Youths in the South African labour market since the transition:
A study of changes between 1995 and 2011

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ABSTRACT

The persistently high unemployment rate has always been one of the most pressing socio-economic problems of the South African economy. There is a general consensus that unemployment is structural, as there is a mismatch between the skills demanded by employers for the available jobs and the skills supplied by the labour force seeking work. As there is an increase of demand for highly-skilled workers with the adoption of capital-intensive and technologically more advanced production processes, most of the unemployed are unskilled and not well educated.

The unemployment rate is much higher amongst youths than in amongst the older workforce. Also, youths are less likely to find employment and employed youths are relatively more likely to be retrenched during recessions due to their lack of experience. The announcement by the Finance Minister in the February 2011 Budget Speech that a youth wage subsidy will be implemented in 2012 was based on the hope that the subsidy program would boost the labour demand for youths, and decrease youth unemployment.

Hence, this paper first analyses the demographic and education characteristics of the youth labour force, employed and unemployed, using the 1995-2011 labour survey data released by Statistics South Africa. The paper then investigates the main causes of youth unemployment, such as skills mismatch, quality of education, lack of experience, expectations of the youths, and the impact of wage rigidities.

The paper then discusses how the wage subsidy program works, as well as its potential merits and drawbacks. It is concluded that while a wage subsidy might be effective in facilitating the entry of young workers into the job market, it is not sufficient to increase and maintain youth employment. Various other issues need to be addressed, such as reducing and preventing early drop out from schools; improving the quality of education in former Black schools; more attention to critical subjects like Mathematics and Science to prevent skills mismatch; more emphasis on practical, skills-oriented, vocational training at higher education levels; curtailing restrictive labour legislation that results in wage rigidity, productivity stagnation or decline, and increase in indirect costs, which eventually discourage employers to employ youth workers; and more rapid economic growth that is employment elastic.

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1.   Introduction

The persistently high unemployment has always been one of the most pressing socio-economic problems of the South African economy. There is a general consensus that unemployment is structural, as there is a mismatch between the skills demanded by employers for the available jobs and the skills supplied by the labour force seeking work. Since there is an increase of demand for highly-skilled workers with the adoption of capital-intensive and technologically more advanced production processes, most of the unemployed are unskilled and not well educated.

Job creation has always been an important policy objective. For example, GEAR (Growth, Employment and Redistribution) aimed at creating 400 000 jobs per annum and thereby achieving an annual employment growth rate of 6%, while ASGISA (Accelerated and Shared Growth Initiative of South Africa) had the goal of reducing the narrow unemployment rate to below 15% by 2014. Moreover, the introduction of legislation such as the Employment Equity Act of 1998 and the Basic Conditions of Employment Act of 1997 was intended to help improving the employment prospects and working conditions of the previously disadvantaged groups (i.e., Africans[2], females, disabled). Furthermore, the recently introduced New Growth Path targets the creation of 5 million jobs over the next 10 years, with particular focus on creating jobs in infrastructure, agriculture, mining, the green economy, tourism, business services as well as manufacturing.

Unemployment is particular high amongst the labour force in the younger age cohorts (Burger and Woolard, 2005; Oosthuizen, 2006; Bhorat, 2009). Also, youths are associated with a lower likelihood of finding employment and the employed youths are relatively more likely to be retrenched during recessions due to their lack of experience. With the announcement by the South African Finance Minister in the February 2011 Budget Speech that the youth wage subsidy will be implemented on 1 April 2012[3], it is expected that it would boost the labour demand for the youths, and decrease youth unemployment.

Hence, the first aim of this paper is to look at the demographic and education characteristics of the youth labour force, employed and unemployed, using the data from the 1995-1999 October Household Surveys (OHSs), 2000-2007 Labour Force Surveys (LFSs) and 2008Q1-2011Q3 Quarterly Labour Force Surveys (QLFSs) released by Statistics South Africa (Stats SA).[4] Secondly, the main causes of youth unemployment will be investigated, such as skills mismatch, quality of education, lack of experience, expectations of the youth, and the impact of wage rigidities.

As only new workers aged between 18 and 29 years as well as existing workers between 18 and 24 years are eligible for the youth wage subsidy, for the remainder of the paper, they are referred to as youths, while people aged between 30 and 65 years are referred to as adults. That is, people aged 15-17 years are excluded from the forthcoming analyses, unless stated otherwise[5]. In addition, the narrow labour market status will be adopted in this paper, due to incomparability

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[2] Africans include blacks, coloureds and Indians.

[3] At the time of writing, the program is still not implemented yet.

[4] OHS took place once a year in 1993-1999. It was replaced by LFS since 2000, and LFS took place twice a year. Since 2008, LFS was replaced by QLFS, which takes place four times a year. Hence, for the remaining of the paper, the OHSs will be referred to as OHS 1995, OHS 1996, etc., while the LFSs will be referred to as LFS 2000a (for the first round of LFS in 2000), LFS 2000b (second round in 2000), LFS 2001a, and so forth. The QLFSs will be referred to as QLFS 2008Q1 (for the first round of QLFS in 2008), QLFS 2008Q2 (second round in 2008), and so forth.

[5] People aged 15 and 17 years are ineligible for the youth wage subsidy. In addition, they only account for less than 1% of the narrow labour force in the surveys under study, so excluding them would not significantly affect the results of the analyses.

issue of the broad labour market status derivation methodologies between OHSs/LFSs and QLFSs (Yu 2009).

2.   South African youths in the labour market since the transition

This section uses the aforementioned Stats SA data to investigate the demographic and educational attainment characteristics of the narrow labour force (LF) of the youth, before looking at the narrow labour force participation rates (LFPRs). Next, employment and unemployment numbers of the youth, as well as their characteristics are analyzed.

2.1   Labour force

Table 1 presents the narrow LF number by age cohort. The youth LF increased from 3.72 million in OHS 1995 to 5.74 million in QLFS 2011Q3 (it peaked at 6.24 million in QLFS 2008Q1) – an increase of 54.3%. In contrast, the adult narrow LF increased by 54.9% between the two surveys, from 7.74 million to 11.99 million. Youths as proportion of total LF increased from 32.5% in 1995 before peaking at about 36.6% in 2001. Since then, it declined slightly to about one-thirds in recent surveys.

The black share of the youth LF increased from 65.1% in 1995 to about 78% in 2011. In contrast, the black share of the adult LF was very stable at between 70% and 72% since 2000 (See Figure 1). With regard to gender, the male share of the youth LF has always been dominant in the surveys under study, hovering around the 53%-56% range (while males accounted for 55%-59% of adult LF).

Nearly half of the youth LF came from the Gauteng and KwaZulu-Natal provinces (their respective shares being 28.2% and 18.9% respectively in QLFS 2011Q3), followed by Western Cape and Eastern Cape (their respective share being 13.5% and 11.1% in QLFS 2011Q3). In both youth and adult LF, approximately three quarters of them resided in urban areas in 2011[6]. The proportion of youth LF who were married or living together with their partners dropped from 29.9% in 1995 to just above 20% in QLFS 2011Q3, while it dropped from 71.3% to 59.3% during the same period when looking at the adult LF.

With regard to the educational attainment of the LF, Figure 2 shows that the youth LF has always been more educated on average compared with the adult LF, as the mean years of educational attainment of the former group was higher in all surveys under study. However, the increase was more rapid in the adult LF, as indicated by the steeper slope of the gray line in the figure. The less rapid increase of mean education years of the youth LF could be attributed to the fact that, the youth LF are the ones who dropped out from school early due to reasons like poverty (e.g., the parents could not afford to pay for their children's studies, the youngsters need to work to earn money to support the family with many unemployed members, etc.) and inability to cope with the school work, but the more educated youths were still pursuing education full-time at the time of the survey and have not entered the labour market for work yet (i.e., they were still inactive at the time of the survey).

Looking at the educational attainment of the LF in greater detail, the proportion of youth LF with Matric or above increased from 43.3% in OHS 1995 to 51.1% in QLFS 2011Q3 (an increase of 7.8 percentage points), while this proportion increased more rapidly from 29.9% to 45.9% (an increase of 16.0% percentage points) in the case of adult LF. In contrast, the proportion of youth LF with post-Matric qualifications was lower (compared with the adult LF), as this proportion

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[6] The area type (urban vs. rural) variable was only available in OHS 1995-1999, LFS 2000a-LFS 2004a, and since QLFS 2010Q2.

fluctuated between 9% and 11% in almost all surveys under study, but in the adult LF, this proportion increased from 12.6% in OHS 1995 to 18.4% in QLFS 2011Q3.

Furthermore, Figure 3 presents the mean years of educational attainment of youth LF by race. Blacks and coloureds, despite showing relatively more increase in mean years of education, remained relatively less educated, compared with Whites and Indians, in all surveys under study. Figure 4 provides more information on the black youth LF by showing that the proportion of these people with at least Matric increased continuously during the years, from 34.9% in OHS 1995 to 46.8% in QLFS 2011Q3. However, this proportion remains low, when compared with Indians and whites, as indicated by Figure 5. Finally, the educational attainment of youth LF by gender is investigated, and Figure 6 shows that females were approximately 0.5 year more educated on average than the males.

2.2 Labour force participation rates

Looking at narrow labour force participation rates (LFPRs), the column chart in Figure 7 shows that the youth LFPR increased between OHS 1996 and LFS 2000a, before fluctuating within the 50%-55% range. It peaked at 56.3% in QLFS 2008Q1, before declining by nearly nine percentage points to 47.6% in QLFS 2010Q4 (this decrease could be due to the impact of global recession). It increased slightly to 49.0% in QLFS 2011Q3. The two line charts show that the LFPR of 25-29 years has always been greater than that of people aged 18-24 years. Their respective LFPRs are 36.1% and 69.0% in QLFS 2011Q3. The much lower LFPR of people aged 18-24 years is mainly attributable to the fact that many of them were still enrolling at educational institutions but inactive in the labour force at the time of the surveys.

Comparing the youth LFPR with those of the other age cohorts, Figure 8 shows that the LFPRs were the highest in the 30-34 years and 35-44 years cohorts (about 75% in 2011), followed by 45-54 years (about 67% in 2011). LFPR was the lowest for people aged 55-65 years (just below 39% in 2011). Finally, Figures 9 and 10 provide more information by presenting the youth LFPRs by race and gender respectively, and the results show that LFPRs were relatively lower amongst Blacks and females during the period under investigation.

2.3 Employment

Table 2 presents the number of employed in each age cohort. Youth employment increased from 2.63 million in OHS 1995 to 3.37 million in QLFS 2011Q3 – an increase of only 28.14%. This increase was less rapid, compared with the increase of adult employment, from 6.83 million to 9.94 million during the same period – an increase of 45.68%[7]. Furthermore, youth employment peaked at 3.92 million in QLFS 2008Q1, before a downward trend took place. In fact, between QLFS 2008Q1 and QLFS 2011Q3, 0.55 million youth workers were retrenched, but there was an increase of 0.28 million of adult employed during the same period.

Looking at the demographic characteristics of the youth employed in greater detail, Figure 11 shows that the Black share increased in general, from just below 55% in 1996 to nearly three quarters in 2011. The similar increase was not observed when looking at the adult employed, as the Black share always hovered in the 65%-70% range. With regard to gender of the youth employed, the male share was more dominant in all surveys under study (approximately 59% in QLFS 2011Q3). In addition, nearly half of the youth employed resided in either Gauteng or KwaZulu-Natal. Slightly above three quarter of the youth workers resided in urban areas.

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[7] The youth employment elasticity coefficient (i.e., percentage change of youth employment over percentage change of real GDP) between OHS 1995 and QLFS 2011Q3 was only 0.44, while the adult employment elasticity coefficient when comparing these two surveys was 0.72. The coefficient was 0.64 when looking at employed aged 15-65 years.

Finally, as far as the educational attainment of the youth employed are concerned, they became more educated throughout the years, as Figure 12 shows that the proportion of employed with at least Matric increased from 47.1% in OHS 1995 to 53.2% in QLFS 2011Q3 (this proportion peaked at 54.9% in QLFS 2009Q3). This result is expected, as the demand for highly-skilled labour has increased, as the South African economy becomes more capital-intensive.

2.4   Unemployment

The number of narrow youth unemployed more than doubled from 1.08 million in OHS 1995 to 2.37 million in QLFS 2011Q3 (See Table 3) – an increase of 119.4% between the two surveys. The youth unemployed number reached its maximum at 2.91 million in LFS 2003a, before fluctuating between 2.2 million and 2.5 million until 2011. The number of adult unemployed also more than doubled from 0.91 million to 2.04 million between the two surveys – an increase of 124.2%. Youth as proportion of all unemployed exceeded 50% in all surveys except OHS 1996, as indicated by the last column of Table 3.

The demographic characteristics of the youth unemployed did not show any significant changes throughout the years, as nearly 90% of them were Blacks, slightly above half of them were females, nearly half of them resided at Gauteng or KwaZulu-Natal. Finally, the youth unemployed were more educated during the years, as the proportion with at least Matric increased from just above one-thirds in OHS 1995 to nearly 47% in QLFS 2011Q3.

Upon further investigation of the narrow unemployed, it was found that a much lower proportion of them worked before (28.0% in 18-24 years and 47.8% in 25-29 years groups in QLFS 2011Q3) during the period under study, compared with the adult unemployed (See Figure 13). In contrast, Figure 14 shows that a higher proportion of youth unemployed were actively[8] seeking work. Moreover, a smaller proportion of the youth unemployed, in particular those aged 18-24 years, were seeking work for more than three years (See Figure 15), and a smaller proportion of youth unemployed (who worked previously) last worked more than three years ago (Figure 16), compared with adult unemployed. This implies chronic unemployment was a more serious problem amongst the elderly unemployed[9].

2.5   Unemployment rates

Figure 17 presents the youth narrow unemployment rates since 1995. The column chart shows that this rate increased between OHS 1995 and LFS 2003a (peaking at 49.0% in the latter survey), before showing a decline until QLFS 2008Q4 (unemployment rate was 36.4% - the lowest since 2000). It went up again since 2009, mainly due to the impact of the global recession. It reached 41.3% in QLFS 2011Q3. Looking at youth unemployment rate in greater detail, the two line charts in the same figure shows that this rate was always greater in the 18-24 years cohort. This could be explained by the fact that these young people were relatively less educated and experienced compared with those aged 25-29 years.

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[8] This means they looked for work by waiting / registering at employment agency, enquired at workplaces, placed / answered advertisements, or searched through job advertisements or on internet.

[9] Burger and Woolard (2005) argue that the unemployed could be categorized as follows:

o   The youngest group with complete secondary or post-secondary education. Demand-side policies to stimulate higher economic growth as well as supply-side policies like vocational training could help improving their chance of employment.

o   Older group (at least 35 years), African females with very low education and no employment experience. It was argued that these people were most like to be unemployable (i.e., chronically unemployed).

o   Older individuals with incomplete secondary education and some forms of labour market experience. Some form of skills upgrading was required before these people could be absorbed into the labour market again.

Figure 18 compares the youth unemployment rates with the adult unemployment rates in different age groups, and it can be seen that youth unemployment rate was much higher. Looking at the adults, unemployment rate was the highest for those aged 30-34 years (about 25% in QLFS 2011Q3 – only slightly above half of the youth unemployment rate). Unemployment rate decreased when moving to the elder age groups. In all age groups, the unemployment rate was the highest in LFS 2003a.

Figures 19 and 20 present the youth unemployment rates by race and gender respectively. As expected, the Black youth unemployment rate was the highest in all surveys (at 45.7% in QLFS 2011Q3 – four times higher than the White youth unemployment rate). Moreover, female youth unemployment was greater than the male youth unemployment rate in all surveys under study (their respective rates being 47.3% and 36.2% in QLFS 2011Q3).

With regard to the relationship between educational attainment and employment likelihood of the youth, Figure 21 shows that unemployment rate decreased as one moved across to the more educated categories. Interestingly, the unemployment rate of youths with Degree or above exceeded 10% in most surveys under study. Figure 22 shows the unemployment rates by educational attainment and age cohort in QLFS 2011Q3, and youth unemployment rate (followed by the unemployment rate of people aged 30-34 years) was always the highest at all educational attainment categories. Finally, Figure 23 shows that Black youth unemployment rate was higher compared with other races, at all educational attainment categories. The abovementioned findings imply that there could be differences in the quality of the education received by the youths, and that employment discrimination by employers (against the youths) might have taken place. These issues will be investigated later.

2.6 Target growth rates, actual growth rates and employment absorption rates

As discussed in Section 2, compared with the adults, the youth labour force increased relatively more rapidly but employment growth was slower during the period under investigation. Hence, the increase in the number of unemployed as well as unemployment rate was relatively faster in the case of youths. These findings are confirmed by the results on target growth rate (TGR[10]), actual growth rate (AGR[11]), and employment absorption rate (EAR[12]) between OHS 1995 and QLFS 2011Q3 at different age groups (See Figure 24). The TGR was the second and third highest in the two youth cohorts – 80.7% and 74.1% in the 18-24 years and 25-29 years cohorts respectively. TGR was the highest in the 55-65 years cohort (86.2%). AGR was only 28.0% in the youths (it was as low as 18.1% when looking at those 18-24 years). As a result, EAR was the lowest in the youth cohort at 36.4% (EARs were 22.4% and 47.1% in the 18-24 years and 25-29 years cohorts respectively). EAR increased when moving across to elder age cohorts (increasing from 58.6% in the 30-24 years cohort to 94.3% in the 55-65 years cohort).

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[10] The target growth rate (TRG) measures how fast employment would have had to expand in order to provide work for all the net entrants to the labour market from period X to period Y. Period X and Y need not be two consecutive years. $TGR = \dfrac{LF_Y - LF_X}{E_X}$, where LF and E stand for the number of labour force and employed respectively.

[11] The actual growth rate (AGR) is the growth rate of the number of employed from period X to period Y. $AGR = \dfrac{E_Y - E_X}{E_X}$.

[12] The employment absorption rate (EAR) measures the proportion of the net increase in the labour force from period X to period Y that finds employment during the same period. $EAR = \dfrac{E_Y - E_X}{LF_Y - LF_X} = \dfrac{AGR}{TGR}$. An EAR of 100% means that the full net increase in the labour force between the two periods were employed.

To conclude, the results indicate that the employment creation for the youths did not take place rapid enough to absorb the net labour force entrants during the 16-year period under study. Hence, the unemployment problem was most serious amongst youths.

2.7 Multivariate analyses of youth employment likelihood

The preceding analyses, although important and useful, are limited in that only one or two variables were taken into account when describing labour force participation, employment or unemployment. A wide variety of variables could account for the likelihood of participation and employment. This sub-section aims to investigate the role of various explanatory variables in influencing whether or not a young person is employed, conditional on participation. In other words, in an effort to avoid selection bias on the employment likelihood regression, a two-step Heckman method is applied. Firstly, participation probit is estimated, and estimates from this equation are used to derive an inverse Mills ratio (i.e. the lambda). This lambda is then included in the second equation (i.e. employment probit).

The following explanatory variables are used to conduct a Heckprobit regression on employment likelihood of narrow youth labour force:
- Age category dummy variable (Reference group: 25-29 years)
- Race dummy variables (Reference group: Black)
- Gender dummy variable (Reference group: Female)
- Province dummy variables (Reference group: Eastern Cape)
- Educational attainment spline variables: No education to Grade 6 (incomplete primary), Grade 7 to Grade 11 (incomplete secondary)
- Educational attainment dummy variables: Matric, Matric plus Certificate or Diploma, Degree or above
- Household headship dummy variable (Reference group: Not household head)
- Marital status dummy variable (Reference group: unmarried/divorced/widowed)
- Lambda derived from the probit regression on narrow labour force participation likelihood

The results are presented in Table 4 and Figure 25. With the exception of OHS 1995-1996, youths aged 25-29 years were associated with greater likelihood of employment. Also, as expected, non-Blacks, males and those with post-Matric qualifications enjoyed a greater probability of finding employment. Being married or household head at the time of the survey resulted in a greater likelihood of employment. Finally, looking at the provincial dummy variables, their signs were positive in some surveys but negative in other surveys, with the exception of the Western Cape dummy variable, as the youth labour force residing in this province was always associated with greater likelihood of employment, compared with those from Eastern Cape.

3. Causes of youth unemployment

There are a number of reasons explaining why the youth unemployment rate is so high (See Figure 26). From the labour supply side, it is argued (Mlatsheni 2007, Guma 2011 & Smith 2011) that youths do not have sufficient network to obtain information on job opportunities. Even if they do, they do not have the financial resources and mobility to successfully seek work and/or relocate closer to the places where job opportunities exist. Hence, they might stay close to home where there are not too many jobs available. Another possible reason from the supply side is that the youths (especially those coming from well-resourced families) have too high expectations about their probability of being employed and too high reservation wage, as well as over-estimate their chances of finding full-time permanent employment, thereby taking long time unnecessarily to 'shop around' for a job that meets their expectations (Mlatsheni 2007; Von Fintel & Black 2007; Rankin & Roberts 2011; Roberts 2011).

Another reason accounting for youth unemployment is their education. As discussed in Section 2, the youth labour force are relatively less educated (quantity of education), especially black youths. This could be attributed to reasons such as early drop out. As the economy demands highly-skilled labour, an incomplete secondary education is simply not enough to guarantee employment (Lam, Leibbrandt & Mlatsheni 2008, Burn, Edwards & Pauw 2010). With regard to their quality of education, South African educational quality lags far behind other countries, as indicated by their disappointing performance in international tests such as SACMEQ (the Southern Africa Consortium for Monitoring Educational Quality)[13], TIMSS (Trends in International Mathematics and Science Study) and PIRLS (Progress in International Reading Literacy Study), especially students from the former Black schools (Van der Berg 2007 & 2008). Even if the youths pursued post-secondary education, they might have enrolled in the wrong study fields (such as Humanities and Arts, Education, but there is already an over-supply of graduates from these fields; there is rather an under-supply of graduates from fields like Engineering and Medical Sciences[14]) and/or attended institutions that are not recognized by employers, since the quality of the qualifications obtained (e.g., post-Matric certificate or diploma) might be inferior (Mlatsheni & Rospabe 2002, Moleke 2005, Altman 2007, CICLASS 2007, Pauw, Oosthuizen & Van der Westhuizen 2008). This is the case especially in the case of black youths. As a result, these youth graduates are not demanded by the employers.

In addition to the abovementioned skills mismatch problem, youths often lack 'soft' skills such as communication skills, personal presentation, work readiness capabilities, emotional maturity, and ability to compete with older workers[15] (Rees 1986, Pauw et al. 2008, Studies in Poverty and Inequality Institute 2010, National Treasury 2011). Even if the youths possess these skills, employers might still feel that it might be too risky to employ them, as the youths lack experience and their productivity is unknown. In addition, as the inexperience youths need training, the employers might be worried that, once trained, the better youth workers might leave for other jobs (Levinsohn 2008). Furthermore, as the provisions of the Labour Relations Act make it very difficult for employers to shed non-performing workers (Van Aardt 2009: 144), it would further make the employers more reluctant to take the risk of employing young workers, who are much more inexperienced and their productivity is not fully known.

High minimum wage, wage rigidity, as well as the extension of collective bargaining agreements[16] could also lead to an increase of youth unemployment (Nattrass 2000, Von Fintel & Burger 2009, National Treasury 2011). As seen in Figure 29, larger firms, using more capital-intensive production techniques, achieve higher labour productivity and hence pay higher wages than smaller firms. Hence, it is likely that the bargaining councils will be dominated by these larger

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[13] Figures 27 and 28 present the mean pupil Reading and Mathematics test scores of the SACMEQ II and III participants by country, and it can be seen that South Africa's performance has not been impressive. In addition, the standard deviation of both scores is very high in the case of South Africa (ranked third in Reading and second in Mathematics in SACMEQ III, amongst all countries).

[14] The under-supply of graduates from these fields is mainly due to the decreasing number of students enrolling and passing Mathematics and Physical Science in their matriculation year as they struggle to cope with these subjects during their school years (Centre for Development and Enterprise 2007), as well as the struggle of tertiary institutions to retain high-quality teaching and research staff (Du Toit and Roodt 2008).

[15] This is more likely in the case of blacks, who often speak a different language as employers and often have lower educational attainment. Hence, an employer might find it costly to restructure the workplace to accommodate these differences, and/or to provide additional training. Hence, according to the transaction costs model, the employer might either refuse to employ blacks, or is forced to offset the aforementioned transaction costs by paying lower wages (Barker 2008: 232).

[16] Collective bargaining system in South Africa is characterized by an extension principle, whereby the minimum wage agreements that are reached between trade unions and employer organizations are legal binding on firms that did not participate in the negotiations across the industry concerned (Nattrass 2000). With regarding to the minimum wage issue, a recent breakthrough is that, in the clothing industry, a three-year wage deal was secured by the South African Clothing & Textile Workers' Union (Sactwu) that makes it possible to pay new workers 20%-30% less than existing workers (Financial Mail 2011).

firms. The minimum wage agreed on during the collective bargaining process is often so high that it could only be afforded by the larger firms, but not by the smaller firms. Hence, the latter firms, which are more labour-intensive and are potentially the main source of employment creation, would either close down or retrench people, thereby increasing unemployment, including youth unemployment (Nattrass 2000). This could be explained by Figure 30. The market-clearing wage and employment levels for the youths should be W_0 and L_0 respectively, where D_1 and S_1 intersect. However, due to the imposition of the minimum wage level of W_1, only L_1 are employed, and the number of youth unemployed equals $(L_S - L_1)$. As some firms end up completely closing down (not being able to afford to pay the minimum wage), labour demand decreases to D_2. Youth employment declines to L_2, and youth unemployment increases to $(L_S - L_2)$.

It is also sometimes argued that there is an inherent asymmetry between the desires of the currently employed (i.e., insiders) and the unemployed (outsiders). The former group prefer wage levels to remain high, while the latter group are actually willing to accept lower wages in order to obtain employment. However, the views of these outsiders are not represented when trade unions and employers negotiate over remuneration of workers during collective bargaining, wages are sticky and slow to fall during the times of low labour productivity and labour demand. In fact, many wages are bargained upwards even during the time of economic crisis. Eventually, the outsiders (a majority of them being youths) will remain unemployed for longer, thereby lengthening the duration of unemployment impact of recession (Von Fintel & Burger 2009).

As inexperienced and less educated youths struggle to find employment in the formal sector, it is argued that they could still survive by engaging in informal sector activities. However, South African is a country characterised by high unemployment but also a small size of informal employment (as proportion of total non-agricultural employment). This could perhaps be because some of the unemployed would like to enter the informal sector, but fail to do so, due to the possible existence of barriers to entry to informal sector, ranging from crime, lack of access to formal or even informal credit, lack of access to infrastructure and services, lack of provision of training facilities, to lack of provision of market access and business development programs.

The existence of some of these barriers are attributed by some to the government support programs on small, medium and microenterprises (SMMEs) being biased towards the groups of small and medium-sized enterprises, bypassing microenterprises and the informal enterprises (Rogerson 2004; Devey, Skinner and Valodia, 2006; Kingdon and Knight, 2007). Also, the Sector Education and Training Authorities (SETAs) tend to prioritise the needs of those paying the skills levy (which goes towards the National Skills Fund (NSF)), that is, the registered enterprises in the formal economy (Devey et al., 2006). Therefore, the development and growth of the informal enterprises and their subsequent contribution towards employment creation, including youth employment, are inhibited.

Another reason that explains youth unemployment is simply economic recession, as young workers are more likely to be laid off at times of financial difficulties (Mlatsheni 2007, National Treasury 2011). A final reason for youth unemployment is employer discrimination against young workseekers[17]. The study done by Mlatsheni and Rospabe (2002)[18], using the Oaxaca and Blinder (1973) decomposition technique[19], found that in OHS 1999, after controlling for differences in demographic and educational attainment characteristics, 27% of the employment gap between

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[17] Employment discrimination, which is one of the types of within-the-labour-market discrimination, occurs when some groups (e.g., Blacks, female, people residing at rural areas) bear a disproportionate share of the burden of unemployment (Barker 2008: 229).

[18] In their study, they defined youth and adults as people aged 15-30 years and 31-65 years respectively.

[19] For detailed econometric explanation on the decomposition of employment probability gap by means of the Oaxaca-Blinder technique, refer to Burger & Jafta (2006).

adults and youths were unexplained. Furthermore, looking at the youths only, 43% of the employment gap between Whites and Blacks, as well as 73% of the employment gap between males and females, were unexplained. The unexplained component is attributed to either difference in the quality of education between the two groups under study or discrimination by employers.

How the youth wage subsidy works as well as the potential merits and drawbacks of the subsidy program are the focus of the next section.

4. Youth wage subsidy

With the youths being much more likely to be unemployed, the marginalization of them means that they are not acquiring the experience and skills that will contribute to their future productivity (Levinsohn 2008). In addition, youth unemployment means the country's investment in education is wasted, and the self worth of the youth is eroded (Bodibe & Nkungu 2010). This could eventually drive the youth to activities like crime and sexual exploitation. Also, they could be denied access to vital social services, disengaged with the political process, and have their family ties weakened (Levinsohn 2008; Bodibe & Nkungu 2010; Mothabi 2010).

Wage subsidy programme was implemented in various countries in the past[20], with the programme specified targeted at youth in some countries[21]. South Africa will be the first African country to implement this youth wage subsidy program.

In general, wage subsidy could be provided to employers (i.e., supply-side or employer-side subsidy) to increase labour demand by reducing the cost of labour, or be provided to employees (i.e., demand-side or employee-side subsidy) to boost labour supply through increasing the returns to employment and thereby improving work incentives. In South Africa, the subsidy will be provided to the employers. Hence, this section first aims to explain how the youth wage subsidy works, before discussing the potential merits and drawbacks of the subsidy.

4.1 How the subsidy works[22]

Only Pay As You Earn (PAYE) registered businesses will be eligible for the youth wage subsidy, excluding central and provincial government. Only full-time workers who work at least 35 hours per week will be qualified for the subsidy. Furthermore, only new workers[23] aged between 18 and 29 years as well as existing workers aged between 18 and 24 years who earn below the personal income-tax threshold of R60 000 per annum will be eligible, with eligibility commencing on the date of the workers' 18th birthday and concluding on the last year of their 24th or 29th year.

Figures 31 and 32 illustrate the subsidy amount at each income level and the subsidy as proportion of the workers' salary respectively. For the existing workers, the maximum value of the subsidy is R6 000 per annum for those earning R24 000 (i.e., the subsidy accounts for 25% of their salary). The subsidy will then decrease, tapering to R0 at the R60 000 level. The duration of the subsidy is one year. In contrast, for the new workers, the duration of the subsidy is two years. In their first year of work, the maximum value of the subsidy is R12 000 per annum for those earning R24 000 (i.e., the subsidy amounts to 50% of their salary). Then subsidy will then

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[20] For example, it was implemented in European countries like Belgium (1990, 2000), Czech Republic (1991), Denmark (2005), Germany (1998-2003), Poland (mid-1990s), Slovakia (1997), Sweden (1992), Turkey (2004-2006), United Kingdom (1998) and non-European countries like Argentina (1998-2000), Colombia (2002-2006) and USA (1979-1994).

[21] Table 5 summarizes the description and outcome of the program in these countries.

[22] The discussion in Section 4.1 relies substantially on Guma (2011) and National Treasury (2011).

[23] This means workers who have their first registered full-time job.

decrease, tapping off to R0 at the R60 000 level. In the second year of work, they will be treated exactly the same existing workers above.

The subsidy is run through the PAYE system managed by the South African Revenue Service (SARS), with the following three options being granted to employers to claim the subsidy:

- Employers pay the net balance of PAYE tax and subsidy every six months.
- Employers pay the net balance of PAYE tax and subsidy on a monthly basis and reconcile every six months.
- SARS collects PAYE tax as usual, cash flows every six months and allows for a tax credit or rebate for the value of the subsidy.

The National Treasury expects that the subsidy will subsidize 423 000 new jobs at a cost of approximately R5 billion to the government over the next three years. In addition, employment gains are expected to be the greatest in the food and agriculture, retail and catering, as well as building and construction sectors as a result of the subsidy, since minimum wage is relatively low in these sectors.

4.2   Arguments for the subsidy[24]

There are numerous arguments in support of the youth wage subsidy. First, it is argued that the subsidy would increase employment while reducing labour cost (Guma 2011; National Treasury 2011). This is especially relevant to the South African economy as the cost of labour (e.g., impact of minimum wage) is too high to achieve full employment. As the subsidy could lower labour cost, labour becomes a relatively cheaper input. This in turn provides an incentive to use more labour. Hence, the demand for labour and eventually youth employment increase.

Figure 33 helps illustrating why this would happen. Assuming before the subsidy takes place, at a specific firm, 20 youths aged 18-24 years were employed, with each of them earning R20 000 per annum (equilibrium at E_1). With the implementation of the subsidy, labour demand increases. The new equilibrium is at E_2. The number of youth employed increases to 25 and the annual salary of each increases to R24 000. Assuming the full subsidy is used to finance the remuneration to the workers but not used to provide training to the workers, looking at the 20 workers who were employed before and are still employed at the new equilibrium, even though their annual salary increases to R24 000, it is actually cheaper for the employer to continue to employ them, as the actual labour cost to the firms is only R18 000 per worker, with remaining R6 000 financed by the wage subsidy. On the other hand, for the newly employed five workers, the employer actually bears a cost of only R12 000, as the remaining R12 000 is financed by government in terms of wage subsidy.

Another important argument for the subsidy is that it would reduce the risk associated with hiring young and inexperienced workers. Since the youths lack experience and their productivity is unknown, it is difficult for the employers to identify the right people to be employed. As the subsidy reduces the relative cost of youth labour, it helps narrowing the gap between entry-level real wages and productivity of the young people, and helps the firms identify high-productivity workers at a lower cost.

Assuming the wage subsidy is not used exclusively to finance the remuneration cost as in Figure 33, the subsidy would increase the possibility of young people receiving on-the-job training, as it becomes more affordable for employers to do so. This in turn would allow to workers to gain valuable work experience and improve their productivity, thereby improving their long-term employment prospects. In addition, by increasing youth employment, the subsidy increases the

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[24] The discussion in Section 4.2 relies substantially on CICLASS (2007), Guma (2011) and National Treasury (2011).

earnings of poor youth who were previously unemployed. This eventually would <u>reduce poverty</u>. Furthermore, the subsidy would <u>reduce inequality</u>, as the disparity between the earnings of highly-skilled and lowly-skilled (who are more likely to be the beneficiaries of the subsidy) is reduced.

As two of the requirements before the youths are eligible for the subsidy is that they must be PAYE registered workers and work at least 35 hours per week, it means <u>job security is improved</u>. This could in turn improve the productivity of the young workers, as they might not work productively under an insecure environment associated with part-time or contract employment. Furthermore, the subsidy may <u>encourage active job-search behaviour</u>, as the youths believe that they are more likely to be able to find work, i.e., labour supply increases. Finally, as the youth are employed as a result of the subsidy, it <u>reduces the likelihood of them committing crime and other violent activities</u>, as well as decreases their dependence on the social grant income received by other members of the same households for survival.

4.3 Arguments against the subsidy[25]

There are various arguments against the implementation of the subsidy problem. First, <u>deadweight loss</u> could be incurred, as the subsidy is paid to youth unemployed who would have been hired even had the subsidy program not been implemented. If this loss is very high, this implies that the subsidy has limited effectiveness to improve the labour market position of the unemployed. Secondly, the subsidy is exclusively targeted at the youth unemployed, and it is argued that this implies <u>discrimination against the elderly unemployed</u>.

Another important argument against the subsidy is that <u>substitution effect</u> could take place, i.e., firms are induced to replace the unsubsidized workers with the subsidized workers. The extent to which the substitution will occur depends on the elasticity of substitution of the two groups of workers. In Figure 34(a), as explained previously, the implementation of the employer-side wage subsidy results an increase of demand for subsidized workers. Although equilibrium wage increases from w_0 to w_1 as a result, the actual labour cost borne by the employer is actually lower than w_1 and could even be lower than w_0, since some of the labour cost burden is partly financed by the subsidy. If the subsidized (younger) and unsubsidized (older) workers are substitutes, that the younger workers become a relative cheaper input eventually results in a decrease of demand for unsubsidized workers, and hence the employment of these workers would decline, as seen by Figure 34(b)[26]. Nonetheless, it is argued that these two groups of workers are actually complements instead of substitutes, as the guidance, skills and experience of the unsubsidized workers is required in order to train the newly employed subsidized workers, who are younger, inexperienced and lowly-skilled. Hence, the subsidy could also increase the demand for unsubsidized workers, and eventually the employment of both groups of workers would increase, as shown in Figures 35(a) and 35(b).

<u>Displacement effect</u> could take place as a result of the subsidy. That is, a firm that employs subsidized workers increases output and displaces output of firms that do not have subsidized workers. As a result, the subsidy crowds out employment in the latter firms, and the subsidy would have no impact on youth employment overall. In addition, <u>stigma effect</u> on the subsidized young workers could happen, as some employers might perceive the target group negatively. This eventually results in decrease (instead of increase) of youth employment.

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[25] The discussion in Section 4.3 relies substantially on CICLASS (2007), Levinsohn (2008), Burns, Edwards & Pauw (2010) and National Treasury (2011).

[26] However, Levinsohn (2008) argues that this is unlikely to happen, as the workers who are currently employed, even if they are not eligible for the subsidy, are protected by legislations surrounding dismissal of established workers.

Another potential drawback of the youth wage subsidy is <u>destructive churning</u>. This happens when, say, in the case of a newly employed young worker (who receive the subsidy for a period of two years), the firm hires and keeps him/her for 1 year and 364 days and then sack him/her. The sacked worker will then be replaced by another newly employed young worker, so that the firm would continue receiving the subsidy, and this cycle would continue[27].

With regard to the impact of the subsidy on <u>inflation</u>, one side of the argument that the subsidy will increase the wage of the young workers (Refer to Figure 33), and this could fuel inflation. However, the other side of the argument is that this is unlikely to happen, as the subsidy, if well-targeted, is much more likely to increase the quantity of labour hired, and the productivity improvement of the workers could offset the increase in the remuneration cost, thereby resulting in negligent impact on unit labour cost[28]. In fact, the productivity improvement of the workers could actually result in real economic growth. Another argument against the subsidy is that employers can <u>deliberately maintain low wage levels</u> (i.e., below the R24 000 level) in order to qualify for the maximum benefit under the subsidy scheme. Hence, the wage level of the worker no longer accurately reflects his/her productivity.

Looking at other criticisms against the wage subsidy, it is possible that <u>fraud</u> would happen. For example, in order to obtain a substantial sum of wage subsidy, an employer could hire and register a handful of friends (who are age-eligible for the subsidy) who actually do not do any work for the firm, and the employer and these 'workers' simply split the subsidy payment. In addition, the firm has to bear <u>administrative burden</u>, as it is time-consuming and costly to, for example, send information about the young workers eligible for the wage subsidy to the relevant labour offices and SARS. A further disadvantage of the wage subsidy is the <u>fiscal cost</u> involved, as it means an increase of public expenditure and budget deficit. Finally, as only workers in registered formal firms are eligible for the subsidy, it is argued that the subsidy would <u>widen income inequality between formal and informal sectors</u>.

5. Possible impact of youth wage subsidy on wage and employment

The discussion in the previous sections suggests that the youth unemployed could be categorised into the following three groups (their shares of youth unemployed in QLFS 2011Q3 in brackets): (1) those with incomplete secondary education and virtually no work experience already struggling to find their first job, that is, their duration of looking for work is quite long compared with the other two groups (55%); (2) those with Matric and some work experience but whose quality of education might be poor, especially those matriculating from the former black schools (40%), (3) those with post-Matric qualifications, having high reservation wage as well as high expectation on how they would fare in the labour market, but the quality of their education is either unknown (especially those graduating from certificate or diploma institutions) or they studied in the wrong fields (5%).

Figure 36 illustrates the possible impact of the youth wage subsidy on employment. In a perfectly competitive labour market, the economy is originally in equilibrium at point E with a wage level equal to W_1 and an employment level equal to L_1, with demand equal to D_1 and supply equal to S_1.

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[27] Levinsohn (2008) argues that even if destructive churning could happen, the concern is alleviated for the following three reasons: (1) if the youth worker proves to be productive and good hires, the firm should retain him/her instead of sacking them, as his/her contributions to the profit of the firms should more than offset the amount of the next round of subsidy received by sacking him/her and replacing him/her with another new youth worker; (2) the firm incurs some training cost when hiring the new workers, and these costs would need to be re-incurred if the workers are constantly being rotated; (3) even if the firm abuses the policy and fires the young worker just before the end of the subsidization period, it is still possible that the sacked worker gains experience and productivity improvement that would boost his future employability to other employers.

[28] Change in unit labour cost is approximated as the difference between change in average remuneration per worker and change in labour productivity (Barker 2008: 121).

There is zero youth unemployment. However, due the imposition of a minimum wage of W_{MIN} (as a result of union actions and collective bargaining agreements), it results in excess supply of labour, and unemployment is equal to (L_3-L_2). Youth employment drops from L_1 to L_2.

W_2 and W_3 reflect wage levels that some of the unemployed youths are willing to accept. However, it is not possible for employers to pay them these wage levels, as the employers must stick with the higher W_{MIN}, due to the extension of collective bargaining wage agreement across the whole industry concerned. Furthermore, some youths have too high expectation on how they would fare in the labour market, and have an unrealistically high reservation wage of, for example, W_4, which is above W_{MIN}. These people would also fail to find employment in the end.

Given high minimum wage levels which causes the unit labour costs to increase, employers would rather opt for capital instead of labour as capital is relatively cheaper. Furthermore, due to the poor quality and quantity of education of the youths, skills mismatch in terms of the skills the youngsters possess and the skills needed by the economy, employers feeling that it would be too risky to employ youths due to their lack of soft skills and experience, as well as other reasons like economic recession, the demand for labour would decrease (and the demand for capital would increase). The decrease in labour demand is represented by a leftward shift in the demand curve from D_1 to D_2. Youth employment decreases further from L_2 to L_4, and the number of youth unemployed increases from (L_3-L_2) to (L_3-L_4).

As the main aim of the youth wage subsidy is to boost youth employment, it is hoped that with the implementation of the subsidy program, labour demand would increase, e.g., increasing from D_2 back to D_1. This would lead to youth employment rising from L_4 to L_2, and youth unemployment decreasing from (L_3-L_4) to (L_3-L_2). Furthermore, as far as the youth labour supply is concerned, some previously discouraged young jobseekers might feel optimistic to look for work with the launch of the subsidy program, and hence labour supply would increase from S_1 to S_2.

Assuming labour demand remains unchanged at D_1, the increase of labour supply would result in an increase of youth unemployment from (L_3-L_2) to (L_5-L_2), with youth employment unchanged at L_2. It is hoped that the subsidy program would lead to an increase of demand bigger than the shift from D_2 to D_1 in order to increase the pace of youth employment creation. For instance, if labour demand increases further from D_1 to D_3, assuming the minimum wage W_{MIN} still holds, youth employment would increase from L_2 to L_6 and the number of youth unemployed would decrease drastically from (L_5-L_2) to (L_5-L_6).

The best outcome takes place at E_2, when the youth wage subsidy program leads to further increase of youth labour demand from D_3 to D_4. E_2 stands for the equilibrium where D_4 and S_2 intersect. The equilibrium wage level is exactly the same as W_{MIN}. Youth employment reaches the highest level at L_5, and youth unemployment no longer exists.

The following question arises: Who are most likely to be those young people successfully finding formal employment as a result of the youth wage subsidy program? As one of the criteria of the youth wage subsidy is that the young worker's monthly earnings is below R5 000, it is unlikely that most educated youths from group (3) above would benefit from the program, as their reservation wage should be much higher than R5 000 (data from the OHSs and LFSs show that employed youths with Matric earn nearly R10 000 on average, and nearly 80% of them earn higher than R5 000, in 2011 prices). So it seems the primary solution to solve the youth graduate unemployment that this group faces is to attract more students into mathematics and science to avoid skills mismatch, improving the quality of tertiary education (especially that of post-Matric certificates and diplomas of the tertiary institutions), and providing more financial support to fund studies in critical skills, e.g., via the National Student Financial Aid Scheme (NSFAS).

Those with Matric (i.e., group (2)) are more likely to benefit most from this demand-inducing youth wage subsidy program, as they are more educated, compared with those without Matric (i.e., group (1)). It is hoped that their productivity would increase by receiving training and further educational opportunities as a result of the constructive spending of the subsidy by the employers, and they would gain the necessary skills and experience to survive long-term in the labour market, once the subsidy comes to an end. The aforementioned labour market rigidities (regarding both legislation and wage) issue must be addressed, or it is difficult for the youth labour force to be greatly absorbed into the labour market or for the youth workers to survive on a more permanent basis.

With regard to group (1), due to their inferior level of education and lack of work experience, it is not sure if employers would be willing to employ them even with the wage subsidy, and if they were employed, whether they would still be employed continually once the subsidy program is over. The Expanded Public Works Program (EPWP) could be quite important here to complement the youth wage subsidy to boost the employment likelihood of this group of least educated young labour force, as it helps the uneducated youths to first obtain the necessary skills required by the employers, before their employment likelihood could be further boosted by the introduction of the subsidy program. A recent review by the Human Sciences Research Council (Hemson, 2008) found that the five-year target of the EPWP to provide one million work opportunities until 2007 was achieved, but only 59% of the funds were spent and 19% of training targets were met. Also, the 2007 September LFS data (this is the most recent survey that asked respondents questions on the EPWP) showed that only about a quarter of the youth labour force claimed they have heard of the EPWP, while only 3% of unemployed youths without Matric who had heard of the EPWP participated in the program at the time of the survey.

Furthermore, it was found that the National Skills Fund (NSF), an important provider of finance to the EPWP (as well as NSFAS and National Research Foundation (NRF)) and SETAs lacked proper systems for accounting and monitoring, effective management, the capacity to monitor the spending of its funds, and sufficient career guidance for young students in their strategies (Department of Higher Education and Training, 2011; National Treasury, 2011). The eventual result is the under-spending of the funds, vulnerability to corrupt activities, uneven performance (in terms of improving skills and employment prospects of the labour force) as a result of the spending of the funds, and the preference of the public to turn to private training providers. Both the SETAs and NSF now fall under the authority of the Department of Higher Education and Training (DHET), who have announced reforms to the system to make it more effective and accountable.

Although informal sector employment is characterised by low remuneration, poor working conditions and lack of job security, and recent studies (e.g., Devey, Skinner and Valodia, 2006; Banerjee, Galiani, Levinsohn and Woolard, 2008) found that only a small proportion of informal sector workers successfully moved to the formal sector, and informal enterprises are not eligible for receiving the youth wage subsidy, it is still better for the youths to work in the informal sector rather than being unemployed. Thus, the barriers to entry to the informal sector as well as the lack of government support to promote microenterprises and informal enterprises as discussed in Section 3 are other areas that need to be tackled before the unemployment problem of the less educated youths could be dealt with. However, it seems the most important long-term solution is simply to reduce the size of this group of lowly educated youth labour force, by improving the quality of education, increasing the enrolment and passes of mathematics and science, and reducing drop-out before Matric. Finally, in order to increase the employment of all groups of youths, a more rapid economic growth (with employment growth being more elastic to growth) is required.

6.   Conclusion

This paper first discussed the youth labour market trends between 1995 and 2011, and it was found that youth employment creation was not rapid to absorb the young labour force entrants during the 16-year period under study, and hence the employment absorption rate was the lowest in the youths, when compared with various adult age cohorts. In addition, unemployment rate was clearly higher in the youths, especially those aged 18-24 years. Blacks and those with low educational attainment were more likely to be unemployed.

The paper then investigated the possible causes of youth unemployment from both supply and demand sides, before discussing how the youth wage subsidy works, as well as the possible advantages and disadvantages of the subsidy program. The paper finally looked at the possible impact of the wage subsidy on employment, and it was found that youth labour supply is expected to increase as a result of the implementation of the program, but the impact of the program needs to be very strong to counteract the various factors causing the decrease of labour demand as discussed (e.g., wage rigidity, increase of unit labour cost, lack of soft skills and experience of the youths, etc.), before demand for young workers increases. The increase must be drastic in order to absorb the net young entrants into the labour market, before youth employment would eventually increase more rapidly. However, youth subsidy alone is clearly insufficient as a long-term solution to increase and maintain youth employment. Other issues also need to be addressed, ranging from improving school resources and quality of education, attracting more students into mathematics and science to avoid skills mismatch, reducing labour market rigidity, government providing more support on informal enterprises, improved management of the SETAs and NSF, to a more rapid economic growth that is employment elastic.

7.   Reference

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Table 1: Narrow labour force by age cohort, 1995-2011

	Narrow labour force (1 000s)							18-29 years	
	18-24 years	25-29 years	30-34 years	35-44 years	45-54 years	55-65 years	18-65 years	Number (1 000s)	Share
OHS 1995	1 694	2 023	2 074	3 224	1 740	697	11 451	3 716	32.5%
OHS 1996	1 649	1 857	2 005	3 212	1 709	693	11 125	3 505	31.5%
OHS 1997	1 571	2 039	2 047	3 314	1 818	679	11 468	3 609	31.5%
OHS 1998	1 911	2 256	2 265	3 457	1 852	703	12 444	4 167	33.5%
OHS 1999	2 146	2 436	2 366	3 702	1 968	779	13 397	4 582	34.2%
LFS 2000a	2 865	2 767	2 720	4 135	2 286	1 126	15 899	5 632	35.4%
LFS 2000b	2 735	3 093	2 466	4 078	2 602	1 207	16 180	5 827	36.0%
LFS 2001a	2 806	3 146	2 546	4 136	2 606	1 229	16 470	5 952	36.1%
LFS 2001b	2 665	3 070	2 488	3 968	2 434	1 038	15 663	5 735	36.6%
LFS 2002a	2 873	3 084	2 591	4 062	2 566	1 119	16 295	5 957	36.6%
LFS 2002b	2 765	3 089	2 626	4 012	2 511	1 065	16 067	5 853	36.4%
LFS 2003a	2 790	3 136	2 691	4 033	2 558	1 057	16 264	5 925	36.4%
LFS 2003b	2 622	3 002	2 662	3 871	2 522	1 035	15 714	5 624	35.8%
LFS 2004a	2 609	2 935	2 730	3 839	2 508	1 061	15 682	5 544	35.4%
LFS 2004b	2 559	2 876	2 739	3 824	2 572	1 081	15 652	5 436	34.7%
LFS 2005a	2 560	2 986	2 809	3 888	2 610	1 204	16 058	5 547	34.5%
LFS 2005b	2 764	3 016	2 941	3 970	2 728	1 202	16 620	5 780	34.8%
LFS 2006a	2 689	3 049	2 952	3 894	2 732	1 228	16 543	5 738	34.7%
LFS 2006b	2 791	3 096	2 992	4 085	2 830	1 243	17 037	5 887	34.6%
LFS 2007a	2 763	3 110	2 998	4 015	2 729	1 224	16 840	5 874	34.9%
LFS 2007b	2 727	3 156	2 952	4 135	2 835	1 253	17 056	5 883	34.5%
QLFS 2008Q1	2 964	3 272	3 038	4 300	2 894	1 250	17 717	6 235	35.2%
QLFS 2008Q2	2 950	3 258	3 078	4 298	2 901	1 271	17 756	6 209	35.0%
QLFS 2008Q3	2 912	3 267	3 043	4 336	2 896	1 248	17 701	6 179	34.9%
QLFS 2008Q4	2 857	3 266	3 046	4 327	2 918	1 240	17 655	6 123	34.7%
QLFS 2009Q1	2 895	3 238	3 047	4 361	2 947	1 270	17 759	6 134	34.5%
QLFS 2009Q2	2 782	3 172	2 981	4 355	2 900	1 235	17 425	5 954	34.2%
QLFS 2009Q3	2 601	3 095	2 963	4 343	2 836	1 192	17 030	5 696	33.4%
QLFS 2009Q4	2 646	3 092	2 977	4 333	2 846	1 193	17 088	5 738	33.6%
QLFS 2010Q1	2 628	3 126	2 935	4 365	2 834	1 200	17 088	5 754	33.7%
QLFS 2010Q2	2 668	3 063	2 911	4 307	2 855	1 220	17 023	5 731	33.7%
QLFS 2010Q3	2 607	3 113	3 040	4 505	2 852	1 227	17 343	5 720	33.0%
QLFS 2010Q4	2 468	3 095	3 018	4 561	2 867	1 235	17 245	5 563	32.3%
QLFS 2011Q1	2 533	3 150	3 047	4 624	2 872	1 213	17 439	5 683	32.6%
QLFS 2011Q2	2 590	3 201	3 042	4 657	2 890	1 258	17 638	5 791	32.8%
QLFS 2011Q3	2 569	3 170	3 093	4 700	2 934	1 261	17 728	5 740	32.4%

Source: Own calculations using OHS/LFS/QLFS data.

Table 2: Employed by age cohort, 1995-2011

	Employed (1 000s)							18-29 years	
	18-24 years	25-29 years	30-34 years	35-44 years	45-54 years	55-65 years	18-65 years	Number (1 000s)	Share
OHS 1995	1 085	1 549	1 727	2 858	1 587	654	9 460	2 634	27.8%
OHS 1996	1 060	1 375	1 613	2 740	1 508	633	8 928	2 435	27.3%
OHS 1997	949	1 450	1 605	2 809	1 610	631	9 053	2 398	26.5%
OHS 1998	1 055	1 494	1 694	2 857	1 594	634	9 329	2 549	27.3%
OHS 1999	1 235	1 667	1 842	3 077	1 748	723	10 292	2 902	28.2%
LFS 2000a	1 542	1 746	1 965	3 369	1 979	1 045	11 646	3 288	28.2%
LFS 2000b	1 420	2 054	1 841	3 354	2 283	1 126	12 077	3 474	28.8%
LFS 2001a	1 389	2 018	1 900	3 409	2 276	1 139	12 130	3 406	28.1%
LFS 2001b	1 232	1 849	1 799	3 183	2 094	928	11 086	3 081	27.8%
LFS 2002a	1 292	1 892	1 859	3 246	2 174	1 017	11 481	3 185	27.7%
LFS 2002b	1 204	1 862	1 902	3 171	2 105	958	11 203	3 066	27.4%
LFS 2003a	1 133	1 886	1 915	3 195	2 154	946	11 229	3 019	26.9%
LFS 2003b	1 172	1 934	1 978	3 147	2 182	943	11 356	3 106	27.4%
LFS 2004a	1 152	1 864	2 021	3 144	2 165	978	11 323	3 015	26.6%
LFS 2004b	1 233	1 896	2 048	3 130	2 266	1 003	11 576	3 129	27.0%
LFS 2005a	1 210	1 914	2 083	3 224	2 299	1 107	11 836	3 124	26.4%
LFS 2005b	1 341	1 897	2 252	3 249	2 373	1 102	12 214	3 238	26.5%
LFS 2006a	1 305	1 994	2 238	3 222	2 411	1 155	12 325	3 299	26.8%
LFS 2006b	1 391	2 085	2 266	3 343	2 480	1 157	12 721	3 476	27.3%
LFS 2007a	1 348	2 050	2 293	3 341	2 394	1 143	12 569	3 398	27.0%
LFS 2007b	1 451	2 212	2 337	3 533	2 519	1 171	13 223	3 663	27.7%
QLFS 2008Q1	1 603	2 315	2 327	3 600	2 586	1 154	13 584	3 918	28.8%
QLFS 2008Q2	1 635	2 257	2 395	3 617	2 611	1 173	13 688	3 892	28.4%
QLFS 2008Q3	1 556	2 275	2 384	3 615	2 627	1 167	13 624	3 831	28.1%
QLFS 2008Q4	1 583	2 309	2 422	3 697	2 640	1 176	13 828	3 892	28.1%
QLFS 2009Q1	1 515	2 173	2 381	3 693	2 661	1 196	13 617	3 688	27.1%
QLFS 2009Q2	1 445	2 173	2 304	3 671	2 584	1 169	13 345	3 618	27.1%
QLFS 2009Q3	1 348	2 112	2 208	3 592	2 502	1 112	12 872	3 459	26.9%
QLFS 2009Q4	1 374	2 068	2 273	3 593	2 539	1 114	12 960	3 442	26.6%
QLFS 2010Q1	1 317	2 086	2 203	3 585	2 503	1 113	12 807	3 403	26.6%
QLFS 2010Q2	1 302	2 034	2 214	3 563	2 509	1 122	12 745	3 336	26.2%
QLFS 2010Q3	1 277	2 060	2 303	3 705	2 499	1 139	12 982	3 336	25.7%
QLFS 2010Q4	1 250	2 089	2 288	3 803	2 543	1 159	13 131	3 339	25.4%
QLFS 2011Q1	1 280	2 040	2 290	3 844	2 516	1 141	13 113	3 321	25.3%
QLFS 2011Q2	1 301	2 027	2 284	3 797	2 527	1 186	13 123	3 329	25.4%
QLFS 2011Q3	1 282	2 090	2 324	3 844	2 593	1 186	13 319	3 372	25.3%

Source: Own calculations using OHS/LFS/QLFS data.

Table 3: Narrow unemployed by age category, 1995-2011

	Narrow unemployed (1 000s)							18-29 years	
	18-24 years	25-29 years	30-34 years	35-44 years	45-54 years	55-65 years	18-65 years	Number (1 000s)	Share
OHS 1995	609	474	347	366	153	43	1 991	1 082	54.4%
OHS 1996	589	482	392	472	201	60	2 197	1 070	48.7%
OHS 1997	622	589	442	505	208	49	2 415	1 211	50.2%
OHS 1998	856	762	570	600	258	70	3 115	1 618	51.9%
OHS 1999	911	769	524	626	221	56	3 106	1 680	54.1%
LFS 2000a	1 323	1 021	755	766	307	81	4 253	2 344	55.1%
LFS 2000b	1 315	1 039	624	724	319	82	4 103	2 354	57.4%
LFS 2001a	1 418	1 128	646	727	330	90	4 340	2 546	58.7%
LFS 2001b	1 433	1 221	689	785	339	110	4 577	2 654	58.0%
LFS 2002a	1 581	1 192	731	816	392	102	4 815	2 772	57.6%
LFS 2002b	1 560	1 227	723	841	405	106	4 864	2 787	57.3%
LFS 2003a	1 657	1 249	775	838	404	111	5 035	2 906	57.7%
LFS 2003b	1 450	1 068	683	724	340	92	4 358	2 518	57.8%
LFS 2004a	1 457	1 071	710	695	343	82	4 359	2 528	58.0%
LFS 2004b	1 327	980	691	694	306	78	4 076	2 307	56.6%
LFS 2005a	1 350	1 073	726	665	311	97	4 222	2 423	57.4%
LFS 2005b	1 423	1 118	689	721	355	100	4 407	2 542	57.7%
LFS 2006a	1 384	1 055	714	672	321	73	4 218	2 439	57.8%
LFS 2006b	1 400	1 011	726	742	351	86	4 316	2 411	55.9%
LFS 2007a	1 416	1 060	705	675	335	81	4 271	2 476	58.0%
LFS 2007b	1 275	945	615	601	315	82	3 833	2 220	57.9%
QLFS 2008Q1	1 360	957	712	699	308	96	4 133	2 318	56.1%
QLFS 2008Q2	1 315	1 002	683	681	290	98	4 069	2 316	56.9%
QLFS 2008Q3	1 356	991	659	721	268	82	4 077	2 347	57.6%
QLFS 2008Q4	1 274	957	624	630	278	64	3 827	2 231	58.3%
QLFS 2009Q1	1 381	1 065	666	668	286	75	4 141	2 446	59.1%
QLFS 2009Q2	1 337	999	677	684	316	66	4 079	2 336	57.3%
QLFS 2009Q3	1 254	984	755	752	334	80	4 158	2 237	53.8%
QLFS 2009Q4	1 272	1 024	704	741	307	79	4 128	2 296	55.6%
QLFS 2010Q1	1 311	1 040	732	780	331	87	4 281	2 351	54.9%
QLFS 2010Q2	1 366	1 029	696	744	346	98	4 278	2 394	56.0%
QLFS 2010Q3	1 330	1 053	737	800	353	87	4 361	2 383	54.6%
QLFS 2010Q4	1 218	1 006	731	758	324	76	4 114	2 225	54.1%
QLFS 2011Q1	1 252	1 110	757	779	355	72	4 326	2 362	54.6%
QLFS 2011Q2	1 289	1 173	758	860	363	72	4 515	2 462	54.5%
QLFS 2011Q3	1 288	1 081	769	856	341	75	4 409	2 369	53.7%

Source: Own calculations using OHS/LFS/QLFS data.

Table 4: Marginal fixed effects of Heckprobit regressions on the employment likelihood of the youths, conditional on participation, selected surveys

	OHS 1995	OHS 1998	LFS 2001b	LFS 2004b	LFS 2007b	QLFS 2009Q4	QLFS 2011Q3
Age: 25-29 years	-0.019	0.033	0.050	0.015	0.082	0.114	0.078
Coloured	0.055	0.194	0.213	0.138	0.105	0.140	0.103
Indian	0.117	0.201	0.259	0.232	0.283	0.185	0.246
White	0.189	0.343	0.418	0.328	0.277	0.310	0.332
Male	0.034	0.071	0.064	0.048	0.074	0.070	0.092
Western Cape	0.008	0.170	0.070	0.049	0.019	0.056	0.011
Northern Cape	-0.086	0.089	-0.041	0.001	-0.068	0.040	-0.088
Free State	0.085	0.113	-0.056	-0.072	-0.116	0.017	0.024
KwaZulu-Natal	0.006	0.078	-0.053	-0.021	-0.099	0.155	0.110
North West	0.024	0.094	-0.023	0.031	-0.045	-0.018	-0.083
Gauteng	-0.011	0.070	-0.068	-0.029	0.013	-0.015	-0.103
Mpumalanga	0.064	0.091	-0.002	0.060	0.020	0.044	-0.038
Limpopo	0.075	-0.023	-0.081	0.026	-0.101	0.023	0.110
Primary	-0.015	-0.030	-0.008	-0.020	-0.019	-0.012	0.023
Secondary	0.006	-0.003	-0.017	-0.005	0.003	-0.002	-0.020
Matric	-0.040	0.022	0.060	0.006	0.043	0.088	0.038
Matric + Cert/Dip	0.098	0.121	0.167	0.142	0.115	0.192	0.145
Degree	0.127	0.143	0.267	0.237	0.256	0.276	0.237
Married	0.095	0.124	0.147	0.134	0.128	0.130	0.113
Head	0.139	0.206	0.351	0.264	0.245	0.220	0.222
Lambda	-0.275	-0.137	-0.043	-0.214	-0.083	0.020	-0.085

Source: Own calculations using OHS/LFS/QLFS data.

Note: Explanatory variables:

- Age category dummy variable (Reference group: 25-29 years)
- Race dummy variables (Reference group: Black)
- Gender dummy variable (Reference group: Female)
- Province dummy variables (Reference group: Eastern Cape)
- Educational attainment spline variables: No education to Grade 6 (incomplete primary), Grade 7 to Grade 11 (incomplete secondary)
- Educational attainment dummy variables: Matric, Matric plus Certificate or Diploma, Degree or above
- Household headship dummy variable (Reference group: Not household head)
- Marital status dummy variable (Reference group: unmarried/divorced/widowed)
- Lambda derived from the probit regression on narrow labour force participation likelihood

Note: All explanatory variables are statistically significant at 5%, except the Northern Cape dummy in LFS 2004b and Mpumalanga dummy in LFS 2001b.

Table 5: International evidence of youth wage incentives and employment subsidies

Country	Period	Program name and description	Outcome
Australia	1976-1985	Special Youth Employment Training Program (SYETP): Wage subsidy with little emphasis on training	• Increased probability of having a job sometime between 8 and 13 months after expiry by 26% • Increased probability of having a job sometime between 14 and 26 months after expiry by 20%
Belgium	2000	Rosetta Plan (First Job Agreement Program): Subsidies, on-the-job training and recruitment	• Positive effects on job placement • 85%-90% still had jobs in the early months after the first job agreement
Sweden	1992	Youth Practice: Provided employment subsidy	• Zero or negative effect on earnings, employment probabilities • Long-run effect mainly zero or slightly positive • Negative employment and income effects 1 year after the program started
Turkey	2008	Law 5763: Subsidization of private employer's unemployment insurance contribution	• Initial evaluations indicated 142 000 estimated new jobs were created (166 000 new jobs created for the youth, 19 000 jobs for the adult women, and a loss of 43 000 jobs for adult men)
UK	1998	New Deal for Youth Employment: Comprehensive approach including subsidized employment	• Significant impact in moving young people into jobs • Young unemployed men are about 20% more likely to find jobs each month • Social benefits appear to outweigh social costs
USA	1979-1994	Targeted Jobs Tax Credit (TJTC): Tax credit to employers; a voucher to the target group, entitled to the employer to the credit if the person was hired	• Modest but positive employment effects on economically disadvantaged young adults • Reduction in employer wage cost by about 15% for the typical participant in a job of six months' duration in the early 1990s

Source: National Treasury (2011: 31-32).

Figure 1: Black share of the narrow labour force, 1995-2011
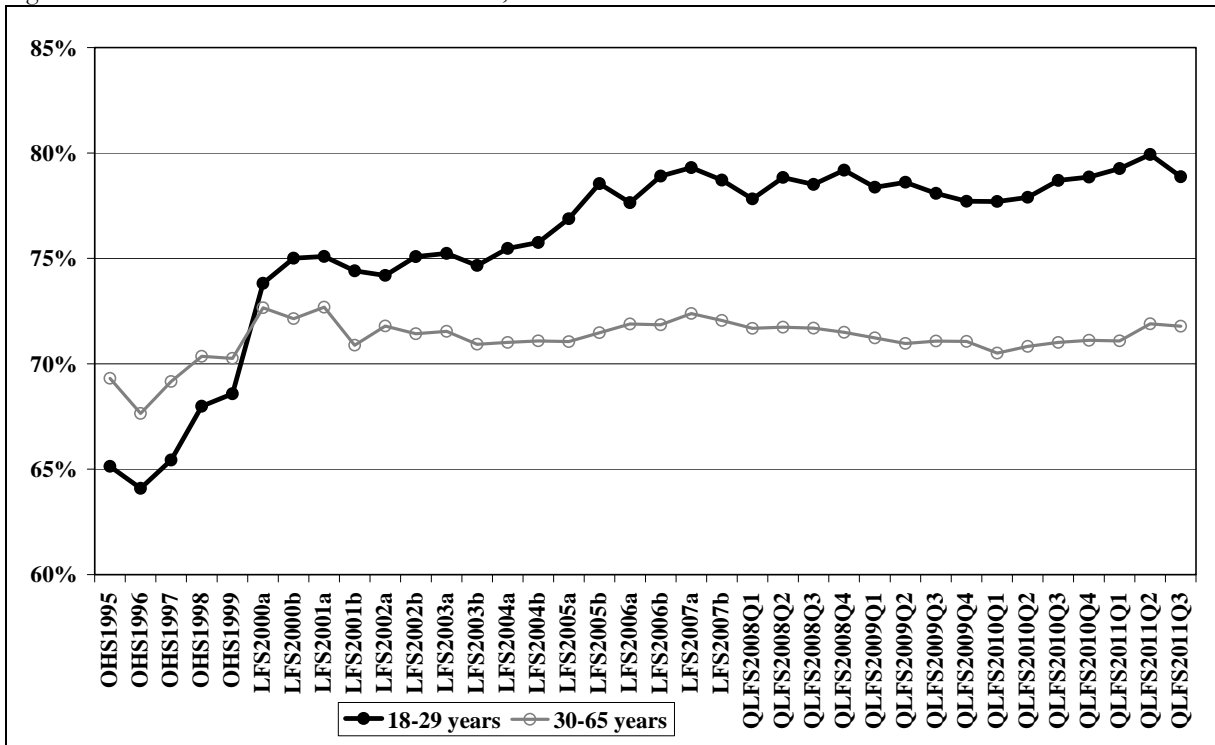
Source: Own calculations using OHS/LFS/QLFS data.

Figure 2: Mean years of educational attainment of narrow labour force, 1995-2011
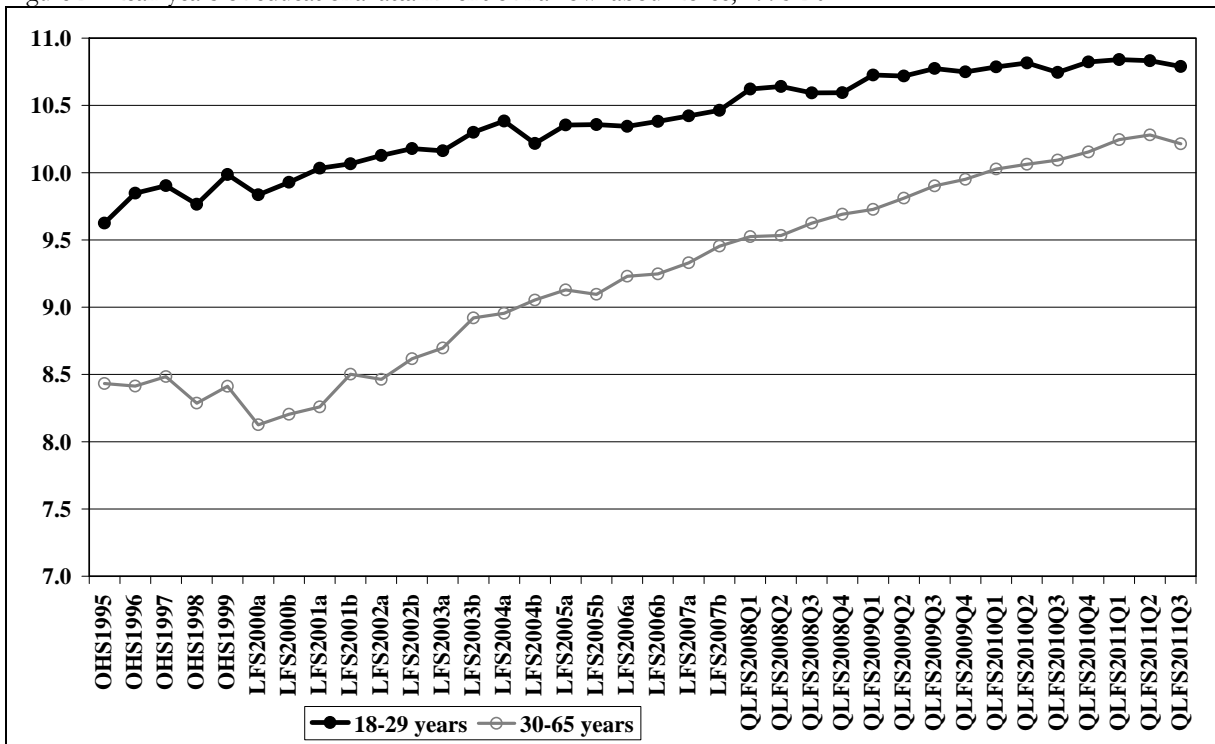
Source: Own calculations using OHS/LFS/QLFS data.

Figure 3: Mean years of educational attainment of narrow youth labour force by race, 1995-2011
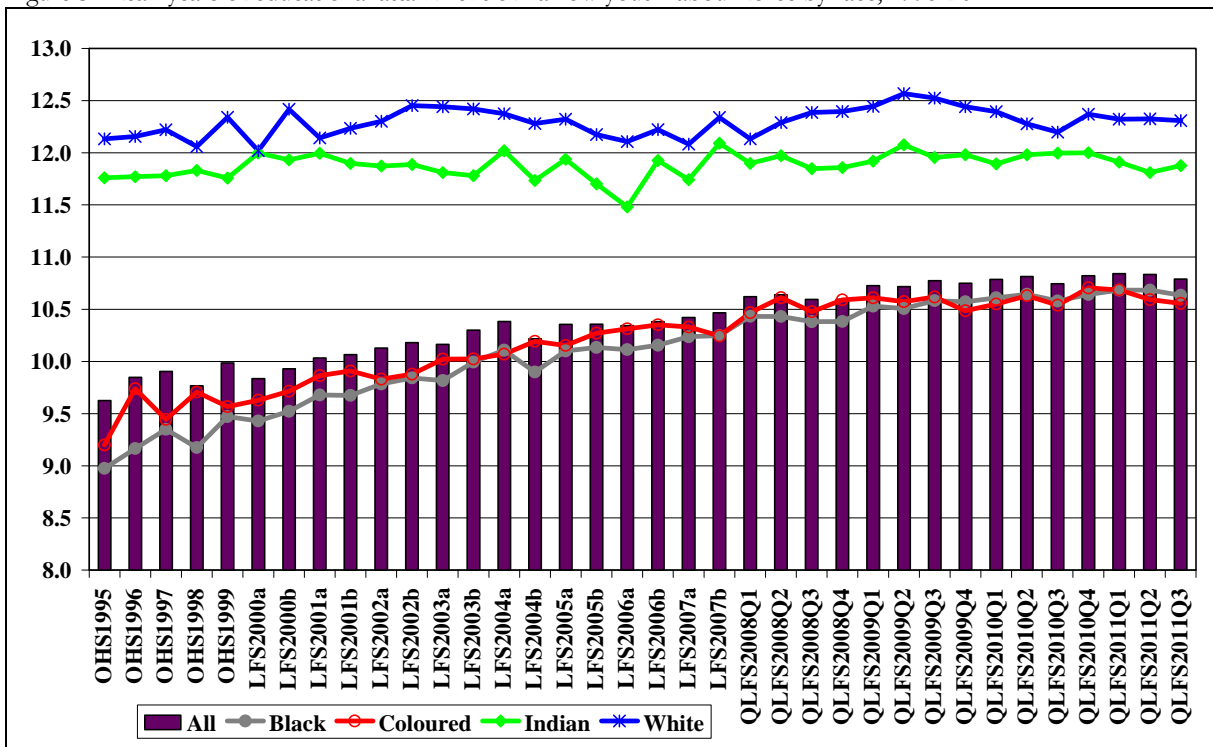
Source: Own calculations using OHS/LFS/QLFS data.

Figure 4: Proportion of narrow black youth labour force completing each schooling grade, selected surveys
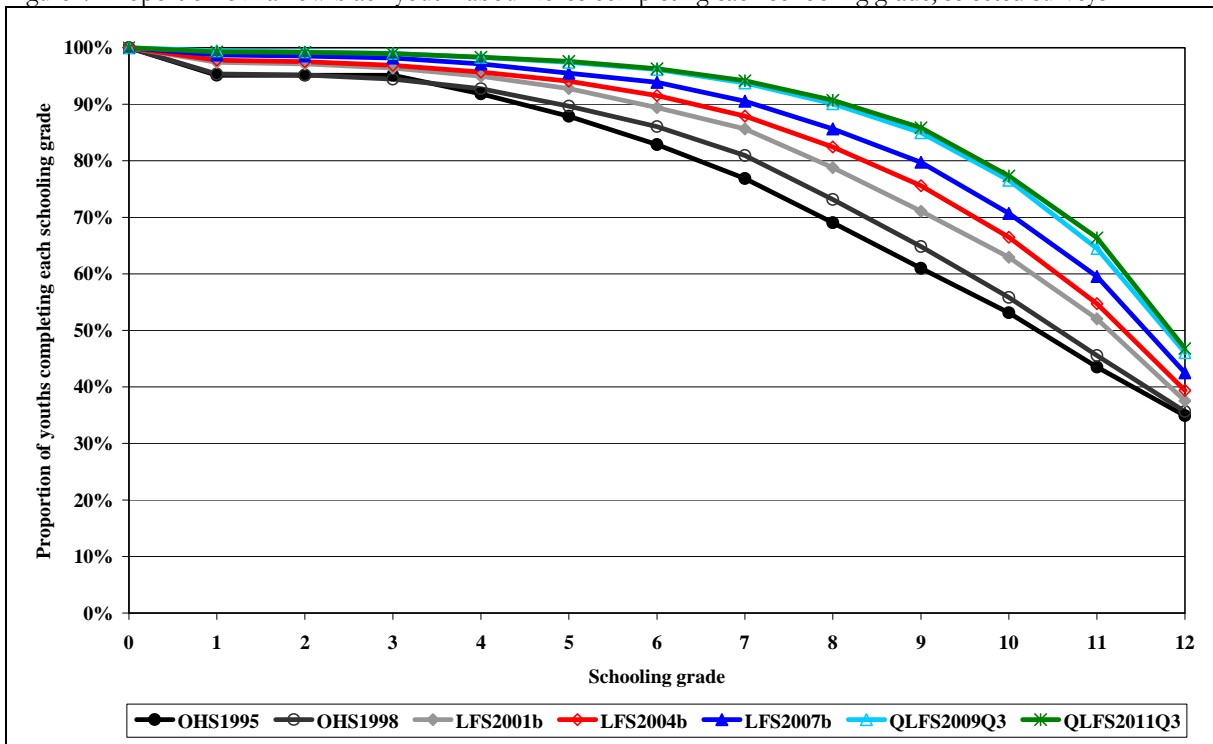
Source: Own calculations using OHS/LFS/QLFS data.

Figure 5: Proportion of narrow youth labour force completing each schooling grade by race, QLFS 2011Q3
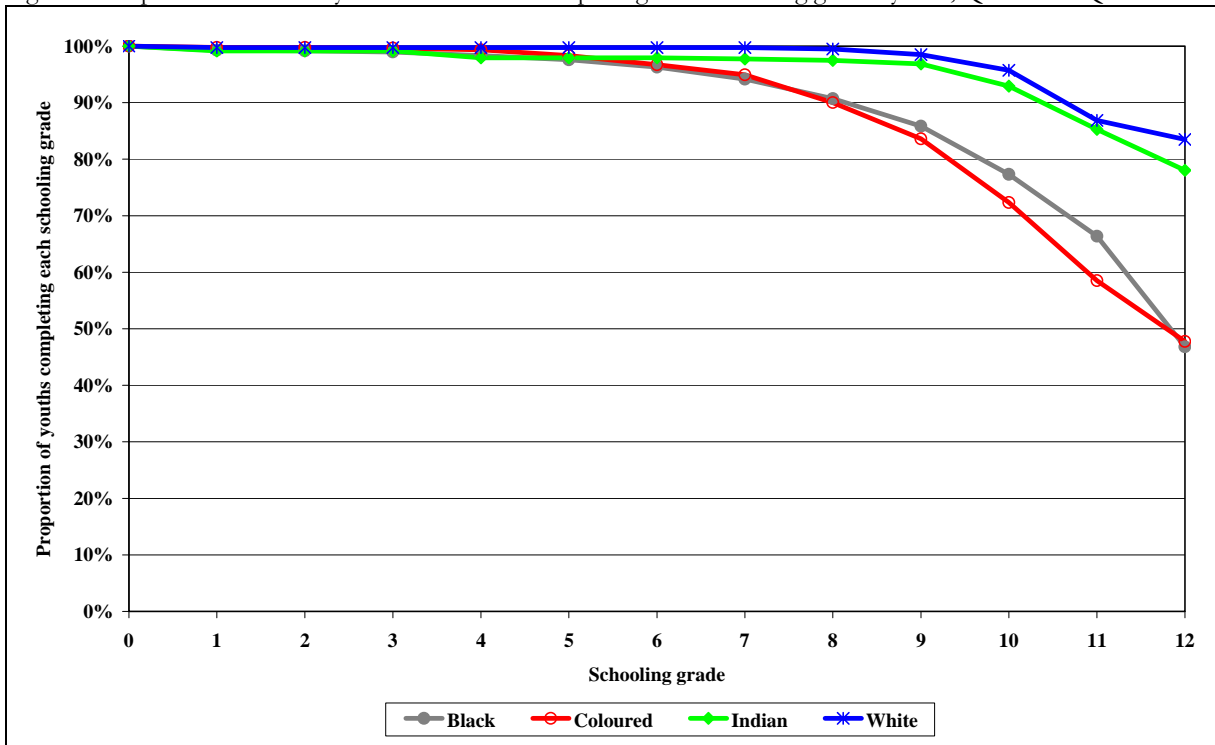
Source: Own calculations using QLFS 2011Q3 data.

Figure 6: Mean years of educational attainment of narrow youth labour force by gender, 1995-2011
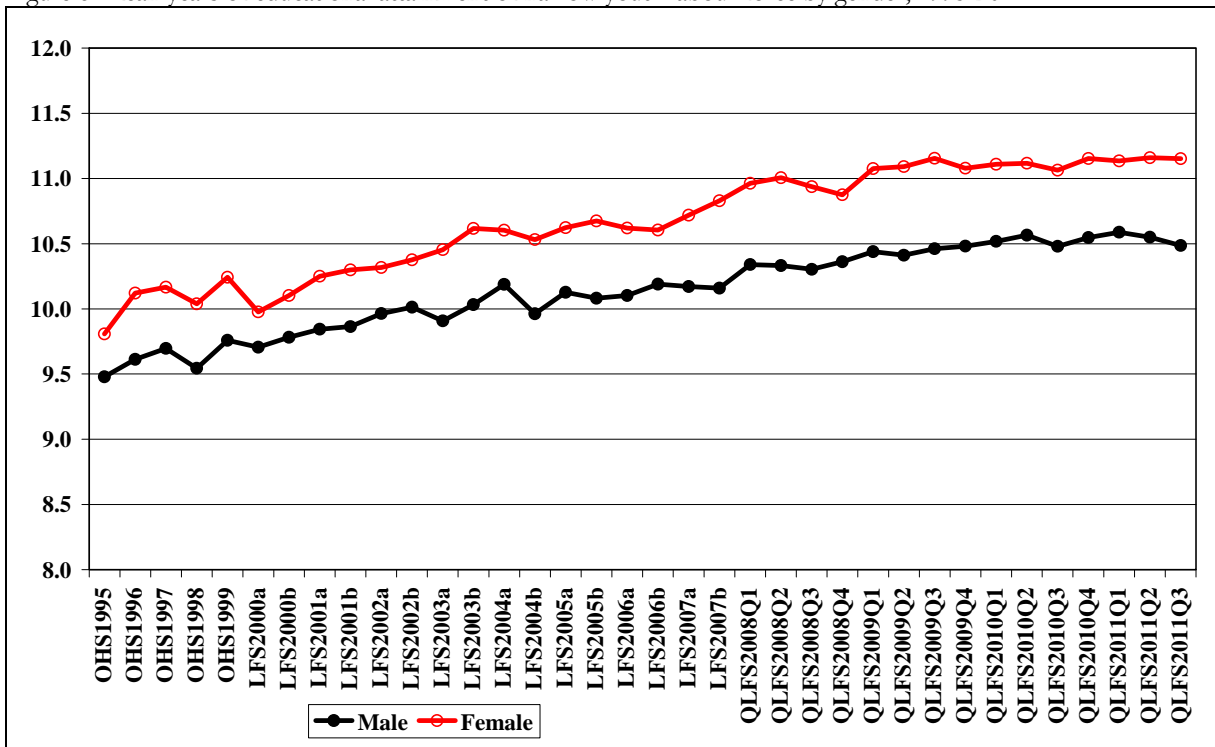
Source: Own calculations using OHS/LFS/QLFS data.

Figure 7: Narrow labour force participation rates of the youths, 1995-2011
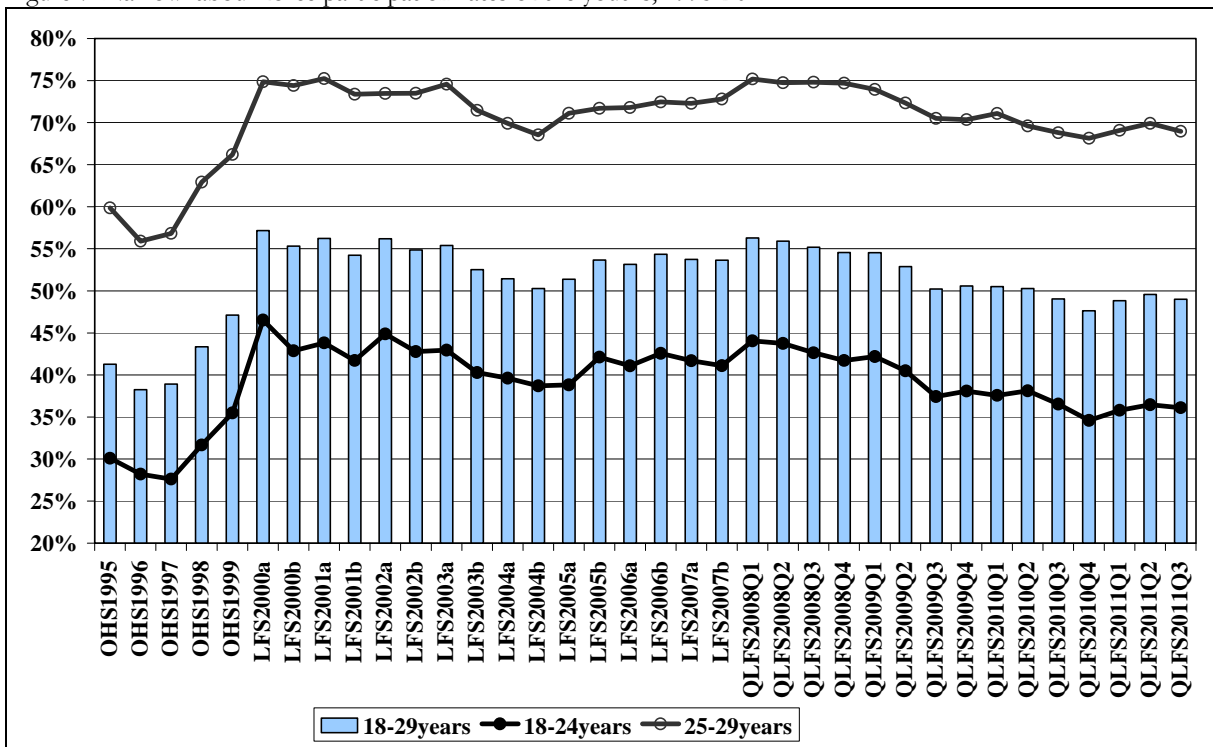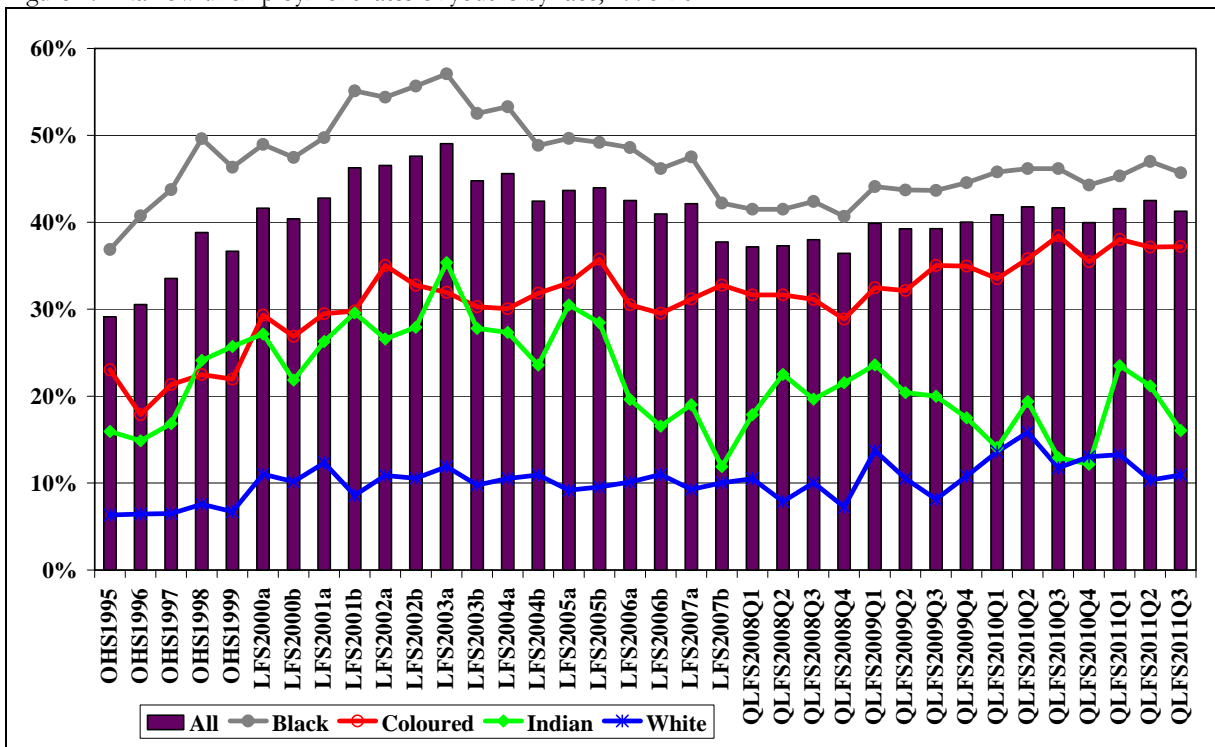

Source: Own calculations using OHS/LFS/QLFS data.

Figure 8: Narrow labour force participation rates by age cohort, 1995-2011
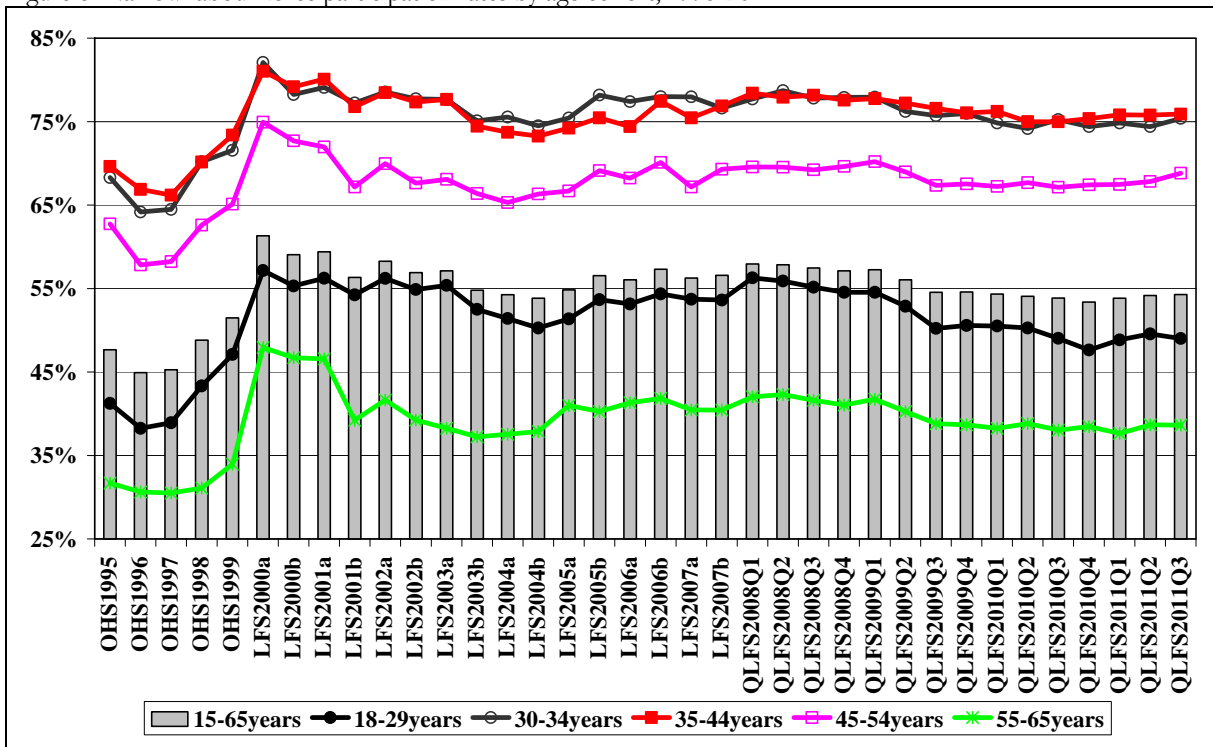
Source: Own calculations using OHS/LFS/QLFS data.

Figure 9: Narrow labour force participation rates of youths by race, 1995-2011
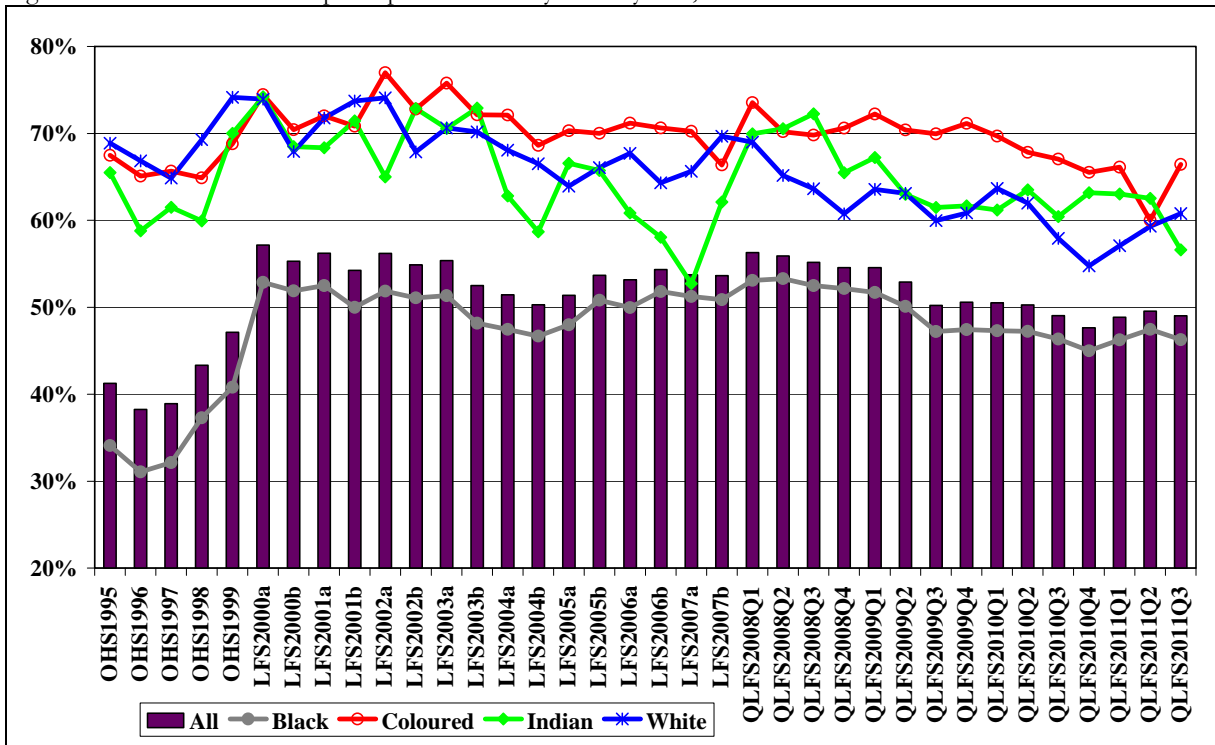
Source: Own calculations using OHS/LFS/QLFS data.

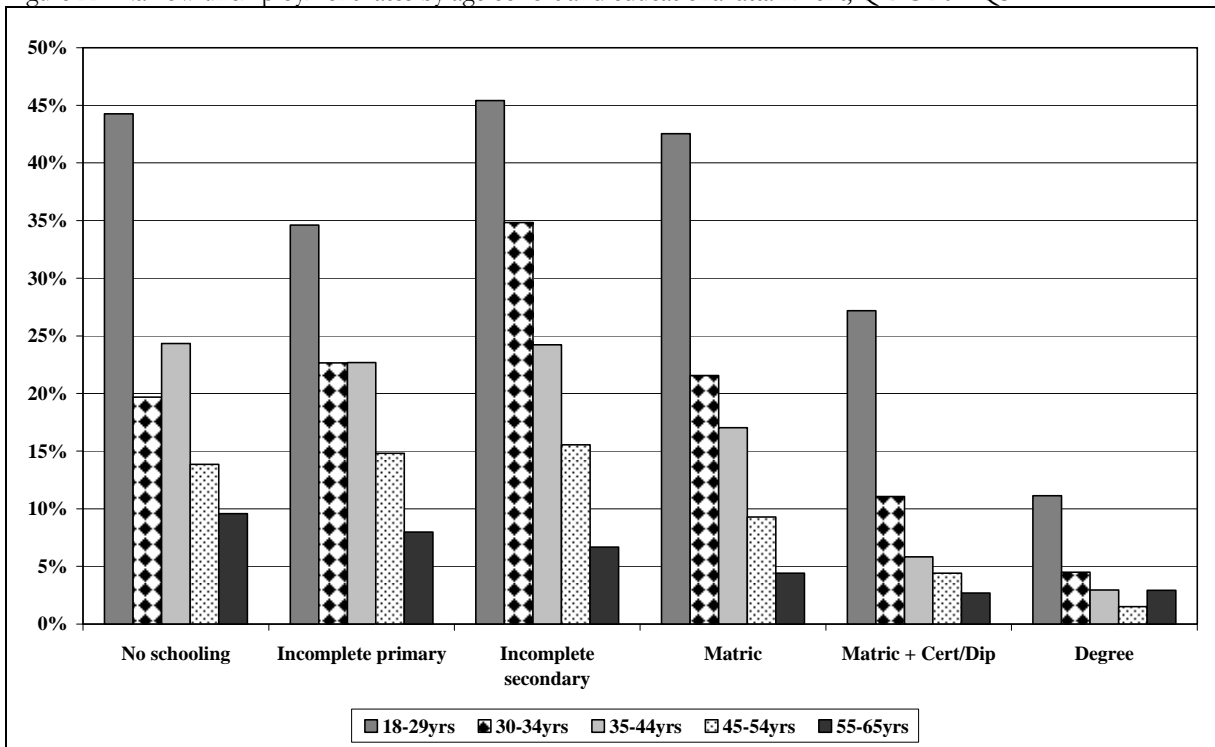Figure 10: Narrow labour force participation rates of youths by gender, 1995-2011
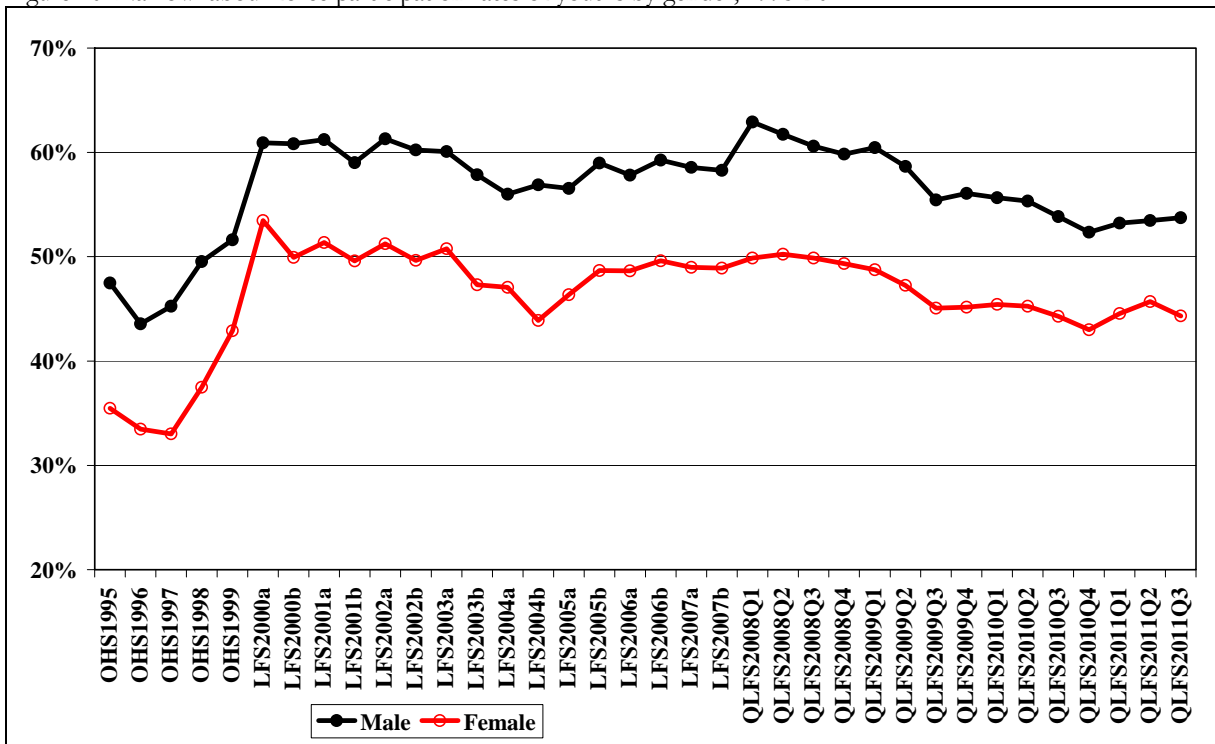
Source: Own calculations using OHS/LFS/QLFS data.

Figure 11: Black share of employed, 1995-2011
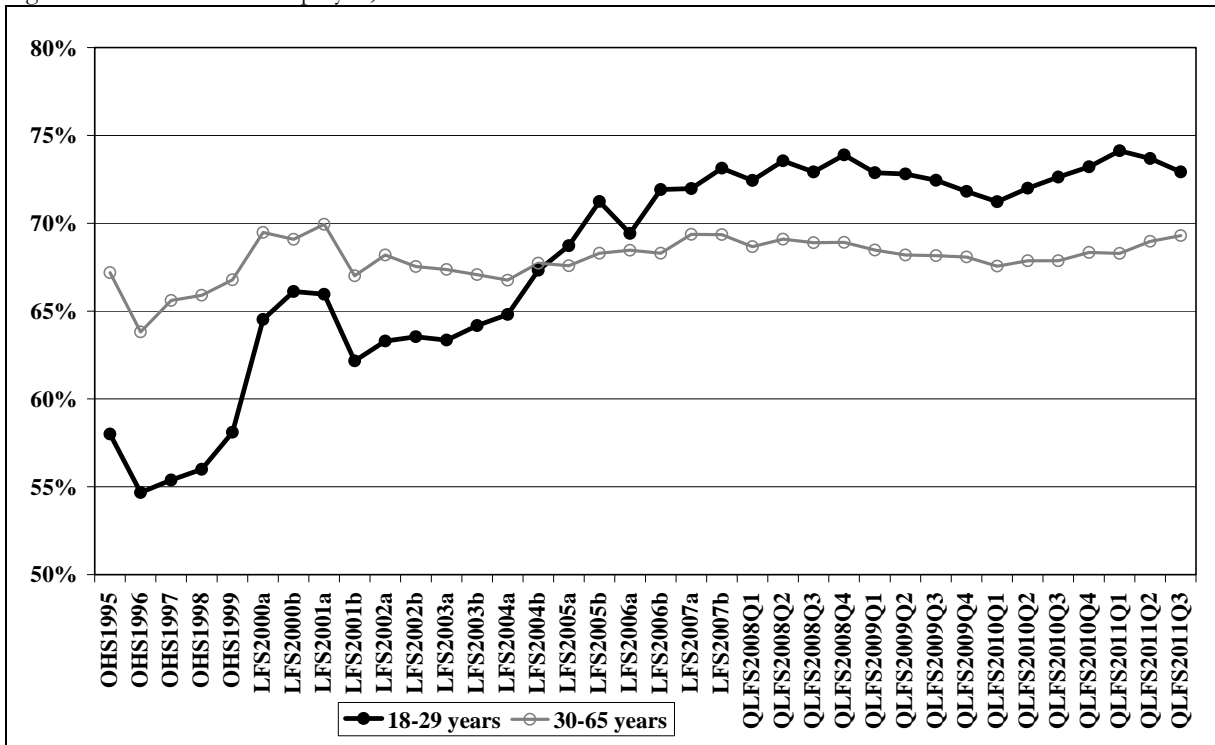
Source: Own calculations using OHS/LFS/QLFS data.

Figure 12: Educational attainment of youth employed, 1995-2011
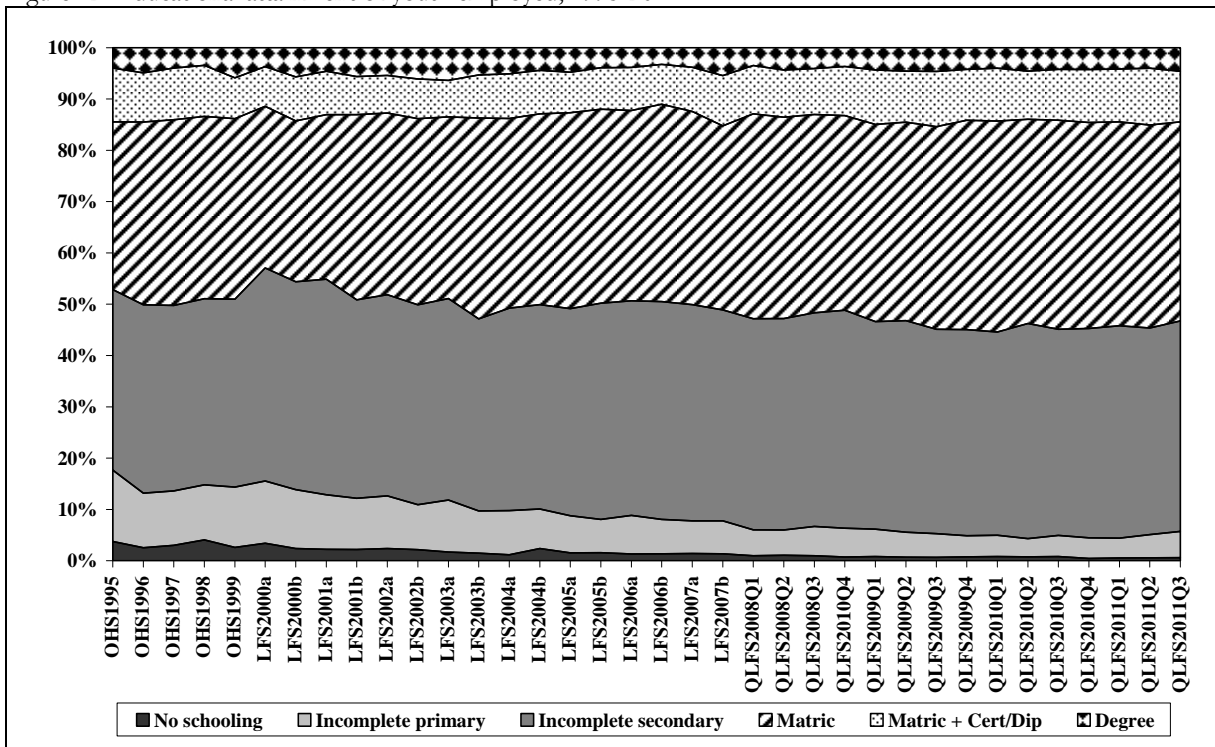
Source: Own calculations using OHS/LFS/QLFS data.

Figure 13: Proportion of narrow unemployed who worked before by age cohort, selected surveys
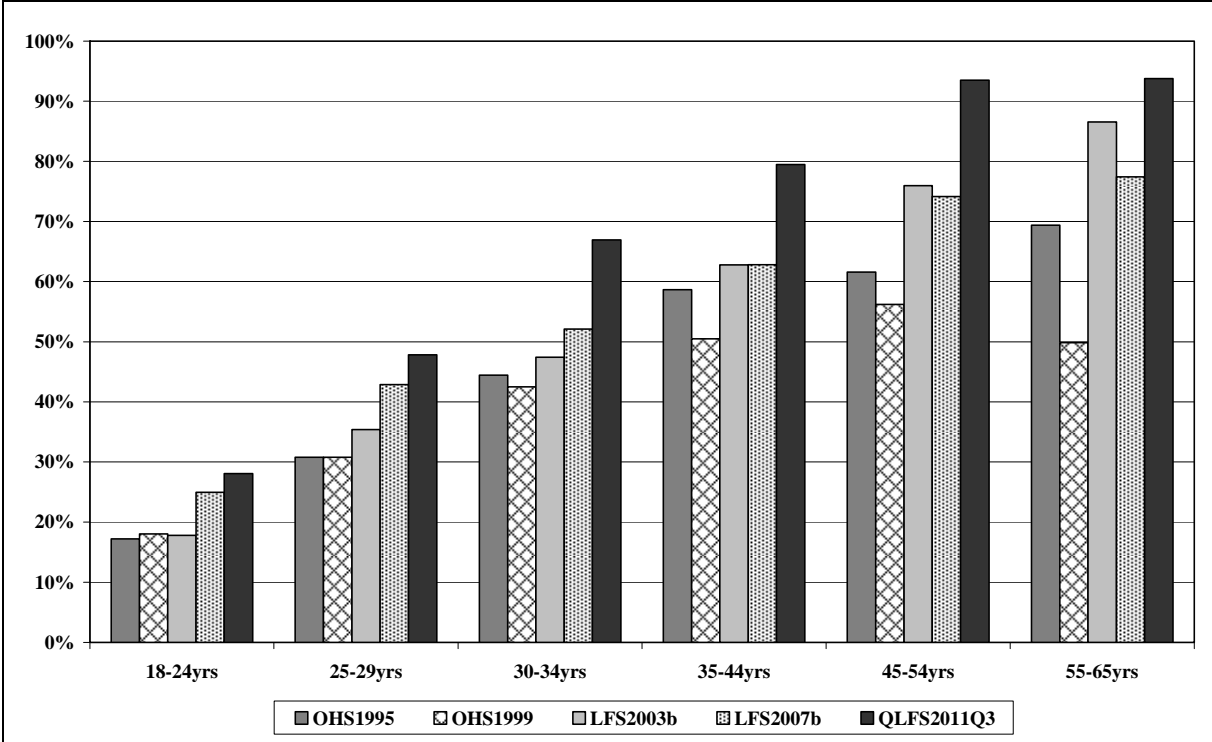
Source: Own calculations using OHS/LFS/QLFS data.

Figure 14: Proportion of narrow unemployed actively seeking work by age cohort, QLFS 2011Q3
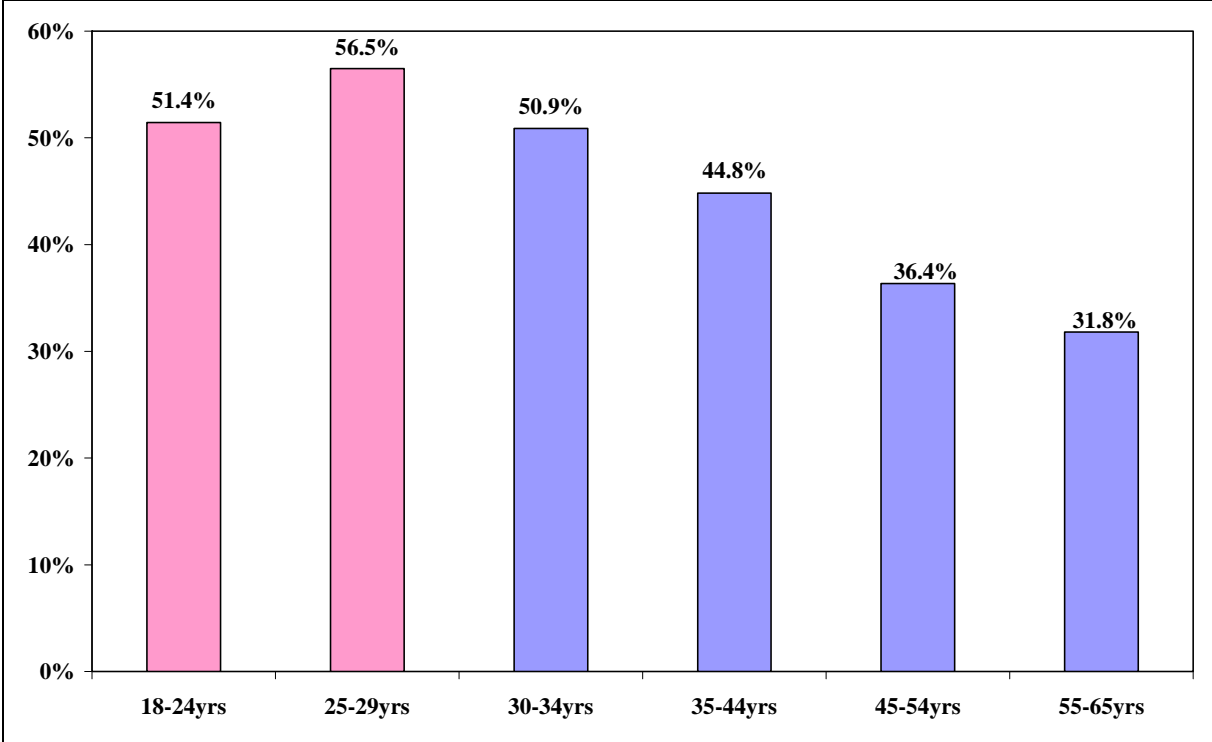
Source: Own calculations using QLFS 2011Q3 data.

Figure 15: Proportion of narrow unemployed seeking work for more than 3 years by age cohort, QLFS 2011Q3
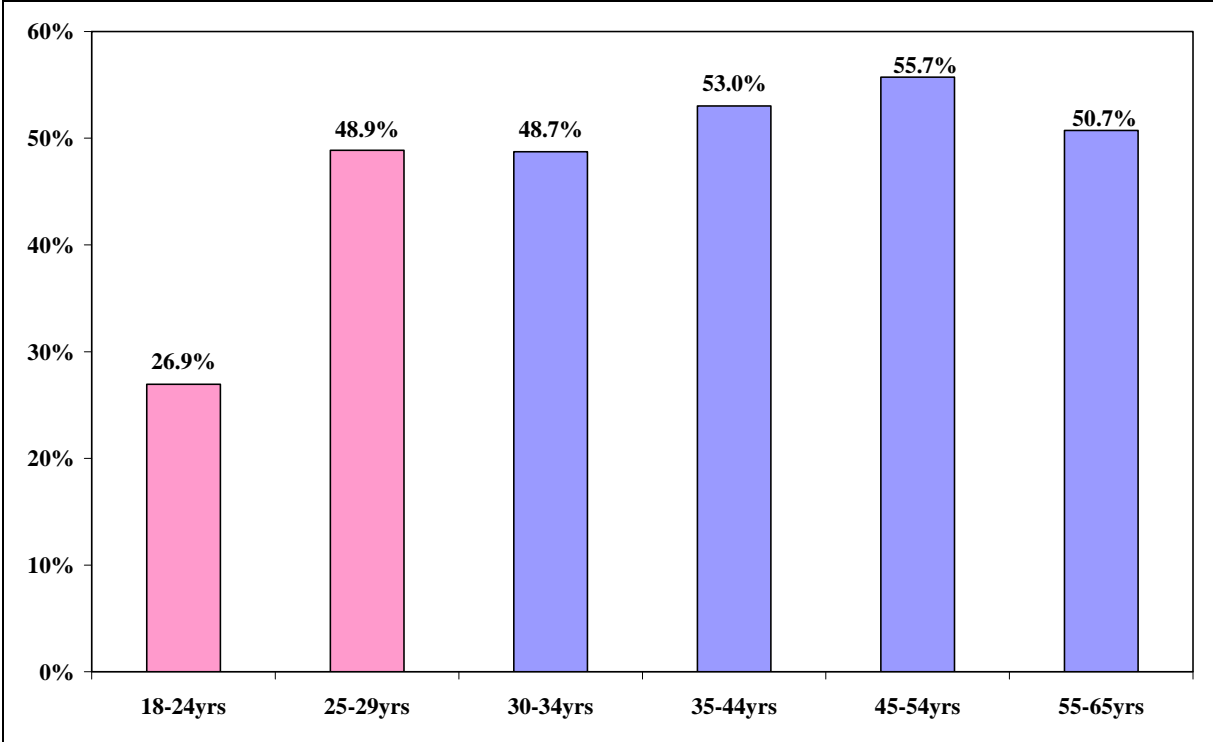
Source: Own calculations using QLFS 2011Q3 data.

Figure 16: Proportion of narrow unemployed (who worked before) last worked more than 3 years ago by age cohort, QLFS 2011Q3
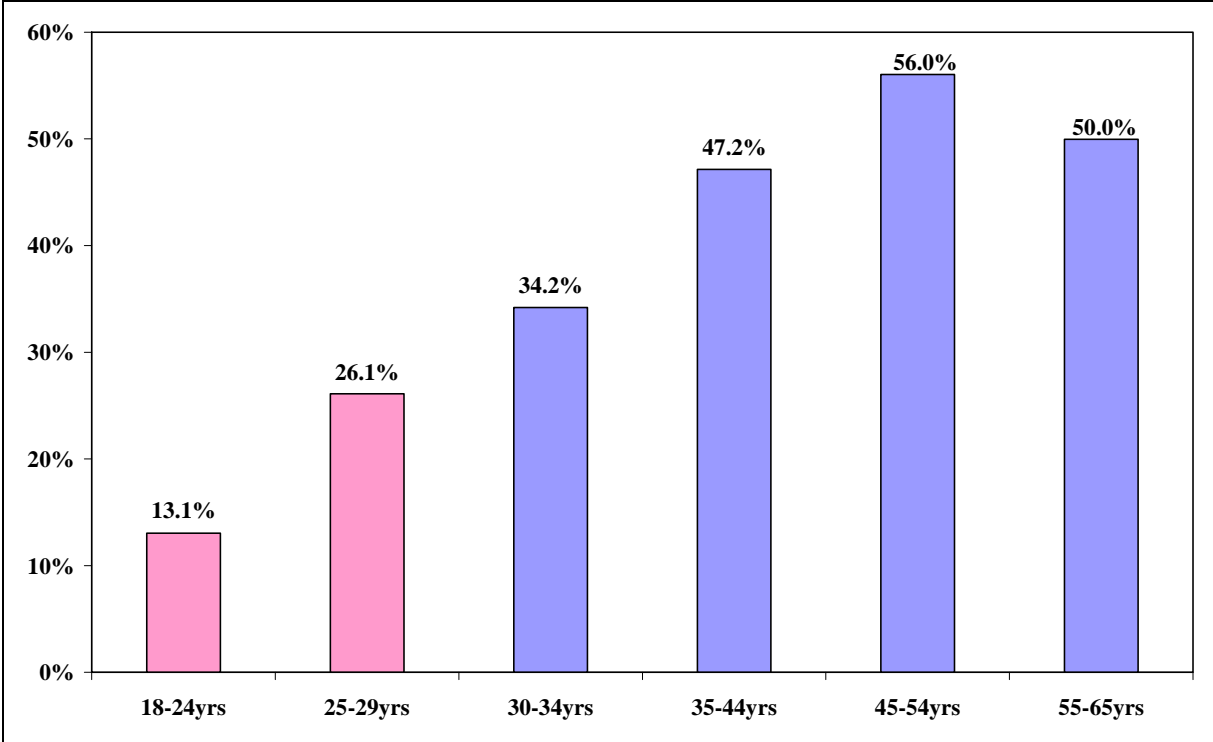
Source: Own calculations using QLFS 2011Q3 data.

Figure 17: Narrow unemployment rates of the youths, 1995-2011
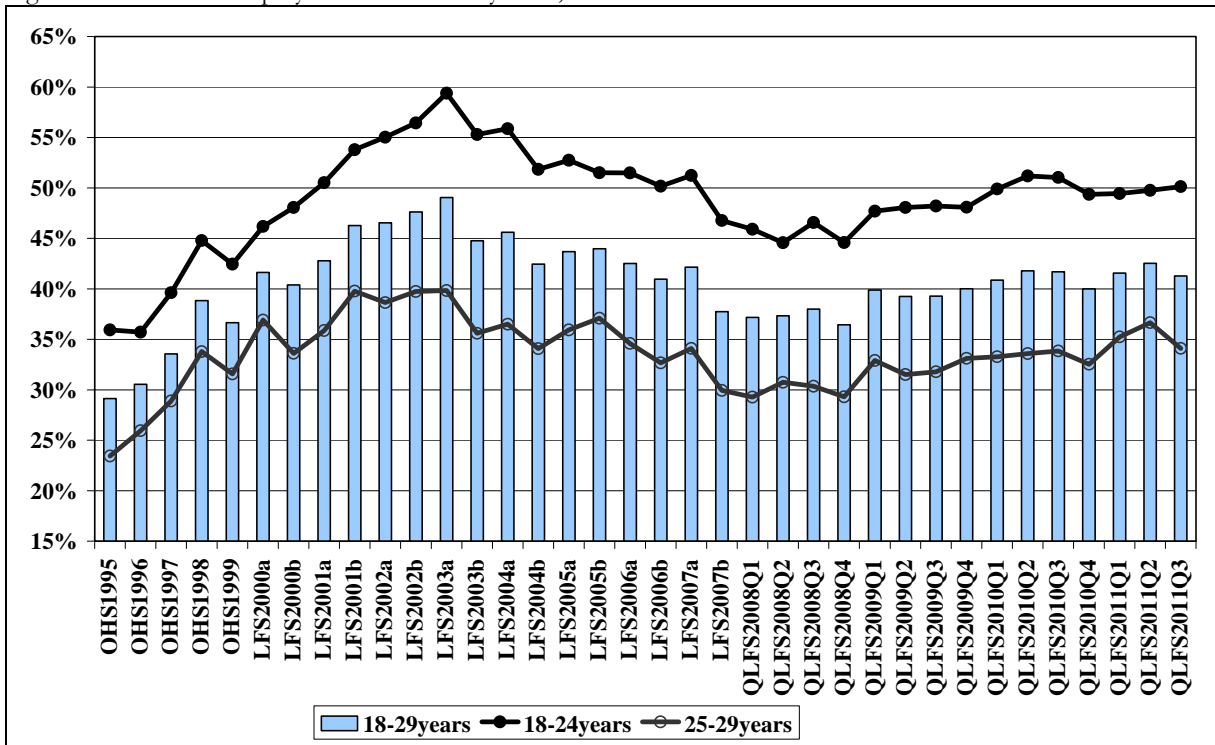
Source: Own calculations using OHS/LFS/QLFS data.

Figure 18: Narrow unemployment rates by age cohort, 1995-2011
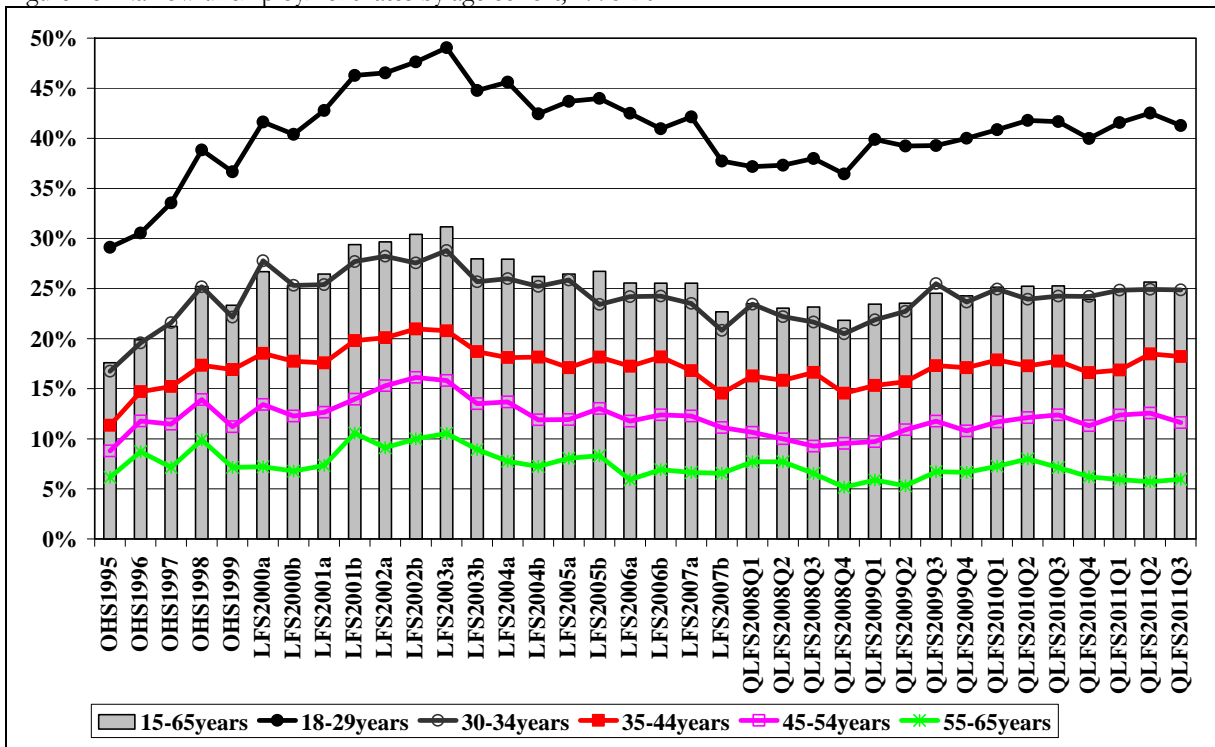
Source: Own calculations using OHS/LFS/QLFS data.

Figure 19: Narrow unemployment rates of youths by race, 1995-2011

Source: Own calculations using OHS/LFS/QLFS data.

Figure 20: Narrow unemployment rates of youths by gender, 1995-2011
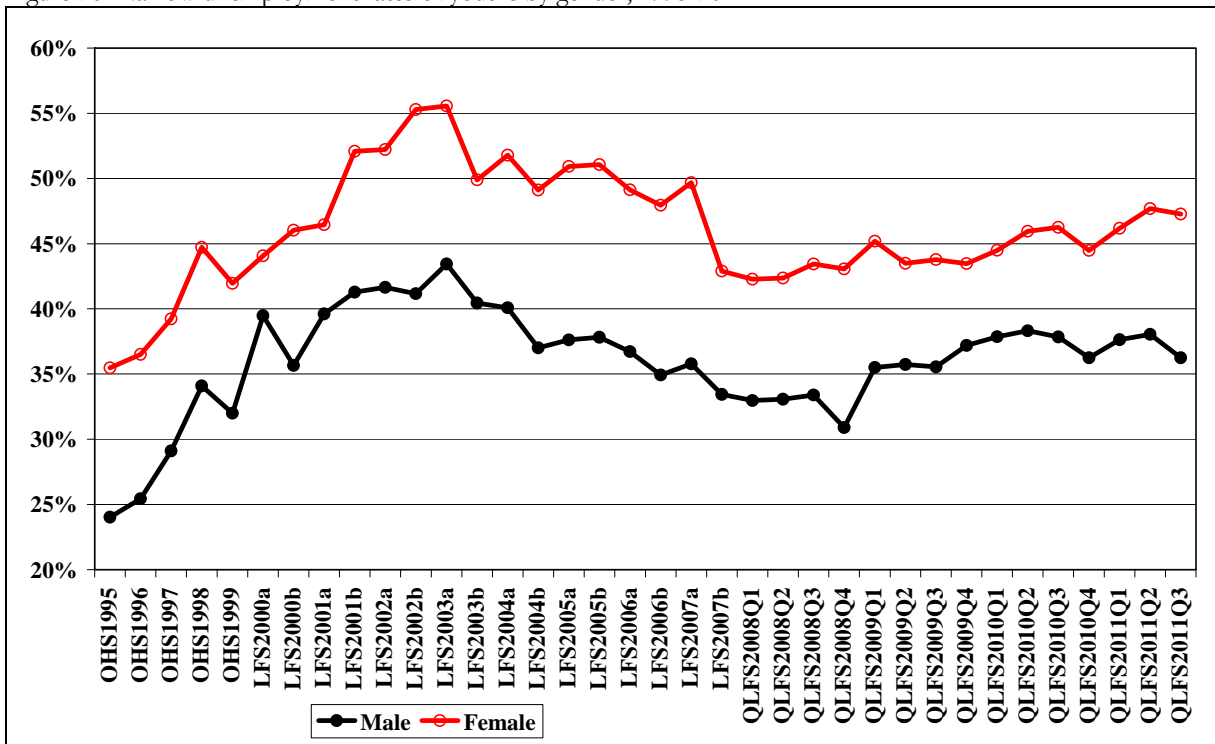
Source: Own calculations using OHS/LFS/QLFS data.

Figure 21: Narrow unemployment rates of youths by educational attainment, 1995-2011
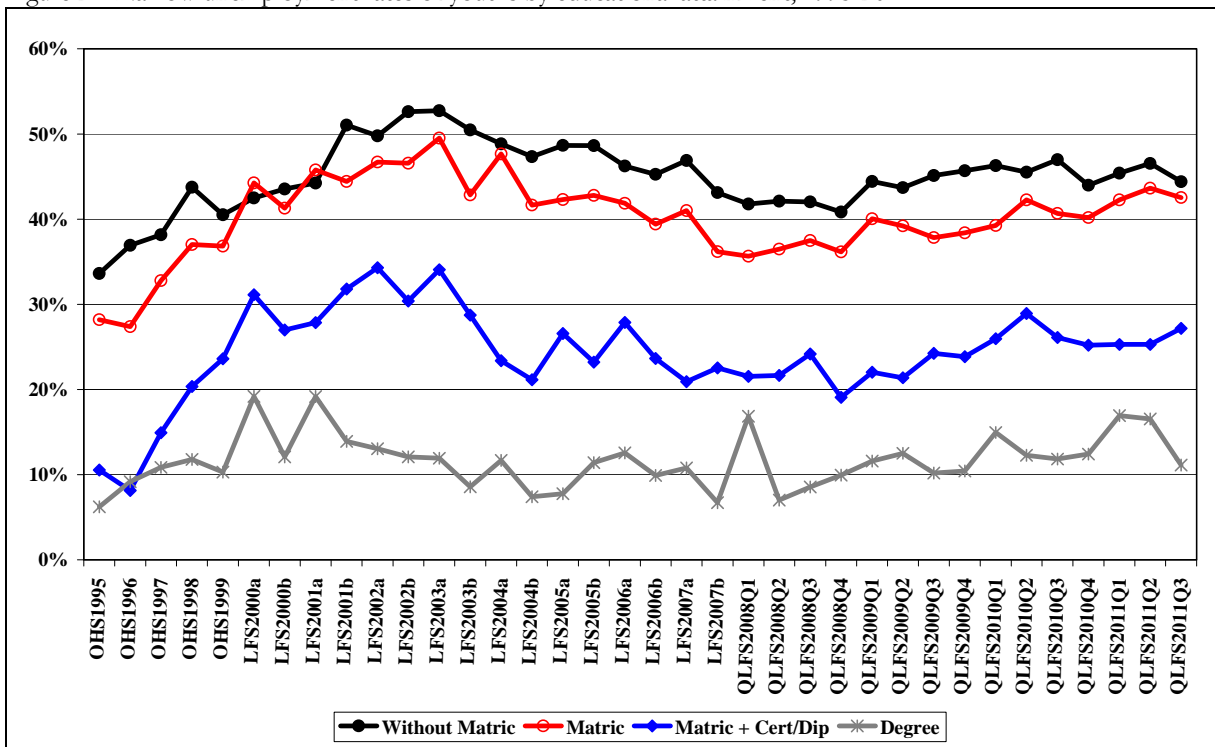
Source: Own calculations using OHS/LFS/QLFS data.

Figure 22: Narrow unemployment rates by age cohort and educational attainment, QLFS 2011Q3

Source: Own calculations using QLFS 2011Q3 data.

Figure 23: Narrow unemployment rates of youths by race and educational attainment, QLFS 2011Q3
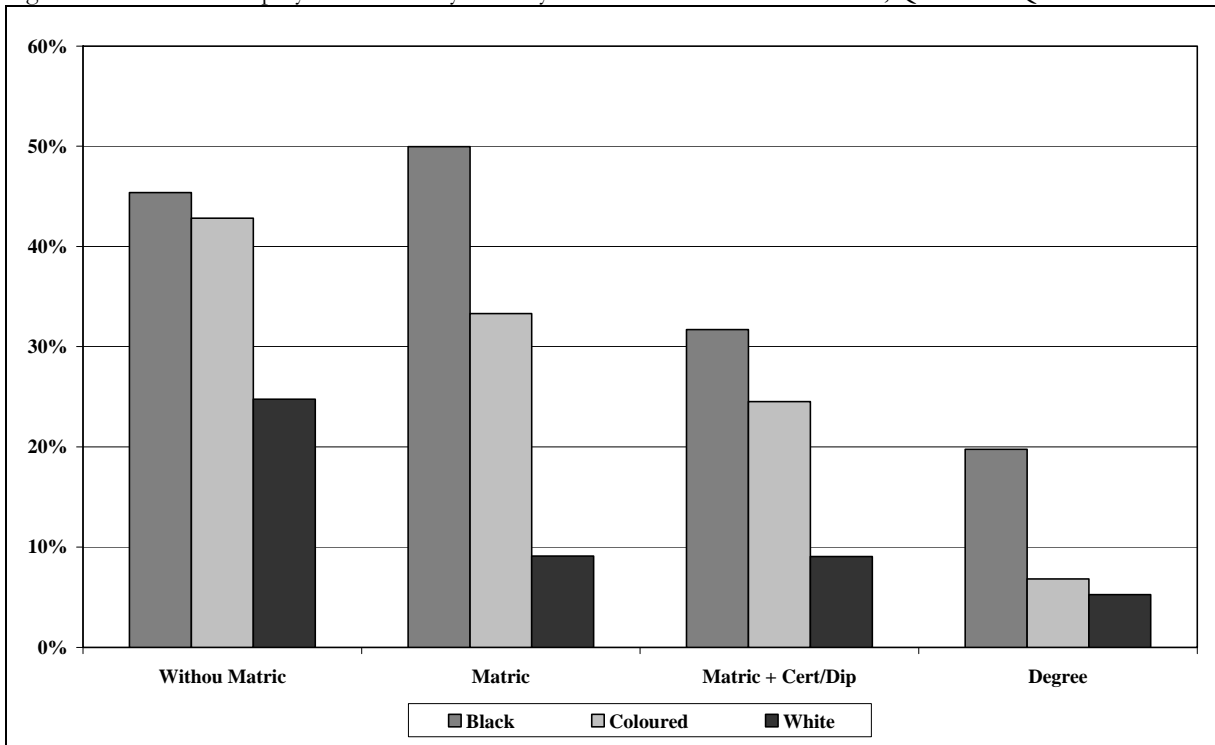
Source: Own calculations using QLFS 2011Q3 data.

Figure 24: Target growth rate, actual growth rate, and employment absorption rate by age cohort, OHS 1995 vs. QLFS 2011Q3
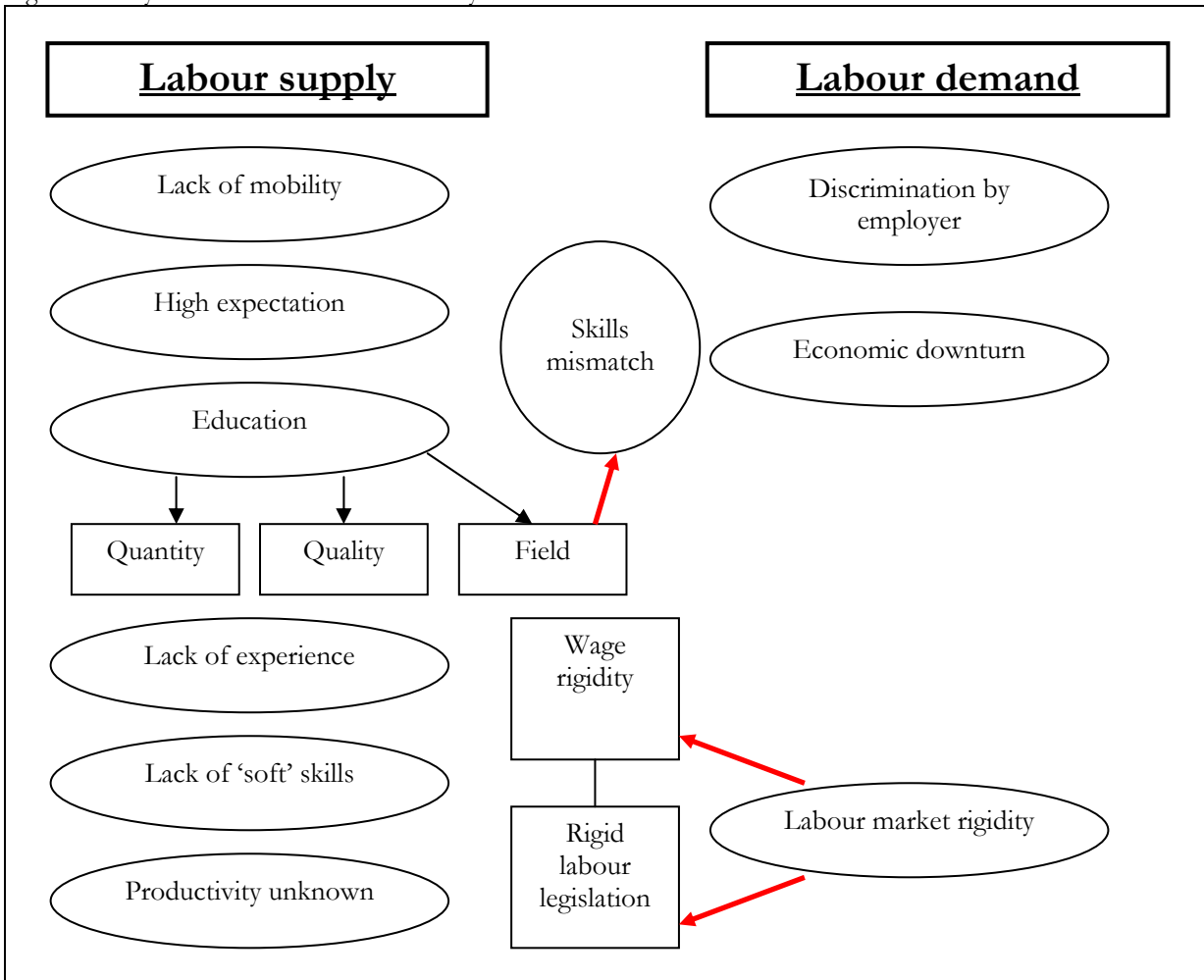

	18-24yrs	25-29yrs	30-34yrs	35-44yrs	45-54yrs	55-65yrs	15-65yrs	18-29yrs	30-65yrs
Target growth rate	80.7%	74.1%	59.0%	51.6%	75.3%	86.2%	65.7%	76.8%	62.3%
Actual growth rate	18.1%	34.9%	34.6%	34.5%	63.4%	81.3%	40.4%	28.0%	45.7%
Employment absorption rate	22.4%	47.1%	58.6%	66.8%	84.3%	94.3%	61.4%	36.4%	73.4%
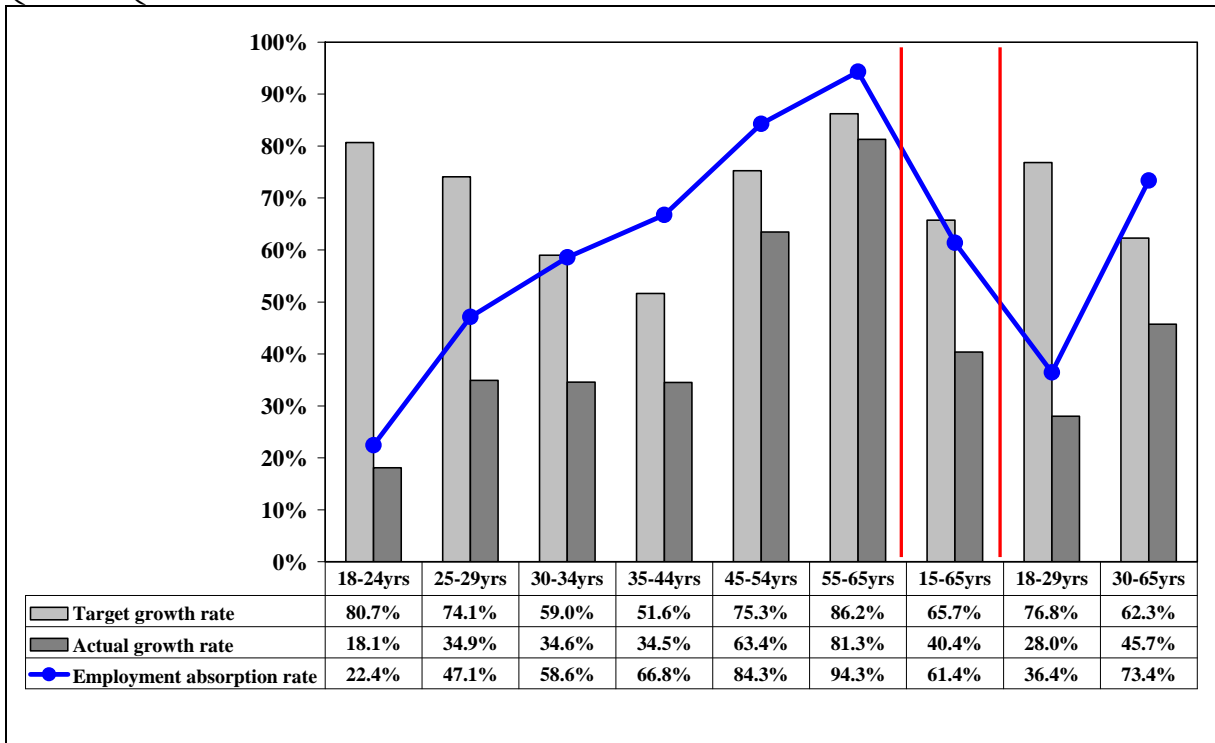
Source: Own calculations using OHS 1995 and QLFS 2011Q3 data.

Figure 25: Marginal fixed effects of the 15-29 years dummy variable in the Heckprobit regressions on the employment likelihood of the youths, conditional on participation, 1995-2011
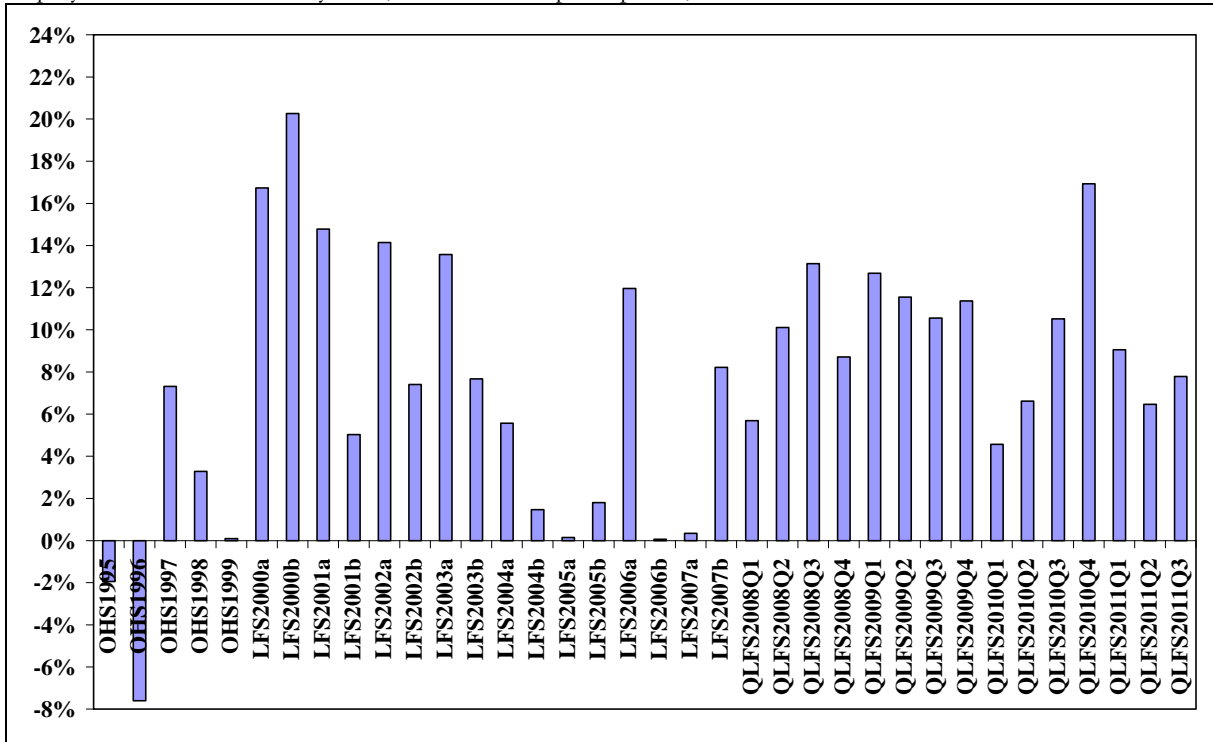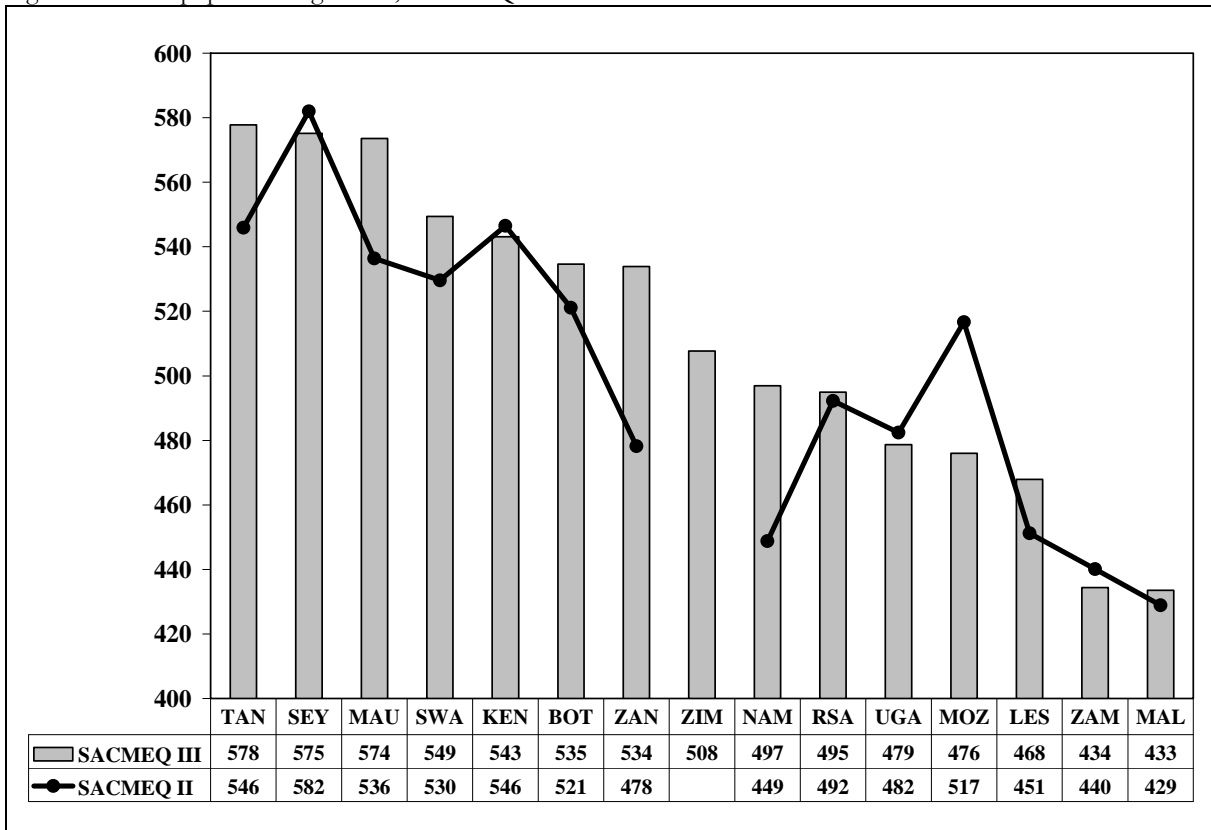

Source: Own calculations using OHS/LFS/QLFS data.

Figure 26: Key labour market barriers for the youth

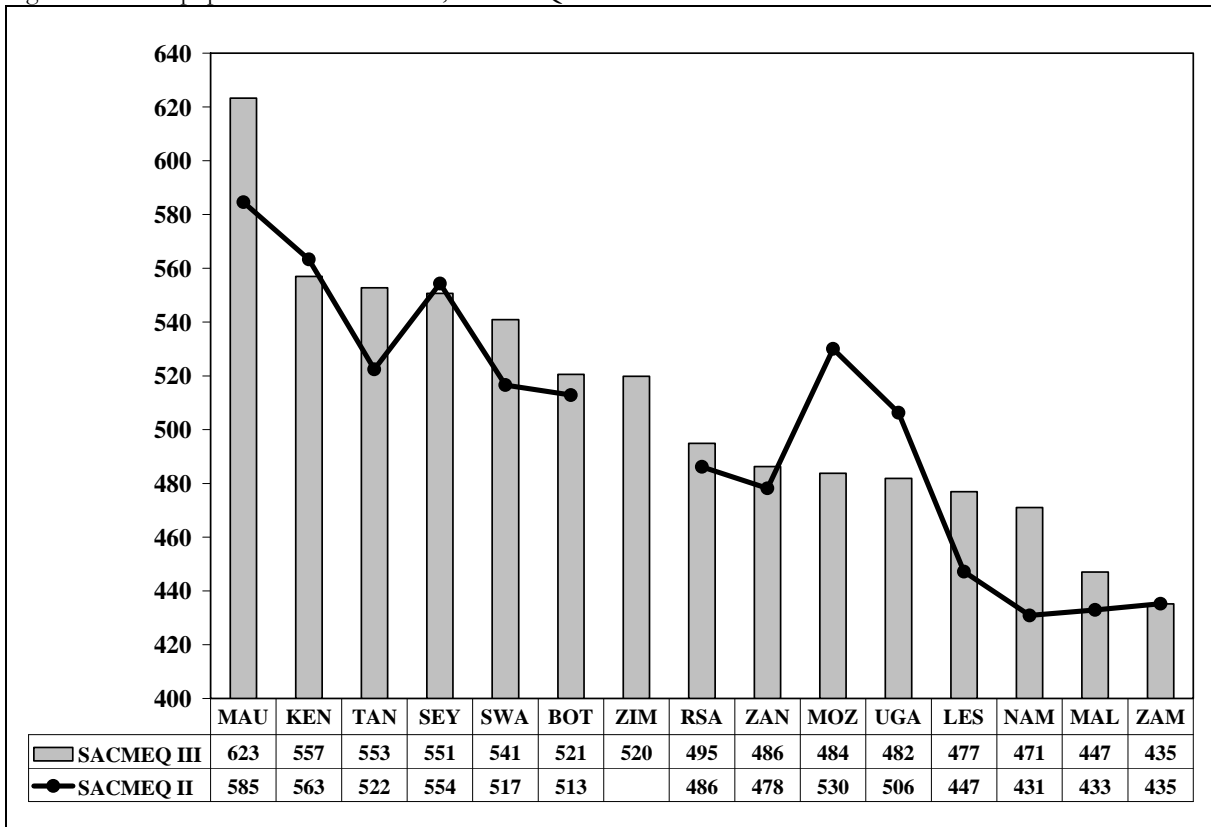Source: Adopted from ILO (2010: 54).

Figure 27: Mean pupil Reading scores, SACMEQ II and III

	TAN	SEY	MAU	SWA	KEN	BOT	ZAN	ZIM	NAM	RSA	UGA	MOZ	LES	ZAM	MAL
SACMEQ III	578	575	574	549	543	535	534	508	497	495	479	476	468	434	433
SACMEQ II	546	582	536	530	546	521	478		449	492	482	517	451	440	429

Source: Own calculations using SACMEQ II and III data.
Note: BOT: Botswana, KEN: Kenya, LES: Lesotho, MAL: Malawi, MAU: Mauritius, MOZ: Mozambique, NAM: Namibia, SEY: Seychelles, RSA: South Africa, SWA: Swaziland, TAN: Tanzania, UGA: Uganda, ZAM: Zambia, ZAN: Zanzibar, ZIM: Zimbabwe (only took part in SACMEQ III)

Figure 28: Mean pupil Mathematics scores, SACMEQ II and III

	MAU	KEN	TAN	SEY	SWA	BOT	ZIM	RSA	ZAN	MOZ	UGA	LES	NAM	MAL	ZAM
SACMEQ III	623	557	553	551	541	521	520	495	486	484	482	477	471	447	435
SACMEQ II	585	563	522	554	517	513		486	478	530	506	447	431	433	435

Source: Own calculations using SACMEQ II and III data.

Figure 29: How the extension of Bargaining Council agreements to non-party firms could harm small, labour-intensive firms
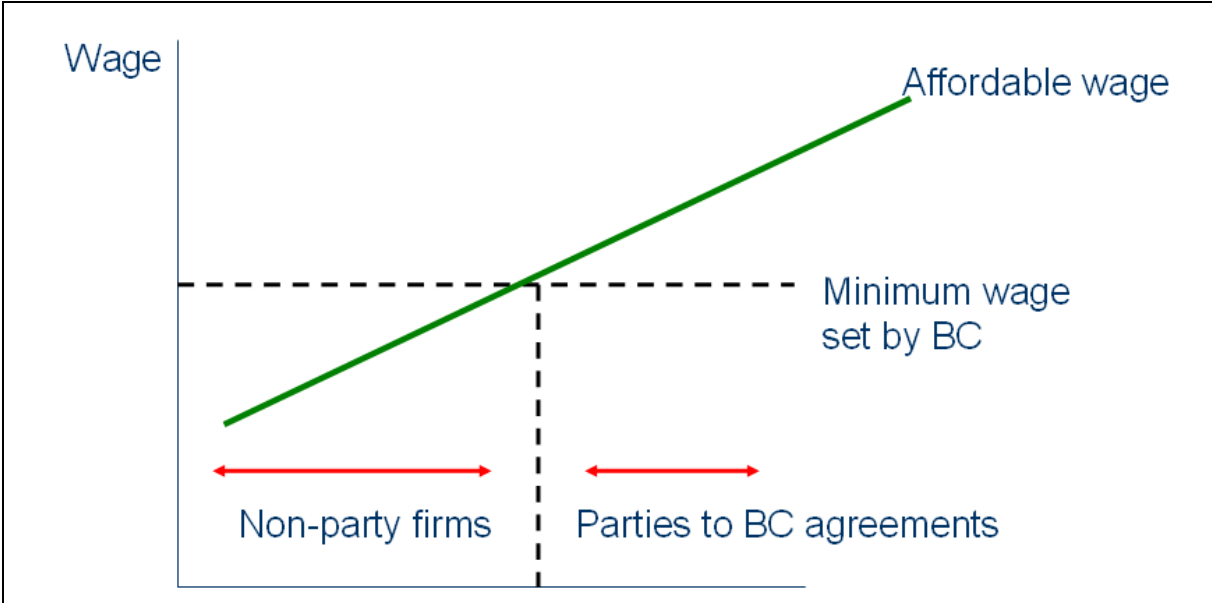
Source: Nattrass (2000: 136)

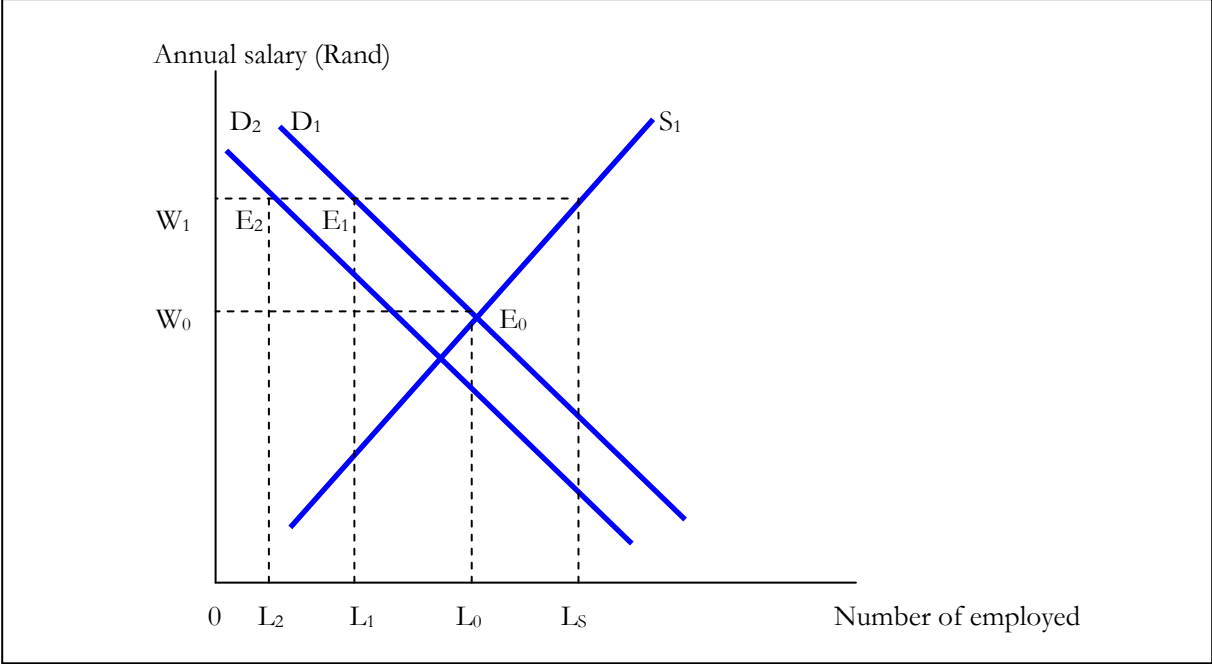Figure 30: Potential impact of rigid minimum wage on youth employment

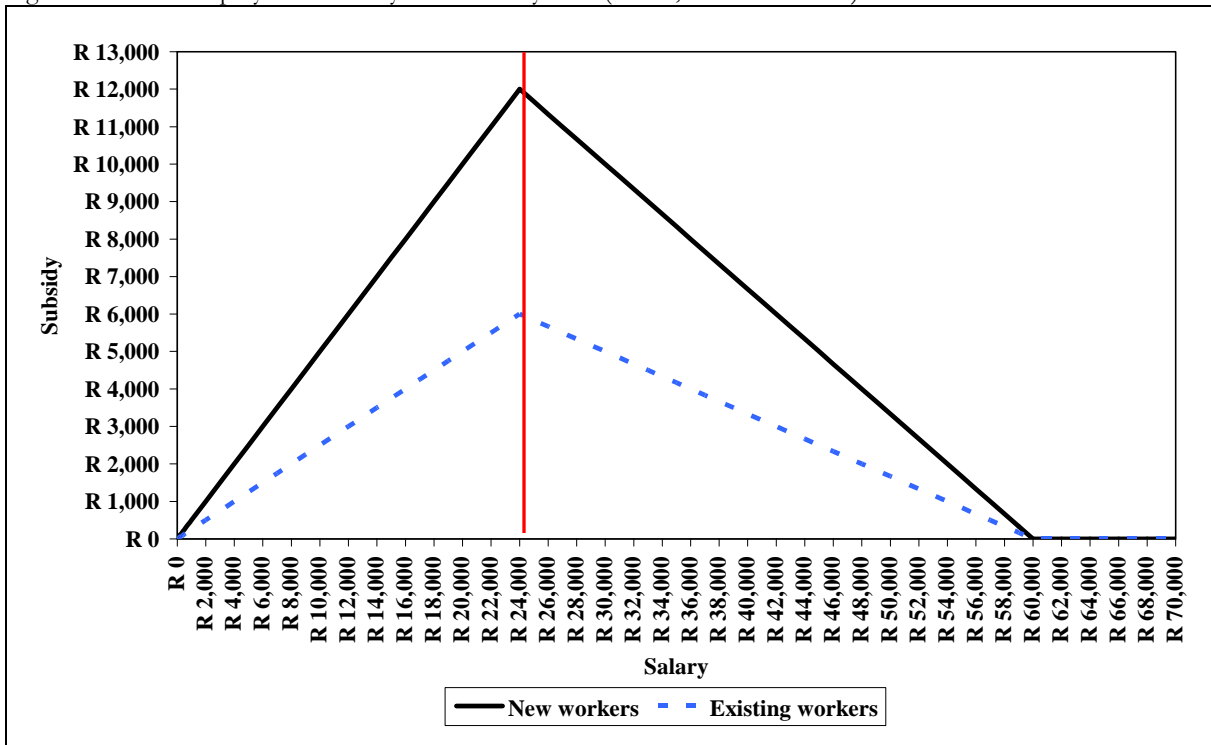Figure 31: Youth employment subsidy at each salary level (Rands, annual amounts)

Figure 32: Youth employment subsidy as proportion of salary at each annual salary level
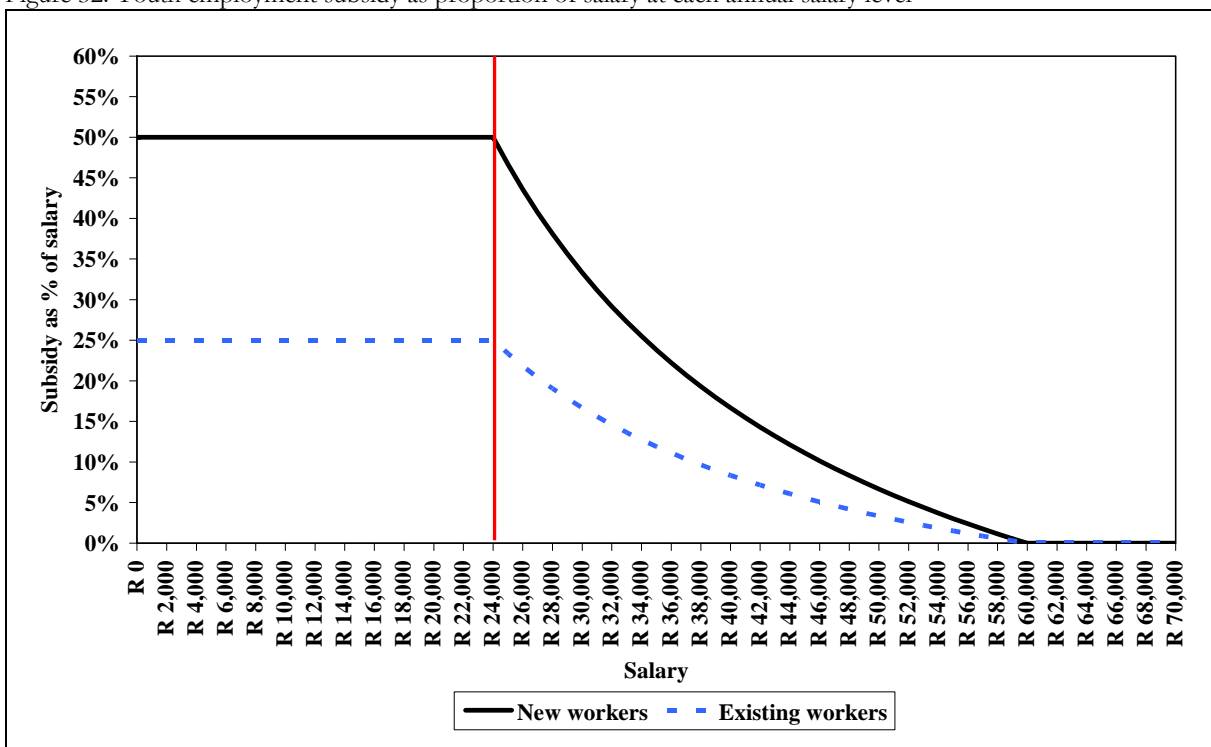
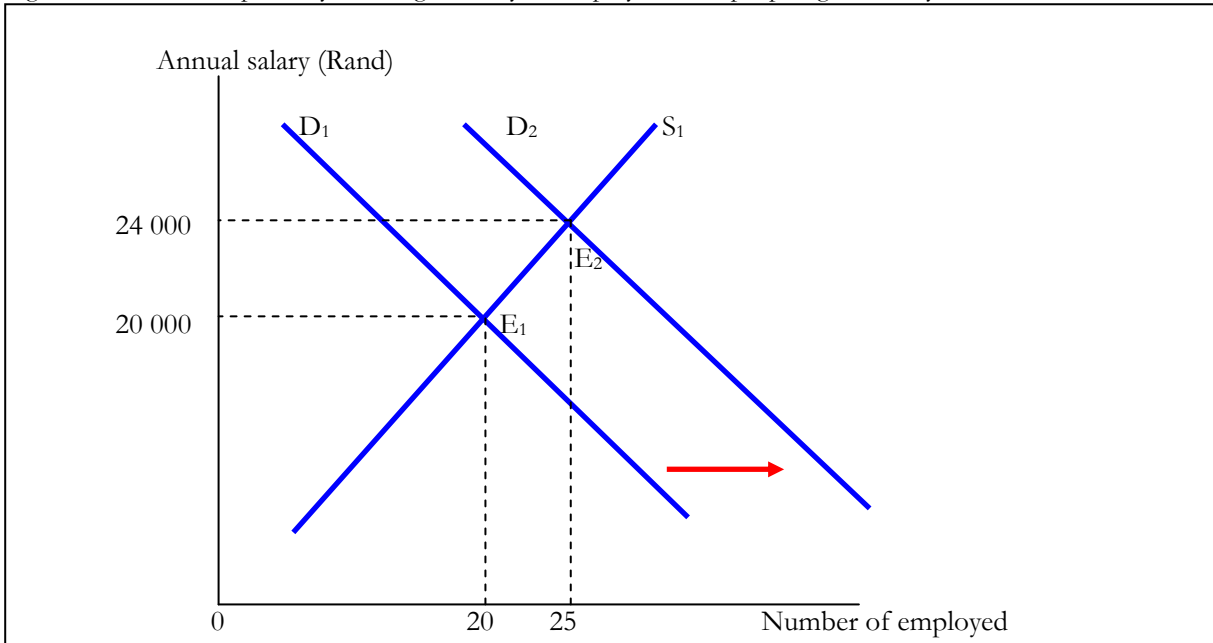Figure 33: Potential impact of youth wage subsidy on employment on people aged 18-24 years

Figure 34: Impact of youth wage subsidy on employment: Subsidized and unsubsidized workers are substitutes
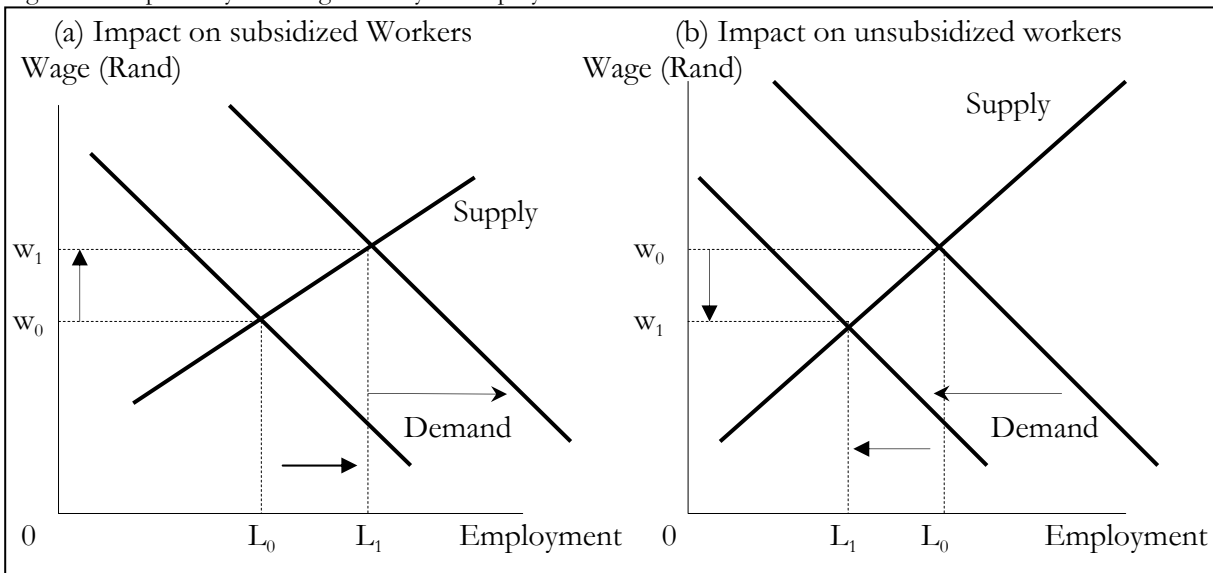

Figure 35: Impact of youth wage subsidy on employment: Subsidized and unsubsidized workers are complements
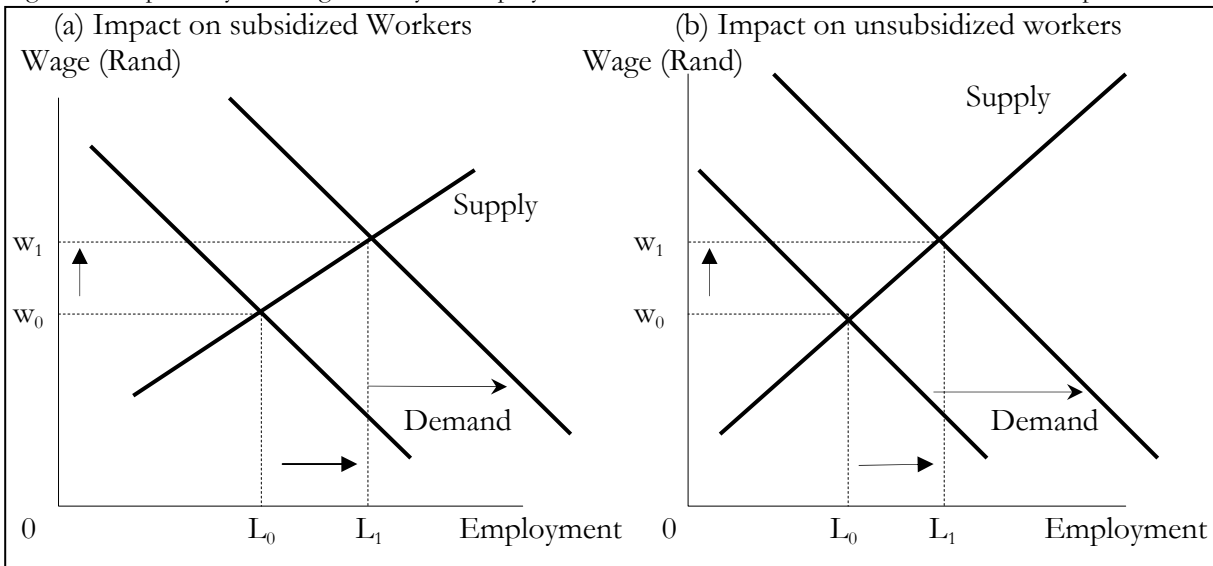
Figure 36: Possible impact of youth wage subsidy on wage and employment