Determinants of Unemployment in Limpopo Province in South Africa: Exploratory Studies

Kwabena A. Kyei, and Kwame B. Gyekye

Department of Statistics, University of Venda. Private Bag X5050
Thohoyandou 0950. South Africa
Corresponding Author: **Kwabena A. Kyei**

_____

Abstract
Employment is one of the most significant determinants of the welfare of any nation. Any significant changes in employment will subsequently affect the living standard of the household. South Africa suffers from high unemployment rates, with the official unemployment rate rising from 15.6 percent in 1995 to a peak of 30.3 percent (2001) and currently about 29 percent. Limpopo tends to have the highest proportion of rural dwellers in the South Africa, hence it is expected that conditions in the province are inferior to the national average; implying higher unemployment rate. After the demise of apartheid (post-1994), the supply of labor increased dramatically, but as the economy grew, there was a drastic shift towards a more skilled based economy creating massive lay-off. This study attempts to find the determinants of unemployment in Limpopo province using annual census data from Global Insight. Regression, Principal Component and Cluster analyses have been employed in this study. Five variables, race, age, education, gender and GDP were categorized into fifteen as independent variables. The results show that unemployment is concentrated at qualifications below the degree. That GDP, male, matriculation and youth have no significant relationship with unemployment. Rather the model reveals that females, postgraduate studies, middle aged, primary, incomplete secondary schooling and race are predictors of unemployment in Limpopo province in South Africa.

_____

Keywords: unemployment, significant determinant, predicted, illiteracy, Limpopo province, model
_____

INTRODUCTION
South Africa has one of the highest unemployment rates in the world, currently standing at 25.2% (i.e. by the narrow definition of unemployment) based on figures released by STATSSA (2008). Thus a quarter of economically active people are unemployed. Unemployment is a real matter of concern, as it can yield devastating effects on economic welfare, crime, erosion of human capital, social exclusion, misery and social instability (Kingdon and Knight, 2007). Furthermore, the incidence of employment determines the distribution of income and poverty across different groups (Bhorat *et al*; 2001). Due to these undesirable effects the government has initiated well meaning programmes such as Skill training, job creation and public works programme but their effects have been minimal as high unemployment rates continue unabated (Akinyemi; 2010). The Limpopo Province being one of the most under privileged and poorest is a victim of these high rates of unemployment. Therefore it is essential to investigate the factors causing the prevalence of unemployment in this region so as to positively alter future empowerment strategies.

According to a study conducted by Kingdon and Knight (2004) on race and the incidence of unemployment in South Africa, unemployment varies dramatically by race. Africans face an unemployment rate of 41% compared to 23.3%, 17.1%, 6% of

Coloured's, Indians (Asians) and Whites respectively. This indicates that the African-White race gap in unemployment is 35 percentage- points and that Africans are more likely than any other race to be unemployed. Of the total African-White race gap in unemployment probability of 33.7 percentage points, 25.4 percentage points is explained by African-White differences and only 8.3 percent is unexplained. Thus a large share of this differential in unemployment between the races is explained by employment enhancing characteristics such as education and location. Of the Coloured-White unemployment gap 60% is explained by differences in characteristics and 40% is unexplained. About 63% of the Indian-White unemployment gap is explained by differences in characteristics and 37% is unexplained. The probability of unemployment that is attributable to discrimination by employers is 8.3, 6.5, 3.2 percentage points for Africans, Coloureds and Indians respectively (Kingdon & Knight, 2004).

Dias (2005) also in support of Kingdon and Knight's work, found that with respect to African males 30.81% were unemployed compared to 20.77%, 16.22%, 4.5% of Coloured's, Indians and Whites males respectively. Similarly, 37.68% of African females were unemployed compared to 23.53%, 19.19%, 6.55% of Coloured, Indian and White females respectively. This tended to agree with Kingdon and Knight's (2004) work that

unemployment is highest among Africans than any other race group and lowest among Whites.

Profile of Limpopo Province
The Limpopo province is located in the northern most part of the country neighboring Botswana, Mozambique and Zimbabwe. The province covers a land size of 123910 km[2;] accounting for 10.2 percent of South Africa's total land area (STATSSA, 2003). Majority of the population resides in rural areas in comparison to the national average of 50%. However due to its rural make-up, conditions are substandard compared to the rest of the country with the exception of the Eastern Cape Province (Gyekye and Akinboade, 2001). Limpopo is characterized as a developing economy, portraying positive growth patterns. For instance, it experienced its highest growth of 3.8 percent between 1995 and 2001. Furthermore, its gross geographic product was quantified at 63646 million signifying a 6 percent contribution to national Gross Domestic Product (i.e. 3rd smallest provincial contribution). The most significant contributors to its economy are community, social and personal service, agriculture, forestry and hunting, wholesale and retail trade. The province is endowed with variety of minerals such as gold, platinum etc; hence mining is one of the mainstay of its economy. However these minerals are exported in their raw state and in return manufactured goods and services are imported (Limpopo City Guide, 2006).

Population Structure
The total population of the Limpopo province is 5277432 representing 11.7% of South Africa's total population. More than half of its population is female (i.e. 52%), with female dominance noticeable in the adult categories. This may be explained by the high migration rates of adult males in search of jobs, and in the old age category due to longer survival of women. The 2001 census findings were that 54.6% of the population is female. A little over 40% of the total population in Limpopo province is less than 15 years and 4% were aged 65 years and above depicting a tendency of high dependency ratio. The total population is mainly Africans with a share of 97.2% whereas 0.2%, 0.2% and 2.4% are Coloureds, Indians and Whites respectively (Limpopo City Guide, 2006, 2009).

Economic Conditions
The 2001 Census recorded that 33.4% aged 20 years and above had no formal education (i.e. 1 in every 3 people had no literacy skills). Nearly half (49%) of the economically active people are unemployed and 33% of the employed were in the informal sector. Poverty prevalence was very high, as 6 in every 10 persons fell below the poverty line in 2002 (ILO, 1996). A little over 70% of the population lived in formal dwellings, 20% and 7% lived in traditional

and informal dwellings respectively. Majority (i.e. 78%) of households had access to clean drinking water. Approximately one in every 4 households had no access to the toilet facilities and only 14% had refuse removal service. Majority (i.e. 60%) of households still used wood as their main source of energy for cooking, 25% and 11% of household used electricity and paraffin respectively (STATSSA, 2003).

Mortality
In 2000, 53815 deaths were recorded for Limpopo province representing about 20% of the national deaths. A slightly higher proportion were male (50.9%) compared to 49.1% for females. Half of the deaths were due to communicable diseases such as HIV/AIDS while 40% and 10% were due to non-communicable diseases and injuries respectively. The province suffered from high infant mortality (57 per 1000 live births) compared to the national average of 42. This was usually due to communicable diseases, maternal and perinatal diseases and also HIV/AIDS. Life expectancy was also low.
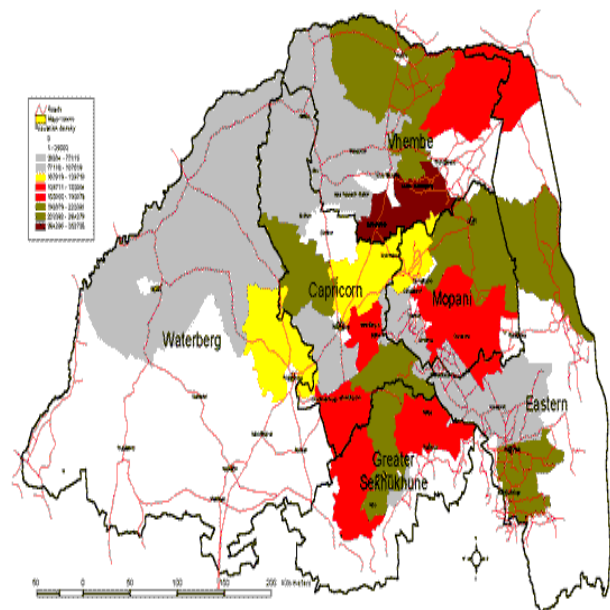

Figure 1: Shows the districts of Limpopo province.
Source: Limpopo province government.

Unemployment and Race in the Country
Race plays a crucial role in determining access to employment in South Africa. Fritjers (1999) conducted a study on the employment criteria for a large clothing firm. The findings were that the firm was likely to employ Indians than Africans based on their relative expected productivity. Although productivity defined as the number of faultless garments were lower for the firm's Africans than for its Indian employees (Standing *et al.* 2000).

METHODOLOGY

Secondary data, i.e. annual census data from Global Insight have been used in this study. Statistical Analyses using Regression, Principal Component and Cluster have been employed. In determining the impact of race, gender, education, GDP, etc. on unemployment, regression analysis was first used. The primary essence of regression analysis is to analyze the relationship between the dependent and independent variable(s). This technique of analysis then exploits this association between these two variables to predict the values of the dependent variable from the independent variables. The dependent variable is expressed as a function of the independent variable and its corresponding parameters plus a stochastic error term. This stochastic error term accounts for all unobserved independent variables that would have had a significant impact on the dependent variable. This study employed the ordinary least square method. The choice of the ordinary least square method is due to its primary purpose to evaluate the relationship between a set of independent variables and a dependent variable.

Model Specification: Regression

The model constructed below is to assess the efficacy of unemployment determinants in the Limpopo province.

$Unemployment = \beta_o + \beta_1 GDP + \beta_2 African + \beta_3 White + \beta_4 Coloured + \beta_5 Asian + \beta_6 Male + \beta_7 Female + \beta_8 No\ schooling + \beta_9 Primary + \beta_{10} Incomplete\ school + \beta_{11} Matric + \beta_{12} degree + \beta_{13} postgraduate + \beta_{14} youth + \beta_{15} Middle\ age + \beta_{16} Old\ age + \xi$

Where: GDP- Gross Domestic Product

β_i - parameter

ξ - Error term

Operational Definitions of Variables

Age: The age variable is categorized into three, thus the youth, middle and old age.

Indicator: The **youth** comprises all economically active people within the ages of 15-29.

The **middle age** cohort comprised all economically active people within the ages of 30-49 years.

The **old age** cohort comprised all economically active people within the ages of 50-64 years.

Education: Education is any act or experience that has a formative effect on the mind, character or physical ability of an individual. Education variable is divided into six categories.

Indicator: **No schooling** is characterized by people with non access to formal education. **Primary** education consists of people with the first six years of education. **Incomplete secondary** consists of people who have had access to secondary education but dropped out.

Matric represents those who completed secondary school.

Tertiary education (post –secondary) is made up of undergraduate and postgraduate.

Principal Component Analysis

The principal component analysis (PCA) is a variable reduction procedure. It explains the correlation structure of a set of predictor variables using a smaller set of linear combinations of these variables. It is useful when one has obtained data on a number of variables and believes that there is some redundancy in those variables. It is appropriate when one wishes to develop a smaller number of artificial variables that will account for most of the variables in the observed variables. It may then be used as a predictor or criterion variables in a subsequent analyses.

Cluster Analysis identifies and classifies objects, individuals or variables on the basis of the similarity of the characteristics they possess. In simple terms, cluster analysis partitions the set of observations into mutually exclusive groupings in-order to best represent distinct set of observations within the sample. The main objectives of cluster analysis are congruent with principal component analysis. Most commonly used cluster analysis procedure is Hierarchical.

RESULTS OF ANALYSIS AND INTERPRETATION

The chart below shows the "relationship" unemployment has with gender and race.
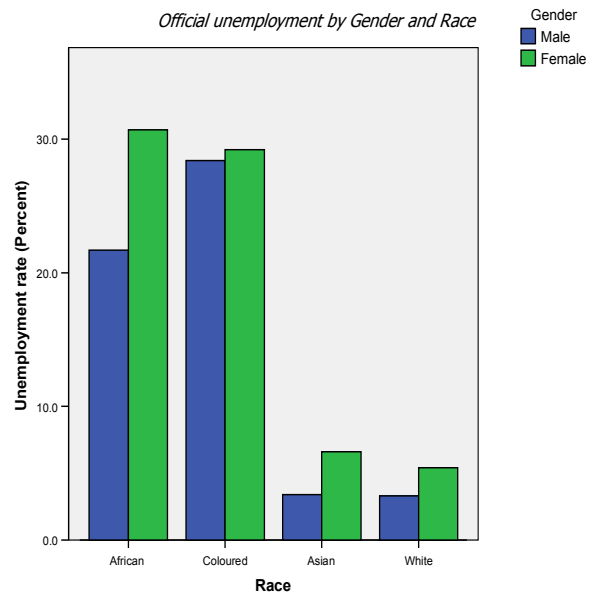

Fig 2: Official Unemployment by gender and race
Source: Global Insight Census, 2008

It is obvious that unemployment is relatively higher for Africans than any other race group. Moreover there is a significant difference between unemployment figures for African males and females. Coloured unemployment rates are also very high, however it seems there is a minimal difference between unemployment rates for males and females of Coloured's, Indian (Asian) and White's respectively. The chart above reveals deficiencies in education levels for Africans and Coloureds. Over 70% of education is concentrated at incomplete schooling and below for Africans and Coloureds while the reverse is true for Whites and Asians. These deficiencies might be related to poverty among the race cohorts, forcing them to terminate their schooling for the job market. The figures suggest that about 60% of Asians and Whites have matric qualifications or more. Only 4% of whites have not gone past Primary schooling, placing them in a better position to find employment. This might explain high unemployment rates amongst Africans and Coloureds as compared to Whites and Indians.

Table 1: The distribution of levels of education by race

	African	Coloured	Asian	White
Education level	%	%	%	%
No schooling	19.1	6	3	1.7
Primary	12.6	7	10.6	1.7
Incomplete Secondary	50.4	51.7	31.4	33.8
Matric	16.0	32.1	40.5	50.9
Degree	1.5	1.7	10.2	8.02
Postgraduate	0.4	1.3	4	3.8

Source: Global Insight Census, 2008

Results from Regression

Table 2: Model Summary

Equation parameters and variables	Value
Dependent variable	Unemployment
Independent variable	15
R	.985
R-squared	.971
Adjusted R-squared	.964
Std. Error of the Estimate	1965.691

Predictors: White, Asian, Coloured, Male, Female, No schooling, Primary, Incomplete Secondary, degree, Postgraduate, youth, middle age, old age.
 Source: Global Insight Census 2008

R represents the multiple correlation coefficient which measures the efficacy of regression by establishing the Pearson correlation between the true values of the target variable y and the estimates y' obtained by substituting the corresponding values of x into the regression equation. The correlation between y and y' is known as the **multiple correlation coefficients R.** The multiple correlations can only take values within the range 0 to +1: $0 \leq R \leq 1$. A multiple correlation coefficient of zero represents no correlation between y and y' while a coefficient of closer to 1 or 1 represents a (strong) perfect correlation. Therefore the **multiple R** is 0.985 which represents a strong correlation between y and y'. The R-squared (R^2), the coefficient of determination is the proportion of the variance of the dependent variable that is accounted for by the linear regression of the independent variables. Thus, it is an indication of the goodness of fit of the model. The R-square is positively biased, however in order to correct the biasedness an Adjusted R-square is applied which is obviously less than **R**. The Adjusted R-square for this multiple regression is 0.971 indicating that the fitted regression line explains 97.1 percent of the variation in the dependent variable and only 2.9 percent is explained by the error term. This implies that the model is good.

Table 3: ANOVA Table

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	8012912469.510	15	534194164.634	138.251	.000(a)
	Residual	239564321.786	62	3863940.674		
	Total	8252476791.295	77			

 Predictors: Age50_64, GDP, White, Asian, No_schooling, Coloured, Primary, Female, degree, Male, age30_49, Incomplete_secondary, matric, youth, postgraduate. Dependent Variable: Unemployment
Source: Global Insight Census 2008

The regression ANOVA tests for a linear relationship between the variables. The *F* statistic is the ratio of the mean square for regression to the residual mean square. In this multiple regression the value of *F* is significant smaller than 0.01. As seen below, the negative sign for GDP growth {in equation (1), with unstandardized coefficients}, shows that there is an inverse relationship between GDP growth and unemployment. An increase in GDP growth will consequently lead to a fall in unemployment, although the t-statistic shows that the variable is insignificant at all levels of significance (i.e. 1%, 5% and 10%). All the race variables (White, Coloured

and Indian) have an inverse relationship with unemployment and the *t*-statistic for all the race variables is significant. An increase in the number of each race will consequently reduce unemployment in the Limpopo province, although the impact of the race variables on unemployment varies significantly. Being Asian (Indian) drastically reduces unemployment compared to Coloured's and White's. The coefficient (unstandardized) of Asian race is -

34.44 indicating that when the Asian population increases by a person unemployment will drop by 34.4. This is relatively high to a drop in unemployment of 12.969 and 0.701 for Coloured's and White's respectively. This scenario might occur due to the relatively small number of the Asian population in the Limpopo province.

Table 4: Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig. level
	B	Std. Error	Beta		
1 (Constant)	-1358.679	616.742		-2.203	.031
GDP	-24.352	91.907	-.007	-.265	.792*
White	-.701	.341	-.224	-2.053	.044
Coloured	-12.969	4.465	-.332	-2.905	.005
Asian	-34.444	9.196	-.974	-3.745	.000
Male	-.087	.160	-.160	-.541	.590*
Female	.782	.118	1.505	6.596	.000
No schooling	.143	.064	.254	2.224	.030
Primary	-.465	.146	-.478	-3.190	.002
Incomplete secondary	.217	.074	1.009	2.936	.005
Matric	.227	.178	.458	1.272	.208*
Degree	-4.739	1.327	-1.102	-3.571	.001
Postgraduate	24.576	5.983	1.952	4.107	.000
Youth	.049	.070	.256	.705	.483*
Middle age	-.623	.096	-1.934	-6.462	.000
old age	.503	.172	.571	2.934	.005

Dependent Variable: Unemployment
Source: Global Insight Census, 2008

Estimated Linear Model (unstandardized)
Unemployment = -1358.679 -24.352GDP – 0.701White – 12.969Coloured – 34.444Asian
-0.87Male + 0.782Female + 0.143No schooling – 0.465Primary
+0.217Incomplete Secondary + 0.227Matric – 4.739Degree +
24.576Postgraduate + 0.049Youth – 0.623Middle age + 0.503Old age   (1)

Estimated Linear Model (Standardized)
Unemployment = -0.007 GDP – 0.224 White – 0.332 Coloured – 0.974 Asian -0.160 Male + 1.505 Female + 0.254 No schooling – 0.478 Primary
+1.009 Incomplete Secondary + 0.458 Matric – 1.102 Degree +
1.952 Postgraduate + 0.256 Youth – 1.934 Middle age + 0.573Old age   (2)

From the model (standardized, which is the predictive model), it is observed that unemployment is concentrated at qualifications below the degree level. Unemployment in Limpopo is structural in nature. The people's skills are substandard to job requirements. Matriculants were not predictors of employment as employers were sceptical about the future productivity of these potential employees

(Standing *et al.*, 2000, Dias 2005). Secondly, the matriculants are likely to have no work experience whilst schooling and also might have higher wage reservation since they might not be knowledgeable about the skills they possess. Therefore they intend to remain as long as they find a job of choice in which, most often, is a mirage. The model shows that postgraduate studies is the most predictor of unemployment with a standardized coefficient of 1.952, followed by middle aged with -1.934, females with 1.505, degree with -1.102, Incomplete secondary with 1.009 and Asian with -0.974. Thus unemployment and post-graduate studies move in the same direction and this is questionable. Because one expects post-graduate candidates to find job easily and therefore post-graduates studies be negatively related to unemployment. Unemployment in Limpopo is concentrated among the following categories: middle age, females, degree, incomplete secondary education and old age and race (Indian).

Results from the PCA
In this study, as can be seen from the plot, the principal component analysis reduced the initial fifteen independent categories (variables) into seven presented in two principal components, namely: race

and "illiterate youth";   where the race comprised white and coloured; and the "illiterate youth" comprised no schooling, primary, incomplete secondary school, youth and old age. Thus the seven reduced variables were: white, coloured, no schooling, primary, incomplete secondary school, youth and old age.

Table 5: Communalities

	Initial	Extraction
White	1.000	.932
Coloured	1.000	.942
No_schooling	1.000	.963
Primary	1.000	.958
Incomplete_secondary	1.000	.989
Youth	1.000	.984
old_age	1.000	.966

Extraction Method: Principal Component Analysis
Source: Global Insight Census, 2008

Table 6: Principal components with variance explained

Component	Total	% of Variance	Total	Rotated Component 1	Rotated Component 2
1	5.394	77.054	5.394	.208	**.943**
2	1.340	19.146	1.340	.249	**.938**
3	.134	1.911		**.980**	-.045
4	.071	1.019		**.916**	.344
5	.037	.532		**.922**	.373
6	.022	.311		**.932**	.341
7	.002	.027		**.892**	.414

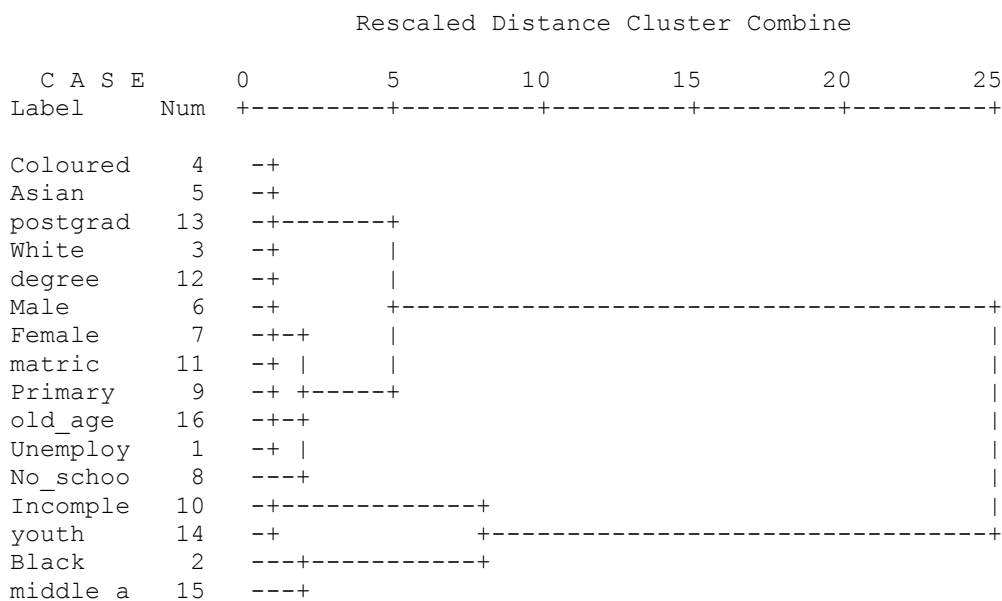**Source:** Global Insight Census, 2008

Component Plot in Rotated Space
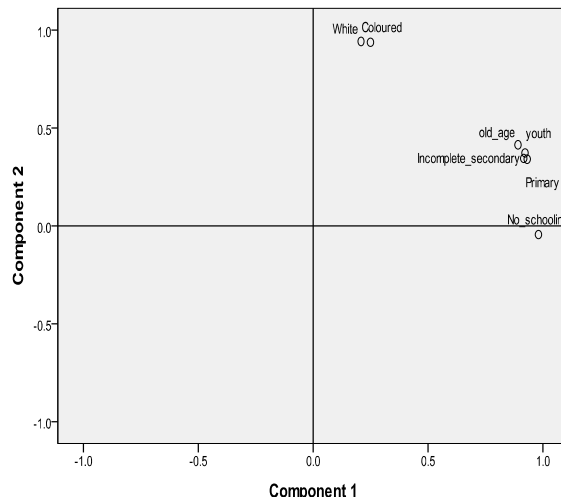
Results from the Hierarchical Cluster analysis
On the other hand as can be seen from the graph (dendrogram), the hierarchical cluster analysis shows that Unemployment is in the same cluster with no schooling, old age, primary, female and matric and closely adjacent to incomplete secondary school. Hierarchical cluster analysis is a way to investigate grouping your data by creating a cluster tree. The tree is a multi-level hierarchy, where clusters at one level are joined as clusters at the next high level.

Dendrogram using Average Linkage (Between Groups)

```
                 Rescaled Distance Cluster Combine

   C A S E      0         5        10        15        20        25
   Label    Num +---------+---------+---------+---------+---------+

   Coloured   4  -+
   Asian      5  -+
   postgrad  13  -+-------+
   White      3  -+       |
   degree    12  -+       |
   Male       6  -+       +-------------------------------------+
   Female     7  -+-+     |                                     |
   matric    11  -+ |     |                                     |
   Primary    9  -+ +-----+                                     |
   old_age   16  -+-+                                           |
   Unemploy   1  -+ |                                           |
   No_schoo   8  ---+                                           |
   Incomple  10  -+-------------+                               |
   youth     14  -+            +------------------------------+
   Black      2  ---+----------+
   middle_a  15  ---+
```

DISCUSSIONS
It can be deduced from the three different analyses that GDP has little or nothing to do with unemployment in our analysis in Limpopo. Rather unemployment is influenced by female, old age, race, no schooling, primary, and/or incomplete secondary education. South Africa has a unique situation in contrast with trends usually observed in developing countries where graduate unemployment is extremely high. For example, higher education holders experience an unemployment rate of close to 6% compared to 41% for those with primary education or less. Secondary schooling and possessing a matric qualification did not enhance the probability of finding employment in South Africa (Altman, 2004). The study has also found out that higher education (post-graduate studies) positively contributes to unemployment considerably across all race groups. This observation is striking because one expects post-graduate studies to have a negative impact on unemployment. This unexpected observation may result from the fact that the proportion of post-graduate students in the province is insignificant, less than 4%.

Our model shows that males do not have significant relationship with unemployment but females have. Dias (2005) observed that women were victims of high unemployment rates than men. The unemployment rate for men in his study was 25.7% in comparison to 32% of women. Thus, there was a significant difference between the unemployment rates, and this was related to less intensive job search by unemployed females in harmony with many other countries. Banerjee *et al.* (2008) supported the general argument that unemployment is prevalent among females than males. In 2005, 22.6% of males were unemployed while the figure for females was 31.7%, but the participation of females has increased drastically; narrowing the gender gap. In addition, Kingdon and Knight (2007) found that unemployment among males and females was 17.3% and 25.3% respectively. Casale and Posel (2002) conducted a study on "the continued feminization of the labour force in South Africa". Their study relied on the October Household survey (1995-99), it was observed that there was a disproportionate increase in the labor supply with respect to gender. Thus both genders' experienced a positive growth in labor supply but women had a greater proportion.

CONCLUSION
This study has tried to find the determinants of unemployment in Limpopo province in South Africa using annual census data by Global Insight and applying three different methods of analysis. It has been found out that GDP does not have significant relationship with unemployment. Meaning that irrespective of how much Limpopo economy grows, it will not be able to turn around the unemployment

situation in the province which is already worrying. Equally striking is the fact that the male population and the youth do not have significant relationships with unemployment in Limpopo. Rather our analysis shows that Unemployment in Limpopo province is predicted strongly and positively by female, old age and incomplete secondary schooling. Furthermore, the model shows that unemployment has strong negative relationships with middle age, degree holders and race (non-Africans). Thus unless the current secondary school going students/learners study hard and complete their studies successfully, they will always add to the pool of high unemployed population in the province.

RECOMMENDATION
Since unemployment in Limpopo is mostly predicted by "illiteracy", incomplete secondary education and below, it will therefore be necessary for the provincial government to make sure that all school going children have free access to schooling up to post-secondary level. It is only when learners successfully complete their secondary education that the prospects of getting job and reducing unemployment will look brighter. Private sectors should be encouraged to support this task of offering financial assistance to learners and even old age people to study. Discrimination against women in job provision should stop. Women with competence should be given jobs equally as men.

REFERENCES
Akinyemi, O. 2010: Factors associated with Employment Status among Graduates in South Africa. International Journal of Mathematics, Pp 14-15.

Altman, M 2004. "The State of Employment and Unemployment in South Africa". In Daniel, J., Habib, A. and Southhall, R.(eds). State of The Nation: South Africa 2003-2004. Cape Town: HSRC Press, 158-183.

Banerjee, A, Galiani, S, Levisohn, J, McLaren, Z, and Woolard, I. 2008." Why has Unemployment risen in the New South Africa?" Economics of Transition, vol. 16(4): 715-740.

 Bhorat, H. and Leibbrandt, M. 2001a. "Modelling Vulnerability and Low Earnings in the South African Labour Market".

Bhorat, H., Murray, L., Muzi, M., Van der Berg, S. and Ingrid, W. 2001b "Fighting Poverty : Labour Markets and Inequality in South Africa", Cape Town : UCT Press, Pp 22-40.

Casale, D. and Posel, D. 2002. "The Continued Ferminisation of the Labour Force in South Africa:

An analysis of recent data and trends", South African Journal of Economics, 72(5), Pp. 978-1002.

Dias, R. 2005. "Education and Economic Status in South Africa: Insights from the Labour Force Survey of 2003". Paper presented at the Economic Society of South Africa Biennial Conference.

Frijters, P. 1999. "Hiring on the basis of Expected Productivity in a South African Clothing Firm". Oxford Economic Papers 51:345-54.

Gyekye, A.B and Akinboade, O.A. 2001."The Determinants of Poverty in the Northern Province of South Africa : Implications for Policy". National Research Foundation Team Research Project (Ref. Number: 15/1/3/19/0037).

ILO. 1996. "Restructuring the Labour Market: The South African Challenge: An ILO Country Review", International Labour Organization, Geneva.

Kingdon, G. and Knight, J. 2004. "Race and the Incidence of Unemployment in South Africa". Review of Development Economics, 8(3), Pp. 198-222.

Kingdon, G. and Knight, J. 2007. "Unemployment in South Africa, 1995-2003: Causes, Problems and Policies", Journal of African Economies, vol. 16(5): 813-848.

Limpopo City Guide. 2006. Southern Africa. http://www. South Africa places.co.za. Info, accessed on 04 February 2009.

Limpopo Province 2009. Rapid Appraisal Report on Home Community Based Care Programme. Department of Social Development 2004-2009.

Standing, G., Sender, J, and Weekes, J. 2000. "Restructuring the Labour Market South Africa's Challenge", An ILO Country Review, Second Impression.

STATSSA 2003: http:/www.statssa.gov.za accessed in June 2010.

STATSSA 2008: http:/www.statssa.gov.za www.wikipedia.com accessed September 2010.

Urban and Non-Urban Population by Province, Census 1996 Report. Internet, South Africa.

UNDP, 2000: Development Report. Internet, South Africa