CHARACTERISATION OF TIME-RELATED UNDEREMPLOYMENT IN A SOUTH AFRICAN MUNICIPALITY: A CASE OF BUSHBUCKRIDGE, MPUMALANGA PROVINCE

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─**Abstract** ─

Labour market is often characterised by an imbalance between demand and supply that sometime is a result of the available labour resources not being fully utilised. Labour underutilisation is known as underemployment. In South Africa, academic debates and analysis about underemployment are largely absent and workers in such positions remain under-researched. Literature review indicates three specific categories of underemployment namely time-related, skill-related and income-based. This paper analyses the demographic characteristics of time-related underemployment using descriptive and logistic regression. The empirical evidence portion of the paper is based on data from a survey "War on Poverty Programme" conducted by the provincial department of Social Development in Mpumalanga. The study is based on a sample of 21668 individuals from targeted prioritised wards in Bushbuckridge Municipality, which is rural. This paper reveals that females are more likely to be underemployed comparing to males. It also indicates that older people are less likely to be underemployed compared to younger people. Furthermore, the study results confirmed that the more educated one gets the less likely to be underemployed. The study discusses the socio-economic policy implications of the findings and suggestions for future research are made.

Key Words: *Time-related underemployment, labour underutilisation, employment, labour market, South Africa*

JEL Classification: J2, J3, Q1, Q4

1. INTRODUCTION

Labour market is like any other markets (eg. goods or services) as it consists of demand and supply sides. This means that households take decisions to supply hours of work to the firms which demand them. Hussmanns (2007) posits that on one hand, labour supply consists of labour force or an economically active population which has two components: those who are employed and those who are unemployed. On the other hand the labour demand also has two components which are job filled and job vacancies. Conversely, many labour economists have demonstrated that the labour markets do not behave like the market for goods and services (Wilkins & Wooden, 2011:13). The imbalance between supply and demand are often found in many labour markets due to the labour resources not being fully utilised and these imbalances are most of time persistent (Wilkins & Wooden, 2011:13).

In developing countries, the employment status is one of the key factors that indicates the poverty level. Hence labour markets play a vital role in determining socio-economic progress. In other words, having a decent, well-paid and secure job is one important measure of a sustainable path that increases income and consumption levels. Cazes and Verick (2013:2) state that "the reality in the formal economy of most developing countries is that the labour market fails to create the jobs needed to help individuals and their families prosper. Rather, the labour markets tend to be characterized by the persistence of informality in urban areas, the continuing share of workers in subsistence agriculture, low pay and poor working conditions, along with the disparities women, youth and other specific segments of society face." In addition, there is a big number of temporary and part-time workers who are unable to obtain full-time contracts. However, it should also be noted that labour market imbalances are not a special case of developing countries as numerous research has been done in developed countries such as Britain, USA and Norway to mention a few where part-time and temporary work is linked with underemployment (Rogers, 2001; Cam, 2012 and Kjeldstad & Nymoen, 2012).

According to Wilkins and Wooden (2011:13), individuals who work part-time are not regarded as unemployed. In most cases they do work part-time because of economic reasons such as unfavourable business conditions or recession. Other economic reasons people do work part-time could be that they can't find full time employment meaning their available working hours are reduced. Moreover,

underemployment could also be caused by disequilibrium in the case where supply is greater than demand, retrenchment or layoffs and technological changes. Therefore, underemployed persons do not form part of the formula used to calculate the unemployment rate which is a measurement of human capital not being fully utilised. Hence, one can argue that the rate of unemployment is not a perfect measure of the labour underutilisation because it does not show how many part-time workers are seeking for full-time employment (Parkin et al, 2013). Nevertheless part-time workers are like those who are unemployed because they are unable to work the number of hours they would like to work. However, one cannot ignore that there are other people who choose part-time, temporary or casual basis employment as secondary job and others may do it because they want to complete their studies or even for personal reasons. The South African labour force comprises approximately of 15.5 million employed persons and 5.5 unemployed persons. Among those who are employed, around 602 000 persons are underemployed (STATSSA, 2015). In South Africa, labour market rates vary by province. In 2008, Mpumalanga which this paper focuses on, was one of six the provinces in South Africa whereby many residents were more likely to be underemployed (Beukes, *et al*, 2016:14). Therefore, understanding underemployment in South Africa at various demographic levels such as age, gender, race, education attainment and industry of work can inform the country's leaders and policymakers to plan programs and come up with interventions aimed at empowering more of its labour force which is dominated by young people who are the economic engines. Understanding underemployment can also be a tool to improve citizens' overall well-being through good related labour policies. The purpose of this article is to examine and analyse demographic characteristics of time-related underemployed individuals in the Bushbuckridge Municipality, Mpumalanga Province. The paper commences by providing a rigorous conceptualisation of underemployment. Thereafter, the paper provides the latest empirical literature review. The paper continues with the method followed by the results analysis section. Lastly, it ends with concluding remarks, and makes suggestions and recommendations based on the findings.

2. DEFINITION AND CONCEPTUAL FRAMEWORK

It is very important to define and clarify the related concepts before one examines characteristics and determinants of underemployment. The definition and measurement of underemployment are not new in labour economics. During the ILO international conference of 1966 two resolutions regarding measurement and

analysis of underutilisation of labour and underemployment were adopted and were revised in the 1982 conference (Laurie, 1997). For Beukes *et al.* (2016) underemployment could have different definitions to different people. Anderson and Winefield (2011:165) report three ways that underemployment can be defined as: first as financial loss when wage is below poverty level (Clogg, Sullivan & Mutchler, 1986); second as overqualification or underutilisation of skill and/or experience for the current employment (O'Brien, 1986 and Johnson & Johnson, 2000). Third as workers' own perceptions of whether or not they are underemployed (Borgen, Amundson & Harder, 1988; Glyde, 1977; Jensen & Slack, 2003 and Beukes et al., 2016).

According to Maynard and Feldman (2011:1) underemployment is defined as a situation in which a worker is employed in a job which is substandard relative to his or her goals and expectations. Wilkins (2006:371) defines underemployment as a representation of excess labour supply of employed persons which arise only when an employed person is available for more hours of work in order to increase his or her wage and salary income. Furthermore, he argues that both full-time and part-time employed persons could be underemployed. The only difference is that underemployment is usually conceived as excess labour supply by those who work few hours than full-time hours. However, one can argue that underemployed persons are not necessarily unemployed.

Theoretically, a perfect labour market is characterised by competitive workers and firms. Boeri and van Ours (2013:129) argue that a person will choose hours she wants to work based on hourly wage rate, her preference for leisure, income and home production. This is different from reality because the choice of working hours is often restricted to a limited set, in most cases to full-time and part-time work but not wage. This means that the real world labour markets are imperfect. Many potential workers are forced to stay out of the labour market due to labour mobility across jobs which give the employer a monopsonistic power to set hours of work. This reduces the size of the labour market and creates hidden unemployment (Boeri & van Ours, 2013:133). Hidden unemployment is different from being unemployed and underemployed by the fact that a person is outside the labour force but would prefer to be employed. Maynard and Feldman (2011:15) show an expanded conceptual framework for the labour underutilisation which include underemployment, unemployment and hidden unemployment. The difference between underemployment and unemployment is that for the former at least some hours are being worked and paid for while the latter one the person

would like to work and able to work but no job can be found meaning that the working hours are completely not utilised.

3. REVIEW OF SOME PAST EMPIRICAL STUDIES ABOUT UNDEREMPLOYMENT IN SOUTH AFRICA

While issues around unemployment are well documented in the labour economics literature, underemployment is not yet established. In South Africa, limited research on underemployment has been reported. By the time of writing, only four local studies have been done. However this paper acknowledges that theoretical and empirical literature on underemployment are enormous. These include the ones which elaborate on definition, measurements, predictors and consequences of underemployment. Therefore, a single article cannot exhaust such a vast literature and is practically not feasible. Hence this paper presents and reviews some of the latest empirical literature on underemployment in South Africa.

At the time of writing this paper only four articles were done about underemployment in South Africa. The first paper on underemployment was conducted by Yu (2009). The paper titled "the comparability of Labour Force Survey (LFS) and Quarterly Labour Force Survey (QLFS)" published in Stellenbosch Economic Working Papers: 08/09; reports some discrepancies in questionnaire design, sampling method, derivation of new variables such as the underemployment status, a new methodology to capture the formal/informal status of the employed, as well as the drastic changes in methodology to capture labour market status." Critically Yu (2009) reveals that there are many uncertainties about how underemployment status is estimated by Statistics South Africa.

Another study done by Schoeman, Botha and Blaauw (2010) is on labour conflict and the persistence of macro underemployment in South Africa. Using cointegration analysis, the variables used are capital/output ratios; compensation for employees; gross value added; interest rates; inflation rates and data on strikes in South Africa. The results indicate that due to strikes and bad labour relations employers are choosing capital-intensive production leading to less labour demand and this rises a serious concern as reversing labour replacement by capital seems to be impossible (Schoeman, et al., 2010: 286).

The third is unpublished paper about "the determinants of time-related underemployment in South Africa" by Mathebula (2013). The article uses categorical covariates such as age, gender, population group, field of study,

highest completed level of education, marital status, and province, contract duration, contract type, sector, occupation, and industry as explanatory variables of underemployment in South Africa. All are found to be statistically significant at the univariate case. Mathebula (2013) reveals that time-related underemployment is determined by Gender, contract type, Geo-type, education, industry and sector. In addition, those with tertiary education qualification are unlikely to be time-related underemployed; while women are likely to be more underemployed compared to men.

The recent and fourth detailed paper about underemployment in South Africa is by Beukes, *et al.* (2016). The aim of their study was to examine the labour market segmentation after taking underemployment into consideration. Using Probit regression, with gender, race and age, years of work experience, geographical location (province), industry categories, whether employed in the public or private sector, formal or informal sector, or as employee or self-employed/employer being explanatory variables of being underemployed or not. They distinguished the time-related and skill-related underemployment. The results indicates that Indians are less likely to be underemployed while blacks and coloureds are more likely to be underemployed all compared to whites. In terms of age, they revealed that being a middle-aged worker there is high probability of being underemployed. Concerning South African provinces, residents of some provinces do have the more likelihood of being underemployed compared to others. For instance workers residing in Mpumalanga and Kwa-Zulu Natal are more likely to be underemployed while those who reside in Limpopo and Gauteng are less likely to be underemployed all compared to those of the Western Cape Province (Beukes, et al., 2016).

4. METHODS

The data used in this paper is from a survey conducted between 2012 and 2014 by the Provincial Department of Social Development. The survey was about intensification and expansion of a profiling process that has started in 2009 with the war on poverty programme. It only targeted prioritised wards in the Bushbuckridge Municipality, in the Mpumalanga Province. The aim of collecting the information was to ensure that poor and vulnerable individuals are provided with the necessary support. The paper uses descriptive analysis including cross-tabulation for all possible demographic characteristics of being underemployed. After this is done, the paper continues with logistic regression (Logit) with

individuals being underemployed as dependent variables. The explanatory variables are gender, age group, marital status and highest education level. It measures the relationship between categorical dependent variable and its determinants. The Logit regression model can be explained through the following equation:

$$\text{Logit (P)} = \text{Log} \left(\frac{P}{1-P}\right) \quad \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots(1)$$

The term on the right side represents the odd of an event occurring. In the case of this paper this would be the odd of being underemployed or not. Theoretically, logit regression is as follows:

$$P_i = \Pr(Y = 1 \mid X = x_i \quad \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots(2)$$

Equation 2 can be written as follows:

$$\log \left(\frac{P_i}{1-P_i}\right) = \text{logit}(P_i) = \beta_0 + \beta_1 x_i \quad \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots(3)$$

Where P_i stands for probabilities of either being underemployed or not and x are the various explanatory variables that predict the probability of whether the individual is underemployed or not. Let Pi denotes the probability that the ith individual would be underemployed and the distribution depends on the vector of predictors X, so that

$$P_i(X) = \frac{e^{\beta x}}{1+e^{\beta x}} \quad \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots(4)$$

Where β is a row vector. The logit function to be estimated is then written as

$$L_i = \ln \frac{P_i}{1-P_i} = \sum_j^k = \beta_1 + \beta_2 X_{ij} + \mu_i \quad \dots\dots\dots\dots\dots\dots\dots\dots\dots(5)$$

L_i stands for the values of the regressand or Logit, ln is the natural log of the odds in the favour of an individual being underemployed, whereas βj is the measure of change in the logarithm of the odds of the probability of an individual being underemployed or not. Therefore, if individual is time-related underemployed $L_i = \ln \left(\frac{1}{0}\right)$ and if not time-related underemployed $L_i = \ln(0/1)$.

5. DESCRIPTIVE ANALYSIS

A total of 21668 individuals participated in the survey. In terms of gender the sample is made of 10114 men (46.7%) and 11553 of women (53.3%). In terms of

age group, respondents are divided into 6 groups in which 4% is made by 15-19 years old; 28.2% is for those who are 20-29 age group; 31.2% for age group of 30-39. While 20.8%, 10.7% and 5.1% were for those who for under age group of 40-49, 50-59 and 60-65 respectively. The majority of participants are single (56.5%) while those who are married are 15% and 19.5% are those who are Living together (Cohabitating). Divorced consists of 0.9% while those who are separated is 2.9% and 5.2% is for widow/widower. Regarding the highest education level attended, 12.4% of the respondents do not have formal education. The respondents with primary school were 15.4%, and those who did attend high school but did not finish were 35.6%. Those with secondary school including those with NTC were 32.6%. Respondents with post high school certificate or/and diploma were 2.3%, while those with national diploma or bachelor degree were 0.3% and those with post graduate being 1.3%. Post graduate qualification include post graduate diploma Honours, masters and Doctorate. In terms of type of job, majority (61.8%) were those who are temporary or part-time employed, followed by those who were on contract (25.1%). Other employment category was casual, self-employed and volunteers made by 4.5%, 7% and 1.7% respectively. One can argue that the relationship between gender and underemployment varies from country to country. The results indicate that in the Bushbuckridge municipality 41.6 % of those who are time-related underemployed are male and 58.4% are female. Hence females are likely to be time-related underemployed proportionally more than males. This is also confirmed by a 52.5% of the males and 47.5% of females saying no to the question of being underemployed.

Table 1: Underemployment and age group

			15-19	20-29	30-39	40-49	50-59	60-65	Total
Underemployment status	**No**	Count	111	2834	3739	2303	909	190	10086
		% within underemployment status	1.1%	28.1%	37.1%	22.8%	9.0%	1.9%	**100%**
		Within Age group	12.7%	46.3%	55.3%	51.2%	39.2%	17.3%	46.6%
	Yes	Count	764	3281	3019	2198	1410	909	11581
		% within underemployment status	**6.6%**	**28.3%**	**26.1%**	**19.0%**	**12.2%**	**7.8**	**100%**
		Within age group	**87.3%**	**53.7%**	**44.7%**	**48.8%**	**60.8%**	**82.7%**	53.4%

Source: Author's own calculation

Table 1 indicates that approximately 87.3% of those who are in between 15 and 19 years, 53.7% of those who are 20 to 29 years, 44.7% of 30 to 39 years, 48.8% of those who are 40 to 49 years old, 60.8% of those who are 50 to 59 years old and 82.7% of those who are 60 to 65 years old are underemployed. The table continues showing that the age group with highest percentage (28.3%) of people who are time-related underemployed is 20-29. 30-39 age group lies in second spot (26.1%) followed by 40-49 age group (19%), 50-59 age group (12.2%), 60-65 age group (7.8%) and 15-19 age group (6.6%) in that order.

On one side the results show that 54.3% of the individuals who are time-related underemployed in the Bushbuckridge Municipality in Mpumalanga province are single. About 19%, 17.2%, 6.7%, 1.8% and 1.1% of time-related underemployed individuals are married, living together (cohabitating), widow/widowers, separated and divorced respectively. Conversely, the table further indicates that 51.3% of single individuals, 67.7% of married individuals, 47.1% of those who live together (cohabitation), 33% of those who are separated, 66.5% of those who are divorced and 68.5% of those who are widow/widowers are confirmed to be time-related underemployed. Findings show the distribution of those individuals who are time-related underemployed according to their highest education levels.

Approximately 15.6% of time-related underemployed are individuals with no formal education and 67.6% of them are underemployed. About 17.6% of time-related underemployed respondents are those who have completed primary school whilst 60.9% of them are underemployed. It is illustrated that 33.9% did not complete high school and 50.8% of them confirmed to be underemployed. About 28.4% of underemployment in Bushbuckridge Municipality in Mpumalanga province is made by those with high school completed and 46.5% of them are time-related underemployment. About 2.4%, 0.4% and 1.8% of underemployment is made by those individuals with post high school certificate or/and diploma, national diploma or Bachelor's degree and postgraduate qualification holders respectively. In addition, 55.8% of those with post high school certificate or/diploma (this are people who completed their matric but did not enrol at any university are time-related underemployed. Approximately 63.6% of those who hold a national diploma or Bachelor degree are time-related underemployed. Lastly, among those with postgraduate qualification 70% of them are time-related underemployed. This high percentage of highly qualified individuals who are underemployed shows serious concerns. One can attribute this to the lack of job opportunities in the area. Therefore, economic prospects in the Bushbuckridge

Municipality requires more sustainable job creation need to be increased and there is a big window for opportunity looking at its geographical location.

Table 2: Underemployment and Highest education level

Underemployment status			No	Yes	Total
Highest education level	No formal School	Count	867	1811	**2678**
		% within Highest education level	32.4%	**67.6%**	**100%**
		% within underemployment status	8.6%	**15.6%**	12.4%
		% of Total	4%	8.4%	12.4%
	Primary completed	Count	1306	2033	**3339**
		% within Highest education level	39.1%	**60.9%**	**100%**
		% within underemployment status	12.9%	**17.6%**	15.4%
		% of Total	6%	9.4%	15.4%

Underemployment status			No	Yes	Total
Highest education level	Did not complete High School	Count	3801	3921	**7722**
		% within Highest education level	49.2%	**50.8%**	**100%**
		% within underemployment status	37.7%	**33.9%**	35.6%
		% of Total	17.5%	18.1%	35.6%
	High School completed	Count	3778	3290	**7068**
		% within Highest education level	53.5%	**46.5%**	**100%**
		% within underemployment status	37.5%	**28.4%**	32.6%
		% of Total	17.4%	15.2%	32.6%
	Post high school cert. or diploma	Count	223	281	**504**
		% within Highest education level	44.2%	**55.8%**	**100%**
		% within underemployment status	2.2%	**2.4%**	2.3%
		% of Total	1%	1.3%	2.3%
	National Diploma or Bachelor's Degree	Count	24	42	**66**
		% within Highest education level	36.4%	**63.6%**	**100%**
		% within underemployment status	0.2%	**0.4%**	0.3%
		% of Total	0.1%	0.2%	0.3%
	Post graduate qualification	Count	87	203	**290**
		% within Highest education level	30%	**70.0%**	**100%**
		% within underemployment status	**0.9%**	**1.8%**	1.3%
		% of Total	0.4%	0.9%	1.3%

Source: Author's own calculation

4. LOGISTIC REGRESSION RESULTS

When one estimates Logit regression with categorical variables, one of them has been chosen to be regarded as a comparator category. In this paper, the following are comparators categories: 15-20 years presented, single for marital status, no formal education for highest education level. From the results in table 3, the estimated coefficient of gender is positive and statistically significant. This implies that the probability of a female being underemployed is more than that of a male. This is in line with the results on same topic conducted in different countries such as Australia, USA and Norway as stated by Wooden et al. (2009), Reynolds and Aletraris (2010), and Kjeldstad and Nymoen (2012) respectively. Furthermore, on a similar topic in the United Kingdom, Cam (2012) found that underemployment is slightly higher among women compared to men, this occurs with a varying degree of influence across the demographic and considered work-related benchmarks. Furthermore, Gallup (2013) confirmed that that the underemployment gender discrepancy continues to persist in favour of men, meaning women are underemployed more than men. This suggests that in case of job availability constraint, women will struggle more than men to obtain those jobs. This can also be caused by the fact that women obtain lower education qualification compared to men (Matthebula, 2013). Therefore this paper empirically provide evidence of higher levels of underemployment among women than men.

The estimated coefficients for 30-39, 40-49, 50-59 and 60-65 years old age groups are all negative and statistically significant. Therefore, it can be concluded that individuals who are in these age categories are less likely to be underemployed than those who are in the comparator age group (15-19 years old). This is similar with Northern Ireland Statistics and Research Agency (2015) which found that younger workers were more likely to be underemployed compared to old ones. It should be noted that this comparison starts with the age group of 30-39 years. When it comes to the age group of 20-29 years old, its coefficient is positive and also statistically significant. This implies that individuals who are in this age group (20-29) are more likely to be underemployed compared to the 15-19 ages. This is in line with the Nigerian National Bureau of statistics (2015) where youth underemployment increased in second it rose 33.8% from 30.6% in the first quarter. Thus the issue of underemployment does decrease with age.

Regarding marital status, the results in table 3 show that the coefficients of variables indicating married, separated and divorced are negative and statistically significant. This implies that the probability of being underemployed for those individuals who are married, separated and divorced is less than for those who are single. One may argue that this is due to the fact that individuals who are single may probably have more time they wish to use to work while others due to family responsibilities do not wish to work more. In addition, for those who are married it might be caused by the fact that their partners are full time employed and the little time they use to work might be enough. The estimated coefficients of those who are living together (cohabitating) and those who are widow/widowers are both positive and statistically significant. Hence, their probability of being underemployed is more likely than those who are single. This might imply that once one is a widow or widower, s/he has more responsibilities which come with a wish to want to work more. In a similar way those who are cohabitating, sometime one of the partners may not fulfil his or her responsibilities which will require the one to want to work hard and more hours. Results show that the estimated coefficients regarding the highest education level are all negative and statistically significant. implying that those with completed primary school, secondary school not completed, high school completed, post high school certificate or/and diploma, National diploma and bachelor degree and postgraduate qualification are less underemployed than those with no formal education. In other words, education decreases the chances of being time-related underemployed. This is similar to Mathebula (2013) who found that "people with primary completed and lower education are likely to be underemployed as compared to those with not completed secondary and above. Holding other educational status constant, for one additional person with a tertiary qualification there will be 0.33 decreases of underemployed persons." However this might be different from skill-related and income related underemployment. Hence, this paper brings desire of doing more research on underemployment in South Africa and in the Mpumalanga province in particular especially for those who are university graduates.

Table 3: Results from Binary Logistic regression

	B	S.E.	Wald	df	Sig.
Gender	.445	.029	231.262	1	.000
Age group			786.845	5	.000
Age group (20-29)	1.072	.136	61.947	1	.000

Age group (30-39)	-.688	.093	54.547	1	.000
Age group (40-49)	-1.185	.091	170.480	1	.000
Age group (50-59)	-1.266	.090	198.658	1	.000
Age group (60-65)	-1.007	.093	117.519	1	.000
Marital Status			429.876	5	.000
Marital Status (Married)	-.371	.075	24.713	1	.000
Marital Status (Living together)	.412	.079	27.203	1	.000
Marital Status (separated)	-.350	.078	20.378	1	.000
Marital Status (Divorced)	-1.121	.111	101.405	1	.000
Marital Status (widow/widower)	.196	.170	1.324	1	.250
Highest education level			267.191	6	.000
Primary completed	-.211	.140	2.278	1	.131
High school not completed	-.423	.137	9.485	1	.002
High school completed	-.815	.134	36.962	1	.000
Post high school cert. or diploma	-.939	.134	48.905	1	.000
National Diploma or Bachelor Degree	-.653	.161	16.509	1	.000
Post graduate qualification	-.374	.294	1.615	1	.204
Constant	1.781	.168	112.240	1	.000

Source: Author's own calculation

5. CONCLUDING REMARKS AND DIRECTIONS FOR FUTURE RESEARCH

Underemployment or hidden unemployment is a serious constraint to economic progress at macro and individual level. Similarly to unemployment, effects of underemployment are also distressing. Using a descriptive and logit model, the main objective of this study was to conduct an analysis of underemployment in the Bushbuckridge municipality, Mpumalanga Province, South Africa. Empirically this paper reveals that females are more likely to be underemployed than males. The results also reveal that the higher level of education, the more unlikely individual will be underemployed. Furthermore, old people (>29 years old) are more likely to be less underemployed compared to young people. The evidence has provided a number of findings that are important to policymakers and all stakeholders in creating more sustainable jobs.

The results of this paper call for a number of recommendations. On the basis of the empirical findings established by this paper, three main recommendations are proposed. Firstly, because old people are less underemployed compared to young people which probably is due to lack of experience. As a result, this paper recommends that young people should be encouraged to do voluntary work to be

employable. Secondly, the more educated an individual is less likely to thus be underemployed; hence this paper recommends that people should be assisted to enrol for courses or other forms of training and advancement to improve their future employability. The municipality should come up with policies which will improve peoples' lives and to achieve these resources and facilities need to be in place. Thirdly, in partnership with other stakeholders such as Kruger National Park, the Bushbuckridge Municipality should use its geographical location and come up with economic boost strategies such as increase and promoting tourism activities, more agriculture activities and trade.

The following suggestions can be used for future research:

1. A better questionnaire should be designed for collecting more accurate information on regular basis for a database on underemployment. This should include both employees and employers.
2. An empirical research on psychological, social and economic effects of underemployment in South Africa and Mpumalanga province in particular.
3. An empirical research targeting young and recent graduates should be provided as this will help the South African education system to improve by providing what is needed on the labour market in avoidance of underemployment.
4. A study addressing the relationship between underemployment and productivity and how government and other stakeholders can help underemployed individuals to reduce consequences of their status.

REFERENCES

Anderson, S. & Winefield, A. H. (2011). The Impact of Underemployment on Psychological Health, Physical Health, and Work Attitude. In Maynard, D. C. & Feldman, D. C (Eds.), Underemployment: Psychological, Economic and Social Challenges. New York: Springer.

Barker, F. (2007). The South African Labour Market: Theory and Practice. 5th edition. Pretoria: Van Schaik Publishers.

Beukes, R., Fransman, T., Murozvi, S. & Yu, D. (2016). Underemployment in South Africa. *ERSA working paper 575*.

Blanden, J., & Machin, S. (2003). Cross-Generation Correlations of Union Status for Young People in Britain. London, Centre for Economic Performance.

Boeri, T. & Van Ours, J. (2013). The Economics of Imperfect Labour Markets. 2nd Edition, Oxford, Princeton University Press.

Borgen, W. A., Amundson, N. E. & Harder, G. (1988). The Experience of Underemployment. *Journal of employment counselling,* 25(4), 149-159.

Cam, S. (2012). Involuntary Part-time work in Britain: Evidence from Labour Forcer Survey. *Industrial Relations Journal,* 43(3), 242-260.

Canada 2020 (2014). Unemployed and Underemployed Youth: A Challenge to Canada Achieving its Full Economic Potential. A Background Paper, June.

Canadian Labour Congress (2014). Underemployment is Canada's Real Labour Market Challenge: A Profile of Canada's Labour Market. Research Note, March.

Cazes, S. & Verick, S. (2013). Introduction and overview. In Cazes, S. & Verick, S. (Eds.), *Perspectives on Labour economics for Development*. Geneva, International Labour Organisation (ILO).

Clogg, C. C., Sullivan,T .A. and Mutchler, J. E. (1986). Measuring underemployment and inequality in the work force. Social Indicators Research, 18(4), 375—393.

Domfe, G., Osei, R. D. and Ackah, C. (2013). Determinants of Types of Underemployment in the MiDA Intervention Zones of Ghana. *Developing Country Studies,* 3(12), 33-47.

Feldman, D. C. (1996). The nature, antecedents, and consequences of underemployment. *Journal of Management, 22,* 385-407.

Gallup (2013). Underemployment in the MENA Region: Young people in MENA are in need of good jobs. December.

Glyde, G. P. (1977). Under-employment: Definition and Causes. *Journal of Economic Issues, 11(2),* 245-261.

Greenwood, A. M. (1999). International definition and prospects of underemployment statistics. Paper prepared for the "Seminario sobre Subempleo" organized by the Departamento Administrativo Nacional de Estadísticas (DANE) and the Universidad Javeriana, Bogotá, Colombia, 8 to 12 November, 1999. Translated from Spanish. At http://www.ilo.org/wcmsp5, June 2016.

Hussmans, R. (2007). Measurement of Employment, unemployment and underemployment-current international standards and issues in their application, ILO Bureau of Statistics. www.ilo.org/wcmsp5/groups/public/. June 2016.

Johnson, G. J. & Johnson, W. R. (2000). Perceived overqualification, positive and negative affectivity, and satisfaction with work. *Journal of Social Behaviour and Personality,* 15, 157-184.

Jensen, L. & Slack, T. (2003). Under-employment in America: measurement and evidence. *American Journal of community Psychology,* 32(2), 21-31.

Kjeldstad, R. and Nymoen, H. (2012). Underemployment in a gender segregated labour market. *Economic and Industrial Democracy,* 33(2), 207–224.

Laurie, A. (1997). Report I: sixteen International conference of labour and statisticians. At http://www.ilo.org/wcmsp5/groups/public/---dgreports/---stat/documents/meetingdocument/wcms_088362.pdf. At June 2016.

Mathebula, I. (2013). The determinants of time-related underemployment in South Africa. Pretoria: Statistics South Africa.

Maynard, D. C. & Feldman, D. C (2011). Introduction. In Maynard, D. C. & Feldman, D. C (Eds.), *Underemployment: Psychological, Economic and Social Challenges.* New York: Springer.

National Bureau of Statistics (2015). *Unemployment/ under-employment watch.* Lagos, NBS

Northern Ireland Statistics and Research Agency (2015). Underemployment in Northern Ireland: Labour Force Survey. June.

O'Brien, G. E. (1986). *Psychology of work and unemployment.* Chichester, Wiley.

Osborn, D., Cutter, A. & Ullah, F. (2015). *Universal sustainable development goals Understanding the Transformational Challenge for Developed Countries.* Report of a study by stakeholder forum, May.

Parkin, M., Antrobus, G., Baur, P., Bruce-Brand, J., Kohler, M., Neethling, L., Rhodes, B., Saayman, A., Schoer, V., Scholtz, D., Thomson, K. and Van der Merwe, J. (2013). *Economics*: Global and Southern African Perspectives. Cape Town, Pearson.

Reynolds, J. & Aletraris, L. (2010). Mostly Mismatched With a Chance of Settling Tracking Work Hour Mismatches in the United States. *Work and Occupation*, 37(4), 476-511.

Rogers, J. K (2001). There's No Substitute: The Politics of Time Transfer in the teaching Profession. *Working and Occupations,* 28, 64-90.

Schoeman, C.H., Botha, I. and Blaauw, P.F. (2010). Labour conflict and the persistence of macro underemployment in South Africa. *South African Journal of Economic and Management Sciences,* 13(3), 272-292.

STATSSA (2015). *Quarterly Labour Force Survey: quarter 1*. Pretoria.

Tal, B. (2013). Dimensions of Youth Employment in Canada. Toronto, CIBC Economics, June.

Wilkins, R. (2006). Personal and Job Characteristics Associated with Underemployment. Australian Journal of Labour Economics, 9(4), 371 – 393.

Wilkins, R. & Wooden, M. (2011). Economic Approaches to Studying Underemployment. In Maynard, D. C. & Feldman, D. C (Eds.), *Underemployment: Psychological, Economic and Social Challenges.* New York: Springer.

Yu, D. (2009). *The comparability of Labour Force Survey (LFS) and Quarterly Labour Force Survey (QLFS).* Stellenbosch Economic Working Papers 08/09. Stellenbosch: Stellenbosch University.