policies rather than, say, the attractiveness of foreign job offers and the push factor of crime have had the greater influence. In the light of the subsequent analysis that shows only moderate rates of unemployment of those graduates who have remained in South Africa, affirmative policies may have had a greater effect on the *nature* of employment available to white graduates than on the availability of jobs.

Another important and related debate is the question of restrictions on skilled immigration. Immigration authorities often offer the perceived over-supply of graduates as a reason for maintaining tight restrictions on skilled immigration. Even if the level of graduate unemployment had indeed been high, this aggregate over-supply of graduates could have co-existed with growth-constraining shortages of specific skills, thus even then the need for *specific* immigration may have remained. But as will be shown, graduate unemployment in South Africa is not high, thus there is a clear need for immigration to supplement human resource needs.

Graduate unemployment is also often linked to debate about the appropriate role of universities in society, something far from unique to South Africa. Teichler (2007) provides a comprehensive summary of the European experience of these debates, which have developed further than in South Africa, though the main strands are also part of South African debates. In this European debate, important questions relate to the quantity and nature of the higher education to be provided and how this is to articulate with employment growth; higher education's role in economic growth; and the growing awareness that not all higher education fills certain specific needs, but that openness, vagueness and flexibility are also desirable in the dynamic balance between demand and supply, "*to take care of the broad variety of occupations, newly emerging job roles and innovative tasks"* and the need to equip students with "*the abilities to handle indeterminate work tasks and graduates with abilities to cope with uncertain employment conditions*". (Teichler 2007)

These and other debates lie at the heart of the discussion about the role of graduates in the economy. As elsewhere, too, there are important questions raised about the quality and focus of different tertiary institutions and their role to prepare students for the labour market.[3] In the South African context, questions are often asked about the quality of many historically disadvantaged tertiary institutions, particularly rural ones, and this also feeds into debates about access to universities, quality of schools, and the role of race.

[3] In this regard, see again Teichler (2007) and also Núñez & Livanos (2010) for European evidence, and Coates and Edwards (2009) for Australian evidence.

2. New evidence on graduate unemployment trends

This section of the report analyses evidence from a large number of surveys in order to arrive at an informed picture of the nature of and trends in graduate unemployment. In particular, care is taken to ensure that the deficiencies of small sample sizes of graduates in the surveys do not lead to erroneous conclusions about trends and patterns. Also, using the whole series of data sets allows for a more informed analysis than using only a start point and an endpoint, so this is the approach used throughout. Attempts are made to address as far as possible issues raised in earlier studies about the nature and origins of graduate unemployment, but data do not always allow for such an analysis. Thus, for instance, it is possible to consider whether race may be associated with patterns of unemployment, but the labour market data do not contain information on the tertiary institutions that individuals studied at. Other factors that are also considered include age cohort (it is usually assumed that younger graduates are more at risk), field of study (the popular perception is that students in Arts/Humanities/Social Sciences find it more difficult to get jobs), length of unemployment (those longer out of jobs may become less employable), and the perception that high measured graduate unemployment may be the result of respondents exaggerating their qualifications.

2.1 Survey data

The availability of a long series of household surveys aimed at investigating the labour market allows a comparison of levels of unemployment over a considerable period. The October Household Surveys (OHSs), Labour Force Surveys (LFSs) and the Quarterly Labour Force Surveys (QLFSs) are in principle comparable, although minor changes in questionnaire design, sampling and definitions have had some effect on how easy it is to discern actual trends. In most of the subsequent analysis of these data, the household surveys used were first the OHSs (1995 to 1999), the September value of the twice-annual LFSs (2000 to 2007), and the October value of the quarterly QLFSs (2008-2011).

Before investigating the situation with regard to graduates, it is first instructive to look at employment conditions for the full labour force. Data from the 2007 Community Survey, the largest nationally representative South African survey available, offers a means of showing the full extent of the employment situation across the whole population of working age (15-65). The years of education are shown on the horizontal axis in Figure 1; 12 years is equivalent to matric, a certificate or diploma without a degree was considered to be equivalent to 13 years, a Bachelor's 15 years, an Honours degree or a Bachelor's degree plus a diploma 16 years, and a Master’s degree or more 17 years. As can be seen, the Labour Force Participation Rate rises strongly for those with matric or higher, and peaks amongst the most advanced graduates; so does the employment rate, here defined as the proportion of the full working-age population who are in employment. Finally, the red line in this figure, the

unemployment rate (as a proportion of those who work or wish to work, i.e. excluding those not desiring to be part of the labour force) is quite flat and even rises with more education up to grade 11, i.e. the year preceding matric; the rise is probably due to younger and more educated cohorts having entered the labour market at a less auspicious time. From matric and especially beyond matric, there is a strong decline in the unemployment rate, with graduates (with fifteen years of education) experiencing considerably less unemployment than non-graduates with post matric education. Thus, when the term 'graduate' is correctly used to reflect those who have *graduated from a university with a degree*, the unemployment rate is much lower than when all those who have more than matric are included in the term, as Kraak (2010) did.

Labour force participation rates (LFPR) have risen during the OHS period and showed a slight jump between the OHS series in 1999 and the start of the LFS in 2000. Reasons put forward for this rise in the LFPR include “feminisation of the labour force” (Casale & Posel 2002) and education policies that accelerated progression through the school system and that placed restrictions on over-age children in schools (Burger, Van der Berg & Von Fintel 2012). During the LFS years (2000-2007), the LFPR still appeared stable. Since then, it may have been edging down slightly. While *broad* unemployment numbers were again affected by definitional changes between LFS and QLFS, the underlying trend is probably slightly better captured in *narrow* unemployment. It appeared that the narrowly unemployed peaked at around 4.9 million in 2002; thereafter there was a gradual decline in unemployment numbers and a slightly larger decline in the narrow unemployment rate, until the world recession in 2008 and beyond again reversed the downward trend. Yet by 2011, broad unemployment (including those desiring a job but not actively searching for one) at 4.4 million had not yet quite risen to 2002 levels, and the narrow unemployment rate of just below 25.0% was still considerably lower than the 30.4% in 2003.

Given these broad trends for the whole labour market, what has been happening in terms of graduate LFPR and unemployment rates? Figure 2 and Figure 3 provide some indication that both of these are below their peak of 2001 (slightly before the peak in the overall unemployment rate that occurred in 2003). In 2001, broad graduate unemployment was measured at above 8% before falling back, while narrow unemployment peaked at 6.75% in the same year (Table 2). After this decline, it appears that the graduate unemployment rate has again been edging upwards since the international financial crisis of 2008, after having recovered well between 2001 and 2007, while the graduate LFPR appears to be quite stable if not declining. It needs to be noted, however, that one cannot draw too strong conclusions regarding graduate unemployment rates based on any single data point, as the small numbers of graduates in the sample reduces the accuracy of estimates; small sampling errors could have large effects. Thus, for instance, the 2006 jump in the broad unemployment rate amongst graduates is probably an aberration caused by sampling error.

Generally there is little difference between broad and narrow unemployment amongst graduates: Per definition, the difference largely arises from discouraged workseekers, i.e. people who desire to have work but who may not actively seek work because they have poor

prospects of finding employment. The small number of discouraged graduate workseekers is already an indication that graduates generally do not struggle to get jobs. The gap between narrow and broad unemployment amongst graduates has also narrowed substantially since the transition from the LFS to the QLFS because of changes in the way that discouraged workseekers are defined in the two surveys.[4] Figure 4 shows that LFPR amongst graduates is far above that for non-graduates, more than 30 percentage points higher for narrow unemployment. Also, unlike the case for non-graduates, one observes little difference in the narrow versus the broad LFPR rate for graduates. Graduates are less likely to have been discouraged from actively seeking work because of perceived poor prospects of finding it. Also, having invested more in human capital, graduates are less likely to remain outside the labour market, something which is found throughout the world.

According to Table 1 and Table 2, graduate employment now stands at above 1.05 million. The largest changes in this number in the period since 1995 seem to have been caused by transitions between survey series and volatility caused by sampling error, so it is difficult to discern underlying time trends. For instance, the erratic changes between 2006 and 2008 could have been the effect of strong growth in employment in 2007, and a subsequent decline as a result of the world recession, or of the change from the LFS to the QLFS series.

Trends in graduate unemployment in Figure 5 are even more difficult to ascribe to underlying events than for graduate employment, because of the even greater volatility of unemployment. The surveys capture only about 50 to 80 graduate unemployed respondents in each sample; small errors on this number could cause large swings in the estimated unemployment numbers and percentages amongst graduates once the sampling weights are applied. The unemployment level of just over 50 000 amongst graduates is somewhat higher than in 2007, indicating a recent weakening in the graduate labour market, but even the *number* of broadly unemployed is still considerably below levels of a decade ago, though narrow unemployment is closer to its earlier peak. Graduate unemployment rates have also been rising, though even the broad unemployment rate is still below 5%, far below the more than 8% of 2001.[5]

The relatively high correlation of 0.72 between the narrow unemployment rates for graduates and non-graduates implies that about half of the variation in graduate unemployment rates can be linked to the same trend underlying non-graduate unemployment. Behind these differences lie presumably factors such as the state of the economy, sectoral growth patterns, labour migration and, importantly, improved educational output from universities.

It is illuminating to also look at the evidence on unemployment for graduates and other tertiary educated individuals, referred to here as ‘diplomates”, though they include holders of

[4] See the Appendix for an exposition of the differences in LFS and QLFS definitions of labour force participation, employment, and unemployment.

[5] However, broad unemployment is defined more strictly in QLFS than in OHS and LFS, thus there may be comparability issues. Trend analysis over this period is more appropriately done using narrow unemployment, which has fallen less from its earlier peak than has broad unemployment.

both diplomas and certificates in addition to a matriculation certificate. Figure 6 shows that broad unemployment amongst diplomates has consistently been much higher than amongst degreed graduates, thus raising unemployment amongst all tertiary educated. As discussed earlier, most of the earlier studies on graduate unemployment included both those with degrees and what less confusingly is here referred to as diplomates, i.e. they focused on the middle one of the three lines in the figure. Also, these studies compared the situation of broad unemployment between 1995 and 2992 or in some cases 2005 (marks added to the figure identify these time points); this more clearly shows a strong upwards trend over the period they considered than is the case for the degreed graduates that this present study is concerned with.

Most of this document uses the narrow unemployment rate, which is more consistently defined across the successive series of surveys of Statistics South Africa than is the broad unemployment rate preferred by the other studies mentioned. In Figure 7 it is clear that for the narrow unemployment rate too, the choice of which magnitude to measure (degreed graduates, or all tertiary) and the choice of the year that one compares with the initial year, affect not only the trend one identifies, but also seemingly the magnitude of the change observed.

Like all statistics based on surveys, the possibility of measurement error exists. Figure 8 and Table 4 shows the narrow unemployment rate on an annual basis from 1995 to 2011, with 95% confidence intervals bands drawn in dotted lines above and below the estimates. Such lines indicate how confident one could be that the rates are statistically accurate, given the size and design of the sample on which the estimates are based. These confidence intervals are fairly large, also reflecting the fact that there are relatively few graduates in the sample. Thus the confidence intervals for 1995, lying between 1.51% and 3.51%, overlap with those of most other years, implying that one cannot say with more than 90% confidence graduate unemployment has been higher in most other years than in 1995, except for 2001 and 2002. The linear trend line over the full period shows that for the period as a whole there was a slight decline in narrow unemployment for graduates, but this trend is not statistically significant, i.e. it could well simply be a horizontal line.

Similar trends and conclusions apply if the broad rather than narrow unemployment rate is measured, though the broad rate shows more volatility, partly perhaps because of definitional changes between survey series.

2.2 More recent shorter term trends in graduate employment status

To investigate graduate unemployment trends more closely for the most recent period using not annual but quarterly data, it is useful to turn to the QLFS figures. Summary statistics indicate that the differences between the narrow and broad definitions of labour force participation and unemployment for graduates when compared to the differences in the overall working-age population are minor, particularly for the period 2008-2011 that is covered by the QLFS. Furthermore, the way in which narrow LFPR and unemployment is

defined/derived in the QLFS surveys is more closely aligned with the narrow definitions/derivations used in the 2000-2007 LFS surveys than the broad definition (Yu, 2009: 12-14). Consequently, only the narrow definition of labour force participation and unemployment are considered when using the QLFS data below.

Figure 9 shows the LFPR for graduates over this period, with 95% confidence bands. Throughout the range, the confidence bands are fairly wide. As the value for the final observation, at 90.52%, lies within the confidence interval for the first period, one cannot have much statistical confidence that any change had taken place over this period. Though the trend line shows a marginal downward slope it is, statistically speaking, not to be distinguished from a horizontal trend. Thus it appears as if the graduate LFPR has been remarkably stable, with annual changes largely simply reflecting sampling error.

A similar analysis is possible for the narrow graduate unemployment rate in Figure 10. In this case, it would appear from visual observation of the data that the general trend is one of rising graduate unemployment in this period, despite the outlier in the first quarter of the observation. But once again the confidence intervals are wide, indicating limited accuracy in estimating this statistic, due to the small number of graduates involved. While the slope coefficient is this time 0.061, indicating that graduate unemployment increases by 0.061% every quarter, the relatively large standard error indicates that this trend too is not statistically speaking different from a flat trend. Thus it appears that even for this period of high economic stress internationally, from 2008 to 2011, there is no hard evidence that the graduate unemployment rate (narrowly defined) has been rising.

2.3 Employment status by educational attainment

Educational attainment of the working-age population in 2011 is shown in Table 5. Those with more than matric constitute only 10.3% of the total, with matriculants another 24.6%. Almost two-thirds (63%) of these hold certificates or diplomas, while the rest are almost equally divided between those with only a Bachelor's degree (19%) and those with higher qualifications (18%). However, no distinction is drawn here between those with an Honours degree and those with a Bachelor's plus a diploma or certificate, which include large numbers of teachers.

Analysis of these qualifications from 2000 to the present shows some fluctuations in the proportion of the working-age population with each of these levels of post-school qualifications. This again points to the limitations of using sample-survey data for making short-term comparisons over time. Where there are only small annual changes in the situation on the ground from one year to the next, the survey data cannot discern trends with any degree of confidence. To estimate the underlying growth rates of these data from sample surveys, all the annual data were used in fitting a growth trend line. This means that possible outlier values in the first or last observation of a data series are not given undue weight.

Table 6 sets out the results obtained. It is no surprise that the annual growth rate of the number of graduates in the working age group was larger over this period than for any other education category, given the low base from which graduate numbers have been growing and the increased progression throughout the education system. Importantly, the growth rate of participants was somewhat faster, though, pointing to an upward trend in LFPR, while narrow unemployment numbers amongst graduates grew at about the same rate, implying a virtually unchanged graduate unemployment rate across the period as a whole, if the trend line rather than simply the start and end points are considered.

For those with diplomas, the situation was far worse than for graduates: The number of unemployed rose at a much faster rate than participants in the labour force and thus also the employed, leading to strongly rising unemployment. Thus if one were to follow some of the earlier studies and use a far more liberal definition of graduates as including all those with tertiary education of any sort, including diplomas and certificates, it could still be true that 'graduate unemployment' had been rising even over this full period. But for graduates as conventionally defined, there is not such evidence for the full 1995-2011 period. If the period is reduced to that starting in 2000 and ending in 2011, there is evidence of an improving trend in graduate unemployment, and for the period since the 2008 recession there is, as discussed earlier, little if any trend, with a possibility of a slight worsening of the graduate unemployment rate.

2.4 Graduate employment status by age cohort

It is often thought that new graduates are at a disadvantage and most likely to struggle when economic circumstances are difficult. For this reason an analysis was also conducted by age cohort, to observe whether younger cohorts of graduates have different patterns of labour force participation, employment and unemployment than their older counterparts. However, as can be seen from Table 8, the actual sample in the survey of graduates in the youngest cohort (20-29 years) ranged between around 190 to 300 respondents, so it is not surprising to see quite a lot of volatility in LFPRs for the various age cohorts. The large standard errors for the youngest age cohort's LFPRs in the table confirm this. Nevertheless, as can be seen from Figure 11 and Table 7, there are consistently lower LFPRs amongst the two youngest of the four cohorts identified across the various surveys. For the youngest cohort, aged 20-29, this is quite understandable: One is likely to have a greater proportion still involved in studies, or having gap years, before entering the labour market. Amongst this and the second youngest cohort, aged 30-39, it is likely that some non-participation may have to do with child-bearing and raising.

Figure 13 and Table 7 show that narrow unemployment rates historically have been very low for graduates aged 30 to 39, only rising above 5% briefly in 2001 and 2002, and again in 2010. For the youngest age cohort shown, however, the narrow unemployment rate has historically been much higher, approaching 10% on average over the full period. Judging by data for this youngest age cohort it appears that there was sharply rising graduate unemployment even between 2008 and 2011 (See Figure 14 and Table 10), but once one

considers the two youngest age cohorts together it is less clear that unemployment amongst young graduates has been rising above its level of a decade ago. Compared to unemployment amongst non-graduates, however, graduate unemployment levels even in the youngest cohort are not all that large.

2.5 Graduate employment status by race

Although whites still constitute the largest group amongst graduates, black graduates are steadily increasing their share and would soon become the largest group, given the racial composition of new graduates. The LFPR amongst graduates is highest among blacks at around 95% (Figure 15 and Table 9), perhaps reflecting the fact that they often have less financial resources to fall back on which would otherwise allow them to first consider other alternatives ('break years', etc.) to labour force participation.

Black graduates also have the highest unemployment rates (see Figure 16, Table 10 and Table 11). Although these have been rising somewhat, there was a marked decline in 2011, while the narrow unemployment rate of around 6.67% is much below its peak of about 14% in 2000. The differences between the broad and narrow rate have historically been larger for the black population, due to more discouraged workseekers amongst this group, even amongst graduates. It is noteworthy, however, that the racial gap in terms of graduate unemployment has been narrowing: Blacks now experience far less graduate unemployment than a decade ago, despite the worse world economic outlook, while white graduate unemployment has shown no spike either.

From Figure 17 it is apparent that graduate unemployment within each of these two groups is to some extent cyclically linked to aggregate unemployment. Importantly, though, it appears as if there has been a more muted response to worsening economic conditions in graduate unemployment than aggregate unemployment in the most recent period.

When one analyses growth rates of different employment statuses for graduates by race, as is done in Table 15, it is no surprise that the growth rates of the graduate working age population are much lower for the white population at 3.27% than for the other groups. The growth rate of 7.13% for the black population is especially encouraging. Employed black graduates also grew even faster over this period at 8.14% per annum, so that there was somewhat slower growth of the number of unemployed black graduates at 6.76% per annum. This implies that for this population group too, taken over the period as a whole, the unemployment rate has been declining. In fact, for the period from 2000, the number of black unemployed has been *declining* at a rate of 1.87% per year, reflecting an improved performance in this period, but this may partly simply reflect the higher levels of black graduate unemployment observed in the first few years of the decade.

Figure 18 and Table 14 show the number of students graduating by race for 2005 and for 2010. If one only considers first degrees (Bachelor's degrees), as in the figure, the black African share of this group has risen to 51% in 2010 compared to the 43% in 2005.

Importantly, also, the number of new black graduates per year (i.e. not including second degrees) has increased by more than 10 000 or almost 50% in this short time span. Despite this rapid rise in the number of new graduates and the overall increase in graduates in the labour force, graduate unemployment is low and not rising. The fact that most of the new graduates are black indicates a high demand for such graduates in the labour market.

2.6 Graduate Employment by Occupation and Industry

An analysis of graduate employment by occupation and industry shows little that is surprising, and reveals no real discernible trends. About 90% of all employed graduates are in professional, technical, or managerial professions, with their proportions of the total being 34%, 29% and 25% in 2011; and a similarly high proportion are in the four sectors social/ community services (50%), business/financial/insurance services (25%), retail/wholesale trade (7%), and manufacturing (8%). This is similar to international patterns.

2.7 Graduate self-employment and sector of employment

Graduate self-employment encompasses both entrepreneurial activity (own businesses) and professional and other services, such as doctors, lawyers or accountants. Figure 19 and Table 15 show consistently around 15% of graduates to be self-employed. In contrast to this relatively stable or even rising trend, the proportion of graduates in public sector employment has been exhibiting a consistent decline, from around 50% in 1995 to 34% in 2011, as the following figure and table show, even though actual number of graduates employed in the public sector increased substantially over this period, from around 224 000 to around 357 000.

2.8 Graduate employment status by field of study

It is often considered that inappropriate course selection may contribute to lower employability among many South African graduates. In popular debates, this is often related to studies in the humanities and social sciences (‘Arts’). It is often argued that many black students are particularly affected by this, as poor quality of teaching of mathematics and science in many schools limits their options at university. Arguments regarding the quality of different universities and the appropriateness of their curricula also enter such debates. This is not a debate unique to South Africa, as the quotation below regarding the situation in Europe illustrates:

> *“… Schomburg and Teichler (2006) provide a thorough comparative analysis examining the employment situation of over 40,000 graduates across Europe through a self-conducted survey. Their analysis does not focus only on unemployment, but on a rather broad set of issues related to employment, such as job satisfaction and occupational destination of graduates. Schomburg and Teichler (2006) observe intense diversity on competences, mainly fostered by differences in the higher education system of each country. For instance, some countries place their emphasis on a broad basis of knowledge, while others focus on direct preparation for*

> *professional life. Thus, the transition to the labour market is rapid in some countries (e.g., United Kingdom, Norway), while the searching period is longer in others (e.g., Spain, Italy).”* (Núñez & Livanos 2010: 476)

In South Africa there does not appear to be very hard evidence that field of study has had a major effect on graduate unemployment. This is illustrated by the data in Table 1, which shows for 2000 and 2007 the employment status by field of study of working-age graduates.[6] The largest number of unemployed graduates in 2007 had a degree in Commerce (some 22 000), followed at a great distance by Social Studies, Engineering and Education, all three fields with similar numbers of unemployed graduates. The unemployment rate, according to this data, is also highest amongst Commerce graduates. Even though the results from both the March and September LFS surveys in a year were pooled, the data are again subject to limitations due to small samples of graduates within particular fields of study, so not too much can be read into this surprising information.

A survey by Moleke (2006) found that 60% of a group of 2 672 university graduates who had graduated between 1990 and 1998 had obtained work immediately, and another 28% did so within six months, leaving only 12% who took more than 6 months to find a job. There did not appear to be clear pointers to certain fields of study providing better job prospects: Arts and Humanities graduates were less likely to find work immediately than in most other fields, but were more likely to do so within six months than commerce graduates within that sample. Factors associated with weaker immediate job prospects appeared to be race (black people were at a disadvantage), gender (women were worse off), and university (formerly black universities were worse off). Interestingly, she also found that 60% of black graduates obtained their first job in the public sector.

Perhaps one reason for limited unemployment of graduates in the humanities is that many first degrees in these fields can become the launching pad for jobs in public sector administration and (sometimes with additional studies to obtain a diploma) in teaching. There is a large shortage of well-qualified teachers, particularly in rural areas, and there is evidence that many under-qualified teachers are appointed in some provinces in rural schools, so qualified teachers willing to work in rural areas would usually find a job.

Comparing the graduate unemployment rate to estimates of the number of vacancies for skilled people of about 4% shows that there is not much of an aggregate over-supply or insufficient demand issue regarding graduates. Rather, if anything, there is a matching issue, which is often tangled with issues of information, job search and frictional unemployment. As Altman (2006: 11) puts it,

[6] This time period is used to have as consistent definitions as possible within the LFS series.

"…information is not perfect and people are not perfectly matched to opportunities, so some mismatch is always likely. Graduate unemployment is frustrating to those experiencing it, and a great loss to the economy. It should be addressed easily through matching and reskilling programmes."

2.9 Time since last worked[7]

Figure 21 shows the time that has elapsed amongst unemployed persons since they had last worked. The duration of average unemployment spells rises in inverse measure with the level of education. Unfortunately this measure is only indicative; it includes people who may for long have been out of the labour force (e.g. to study) and have only recently returned to becoming job seekers. Thus the disaggregation of this information for graduates by age cohort shown in Figure 22 cannot be interpreted too finely; most of those unemployed graduates who indicated that they have not worked for a long time may not have been looking for a job for such a long time; they may simply be women returning to the labour market after a period of child rearing, particularly in the age range 30-39.

Kraak (2010: 81) asserts that one of the primary reasons for growth in graduate unemployment in South Africa is the "*collapse of structured pathways from education and training into work in key areas of employment*". Some evidence in support of this supposition is found in the data as illustrated in Figure 23 below. It indicates that a considerable proportion of unemployed persons have never worked before. This proportion fluctuates much amongst graduates, but is on average not all that different from the approximately 40% for the population as a whole. For the age cohort 20-29 this proportion stood at almost 70% on average amongst graduates for the period 2008-2011, 12 percentage points above the rate for the full population in this cohort, and amongst graduates in the cohort 30-39 this is also above 30%. Clearly, many graduates enter the labour market late, and many who do enter the labour market first experience a period out of employment before finding a job. Unfortunately the period of active job search is not recorded in the surveys.

2.10 Graduate unemployment by country of birth

Working-age individuals born outside of South Africa have far higher LFPRs and indeed far lower unemployment rates than those born in South Africa (see Figure 25 and Table 18). The difference may lie in the strongly developed social grant system which perhaps makes labour market participation less attractive to many South Africans.

These data offer little support to the argument that foreign migrants reduce job opportunities for South African graduates. If indeed this argument could be applied regarding foreign competition for jobs, it would be more the case for foreign migrants with lower levels of education; at such levels South African unemployment rates are much higher than for

[7] In the 2008QLFSQ1 – 2011QLFSQ4 survey questionnaires, respondents who indicated that they were not currently working, but had at some time in the past worked, were asked how long it had been since they last worked (Questions 3.6 and 3.16). Similarly, respondents who indicated that they were not currently working and had never been employed in the past, were asked how long they had been without work.

graduates. Amongst the latter, though, the differences in unemployment levels between those individuals of working age born inside and those born outside the country are negligible. Moreover, the approximately 109 000 foreign born graduates is relatively small in the context of the almost one million South African born graduates recorded in this 2007 survey.

A stronger argument can be made that skills, whether domestic or imported, are essential to improve the functioning of the economy, and that the ability of the South African education system to provide the necessary skills is limited, while the demands of the economy for such skills are great.

2.11 Graduate Labour Market Premium

One way of determining the scarcity value of graduates in the labour market is to estimate how the employment probability of an individual who has graduated compares to one who only has a matric, once all other factors that may be relevant (e.g. age, urban-rural location, gender and race) have been taken into consideration. A set of probit models to this effect were run for each of the survey years, and the probability of employment of graduates was estimated for each year. This is shown in Figure 26, with confidence bands. Here it can be seen that graduates have been between 20% and 25% more likely to get a job than matriculants, and that this ratio is rising significantly over time, by about 0.29% per year. This implies that the premium on having a degree is rising rather than declining, contrary to what would have been expected if graduate unemployment was becoming a growing problem.

2.12 Degree inflation?

In 2010, just over 61 000 Bachelor's degrees were awarded by South African universities. Of these, 8 777 were by the University of South Africa, many of which would have been for non-South Africans. But even the remainder is much higher than the average of 37 574 graduates aged 30 years old in the QLFS surveys. From these data, it does not appear as if there is any inflation of the number of graduates in the QLFS, and the contrary may even be true, i.e. that there is an under-recording of graduates. This does not necessarily mean that there is no over-reporting of qualifications for employment purposes, but on the available evidence it does not appear as if part of the graduate unemployment that is observed is simply the results of degree inflation occurring in the surveys.

3. Summary and Conclusions

The analysis conducted above has shown no evidence of a high level or a markedly upward trend in graduate (i.e. degreed) unemployment. Levels of unemployment are low even by the standards of prosperous economic times in the countries of Western Europe. One would have expected current economic conditions in South Africa and the world to have had a dampening effect on graduate employment through a sluggish demand for labour, an increase in domestic supply of graduates due to diminished outflows to developed countries, and even some return flows because of inauspicious economic circumstances in destination countries. Yet graduate unemployment remained at very low levels. The substantial increase in graduates in the labour force of around 640 000 (narrowly defined) over the 16 years from 1995 to 2011 was virtually matched by the rise in graduate employment of 610 000. Thus graduate unemployment numbers rose to reach only 45 000 in 2011, still a small number, despite the global economic situation.

Thus the studies summarised earlier that had indicated that graduate unemployment was a problem – all of them based on data that did not extend beyond 2005 – are no longer accurate for the current situation. There are three reasons why these studies no longer offer an appropriate view of the reality with regard to trends in graduate unemployment:

- Firstly, data beyond 2005 showed no strong trend towards worsening graduate unemployment, despite the economic weakening of the last few years;
- Secondly, the 'trends' identified by these studies may not have been accurate reflections of the situation for the period these studies investigated, because they were overly dependent on observations based only on the start point (in all cases 1995) and an end point (2002 or 2005), which may have been outliers. Moreover, none of these studies used all available data, and none of them tested whether the observed 'trends' were really statistically significant (small sample sizes raise doubts about the accuracy of any individual data points).
- Thirdly and finally, most of these studies at least to some extent conflated the situation and trends regarding *graduates with degrees* with those of persons without such degrees but with other tertiary qualifications only, i.e. diplomas and certificates. While Kraak's (2010) finding may still stand for this latter group, that there is a poor articulation (unclear pathways) between tertiary training and the labour market, there is no strong evidence that this also applies to graduates with degrees, as his article acknowledged.

Thus the main conclusion of this study is that *there is no graduate unemployment crisis*. This does not mean that there need be no concern about the quality and relevance of university studies, whether for a degree or another qualification, which should receive continual attention. Nor does it settle all debates about labour market and other policy in which graduate unemployment featured. There are important remaining issues. Yet a scarcity rather than a surfeit of graduates requires re-thinking some policy positions. In particular, it means that greater attention should again be paid to the argument that South African economic

growth is held back by a lack of skills, and in particular policies that restrict importation of scarce skills. If the graduate labour force is not in over-supply, as this report has indicated, serious consideration has to be given to dealing with skills bottlenecks. Training domestic human resources remains essential, but cannot deal with current skills shortages. These require earlier intervention, by making possible more inflows of skills, whether it be doctors or nurses, teachers and lecturers, engineers and technicians – skills which would help the economy get closer to its growth capacity, to the benefit of all.

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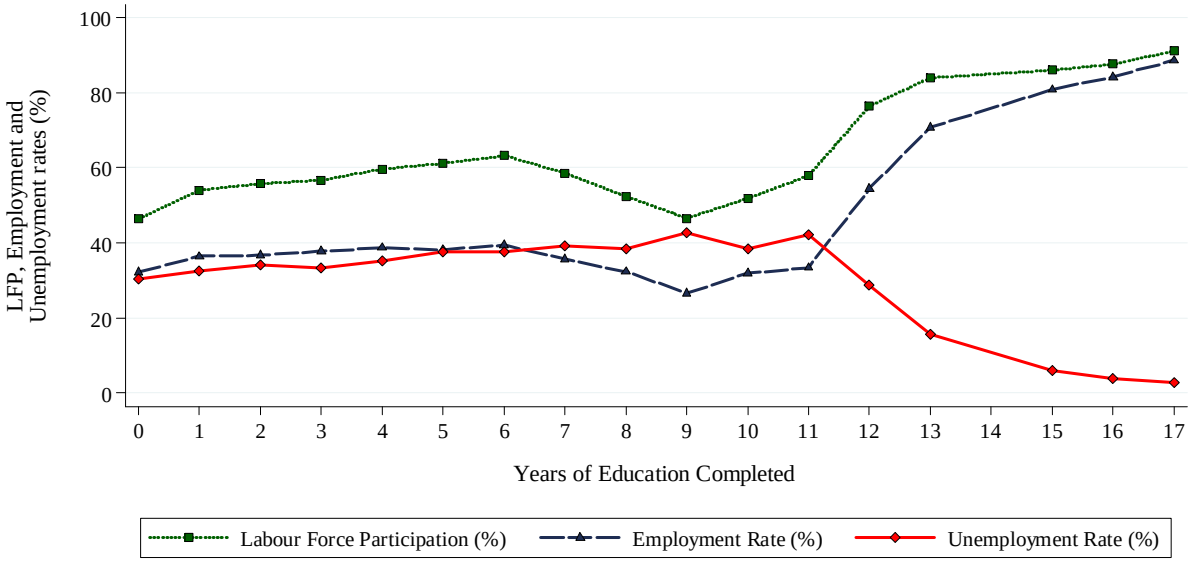
Figure 1 – *Labour force participation, employment and unemployment rates by years of education (2007)*



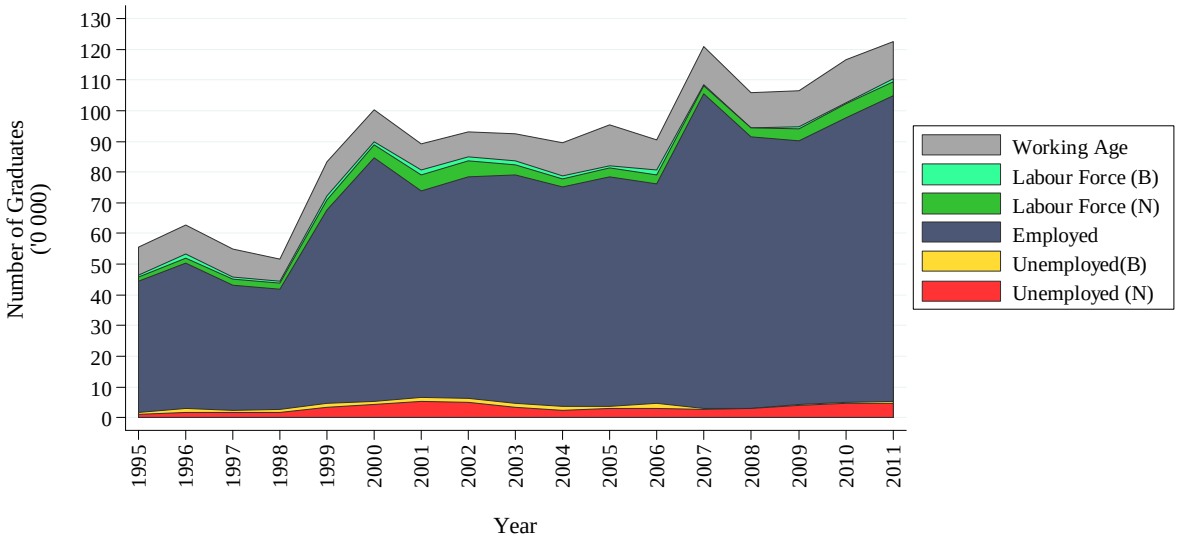
Source: Own calculations, 2007 Community Survey. Notes: Estimates are weighted and are calculated only for the population of working-age (15 – 65 year-olds).

Table 1 - *Labour force participation, employment and unemployment by years of educational attainment (2007)*

	Years of education	Broad Labour Force		Employment		Broad Unemployment	
		N	*%*	*N*	*%*	*N*	*%*
2007 Community Survey	0	898 939	*46.40*	624 851	*32.25*	274 088	*30.49*
	1	114 377	*54.05*	77 046	*36.41*	37 331	*32.64*
	2	198 973	*55.79*	131 042	*36.74*	67 931	*34.14*
	3	334 031	*56.69*	222 629	*37.79*	111 402	*33.35*
	4	474 173	*59.68*	307 544	*38.71*	166 629	*35.14*
	5	534 927	*61.19*	333 682	*38.17*	201 245	*37.62*
	6	720 790	*63.24*	449 514	*39.44*	271 276	*37.64*
	7	1 045 959	*58.60*	636 546	*35.66*	409 413	*39.14*
	8	1 248 309	*52.43*	769 899	*32.34*	478 410	*38.32*
	9	1 271 301	*46.54*	727 289	*26.63*	544 012	*42.79*
	10	1 764 122	*51.86*	1 085 617	*31.92*	678 505	*38.46*
	11	2 587 589	*57.93*	1 494 619	*33.46*	1 092 970	*42.24*
	12	4 817 125	*76.47*	3 430 510	*54.46*	1 386 615	*28.79*
	13	970 144	*83.97*	818 178	*70.81*	151 966	*15.66*
	15	559 129	*86.04*	525 352	*80.84*	33 777	*6.04*
	16	332 909	*87.64*	319 983	*84.24*	12 926	*3.88*
	17	156 752	*91.13*	152 497	*88.66*	4 255	*2.71*

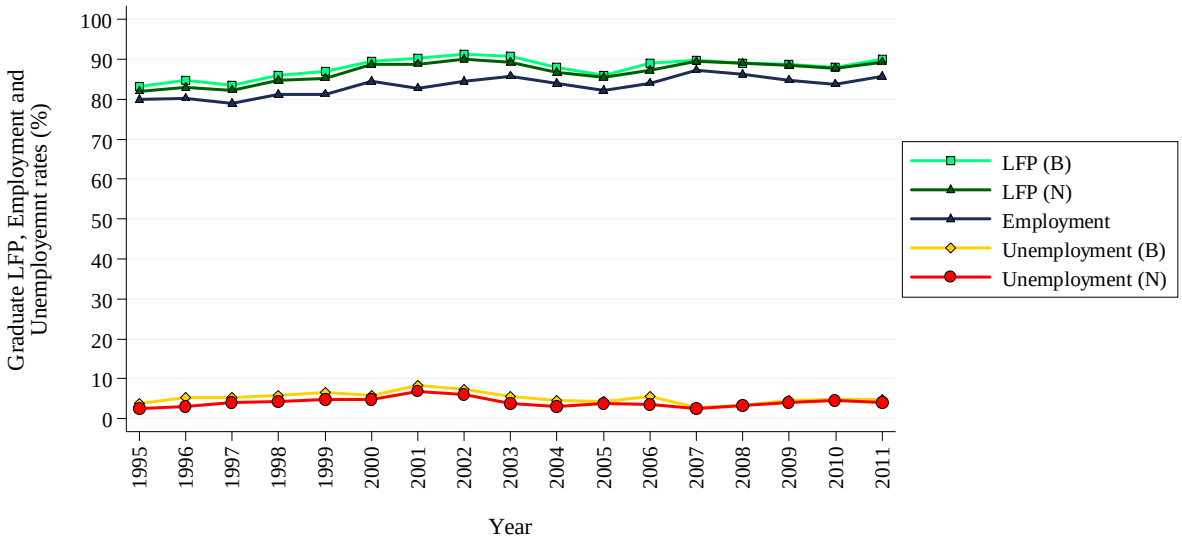
Source: Own calculations, 2007 Community Survey. **Notes:** Estimates are weighted and are calculated only for the population of working-age (15 – 65 year-olds).

Figure 2 – *Graduate labour force participation, employment and unemployment numbers (1995 – 2011)*



Source: Own calculations, OHS 1995 – 1999, September LFS 2000 – 2007, QLFS2008Q3 – QLFS2011Q3. Notes: Estimates are weighted and are calculated only for the graduates in the population of working age (15 – 65 year-olds).

Figure 3 – *Graduate labour force participation, employment and unemployment rates (1995 – 2011)*



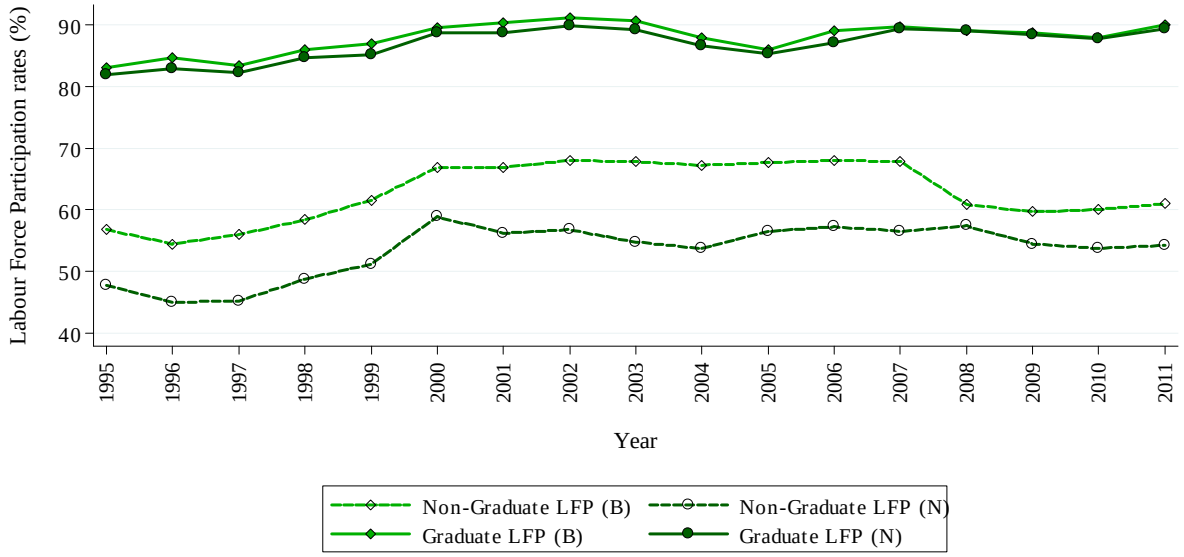
Source: Own calculations, OHS 1995 – 1999, September LFS 2000 – 2007, QLFS2008Q3 – QLFS2011Q3. Notes: Estimates are weighted and are calculated only for the graduates in the population of working age (15 – 65 year-olds).

Table 2 – *Graduate labour force participation, employment and unemployment numbers and rates (1995 - 2011)*

	Year	Working-Age Graduates	Broad Graduate Labour Force		Narrow Graduate Labour Force		Graduate Employment		Broad Graduate Unemployment		Narrow Graduate Unemployment	
		N	N	%	N	%	N	%	N	%	N	%
OHS	1995	556 811	462 852	83.13	456 321	81.95	444 862	79.89	17 990	3.89	11 459	2.51
	1996	628 665	533 044	84.79	520 909	82.86	504 372	80.23	28 672	5.38	16 537	3.17
	1997	548 870	458 132	83.47	451 426	82.25	433 276	78.94	24 856	5.43	18 150	4.02
	1998	517 510	445 293	86.05	438 241	84.68	419 800	81.12	25 493	5.72	18 441	4.21
	1999	832 174	723 515	86.94	709 390	85.25	675 932	81.22	47 583	6.58	33 458	4.72
September LFS	2000	1 003 825	899 182	89.60	890 381	88.72	847 647	84.46	51 535	5.73	42 734	4.80
	2001	892 406	806 157	90.34	791 987	88.75	738 526	82.76	67 631	8.39	53 461	6.75
	2002	931 064	848 879	91.17	836 767	89.87	785 616	84.38	63 263	7.45	51 151	6.11
	2003	923 674	838 270	90.75	824 228	89.23	792 212	85.77	46 058	5.49	32 016	3.88
	2004	895 883	787 778	87.93	776 868	86.72	752 183	83.96	35 595	4.52	24 685	3.18
	2005	952 921	819 064	85.95	813 446	85.36	782 937	82.16	36 127	4.41	30 509	3.75
	2006	906 199	807 059	89.06	790 254	87.21	761 088	83.99	45 971	5.70	29 166	3.69
	2007	1 208 691	1 085 050	89.77	1 081 583	89.48	1 054 558	87.25	30 492	2.81	27 025	2.50
QLFS Q3	2008	1 060 174	944 543	89.09	943 758	89.02	913 621	86.18	30 922	3.27	30 137	3.19
	2009	1 065 266	946 363	88.84	941 694	88.40	902 559	84.73	43 804	4.63	39 135	4.16
	2010	1 165 602	1 025 584	87.99	1 022 746	87.74	976 916	83.81	48 668	4.75	45 830	4.48
	2011	1 226 774	1 104 589	90.04	1 096 084	89.35	1 050 661	85.64	53 928	4.88	45 423	4.14

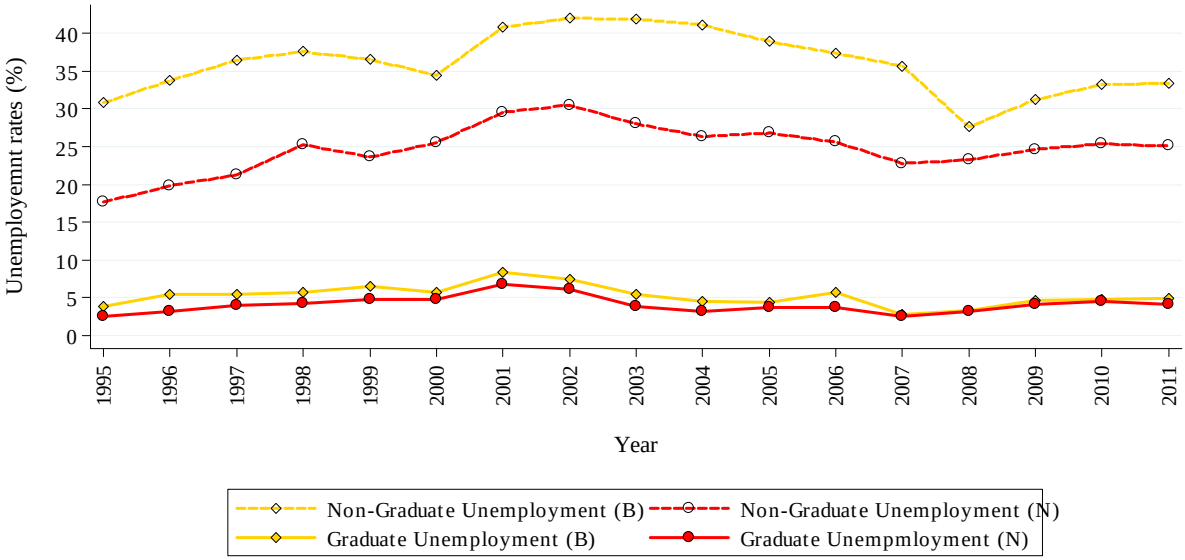
Source: Own calculations, OHS 1995 – 1999, September LFS 2000 – 2007, QLFS2008Q3 – QLFS2011Q3. **Notes:** Estimates are weighted and are calculated only for the graduates in the population of working age (15 – 65 year-olds).

Figure 4 –*Labour force participation rates for graduates and non-graduates (1995 – 2011)*



Source: Own calculations, OHS 1995 – 1999, September LFS 2000 – 2007, QLFS2008Q3 – QLFS2011Q3. **Notes:** Estimates are weighted and are calculated only for individuals in the population of working age (15 – 65 year-olds).

Figure 5 – *Unemployment rates for graduates and non-graduates (1995 – 2011)*



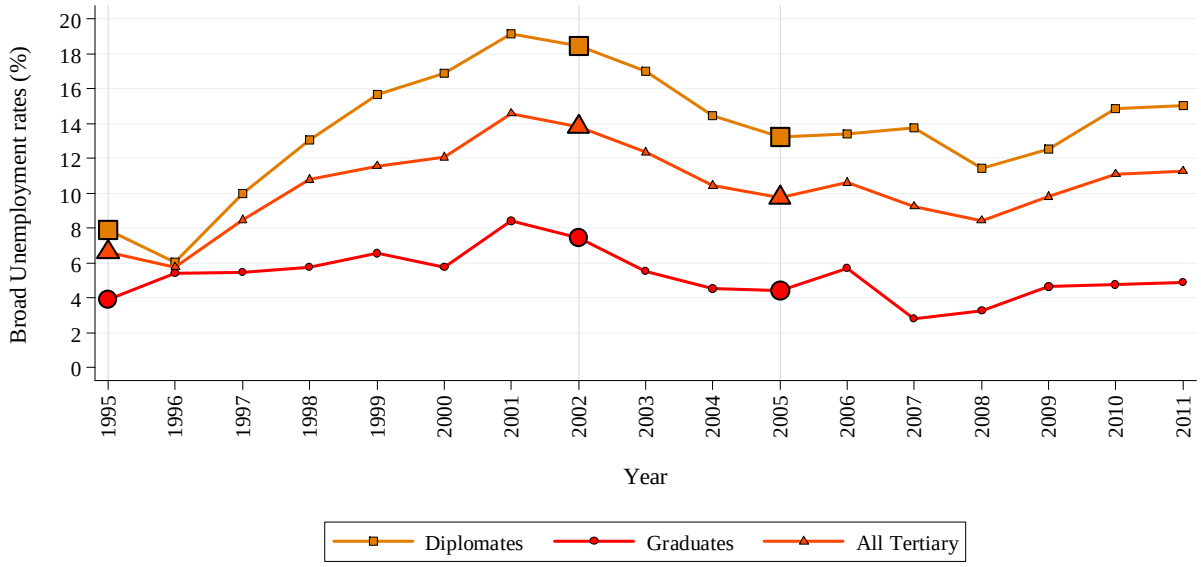
Source: Own calculations, OHS 1995 – 1999, September LFS 2000 – 2007, QLFS2008Q3 – QLFS2011Q3. **Notes:** Estimates are weighted and are calculated only for individuals in the population of working age (15 – 65 year-olds).

Table 3 – *Unemployment numbers and rates for graduates and non-graduates (1995 - 2011)*

	Year	Non-Graduates				Graduates			
		Broad Unemployment		Narrow Unemployment		Broad Unemployment		Narrow Unemployment	
		N	*%*	N	*%*	N	*%*	N	*%*
OHS	1995	4 189 151	*30.79*	2 016 539	*17.63*	17 990	*3.89*	17 990	*2.51*
	1996	4 518 591	*33.73*	2 194 893	*19.83*	28 672	*5.38*	28 672	*3.17*
	1997	5 190 541	*36.45*	2 444 323	*21.26*	24 856	*5.43*	24 856	*4.02*
	1998	5 614 765	*37.56*	3 154 405	*25.26*	25 493	*5.72*	25 493	*4.21*
	1999	5 819 201	*36.54*	3 125 954	*23.62*	47 583	*6.58*	47 583	*4.72*
September LFS	2000	6 348 748	*34.44*	4 139 895	*25.51*	51 535	*5.73*	51 535	*4.80*
	2001	7 600 774	*40.80*	4 626 345	*29.55*	67 631	*8.39*	67 631	*6.75*
	2002	8 080 078	*42.00*	4 900 817	*30.51*	63 263	*7.45*	63 263	*6.11*
	2003	8 164 426	*41.86*	4 411 293	*28.01*	46 058	*5.49*	46 058	*3.88*
	2004	8 032 326	*41.13*	4 110 938	*26.34*	35 595	*4.52*	35 595	*3.18*
	2005	7 765 014	*38.91*	4 464 248	*26.80*	36 127	*4.41*	36 127	*3.75*
	2006	7 580 189	*37.36*	4 375 314	*25.61*	45 971	*5.70*	45 971	*3.69*
	2007	7 316 251	*35.67*	3 891 833	*22.78*	30 492	*2.81*	30 492	*2.50*
QLFS Q3	2008	5 154 435	*27.61*	4 091 823	*23.24*	30 922	*3.27*	30 922	*3.19*
	2009	5 777 592	*31.22*	4 160 755	*24.64*	43 804	*4.63*	43 804	*4.16*
	2010	6 378 843	*33.23*	4 358 966	*25.38*	48 668	*4.75*	48 668	*4.48*
	2011	6 596 110	*33.37*	4 405 436	*25.06*	53 928	*4.88*	53 928	*4.14*

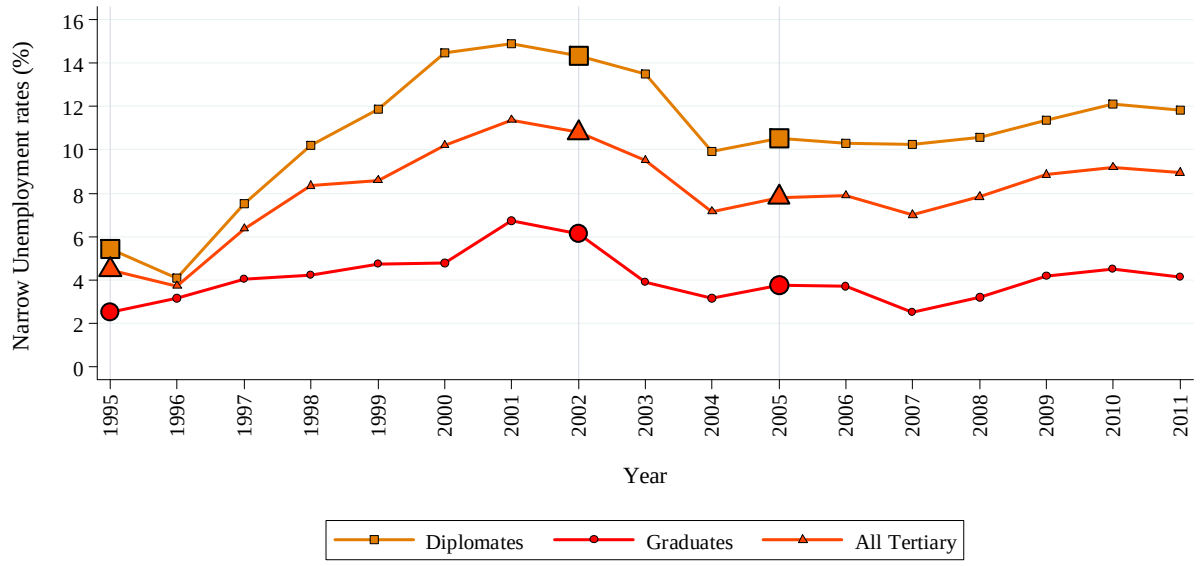
Source: Own calculations, OHS 1995 – 1999, September LFS 2000 – 2007, QLFS2008Q3 – QLFS2011Q3. **Notes:** Estimates are weighted and are calculated only for the population of working age (15 – 65 year-olds).

Figure 6 – *Broad unemployment rates for 'diplomates', graduates and all tertiary (1995 – 2011)*



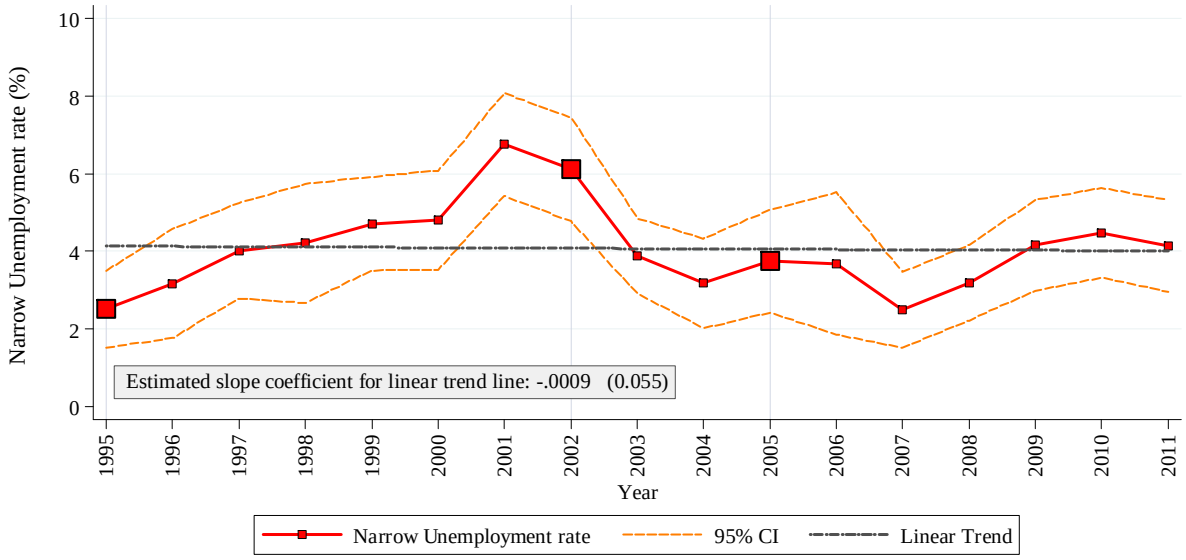
Source: Own calculations, OHS 1995 – 1999, September LFS 2000 – 2007, QLFS2008Q3 – QLFS2011Q3. **Notes:** Estimates are weighted and are calculated only for individuals in the population of working age (15 – 65 year-olds). *'Diplomates'* include all individuals with post-matriculation certificates or diplomas; graduates include individuals with bachelor's degrees or higher, and *'All Tertiary'* include all individuals with tertiary education qualifications.

Figure 7 – *Narrow unemployment rates for 'diplomates', graduates and all tertiary (1995 – 2011)*



Source: Own calculations, OHS 1995 – 1999, September LFS 2000 – 2007, QLFS2008Q3 – QLFS2011Q3. **Notes:** Estimates are weighted and are calculated only for individuals in the population of working age (15 – 65 year-olds). *'Diplomates'* include all individuals with post-matriculation certificates or diplomas; graduates include individuals with bachelor's degrees or higher, and *'All Tertiary'* include all individuals with tertiary education qualifications.

Figure 8 – *Graduate narrow unemployment rate (1995 – 2011)*



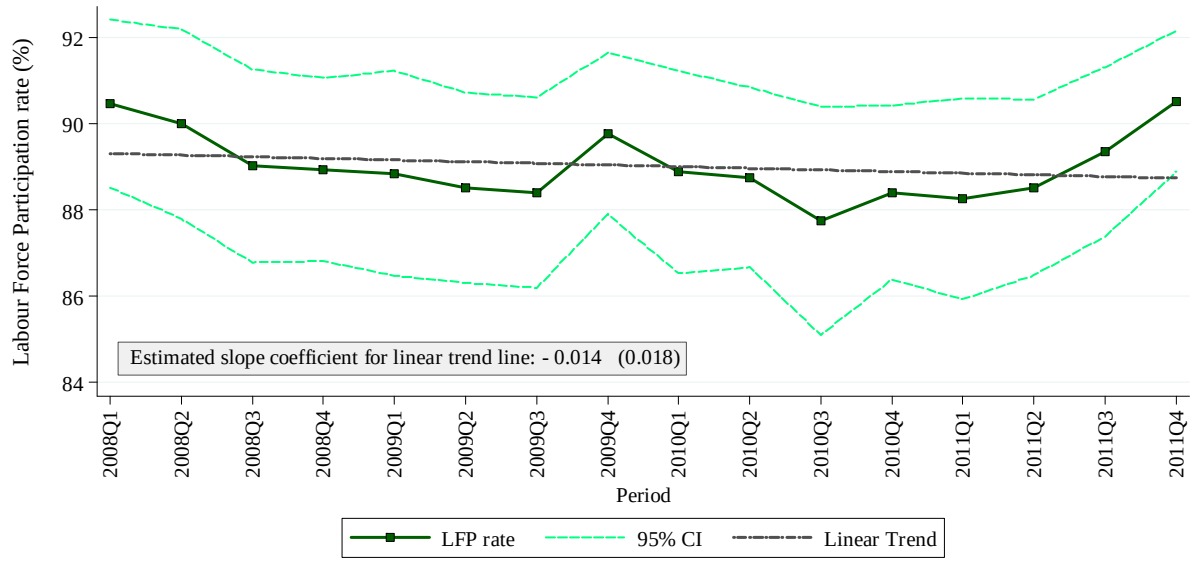
Source: Own calculations, OHS 1995 – 1999, September LFS 2000 – 2007, QLFS2008Q3 – QLFS2011Q3. **Notes:** Estimates are weighted, adjusted for complex survey design and are calculated only for graduates in the population of working age (15 – 65 year-olds). The 95% CI lines represent the upper and lower bounds of the 95% confidence interval for the estimate of the narrow graduate unemployment rate. The linear trend line is fitted using the predictions from a linear regression of the narrow graduate unemployment rate on the year of observation. The estimated slope coefficient for the linear trend line and its standard error (in parentheses) are reported in the note in the lower left corner of the figure.

Table 4 – *Graduate narrow unemployment numbers and rates (1995 - 2011)*

	Quarter	Graduate Narrow Unemployment			
		N	*%*	*Std Error (%)*	Sample N
OHS	1995	11 475	*2.51*	*0.50*	32
	1996	16 537	*3.17*	*0.72*	26
	1997	18 150	*4.02*	*0.63*	44
	1998	18 457	*4.21*	*0.78*	32
	1999	33 493	*4.72*	*0.62*	76
September LFS	2000	42 779	*4.80*	*0.65*	90
	2001	53 527	*6.75*	*0.67*	126
	2002	51 218	*6.12*	*0.68*	122
	2003	32 051	*3.89*	*0.49*	76
	2004	24 712	*3.18*	*0.59*	51
	2005	30 535	*3.75*	*0.68*	46
	2006	29 184	*3.69*	*0.93*	39
	2007	27 049	*2.50*	*0.50*	50
QLFS Q3	2008	30 163	*3.19*	*0.50*	55
	2009	39 163	*4.16*	*0.60*	59
	2010	45 864	*4.48*	*0.59*	73
	2011	45 456	*4.14*	*0.60*	66

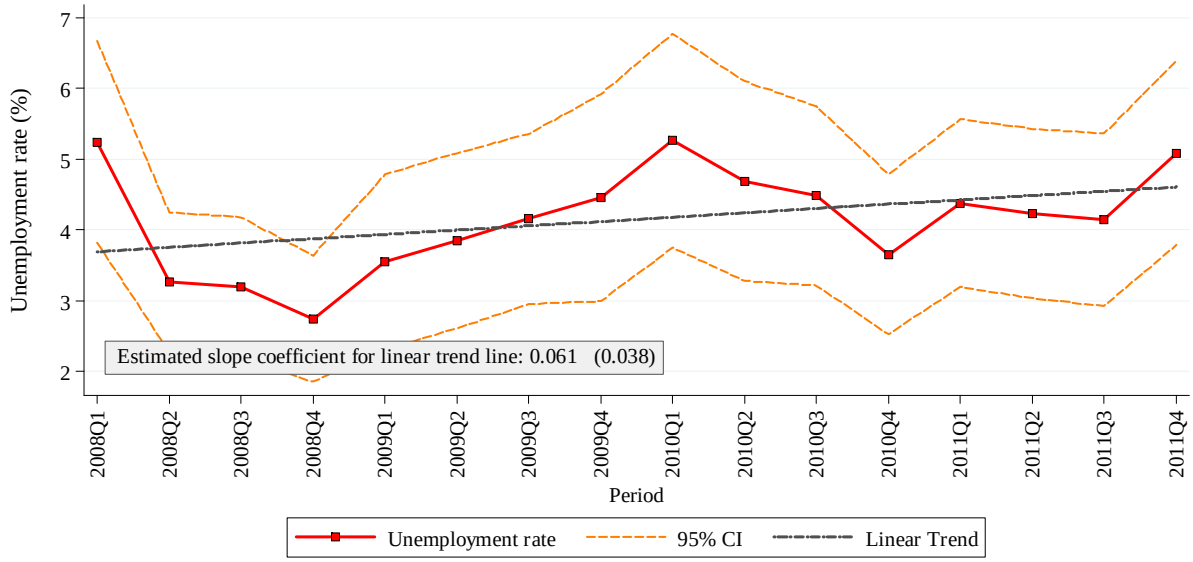
Source: Own calculations, OHS 1995 – 1999, September LFS 2000 – 2007, QLFS2008Q3 – QLFS2011Q3. **Notes:** Estimates are weighted, adjusted for complex survey design and are calculated only for graduates in the population of working age (15 – 65 year-olds). The standard error column reports the standard error of the graduate narrow unemployment rate estimates for each year. The 'sample N' column reports the number of narrow unemployed graduates in the survey sample for each year.

Figure 9 – *Graduate narrow labour force participation rate (2008 – 2011)*



Source: Own calculations, QLFS2008Q1 – QLFS2011Q4. **Notes:** Estimates are weighted, adjusted for complex survey design and are calculated only for graduates in the population of working age (15 – 65 year-olds). The 95% CI lines represent the upper and lower bounds of the 95% confidence interval for the estimate of the narrow graduate labour force participation rate. The linear trend line is fitted using the predictions from a linear regression of the narrow graduate labour force participation rate on the quarter of observation. The estimated slope coefficient for the linear trend line and its standard error (in parentheses) are reported in the note in the lower left corner of the figure.

Figure 10 – *Graduate Narrow Unemployment Rate (2008 – 2011)*



Source: Own calculations, QLFS2008Q1 – QLFS2011Q4. Notes: Estimates are weighted, adjusted for complex survey design and are calculated only for graduates in the population of working age (15 – 65 year-olds). The 95% CI lines represent the upper and lower bounds of the 95% confidence interval for the estimate of the narrow graduate unemployment rate. The linear trend line is fitted using the predictions from a linear regression of the narrow graduate unemployment rate on the quarter of observation. The estimated slope coefficient for the linear trend line and its standard error (in parentheses) are reported in the note in the lower left corner of the figure.

Table 5 - *Educational attainment of the working-age population (2011)*

Educational Attainment	**2011**			
	N	Std error	*%*	*Std error*
No Schooling/Grade R	1 290 974	(30971)	*3.98*	*(0.09)*
Grade 1/Sub-A	137 248	(10277)	*0.42*	*(0.03)*
Grade 2/Sub-B	228 761	(12702)	*0.71*	*(0.04)*
Grade 3/Std. 1	453 234	(18814)	*1.40*	*(0.06)*
Grade 4/Std. 2	655 909	(23310)	*2.02*	*(0.07)*
Grade 5/Std. 3	746 025	(25478)	*2.30*	*(0.08)*
Grade 6/Std. 4	1 165 600	(31717)	*3.59*	*(0.10)*
Grade 7/Std. 5	1 963 359	(41066)	*6.05*	*(0.12)*
Grade 8/Std. 6	2 788 482	(48100)	*8.60*	*(0.14)*
Grade 9/Std. 7	3 221 498	(53088)	*9.93*	*(0.16)*
Grade 10/Std. 8/NTC I	3 987 207	(59383)	*12.29*	*(0.17)*
Grade 11/Std. 9/NTC II	4 469 494	(66044)	*13.78*	*(0.19)*
Matric/Grade 12/Std. 10/NTC III	7 994 010	(87378)	*24.64*	*(0.23)*
Post-Matric Diploma/Certificate	2 109 425	(44990)	*6.50*	*(0.13)*
Bachelor's Degree or Equivalent	641 047	(26221)	*1.98*	*(0.08)*
Honours Degree/Bachelors + Diploma/Certificate	398 111	(20977)	*1.23*	*(0.06)*
Master's Degree and Higher	188 449	(14769)	*0.58*	*(0.05)*

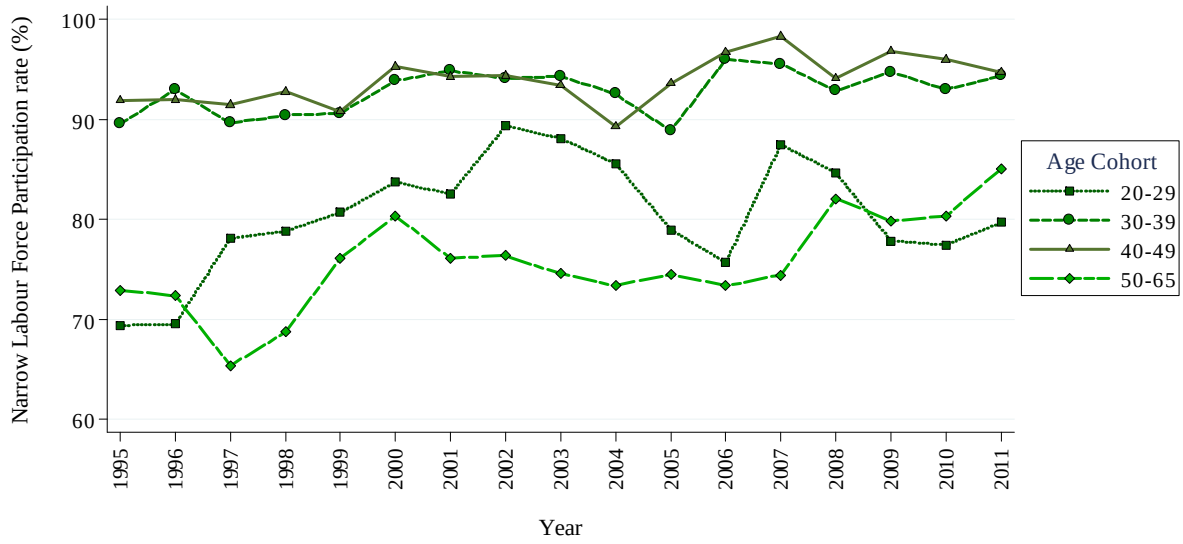
Source: Own calculations, QLFS2011Q3. **Notes**: Estimates are weighted and are calculated only for individuals in the population of working age.

Table 6 – *Average yearly growth in working-age population, narrow labour force, employment, and narrow unemployment by education (1995– 2011)*

		Average yearly growth rate by education (%)					
		None	Primary	Secondary	Matric	Diploma	Graduate
1995 - 2011	Working-Age	-3.83	-1.12	2.55	4.37	4.39	4.89
	Participant	-4.27	-1.08	3.66	5.27	4.99	5.36
	Employed	-4.09	-0.94	3.01	4.79	4.71	5.37
	Unemployed	-5.15	-1.44	5.45	7.06	8.60	5.38
2000 - 2011	Working-Age	-4.85	-3.09	2.76	4.27	5.29	2.51
	Participant	-7.76	-5.08	2.05	3.93	5.45	2.50
	Employed	-7.46	-4.44	2.70	4.69	5.83	2.67
	Unemployed	-9.17	-6.87	0.80	1.98	2.95	-0.93
1995 - 2000	Working-Age	-1.83	4.32	1.50	3.18	1.40	11.24
	Participant	4.86	8.93	6.41	6.51	3.28	12.88
	Employed	4.70	7.96	3.58	3.11	0.98	12.33
	Unemployed	5.71	12.28	14.91	19.12	31.34	28.26

Source: Own calculations, OHS 1995 – 1999, September LFS 2000 – 2007, QLFS2008Q3 – QLFS2011Q3. **Notes:** Estimates are weighted and are calculated only for the population of working-age (15-65 year-olds The average growth rates are calculated by regressing the log of the yearly total number of individuals in the working-age/narrow labour force/employed/unemployed populations for each of the education cohorts on the year of observation across the relevant observation period and then taking the antilog of the estimated coefficient on the year variable to obtain an estimate of the average growth rate in the underlying population-of-interest variable for the period under consideration. Educational attainment categories correspond to the following number of years of education completed: None: 0 years; Primary: 1-7 years, Secondary: 8 – 11 years; Matric 12 years; Diploma: 13 years; Graduate: 15 years or more.

Figure 11 – *Graduate narrow labour force participation rates by age cohort (1995 – 2011)*



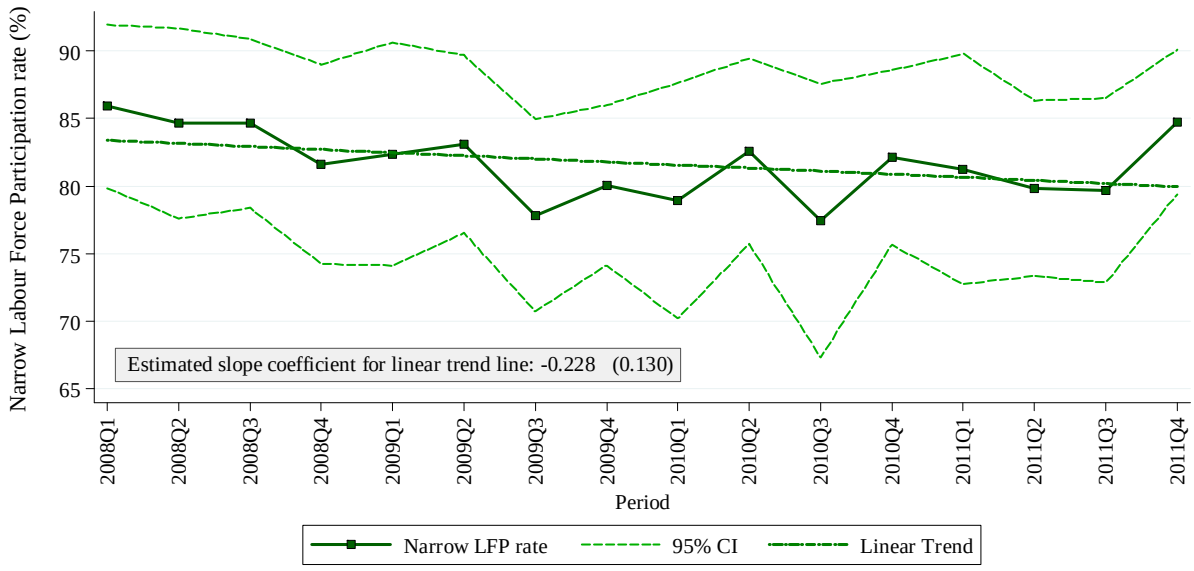
Source: Own calculations, OHS 1995 – 1999, September LFS 2000 – 2007, QLFS2008Q3 – QLFS2011Q3. **Notes:** Estimates are weighted and are calculated only for 20 – 65 year-old graduates.

Table 7 – *Graduate narrow labour force participation numbers and rates by age cohort (1995– 2011)*

		Graduate narrow labour force participation numbers and rates by age cohort							
		20 - 29		**30 - 39**		**40 - 49**		**50 - 65**	
		N	*%*	N	*%*	N	*%*	N	*%*
OHS	1995	111 102	*69.39*	174 530	*89.54*	116 182	*91.90*	54 030	*72.93*
	1996	129 906	*69.52*	200 442	*92.98*	125 649	*91.96*	64 688	*72.37*
	1997	104 971	*78.10*	157 165	*89.62*	121 221	*91.46*	67 479	*65.35*
	1998	96 294	*78.80*	168 050	*90.40*	116 586	*92.77*	57 311	*68.72*
	1999	187 828	*80.68*	242 131	*90.59*	175 076	*90.82*	104 355	*76.06*
September LFS	2000	223 593	*83.69*	305 885	*93.84*	201 655	*95.29*	159 248	*80.35*
	2001	197 854	*82.54*	306 163	*94.88*	186 885	*94.28*	97 791	*76.11*
	2002	211 049	*89.32*	280 234	*94.08*	226 125	*94.35*	119 359	*76.37*
	2003	181 043	*88.10*	317 974	*94.30*	204 199	*93.41*	121 012	*74.57*
	2004	147 736	*85.53*	289 461	*92.55*	215 617	*89.28*	123 417	*73.35*
	2005	142 273	*78.96*	280 023	*88.87*	249 465	*93.62*	141 685	*74.50*
	2006	123 404	*75.67*	298 173	*95.96*	212 074	*96.75*	155 625	*73.34*
	2007	212 766	*87.47*	370 121	*95.54*	284 045	*98.31*	214 651	*74.42*
QLFS Q3	2008	168 710	*84.61*	274 910	*92.84*	286 971	*94.11*	212 875	*82.05*
	2009	177 259	*77.84*	301 150	*94.73*	275 830	*96.81*	187 455	*79.86*
	2010	157 710	*77.44*	308 900	*92.99*	309 045	*95.96*	247 091	*80.30*
	2011	173 219	*79.67*	352 339	*94.36*	290 846	*94.72*	279 680	*85.04*

Source: Own calculations, OHS 1995 – 1999, September LFS 2000 – 2007, QLFS2008Q3 – QLFS2011Q3. **Notes:** Estimates are weighted and are calculated only for 20 – 65 year-old graduates.

Figure 12 – *Narrow labour force participation for the 20 – 29 age cohort (2008 – 2011)*



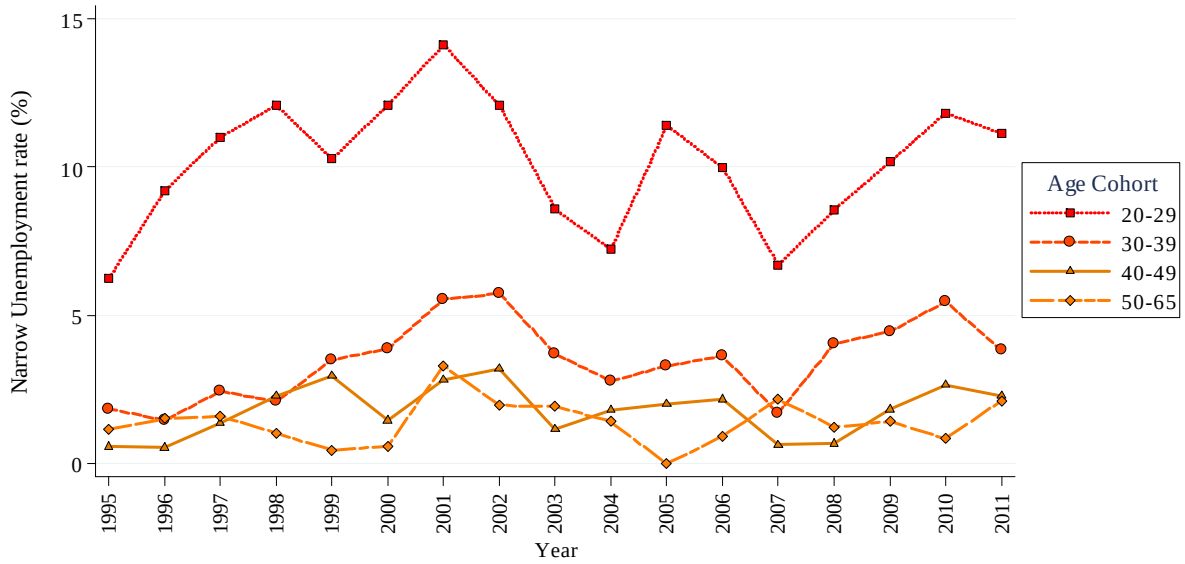
Source: Own calculations, QLFS2008Q1 – QLFS2011Q4. **Notes:** Estimates are weighted, adjusted for complex survey design and are calculated only for 20 –29 year-old graduates. The 95% CI lines represent the upper and lower bounds of the 95% confidence interval for the estimate of the narrow graduate labour force participation rate for the 20 – 29 year-old age cohort. The linear trend line is fitted using the predictions from a linear regression of the narrow graduate labour force participation rate 20 – 29 year-old age cohort on the quarter of observation. The estimated slope coefficient for the linear trend line and its standard error (in parentheses) are reported in the note in the lower left corner of the figure.

Table 8 – *Graduate narrow labour force participation numbers and rates for the 20 - 29 age cohort (2008 - 2011)*

	Quarter	Young graduate narrow labour force participation numbers and rates			
		N	*%*	*Std Error (%)*	Sample N
QLFS	2008 Q1	162 339	*85.89*	*3.08*	230
	2008 Q2	180 862	*84.63*	*3.59*	253
	2008 Q3	168 842	*84.61*	*3.18*	249
	2008 Q4	155 649	*81.62*	*3.76*	248
	2009 Q1	181 040	*82.37*	*4.21*	297
	2098 Q2	186 952	*83.10*	*3.35*	272
	2009 Q3	177 371	*77.85*	*3.63*	232
	2009 Q4	159 932	*80.05*	*3.02*	203
	2010 Q1	159 490	*78.90*	*4.44*	216
	2010 Q2	170 654	*82.56*	*3.50*	232
	2010 Q3	157 809	*77.45*	*5.17*	207
	2010 Q4	161 273	*82.11*	*3.30*	194
	2011 Q1	165 603	*81.25*	*4.34*	197
	2011 Q2	158 329	*79.83*	*3.31*	214
	2011 Q3	173 338	*79.67*	*3.47*	243
	2011 Q4	173 747	*84.73*	*2.73*	238

Source: Own calculations, QLFS2008Q1 – QLFS2011Q4. **Notes:** Estimates are weighted, adjusted for complex survey design and are calculated only for 20 –29 year-old graduates. The standard error column reports the standard error of the 20 – 29 year-old age cohort graduate narrow labour force participation rate estimates for each quarter. The 'sample N' column reports the number of 20 – 29 year-old graduate narrow labour force participants in the survey sample for each quarter.

Figure 13 –*Graduate narrow unemployment rates by age cohort (1995 – 2011)*



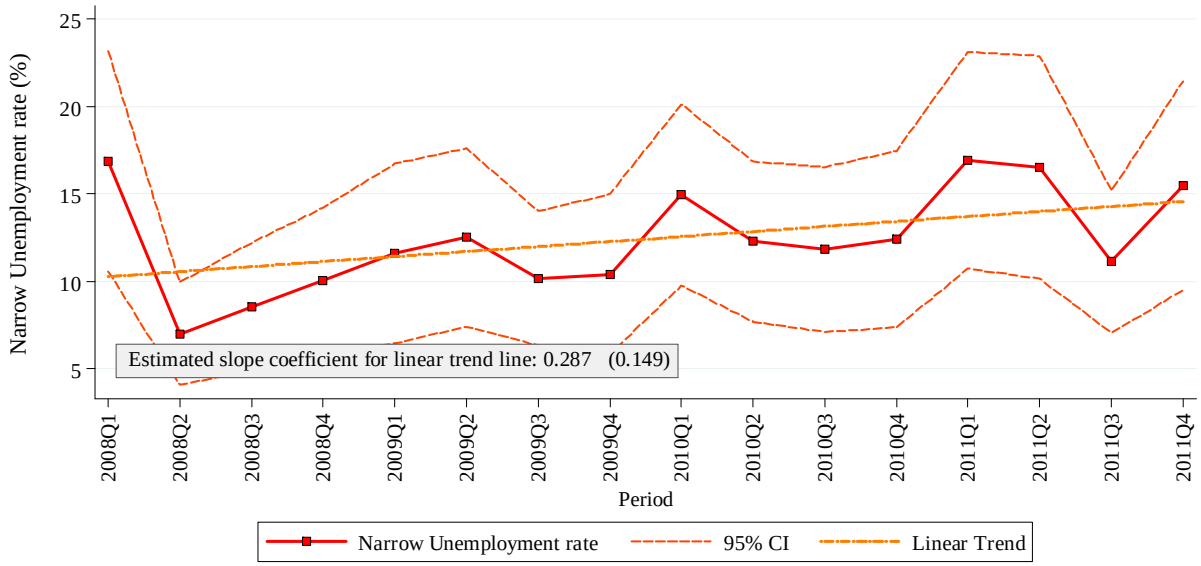
Source: Own calculations, OHS 1995 – 1999, September LFS 2000 – 2007, QLFS2008Q3 – QLFS2011Q3. **Notes:** Estimates are weighted and are calculated only for 20 – 65 year-old graduates.

Table 7 – *Graduate unemployment numbers and rates by age cohort (1995– 2011)*

		Graduate unemployment numbers and rates by age cohort							
		20 - 29		**30 - 39**		**40 - 49**		**50 - 65**	
		N	*%*	N	*%*	N	*%*	N	*%*
OHS	1995	6 937	*6.24*	3 239	*1.86*	660	*0.57*	623	*1.15*
	1996	11 939	*9.19*	2 927	*1.46*	689	*0.55*	982	*1.52*
	1997	11 563	*11.02*	3 839	*2.44*	1 669	*1.38*	1 079	*1.60*
	1998	11 632	*12.08*	3 539	*2.11*	2 676	*2.30*	594	*1.04*
	1999	19 324	*10.29*	8 460	*3.49*	5 193	*2.97*	481	*0.46*
September LFS	2000	27 006	*12.08*	11 859	*3.88*	2 934	*1.45*	935	*0.59*
	2001	27 956	*14.13*	16 962	*5.54*	5 307	*2.84*	3 236	*3.31*
	2002	25 490	*12.08*	16 086	*5.74*	7 232	*3.20*	2 343	*1.96*
	2003	15 528	*8.58*	11 772	*3.70*	2 372	*1.16*	2 344	*1.94*
	2004	10 678	*7.23*	8 073	*2.79*	3 900	*1.81*	1 753	*1.42*
	2005	16 229	*11.41*	9 228	*3.30*	5 052	*2.03*	0	*0.00*
	2006	12 316	*9.98*	10 818	*3.63*	4 594	*2.17*	1 438	*0.92*
	2007	14 253	*6.70*	6 301	*1.70*	1 807	*0.64*	4 664	*2.17*
QLFS Q3	2008	14 457	*8.57*	11 107	*4.04*	1 925	*0.67*	2 648	*1.24*
	2009	18 031	*10.17*	13 410	*4.45*	5 041	*1.83*	2 653	*1.42*
	2010	18 645	*11.82*	16 870	*5.46*	8 231	*2.66*	2 084	*0.84*
	2011	19 289	*11.14*	13 509	*3.83*	6 679	*2.30*	5 946	*2.13*

Source: Own calculations, OHS 1995 – 1999, September LFS 2000 – 2007, QLFS2008Q3 – QLFS2011Q3. **Notes:** Estimates are weighted and are calculated only for 20 – 65 year-old graduates.

Figure 14 – *Graduate narrow unemployment rates for the 20 – 29 age cohort (2008 – 2011)*



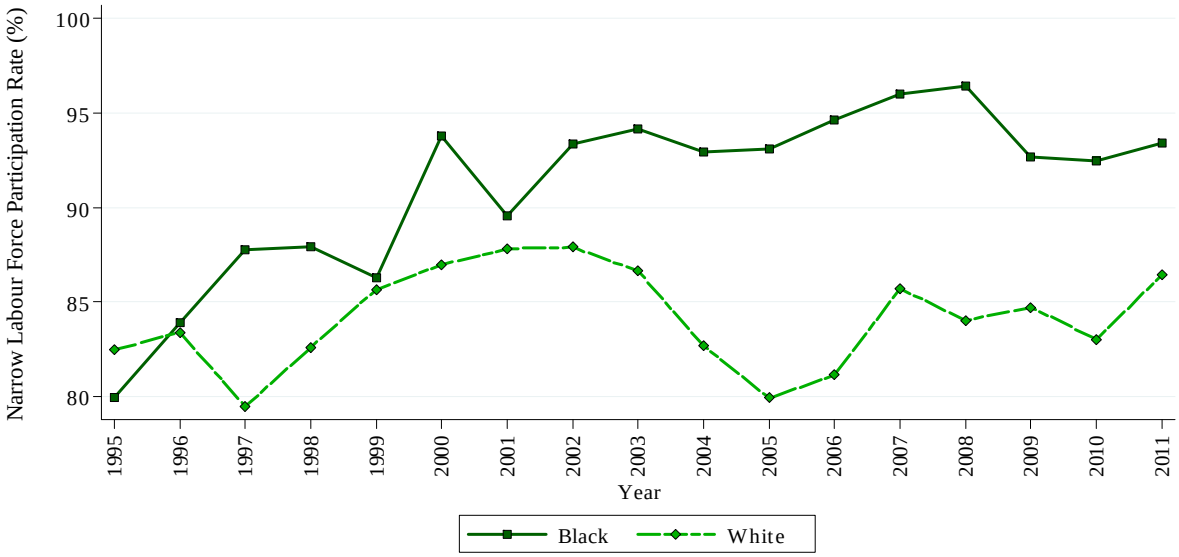
Source: Own calculations, QLFS2008Q1 – QLFS2011Q4. **Notes:** Estimates are weighted, adjusted for complex survey design and are calculated only for 20 –29 year-old graduates. The 95% CI lines represent the upper and lower bounds of the 95% confidence interval for the estimate of the graduate narrow unemployment rate for the 20 – 29 year-old age cohort. The linear trend line is fitted using the predictions from a linear regression of the graduate narrow unemployment rate for the 20 – 29 year-old age cohort on the quarter of observation. The estimated slope coefficient for the linear trend line and its standard error (in parentheses) are reported in the note in the lower left corner of the figure.

Table 8 –*Graduate narrow unemployment numbers and rates for the 20 - 29 age cohort (2008 - 2011)*

	Quarter	**Young Graduate Narrow Unemployment Numbers and Rates**			
		N	*%*	*Std Error (%)*	Sample N
QLFS	2008 Q1	27 376	*16.86*	*3.21*	40
	2008 Q2	12 694	*7.02*	*1.50*	27
	2008 Q3	14 470	*8.57*	*1.86*	27
	2008 Q4	15 652	*10.06*	*2.12*	26
	2009 Q1	21 003	*11.60*	*2.62*	34
	2098 Q2	23 391	*12.51*	*2.60*	40
	2009 Q3	18 046	*10.17*	*1.96*	33
	2009 Q4	16 667	*10.42*	*2.33*	29
	2010 Q1	23 836	*14.94*	*2.64*	39
	2010 Q2	20 955	*12.28*	*2.34*	35
	2010 Q3	18 662	*11.83*	*2.40*	32
	2010 Q4	20 023	*12.42*	*2.57*	31
	2011 Q1	28 033	*16.93*	*3.16*	37
	2011 Q2	26 159	*16.52*	*3.25*	33
	2011 Q3	19 304	*11.14*	*2.07*	31
	2011 Q4	26 861	*15.46*	*3.04*	34

Source: Own calculations, QLFS2008Q1 – QLFS2011Q4. **Notes:** Estimates are weighted, adjusted for complex survey design and are calculated only for 20 –29 year-old graduates. The standard error column reports the standard error of the narrow 20 – 29 year-old age cohort graduate narrow unemployment rate estimates for each quarter. The 'sample N' column reports the number of 20 – 29 year-old narrowly unemployed graduates in the survey sample for each quarter.

Figure 15 – *Graduate narrow labour force participation rates by race (1995 – 2011)*



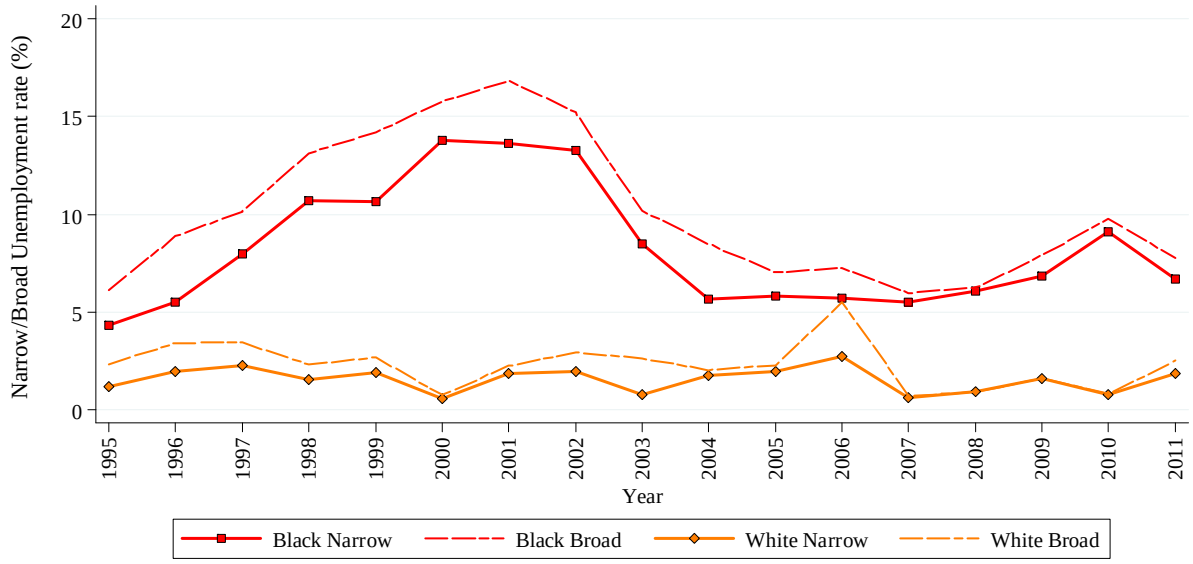
Source: Own calculations, OHS 1995 – 1999, September LFS 2000 – 2007, QLFS2008Q3 – QLFS2011Q3. **Notes:** Estimates are weighted and are calculated only for graduates in the population of working age. The estimated narrow labour force participation rates for Coloureds and Indians are omitted from the graph as they are subject to substantial year-on-year fluctuations owing at least partly to the small number of graduate Coloured and Indian respondents in the respective survey datasets.

Table 9 – Graduate narrow labour force participation numbers and rates by race (1995– 2011)

		Graduate narrow labour force participation numbers and rates by race							
		Black		**Coloured**		**Indian/Asian**		**White**	
		N	*%*	N	*%*	N	*%*	N	*%*
OHS	1995	151 655	*79.95*	20 701	*88.22*	29 013	*84.07*	254 952	*82.47*
	1996	138 418	*83.93*	19 251	*86.61*	36 127	*73.26*	327 113	*83.40*
	1997	130 085	*87.77*	24 937	*87.15*	31 012	*81.38*	265 392	*79.47*
	1998	115 683	*87.90*	28 432	*90.63*	31 629	*86.04*	262 497	*82.60*
	1999	231 183	*86.27*	27 922	*78.04*	37 442	*80.21*	410 372	*85.67*
September LFS	2000	263 696	*93.79*	46 951	*86.33*	45 815	*83.22*	528 544	*86.98*
	2001	285 002	*89.57*	31 743	*87.95*	60 816	*91.31*	410 087	*87.82*
	2002	302 375	*93.38*	30 383	*91.97*	45 164	*86.92*	456 920	*87.90*
	2003	278 558	*94.16*	34 015	*90.18*	53 041	*87.19*	455 923	*86.64*
	2004	287 079	*92.95*	23 099	*88.52*	38 133	*83.95*	412 187	*82.68*
	2005	330 108	*93.08*	31 596	*93.84*	41 558	*79.57*	403 913	*79.94*
	2006	320 578	*94.60*	30 672	*86.88*	43 318	*95.42*	391 452	*81.15*
	2007	412 524	*95.98*	42 088	*85.50*	112 408	*91.84*	505 855	*85.72*
QLFS Q3	2008	382 745	*96.44*	47 066	*88.95*	50 826	*85.81*	463 121	*84.03*
	2009	398 298	*92.68*	62 032	*95.96*	59 401	*81.56*	421 963	*84.73*
	2010	382 542	*92.48*	74 075	*92.89*	84 937	*91.62*	481 192	*83.03*
	2011	431 732	*93.39*	78 192	*91.99*	88 390	*85.28*	497 770	*86.45*

Source: Own calculations, OHS 1995 – 1999, September LFS 2000 – 2007, QLFS2008Q3 – QLFS2011Q3. **Notes:** Estimates are weighted and are calculated only for graduates in the population of working age.

Figure 16 – *Graduate broad and narrow unemployment rates by race (1995 – 2011)*



Source: Own calculations, OHS 1995 – 1999, September LFS 2000 – 2007, QLFS2008Q3 – QLFS2011Q3. **Notes:** Estimates are weighted and are calculated only for graduates in the population of working age. The estimated unemployment rates for Coloureds and Indians are omitted from the graph as they are subject to substantial year-on-year fluctuations owing at least partly to the small number of graduate Coloured and Indian respondents in the respective survey datasets.

Table 10 – *Graduate unemployment numbers and rates by race (1995– 2011)*

		Graduate unemployment numbers and rates by race							
		Black		**Coloured**		**Indian/Asian**		**White**	
		N	*%*	N	*%*	N	*%*	N	*%*
OHS	1995	6 545	*4.32*	1 658	*8.01*	289	*1.00*	2 967	*1.16*
	1996	7 607	*5.50*	1 168	*6.07*	1 289	*3.57*	6 473	*1.98*
	1997	10 370	*7.97*	544	*2.18*	1 214	*3.91*	6 022	*2.27*
	1998	12 386	*10.71*	1 166	*4.10*	841	*2.66*	4 048	*1.54*
	1999	24 673	*10.67*	372	*1.33*	517	*1.38*	7 896	*1.92*
September LFS	2000	36 359	*13.79*	699	*1.49*	2 268	*4.95*	3 000	*0.57*
	2001	38 784	*13.61*	614	*1.93*	6 514	*10.71*	7 549	*1.84*
	2002	40 086	*13.26*	1 134	*3.73*	945	*2.09*	8 986	*1.97*
	2003	23 680	*8.50*	2 248	*6.61*	2 589	*4.88*	3 499	*0.77*
	2004	16 181	*5.64*	62	*0.27*	1 301	*3.41*	7 141	*1.73*
	2005	19 205	*5.82*	0	*0.00*	1 740	*4.19*	7 927	*1.96*
	2006	18 315	*5.71*	45	*0.15*	154	*0.36*	10 652	*2.72*
	2007	22 607	*5.48*	0	*0.00*	1 337	*1.19*	3 081	*0.61*
QLFS Q3	2008	23 195	*6.06*	2 091	*4.44*	613	*1.21*	4 238	*0.92*
	2009	27 180	*6.82*	2 376	*3.83*	2 827	*4.76*	6 752	*1.60*
	2010	34 874	*9.12*	891	*1.20*	6 233	*7.34*	3 832	*0.80*
	2011	28 783	*6.67*	5 427	*6.94*	2 032	*2.30*	9 181	*1.84*

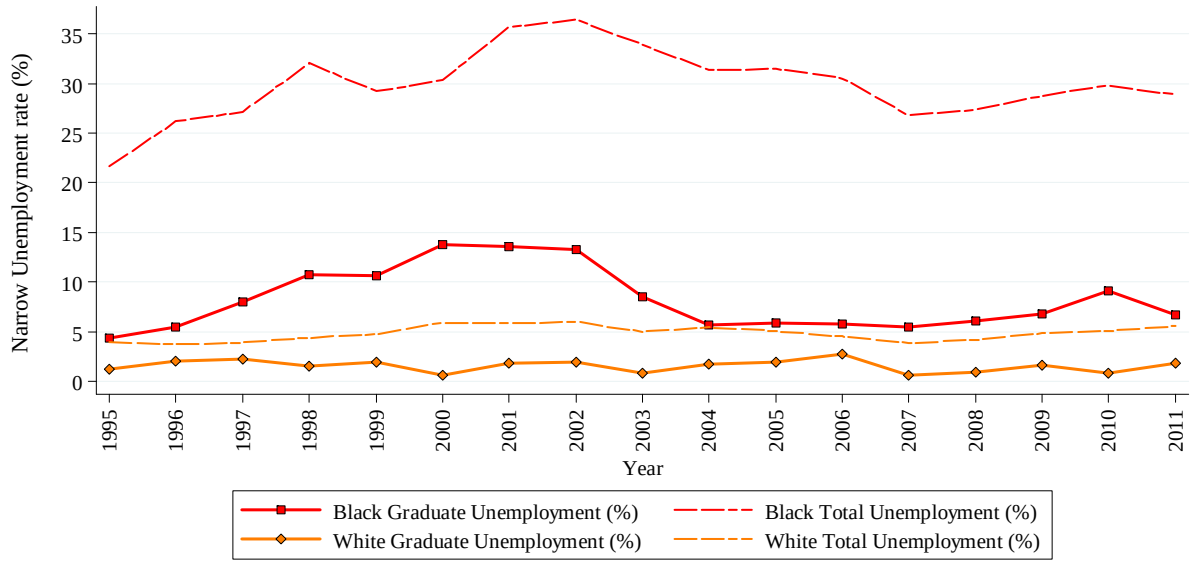
Source: Own calculations, OHS 1995 – 1999, September LFS 2000 – 2007, QLFS2008Q3 – QLFS2011Q3. **Notes:** Estimates are weighted and are calculated only for graduates in the population of working age.

Table 11 – *Graduate broad and narrow unemployment numbers and rates for blacks and whites (1995–2011)*

		Graduate Narrow Unemployment				Graduate Broad Unemployment			
		Black		White		Black		White	
		N	*%*	N	*%*	N	*%*	N	*%*
OHS	1995	6 545	*4.32*	2 967	*1.16*	9 509	*6.15*	6 029	*2.34*
	1996	7 607	*5.50*	6 473	*1.98*	12 749	*8.88*	11 323	*3.41*
	1997	10 370	*7.97*	6 022	*2.27*	13 502	*10.14*	9 261	*3.45*
	1998	12 386	*10.71*	4 048	*1.54*	15 601	*13.12*	6 127	*2.32*
	1999	24 673	*10.67*	7 896	*1.92*	34 175	*14.20*	11 091	*2.68*
September LFS	2000	36 359	*13.79*	3 000	*0.57*	42 548	*15.77*	4 012	*0.76*
	2001	38 784	*13.61*	7 549	*1.84*	49 875	*16.84*	9 260	*2.25*
	2002	40 086	*13.26*	8 986	*1.97*	47 087	*15.22*	13 513	*2.93*
	2003	23 680	*8.50*	3 499	*0.77*	28 900	*10.18*	12 174	*2.62*
	2004	16 181	*5.64*	7 141	*1.73*	25 117	*8.49*	8 417	*2.04*
	2005	19 205	*5.82*	7 927	*1.96*	23 512	*7.03*	9 238	*2.28*
	2006	18 315	*5.71*	10 652	*2.72*	23 674	*7.26*	22 098	*5.48*
	2007	22 607	*5.48*	3 081	*0.61*	24 798	*5.98*	3 593	*0.71*
QLFS Q3	2008	23 195	*6.06*	4 238	*0.92*	23 980	*6.25*	4 238	*0.92*
	2009	27 180	*6.82*	6 752	*1.60*	31 849	*7.90*	6 752	*1.60*
	2010	34 874	*9.12*	3 832	*0.80*	37 712	*9.79*	3 832	*0.80*
	2011	28 783	*6.67*	9 181	*1.84*	33 916	*7.76*	12 553	*2.50*

Source: Own calculations, OHS 1995 – 1999, September LFS 2000 – 2007, QLFS2008Q3 – QLFS2011Q3. Notes: Estimates are weighted and are calculated only for graduates in the population of working age.

Figure 17 – *Total narrow unemployment and graduate narrow unemployment rates for blacks and whites (1995 – 2011)*



Source: Own calculations, OHS 1995 – 1999, September LFS 2000 – 2007, QLFS2008Q3 – QLFS2011Q3. **Notes:** Estimates are weighted and are calculated only for individuals in the population of working age.

Table 12 – *Total narrow unemployment and graduate narrow unemployment numbers and rates for blacks and whites (1995– 2011)*

		Graduate Narrow Unemployment				**Total Narrow Unemployment**			
		Black		**White**		**Black**		**White**	
		N	*%*	N	*%*	N	*%*	N	*%*
OHS	1995	6 545	*4.32*	2 967	*1.16*	1 693 162	*21.63*	75 805	*3.92*
	1996	7 607	*5.50*	6 473	*1.98*	1 945 527	*26.17*	73 972	*3.71*
	1997	10 370	*7.97*	6 022	*2.27*	2 127 200	*27.13*	75 200	*3.89*
	1998	12 386	*10.71*	4 048	*1.54*	2 790 276	*32.05*	88 594	*4.38*
	1999	24 673	*10.67*	7 896	*1.92*	2 747 746	*29.21*	99 259	*4.72*
September LFS	2000	36 359	*13.79*	3 000	*0.57*	3 640 976	*30.33*	131 220	*5.89*
	2001	38 784	*13.61*	7 549	*1.84*	4 076 741	*35.69*	130 365	*5.85*
	2002	40 086	*13.26*	8 986	*1.97*	4 299 171	*36.42*	130 031	*5.99*
	2003	23 680	*8.50*	3 499	*0.77*	3 883 310	*33.90*	109 674	*4.98*
	2004	16 181	*5.64*	7 141	*1.73*	3 587 740	*31.32*	115 555	*5.42*
	2005	19 205	*5.82*	7 927	*1.96*	3 905 601	*31.49*	105 671	*5.04*
	2006	18 315	*5.71*	10 652	*2.72*	3 895 249	*30.51*	94 668	*4.51*
	2007	22 607	*5.48*	3 081	*0.61*	3 419 904	*26.80*	83 003	*3.84*
QLFS Q3	2008	23 195	*6.06*	4 238	*0.92*	3 601 903	*27.34*	89 735	*4.15*
	2009	27 180	*6.82*	6 752	*1.60*	3 605 807	*28.75*	101 299	*4.83*
	2010	34 874	*9.12*	3 832	*0.80*	3 810 581	*29.79*	107 180	*5.07*
	2011	28 783	*6.67*	9 181	*1.84*	3 801 676	*28.87*	117 840	*5.56*

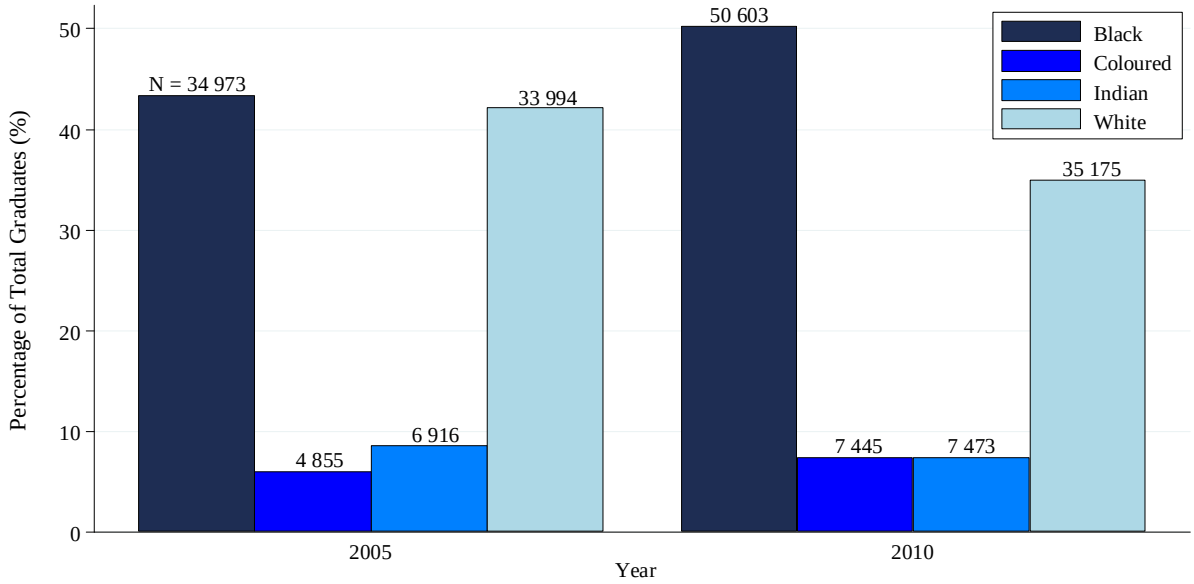
Source: Own calculations, OHS 1995 – 1999, September LFS 2000 – 2007, QLFS2008Q3 – QLFS2011Q3. Notes: Estimates are weighted and are calculated only for individuals in the population of working age.

Table 13 – A*verage yearly growth in graduate working-age population, narrow labour force, employment, and narrow unemployment by race (1995– 2011)*

		Average Yearly Growth Rate (%) by Race			
		Black	Coloured	Indian	White
1995 - 2011	Working-Age	7.13	6.67	5.58	3.27
	Participant	7.98	7.14	6.18	3.36
	Employed	8.14	7.27	6.16	3.38
	Unemployed	6.76	3.11	5.94	1.53
2000 - 2011	Working-Age	4.37	7.39	5.38	0.61
	Participant	4.52	7.86	5.47	0.31
	Employed	5.24	7.69	5.74	0.31
	Unemployed	-1.87	13.45	-1.21	1.03
1995 – 2000	Working-Age	9.92	17.76	6.29	11.88
	Participant	12.71	16.49	7.13	13.12
	Employed	10.41	18.06	6.75	13.25
	Unemployed	42.03	-18.10	22.82	0.73

Source: Own calculations, OHS 1995 – 1999, September LFS 2000 – 2007, QLFS2008Q3 – QLFS2011Q3. **Notes:** Estimates are weighted and are calculated only for graduates in the population of working-age (15-65 year-olds The average growth rates are calculated by regressing the log of the yearly total number graduates in the working-age/narrow labour force/employed/unemployed populations for each of the race groups on the year of observation across the relevant observation period and then taking the antilog of the estimated coefficient on the year variable to obtain an estimate of the average growth rate in the underlying population-of-interest variable for the period under consideration.

Figure 18 – *Percentage of total number of students graduating by race (2005, 2010)*



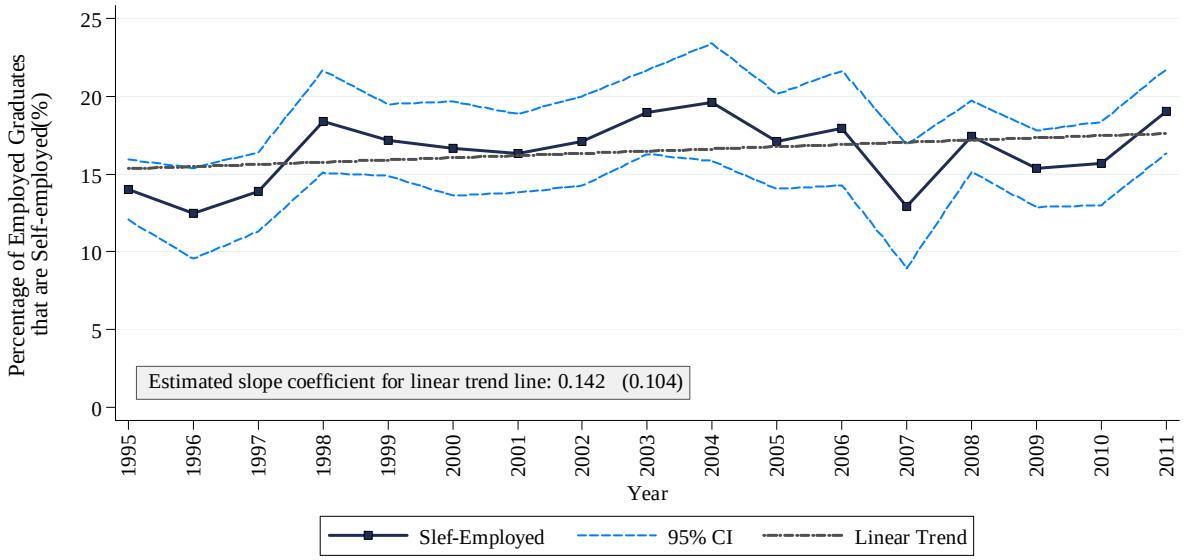
Source: Own calculations, HEMIS 2005, 2010. **Notes:** The respective labels at the top of the bars show the total number of Black, Coloured, Indian and White graduates for 2005 and 2010.

Table 14 – *Total graduate numbers and percentages by race (2005, 2010)*

	2005				2010			
	First Degrees		All Degrees		First Degrees		All Degrees	
	N	***%***	**N**	***%***	**N**	***%***	**N**	***%***
Black	21 052	*43.46*	34 973	*43.23*	31 453	*51.31*	50 603	*49.88*
Coloured	2 916	*6.02*	4 855	*6.00*	4 366	*7.12*	7 445	*7.34*
Indian	4 505	*9.30*	6 916	*8.55*	4 690	*7.65*	7 473	*7.37*
White	19 860	*41.00*	33 994	*42.02*	20 456	*33.37*	35 175	*34.68*
Total	48 444	*100.00*	80 908	*100.00*	61 299	*100.00*	101 441	*100.00*

Source: Own calculations, HEMIS 2005, 2010.

Figure 19 – *Percentage of employed graduates that are self-employed (1995 - 2011)*



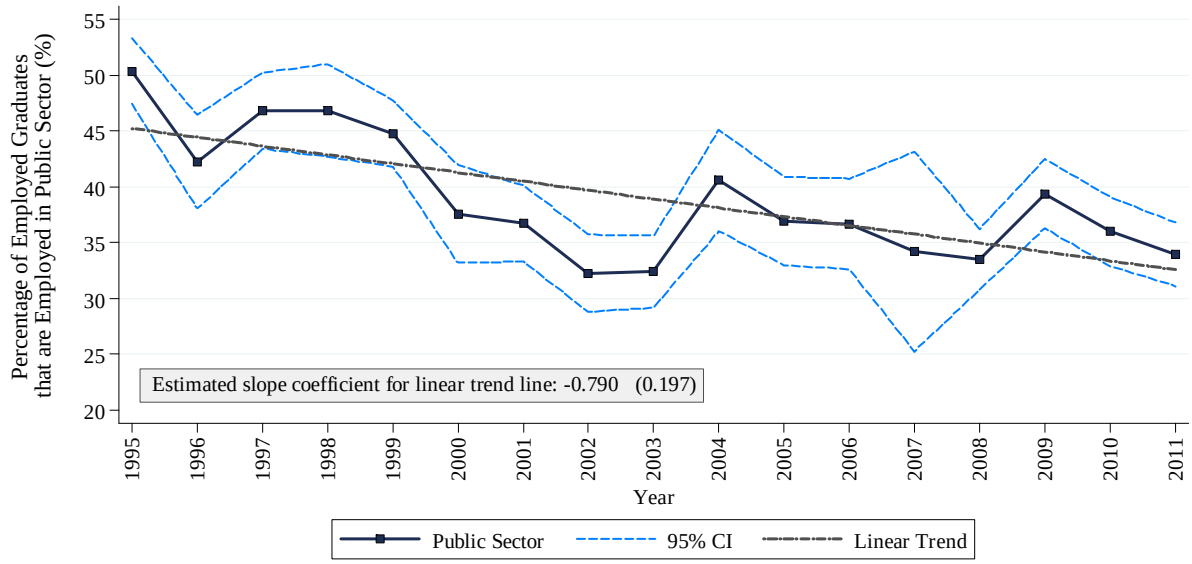
Source: Own calculations, OHS 1995 – 1999, September LFS 2000 – 2007, QLFS2008Q3 – QLFS2011Q3. **Notes:** Estimates are weighted, adjusted for complex survey design and are calculated only graduates. The 95% CI lines represent the upper and lower bounds of the 95% confidence interval for the estimate of the percentage of employed graduates that are self-employed. The linear trend line is fitted using the predictions from a linear regression of the percentage of employed graduates that are self-employed on the year of observation. The estimated slope coefficient for the linear trend line and its standard error (in parentheses) are reported in the note in the lower left corner of the figure.

Table 15 *–Graduate self-employment numbers and percentages (1995 - 2011)*

	Year	**Graduate Self-employment**				
		N	*Std Error (N)*	*% of Employed Graduates*	*Std Error (%)*	Sample N
OHS	1995	62 415	4 716	*14.01*	*0.99*	242
	1996	62 769	8 056	*12.48*	*1.49*	80
	1997	60 046	6 129	*13.86*	*1.30*	110
September LFS	1998	77 187	7 829	*18.37*	*1.68*	126
	1999	116 277	8 756	*17.19*	*1.17*	229
	2000	140 543	13 987	*16.64*	*1.54*	199
	2001	120 628	10 215	*16.35*	*1.29*	224
	2002	134 152	12 240	*17.13*	*1.47*	258
	2003	150 583	11 987	*18.99*	*1.38*	279
	2004	147 486	16 295	*19.62*	*1.93*	198
	2005	133 697	13 214	*17.10*	*1.56*	219
	2006	136 412	15 900	*17.96*	*1.87*	193
	2007	136 462	19 361	*12.93*	*2.02*	179
QLFS Q3	2008	159 394	11 783	*17.43*	*1.17*	245
	2009	138 566	12 469	*15.34*	*1.26*	183
	2010	153 255	14 756	*15.68*	*1.37*	174
	2011	200 286	16 584	*19.05*	*1.39*	225

Source: Own calculations, OHS 1995 – 1999, September LFS 2000 – 2007, QLFS2008Q3 – QLFS2011Q3. **Notes:** Estimates are weighted, adjusted for complex survey design and are calculated only for employed graduates. The standard error columns respectively report the standard error of the estimate of the number of self-employed graduates and the percentage of employed graduates who are self-employed for each year. The 'sample N' column reports the number of self-employed graduates in the survey sample for each year.

Figure 20 – *Percentage of employed graduates that are employed in the public sector (1995 - 2011)*



Source: Own calculations, OHS 1995 – 1999, September LFS 2000 – 2007, QLFS2008Q3 – QLFS2011Q3. **Notes:** Estimates are weighted, adjusted for complex survey design and are calculated only graduates. The 95% CI lines represent the upper and lower bounds of the 95% confidence interval for the estimate of the percentage of employed graduates that are employed in the public sector. The linear trend line is fitted using the predictions from a linear regression of the percentage of employed graduates that are employed in the public sector on the year of observation. The estimated slope coefficient for the linear trend line and its standard error (in parentheses) are reported in the note in the lower left corner of the figure.

Table 16 – *Graduate public sector employment numbers and percentages (1995 - 2011)*

	Year	Graduate Self-employment				
		N	*Std Error (N)*	*% of Employed Graduates*	*Std Error (%)*	Sample N
OHS	1995	224 458	9 110	*50.37*	*1.50*	774
	1996	213 098	13 598	*42.25*	*2.14*	305
	1997	202 877	9 683	*46.82*	*1.74*	526
	1998	196 823	11 626	*46.85*	*2.12*	355
	1999	302 999	13 198	*44.78*	*1.51*	687
September LFS	2000	318 728	25 339	*37.57*	*2.23*	564
	2001	271 447	15 296	*36.72*	*1.73*	632
	2002	253 720	14 461	*32.27*	*1.77*	571
	2003	256 959	15 152	*32.41*	*1.64*	584
	2004	305 427	22 094	*40.57*	*2.31*	543
	2005	289 353	18 920	*36.93*	*2.02*	528
	2006	279 482	17 244	*36.70*	*2.07*	567
	2007	360 890	58 421	*34.20*	*4.56*	589
QLFS Q3	2008	306 614	14 829	*33.53*	*1.38*	606
	2009	355 846	17 351	*39.40*	*1.58*	617
	2010	352 051	17 702	*36.01*	*1.58*	621
	2011	356 971	17 553	*33.95*	*1.45*	615

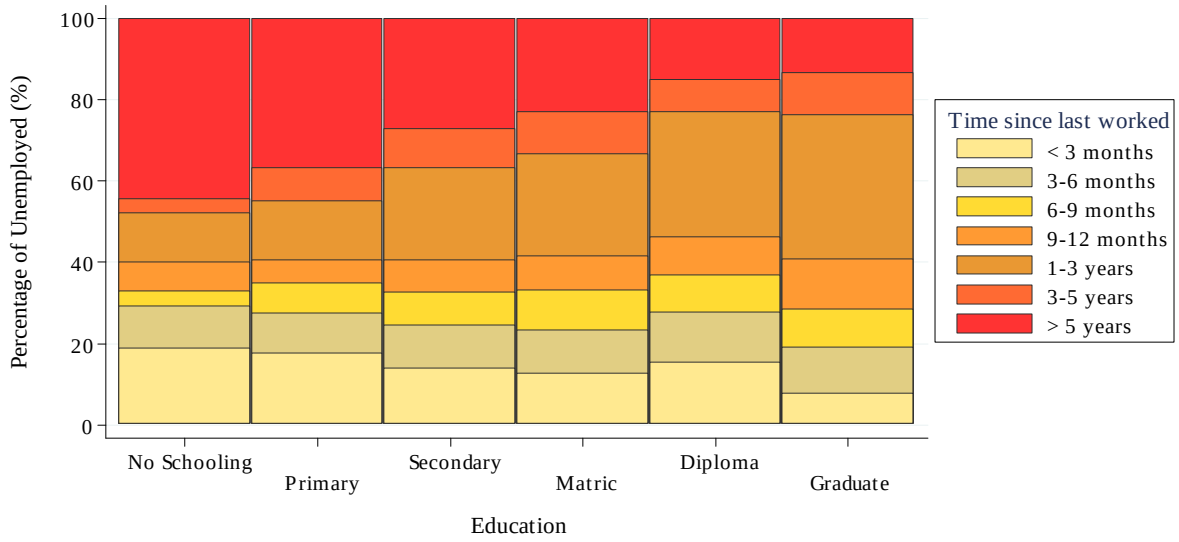
Source: Own calculations, OHS 1995 – 1999, September LFS 2000 – 2007, QLFS2008Q3 – QLFS2011Q3. **Notes:** Estimates are weighted, adjusted for complex survey design and are calculated only for employed graduates. The standard error columns respectively report the standard error of the estimate of the number of graduates that are employed in the public sector and the percentage of employed graduates who are employed in the public sector for each year. The 'sample N' column reports the number of graduates who are employed in the public sector in the survey sample for each year.

Table 17 – *Graduates by field of study and labour market status (2000 and 2007)*

	Year	Graduates by field of study											
		Commun	Educ	Engineer	Social Studies	Law	Health	Agri	Arts	Commerce	Sciences	Services	Construction
March & September LFS							**All graduates**						
	2000	51 989	428 540	146 031	132 760	133 672	256 885	33 685	54 635	366 081	103 206	9 718	17 229
	2007	53 070	475 391	213 964	228 547	118 246	298 055	47 247	81 254	468 351	84 500	13 540	14 823
							Employed graduates						
	2000	40 057	348 830	131 720	97 535	113 559	218 192	30 416	39 683	291 318	91 590	7 933	15 704
	2007	40 279	410 248	189 159	211 206	109 720	232 811	40 590	56 473	399 479	74 015	9 512	14 657
							Unemployed graduates						
	2000	230	29 786	3 401	10 164	4 455	4 436	1 030	4 403	26 705	3 226	892	719
	2007	1 616	5 648	5 667	7 572	883	6 196	1 009	2 401	22 100	3 981	0	0
							Unemployment rate %						
	2000	0.57	7.87	2.52	9.44	3.77	1.99	3.28	9.99	8.40	3.40	10.11	4.38
	2007	3.86	1.36	2.91	3.46	0.80	2.59	2.43	4.08	5.24	5.10	0.00	0.00

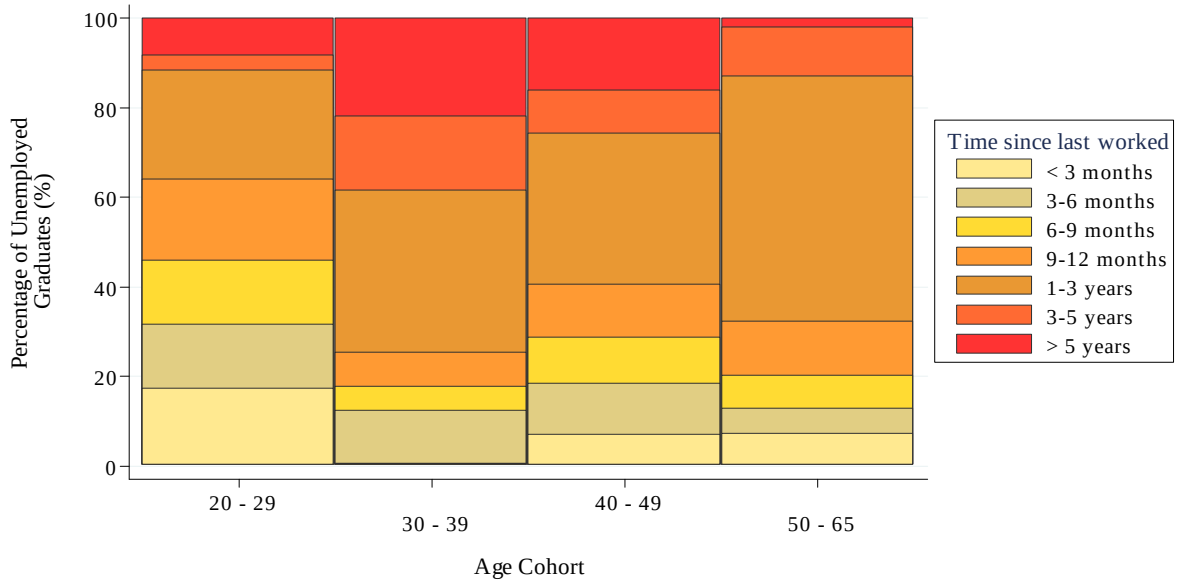
Source: Own calculations, March and September LFS 2000 – 2007. **Notes:** Estimates are weighted and are calculated only for narrowly unemployed graduates in the population of working age. The field of study classifications are: Commun – 'Communication/Language', Educ – 'Education/Training/Development', Engineer - 'Manufacturing/Engineering/Technology', Social Studies – 'Human & Social Studies', Law – 'Law/Military Science & Security', Health – 'Health Sciences & Social Services', Agri – 'Agriculture & Nature Conservation', Arts – 'Culture & Arts', Commerce – 'Business/Commerce/Management', Sciences – 'Physical/Mathematical/Computer/Life Sciences', Services – 'Services', Construction – 'Physical Planning & Construction'.

Figure 21 – *Time since last worked by education (2011)*[8]



Source: Own calculations, QLFS2011Q1-QLFS2011Q4. **Notes:** Estimates are weighted, adjusted for complex survey design and are calculated only for narrowly unemployed individuals in the population of working age who have at some stage in the past been employed.

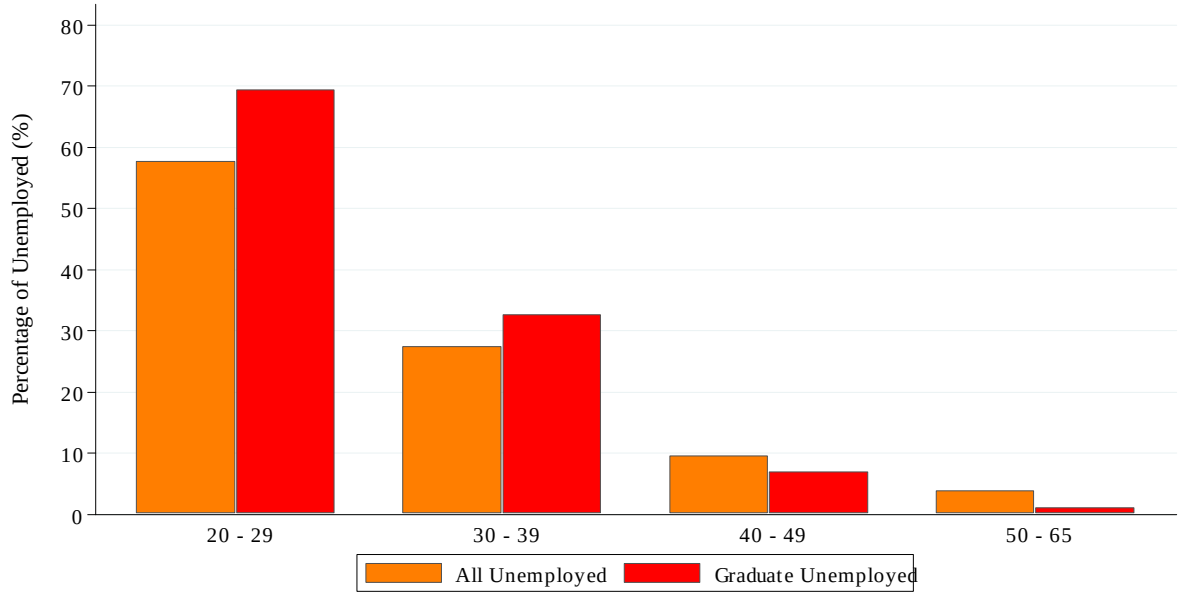
Figure 22 – *Time since last worked for graduates by age cohort (2011)*



Source: Own calculations, QLFS2011Q1-QLFS2011Q4. **Notes:** Estimates are weighted, adjusted for complex survey design and are calculated only for narrowly unemployed graduates, aged 20 – 65, who have at some stage in the past been employed.

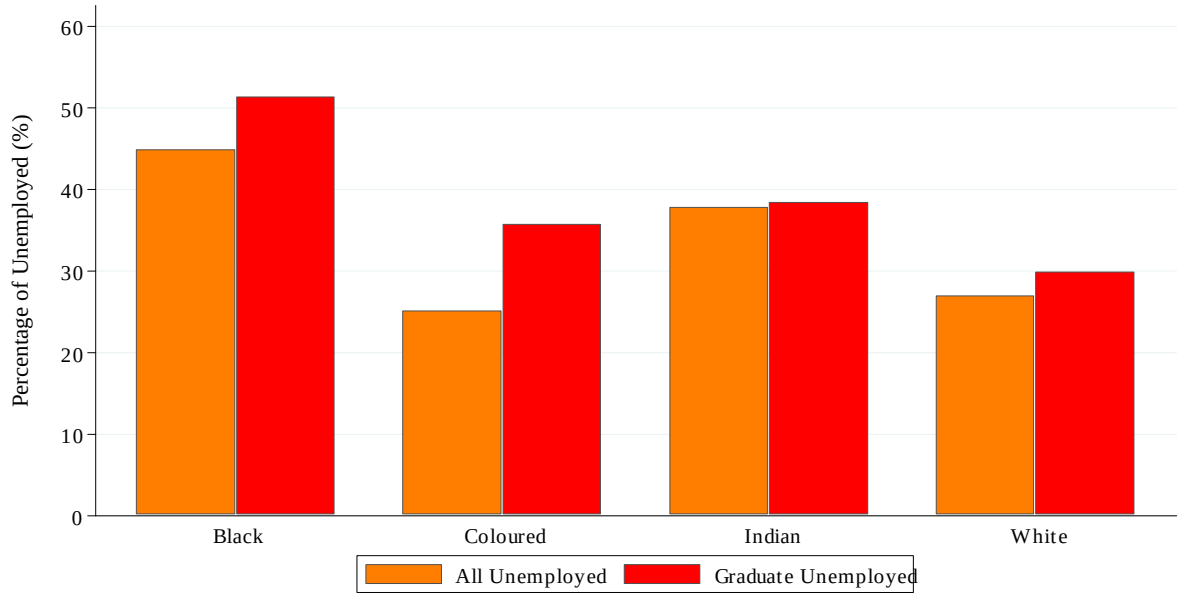
[8] Data used to compile this graph were obtained from the combined QLFS2011Q1, QLFS2011Q2, QLFS2011Q3, and QLFS2011Q4 datasets in order to maximize the number of observations within each cell and thus minimise the magnitudes of the standard errors of the estimates that accrue to sampling (there would otherwise be very few observations in certain cells). Preliminary analysis of the trends in unemployment duration over the four quarters of 2011 revealed that the overall proportions (across all levels of educational attainment, not just graduates) within each cell remained virtually unchanged over the four periods. It was consequently assumed that pooling of the four datasets for present purpose would not be contentious.

Figure 23 – *Percentage of narrow unemployed who have never worked by age cohort (2008 - 2011)*



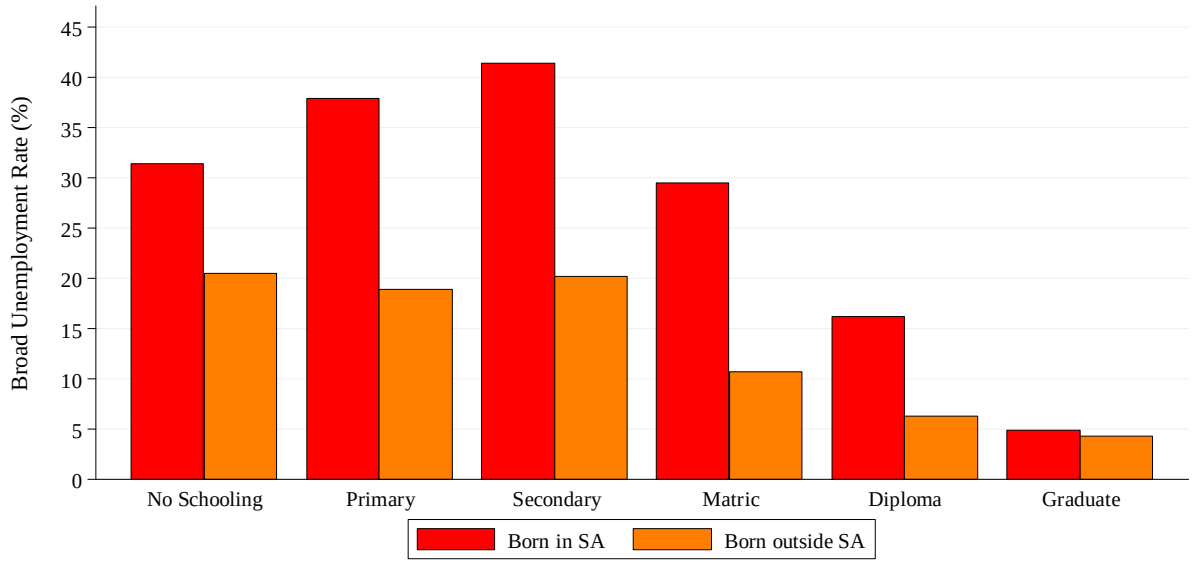
Source: Own calculations, QLFS2008Q1-QLFS2011Q4. **Notes:** Estimates are weighted, adjusted for complex survey design and are calculated only for narrowly unemployed individuals.

Figure 24 – *Percentage of narrow unemployed who have never worked by race (2008 - 2011)*



Source: Own calculations, QLFS2008Q1-QLFS2011Q4. **Notes:** Estimates are weighted, adjusted for complex survey design and are calculated only for narrowly unemployed individuals.

Figure 25 – *Unemployment rates for working-age individuals born inside and born outside South Africa (2007)*



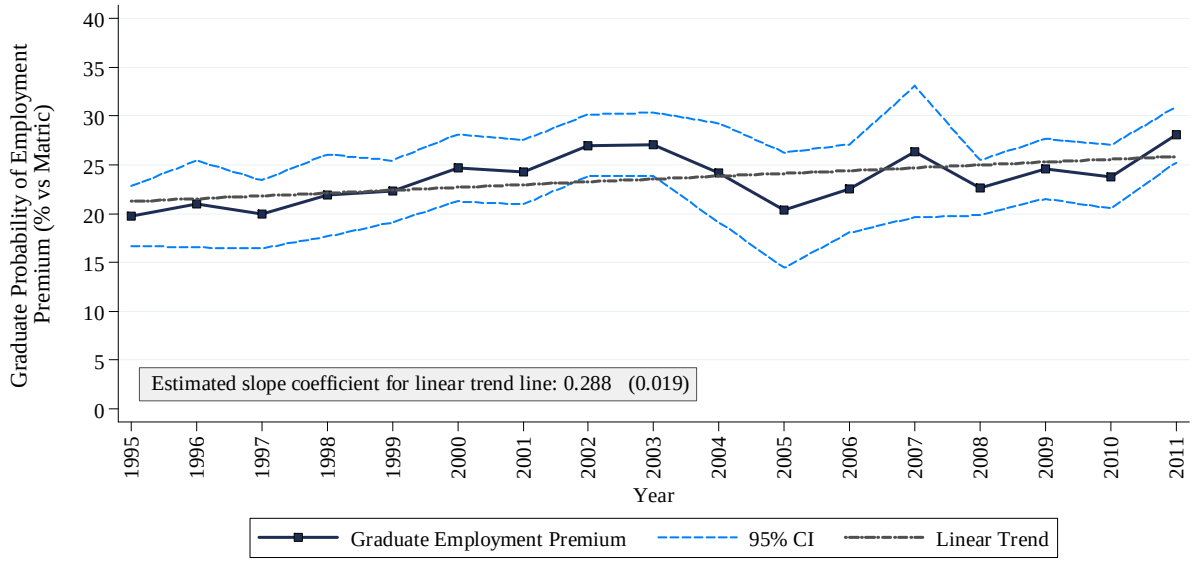
Source: Own calculations, 2007 Community Survey. **Notes:** Estimates are weighted and are calculated only for individuals in the population of working-age (15 – 65 year-olds).

Table 18 – *Labour force participation, employment and unemployment numbers and rates by education level for South African born and non-South African born individuals (2007)*

	Labour Force Participation		Employment		Unemployment	
	N	***%***	***N***	***%***	***N***	***%***
			Individuals born in SA			
No Schooling	825 334	*44.94*	566 420	*30.84*	258 914	*31.37*
Primary	3 248 659	*58.60*	2 016 723	*36.38*	1 231 936	*37.92*
Secondary	6 627 057	*52.35*	3 883 168	*30.67*	2 743 889	*41.40*
Matric	4 627 653	*76.46*	3 261 455	*53.89*	1 366 198	*29.52*
Diploma	915 864	*84.19*	767 403	*70.54*	148 461	*16.21*
Graduate	936 850	*87.89*	891 008	*83.59*	45 842	*4.89*
			Individuals born outside SA			
No Schooling	70 354	*74.38*	55 943	*59.15*	14 411	*20.48*
Primary	168 656	*84.91*	136 783	*68.86*	31 873	*18.90*
Secondary	231 909	*77.07*	185 156	*61.53*	46 753	*20.16*
Matric	179 154	*76.16*	160 114	*68.06*	19 040	*10.63*
Diploma	51 643	*80.25*	48 416	*75.24*	3 227	*6.25*
Graduate	108 950	*82.13*	104 303	*78.63*	4 647	*4.27*

Source: Own calculations, 2007 Community Survey. **Notes:** Estimates are weighted and are calculated only for the population of working-age (15 – 65 year-olds).

Figure 26 – *Graduate probability of employment premium versus matric (1995 - 2011)*



Source: Own calculations, OHS 1995 – 1999, September LFS 2000 – 2007, QLFS2008Q3 – QLFS2011Q3. **Notes:** The 'Graduate Employment Premium' reflects the average marginal rate of return to holding a graduate educational qualification vis-à-vis Matric in terms of the probability of procuring employment, ceteris paribus, and is derived from the probit estimations run for each year under consideration. All of the probit regressions included controls for age, race, gender, province of residence, and educational qualifications (results are available from the authors on request). Estimates are weighted and calculated only for graduates in the population of working-age (15-65 year-olds). The 95% CI lines represent the upper and lower bounds of the 95% confidence interval for the estimate of the 'graduate employment premium'. The linear trend line is fitted using the predictions

from a linear regression of the 'graduate employment premium' on the year of observation. The estimated slope coefficient for the linear trend line and its standard error (in parentheses) are reported in the note in the lower left corner of the figure.

APPENDIX: DATA, DEFINITIONS AND CLASSIFICATIONS

Notes on definitions:

In this document the term 'graduates' is used as a collective noun for all individuals who have obtained bachelor's degrees or equivalents and higher educational qualifications (honours, Masters, and doctorate degrees). All individuals with less than these tertiary qualifications - e.g. those with only post-secondary diplomas or certificates - are excluded from the graduate classification.

Notes on DATA:

LFS distinguishes between employed, unemployed and inactive and includes a question that directly enables identification of broad and narrow labour force participation. QLFS distinguishes between employed, unemployed, inactive and discouraged job seekers and indirectly allows for the identification of broad and narrow labour force participation.

LFS:

- Employed
  - Worked at least 1hr in the last 7days at any type of work/business excluding begging for money **or**
  - Has not worked at least 1hr in the last 7days at any type of work/business excluding begging for money, but will definitely return to work
- Narrow Unemployed
  - Has not worked at least 1hr in the last 7 days at any type of work/business excluding begging for money **and**
  - Will not definitely be returning to work **and**
    - Has found a job and will start working soon **or**
    - Has taken action to look for work/start business in the last 4 weeks
- Discouraged Unemployed (Indirect)
  - Has not worked at least 1hr in the last 7 days at any type of work/business excluding begging for money **and**
  - Will not definitely be returning to work **and**
  - Has not found a job and will start working soon **and**
  - Has not taken action to look or work/start business in the last 4 weeks **and**
  - Will accept a suitable job offer and be willing to start work within 2 weeks
- Narrow Labour Force
  - Employed + Narrow Unemployed
- Broad Labour Force
  - Employed + Narrow Unemployed + Discouraged Unemployed

QLFS

- Employed (Q. 2.4)
  - Worked in the last week for wage, salary, commission or payment of any kind **or**
  - Run or do any kind of business for yourself or with one or more partners **or**
  - Help without being paid in any kind of business run by your household **or**

    - Did not do any of the above, but would definitely be returning to one of the aforementioned activities.
- Narrow Unemployed
    - Was not involved in any of the activities that would qualify one as being 'employment' **and**
        - Looked for a job or tried to start a business in the last 4 weeks **or**
        - Already arranged to accept job or start a business later **and**
    - Would be able to start work (if offered job) or business in the next 7 days
- Discouraged Unemployed (Direct)
    - Was not involved in any of the activities that would qualify one as being employed **and**
    - Did not look for a job or try to start a business in the last 4 weeks **and**
    - Has not already arranged to accept a job or start business later **and**
    - Would be willing to start work (if offered job) or start business in last 7 days
- Narrow Labour Force
    - Employed + Narrow Unemployed
- Broad Labour Force
    - Employed + Narrow Unemployed + Discouraged Unemployed

Definitions and changes in the definitions of broad and narrow labour force and unemployment

The broad labour force comprises all employed and broad unemployed individuals whereas the narrow labour force comprises all employed and narrow unemployed individuals. The methodology used by Stats SA in the classification of broad and narrow unemployment has changed considerably between the OHS, LFS, and QLFS surveys.[i] The tables below provide crude classifications of narrow and broad unemployment for each of the three surveys to illustrate how the broad-narrow classification methodology has changed between 1995 and 2011.

Table 19 - *Definitions of broad and narrow unemployment*

	Narrow Unemployment	**Broad Unemployment**
OHS:	All individuals who **(1)** have not been engaged in full-time, part-time, or casual work in the past week and who **(2)** are not merely absent from work on a temporary basis and who **(3)** took action to look for work in the last 4 weeks.	All individuals who **(1)** have not been engaged in full-time, part-time, or casual work in the past week and who **(2)** are not merely absent from work on a temporary basis and who **(3)** took action to look for work in the last 4 weeks or who **(4)** have not actively been looking for work in the last 4 weeks, but would be willing to start work within 1 week if they were offered a suitable job.
LFS:	All individuals who **(1)** have not worked at least 1 hour in the past week and who **(2)** will not definitely be returning to work or starting an existing new job soon and who **(3)** actively looked for work in the last 4 weeks.	All individuals who **(1)** have not worked at least 1 hour in the past week and who **(2)** will not definitely be returning to work or starting work at a new job soon and who **(3)** actively looked for work in the last 4 weeks or who **(4)** have not actively been looking for works in the last 4 weeks, but would be willing to start work within 2 weeks if they were offered a suitable job.
QLFS:	All individuals who **(1)** have not worked at least 1 hour in the past week and who **(2)** have not already arranged to return to work or start work at a new job soon and who **(3)** actively looked for work in the last 4 weeks.	All individuals who **(1)** have not worked at least 1 hour in the past week and who **(2)** have not already arranged to return to work or start work at a new job soon and who **(3)** actively looked for work in the last 4 weeks or who **(4)** have not actively been looking for work in the last 4 weeks, but would be willing to start work within 1 week if they were offered a suitable job.

Terms and definitions used throughout the report

Population of Working Age/ Working-age Population:	15 to 65 year-old individuals
Graduates:	All individuals who have obtained bachelors' degrees or equivalents and higher educational qualifications (honours, Masters, and doctorate degrees). As such, all individuals with less than the aforementioned tertiary qualifications - e.g. post-secondary diplomas or certificates - are excluded from the graduate classification.
Broad Labour Force Participation Rate:	The percentage of the working-age population that is part of the broad labour force.
Narrow Labour Force Participation Rate:	The percentage of the working-age population that is part of the narrow labour force.
Employment Rate:	The percentage of the working-age population that is employed.
Broad Unemployment Rate:	The percentage of individuals in the broad labour force who are unemployed according to the narrow definition of the labour force.
Narrow Unemployment Rate:	The percentage of individuals in the narrow labour force who are unemployed according to the narrow definition of the labour force.

[i] The questions that were posed to OHS survey respondents from which the broad and narrow definitions of unemployment can be derived changed slightly between 1995 and 1996, between 1996 and 1997, and again between 1998 and 1999. See Yu (2007) for a comprehensive discussion of the changes between different waves of the OHS and the comparability of the OHS and LFS surveys, and Yu (2009) for a comprehensive discussion of the comparability of the LFS and QLFS surveys.