

Why is Youth Unemployment so High and Unequally spread in South Africa?

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Abstract

In 1999, according to the broad definition of unemployment of the ILO, 58 percent of the young active South Africans could not find a job. Not only does the South African labour market exhibit a high unemployment rate for the young, according to international standards, but it also shows evidence of large inequalities between age groups, races and genders. Thus, this paper first seeks to explain these stylised facts investigating the microeconomic determinants of employment for different groups of the population. An application of the residual difference method of decomposing group wage differences (Oaxaca, 1973) to discrete choice models enables us to investigate whether the age, racial and gender employment gaps reflect heterogeneous “productive” characteristics between the two groups (such as education, experience, family background, location etc.) or, alternatively, result from differences in the way these characteristics are rewarded on the market. This methodology also allows the option of finding out whether there is any evidence of hiring discrimination or discrimination in setting up as self-employed among races and genders. Secondly, as human capital variables and geographical location of young individuals seem to influence in a strong and somewhat unexpected way their employment probability, the paper sheds more light on the role played by these two characteristics in the access to the labour market.

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1. Introduction

In most countries in the world, whether industrialised, developing or in transition, young people suffer from lower access to the labour market than the adult active population. South Africa is not an exception and exhibits a very high rate of unemployment among young people. Whereas, the global unemployment rate was around 36% in 1999 (according to the broad definition), 58 percent of the young economically active people (from age 16 to 24) could not find a job; this figure decreasing to 26 percent when considering the adult active population. The issue of young unemployment has been investigated to a large extent in international literature, focusing on its causes as well as on the different ways of inserting young people in employment (Blanchflower & Freeman (1999), Freeman & Wise (1982), O'Higgins (2001), Rees (1986)). However, so far, little attention has been paid to the issue of youth unemployment in South Africa (Bhorat and Oosthuizen, 2000, Wittenberg and Pearce, 1996 and Mhone, 2000) and the high youth unemployment rate largely remains unexplained. The contribution of this paper is to investigate the topic, applying econometric tools to a recent statistical data set (OHS 1999) in order to infer some policy implications.

Thus, the first aim of the paper is to look in a specific way at the youth unemployment issue, analysing the microeconomic determinants of employment. In other words, we explore the main variables that influence the young probability of finding wage employment or being self-employed. Reiterating the same analysis on the adult active people enables us to investigate whether the young/adult employment gap reflects heterogeneous "productive" characteristics between the two groups (such as education, experience, family background, location etc.) or, alternatively, results from differences in the way these characteristics are rewarded on the market. As human capital variables and location of individuals seem to influence the employment probability of young people in a strong and somewhat unexpected way, the paper sheds more light on the role played by these two characteristics in the access to the labour market.

Furthermore, one particular feature of youth unemployment in South Africa is that it is unequally spread between segments of the population. For instance, young African people suffer much more from unemployment than young White people – the unemployment rates are 70 percent and 12 percent respectively. The lack of employment is also more severe for women than for men as 63 percent of economically active women are unemployed whereas 53 percent of men remain without jobs.

Applying the residual difference method of decomposing group wage differences (Oaxaca, 1973) to discrete choice models, the second aim of the paper is to analyse the extent to which these racial and gender differences reflect disparities in individual productive characteristics. This methodology also enables us to find out if there is any evidence of hiring discrimination or discrimination in setting up as self-employed among races and genders.

Section 2 introduces the issue of youth unemployment in the light of the international literature and presents its nature in South Africa with a particular focus on the microeconomic determinants of youth employment. Then an attempt is made to shed light on the differences in the access to employment observed between population groups, considering successively age groups (section 3), races and genders (section 4). Sections 5 and 6 investigate the specific roles of human capital endowment and geographical location (rural/urban) respectively, on the probability of finding employment. Section 6 concludes and presents some policy implications of our findings.

2. The Issue of Youth Unemployment

2.1. A Short Review of the Causes of Youth Unemployment

During the last two decades, there has been a growing concern over youth unemployment and the transition from school to work as more and more young people are likely to experience a period of unemployment when first looking for work. Broadly speaking, the literature on youth unemployment, (Blanchflower & Freeman (1999), Freeman & Wise (1982), O'Higgins (2001), Rees (1986) focuses on its nature, causes and consequences, often following a macroeconomic perspective whereas, the literature on transition from school to work adopts generally a microeconomic and longitudinal approach to study the individual process of finding a job [Dolton (1994), Ryan (2001), Wolpin (1987), Giret (2001) Vernières (1997)]².

The main causes of youth unemployment have been widely studied in the economic literature and can be classified in two groups: whether they are analysed from a macroeconomic or microeconomic point of view. Following the former approach, the determinants of youth unemployment more often quoted are aggregate demand, youth wages, the size of the youth labour force and the lack of skills among youth (O'Higgins (2001)). Indeed, unemployment of young people seems to be more sensitive to changes in aggregate demand than adult unemployment, as young people are more likely than older workers to leave their jobs voluntary and to do so, albeit to a lesser extent, during a recession. On the demand side, it is likely that the first reaction of firms to a recession is to stop recruitment, and this affects young people more strongly. Furthermore, when firms start redundancy procedures, it is cheaper for them to fire young workers rather than older workers. Turning to the argument of wages, the evidence seems to suggest that, in industrialised countries (Blanchflower, 1999) the young are not being priced out of jobs by wages that are too high. However, the effect of minimum wages on youth employment is often found to be significant (Neumark and Wascher, 1999). The microeconomic theory puts forward other explanations to youth unemployment, however, not specific to the young generation. The theory of human capital (Schultz, 1961, Becker, 1964, Mincer, 1974) differentiates the individuals by their schooling and training investment and accounts for some of the differences in productivities between young people and more generally between cohorts. Young people with low education and experience will go through more difficulties to find employment (Giret, 2001).

² Another way of dealing with the school-to-work transition is to study the institutional factors (schooling system and types of labour market) which regulate the access of young to the labour market.

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Unemployment may also result from imperfect information on the labour market. Indeed, following this assumption, the theory of job search (Stigler, 1962, Mac Call, 1970) explains the different strategies of job seeking and durations of unemployment by the youth preferences and constraints (reflected in the reservation wage). The theory of job shopping (Johnson, 1978) stipulates that a young work seeker must first try a job before deciding if he is going to keep this employment or start a new search. Unlike the previous theory, models of job matching (Jovanovic, 1979) explain youth joblessness by decisions from both the employee and the employer, based on the individual's productivity.

This paper concentrates on the microeconomic causes (and does not investigate as such its macroeconomic features) of youth unemployment in South Africa, addressing the issue of the individual determinants of wage employment and self-employment.

2.2 The Situation in South Africa

Table 1 displays the figures for the labour market status of youth and adults in South Africa. It can be seen that youth from 15 to 24 years old represent around 20 percent of the economically active population (EAP), which is closest to the figure observed in developed countries (20.7%) than in developing countries (29.5 percent) or in Africa (36.4 percent)³. A relatively low share of youth in the EAP is likely to reflect a large enrolment in education. Indeed, in South Africa, it seems that young Africans obtain their post-graduate qualifications quite late. Working with the age category 15-30 will probably better capture the behaviour of the young economically active Africans. This is the option that we have decided to adopt in this paper. The youth from 15 to 30 years old amount to 40 percent of the EAP. However, unemployed youth represent a higher share of the unemployed in the economy, as 58 percent of the jobless are 15 to 30 years old. In other words, the young are disproportionately hit by unemployment, as their unemployment rate is as high as 50 percent whereas it is 26 percent for adult people.

Table 1. Labour Force Participation, by Age Group

	Young		Adult	Whole EAP
	15-24	15-30	31-65	15-65
Unemployed¹	1 793 340 58,1%	3 412 245 50,5%	2 470 117 26,3%	5 882 362 36,4%
Employed²	1 153 099 37,4%	3 027 561 44,8%	5 721 413 61,0%	8 748 974 54,2%
Self-employed	138 865 4,5%	320 106 4,7%	1 187 360 12,7%	1 507 466 9,3%
Total	3 085 304 100%	6 759 912 100%	9 378 890 100%	16 138 802 100%

Source: OHS 1999

Notes: ¹ Broad definition of unemployment. ² Employment can be full time, part time or casual. Employment and self-employment can be either formal or informal.

³ Blanchflower (1999)

The rest of the EAP is divided between the wage employed and the self-employed. The table above shows that young workers are relatively less involved in self-employment than adult workers. Around 9 percent of young workers are self-employed whereas this figure increases to almost double for adults. Lack of capital appears to be the primary constraint to enterprise development and it limits even more severely young entrepreneurship as adult people may have accumulated more capital than youth. Indeed, international literature stresses the support of young self-employment as a mean to reduce the level of youth joblessness (Blanchflower, 1999, O'Higgins, 2001)

Table 2 below gives more details on the breakdown of labour force participation by gender and race.

Table 2. Labour Force Participation, by Gender and Race

Young (15-30)	Whole	African	Coloured	Indian	White	Male	Female
Unemployed¹	3 412 245 50,5%	3 015 753 60,3%	260 046 32,4%	61 780 29,2%	71 997 9,7%	1 493 162 44,0%	1 916 635 57,0%
Employed²	3 027 561 44,8%	1 742 826 34,9%	528 539 65,9%	135 795 64,1%	614 622 83,1%	1 708 473 50,3%	1 318 098 39,2%
Self-employed	320 106 4,7%	238 907 4,8%	13 571 1,7%	14 216 6,7%	52 841 7,1%	194 044 5,7%	126 063 3,8%
Total³	6 759 912 100%	4 997 487 100%	802 156 100%	211 790 100%	739 459 100%	3 395 678 100%	3 360 796 100%

Source: OHS 1999

Notes: ¹ Broad definition of unemployment. ² Employment can be full time, part time or casual. Employment and self-employment can be either formal or informal. ³ The whole total does not match with the sum of the totals for race and for gender because of missing observations on race and gender.

Participation in the labour force takes the form of unemployment, employment and self-employment. There are striking differences by race and gender in all of these.

First, table 2 shows that the incidence of unemployment is unequally distributed among races and between males and females. Young economically active Africans suffer from very low access to the labour market as, 60 percent of them are unemployed, which is double the unemployment rate of Coloureds and Indians. Young Whites appear to be relatively less affected by unemployment as less than 10 percent of them are jobless. Young women suffer more than men from unemployment, as 57 percent of the young female and 44 percent of the male labour force is unemployed. However, some authors underline that this differential is likely to be somewhat overestimated as female employment in the subsistence farming sector is not efficiently captured in the current national statistics (See Standing *et al.* 1996, Posel & Casale, 2001 and Klasen & Woolard, 1999).

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The other part of the labour force is divided between employment and self-employment. These two categories cover a very wide variety of situations, as employed and self-employed can work in micro-enterprises, in formal or informal activities and can be badly or highly remunerated. Again, we observe high discrepancies among races and genders. As displayed in table 3, only 35 percent of young Africans are employed whereas this figure increases to 83 percent for Whites. Turning to self-employment, the percentage of workers in this category is also lower for Africans than for Whites, but to a smaller extent than in wage employment. Thus, the White/African gap in employment appears to be higher for the employed than the self-employed. Note, that only a very small percentage (less than 2 percent) of young Coloured are established as self-employed. Different observations can be made on gender statistics as comparatively females appear to be less disadvantaged in wage employment than in self-employment

Regarding these observations, one can question the reasons underlying such racial and gender differences in the employment and self-employment rates. Do they reflect disparities in individual productive abilities, differences in preferences or discrimination? Section 4 attempts to address this issue focusing on the one hand on Whites and Africans and on the other hand on males and females⁴. We move on in the next paragraph, however, to estimating the determinants of youth employment.

2.3. An Analysis of the Determinants of Youth Employment

In dealing with the issue of youth unemployment requires definition of both the notion of youth and the concept of unemployment. According to the standard United Nations definition, "youth" comprises young people from 15 to 24 years of age inclusive. However, in practice, the operational definition of youth varies from country to country depending on cultural, institutional and political factors (O'Higgins (2001)⁵). In this paper we use the age category [15-30], as the

African majority seems to be involved in education until relatively late. Hence, lengthening the age category probably better captures the behaviour of the young economically active Africans (see below). Defining unemployment is also a difficult issue. According to the ILO definition, which is the most widely used, the unemployed are described as those people who have not worked for more than one hour during the short reference period (generally the previous week or day) but who are available for and actively seeking work. In South Africa, the definition including discouraged job seekers (those people who wish to work but are not actively looking for a job) is often perceived as the more relevant (for instance, see Kingdon and Knight, 2000 for the definition used in this article).

In order to shed some light on the causes of youth unemployment in South Africa today, this section investigates the microeconomic determinants of youth employment. Finding out which individual characteristics have the greatest influence on the probability of the young finding employment, is a decisive step in the understanding of the youth joblessness issue. As far as we know, only one econometric study has focused on the determinants of youth unemployment, using unemployment probit analysis on the PSLSD data set of 1993 (Wittenberg & Pearce, 1996). The contributions of our analysis are twofold. First, youth employment is analysed from two different angles: employment by someone else and self-employment. As encouraging youth small

⁴ The choice of observing race differences on Africans and whites only is somewhat constrained by the small amount of observations for young coloured and Indians which does not allow statistically significant econometric results.

⁵ For instance, in Italy, the term "youth" designates (for policy purpose) people aged between 14-29 (in the North) and 14-32 (in the South) (O'Higgins, 2001).

business is often cited as a way of coping with youth unemployment, an investigation of its determinants could be useful. Secondly, the use of a more recent data set, the October Household Survey 1999, will allow us to update the results of this previous study.

- *The Methodology*

The first step consists in making a choice between the different econometric tools that allow estimating the access to employment. The common solution is to retain a probit of participation (employed or not). However, in our case, the availability of detailed survey data favours the adoption of a multiple-choice model in order to keep the highest amount of information. Individuals declare to be unemployed (u), employed (e) or self-employed (s). The employment status depends on the individual characteristics and on the employer's hiring policy.

If employment status are indexed by m ($m = u, e, s$), the probability that an individual i ($i = 1, \dots, N$) with a vector of characteristics $Z_i = (1, Z_{2i}, Z_{3i}, \dots)$ will be assigned to employment status k is:

$$p_{ki} = \frac{\exp(a_k Z_i)}{\sum_{m=u,e,s} \exp(a_m Z_i)} \quad (k = u, e, s) \quad (1)$$

where \mathbf{a}_k is the vector of coefficients corresponding to the k th employment status.

The average predicted probability of assignment in employment status k is then:

$$\bar{p}_k = \frac{1}{N} \sum_i p_{ki} \quad (2)$$

- *The Data*

The data are derived from the *October Household Survey* (OHS) 1999 which covers 30000 households. The sample is limited to young people between the age of 15 and 30 for which employment attributes are available, restricting the sample size to 15 453 observations.

In order to produce efficient statistics and econometric estimates, the analysis takes into consideration the features involved in the sample design. These features include clustering and sampling weights⁶.

⁶ A two-stage sampling procedure was applied in which the first stage units are Enumerated Areas (the clusters) and the second stage, households. The sampling procedure involved stratification by province and area type (urban/rural). The 1996 population census (adjusted for growth) was used as a basis for the weighting.

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- *The Variables*⁷.

→ The dependent variables

The dependent variable is a discrete variable equal to 1 if the individual is unemployed (broad definition), 2 if he (she) is employed by someone else and 3 if he (she) is self-employed.

→ The independent variables

As highlighted by Kingdon & Knight (2000), it is hardly possible to distinguish the specific effects of the supply-side (worker-related) and demand-side (employer-related) factors on the individual's labour market state. We will, therefore, just separate the worker-related characteristics from the non-worker-related ones.

*** Worker-related Characteristics**

Information on gender and race group is included to test the presence of gender and racial discrimination in the access to the labour market.

Other available variables to characterise the individual are related to human capital endowment: 4 dummies for the **level of schooling** and **years of participation to the labour force**. This variable is conventionally constructed as (age - years of schooling - 6) and is often labelled years of experience. Note that it might be a weak proxy for real work experience, as one cannot distinguish between the years that the individual spent in unemployment (a long period of unemployment could deserve the probability of finding a job) and his (her) years of work experience. However, it is expected that the employer's hiring choice and the worker's decision to enter the labour market will be positively affected by the individual's level of education and experience. The effect of these variables on the probability of being self-employed is more blurred.

A dummy variable, **young people** (=1 if the individual is from 15 to 24 years old) is introduced to assess if there is an age effect (15-24) inside the category 15-30.

The other independent variables introduced are mainly linked to the individual's family background and can be divided into 3 sets:

- First, marital status, headship status, and number of children in the household. On the supply side, it is expected that greater family responsibilities induce entry into the labour market and lower the reservation wages. On the demand side, employers may exhibit preferences for workers with higher probabilities of staying in their firm. The variable marital status should be considered cautiously as it might be endogenous if

⁷ See appendix 1 for the construction of each variable.

the link with the dependent variable is the other way around due to the fact that getting a job can also influence the decision to get married.

- Secondly, the **presence of unemployed** in the family – other than the individual – is also likely to increase the will of participating in the labour market, owing to the associated economic responsibility. On the other hand, it can also indicate the precariousness of the household and thus, deserves the job search (see Miller, 1998).
- Thirdly, the **presence of employee** in the household is introduced as a proxy for the network (Wittenberg & Pearce, 1996). It is assumed that if there are other people in the household in employment, they might act as informants about places and opportunities (insider-outsider theory of job recruitment). The **presence of self-employed** in the family is also included as it can increase the probability of being self-employed in case of setting up of a family business.
- We also include a variable for **housing tenure**, which can have two opposing effects on the probability of getting a job (Kingdon and Knight, 2000). It may have a negative effect at first, as housing tenure has often been shown to impede labour mobility and migration (and thus employment) because of higher transactions costs than in renting (Cameron & Muellbauer, 1998, McCornick, 1997). Housing ownership may also impede employment if it acts as a proxy for wealth and the level of the reservation wage (Kingdon and Knight, 2000a). However, it can also have a positive effect if stability is sought by the employer (to reduce labour turnover) or if the worker still has to pay for his (her) accommodation.

* Non-worker-related Characteristics

Following Kingdon and Knight's research (2000), the distance from the nearest phone is introduced as a proxy for the isolation of the community. It is likely to capture the cost of job search. It is expected that it will increase the probability of getting a job. A dummy for location (urban/rural) is included in order to test on whether living in urban areas helps or impedes the entry on the labour market. Urban living may increase the chances of being employed as more jobs are available in towns than in rural area. A set of regional dummies (provinces) aims to capture the effects of regional economic differences.

→ A note on the missing variables

One should be aware of the fact that a few other variables could influence the probability of employment but are not available in the OHS 1999 or sometimes even unobservable. One could think in particular of reservation wage in order to investigate the assumption of voluntary unemployment. The introduction of parental background variables (such as the father's education, labour market status or occupation) could also be introduced to test for intergenerational transmission of inequalities (see O'Neill & Sweetman, 1998)⁸. It could also have been interesting to

⁸ Looking at the variables available in the OHS 1999, the only way to introduce these intergenerational variables is to select the sample of youth living with their parents and thus to exclude the youth who are head of the household which induces a bias in the estimates.

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assess the impact of neighbourhood effects and peer effects on the probability of employment. Finally, one should also consider the introduction of credit availability and the interest rate as important determinants of self-employment.

- *The Results*

Table 3 displays the results of the multinomial logit estimates of the determinants of employment, taking into account the survey design, for the young people, from 15 to 30 years old in 1999. Following Greene (1997), we report the ratio of relative risk for one-unit change in the explanatory variable, it being understood that risk is being measured as the risk of the category relative to the base category (unemployed).

Table 3. The Determinants of Employment for Young People

	Employed		Self-employed	
	Ratio of relative risk	t-stat	Ratio of relative risk	t-stat
Male	1.602***	9.48	1.910***	5.91
African	0.114***	-15.07	0.170***	-8.16
Colour	0.313***	-7.52	0.155***	-6.00
Indian	0.338***	-5.45	0.346**	-3.10
Young People (15-24)	0.721***	-4.44	0.865	-0.88
Primary Education	1.258*	1.67	0.744	-0.91
Secondary Education	1.112	0.66	0.640	-1.07
Further Education	2.201**	3.13	1.306	0.49
High Education	3.092***	5.78	1.198	0.36
Participation Duration	1.035***	3.57	1.006	0.24
Married	1.241***	3.48	1.600***	3.51
Headship Status	4.387***	19.91	6.024***	11.71
Children Under the Age of 6	0.899***	-3.87	1.114**	2.13
Other Employed	1.834***	9.26	0.647**	-3.02
Other Self-Employed	1.106	1.13	7.097***	12.37
Other Unemployed	0.444***	-13.73	0.296***	-9.40
Ownership Status	0.641***	-8.21	1.114	0.90
Urban	0.799***	-3.28	0.677**	-2.78
Distance from Phone	0.890***	-6.53	0.933	-1.50
Gauteng	0.659***	-4.14	0.689	-1.51
Eastern Cape ^a	0.464***	-6.82	0.736	-1.17
Northern Cape	0.648**	-3.03	0.287**	-2.84
Free State	0.654***	-3.35	0.589*	-1.84
Kwazulu Natal	0.753**	-2.51	0.907	-0.36
North West	0.566***	-4.88	0.511**	-2.13
Mpumalanga	0.587***	-4.26	0.639*	-1.65
Northern Province	0.396***	-6.94	0.516**	-2.23
N	15453			
F stat	50.55			
% of N Correctly Predicted	71.8%			

Source: OHS 1999

Notes: Normalizing category: unemployed.

*** Statistically significant at the 1% level, ** the 5% level and * the 10% level. Absolute value of t-statistics in parenthesis.

^a Reference category: Western Cape

As expected, being male increases both the probabilities of being employed and self-employed (compared to unemployed). More precisely, young males have 60% more chances of getting a job from an employer than young females. This figure increases to 90% when self-employment is considered. These results suggest that some gender discrimination might occur in the access of young people to the labour market⁹. However, the introduction of a dummy variable is not a satisfactory tool to estimate the extent of discrimination, as it does not allow the impact of all the other determinants of employment to vary between males and females. Section 4 takes this point into account and presents an estimate of gender discrimination in youth unemployment.

Table 3 shows that Africans, Indians and Coloured young people have a lower access to employment than White young people. The inequality is the most severe for Africans as the odds of being employed is reduced by 90 percent and of being self-employed by 93 percent (if one is a young African than if one is a young White). These racial employment gaps will be analysed further in section 3, which attempts to investigate whether these gaps can be explained by differences in individual “productive characteristics” between race groups or can be attributed to discrimination.

Being 15 to 24 years old (compared to 24 to 30 years old) decreases the probability of finding a job by 30 percent, meaning that youth unemployment crisis is stronger among the youngest people. This age dummy does not influence self-employment significantly.

The impact of human capital endowment on wage employment is not homogeneous among the various educational levels. For instance, the impact of primary education on wage employment is barely significant (at the 10 percent level). Furthermore, young people with secondary education (from grade 8 to grade 12) do not have a better chance to get a job than people with no education (insignificant coefficient). The strong positive effect of education on the access to wage employment starts at the level of technical certificates or university degrees. For instance, young people with university degrees have three times more chances to get a job than people without any education. Years of schooling do not have any significant effect on the probability of self-employment. Entrepreneurial drive and availability of funding are likely to be overriding factors where adoption of relatively less sophisticated self-employment is concerned. As the improvement and adaptability of formal education to employers’ criteria of hiring is expected to reduce youth unemployment, a whole section (section 5) of this paper will be devoted to further investigation of this issue.

Higher participation duration increases the access to wage employment, meaning that this variable captures better work experience than years spent in unemployment. Note that this variable is not significant in the estimates run for self-employed.

⁹ This finding is in accordance with results obtained for the whole economically active population from 15 to 65 years old (Rospabé, 2001).

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Turning to the variables linked to the individual's family background, it is found, as expected, that being married or the head of the family, favours access to wage and self-employment. The influence of the headship status is even stronger. The number of children under the age of 6, have a differing affect on the probability of getting a job and the probability of being self-employed. Young people with greater child-care responsibilities are less flexible labour force participants and thus, have a lower probability of being employed. However, these responsibilities do not prevent them from being self-employed. Indeed, taking care of children is not incompatible with self-employment especially if the latter occurs at home.

The presence of other wage employed in the household, introduced as a proxy for the social network, significantly increases the probability of young wage employment. However, it decreases the probability of self-employment by more than 30 percent. This is possibly because wage employment is the only option considered in such cases. On the other hand, the presence of other self-employed in the household only influences the access to self-employment significantly. It may reflect the fact that young self-employment is largely influenced by the existence of a family business or a role model from whom they can see how to go about self-employment.

In other respects, having unemployed members in the family decreases the probability of being employed suggesting that the precariousness of the household renders the job search efforts of the family's members costly. It also reduces the probability of self-employment by 70 percent.

Housing tenure lowers the young's chances of getting formal employment by 35 percent. As underlined above, this negative effect occurs if homeowners are less mobile than tenants or if housing ownership acts as a proxy for wealth and the level of the reservation wage. Home-ownership has an insignificant affect on the probability of being self-employed.

Being far from a phone (proxy for the isolation of the community and the cost of job search) hinders the finding of a job, as an employee, but is not significant in the case of self-employed.

Considering the impact of location on the probability of employment, results show that living in an urban area significantly reduces the young's access to employment. It decreases the odds of being employed by 20 percent and being self-employed by 33 percent. This outcome, consistent with those found by Borat & Leibbrandt (2001) and Kingdon & Knight (2000), Wittenberg & Pearce (1996) in the case of employment probit estimates, is somehow counter-intuitive as employment opportunities are higher in the cities. However, as the large migrations from rural areas towards cities substantially increase the urban labour supply, the probability of finding a job in urban areas is thus likely to be negatively affected. Section 6 will investigate this result further.

Finally, living in a province other than the Western Cape significantly decreases the chance of getting a job from someone else. The province where the young have the lowest opportunities of work (compared to the Western Cape) is the Northern Province. The odds of being hired in this province are reduced by 60 percent. The significance of the impact of the provincial location is lower on the self-employed.

The results of these estimates lead to a number of observations. First, the introduced individual characteristics seem to better explain wage employment rather than self-employment. Indeed, for instance, human capital variables do not significantly influence the probability of being self-employed. It is likely that other variables would be more relevant, access to family assets or credit especially. The only variable available in the survey for family income was monthly wage added to monthly income for self-employed. However, it is a weak proxy for household resources and turns to be insignificant when introduced in the regression¹⁰. Second, a few outcomes need further investigation, whether they reveal unexpected results (heterogeneous significance of the educational levels, negative influence of urban localisation on youth employment) or match governmental concerns of equity (significant effect of gender and race). The results of this research should bring some light on a few ways to deal with youth unemployment. The next section studies the particularities of youth unemployment compared to adult unemployment and attempts to investigate, on a microeconomic basis, the reasons for the higher level of joblessness among the young than among adults.

3. Explaining why the Young suffer more from Unemployment than Adult People?

As seen previously, throughout the world, evidence shows that youth unemployment rates are around twice as high as adult unemployment rates. Though the literature often raises the macroeconomic and demographic factors underlying this observation, like the aggregate demand, the level of youth wages or the size of the youth cohort, one can wonder how a microeconomic analysis would explain this stylised fact. South Africa is not an exception to this “2 times rule” as around 50 to 58 percent (depending on the age category considered) of young people suffer from unemployment whereas the adult unemployment rate is around 26 percent (see table 2 on page). Setting aside the macroeconomic side of the analysis, the aim of this section is to investigate how the micro-economic determinants of the access to the labour market account for the employment gap observed between young and adult people. Does the observed gap result from different “productive” characteristics between the 2 population groups? Alternatively, does the way these characteristics are rewarded on the market also play a role in explaining the differences in employment?

¹⁰ Note that the introduction of this variable as a determinant of wage employment was a test for voluntary unemployment, as other resources might encourage the job seeker to spend more time in unemployment. Its impact on wage employment also appears to be insignificant.

These issues are tackled, using a decomposition analysis on the young/adult employment gap in order to evaluate which part of it is explained by productive individual characteristics and which part remains unexplained. First, we briefly present the methodology used to decompose the employment gap between two groups of population and then we display the results of its application to young and adult people.

3.1. Methodology

The methodology employed to investigate the nature of the employment gap is inspired by Oaxaca's method of analysing group wage differences (Oaxaca, 1973) based on linear regressions. This residual difference methodology has been previously adapted to discrete choice models by Gomulka & Stern (1990) and Altonji & Blank (1999) in their decomposition of gender labour force differentials.

It consists in decomposing the differences in the average wage employment (or self-employment) probabilities between individuals of type 1 and individuals of type 2¹¹ into an explained component and an unexplained component in the following way¹²:

$$\bar{P}_{k1} - \bar{P}_{k2} = \underbrace{(\bar{P}_{k1} - \bar{P}_{k2}^*)}_{\text{Explained}} + \underbrace{(\bar{P}_{k2}^* - \bar{P}_{k2})}_{\text{Unexplained}} \quad (3)$$

where:

$k = w$, for wage employment and s for self-employment and, \bar{P}_{k2}^* is defined as the proportion of individuals of type 2 who would be in employment category k if they had the same employment structure as individuals of type 1 (see section 2 above for further explanation on the multinomial logit)

$$\bar{P}_{k2}^* = \frac{1}{N_j} \sum_i p_{ik2}^* \quad \text{where} \quad p_{i2}^* = \frac{\exp(\mathbf{a}_1 Z_2)}{\sum_{s=1}^M \exp(\mathbf{a}_1 Z_2)} \quad (4)$$

The first term (*Explained*) represents the part of the gap (in employment and self-employment rates) explained by the differing productive characteristics of individuals of type 1 and 2. It is the predicted gap that would be observed if individuals of type 2 had the same employment structure as individuals of type 1. The second term (*Unexplained*) is the component of the differential not explained on the basis of personal characteristics – the residual part. The classic literature on this area ascribes it to discrimination (Oaxaca (1973), Cotton (1988), Neumark (1988) Oaxaca and Ransom (1994)). However, some authors moderate this assumption and stipulate that on the supply side, this gap can reflect differences in preferences between two groups of people (Altonji

¹¹ In this paper, type will successively be the age, the race and the gender.

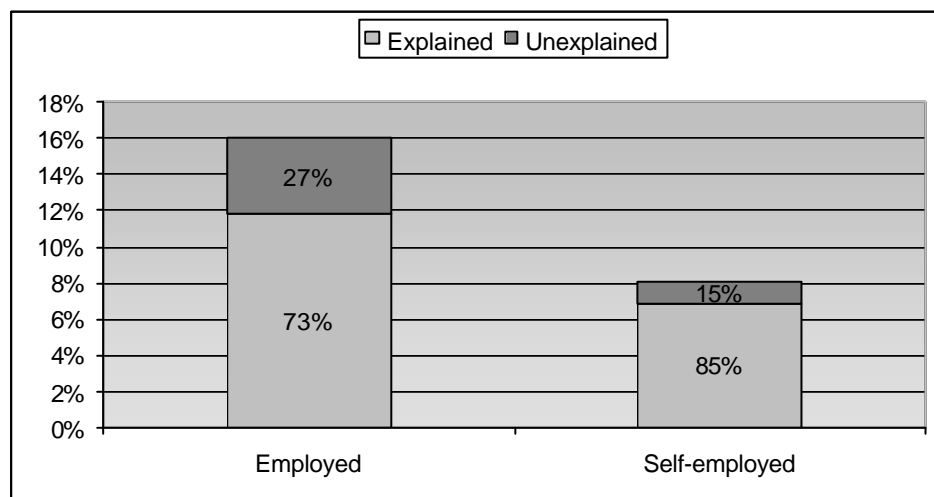
¹² One feature of the multinomial logit analysis is that, unlike OLS, the actual mean of the dependent variable and the predicted mean are not exactly the same. However, they are close enough to enable us not to distinguish them in the following analysis.

and Blank, 1999). Indeed, people might differ in their preferences for market versus non-market work or leisure. In the specific case of gender, the two authors consider pre-market gender discrimination in child-rearing practices or in the educational system as one source of differences in preferences. However, the differential treatment of boys and girls may be a rational response by parents to market discrimination. On the demand side, the residual can be cautiously attributed to discrimination, relying on a few more important assumptions. Firstly, other forms of discrimination, such as pre-entry discrimination – for instance in schooling (quality of education in particular) or in housing – are not controlled for owing to the lack of data. These omissions could result in over-estimating the level of labour market discrimination. Secondly, because discrimination is estimated as a residual, misspecification of the employment equation, measurement errors in data, omission of relevant unobservable or non-quantifiable characteristics (such as neighbourhood and family effects) can induce bias into the discrimination estimates. Thirdly, it is assumed that the presence of discrimination has only distributional effects. In other words, the volume of employment is regarded as constant whether discrimination is present or not.

3.2. Decomposition of the Age Gap in Employment

Figure 1 below reports the results obtained from the decomposition of differentials in the employment of young and adult people¹³.

Figure 1. Decomposition of the Average Age Gap in Employment



Source: OHS 1999

¹³ See appendix 2 for the results of the multinomial logit estimates for young and adult people.

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As already noted in table 1, page , the young/adult employment gap is double among the employed than the self-employed. The average probability that a youth gets a job from an employer amounts to 45 percent and for an adult to 61 percent, whereas 4.7 percent of the youth and 12.7 percent of adults are self-employed.

Around three quarters of the age gap among the employed is accounted for by differences in observable “productive” characteristics between young and adult people. The most obvious difference in individual characteristics between young and adults lies in the level of work experience (weakly proxied in the econometric analysis by age-years of schooling-6). Further investigation shows that on average, economically active youngs’ experience is around one third of adults’ experience. Around 27 percent of the employment gap remains unexplained by the characteristics introduced in the analysis. Ideally, the introduction of other variables (unavailable in the survey, like parental effect, real network etc) would enable us to better define the real part of the employment gap, imputed to unobserved behaviour of the employers¹⁴. Even in this case, the belief that one age group of worker can be perfectly substituted for another is not likely to be widespread. Employers are unlikely to regard younger and older workers in the same way. Some types of work may require “youthful” qualities, such as adaptability, while other jobs may call for more “adult” qualities, such as responsibility or reliability (O’Higgins, 2001). However, in his theory of signaling, Spence (1974) shows that in an imperfect information setting, when the employer doesn’t know the individual’s productivity, the young can suffer from discrimination based on stereotypes from the employers, which may self-confirm in some signaling equilibria (Giret, 2001). The theory of statistical discrimination (Phelps, 1972) also lead to the same conclusions.

The employment gap between young and adult self-employed is better explained than in the previous case (up to 85 percent) by differences in the “productive” characteristics introduced in the analysis. As underlined before, access to capital is likely to be one of the most important determinants of self-employment. However, the available data set does not allow us to estimate the individual’s access to the credit market. The fact that young people might suffer from a lower probability of loan approval than adults could further explain the self-employment gap observed between young and adults. Furthermore, adults have an added option that the young do not have, which is to have accumulated resources during their life that enable them to set up small businesses later on.

This section was able to show that the employment gaps (wage employment or self-employment) are largely explained by differences in “productive” characteristics between young and adult people, mainly by unequal work experience. Only a small portion of the gap remains unexplained. When dealing with the two groups of population considered in this analysis, this residue can not really be attributed to employer discrimination. However, the same kind of study on racial groups or on gender is likely to raise other issues and produce different conclusions. The next section investigates the extent of racial and gender inequalities in youth employment.

¹⁴ *As this misspecification could lead to some erroneous measurement of the residual, the comments thereafter should be considered cautiously.*

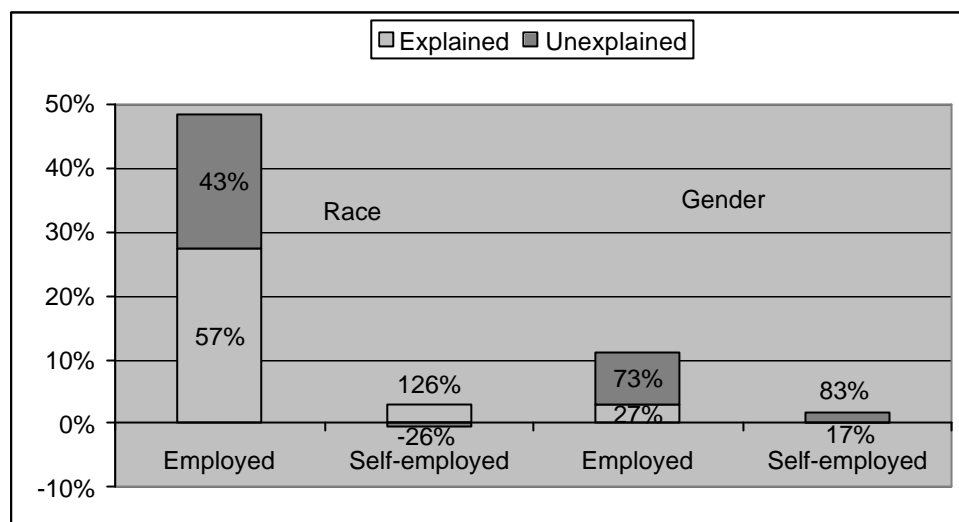
4. Racial and Gender Inequalities in Youth Employment.

As underlined previously, it appears that following a global perspective in dealing with youth unemployment could lead to abusive generalisations as unemployment is not spread homogeneously among the different population groups. Indeed, black and female youths seem to have lesser access to the labour market than White and male youths, meaning that there is a need to consider each population group separately. The aim of this section is to analyse the nature of the racial and the gender gaps in employment. Do they reflect mainly differences in characteristics (education, experience, geographical localisation...) between males (Whites) and females (blacks)? Or do they reveal differences in the way these individual productive characteristics are rewarded by the labour market? We suspect that among the demand and supply factors that affect the rewarding of these characteristics might be some racial and gender discrimination in employment. Rather than simply estimating hiring discrimination (which occurs when subjective non-economic criteria participate in the employer's recruitment decision), this section also deals with discrimination in self-employment (which appears when males and females or Whites and Blacks with the same productive abilities do not get the same opportunity to establish themselves as self-employed workers).

This section investigates the nature of the racial and gender gaps in the probabilities of being employed and self-employed in order to approximate the degree of employment discrimination. Figure 2 below reports the results obtained from the decomposition of the racial and gender differentials in the employment of young workers¹⁵.

¹⁵ See appendix 3 and 4 for the results of the multinomial logit estimates for African, white, males and females.

Figure 2. Decomposition of the Racial and Gender Gap in the Employment of Young Workers



Source: OHS 1999

Consider first the result of the decomposition for the African and White young.

Figure 2 shows that slightly more than a half of the African/White gap in the probabilities of wage employment is accounted for by differences in observed characteristics between the two racial groups (*explained* component in equation 3). The major factor explaining why young Whites have better job opportunities is their higher levels of employment-enhancing features such as education, their better family background as well as their location in areas of lower unemployment. However, one should observe that the differences in some of these characteristics between Whites and Africans could reflect, in some respects, pre-labour discrimination. Indeed, the segregation of the educational system under Apartheid prevented black people from getting the same level of education as Whites and from accessing the same quality of education¹⁶. This is less of a concern for very young workers than for workers from 25 to 30 years old who were educated under the old system. Furthermore, the policies of “influx control” and “Homelands” have hindered the mobility of Africans and constrained them to live in areas with low employment opportunities. This geographical segregation may still hamper the access of young Africans to the labour market. Furthermore, 47 percent of the racial gap in the employment rate remains unexplained by the measured characteristics and can be cautiously attributed to discrimination (*unexplained* component in equation 3)¹⁷. Following our assumption - if the White employment structure is perceived as the non-discriminatory norm -, without discrimination, the racial gap in employment would be reduced from 48 to 27 per cent.

¹⁶ Quality of education is perceived as a determinant factor of schooling outcome for Africans (Case and Deaton, 1999).

¹⁷ Indeed, the omission of certain variables (unavailable in the surveys used), such as social network, skills and behaviours, parent's education might lead to an overestimation of the extent of employment discrimination.

Turning to self-employment: the decomposition of the racial gap leads to other conclusions as it is entirely - and even more so - explained by differences in individual productive characteristics. In other words, the lower rate of self-employment among Africans than among Whites is entirely accounted for by differences in employment enhancing abilities and not by any kind of discrimination. In fact, in the absence of discrimination, Whites' advantage over Africans would be even higher. This result is rather dubious and one would not like to infer too firm conclusions from it. In the present state of the study, we are not able to tell if the discrimination component itself is significant. This result is furthermore surprising as the same analysis on the whole economically active population comes across some discrimination, even though it is a small amount (Rospabé, 2000). Besides, international literature also points to the existence of racial discrimination in the small business credit market (Blanchflower *et al.*, 1998).

Turning to the gender gap in young employment, figure 2 indicates that, whether one considers the self-employed or wage employed status, only between 17 percent and 27 percent of the male/female gap is explained by differences in individual productive characteristics. Seventy percent of the gender gap in employment and 83 percent in self-employment remains unexplained by individual characteristics and reflects differences in the coefficients of male and female employment equations. On the supply side, this gap can reflect differences in the preferences for young men and women (Altonji and Blank, 1999). Young people might differ in their preferences for market versus non-market work or leisure. The two authors consider pre-market gender discrimination in child-rearing practices or in the educational system as one source of differences in preferences. Indeed, the differential treatment of boys and girls may be a rational response by parents to market discrimination. On the demand side – the aspect emphasised in this paper – the residual can be cautiously attributed to discrimination. Thus, our findings first suggest that the employer's recruitment procedure is only partly objective and that hiring discrimination hampers female entry to the labour market. Without discrimination, the gender gap in employment would be reduced from 11 to 3 per cent. Secondly, females also suffer from large discrimination in being established as self-employed.

One step that the government has taken in an attempt to address these racial and gender inequalities, is the *Employment Equity Act 1998* which implements a policy of affirmative action "designed to ensure that suitably qualified people from designated groups¹⁸ have equal employment opportunities", through preferential treatment and numerical goals. Even if this law does not mention any specific measures for young people, it should implicitly affect them. However, it would be highly optimistic to expect that the Act will uproot the long entrenched problem of discrimination, though it is a step in the right direction. It is also likely that the development and improvement of schooling and training will not only improve the rate of employment of young people in general, but also affect racial and gender inequalities in accessing the labour market. The *Skills and Development Act 1998* together with the *Employment Equity Act 1998* are aimed to work in this direction as they compel employers to implement appropriate training measures for people from disadvantaged groups. The next section further investigates this area of skills and looks at the extent to which human capital endowment affects the employment of young people.

¹⁸ Black people (African, Asian and Coloured), women and people with disabilities.

5. The Role of Education

In this section we carry out an investigation into the education profile of South African youth, seeing that the link between education and labour market opportunities is one that is well recognised. The results of the multinomial logit regression in Table 1 show clearly that there are greater chances of employment over unemployment within post secondary higher education. However, Appendix 3 shows that the effect of education on employment is stronger for White youths than it is for African ones.

Of particular interest is the extent to which deficiencies in education and skills account for the phenomenon of high youth unemployment, more especially among African youth. There is most certainly a case to be made regarding deficiencies in education among African youths given South Africa's past. One facet of the debate is that many youths participating in the labour market have hardly finished secondary schooling. Table 4 shows the educational attainment of youths between the ages of 16 and 19 who are participating in the labour market. The figures suggest that over 80 percent of the African youths have less than grade 12 or matric qualification.

Table 4. The Educational Attainment of Young Participants between the ages of 16 and 19

Participants ages 16-19		
Level of Schooling	African	White
	percent	percent
Zero	5.63	0
Primary	45.05	1.55
Incomplete Secondary	34.32	35.65
Complete Secondary	14.78	62.02
Post Secondary	0.22	0.78
Total	100	100

Source: OHS 1999

These youths have made an early exit out of the schooling system and an early entrance into the labour market. However, their chances of success at finding employment are hampered by their poor education. The observed phenomenon is likely to be the outcome of certain socio/economic conditions faced by these youth. Poverty is most certainly one of the factors that induces them out of the schooling system and onto the job market. This situation stems directly from the high level of income inequality in South Africa. This is clear when considering on the other hand the education distribution of White participants in this age category. The table shows, for example, that less than 2 percent of Whites have not advanced past primary education whereas a staggering 45 percent of Africans fall into this category. In addition, 62 percent of White participants have grade 12 qualifications and this places them in a better position to find employment. The situation reflected in these statistics indicates a vicious circle where income disparities lead to educational attainment disparities, which in turn perpetuate the existing income inequality.

Another facet of the debate is that those youths who do carry on to post secondary education (degrees and diplomas) pursue fields of study that are not demanded by the labour market. This

would result in well-educated youths who cannot find employment. Table 5 takes a preliminary look at the post secondary qualifications obtained by African youths between the ages 20 and 30 inclusive. The figures for White youths are included to enable comparisons.

Table 5. Post Secondary Qualifications obtained by African and White Youths Between the ages 20 and 30

Field of qualification	African		White	
	Total	Employed	Total	Employed
Arts	5.37	66.01	13.27	100
Science	2.9	88.05	6.19	92.08
Law	2.23	79.39	3.47	100
Theology	0.13	100		
Commerce/Management	19.14	61.22	26.95	91.51
Education	34.34	65.15	8.9	96.29
Medical Services	6.29	88.08	6.95	100
Engineering	5.52	46.4	5.37	93.31
Admin/Clerical	7.87	49.82	5.52	94.39
Protection	2.28	68.57	3.59	100
Building Sciences	0.46	100	0.6	100
Technical	3.33	80.49	6.42	92.58
Computing	8.93	42.95	11.78	100
Veterinary			0.18	100
Other	1.2	67.58	0.8	100

Source: OHS 1999

The column labelled 'Total' shows the spread of the youth over the various qualifications. Of note is the fact that the largest number (over a third) of African youth participants has qualifications in the field of education. A fair amount (19 percent) have commerce qualifications. Close to 9 percent of these youths have computing qualifications. The column labelled 'Employed' displays the percentage employed within each particular field. For example, of the people with education qualifications, 65 percent of them are employed. Clearly the bias towards education qualifications results in many of these youth being jobless. Another factor could be that, within the education field, most qualifications are not in the sciences or commerce. As a matter of fact, table 5 suggests that there are high chances of being employed for people with science qualifications, however, only 3 percent of African youth fall into this category. Furthermore, one might expect a higher percentage of youth to be employed in the commerce field, however, close to 40 percent are unemployed in this field. Comparing this result to the employment figures for Whites in this field reveals that over 90 percent of them are employed. In addition, less than half of the Africans with computing skills as well as engineering skills have jobs. The pattern that emerges from these figures suggests that having qualifications in the fields that are often considered to be in high demand, does not necessarily guarantee one a job, more especially if one is African.

This is a rather perturbing finding that could be interpreted in a number of ways. One is related to the Arrow's filter theory (1973), which shows that employers use an individual's certificate/diploma as an estimate of his (her) productivity in an environment of imperfect information. It could be the case, however, that South African employers do not attach great value to Africans' qualifications. This would be true if employers felt that the qualifications held by African work seekers do not accurately reflect their skills levels. These perceptions could be the result of mistrust in the quality of schooling of youths from traditionally 'black' schools. A question

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that arises from this is to what extent a diploma or degree bridges the gap between youths from disadvantaged backgrounds and the rest. Is it realistic to assume that students who enter tertiary education from differing backgrounds leave with equal skills? It could also be that mistrust is directed not at African work seekers per se but at the institutions from which they receive their qualifications. Indeed, the quality of graduates produced by historically black centres of higher learning (universities and technikons) has been an issue for debate in recent times. In the mid 1990s, the governments funding of higher learning institutions was based on enrolments of students. Higher student enrolments meant greater state funding and this led to a compromise of quality in many historically black centres of higher learning. However, throughput rates (number of students graduated) fell as poorly prepared high school leavers that had been accepted by these institutions, dropped out or failed repeatedly. The governments approach has now shifted to a focus on efficiency with plans being put in place for the reconfiguration of higher learning institutions. There is a particular focus on the Eastern Cape, a province that reflects the stark ravages of apartheid, which houses a lot of the historically black institutions. These issues most likely make up part of the 47 percent unexplained portion of the racial gap in employment mentioned under section 4.

6. The Role of Urban versus Rural Background

With respect to the effect of location on chances of employment, the results of the multinomial regression reflected that the odds of employment over unemployment were lower in urban areas than in rural areas. As mentioned earlier, these results are likely to be capturing the effects of the greater labour supply in urban areas caused mainly by migration from rural to urban areas. Youth in urban areas not only compete against increasing numbers of youth for jobs but also against increasing numbers of older age cohorts. Indeed, there is evidence of substantial youth migration from rural to urban areas in South Africa (Bekker, 2000). The focus of this section is in determining whether rural African youth are any better off in urban areas in terms of employment.

We begin by repeating the multinomial logit regression but this time restricting the sample to urban African youths. Predicted probabilities of employment for the urban youth can then be easily calculated. By running the rural sample through this model, predicted probabilities of urban employment for the rural dwellers can be determined. In doing this, however, we are assuming away the information and transportation costs of rural workers seeking urban employment, which have been shown to be significant (Wittenberg, 2001). The results we obtain are therefore overly optimistic about rural youths probability of finding urban employment. However, once these predicted probabilities have been calculated we then rerun the regression, restricting it this time to rural youths and estimate their predicted probabilities of employment in the rural areas. Finally, to see whether they would be better or worse off in urban areas, we calculate the difference between their predicted probabilities of employment had they been in the urban setting and their predicted probabilities of employment in rural areas.

The first issue we address is whether the youth in rural areas would at all be able to compete against that in the urban setting for jobs. Figure 3a below shows the densities with a normal curve fitted, for probability of employment of rural dwellers had they been in urban areas. Figure 3b on the other hand displays the densities for the predicted probability of employment of urban dwellers in the urban labour market. It is clear when comparing these two graphs that, on the whole, urban youth have higher chances of employment than youth who might have migrated from rural areas.

Worthy of note though is the fact that a number of the rural dwellers display higher probabilities of employment than a significant portion of the urban dwellers, for example, those with predicted probabilities of employment greater than 40 percent. These are the youths that would most likely be competitive in the urban labour market.

The next intriguing question is whether the rural youth would be better off seeking work in the urban rather than rural labour market. Figure 3c displays the difference between the predicted probabilities of employment of the rural had they been in the urban environment and the predicted probability of employment of the rural in the rural areas. Where the difference is negative it implies that these youth are better off in the rural areas. Where as a positive difference suggests that these youth would be better off migrating to urban areas in search for employment.

Figure 3a

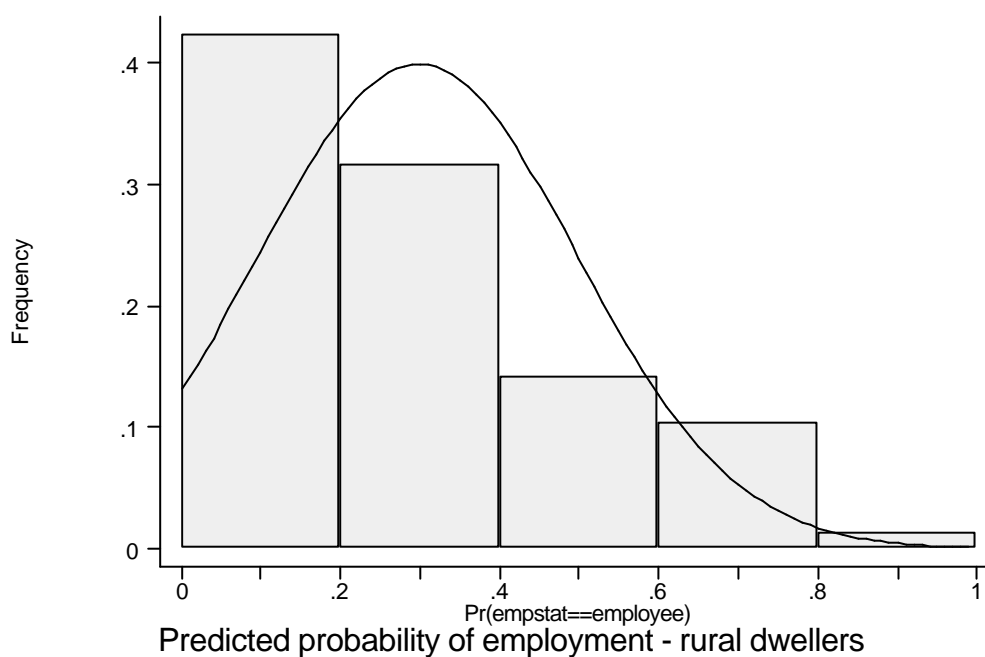


Figure 3b

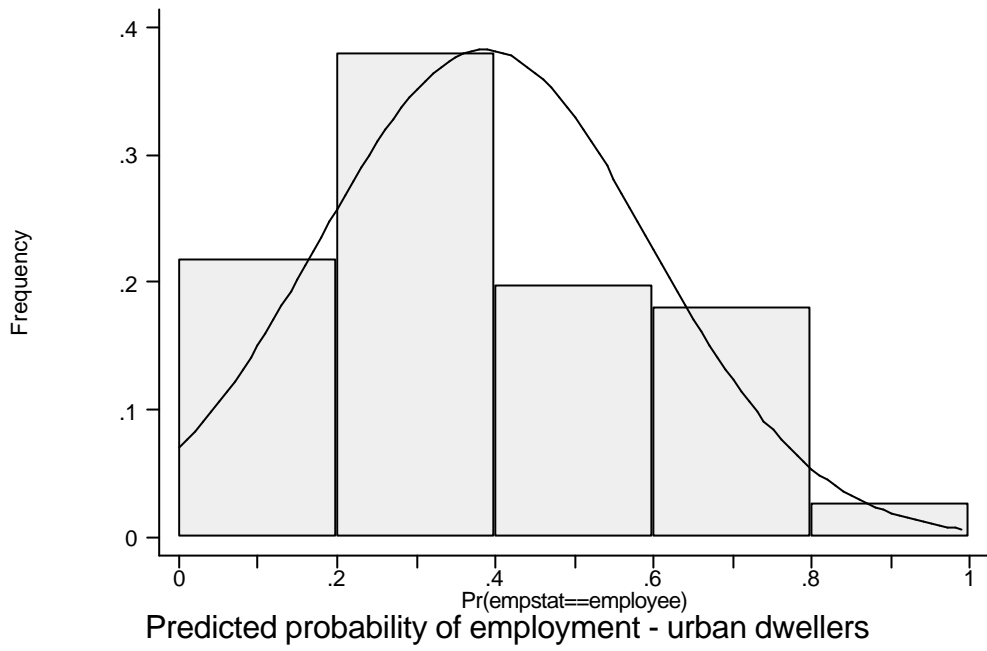
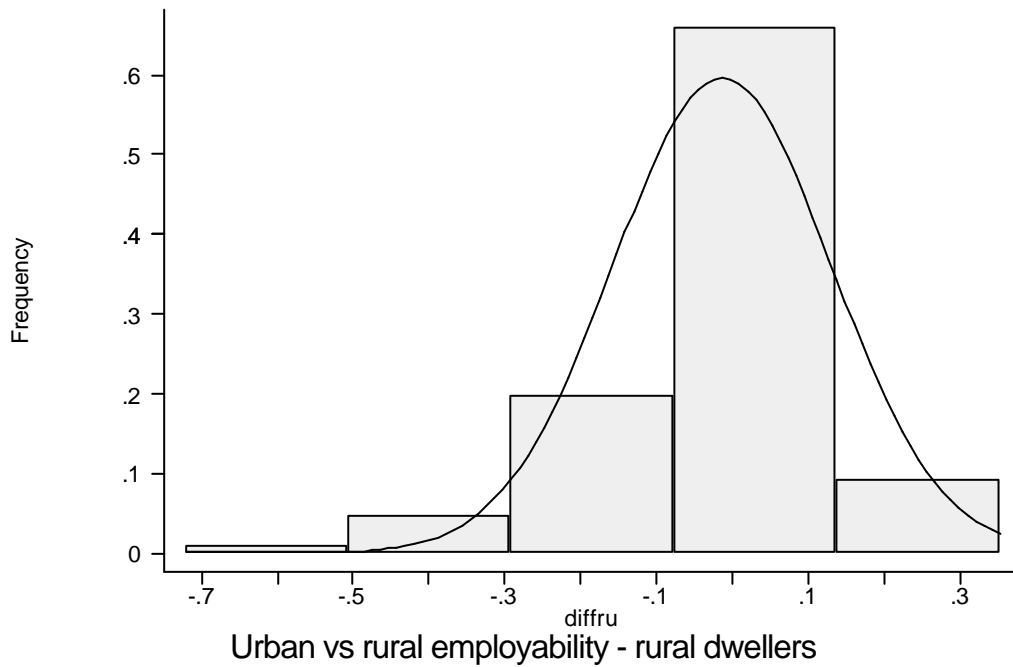


Figure 3c



It would seem from Figure 3c that a fair amount of the rural youth is better off seeking employment in the rural areas. These may be well-educated teachers and bureaucrats who are likely to hold secure and respectable employment posts. There is also a substantial portion of the rural youth that could improve its job prospects by moving to urban areas. The situation in the rural setting may be so bleak for these individuals that the highly competitive urban labour market offers better prospects.

7. Conclusion

This paper investigates some aspects of youth unemployment in South Africa, attempting to analyse its main determinants and the reasons why it is so unequally spread among different population groups, notably race groups and genders.

First, in order to better understand the particularities of youth joblessness, the paper studies the differences in opportunities for both wage employment and self-employment between the youth and older age cohorts. The decomposition analysis indicates that large amounts of the differences in employment of youth and older participants are attributable to disparities in observable characteristics such as experience and education in the case of wage employment and family characteristics in the case of self-employment. The latter is also likely to be greatly influenced by differences in access to credit.

Second, the paper focuses on differences in the incidence of unemployment within the young population, considering specifically race and gender. With regard to racial differences in employment, it is found that a significant proportion of the difference in African and White youth wage employment is unexplained by observable characteristics and is likely to reflect some hiring discrimination from the employers. In the case of self-employment differences, it can be entirely attributed to differences in observable characteristics of the two races. The gender analysis revealed strong evidence of discrimination against women in both wage employment and self-employment. One should note that in both the race and gender cases pre-labour market discrimination is likely to have played a part in the outcomes.

Education has been found to play a major role in the probability of finding a job. However, in a heterogeneous way, depending on the race considered, further analysis is conducted in this area. It appears that the majority of youth (mostly African) either suffers from deficiencies in education because these youths have made an early exit out of the schooling system or undergo a lack of skill recognition from the employers, even if they have qualifications in the fields that are considered to be in high demand.

Youth unemployment has been shown to have detrimental effects for the individual as unemployment early in someone's career may permanently impair their future productive capacity (Blanchflower, 1999). Seen in a broader respect, the whole society may suffer from a high level of youth unemployment as there is a link between youth joblessness and serious social problems such as drug abuse, vandalism and crime (Freeman, 1999), the latter being a problem particularly

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severe in South Africa. Thus, implementing policies aimed at reducing youth unemployment might have a significant impact on the society as a whole. Leaving aside the influence that higher economic growth and lower wages could have on the reduction of the level youth unemployment, some labour market and education policies could help in coping with this huge issue.

First, this paper showed that the nurturing of a vibrant informal sector and encouragement of SMMEs would go a long way towards alleviating the problem of high youth unemployment. In particular, the African youth need guidance and better access to capital in order to create booming ventures. This is one facet of the *Black Empowerment* policy.

Second, the education system should be better aligned to the labour market so that employers respect qualifications held by youths. This could be achieved through students being offered internships at private companies, government bureaus and non-government organisations. As earlier analysis also revealed that the youth participants at the younger end of the scale (ages 16-19) were severely disadvantaged on the job market by their poor educational attainment, more should be done to ensure that these youths refrain from early exit from the schooling system. The main consideration in this instance should be the provision of financial assistance to scholars, even prior to them reaching higher education. In addition, links should be set up between secondary and higher levels of education so that secondary school leavers are better prepared to enter into higher learning. This would most likely lead to higher numbers of graduates in the required fields. Furthermore, the historically black institutions that are struggling should be attended to with great haste because they are currently perpetuating inequality in South Africa, especially racial inequality in education. This is a serious concern considering that education is seen as one of the surest ways to reduce the disparities existing on many fronts.

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Appendix 1

The Variables

Variable	Determination
Dependent:	
Employment Status	= 1 if unemployed, = 2 if employee and = 3 if self-employed
Independent:	
Race Group	= dummy variable: African, Coloured, Indian, <i>White</i>
Gender	= 1 if male
Young People (15-24)	= 1 if age between 15 and 24 years old
Primary Education	= 1 if between grade 1 and grade 7
Secondary Education	= 1 if between grade 8 and grade 12
Further Education	= 1 if National Technical Certificate
Higher Education	= 1 if university degree or post-graduate degree
Participation Duration	= age - years of schooling - 6
Married	= 1 if married, civilly, traditionally
Headship Status	= 1 if the head of the family
Number of Children	= number of children under 6
Other Wage Employed in the Family	= 1 if people (other than the individual) in the household are employed by someone else
Other Self-Employed in the Family	= 1 if people (other than the individual) in the household are self-employed
Other Unemployed in the Family	= 1 if people (other than the individual) in the household are unemployed
Ownership Status	= 1 if owner of its housing
Distance from the Phone	= 1 if 0-5 mns, = 2 if 6-15 mns, = 3 if 16-30 mns, = 4 if 31-60 mns, = 5 if 1-2 hours and = 6 if over 2 hours
Urban	= 1 if lives in a urban area
Regions	= dummy variables : <i>Western Cape</i> , <i>Northern Cape</i> , <i>Eastern Cape</i> , <i>Free State</i> , <i>Kwazulu Natal</i> , <i>North West</i> , <i>Gauteng</i> , <i>Mpumalanga</i> , <i>Northern Province</i>

APPENDIX 2

The Determinants of Employment and Self-Employment among Youth and Adult People

	Adults				Young			
	Employed		Self-employed		Employed		Self-employed	
	rrr	t-stat	rrr	t-stat	rrr	t-stat	rrr	t-stat
Male	1.197	4.08	1.139	1.9	1.607	9.55	1.898	5.87
African	0.329	-7.98	0.146	-13.01	0.107	-15.5	0.156	-8.8
Colour	0.616	-3.05	0.184	-8.67	0.297	-7.86	0.141	-6.34
Indian	0.464	-3.75	0.317	-4.77	0.324	-5.8	0.335	-3.19
Years of Schooling	1.094	12.74	1.079	7.72	1.093	8.52	0.996	-0.17
Participation	1.026	8.98	1.047	12.15	1.094	13.87	1.023	1.36
Duration								
Married	1.498	9.91	1.519	6.47	1.236	3.41	1.626	3.63
Headship Status	0.910	-3.92	1.034	1	0.899	-3.85	1.116	2.13
Children	3.214	23.06	4.286	18.08	4.285	19.76	5.990	11.67
Other Employed	1.356	5.55	0.809	-2.94	1.835	9.36	0.641	-3.08
Other Self-Employed	0.983	-0.2	4.569	13.41	1.115	1.24	7.075	12.36
Other Unemployed	0.532	-13.2	0.488	-10.11	0.431	-14.34	0.290	-9.49
Ownership Status	0.602	-9.5	1.251	3.04	0.635	-8.39	1.130	1.03
Urban	0.881	-2.21	0.646	-5.73	0.771	-3.73	0.681	-2.74
Distance from Phone	0.862	-9.79	0.870	-6.45	0.886	-6.72	0.921	-1.75
Gauteng	0.657	-4.06	0.592	-3.87	0.652	-4.31	0.689	-1.5
Eastern Cape^a	0.509	-6.36	0.527	-4.55	0.486	-6.46	0.752	-1.09
Northern Cape	0.865	-1.13	0.648	-2.4	0.676	-2.76	0.296	-2.79
Free State	0.792	-1.98	0.448	-5.06	0.663	-3.3	0.591	-1.84
Kwazulu Natal	0.785	-2.23	0.924	-0.53	0.756	-2.5	0.918	-0.31
North West	0.764	-2.41	0.446	-5.14	0.572	-4.84	0.519	-2.07
Mpumalanga	0.905	-0.85	0.788	-1.54	0.576	-4.42	0.646	-1.61
Northern Province	0.523	-5.45	0.478	-4.61	0.411	-6.78	0.543	-2.05
N	23 346				15 453			
F stat	65.75				57.71			
% of N correct. pred	67.4%				71.6%			

Source: OHS 1999

Notes: Normalizing category: unemployed.

*** Statistically significant at the 1% level, ** the 5% level and * the 10% level. Absolute value of t-statistics in parenthesis.

^a Reference category: Western Cape

APPENDIX 3

The Determinants of Employment and Self-Employment among Africans and Whites

	Young Whites				Young Africans			
	Employed		Self-employed		Employed		Self-employed	
	rrr	t-stat	rrr	t-stat	rrr	t-stat	Rrr	t-stat
Male	0.771	-0.95	1.422	0.8	1.777	10.38	1.716	4.42
Young People	0.985	-0.03	1.106	0.14	0.748	-3.1	0.762	-1.32
Years of Schooling	1.278	2.8	1.260	1.78	1.049	2.98	0.923	-2.14
Participation	1.010	0.15	1.110	1.02	1.058	4.21	0.962	-1.23
Duration								
Married	2.550	2.82	2.988	2.29	1.223	2.93	1.524	2.74
Headship Status	0.600	-2.32	0.650	-1.56	0.929	-2.5	1.083	1.41
Children	5.842	3.23	15.300	3.68	4.626	19.04	4.798	9.48
Other Employed	0.762	-0.74	0.457	-1.57	2.061	9.54	0.580	-3.33
Other Self-Employed	0.807	-0.53	6.676	3.41	1.095	0.87	6.587	10.71
Other Enemployed	0.169	-4.33	0.117	-2.54	0.493	-11.01	0.316	-8.28
Ownership Status	1.206	0.76	3.261	2.61	0.561	-9.11	0.938	-0.5
Urban	0.246	-2.87	0.092	-4.39	0.855	-2.03	0.865	-0.97
Distance from Phone	0.602	-3.63	0.329	-3.22	0.887	-6.16	0.933	-1.42
Gauteng	0.907	-0.24	1.105	0.18	0.680	-2.79	0.824	-0.63
Eastern Cape^a	0.267	-2.6	0.254	-1.89	0.541	-3.97	1.108	0.3
Northern Cape	0.313	-2.07	0.345	-1.27	1.205	0.86	0.327	-1.34
Free State	0.196	-3.05	0.232	-1.91	0.817	-1.34	0.809	-0.61
Kwazulu Natal	0.841	-0.29	1.068	0.11	0.881	-0.85	1.309	0.77
North West	0.791	-0.37	0.516	-0.83	0.656	-2.77	0.775	-0.67
Mpumalanga	0.297	-2.9	0.175	-2.25	0.702	-2.27	1.034	0.1
Northern Province	1.542	0.42	4.585	1.29	0.501	-4.21	0.832	-0.5
N	1 164				11 705			
F stat	5.05				37.34			
% of N correct. pred	83.1%				70.6%			

Source: OHS 1999

Notes: Normalizing category: unemployed.

*** Statistically significant at the 1% level, ** the 5% level and * the 10% level. Absolute value of t-statistics in parenthesis.

^a Reference category: Western Cape

APPENDIX 4

The Determinants of Employment and Self-Employment among Males and Females

	Young Males				Young Females			
	Employed		Self-employed		Employed		Self-employed	
	rrr	t-stat	rrr	t-stat	rrr	t-stat	rrr	t-stat
African	0.158	-9.11	0.197	-5.86	0.073	-14.4	0.141	-6.18
Colour	0.433	-3.83	0.214	-4.08	0.205	-8.03	0.097	-4.74
Indian	0.390	-3.47	0.493	-1.58	0.281	-4.61	0.205	-2.65
Young People	0.750	-2.49	0.659	-1.65	0.979	-0.17	0.948	-0.18
Years of Schooling	1.028	1.48	0.963	-0.72	1.133	5.72	0.954	-1.02
Participation Duration	1.044	2.66	0.971	-0.74	1.111	6.03	1.009	0.21
Married	2.050	6	2.020	3.65	0.864	-1.66	1.459	1.83
Headship Status	0.977	-0.6	1.258	2.95	0.844	-4.49	0.992	-0.12
Children	5.047	16.58	10.112	12.02	2.890	9.81	2.380	3.56
Other Employed	1.819	7.32	0.626	-2.69	1.828	7.02	0.618	-2.3
Other Self-Employed	1.040	0.33	6.624	9.3	1.092	0.72	7.424	9.48
Other Unemployed	0.410	-11.87	0.260	-7.9	0.401	-11.17	0.308	-6.31
Ownership Status	0.621	-6.39	1.317	1.7	0.671	-5.38	0.925	-0.43
Urban	0.823	-2.2	0.602	-2.56	0.738	-2.94	0.859	-0.8
Distance from Phone	0.902	-4.24	0.860	-2.31	0.871	-5.04	1.010	0.19
Gauteng	0.767	-1.79	0.936	-0.22	0.562	-4.35	0.439	-1.94
Eastern Cape^a	0.453	-5	0.800	-0.7	0.538	-4.32	0.725	-0.79
Northern Cape	0.900	-0.53	0.445	-1.64	0.526	-3.71	0.146	-2.78
Free State	0.755	-1.56	0.694	-1	0.589	-3.27	0.449	-1.72
Kwazulu Natal	0.727	-2.01	0.945	-0.15	0.790	-1.64	0.843	-0.43
North West	0.786	-1.49	0.658	-1.16	0.417	-5.67	0.431	-1.75
Mpumalanga	0.692	-2.14	0.476	-2.06	0.476	-4.39	0.902	-0.25
Northern Province	0.507	-3.72	0.657	-1.05	0.362	-5.56	0.534	-1.41
N	7 667				7 786			
F stat	32.65				32.67			
% of N correct. pred	72.1%				72.1%			

Source: OHS 1999

Notes: Normalizing category: unemployed.

*** Statistically significant at the 1% level, ** the 5% level and * the 10% level. Absolute value of t-statistics in parenthesis.

^a Reference category: Western Cape