

“Determinants of youth unemployment in South Africa: evidence from the Vhembe district of Limpopo province”

AUTHORS	Mbulaheni Albert Dagume Agyapong Gyekye
ARTICLE INFO	Mbulaheni Albert Dagume and Agyapong Gyekye (2016). Determinants of youth unemployment in South Africa: evidence from the Vhembe district of Limpopo province. <i>Environmental Economics</i> , 7(4), 59-67. doi: 10.21511/ee.07(4).2016.06
DOI	http://dx.doi.org/10.21511/ee.07(4).2016.06
RELEASED ON	Friday, 09 December 2016
JOURNAL	"Environmental Economics"
FOUNDER	LLC "Consulting Publishing Company "Business Perspectives"



NUMBER OF REFERENCES

0



NUMBER OF FIGURES

0



NUMBER OF TABLES

0

© The author(s) 2025. This publication is an open access article.

Mbulaheni Albert Dagume (South Africa), Agyapong Gyekye (South Africa)

Determinants of youth unemployment in South Africa: evidence from the Vhembe district of Limpopo province

Abstract

The persistent high unemployment rate confronting South Africa, in particular among the youth, continues to be a cause of concern for all stakeholders including academic researchers dealing with labor market issues. As a contribution to efforts at finding solution to the unemployment challenge, the study sought to investigate the nature and causes of rural unemployment amongst the youth using data on a sample of 580 randomly and systematically selected youth from the four local municipalities in the Vhembe district of Limpopo province, South Africa. Binary logistic regression model was estimated to determine the socio-demographic, as well as economic factors that influence youth unemployment. Results of the binary logistic regression model showed that having received (skills) training and work experience were associated with reduced odds of being unemployed. This study highlights the importance of skills training opportunities, as well as apprenticeship in mitigating the unemployment challenge among the youth. The provision of necessary training infrastructure and funding for skills training, as well as work integrated learning and extended career specific internship programs to help to equip South African youth with work experience are major recommendations from this study.

Keywords: unemployment, youth, binary logistic regression, Vhembe district, South Africa.

JEL Classification: J64.

Introduction

The problem of high youth unemployment is a global phenomenon (Lam, Leibbrandt and Mlatsheni, 2008; Zinhwe, 2012 and Yarima, 2014). This view has been echoed by International Labor Organization (ILO) (2011), which points out that youth unemployment is among the major challenges facing both developed and developing countries. ILO (2010) reports that the global youth unemployment reached its highest level in 2010, pointing out that out of 620 million economically active youth aged 15 to 25 years, 81 million were unemployed at the end of 2009. This is the highest number ever recorded and it is 7.8 million more than in 2007. Eighty percent of youth who live in developing economies are vulnerable to underemployment and poverty (ILO, 2010).

Unemployment among the youth has been and continues to be South Africa's primary policy challenge (Bernstein, 2008). It has become a contentious issue, as the rate is much higher than that of adults in most countries of the world (Dale, 2014). Almost three quarters (70.8%, 3.4 million) of the 4.8 million people who are unemployed are youths between the ages of 15 and 34 (Stats SA, QLFSQ1, 2013). According to Statistics South Africa (2015), youth unemployment rates for South Africa between 2008 and 2015 were 32, 7% in 2008, 33.7% in 2009, 35.7% in 2010, 36.1% in 2011, 35.8% in 2012, 36.2% in 2013, 36.1% in 2014 and 36.9% in 2015.

South Africa, the country with the most advanced economy in Africa and with three-quarters of poor people living in rural areas has a rural unemployment rate of about 70 percent (du Toit, 2003, Eastwood, Kirsten and Lipton, 2006). The 15 to 24 year-old age group constitutes 71 percent of the unemployed (Bhorat, 2006). The unemployment rates along gender groups also differ considerably. According to Statistics South Africa (2011), unemployment affects females more than males. In support of this, in Limpopo province, there were 376 101 (59.4%) unemployed females and 256 860 (40.6%) unemployed males during 2011 Statistics South Africa survey.

According to Giri, as quoted in Pandey (2005), unemployment is the problem of problems. This is because unemployment contributes significantly to the unacceptably high levels of poverty and income inequality. The inability of jobseekers to secure jobs tends to create frustration among them, especially among the youth, resulting in increase in crime, suicide, violence, drug abuse and other social problems that can increase personal insecurity (Malik, 2014). From a national economic perspective, unemployment results in the loss of output to the economy (du Toit, 2003).

1. Statement of the problem

Since the advent of the new democratic dispensation in 1994, expectations have been high especially among the previously disadvantaged (black) population for better living conditions in post-apartheid South Africa. In response to such expectations, the government promised to prioritize

© Mbulaheni Albert Dagume, Agyapong Gyekye, 2016.

Mbulaheni Albert Dagume, Ph.D., Lecturer of Economics, School of management Sciences, University of Venda, Thohoyandou, South Africa.

Agyapong Gyekye, Professor, Department of Economics, University of Venda, South Africa.

poverty alleviation, income inequality through reduction of unemployment in its development strategies. Consequently, since 1994, the government introduced a plethora of development policies designed to mitigate the challenges of unemployment, poverty and income inequality, including the Redistribution and Development Program (RDP), Growth, Employment and Redistribution Policy (GEAR), Accelerated and Shared Growth Initiative of South Africa (ASGISA) and the Joint Initiative for Priority Skills Acquisition (JIPSA).

Despite the good intentions embedded in the above policy initiatives, unemployment still remains stubbornly high in South Africa. Vhembe district of Limpopo province, which is the focus of the study, has a large population of unemployed youths. According to Census (2011), youth unemployment rate in the district has increased from 53.4% in 2010 to 58.4% in 2011. Despite these alarming figures, unemployment among the youth in the Vhembe district has not received much scholarly attention, apart from two studies, one by Kyei et al. (2011) attempting to find determinants of unemployment in Limpopo Province, and another by Nematili (2006) investigating unemployment in Tshiheni Village within the Vhembe district. All these studies were trying to address unemployment on the whole, generally for the working age group 15 to 64. The problem of unemployment of the working age group 15 to 34 years (the youth) who constitutes the highest percentage of the entire population has yet to be addressed. As a social phenomenon, unemployment is a multifaceted issue, because it affects not only the unemployed individual, but also the entire society. An investigation of the factors of youth unemployment in the Vhembe district, being the first of its kind, will, therefore, contribute to an understanding of the problems of youth job seekers from individual, social and household perspectives, and how the problems can possibly be mitigated.

2. Research objectives

Drawing on data from representative sample of youth, the main objective of the study is to investigate the causes of unemployment among the youth in the Vhembe district of South Africa. The specific objectives are: to provide an overview of trends in youth unemployment in South Africa; to empirically analyze the determinants of unemployment incidence among the youth in the Vhembe district; and to recommend public policy measures for employment creation to reduce unemployment in

the district. Binary regression estimation technique is applied to investigate the causes of unemployment among the youth in the Vhembe district from the supply side of the labor market.

The paper is organized as follows: sections 3 discusses operational concepts together with theoretical and empirical literature. sections 4 focuses on the overview of youth unemployment in South Africa. In section 5, the methodology employed for the econometric analysis of the cross-sectional data, results and discussions are presented, while final section presents conclusions and policy recommendations.

3. Literature review

3.1. The concept of unemployment. The International Labor Organization (ILO) considers a person of working age fifteen years and older to be unemployed if during a specified reference period (a week) if that person is not working for some kind of financial compensation, but is: (a) willing to work; (b) available to work; and (c) actively searching for work (Statistics South Africa, 2011).

3.2. Youth. This study is on youth unemployment. The definition of youth varies from country to country. For example, according to the United Nations, youth refers to a person aged between 15-24. In South Africa, youth refers to persons falling within the age group of 15-34 years, which is the official definition of youth according to Statistics South Africa (2011) and which is the definition used in this study.

3.3. Types of unemployment. Several types of unemployment may be experienced in an economy such as that of South Africa and they include: frictional, seasonal, cyclical and structural unemployment. Frictional unemployment which, amongst other things, deals with unemployment arising from people who are in the process of moving from one job to another. This may be common among the youth who prefer to move from one job to another, with the aim of searching for greener pastures. Seasonal unemployment arises when workers are laid off during off seasons. This type of unemployment is common in sectors such as agriculture. Cyclical unemployment occurs when the economy slows down, such as during times of recession, when people lose their jobs. Structural unemployment occurs when there is a change in the structure of an industry or economic activities due to say rapid changes in technology which results in mismatch between the skills of workers and skill requirements of available jobs.

3.4. Theoretical literature review. A variety of theories have been advanced in economic literature to explain the phenomenon of unemployment. Under classical economic theory, unemployment in the economy is simply a short term phenomenon, and

the workings of the free market forces would eventually restore the economy to full employment. In other words, labor market always clears on the basic assumption of flexible wages and perfect information. In situations where this assumption does not hold, due to institutional rigidities such as minimum wage legislation, the market may not clear, leading to the classical involuntary unemployment. As Goodwin (2006) points out, involuntary unemployment can exist if minimum wages get in the way of market forces. If employers are required to pay a minimum wage that is above the equilibrium wages, fewer workers will be hired. In the classical theory parlance, it is not possible to have involuntary unemployment unless there are distortions in the functions of the labor market. The theory maintains that there is no such thing as cyclical unemployment and that those people who are not working have made decisions not to work or that they are either part of frictional or structural unemployment.

From the Keynesian school of thought, unemployment largely arises from deficiencies in aggregate demand over certain periods in the business cycle such that jobs created are inadequate for everyone who wants to work (Keynes, 1936). This type of unemployment is cyclical and involuntary due to the constraint imposed by limited availability of employment opportunities. When aggregate demand is low, firms hire little labor. The idea underlying the theory is that lack of aggregate demand would lead to falling sales which lead to a fall in investments; this leads to another fall in aggregate demand and more unemployment, therefore, creating a vicious cycle. Keynesian school of thought, therefore, calls for the use of appropriate government policies, either fiscal or monetary policies, to eliminate involuntary unemployment in the economy.

The insider-outsider model of wage-setting behavior of firms is a model used to explain institutional form of involuntary unemployment. In the model, there are two groups of potential workers; insiders are workers who are already employed (e.g., unionized workers) and strive to maximize the interest of their members only. Outsiders are workers, i.e., non-unionized workers who possess the same potential to be hired as unionized workers. The model asserts that unemployment arises when wages are determined by taking into consideration the interest of only those employed (insiders) without regard to the interest of those seeking to be employed referred to as outsiders (Bentolila et al., 2011). Thus, firms and insiders bargain to lock the outsiders out of the job market and thereby create unemployment.

Human capital theory asserts that the quality of labor force is vital for labor demand by companies and it is relevant to the decisions of these companies as to who is retrenched or dismissed. As a result, human capital variables such as education level and training explain the probability of unemployment (Osberg et al., 1986; Byrne and Strobl, 2001; Lindley, 2005).

3.5. Empirical literature survey. Empirical studies on determinants of unemployment have focused on the phenomenon either from the supply side perspective or from the demand side perspective. From the supply side perspective, a number of empirical studies have found that unemployment tends to be lower for persons with higher educational attainment. In his empirical analysis on unemployment, Elhorst (2003) found a direct relationship between the level of educational attainment and employability. He explored four impacts education has on individuals' employment pattern/employability. First, he opines that in an economy with continued technological progress, labor demands tend to focus on skills exhibited mainly by better educated individuals. Second, the search behaviors of better educated individuals enable them to find jobs more quickly than those of the less educated individuals. Thirdly, the higher a person's educational attainment, the lower the probability that the person will be laid off. Lastly, higher skilled workers crowd out workers with less education by accepting jobs that require lower educational attainments than they possess. Kabaklarli, Hezeler and Buhus (2011), in an Organization for Economic Cooperation and Development's (OECD) study, found that employment rate of the youth aged (15-29 years) with higher education level was higher than those with secondary education level and high illiteracy level. A study by Sackey and Osei (2006) in Ghana similarly found that basic and senior secondary levels of education are associated with relatively more unemployment in Ghana due to the relatively lower levels of such education compared with tertiary education. In South Africa, a study by Msigwa and Kipsha (2013) found that youth with higher educational levels had lower levels of unemployment. The reason given was that young people who had completed primary or secondary education did not possess any skills required in the job market. A number of studies have also found that youth with job training are in a better position of getting employment than their counterparts who had never gone for any training. For example a study by Qayyum (2007) found that technical and vocational training significantly decreases the probable chances of an individual becoming unemployed.

Studies by Layard and Nickel (1991), Qayyum (2007) and Echebiri (2005), have confirmed that age of a

youth can influence employment status due to the fact that employability goes with experience, implying that fresh graduates with no experience will always find it difficult to access jobs, since they lack relevant experience. This has been echoed by Dickens and Lang (1995) who found unemployment to be highest among the highly educated Sri Lankan youth (aged 15-24), but declining thereafter. Sackey and Osei (2006) conclude that younger people are more likely to be unemployed due to the fact that they possess lower skills in comparison to their older counterparts.

Gender disparities in unemployment have been reported by Qayyum (2007) using data from labor force survey (2003-2004) and probit model to investigate causes of unemployment among young people aged 15-29 years in Pakistan. Qayyum found higher unemployment rate among females than males. A study by the International Labor Office (2004), pointed out that youth unemployment in South Africa has a gender dimension, because it is generally higher among females than males. This has been confirmed recently by Msigwa and Kipsha (2013). The results of the same study by Quyyum (2007) relating to marital status showed that unemployment among unmarried people was found to be considerably higher than among married people. This seems to contradict the findings of a study by Gebere (2011) which found that the percentage of unemployed for married youths (46.5 percent) was greater for never married youth (36.9 percent).

From the demand side, prolonged unemployment has been attributed to weak demand for labor.

For example, Altman and Potgieter-Gqubule (2009), as cited in Smith (2011), argue that the quantum of job creation was too small to make a dent in youth unemployment in South Africa, although Altman and Potgieter-Gqubule (2009) equally point out supply side factors such as mismatch between worker skills and employer needs, which causes available jobs to go unfilled, may explain the slow employment growth in the South African economy. To correct the mismatch, it been variously been suggested that jobs should be created in the private sector, in particular, small and medium enterprise (SME) sector, through the development and promotion of entrepreneurial skills for the sector. A study on youth employment by Kiiru, Onsomu and Wamalwa (2013) suggests that a youth fund be established in order to assist youth entrepreneurs.

4. Overview of youth unemployment in South Africa

Youth unemployment poses a formidable policy challenge for South Africa. Figure 1 illustrates unemployment trends in South Africa (SA) by age group over the period 1995 to 2013. These figures reveal a strong relationship between age and unemployment rates. Unemployment rates are increasingly lower in the higher age groups. Thus, the unemployment rate among persons aged 15-24 years, as shown above, is higher than those in the 15-34 years age group. In turn, the unemployment rate among persons aged 15-34 years is higher than among those in the 35-64 years age group.

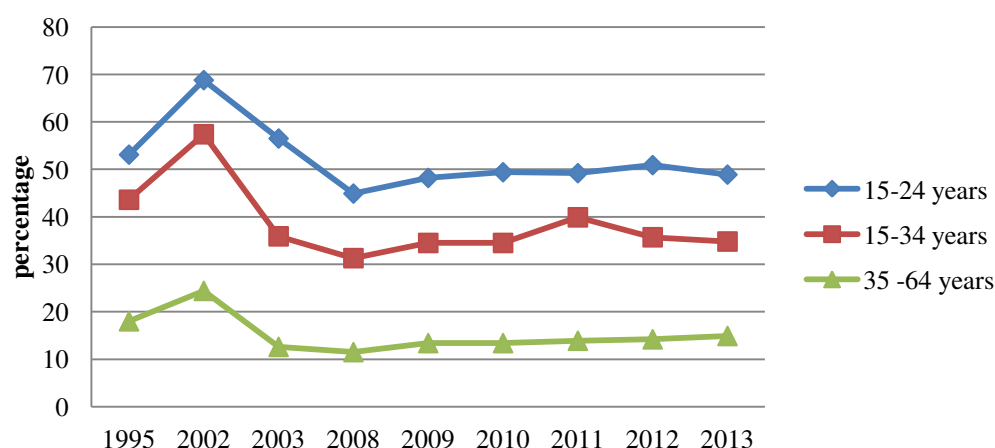


Fig. 1. Unemployment rates by age group, SA, 1995-2013

Source: Stats SA (2014), QLFS, Q4 (2010), QLFS Q3(2013), Q1 (2014).

Youth unemployment in South Africa also seems to have a gender dimension. The unemployment rate among the youth for the period 2001-2011 is consistently higher for females than males, as depicted in Fig. 2. This trend has been confirmed

by a number of empirical studies such as the ones done by Fawcett (2002), Msigwa and Kipsha (2013) and Kyei and Gyekye (2011) that have found female unemployment rates to be higher than those of males.

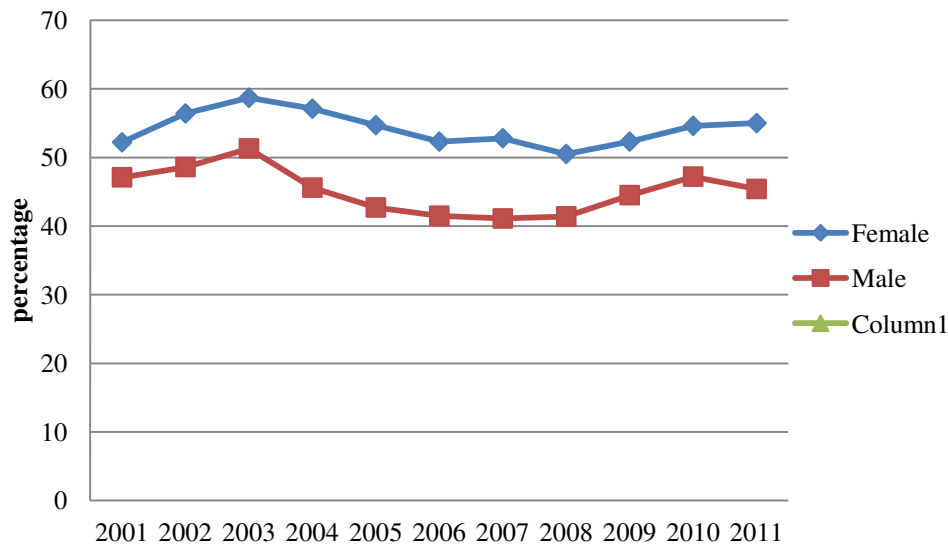


Fig. 2. Unemployment rate by gender (15-24 years), SA, 2001 -2011

Source: SADC Statistical Yearbook (2011)

Fig. 3 depicts the impact of educational attainment on the unemployment situation in South Africa. Unemployment rate is the highest among those with lower than Matric (without secondary school qualification) compared to those with education levels higher than Matric

(with secondary school or tertiary qualification), i.e., unemployment rate decreases as levels of educational attainment increase. This supports the view that education, particularly the attainment of tertiary qualifications, enhances access to the labor market.

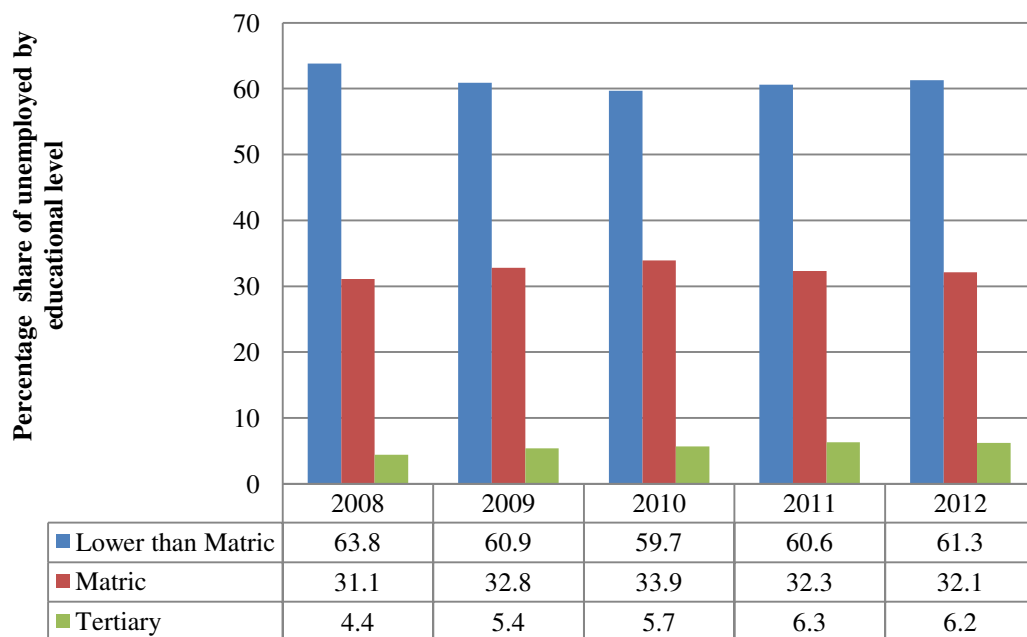


Fig. 3. Share of the unemployed by educational level, South Africa, 2008-2012

Source: Stats SA, Q4 (2012).

5. Research methodology

5.1. Data and model specification. In order to analyze the relationship between socio-demographic factors and unemployment among the youth in the Vhembe district, this study uses a cross-sectional data on a representative sample of 580 youth (defined as individuals falling within the age group of 15-34) in the four local

municipalities of the district. The data were collected in June/July 2013 using a structured questionnaire. The questionnaire enabled detailed data to be collected on respondents' demographic information, as well as information on their human capital assets.

Conceptually, the model of determinants of unemployment among the youth is specified as:

$$Y_i = \beta_0 + \beta_i X_i + \varepsilon_i, \quad (1)$$

where Y_i = unemployment, iX is a vector of explanatory variables, β represents a vector of parameters of explanatory variables to be estimated, and ε is a vector representing the stochastic error term.

In this study, the dependent variable (Y) is measured as a binary variable with an assigned value of 1 if the individual is unemployed and 0 if the individual is employed. In the context of this study, an individual is unemployed if he or she falls within the age group of 15-34 and was not in paid employment or self-employment and has not worked for five or more hours for a wage or salary or for profit or family gain during the reference period; or was available for paid employment or self-employment during the reference week; or took specific steps during the four weeks preceding the interview to find paid employment or self-employment.

On the basis of the binary nature of the dependent variable, a binary logistic regression technique was adopted to analyze how each of the explanatory variables (age, gender, marital status, educational level, ethnicity, training or skills, geographical location and work experience) influence the probability of an individual becoming unemployed. The logistic model to be estimated for this study is specified as follows:

$$\ln\left(\frac{P_i}{1-P_i}\right) = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \beta_7 X_7 + \beta_8 X_8 + \varepsilon_i, \quad (2)$$

where: Y = employment status (unemployed = 1; employed = 0). Employment status is expressed as a probability function $\left(\frac{P_i}{1-P_i}\right)$, with P_i denoting the probability of youth i^{th} being unemployed and $1-P_i$ is the probability that i^{th} respondent is employed from the survey data. X_1 denotes age group of respondents in years; X_2 denotes gender of respondent, 1 if male and 0 if female; X_3 denotes race of respondent measured according to categories in South Africa, 1 if black, 0 if colored (the other racial groups, i.e. Indians and Whites declined to be interviewed); X_4 denotes location of respondent, 1 if urban, 0 if rural; X_5 denotes the highest level of education of respondent and captured as dummy variable (1 if primary, 2 if secondary and 3 if tertiary with no schooling as a reference dummy); X_6 denotes marital status, 1 married and 0 single; X_7 denotes prior training status of respondent, 1 if trained, 0 not trained and X_8 denotes work experience, 1 experience and 0 no experience.

The parameters for to be estimated from equation 2 are $\beta_1, \beta_2, \beta_3, \beta_4, \beta_5, \beta_6, \beta_7$ and β_8 . Based on theory and empirical literature, expected a priori signs of the parameters are:

$$\beta_1 > 0, \beta_2 < 0, \beta_3 > 0, \beta_4 < 0, \beta_5 < 0, \beta_6 < 0, \beta_7 < 0, \text{ and } \beta_8 < 0.$$

The estimated regression coefficients represent the “odds ratio” – $\exp(\beta_i)$ which measures the effect of explanatory variables on the “odds ratio” (the odds ratio is the probability of being unemployed divided by the probability of being employed; $p/1-p$).

For categorical explanatory variables, if the value of the odds ratio $\exp(\beta_i)$ for a certain category is greater than 1, the chance of unemployment is higher for a member of that group in relation to the reference category. On the other hand, the odd ratio of less than 1 implies the lower chance of unemployment in relation to the reference category. For continuous explanatory variables, $\exp(\beta_i)$ is the estimated multiplicative change in the odds for a unit of increase in the predictors, controlling the effects of others. In addition, a positive predictive coefficient ($\beta > 1$) means that the predicted odds increased, as the predictor value increased, and a negative coefficient ($\beta < 1$) indicates that the predicted odds decreased, as the predictor value increased.

The maximum likelihood method was used to estimate the numerical values of the parameters of the binary logistic model. This method has stronger theoretical appeal compared to the method of OLS (Bhat, 2000), due to its ability to estimate the non-linear equation associated with the binomial logit model adopted in this study.

5.2. Results and discussion. Table 1 presents the results of the estimated logistic model of the determinants of youth unemployment in the Vhembe district of South Africa. We, first, analyzed whether the independent variables in our model have a significant relationship with the dependent variable. This was necessary for determining the ability of the model to predict the dependent variable accurately. The Likelihood ratio test was, consequently, performed to test the overall significance of all the coefficients in the model and our results indicate that the overall model is significant at the 0.01 level according to the Model chi-square, implying that, as a whole, the independent variables have a significant contribution to predict the response variable (i.e., the unemployment status of the youth in the Vhembe district of South Africa). The logistic regression coefficients, Wald test and odds ratio for each of the predictors are presented in this table. The “sig” column reveals the significance (or p-value) of each of the variables while B values explain the direction of the relationship of the particular independent variable, with the dependent variable.

On the other hand, Exp (B) column represents the odds ratio. Using 0.05 level of significance as a standard for test of statistical significance, the coefficients of all the variables, with the exception of training and experience were found to be statistically insignificant.

The table indicates that the coefficients for training and experience are statistically significant at the 0.05 and 0.01 level, respectively. This shows that the two variables play a significant role in predicting the probability of being unemployed.

Table 1. Parameter estimates of the logistic model of the determinants of youth unemployment

Variables	Category	B	S.E	Wald Chi-square	df	Sig.	Exp (B)	Confidence interval 95%	
								Lower	Upper
Age group	15-20	.181	.515	.123	1	.726	1.198	.437	.3.288
	21-25	-.130	.318	.167	1	.683	.878	.471	1.637
	26-30	.103	.329	.099	1	.753	1.109	.581	2.115
	31-34 (RC)								
Gender	Male	.124	.222	.310	1	.578	1.132	.732	1.751
	Female (RC)								
Marital status	Single	.180	.342	.278	1	.598	1.197	.613	2.341
	Married (RC)								
Education	Primary	.968	.771	1.575	1	.209	2.632	.581	11.931
	Secondary	.411	.362	1.288	1	.256	1.508	.742	3.064
	Tertiary (RC)								
Training	Trained	-5.03**	.227	4.931	1	.026	.604	.388	.943
	Not trained (RC)								
Experience	Experience	-2.272***	.259	77.049	1	.000	.103	.062	.171
	No experience (RC)								
-	-2 Log Likelihood	547.507							
	Model Chi-square	136.185***							

RC = reference category ** $p < 0.05$, *** $p < 0.01$

Source: data survey.

From the results, training has a negative coefficient and is statistically significant ($p = 0.026 < 0.05$). This result is in agreement with the prior expectation and indicates that the high level of youth unemployment in Vhembe district arose as a result of a lack of training or skills. The sample odds of a trained youth being unemployed were 0.604 times lower than those of an untrained youth. This means that a youth who had some training was less likely to be unemployed, compared to a youth without training. Our results collaborate the findings presented in a study by Msigwa and Kipesha (2013) in Tanzania, which also reported that being a youth without training made a person about 23 percent more likely to be unemployed. The results are also in line with the studies done by Mahlwele (2009) who found that untrained women were less likely to get employment than the trained women. Gebeyaw (2011) in a study conducted in Addis Ababa similarly found training to have a negative impact on unemployment, and was statistically significant at 1% level of significance. The implication of our result is that training could be an important strategy to reduce youth unemployment, particularly among those with only primary and secondary education

who constitute a large proportion of the unemployed in the Vhembe district municipality.

Our results also provide evidence to support the view held by many that prior work experience is likely to positively impact on the probability of unemployed youth finding employment. From Table 1, provided all other variables are held constant, the odds of a youth with some work experience being unemployed are about 0.103 times lower than those of a youth without work experience. This means that a youth who has some work experience is less likely to be unemployed, compared to a youth without job experience. The association between experience and unemployment was statistically significant ($p = 0.000$). The results agree with studies and findings by Altman and Gqulube (2009), as cited in Smith (2011), who found that individuals who had never held a job before were 35% more likely to remain unemployed than those who had prior work experience. Similarly, the ILO (2004), as cited in Gebere (2011), notes that lack of work experience reduces the chances of getting employment in the modern sectors of the economy.

Youth unemployment in Vhembe district in 2013 was largely found to be determined by training and work experience. The other variables (age, gender, marital status and education level) were insignificant in determining youth unemployment. With regards to age, even though it was not significant, the coefficients on the other age categories (i.e., 15-20 years and 26-30 years) were positive as per prior expectation indicating that youths in these age groups are more likely to be unemployed, as compared to those in the reference category (age 31-34 years). These results are in conformity with Qayyum (2007) who found age to be significant and negatively related with unemployment indicating that additional increase in age reduced the probability of becoming unemployed by 0.2%. The coefficient of the gender variable was found to be insignificant at the 0.05 level. The insignificance of the gender variable, in apparent contrast with the picture in South Africa as a whole (see Fig. 2), may be attributable to a better compliance and implementation of the national affirmative action legislation, known as Employment Equity Act 55 of 1998 in the Vhembe district, our study area. The purpose of this legislation is to achieve equity in the workplace, by promoting equal opportunity and fair treatment in employment through the elimination of unfair discrimination, while implementing affirmative action to redress the disadvantages in employment experiences by designated groups (black people, women and people with disabilities).

Conclusions and recommendations

The aim of the study was to investigate the determinants of youth unemployment in Vhembe district of Limpopo province South Africa and suggest way forward for mitigating the joblessness challenge. The study,

essentially a supply side (of the labor market) one, used binary logistic regression model to examine the relationship between age, gender, marital status, race, education, geographical location, work experience, training and youth unemployment. It was hypothesized that these factors exert a strong impact on youth unemployment in the economy of Vhembe district over the period up to 2013. The results showed that two out of eight explanatory variables tested were significant in explaining youth unemployment; training and work experience were found to have major influence on youth unemployment. The results showed that having received some training and having some experience are associated with reduced odds of being unemployed. Controlling for the level of training, the odds of a youth without experience being unemployed are about (0.103) times more likely to be unemployed, as compared to a youth with experience. With regard to training or skills, the sample odds of a trained youth being unemployed were 0.604 times lower than those of an untrained youth. This means that a youth who had some training was less likely to be unemployed compared to a youth without training. Lack of work experience and training or skills are the key factors for youth unemployment in Vhembe district of Limpopo province. Based on these findings, the recommendations are that the South African government must strengthen the laws and policies which will enable the youth to acquire work experience and more training. Thus, instead of government and private sectors offering internships to the youths for twelve months or less, this period should be increased to at least twenty four months, as many companies require three years' experience when recruiting. In addition, those offered internships should do career-specific training.

References

1. Altman, M. and Potgieter-Gqubule (2009). *The State of Youth: Labour Market Status and Policy Challenge*, Centre for Poverty, Employment and Growth, Human Sciences Research Council, Pretoria.
2. Bentolila, S.J., Juan, D. and Jimeno, J.F. (2011). *Reforming an Insider-Outsider Labour Market: The Spanish Experience* IZA, Discussion Paper No. 6186, 53072, Bonn, Germany.
3. Bernstein, A. (2008). *Youth unemployment interventions neither attacking root causes nor going to scale*, Centre for Development and Enterprise, Johannesburg.
4. Bhat, C.R. (2000). Flexible model structures for discrete choice analysis. In D.A. Hensher and K.J. Button (eds), *Hand Book of Transport Modelling*, Elsevier Science, Amsterdam.
5. Bhorat, H. (2006). Youth employment and education in South Africa. Cape Town, Harold Wolpe Memorial Trust, February 2.
6. Byrne, D. and Strobl (2001). *Defining unemployment in developing countries: The case of Trinidad and Tobago*, Credit Research paper No.01/09, Center for Research in Economic development and International Trade, University of Nottingham, Nottingham.
7. Dale, B.B. (2014). Unemployment Experience of Youth in Addis Ababa, Master of Arts in Development Studies thesis. International Institute of Social Studies, Ethiopia.
8. Dickens, W.T. and Lang, K. (1995). Analysis of the Nature of Unemployment in Sri Lanka, *The Journal of Development Studies*, 31(4), pp. 620-636.
9. Du Toit, R. (2003). *Unemployed youth in South Africa: The distressed generation?* Paper presented at the Minnesota International Counseling Institute (MICI), 27 July-1 August 2003.
10. Eastwood, R., Kirsten, J. and Lipton, M. (2006). Can land redistribution help reduce rural dependency in South Africa? Brighton, Institute of Development Studies.

11. Echebiri, R.N. (2001). *Youth Unemployment and Job Perceptions among Youth in Rural Southeastern Nigeria*. Paper presented at the 2001 conference of Agricultural Society of Nigeria.
12. Elhorst, J.P. (2003). The Mystery of regional unemployment differentials; Theoretical and empirical explanations, *Journal of Economic Surveys*, 17, pp. 709-748.
13. Fawcett, C. (2002). *Latin American Youth in Transition: A Policy Paper on Youth Unemployment in Latin America and the Caribbean*. Inter-American Development Bank. Sustainable Development Department, Social Development Division, Labor Markets Policy Briefs Series, America [Online]. Available at: http://www.youthpolicy.org/library/wpcontent/uploads/library/2002_Latin_American_Youth_Transition_Policy_Paper_Youth_Unemployment_Eng.pdf. Accessed on 12 June 2014.
14. Gebere, A. (2011). Demographic and Socio-economic determinants of youth unemployment in Debre Birhan Town, North Showa Administrative zone, Ahhara National Regional State. Masters in Population Studies Thesis, Addis Ababa University.
15. Gebeyaw, T. (2011). Socio-Demographic Determinants of Urban Unemployment: The Case of Addis Ababa, *Ethiopian Journal of Development Research*, 33(2), pp. 79-125.
16. Goodwin, N.R., Nelson, J.A., Ackerman, F. and Weisskopf, T. (2006). *Theories of unemployment* [Online]. Available at: <http://www.eoearth.org/article/Theories-of-unemploymentssami>. Accessed on 26 April 2014.
17. ILO. (2010). *Global Employment Trends for Youth: A generation at risk*, International Labor Office Geneva, Switzerland.
18. ILO. (2014). *Global Employment Trends for Youth*. International Labor Office – Geneva, Switzerland.
19. Kabaklarli, E., Hazeler, P. and Buhus, A. (2011). *Economic Determinants of Turkish youth unemployment problem: Cointegration Analysis*, Proceedings of the International Conference on Applied Economics, pp. 267-272.
20. Keynes, J.M. (1936). *General Theory of Employment, Interest and Money*, Macmillan Cambridge University Press.
21. Kiiru, J.M., Onsomu, E. and Wamalwa, F. (2003). Does Education and Training matter for youth employment? *Journal of Emerging Issues in Economics, Finance and Banking*, vol. 1 No. 2, pp. 128-149.
22. Kyei, K.A. and Gyekye, K.B. (2011) Determinants of Unemployment in Limpopo Province of South Africa: An Exploratory Study, *Journal of Emerging Trends in Economics and Management Sciences (JETEMS)*, 2(1), pp. 54-61.
23. Lam, D., M. Leibbrandt and Mlatsheni, C. (2008). *Education and Youth Unemployment in South Africa*, University of Cape Town, Southern Africa Labor and Development Research Unit.
24. Layard, R. and Nickel, S. (1991). *Unemployment in the OECD Countries*, Economics Series Working Paper 99130, University of Oxford, Department of Economics.
25. Lindley, J. (2005). Explaining Ethic Unemployment and Activity Rates: Evidence from the QLFS in the 1990s and 2000s, *Bulletin of Economic Research*, 57(2), pp. 185-203.
26. Mahlwele, C. (2009). Factors Associated with Women Unemployment in South Africa. Makerere University, Statistics South Africa.
27. Malik, K. (2014). Human Development Report, Sustaining Progress: Reducing vulnerabilities and Building Resilience. United National Development Program.
28. Msigwa, R. and Kipeshu, E.F. (2013). Determinants of youth unemployment in developing countries: Evidence from Tanzania, *Journal of Economics and study sustainable development*, 4 (14).
29. Nematili, N.P. (2006). An investigation of Unemployment at Tshiheni Village: Limpopo Province. Master of Development thesis, University of Limpopo, South Africa.
30. Osberg, L., Apostle, R. and Clairmont, D. (1986). The Incidence and Duration of Individual Unemployment: Supply Side or Demand Side, *Cambridge Journal of Economics*, 10, pp. 13-33.
31. Pandey, A.P. (2005). The new employment guarantees scheme - a radical deal for India's poor.
32. Qayyum, W. (2007). Causes of Youth Unemployment, *The Pakistan Development Review*, 46(4/2), pp. 611-621.
33. Smith, J.M. (2011). Connecting Young South Africans to opportunity Literature Review and strategy, The DG Murray Trust (DGMT).
34. Statistics South Africa (2011). Census. Pretoria.
35. StatsSA Labour Force Survey: Statistics South Africa. Statistical release Labour force survey 2013, 2015. Available at: <http://www.statssa.gov.za/>
36. Yarima, Y.A. (2014). Socio-Economic effects of Unemployment among the Youth in Nigeria, *Journal of Contemporary Issues in Business Research*, 3(5), pp. 240-249.
37. Zinhunwe, C. (2012). *The Youth and Unemployment in Zimbabwe*. Paper Presented at the National Conference with the theme "Building a Future with Decent Work for Young People held at Rainbow Towers in Harare" 29 March 2012.