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Job Satisfaction and Employment Equity in South Africa

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Job Satisfaction and Employment Equity in South Africa

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ABSTRACT

This paper is the first to estimate job satisfaction equations in post-Apartheid South Africa. Earnings and relative earnings are both found to contribute to greater job satisfaction. Racial group is also an important predictor of job satisfaction but when interacted with a proxy for affirmative action legislation it is found that black job satisfaction is positively correlated with this legislation whereas coloured and to a lesser extent white job satisfaction is diminished.

Key Words: Job satisfaction, Employment Equity, ordered probit, South Africa.

I INTRODUCTION

Substantial economic evidence indicates that a satisfied workforce is beneficial to firms and to wider society. Greater satisfaction is associated with higher productivity that can improve a firm's competitiveness and profits (Clark, 1996; Warr, 1999; Judge et al, 2001) but little direct evidence of this relationship exists (Sharkh, 2005). A satisfied workforce is also less likely to suffer from absenteeism or quit for other jobs, so reducing firm turnover costs (Warr, 1999; Griffeth et al 2000; Patterson, Warr and West, 2004). There is also evidence that a more satisfied workforce produces positive externalities for society in the form of more altruistic behaviour and to improved health (Herzberg et al., 1959; Meyer, 2004; Myers, 1992; all cited in Sharkh 2007). The issue of job satisfaction is of particular interest to developing and underdeveloped countries for these very reasons.

The issue of worker and job satisfaction and what determines them in South Africa has yet to be addressed in the literature due to data restrictions. This paper aims to fill this gap with specific attention given to the impact earnings and relative earnings have on job satisfaction. Of particular importance too is whether job satisfaction differs by racial group and whether employers with an employment equity plan (EEP) have more satisfied workers. The main caveat to the paper would seem to be the lack of a direct question on overall job satisfaction, with information instead being gathered on seven aspects of job satisfaction. However by calculating Cronbach's Alpha statistic a composite score variable that uses the seven aspects of job satisfaction is used.

In the next section a review of some of the job satisfaction literature is presented to provide some a priori's. Section III presents the methodology adopted. Section IV provides an explanation of the data set used and some descriptive statistics. Section V analyses the job satisfaction results and a conclusion follows.

II JOB SATISFACTION: The Usual Suspects

What influences worker/job satisfaction has been debated in the psychology and labour economics literature for a number of years. Much of this focus has been on the level of earnings. Standard economic theory predicts that earnings positively affect job satisfaction. This does not necessarily follow though. High earners may have to work harder and deal with greater levels of stress in the workplace (compensating differentials),

which could result in lower levels of job satisfaction. Empirical findings indicate that absolute levels of earnings consistently increase job satisfaction (Clark, 1996; Clark and Oswald, 1996). Of more interest though is the issue of earnings relative to similar skilled persons or an appropriate reference group (e.g. work colleagues in a team). Relative earnings have not received the attention they deserve in labour economics until recently. If a worker knows his wage is lower than a colleague's then this is likely to reflect itself in a grievance that affects both his job satisfaction and performance. However the dynamics of relative wages is also important here. It is possible that a worker with a low relative wage is more satisfied with his job if he expects an increase in his relative wage sometime in the future based on current earnings increases of colleagues; essentially there is a tolerance of a poor relative wage. The latter explanation is an application of Hirschmann's (1973) tunnel theory. Like tunnel theory it is expected that tolerance makes way for grievance if expectations do not come to fruition[i].

How to estimate the average pay-off associated with a specific set of productivity characteristics was first undertaken by Clark and Oswald (1996) who estimated a Mincerian earnings equation from which an average wage for each worker is calculated. This predicted going rate is controlled for in their job satisfaction model along with an absolute earnings term. They found the going rate for the job to negatively affect job satisfaction in the UK, ceteris paribus, and that this comparison earnings term has a greater impact on job satisfaction than absolute earnings. However Senik (2004) found a positive relationship between life satisfaction and the relative wage in Russia consistent with Hirschman's tunnel effect. This is argued to stem from the volatility of earnings in Russia causing comparisons between people to be less important than information about other people's wages and that an increase in "one's (wage) reference group is an encouraging promise of future income gains" (ibid, pp.2119). Kingdon and Knight (2007) find similar results in South Africa amongst small communities with higher relative income of other households raising subjective well-being.

Age is found to have an inverted U-shaped relationship with satisfaction. A variety of explanations for this relationship have been suggested in the literature. Clark and Oswald (1996) find that better job matching amongst older workers than younger workers may help explain the relationship in the US labour market, whilst in Clark (1996) it is acknowledged that because dissatisfied older workers are more likely to drop out of

the labour market when nearing retirement age, satisfaction scores increase. Another likely explanation though is that younger workers are initially highly satisfied with their first job because they have no way of evaluating their job and are happy to find work[ii]. As workers become more experienced so job satisfaction declines as expectations and aspirations are formed that are greater than the reality of work, with satisfaction finally increasing as expectations and aspirations are re-calculated in line with accepting the reality of fewer job opportunities and promotions (Clark, Oswald and Warr, 1996).

With education playing a significant role in earnings and employment likelihood, Clark (1996) argues it is also likely to correlate with earnings satisfaction. What direct impact a higher or lower level of education would have on earnings or job satisfaction is in itself unclear. When a negative correlation is found between job satisfaction and education in Clark and Oswald (1996) they argue that expectations of the more educated are higher meaning it is harder to be a satisfied worker. Other unobservables education could be picking up include job characteristics such as level of independence or non-pecuniary benefits that only the highly educated receive because of their perceived value and variety of tasks in the job.

Hours worked could be interpreted as a proxy for effort with greater effort (more hours) resulting in brighter future employment opportunities and higher earnings. However the relationship between number of hours worked and job satisfaction is clouded by a number of issues. Firstly, some workers could be under-employed and want more hours of work. This is far more likely in developing countries and particularly in South Africa where unemployment is so high. It is expected that the under-employed are less satisfied with work than those reporting no under-employment. However those workers with long hours could equally be dissatisfied with expending so much effort and reducing leisure time. Distinguishing between employees and the self-employed is also necessary here. In the UK, Clark (1996) finds that hours worked has a strongly negative affect on earnings satisfaction and to a lesser extent job satisfaction.

III METHODOLOGY

The job satisfaction equation takes the form of,

$$JS_i = f(g(X_i)) + \varepsilon$$

where self-reported job satisfaction (JS_i) is a function of g(.) that represents the individual's true level of job satisfaction (the latent variable that is not directly observed) that is determined here by X_i a vector of factors and ε is an error term. Variables of particular interest here are earnings, relative earnings, and racial group.

An overall job satisfaction variable is created by adding the scores for each of the satisfaction variables together for each worker. This gives us a minimum value of 7 and a maximum value of 28. Our final variable subtracts 7 from each observation so that the range of values is from 0 to 21. The overall job satisfaction term allows us to include a number of general variables of interest that otherwise would not be justifiably included in earnings satisfaction and job security satisfaction models. The analysis focuses on formal sector employees between the ages of 18 and 65.

Because of the ordered nature of job satisfaction the ordered probit model is the most appropriate to use. However the basic model is also estimated using ordinary least squares to observe whether coefficients change sign or significance depending on the model used. Ferrer-i-Carbonell and Frijters (2004) find the two methods produce similar results when estimating happiness scores.

Arguably of most interest in the literature is the correlation between earnings and job satisfaction. Work tends to assume that higher earnings increases job satisfaction in a linear or non-linear way. However, it could also be the case that more satisfied workers are more productive and hence earn more or that it is a workers general disposition that increases the likelihood of finding a job in the first place (Heywood et al, 2002). It is beyond the scope of this paper to address the endogeniety issue implicit within the correlation between earnings and job satisfaction and we simply include observed earnings rather than any instrumented earnings term. Research by Clark and Oswald (1996) has also found that relative earnings can be important when estimating job satisfaction. This paper follows their method by estimating predicted earnings for all workers in the sample based on a 2-stage earnings equation that is identified by marital

status and number of children in the household in the employment equation and the inverse mills ratio of this in the earnings equation.

Actual hours worked in the last week is used as a proxy for effort. Plans to include a subjective underemployment term were not feasible since the question asked on this was too vague[iii]. The relationship between age and earnings satisfaction was initially captured by age and age-squared terms. This specification proved unreliable though and instead age categories were used. Previous research in high income countries finds that older workers report more job satisfaction than younger workers, ceteris paribus. This could be because older workers select jobs that they know will provide the greatest level of job satisfaction for themselves based on previous job experiences. Alternatively expectations of older workers are more likely to adjust downwards meaning job satisfaction is achieved more readily compared to younger workers whose aspirations and expectations drive job satisfaction scores down. It is also possible that dissatisfied older workers have already left employment leaving only satisfied older workers. It is not possible to distinguish between the first two explanations in our model since information on previous work experiences and expectations are not available. Race is captured by including a group of dummy variables with whites as the reference group.

Controls are included for independence on the job that stems from the industrial psychology literature (e.g. Warr, 1999). Information is included too as to whether workers' have been subject to threats of violence, sexual harassment or crime in the job in the previous year. Whether employees have received any formal or on-the-job training is included too following Clark (1996) who found that workers with good availability of opportunities were significantly more likely to report earnings satisfaction.

The issue of race is particularly emotive in South Africa because of the Apartheid system. The legacy of Apartheid remains today, with wage, employment and occupational hierarchies that have a clear racial divide (see Allanson, Atkins and Hinks, 2002; Kingdon and Knight, 2004a) and with discrimination still apparent. That 80% of the population is Black and that income inequality is amongst the highest amongst middle-income countries gives an idea as to the depth of inequality in South Africa[iv]. It is not clear what impact race will have on job satisfaction. Kimenyi (1991) found that amongst black university faculty members in the southern United States there was a feeling of receiving

less from the job than their white counterparts. However, Bartel (1991, p.302) found that black Americans are more satisfied with jobs than whites arguing this is "due to the direct affect of race in reported job satisfaction that occurs because discrimination causes blacks to have lower aspirations than comparable whites." Blanchflower and Oswald (1999, p26) find convincing evidence that both blacks and other non-white workers are significantly less satisfied with jobs relative to whites in the US. In the UK Clark, Oswald and Warr (1996) find that black and Asian minorities are no more or less satisfied with work than whites during the early 1990s. Race in the South African labour market is complicated by affirmative action legislation under the guise of employment equity. The data set used in this paper has information on whether there is an employment equity plan (EEP) at work. By including this and racial group in the model it can be seen whether this legislation has worked in creating at least a perception of greater racial equality in the workplace.

Employment equity plans are part of the broader 1998 Employment Equity Act (EEA) the overall aim of which is to promote 'equal opportunity and fair treatment in employment through the elimination of unfair discrimination and implementing affirmative action measures to redress the disadvantages in employment experienced by designated groups' (Government Gazette, 1998, pp.12). EEPs are required by law to be undertaken by private and public sector employers of all sizes, with an emphasis on self-monitoring. They are seen as an additional requirement of affirmative action. Government and trade union representatives monitor whether an EEP is in place and employers have to complete a report every 1-2 years depending on their size. Fines for contravening EEPs vary from R700,000-R900,000. The initial take up of the EEP focussed on large employers who had to submit employment equity reports within 6 months of the commencement of the EEA, with smaller firms (less than 150 employees) submitting within 12 months. The data used in this paper is from 1999 and it is clear that take up of the EEPs was not universal across employers at the time of the survey which makes investigation of the impact of this legislation on job satisfaction possible.

IV DATA AND DESCRIPTIVE STATISTICS

The Mesebetsi labour force survey was conducted with 10,000 household interviews and 10,000 individual response interviews between October and December 1999. Its aim was to shed new light on important aspects of the South Black labour market after a period of economic suppression that ended in 1994 followed by a flurry of new labour legislation aimed at righting the wrongs of the past and in particular encouraging employment equity of blacks, coloureds, Asians, females and the disabled. Insights into working life included questions on attitudes to work and to labour market institutions, health status of workers, reservations wages and perceptions of promotion. This is the only national survey of its kind to emerge from South Africa and represents a vital source of information in understanding the labour market.

Instead of a general worker satisfaction question the Mesebetsi asks employees a series of questions on job satisfaction. These comprise seven separate questions with four possible values. These range from 'completely satisfied' to 'not satisfied at all'. The questions relate to how satisfied the worker is with respect to; earnings, job security, type of work, opportunities to use skills/education, working time, working conditions/environment and distance from work. An overall job satisfaction term can be created as long as the satisfaction variables are highly correlated. Correlations between the seven categories are positive, varying between 0.329 and 0.649. One such method favoured by psychologists and sociologists is to calculate Cronbach's Alpha statistic (Rose, 2003). Here the alpha statistic is an estimate of the reliability of using the seven aspects of job satisfaction to form an overall job satisfaction scale. The variance of this scale can be broken down into the variance attributable to each component and the interactions of these components. An Alpha value of 0.70 is considered the threshold necessary for building a trustworthy composite score of overall job satisfaction (ibid, p8). The Alpha statistic we find is 0.87. Findings that use single item and multi-item satisfaction measures have been shown to be reliable and stable (Scarpello and Campbell, 1983) and validity evidence from Warr, Cook and Wall (1979) confirms that the two can be interchanged.

This paper uses information on formal sector workers only. This is for a number of reasons. Firstly, the self-employed do not face the same earnings function as formal sector workers and since earnings are likely to be highly important to reported job

satisfaction could bias our results. In South Africa's case this is potentially even more of an issue since the majority of the self-employed work in the informal sector where earnings are low, uncertain and do not follow any particular pattern. The same is true of informal employees. The formal self-employed though represent a different problem with potentially the same outcome. This group have more flexible earnings and working hours relative to employees meaning a greater variation in earnings. Finally there is the obvious issue of missing EEP data for these groups of workers.

Average job satisfaction for our sample of workers reveals a racial hierarchy with blacks at the bottom and whites at the top (see Table 1). Black workers are less satisfied in every aspect of their job compared to white workers. In the case of earnings satisfaction and job security satisfaction the gap is equivalent to moving from mostly unsatisfied to mostly satisfied (Table 2).

INSERT TABLES 1 AND 2

This is expected given the legacy of Apartheid in South Africa. It is likely that the scarring of blacks explains at least some of the large racial differences despite a wave of pro-black labour and economic reforms in the post-Apartheid period (e.g. Labour Relations Act, 1995; Employment Equity Act, 1998; Skills Development Act, 1998; Basic Conditions of Employment Act, 1998). Whether these racial differences can be explained away will be investigated during this paper.

Job satisfaction is, ceteris paribus, expected to increase with earnings and Table 3 confirms this with the highest earning quintile group reporting an average job satisfaction level of 14.44 out of 21, compared with 9.58 for the lowest earning quintile.

INSERT TABLE 3

A strong finding in Clark, Oswald and Warr (1996) is that UK job satisfaction is U-shaped in age for those who report they are at least 'highly satisfied' with overall job satisfaction. Other evidence for the UK and US though is mixed[v]. For all workers Table 4 reveals no U-shaped relationship between job satisfaction and age in South Africa. When looking at satisfaction with pay and job security these findings are confirmed.

This is consistent with early work by Doering et al (1983), but in order to test the relationship formally a multivariate analysis is required.

INSERT TABLE 4

V RESULTS: JOB SATISFACTION AND EARNINGS

Estimated job satisfaction equations are presented in Table 5. Model I is estimated using the ordered probit and then OLS method. The sign and significance of the coefficients remain the same, confirming the findings of Ferrer-i-Carbonell and Frijters (2004). Remaining models are estimated using the ordered probit method. Model I illustrates the basic model of job satisfaction which includes the natural logarithm of earnings. As earnings increase so reported job satisfaction increases significantly. Model II includes a relative earnings terms, estimated from a Heckman procedure with employment likelihood identified by marital status and number of children in the household and the earnings function by the inverse mills ratio from this first stage (see Appendix 1). The positive sign on relative earnings indicates that workers are more satisfied the higher the earnings of identically skilled workers, though this is not significant. This is consistent with the findings of Russian workers by Senik (2004) that such increases in relative earnings encouraged workers that their earnings would likely increase to a similar level.

Race plays a significant role in job satisfaction with black workers less satisfied than equivalent white workers, ceteris paribus, after controlling for occupation and industry groups and provincial location. This finding could be overestimated since unobserved factors such as perceptions and expectations are unrealistically high amongst black workers. This is complicated by pre-labour market factors that current workers encountered during the Apartheid era, causing a reduction in the likelihood of finding satisfactory jobs. Various affirmative action policies have been adopted since 1994 to tackle the legacy of occupational colour barring and job reservation but this does not seem to have prevented lower job satisfaction amongst blacks compared to whites. Unfortunately we cannot formally test for perceptions and expectations of workers. However, consideration of whether an employer adopts an employment equity plan (EEP) can be controlled for in our model to test whether affirmative action policies contribute at all to job satisfaction. This represents the first such study for South Africa.

Model III controls for whether an employer has an EEP or not with those who do, having significantly more satisfied workers. Black employees still report significantly lower satisfaction than whites. Whether there are significant racial differences in job satisfaction between workers in EEP and non-EEP firms is tested by including racial group and EEP interaction terms. Model IV finds that blacks' working for EEP employers express greater job satisfaction than Africans not working for an EEP employer, Coloured workers employed by an EEP employer are significantly less satisfied relative to Coloureds working for a Non-EEP employer. This could be because they see the EEP as adversely affecting their prospects of promotion or wages when according to the Employment Equity Act, the opposite should be the case. White workers employed by an EEP employer are also less satisfied but not significantly so.

One implication of this finding is that affirmative action policies determine better working environments for the majority black workers but not for Coloureds who would rather not work for an employer with an EEP. The issue of causality though is tempered by selectivity. Some employers with an EEP could well have been progressive in their recruitment/employment strategy before the Employment Equity Act (EEA) which would have meant black workers would have been more satisfied (and presumably Coloured workers less so from the results in Model V). The EEP dummy would then simply be picking up a selection effect. If information on job satisfaction were available before the EEA then we could have tested for this effect. As mentioned previously the rolling out of the EEP targeted large organisations first with small and medium sized enterprises being given longer to complete an EEP. Again the larger organisations may have been more progressive in their employment strategies for a variety of economic and non-economic reasons. During the 1980s and 1990s many large South African and multinational companies demanded changes to Apartheid labour legislation since the resultant labour supply constraints were increasing costs. In this sense some companies were progressive. It is hard to believe this thinking would have changed in the post-1994 period. Politically these larger companies also had to take the lead in at least seeing to implement affirmative action policies to retain and/or increase political leverage and to improve their public image[vi].

Trade union members are significantly less satisfied than non-union members, which is a strong finding and consistent with the work of Borjas (1979), Heywood (1992) and Heywood et al (2002). It has been suggested that trade union members are more likely to report dissatisfaction since improved conditions, pay and security is a priority for union members through a voice affect. Issues of selectivity are obvious here, with many workers joining trade unions because they are dissatisfied with their job, but this selectivity issue is beyond the remit of this paper.

Of the other variables, training is weakly correlated with higher job satisfaction but there is no correlation between employment sector (e.g. public or private) and job satisfaction. Workers of all age groups report less job satisfaction compared to 55-65 year olds, with a U-shaped relationship found. Violence and crime in the workplace negatively affect job satisfaction. Urban location and gender have no significant correlation with job satisfaction. Those workers in high end occupational groups report significantly more job satisfaction compared with crafts and trade workers.

CONCLUSION

The paper reveals that our proxy for affirmative action in the workplace enhances black worker job satisfaction but significantly diminishes job satisfaction of coloured workers. This is a surprising result in that affirmative action legislation targets those groups who were previously disadvantaged by job reservation and colour barring practices which included coloured workers. Affirmative action can reasonably be expected to diminish the job satisfaction of whites but the finding on coloureds indicates that not all groups that should be benefiting from post-Apartheid legislation are doing so. Issues of selection mean than interpretation of the employment equity plan are curtailed since it may not be exogenous in the model but the result requires further investigation.

The remaining components of the job satisfaction equation follow previous findings for other research, with job satisfaction increasing with earnings and the age-job satisfaction relationship following a U-shape. Trade union members were significantly less satisfied in the workplace. Relative earnings was positively related to job satisfaction but was not significant in any of our models.

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Tables

Table 1

	Average Job Satisfaction
Black	11.30 (0.16)
Coloured	13.20 (0.34)
Asian	13.60 (0.49)
White	15.46 (0.25)
All	12.28 (0.13)

Note: Standard Errors in parentheses.

Table 2

	Earnings Satisfaction	Job Security Satisfaction	Type of Work	Opportunities to use skills	Working Times	Working Conditions	Distance to job
Black	1.92 (0.03)	2.41 (0.03)	2.81 (0.03)	2.63 (0.03)	2.98 (0.03)	2.84 (0.03)	2.71 (0.03)
White	2.79 (0.06)	3.12 (0.06)	3.37 (0.05)	3.23 (0.06)	3.29 (0.05)	3.33 (0.05)	3.33 (0.06)
Gap	0.87	0.71	0.56	0.60	0.32	0.50	0.61

Note: Standard Errors in parentheses.

Table 3

Earnings	Average Job Satisfaction
Quintile 1	9.58 (0.61)
Quintile 2	9.53 (0.37)
Quintile 3	11.18 (0.26)
Quintile 4	12.49 (0.23)
Quintile 5	14.44 (0.19)

Note: Standard Errors in parentheses.

Table 4

Age	Average Job Satisfaction
18-25	11.75 (0.45)
26-35	12.08 (0.22)
36-45	12.32 (0.22)
46-55	12.47 (0.30)
56-65	13.432 (0.495)
All	12.278 (0.128)

Note: Standard Errors in parentheses.

Table 5

	Model I: Ordered Probit		Model I: OLS		Model II: Ordered Probit		Model III: Ordered Probit		Model IV: Ordered Probit	
Dependent Variable = Job Satisfaction	Coefficient	T-Test	Coefficient	T-Test	Coefficient	T-Test	Coefficient	T-Test	Coefficient	T-Test
Log of Earnings	0.236	4.740	1.015	4.650	0.206	0.206	0.193	3.640	0.185	3.470
Log of Relative Earnings					0.204	0.204	0.188	1.370	0.167	1.220
Black	-0.510	-4.850	-2.182	-4.950	-0.375	-2.610	-0.381	-2.660	-0.699	-3.570
Asian	-0.112	-0.790	-0.318	-0.550	-0.040	-0.260	-0.034	-0.230	-0.311	-1.490
Coloured	-0.061	-0.450	-0.192	-0.330	0.040	0.260	0.029	0.190	0.055	0.250
EEP							0.128	2.030		
Black*EEP									0.272	3.560
Coloured*EEP									-0.421	-2.370
Asian*EEP									0.196	0.890
White*EEP									-0.216	-1.350
Log of Actual Hours worked	-0.056	-0.540	-0.227	-0.500	-0.041	-0.390	-0.045	-0.430	-0.041	-0.400
Trade Union Member	-0.195	-2.790	-0.791	-2.570	-0.257	-3.190	-0.271	-3.360	-0.266	-3.300
Training in last 5 year	0.150	1.880	0.650	1.860	0.131	1.640	0.123	1.540	0.134	1.690
Training 5 years or more ago	0.250	2.910	1.061	2.870	0.223	2.550	0.227	2.610	0.225	2.590
Violence at work	-0.217	-2.050	-0.934	-1.920	-0.213	-2.010	-0.197	-1.860	-0.188	-1.780
Sexual Harassment at work	0.103	0.790	0.371	0.630	0.108	0.830	0.112	0.860	0.090	0.690
Crime at work	-0.185	-1.760	-0.757	-1.630	-0.187	-1.770	-0.198	-1.870	-0.198	-1.870
Public Employee	0.080	0.610	0.391	0.690	0.084	0.640	0.080	0.610	0.077	0.600
Private Formal sector Employee	0.033	0.270	0.119	0.220	0.041	0.330	0.050	0.400	0.041	0.340
Age 18-24	-0.341	-2.140	-1.481	-2.120	-0.302	-1.880	-0.298	-1.860	-0.346	-2.160
Age 25-34	-0.358	-2.720	-1.520	-2.660	-0.359	-2.750	-0.350	-2.690	-0.352	-2.700
Age 35-44	-0.287	-2.200	-1.304	-2.300	-0.310	-2.370	-0.305	-2.340	-0.314	-2.400
Age 45-54	-0.253	-1.840	-1.086	-1.810	-0.275	-1.990	-0.264	-1.920	-0.254	-1.840
Female	-0.041	-0.610	-0.197	-0.670	0.015	0.190	0.009	0.120	-0.006	-0.070

Urban area	-0.102	-1.300	-0.465	-1.340	-0.129	-1.600	-0.128	-1.590	-0.126	-1.560
Great extent of independence on the job	0.102	0.710	0.539	0.840	0.090	0.620	0.082	0.560	0.083	0.570
Certain extent of independence on the job	0.041	0.280	0.340	0.520	0.033	0.220	0.025	0.170	0.031	0.210
Very limited extent of independence on the job	-0.066	-0.420	-0.229	-0.320	-0.073	-0.460	-0.078	-0.490	-0.069	-0.430
Manager	0.424	2.480	1.732	2.410	0.310	1.650	0.304	1.610	0.338	1.850
Professional	0.385	2.650	1.573	2.500	0.238	1.350	0.221	1.250	0.264	1.500
Associate Professional	0.291	2.090	1.276	2.120	0.182	1.140	0.163	1.020	0.213	1.330
Clerk	0.333	2.650	1.479	2.670	0.284	2.190	0.273	2.110	0.292	2.260
Sales Person	0.262	2.100	1.200	2.140	0.258	2.070	0.251	2.010	0.255	2.040
Skilled Agricultural worker	-0.132	-0.330	-0.471	-0.240	0.061	0.140	0.067	0.160	0.058	0.140
Machine Operator	0.110	0.900	0.443	0.800	0.123	0.990	0.116	0.930	0.130	1.050
Elementary	0.119	1.020	0.521	0.980	0.153	1.290	0.137	1.140	0.142	1.190
Provincial Dummies	Yes		Yes		Yes		Yes		Yes	
Industry Dummies	Yes		Yes		Yes		Yes		Yes	
Constant			8.460	3.320						

Reference Groups are: non-trade union members, whites, no training, other private employee, age 55-65, no extent of independence on the job, rural, male, Gauteng, Crafts worker and manufacturing. N/A not any in the sample.

Appendix 1

Heckman 2 stage Earnings Equation

Stage 1 – Employment Likelihood Model Dependent Variable: Formal Sector Worker =1, Other = 0			Stage 2 – Earnings Regression with Inverse Mills Ratio Dependent Variable: Log of Earnings		
	T-Test	**Coefficient**		**Coefficient**	**T-Test**
Age	0.124	9.260	Tenure	0.023	3.720
Age-Squared	-0.001	-8.170	Tenure-Squared	0.000	-2.230
Female	-0.380	-9.550	Female	-0.164	-3.850
African	-0.145	-1.880	African	-0.612	-11.180
Coloured	0.167	1.550	Coloured	-0.534	-7.190
Asian	0.043	0.310	Asian	-0.333	-3.630
Married	0.152	3.130	No Education	-0.156	-1.450
Widow	0.258	2.530	Primary Education	-0.089	-1.390
Divorced	0.231	2.500	Secondary Education 1	-0.088	-1.750
Number of children in Household	-0.032	-2.260	Higher Education	0.191	2.700
No Education	-0.892	-9.280	Trade Union member	0.261	7.430
Primary Education	-0.677	-11.570	Western Cape	-0.180	-2.950
Secondary Education 1	-0.370	-7.010	Eastern Cape	-0.411	-6.880
Higher Education	0.670	10.480	Northern Ccape	-0.418	-3.150
Western Cape	0.236	2.650	Free State	-0.340	-4.900
Eastern Cape	-0.063	-0.900	Kwazulu-Natal	-0.252	-5.140
Northern Ccape	0.142	0.890	North-West	-0.360	-5.660
Free State	-0.018	-0.230	Mpumalanga	-0.142	-1.940
Kwazulu-Natal	0.112	1.760	Limpopo	-0.332	-4.930
North-West	0.260	3.090	Urban Area	-0.029	-0.640
Mpumalanga	0.009	0.100	Manager	0.464	5.000
Limpopo	0.082	0.960	Professional	0.405	4.670
Urban Area	0.326	6.730	Associate Professional	0.397	4.780
Constant	-2.759	-10.740	Clerk	0.157	2.400
			Sales Person	-0.003	-0.050
Observations	5,210		Skilled Agricultural worker	-1.011	-12.160
Log pseudo-likelihood	-2838.648		Machine Operator	-0.064	-1.110
			Elementary	-0.121	-2.050
			Mining	0.067	0.920

	Utility	0.280	2.770
	Construction	-0.140	-1.760
	Retail	-0.121	-2.260
	Hotels	-0.068	-0.680
	Transport	0.120	1.700
	Finance	0.223	2.370
	Real Estate	0.117	1.780
	Education	-0.153	-1.900
	Health	-0.158	-2.260
	Other Social	0.011	0.110
	Private Household	-0.144	-0.760
	Inverse Mills Ratio	-0.720	-6.900
	Constant	8.717	63.600
	Observations	1,288	
	F-Statistic	81.28	
	R-Squared	0.65	

Reference groups are males, whites, never married, with Upper Secondary (Grade 10-12, NTC I-III), non-trade union member, Gauteng, crafts worker and manufacturing.

[i] Senik (2004) finds a tunnel effect in Russia regarding relative earnings and subjective well being.

[ii] In the subjective well being literature the employed are significantly more happy than the unemployed in developed (Di Tella et al 2003) and developing countries (Hinks and Gruen, 2006; Powdthavee, 2004; Kingdon and Knight, 2004b). It is well known too that youth unemployment is far greater than average rates in low, middle and high income countries.

[iii] Unfortunately the question asked was "Do you want to work more hours, or to do a different type of work?", which is clearly two separate questions.

[iv] See Leibbrandt et al (2005).

[v] See Clark, Oswald and Warr (1996) for this evidence.

[vi] The issue of take-up of EEPs and firm size was mentioned in Section 2. Because of a poor response rate this was not included in our job satisfaction models. However the proportions of workers reporting EEPs in the workplace decreased monotonically by size of firm from 61.4% amongst workers in the largest firms (>500 workers) to 18.9% amongst workers in the smallest firms (<5 workers). This illustrates that a selection issue cannot be discounted.