

An analysis of underemployment amongst young people in South Africa: The case of university graduates

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DECLARATION

I declare that:

“An analysis of underemployment amongst young people in South Africa: The Case of university graduates”

is, to the best of my knowledge and belief, my own work and that all the sources used were properly acknowledged according to academic standards of research by means of completed references. The thesis has not, in part or whole, been submitted for examination at any other higher education institution.

N.P Mncayi

SIGNATURE

June 2020

DATE

DEDICATION

This study is dedicated to my younger sister,

Thenjiwe Jessica Mncayi

Thank you for everything you have done for me, for staying the late nights with me, and most importantly encouraging me when giving up was the only option. May this be proof enough that God's delay is not denial. "...At the right time, I, the LORD, will make it happen." ~ Isaiah 60:22

I love you to the moon and back!

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ABSTRACT

Labour markets around the world are undergoing significant changes which has seen the rate of secure and stable employment decline significantly. South Africa has also not been spared from this wave of change, where besides the country's high unemployment rate, both at national level and among the youth by global standards, non-standard employment such as casual and part-time work has been on the rise. At the same time, higher education has also proven to no longer be a guarantee of employment, let alone secure/stable and full-time employment. Such rising labour market instability has therefore necessitated the exploration of alternative measures of labour underutilisation, over and above the typical measures of unemployment. Hence the primary objective of the study was to analyse underemployment among university graduates in South Africa. The empirical process followed in the study was based on the post-positivism paradigm which necessitated the use of a quantitative research approach which entailed primary data collection through a survey. The overall sample size after data cleaning was 576 in total. The survey data was subject to a three stage analysis. Firstly, descriptive statistics of the frequency distribution for discrete data. Secondly, a binary logistic regression to determine factors that contribute or influence underemployment status. Lastly, an OLS regression model was employed where three different types of regressions were used to analyse the determinants of the three types of underemployment. The regressions were conducted based on the three main perceptions of underemployment status as indicated in the newly-validated scale called the Subjective Underemployment Scale (i.e. underpayment, hours' discrepancy and field).

The results of the study showed that 82.6 percent of the sampled graduates were employed (part-time or full time) and that only 17.4 percent were unemployed. Of those that were unemployed, more than 26 percent had been so for more than a year which is indicative of long-term unemployment. The employment findings by gender showed that female graduates constituted a large share of the employed (61.6%) compared to 38.4 percent male graduates. At the same time and as expected, females assumed a large percentage of the unemployed at 63.3 percent compared to males (36.7%). In terms of underemployment, approximately 45 percent of the participants considered themselves underemployed. Concerning the various categories of underemployment, the study found that 36.4 percent were underemployed by income, which entailed workers whose earnings were 20 percent less than what they earned in their previous job¹ or 20 percent less than the occupational average income for those in their first jobs. Only 5.1 percent of the sampled graduates were time-underemployed, *inter alia*, working less than 35 hours a week. About 58.5 percent considered themselves to be underemployed in terms of skills

¹ The term **job** is used in reference to **employment**. Therefore, in this study, these two terms are used interchangeably.

which was defined as those who perceived themselves to be in jobs where they were overqualified or had the most skills and experience that their counterparts in the same jobs.

South Africa's higher education institutions have a history of being dualistic which can be divided into historically advantaged institutions (HAI - white) and historically disadvantaged institutions (HDI - black). The study found that out of 351 young people who graduated from HAI, 42.7 percent were underemployed while of the 124 that graduated from HDI, 52.9 percent were underemployed. The study found that in terms of the specific age categorisation, 45.6 percent of the underemployed participants are between the ages of 25 and 29, 31.6 percent are in the 15-24 age category while 22.8 percent are in the age category of 30-34 years. In addition, despite the findings reporting that more female participants are employed relative to their male counterparts, the study's findings on gender show that in all the underemployment types, young females are overrepresented, which raises concerns of the kinds of employment they are in. About 56 percent of those that were income-underemployed are females compared to 44 percent males. Also, in terms of skills, 64.6 percent of those that were underemployed by skills are females relative to only 35 percent males. These findings are also mirrored in the time-underemployment status suggesting that typical employment indicators do not provide a true picture of employment or rather kinds of jobs that workers are in. Surprisingly, the study found that out of the total number of underemployed participants, 59.9 percent were White, followed by 35.8 percent Blacks, 3.8 percent Coloured and 0.5 percent Asian/Indians. However, within each race group, the findings still mirror themes to emerge from literature that underemployment is more prevalent among non-white workers.

In terms of the perceptions, the results show that a larger share of the participants seems to be in agreement with the underpayment factor where the perception seems to be that their jobs were not paying them sufficient income, relative to their counterparts. Similar findings were also observed with regards to the status factor where a substantial number of the participants perceived themselves as being in positions that were inferior to their level of skills and abilities they possess. The results, however, did indicate a disagreement among the participants when it comes to perceiving themselves as being underemployed in terms of working hours. Perceptions relating to involuntary temporary employment similarly to the hours' discrepancy factor show that a higher number of graduates did not perceive themselves to be involuntary and temporary employment, suggesting that a higher share is in fact in permanent positions of a full-time nature. In terms of the fifth factor which relates to skills, more than 30 percent of the participants in each scale item strongly disagreed with this factor (68.4%). Last but not least, the perception regarding poverty wage employment showed very small differences between those that identified themselves with this factor (48.3%) and those that did not (51.5%).

The results of the binary logistic regression confirmed what is already in the literature that the younger graduates were more likely to be underemployed compared to their more mature counterparts, that is, those in the 30-34 age category. With regards to marital status, those that were unmarried have a higher likelihood of being underemployed when contrasted with their married counterparts. In terms of geographical location, the regression results found that urban graduates were less vulnerable to underemployment as compared to their counterparts, which in other words imply that rural graduates were more vulnerable to underemployment. Career guidance was also statistically significant in the model where the study found that graduates who received career guidance were less likely to fall in underemployment and that the odds of this was 0.596 higher than participants who did not receive career guidance. Lastly, in regards with race, Blacks and Coloured youth have an increased probability of being underemployed compared to their White and Asian/Indian counterparts.

The second part of the regression analysis entails the use of the OLS model to measure income underemployment, skills underemployment and time underemployment. Pertaining to the first OLS regression on income underemployment, participants who were not married tended to be underpaid which again corresponds with the findings of the logistic regression. Participants who received career guidance perceived themselves as being underemployed due to the income they were receiving at the time of the survey. More findings in terms of age and race show that respondents who were below the age of 24 perceived themselves as underemployed due to the income they were receiving similarly Black youth perceived themselves as being underpaid. The findings of the second OLS regression on skills underemployment showed that again the unmarried graduates were most likely to agree with the perception that they were employed in jobs which were outside their field of studies. In terms of geographical location, the regression analysis found that graduates situated in urban areas tended to agree with the perception that they were underemployed by skills. Lastly, Black graduates relative to white graduates seem to agree with the perception of being underemployed by skills. The third OLS regression found that again, young people in the 15-24 age group are most likely to identify with time underemployment compared to their mature counterparts. In terms of race, Asians/Indians relative to graduates of other races were most likely to be in agreement with perception that they are working less hours than they would like to. From these findings, a model was conceptualised in Figure 7.2 which contributes to a broader understanding of the dynamics present in the South African graduate labour market and may explain the predictors of underemployment among young graduates. Figure 7.3 also provides a framework for reducing graduate underemployment.

Government needs to work with higher education institutions and the private sector to try and better prepare graduates for work. It is crucial to go beyond just getting graduates into employment but ensuring that they are in stable and sustainable employment. The main aim should not just be about reducing youth unemployment numbers through any kinds of jobs but good jobs which utilises an

individual's time and skills while at the same time earning decently. There is also a need for graduates to play their part in their career prospects by ensuring that they also are soft-skills ready, and reduce their unrealistic expectations in their initial entry into the labour market.

Keywords: underemployment, underemployment perceptions, young people, university graduates, South Africa.

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CHAPTER 1

INTRODUCTION AND BACKGROUND

“Underemployment has replaced the role outright joblessness used to play in the labour market, and that the major dynamic of inequality.....today is the divide between those with full-time jobs and workers stuck in the poorly paid gig economy” – Edwards (2018:5).

1.1 BACKGROUND TO THE STUDY

Unemployment amongst young people (i.e. those between 15 and 34) has taken centre stage since the dawn of the 21st century. The focus of research has mainly been on graduate employment and unemployment which has gained unprecedented attention on both national and global development agendas over the past decade (e.g. Bhorat, 2009; Griesel & Parker, 2009; Moleke, 2009; Altbeker & Storme, 2013; Baldry, 2016; ILO (International Labour Organization), 2016; Van Broekhuizen, 2016). Labour market challenges facing young people have their dimensions and confront countries worldwide regardless of their idiosyncrasies in socio-economic development (Coenjaerts *et al.*, 2009:119-120). Underlying the issue are the extensive numbers of the young people entering labour markets each year, the absence of job opportunities in many countries and the education and training received that are not appropriately connected to the job market (Graham, Shier & Eisenstat, 2014:213; Kruger, 2016). Employment growth seems to be directed in jobs for which workers are insufficiently prepared for (World Economic Forum (WEF), 2016:8). Worsening the situation is the fact that stable employment is becoming increasingly difficult to find (ILO, 2015:13).

In particular, aspects of theories such as the theory of career mobility advocate that education furnishes people with human capital, which eventually increase their future income as well as improving their career path (Sicherman & Galor, 1990:169). Even the theory of human capital has reinforced the idea that employment benefits improve with the level of education and training received (Becker, 1964; Krul, 2010:2-3). However, these theories have been subject to criticisms particularly in countries characterised by high rates of unemployment, youth issues and especially graduates who seem to struggle to find employment even after graduation (Jamoussi & Gassab, 2011:1; Van Broekhuizen, 2016:i). For young people, the absence of job opportunities is frequently the main factor discouraging their participation in the labour market (ILO, 2016b:7). More precisely, it is argued by authors and researchers that undergoing a spell of negative employment outcomes after graduation, might have long-term negative impacts on occupational accomplishment and future job finding rates, permanently reducing a young person’s future earning potential (Mosca & Wright, 2011:3; McKee-Ryan & Harvey, 2011:991; Anand, Kothari & Kumar, 2016:2).

In South Africa, the reasons for the increased interest in the labour market prospects of young people, particularly amongst graduates are extensive and as a result form part of the current debates on the post-apartheid labour market and the transformation of the higher education sector (Rogan, Reynolds, du Plessis, Bally & Whitfield, 2015:viii). South Africa has come a long way since the end of its racially discriminative legislature in 1994, however, challenges such as poverty and poor labour market conditions still prevail (Beukes *et al.*, 2016: Statistics South Africa (Stats SA), 2017a:12). For instance, in the fourth quarter of 2019, an estimated 6.7 million people were not in employment despite wanting to work (29.1%) according to the broad unemployment definition, while the expanded unemployment rate stood at 38.7 per cent (Stats SA, 2020a:9). Young people (below 34 years) are, in fact, the most affected amongst all age groups as they constitute a high proportion of individuals experiencing negative employment outcomes. Their unemployment is more than 20 per cent higher than the national average at 63.4 per cent in the first quarter of 2019 (Stats SA, 2019a:6). Discouragement is also another growing factor where, for instance, between 2008 and 2019, the country registered a growing number of discouraged young work-seekers in South Africa which to 2 855 million from 756 thousand (Stats SA, 2020a:19). In the '*2019 World Employment and Social Outlook*', the ILO (2019:29; 33) reports that underemployment and vulnerable employment are highlighted as obstinately high, with Sub-Saharan Africa representing a greater part of the world's vulnerable employment and working poverty (18 of 20 countries with the highest incidences, with three out of four workers in this kind of work). Most young people in the region are forced to accept any form of employment inevitably characterised by low pay and insecurity, as way of avoiding unemployment to sustain their livelihoods (ILO, 2017:3). The challenges that are facing young people including in South Africa, emphasise the helplessness in the labour market and could lead to far-reaching socio-economic consequences such as poverty, putting these young people at an increased probability of falling into poverty and crime, amongst other issues.

Contrary to the general youth, unemployment amongst graduates remains very low in comparison to those with lower educational qualifications (Altbeker & Storme, 2013:1; Van Broekhuizen, 2015; Stats SA, 2020a:12). This is explained by the fact that chances of being unemployed or in vulnerable employment decline with education, which means that, with education, comes more employment opportunities (Filmer *et al.*, 2014:10). University graduates are least likely to be unemployed (Van Broekhuizen & Van Der Berg, 2013; Van Broekhuizen, 2016). A report by Stats SA (2016) on the social profile of the youth between 2009 and 2014 highlights that the share of unemployed graduates remained the same at one per cent. These findings also mirror those of Van Broekhuizen and Van Der Berg (2013) who investigated the status of graduate unemployment in South Africa and found that the broad unemployment rate amongst graduates has been below six per cent, despite South Africa's high broad unemployment rate (more than 37%) (Stats SA, 2017a). These findings are also reiterated by Van Broekhuizen (2016) and Van De Rheede (2012) who found that unemployment amongst university

graduates is very low in relation to overall unemployment rates. Labour force participation seems to increase with the level of education. For example, in the fourth quarter of 2016, graduates had higher participation in the labour market (88.4%) when compared with those with matric (71.5%) and those with less than matric (48.5%) (Stats SA, 2017a). However, some studies (e.g. Moleke 2010; Altbeker & Storme 2013:15; Spaul 2013) contend that not all graduates enjoy this added advantage in the labour market because of particular circumstances that exist in the fact that graduates of certain courses are more probable to experience negative employment outcomes such as lengthier job searches or even unemployment. In other instances, factors such as career guidance come forth, particularly in these work-qualifications mismatches and other forms of labour underutilisation. According to Robertson (2019:2), *“where the choice of career pathway is informed by good guidance, work is more likely to be rewarding, consistent with an individual’s needs and values, and as a result more likely to be sustainable over time”*.

While labour market analysis and all its aspects have undergone vast transformations over the years; there are arguments that employment and unemployment measures have not been adequate in understanding the growing complexities of labour markets (Beukes, Fransman, Murosvi & Yu, 2017:33; Lacmanovic, Buric & Tijanic, 2016:331-332; Wilkins & Wooden, 2011:14). This view is also reiterated by Pisica, Caragea and Vasile (2015:11) who argue that unemployment is not a complete measure of unused labour capacity. Factors such as discouragement and underemployment continue to hinder the effective functioning of labour markets. The main difference between the expanded and strict definition of unemployment is explained by the active job search requirement, where for an individual to be considered unemployed according to the latter definition, active steps much have been taken to find employment in the previous week. The former definition only requires a desire to find employment, even though the individual did not actively look for employment. Likewise, the ILO (2016b:2) also argues that unemployment figures have over the years understated the magnitude of labour market challenges confronting young people since a substantial number of youth are working; however, do not acquire enough to lift themselves out of poverty. *“They may not yet be in a situation of what is known as ‘precarious work’, but they face a near future of more and more insecure, unprotected and low-paid work”* (Quak & van de Vijzel, 2014:1).

At times there are instances where an individual would have been employed but is in a job that is not fulfilling his reservation hours or skills and qualifications. Such a situation is referred to as underemployment, and according to Beukes *et al.* (2016:2) and Maynard and Feldman (2011:1), there has been a lack of thought given to the degree to which jobs use abilities and capabilities of individuals as well as occupying them regarding hours. A focus on employment rather than unemployment as an indicator of labour market performance would give an advantage of being more comprehensive since

“the employment rate covers all people, including the inactive population, in its denominator, other than the unemployment rate which disregards the inactive population altogether” (Eurofound, 2017:4).

Quite a few theories have been connected to underemployment, for example, the theory of career mobility, the human capital theory, relative deprivation theory, and person job-fit theory amongst others. These theories have endeavoured to elucidate the reasons behind underemployment. For instance, as indicated by the person-job fit theory, underemployment emerges as a result of the gap between worker capabilities such as skills and knowledge and the demands of their jobs (McKee-Ryan & Harvey, 2011:963). This, in turn, will cause the worker to be dissatisfied with their jobs and in consequence, be more inclined to quit (Lee, 2005:172). The relative deprivation theory on the other hand contends that underemployment comes about when workers contrast themselves with ideal or perfect work circumstances or even their peers who hold practically identical skills, education, experiences and qualifications (Feldman, Leana & Bolino, 2002:453; Luksyte & Spitzmueller, 2011:35). In other words, the workers feel less satisfied with their current job since it does not match up to where they feel they should be in (i.e. the current job comes shortly). The human capital theory argues that underemployment arises because of the disparity between an individual's human capital and their work or employment prerequisites (Becker, 1964). In line with the analysis of the proposed study, underemployment will be related for example, to the theoretical foundations of a number of theories including human capital, person-job fit and relative deprivation. Thus, this study departs from the perspective that in general, underemployment arises because a person's current job is deemed inferior by some standard and also from a graduate perspective, underemployment is a result of a mismatch between a workers' skills and competencies and their job and its demands.

From a broader perspective, underemployment fundamentally reflects a gap between an individual's longings and his/her surroundings (Maynard & Feldman, 2011:2; Luksyte & Spitzmueller, 2011:38; Allan, Tay & Sterling, 2017:93) particularly their employment. Underemployment is multidimensional and as reasoned by Feldman (1996:385), its scope encompasses being overqualified for a job, being involuntarily employed in a job that is not related to one's field, having more skills and experience than needed, being forced to be non-standard employment which is on a part-time or temporary basis or being in a job which pays less income than last job or relative to one's peers. Specifically, according to Feldman *et al.* (2002:454), underemployment may be skills-related which entails having more education, skills or experience than one's job requires. Skills-related underemployment can be explained by job field underemployment which mirrors an individual employed in a job that is outside his or her formal education and training (Burke, 1998:84). Secondly, time-related can be explained as the desire to work more hours than one is currently working, i.e. involuntarily being in part-time employment though desiring full-time work (Greenwood, 1999:6; ILO, 2010:2) Workers who for the most part work less than 35 hours every week but might want to work more are considered to experience

time-related underemployment (Wilkins, 2007:248). Lastly, underemployment can be income-related where a worker's income is lower than it would otherwise be or essentially inferior to the income earned in the previous job (Acosta-Ballesteros, del Pilar Osorno-del Rosal & Rodríguez-Rodríguez, 2018:29), often referred to as low-pay. Zvonkovic (1988:163-164) initially categorised income underemployment as currently earning 20 per cent less than in the past employment, or than their peers. All this suggests that the underemployed is made up of a distinct group which desires to be completely utilised.

The underutilisation caused by underemployment is a serious concern as it means loss of labour that can never be regained, depreciation of skills, overall decline in job satisfaction and may in some cases lead to poverty by pushing people below the poverty threshold due to relatively lower earnings (Lacmanoviet *al.*, 2016:342-343). *“Unemployed and underemployed youth are less able to contribute effectively to national development and have fewer opportunities to exercise their rights as citizens. They have less to spend as consumers, less to invest as savers and often have no ‘voice’ to bring about change in their lives and communities”* (ILO, 2010:1).

1.2 PROBLEM STATEMENT

The integration of young people into the labour market, their skills and educational development are all critical to the acknowledgement of a thriving, sustainable and fair socio-economic environment (ILO, 2016b:2). High structural unemployment and underemployment amongst young people are identified as serious risks confronting the global economy (WEF, 2016:3). According to ILO estimates, more than 60 per cent of young people in developing countries are underutilised, facing either unemployment or underemployment (ILO, 2015:6). According to Flynn, Mader, Oosterom and Ripoll (2017:9), in worse-off regions of the world, for example, sub-Saharan Africa, underemployment is a greater concern than youth unemployment, which is distressing a large proportion of young people (Blackden & Wodon, 2006:7). Graduate employability is a fundamental issue which is not just about quantifying job finding rates by means of *“destination statistics”* (Harvey as cited by Nabi, 2003:371), but it is also about graduates being better prepared and in jobs which enable them to be better individuals contributing positively to societal growth and development. Poor job quality, underemployment and working poverty remain significant problems which have a gender dimension to it with women overrepresented in such statistics (ILO, 2019:8). The ILO (2016c:1) further maintains that over the next coming decade, stable employment will become increasingly difficult to find, raising the risks of underemployment and vulnerable employment. Young people, who continues to be disproportionately affected by negative employment outcomes, will remain the most affected as the further they are from stable employment, the more difficult it is to go back to what is considered normal. Even currently, young people constitute a large proportion of people in temporary and part-time jobs, a situation which is frequently involuntary (ILO, 2019:1). Unfortunately, many people in informal work are in low-skilled jobs, unprotected from

low wages, long working hours and social security, and also exposed to insufficient training prospects (ILO, 2016c:33). Research on underutilisation has just focused on one side of the underutilisation spectrum, which is just about the scarcity of jobs, while actually there is more to the labour market than just scarcity of jobs. Many people are scarcely in employment and wages are increasing at a slow rate to be regarded as full employment. At the same time, there is an expectation by many companies that automation because of the fourth industrial revolution wave will see types of employment change, superficially full-time work by 2020 (WEF, 2018:viii).

Graduate labour market outcomes in South Africa often tend to reflect the global experience of expansion in informal, contract, part-time and outsourced employment amongst the youth (Rogan *et al.*, 2015:2). While there is some evidence that in several nations, casual and temporary employment aid and move people to more steady and better-paying employment (e.g. Feldman & Turnley, 2004:284; Schomberg & Teichler, 2007), there is not enough literature even for South Africa that these kinds of employment enhances the odds of moving to full-time and permanent employment (ILO, 2016b:3-4). In fact most of these jobs are frequently related to low earnings, restricted access to training and career growth, undermining prospects and income potential. There is now a more significant number of instabilities connected with the change from higher education to the labour market and South Africa is not excluded given the worsening youth labour market performance (Rogan *et al.*, 2015:4). Many young South Africans experience exclusion from the labour market and when when they do find employment, they mostly still encounter considerable forms of adversity (Brandson, De Lannoy & Brynde, 2019:3).

In a study which aimed to examine the influence of demographic and educational, characteristics on the employment/unemployment status of South African graduates, Baldry (2016:788) found that of employed graduates, 27 per cent considered themselves underemployed. Even wider disparities exist between young males and females in South Africa, with females being more prone to experiencing negative labour market outcomes than males (Niyimbanira, 2016:116; Beukes *et al.*, 2017:51. In addition, negative labour market outcomes such as unemployment and informality have a race and geographical location dimension, where employment precariousness is more likely for Blacks, and those in rural areas (Zizzamia & Ranchhod, 2019:16; Schotte *et al.*, 2018). From the perspective of education, the common finding in South African literature is that those from relatively well-resourced educational institutions are more successful in finding stable employment (Branson *et al.*, 2019:6). However, not much is known about the degree to which underemployment disadvantages young graduates in their early careers, particularly if the previously mentioned aspects are taken into consideration.

Of greater concern is experiencing poverty despite being employed, which is commonly known as working-poverty. The issue of employment quality (and decent work) is critically important as even the

ILO (2018b:8-9) maintains that full, productive and decent employment is the most effective path out of poverty. As such, the provision of decent work even forms part of the 2030 sustainable development goals (goal 8) where the goal is to create full and productive employment that will positively contribute to personal and eventually societal growth through ensuring equal remuneration for work of equal value, eradicating vulnerable and/precious employment, and promoting safe and secure working environments for all (United Nations, 2015). Be that as it may, the ILO (2019:16) reports that more than 80 million working youth in upper-middle-income countries (which South Africa is classified under) are in pervasive or moderate poverty in comparison. In South Africa's economic counterparts like BRICS, significant strides to move away from vulnerable employment to paid employment have not resulted in quality employment. The ILO (2018a:2) reports that an estimated three quarters of all the paid employment have been accounted for temporary and informal employment which is often characterised by job insecurity. The state of underemployment influences society's standards of living and raises the extent and widespread presence of fraudulent conduct, poverty, crime and other social ills (Coenjaerts *et al.*, 2009:119; Stats SA, 2015b:8). Due to the fact that many young people are working but do not earn enough to lift themselves out of poverty, raises the concern that they may be experiencing underemployment.

While quite a number of studies have been done on employment amongst young people in South Africa, little or no consideration has been given to the subjective valuation of employment by the employed graduates. To date, most studies (*see* Pauw, Oosthuizen & Van Der Westhuizen 2008; Acquah 2009; Bhorat 2009; Moleke 2009; Rasool & Botha 2011; Van Der Berg & Van Broekhuizen 2012; Nel & Neale-Shutte 2013; Altbeker & Storme 2013; Van Broekhuizen, 2016) have tracked the transition from education to the labour market and the level of employment amongst graduates. Although this has been informative and useful, there is a threat of overlooking the kinds of jobs that graduates are in and whether their education, skills and abilities are being efficiently utilised or not. Though underemployment seems to have become progressively widespread in the labour market, only a slight body of research on the topic at present exists (Abel & Dietz, 2016:1-2). Even amongst graduates, there is still a lack of research that goes beyond employment to determine the state of jobs (Beukes *et al.*, 2017:34). There are still many gaps in the literature on underemployment amongst graduates in South Africa given the lack of research. This gap suggests that labour market prospects that graduates are probably likely to encounter even after employment are still not clear. There is, therefore, a need to investigate the subjective valuation of employment by employed graduates. The main thing is that the creation of full-time employment would prompt a significant reduction in poverty, even at the current moderately low levels of income.

1.3 OBJECTIVES

The overall objective of the study was to investigate the phenomenon of underemployment amongst young people² in South Africa with a focus on university graduates through the application of modern statistical techniques. Explicitly, the study was intended to attain the following interconnected objectives:

1.3.1 Primary objective

The primary objective of this study was to analyse underemployment of young people in South Africa with a focus on university graduates.

1.3.2 Theoretical objectives

The following theoretical objectives were used to achieve the primary objective of the study:

- To conceptualise, define and analyse underemployment as well as other forms of labour underutilisation.
- To review theories and approaches relating to underemployment such as the neoclassical theories, theories from the institutionalist school of thought and psychological/management theories on underemployment.
- To determine the consequences of underemployment at the macroeconomic, firm and individual level.
- Review underutilisation, particularly underemployment amongst young people in South Africa's counterparts which are the BRIC countries
- Profile underemployment in terms of time, skills, and income amongst young people in South Africa.

1.3.3 Empirical objectives

In line with the primary objective, the study was also aimed at the achievement of the following empirical objectives:

- To analyse the extent of underemployment amongst graduates.
- Examine underemployment variations by historical nature of the campuses of the university in question.

² Throughout the proposed study, the 15–34 age range covers the references made to the term '*young people*'

- Determine the relationship between the graduate's demographical variables (biographical differences), social, economic background and underemployment.
- Determine the perceptions of graduate underemployment.
- Determine factors which influence underemployment status and also according to the time-related, skills-related and income-related definition of underemployment.
- Conceptualise a theoretical model explaining graduate underemployment in the context of South Africa.
- Formulate guidelines for policy development for government and policy-makers.

1.4 RESEARCH DESIGN AND METHODOLOGY

The study used a literature review and statistical analysis to achieve the objectives of study. A quantitative research design was deemed fit for the purpose of the study.

1.4.1 Introduction

This study is primarily an empirical analysis, which was based on primary data collected through a survey. Given the shortage of studies on graduate underemployment in South Africa, only limited studies were found at the time of writing (e.g. see Baldry's 2016 study which aimed to examine the influence of demographic and educational characteristics on the employment/unemployment status of South African graduates which had a sample of 1175 respondents. The overall sample size in this study, disregarding the respondents age was 1072, where graduates younger than 35 were only 576 in total. According to Avikaram (1994:29) for multivariate statistical analysis to be employed, it is recommended that a sample size be more than 200. Furthermore, since a sample size of more than 30 is deemed adequate for normal approximation (Gujarati & Porter, 2010:37; Swanepoel *et al.*, 2010:20), statistically, the current study's sample size is sufficiently extensive.

In order to collect the necessary data, a survey with a questionnaire was undertaken. Given that past measurements of underemployment have been meagre, constraining variability and reliability (Allan *et al.*, 2017:94), the proposed study used a recently validated Subjective Underemployment Scale (SUS). The SUS ordered into six subscales utilised underemployment dimensions (i.e. pay, status, hours, temporary work, field, and poverty-wage employment) as specified by Feldman (1996:386), to create and confirm a subjective and continuous scale that captures the dimensions of underemployment. These scales were observed to be fundamentally solid with consistent reliability and are the first to expansively measure underemployment (Allan *et al.*, 2017:103). From these subscales, pay, hours and field will be used in the regression analysis as proxies for income, time and skills-underemployment. At the time of this proposal, there was no record of studies in South Africa which have used this scale to measure underemployment. A questionnaire which was inclusive of the SUS on a Likert scale, demographic,

higher education and employment information was distributed to the alumni database of the university in question (i.e. across all the three campuses of the University). Since the study made use of a survey type of research, a quantitative research design was deemed suitable and fit for the purpose of the study. The study collected primary data from graduates who were between ages of 15 to 34 years to fit in the young graduate category. This age selection was also based on findings by Stats SA (2019a) that young people in the age category of 15–34 years tend to be more disadvantaged in the labour market and most likely to encounter negative employment outcome, thus the selected age category fits within this finding. The definition of young people differs from country to country and in some instances a more flexible definition of young people is a reflection of national realities (United Nations Development Programme (UNDP), 2014a:9). Therefore, this definition of young people falls under the South African National Youth Policy (SANYP, 2015:10). The study targeted at least graduates who had completed at least a bachelor's degree at University. The reason for selecting the university in question is mainly due to findings that graduates from historically advantaged higher education institutions (HAI) seem to enjoy more effective job search and employment success than graduates from historically disadvantaged higher education institutions (HDI) in South Africa (see Moleke, 2009; Baldry, 2013; Van Broekhuizen, 2016). However, there is still little empirical data that has been collected to state that graduates from HDI are also likely to be underemployed.

The data collected was analysed using descriptive statistics (frequency distribution, percentages and mean) and through the use of both a Binary Logistic Regression model and an Ordinary Least Squares (OLS) model. The questionnaire was tested for validity and reliability. A pilot study was also done before the questionnaire was distributed for the final survey (see Chapter 5.6.4).

1.4.2 Philosophical fundamentals embraced in this study

The world of research has many paradigms and therefore, a research project is most likely to have elements of several research paradigms (Bailey, 1987:25). Given that the study had a sole focus of analysing underemployment amongst young graduates in South Africa, a quantitative research approach was regarded as a best fit towards answering the research objectives. As such, the post-positivism research philosophy was therefore fitting of this research approach.

The post-positivism world view originated from the dismissal of the predominant convictions of positivism (Trochim, 2006:5). According to Healy and Perry (2000:119), the main belief under mainstream positivism was that researchers need not be in the world in order to understand it. There was therefore a focus on scientific approaches to research which solely relies on facts (Healy and Perry, 2000:119). Post-positivism on the other hand, acknowledged that there cannot be a total separation between the world and what the researcher is trying to understand or studying. As argued by Ryan

(2006:12): “*post-positivists believe that theory cannot be excluded from practice; it cannot be ignored for the sake of just the facts*”. With regards to post-positivism, a proposal unequipped for empirical testing can never be affirmed to be entirely true (Guba & Lincoln, 1989). In addition, even though post-positivists want to solve research problems, they also place importance in understanding how the research participants views the world they live in. It is not just about facts but viewing a research problem from another perspective which not only underlines meaning but also provides clarity to questions (Henderson, 2011:343). Hence, as maintained by Creswell (2003:7), the issues concentrated under post-positivism uncover the need to examine causes that impact the results or conclusions.

1.4.3 Statistical and empirical analysis

The data as captured was analysed using IBM Statistical Package for Social Sciences (SPSS 26:2020). The study used the descriptive and statistical approaches of analysis on the data set. The choice of empirical model is somewhat influenced by the nature of the outcome variable, data type, and the objectives to be achieved. This study used a binary logistic regression to determine factors that influence underemployment status. A binary logistic regression allows the response variable to have two alternatives. In other words, it allows for two categories of the dependent variable. In general, logistic regression, regardless of which specific logit model has been chosen, is highly effective and accurate in estimating the probability that an event will occur (Sarkar & Midi, 2010:479), and its usage has become very important in social sciences.

The model for the regression used is discussed in detail in the next sub-section. In addition, an OLS regression model, which is the second regression model that was used to answer empirical objective four and five of the study. A range of regressors were used such as age, marital status, geographical location, career guidance and race. These factors after model testing were significant and therefore assumed to influence underemployment status.

1.4.4 Model specification

The binary logistic regression model adopted is presented as follows:

$$L_i = \ln\left(\frac{P_i}{1 - P_i}\right) = \beta_0 + \beta_1 X_1 + \cdots \beta_n X_n + u_i \dots \dots \dots (1.1)$$

The dependent variable is, therefore, the probability of being underemployed, where a yes response is coded as 1 and a no response is coded as 0. Therefore, if an individual is underemployed $L_i = \ln\left(\frac{1}{0}\right)$ and if not underemployed $L_i = \ln\left(\frac{0}{1}\right)$. Where $\beta_{1,2,\dots,n}$ are the coefficients for the corresponding independent variables.

With regards to the OLS regression model, three OLS regression models will be employed on income underemployment (measured by the underpayment perception), skills underemployment (measured by the field perceptions) and time underemployment (measured by hours' discrepancy perception). The linear regression model was formulated as follows:

$$Index_i = \beta_0 + \beta_1 X_1 + \cdots \dots \dots + \beta_n X_n + u_i \dots \dots \dots (1.2)$$

1.5 SIGNIFICANCE AND CONTRIBUTION OF THE STUDY

Underemployment is intricate in nature, and a comprehension of what may determine this state is critical and may assist towards the outlining of appropriate labour market and social welfare policies. Firstly, the proposed study will contribute to policy formulation, especially considering that young people are central to the future development of a country. Secondly, the current study will provide valuable evidence for policy-makers and researchers in order to detect crucial dynamics affecting the employability of South African graduates, and also the nature and extent of such effects. Thirdly, the study will further assist or broaden the understanding of the dynamics that are present in the South African graduate labour market, while at the same time adding on the existing and continuing debates surrounding higher education and labour market outcomes. The study will also do this by conceptualising a model explaining underemployment in the context of South Africa. This is important since at present, underemployment is a very under-researched topic in South Africa, especially one that focuses on graduates. Lastly, the use of the SUS will further enhance the results especially given the fact that past measurements of underemployment have lacked reliability and consistency. Overall, this study may open up the gap for other researchers to study graduate underemployment.

1.6 ETHICAL CONSIDERATIONS

The questionnaire used for the data collection was presented to the university's Research Ethics Committee and was approved with ethical clearance number ECONIT-2017-061. The study complied with ethical principles of academic research where respondents could participate in the study out of free will and withdraw their participation too. Confidentiality was also ensured and all responses were only used for statistical purposes. Access to the alumni database of the university in question was also requested where the researcher needed to motivate why the specified target population was appropriate and had to ensure privacy of the personal information of the desired respondents as per the Protection of Personal Information (POPI) act. After having followed various ethical procedures as required by the university's Research Data Gatekeeper Committee, permission to do the study was granted reference number ***-GK-2018 (*the ethical clearance certificate can be given upon request*). For ethical reasons, the study does not under any circumstances disclose the name of the university where graduates were sourced.

1.7 CHAPTER CLASSIFICATION

The study consists of the following chapters:

Chapter 1 (Introduction and background)

This chapter introduces the field of the research under study. It further introduces the research problem, the objectives of the study and the research methodology. Lastly, it provides a clear and brief outline of the research and topics to be discussed.

Chapter 2 (Theoretical framework of labour underutilisation)

This chapter provides a conceptual analysis of labour underutilisation with a specific focus on underemployment. The chapter comprehensively discusses labour underutilisation as guided by the labour utilisation framework. Furthermore, the chapter amongst other things discusses the determinants of underemployment and provide a discussion on theories relating to underemployment.

Chapter 3 (Regional empirical analysis on underemployment)

This chapter provides a regional analysis on underutilisation particularly underemployment amongst young people. The analysis is done on both developed countries (represented by the US) and developing countries; Brazil, Russia, India and China (commonly known as the BRIC countries which share an economic standing to South Africa. A summary of lessons from these countries is provided at the end of chapter.

Chapter 4 (Profiling underemployment in South Africa)

A profile of South Africa's labour underutilisation situation, in particular, underemployment amongst young people is given in this chapter. The chapter starts off by providing a historical background on South Africa's macroeconomy. This is followed by an analysis of youth employment trends. The emphasis is on the supply and demand of skills, which helps in understanding skills-employment mismatches. Amongst other factors, more profiling is done on other dimensions of underemployment. The chapter ends with a review of policies implemented towards addressing employment challenges facing graduates.

Chapter 5 (Research methodology)

This chapter describes the nature and the scope of the methodology applied in the study. It also presents a description of the data.

Chapter 6 (Empirical results and discussions)

This chapter analyses and discusses the findings of the empirical research undertaken.

Chapter 7 (Summary, recommendations and conclusions)

This chapter presents the summary of the study, concluding remarks and policy recommendations.

1.8 SYNOPSIS

This chapter identified and subsequently expounded on the introductory issues leading to the study. More specifically, issues such as the introduction and background of the study, problem statement, research methodology, objectives of the study and the expected benefits from the study were outlined. The objective of the study is grouped into primary, theoretical and empirical objectives. The next chapter of the study presents the detailed theoretical background on labour underutilisation, with a specific focus on underemployment.

CHAPTER 2

A THEORETICAL FRAMEWORK OF LABOUR UNDERUTILISATION

“Labour is by far the most important factor of production. Wages and employment are important because they represent the primary source of income to the vast majority...and because they are related to a variety of important social and political issues” – Baumol & Blinder (1988:794).

2.1 INTRODUCTION

Chapter 1 introduced the graduate labour market, in particular with reference to South Africa in all its facets. The presence of underemployment has likewise been found to exist within the country’s labour market (Baldry, 2016a:51; Beukes *et al.*, 2017:33; Niyimbanira, 2016:116; Mathebula, 2017:51). Underemployment is one of the most compelling yet overlooked labour market issues. Despite the fact that a person has work, they are not fulfilled either regarding income, skills/education or time. However, as indicated in the previous chapter, compared to graduate unemployment, underemployment has received little attention from researchers and policy-makers alike (Heyes, Tomlinson & Whitworth, 2017:72). This is worrying, as the probability of finding stable employment continues to diminish around the world (Allan *et al.*, 2017:93; ILO, 2017:7), South Africa is not excluded, raising the risks of pervasive underemployment. Theories such as the human capital theory and job competition theory support the idea that education improves employment opportunities (Becker 1964; Thurow, 1975; Sicherman & Galor 1990:169). Despite what some of these theories have advocated, recent years have proven the theories otherwise, where educated individuals find themselves in situations of struggling to find employment, and even if they are employed, many of them find themselves in jobs that are inferior by some standards (Lourens & Fourie-Malherbe, 2016). Even though most are utilised and have work, studies show a different image: they are educated and employed, yet in most cases they earn less than expected (not enough) or they are not in full-time employment (Baldry, 2016; Lutz, 2017:4).

In spite of the fact that labour market analysis and all its various facets have gone through immense changes over the years, it is widely believed that employment and unemployment measures have been insufficient with regards to understanding the growing complexities of labour markets (Greenwood, 1999:1; Pisica *et al.*, 2015:12; ILO, 2016b). As indicated by Sengenberger (2011:89), even though both employment and unemployment measures seize the economic aspect of labour market slack, they, however, neglect to enlighten something about employment or work quality. This is important given the fact that there are many instances where labour is underutilised and this is very common, not just in developing countries but also in the developed ones.

In most cases, labour markets, especially in Africa, have a high number of underutilised labour evidenced by high unemployment, informal and vulnerable employment (Bhorat, Naidoo & Ewinyu, 2017:31; Samans & Zahidi, 2017:4-7). For instance, the ILO's 2017 *'World Employment Social Outlook'* reports that nearly two-thirds of workers in sub-Saharan Africa living in extreme or moderate working poverty, South Africa is not excluded (Lilenstein *et al.*, 2016). The consequences of labour underutilisation are severe and pervasive as this may increase the likelihood of issues such as poverty, insecurity, job dissatisfaction and distress (Lacmanovic *et al.*, 2016:342; Steffy, 2017; Wilkins, 2007:264-265). This situation affects individuals and their families (Wilkins & Wooden, 2011:13). On the other hand, underutilisation implies loss of labour that can never be recovered including a depreciation of skills (Brown, Sessions & Watson, 2007:445), which is a further setback in the labour market, potentially affecting both career development and wellbeing (Verbruggen *et al.*, 2015; Chartered Institute of Personnel and Development (CIPD), 2018:24-25). *"Underemployment represents an inefficient usage of and lost output for society"* (Glyde, 1977:257).

As argued by Brown and Pintaldi (2006:43) the examination of underutilisation, specifically underemployment is vital in the sense that it assists an economy to determine whether it is creating and providing full employment opportunities to the labour force or not. In other words, underemployment has important implications for understanding labour market circumstances and the strength in the wider economy (Li & McCully, 2016:1). Also, examining underemployment is further fuelled by the fact that evidentiary support shows that employers are gradually resorting to non-standard work arrangements such as part-time or contingent work as a way to take full advantage of employment flexibility while reducing labour costs (Berglund, Hakansson, Isidorsson & Alfonsson, 2017:22). This pattern, joined with the present reality of persistent loss of jobs, especially amongst young people (ILO, 2017:1), may compel an ever-increasing number of people to take jobs that are substandard and additionally that do not use their skills because of an absence of work that actually fits their skills and desires (Jericho, 2018). Yet at the same time being forced to take up meagre employment to avoid being without one has negative effects on career growth by decelerating the process and shift into an *'education-adequate'* employment (Baert, Cockx & Verhaest, 2013:134). As maintained by Wilkins and Wooden (2011:13) *"underemployment is primarily of interest as an economic concept because of the foregone market output that it represents"*.

Against, this background, this chapter provides a conceptual analysis of labour underutilisation with an objective to give the reader a clear understanding of what underutilised labour means. For the purpose of the study, the chapter addresses the first, second and fourth theoretical objectives outlined in Chapter 1.3.2. The chapter also provides a distinction between labour underutilisation, labour hoarding and underemployment, given the overlaps present when defining them. The crux of this chapter is on underemployment; hence the discussion is centred on it. Some of the points which are included in the

discussion entail issues which are often encountered when measuring underutilisation, specifically underemployment, and some of the economic and individual effects of underemployment amongst others. This section then proceeds onward to comprehensively discuss other forms of labour underutilisation as guided by the Labour Utilisation Framework (LUF). Lastly, a comprehensive review of the theories that underpin the study of underemployment from various disciplines such as the labour released theory, disguised unemployment theory, Keynes underemployment theory, job competition theory, assignment theory, signal theory, theory of career mobility and the relative deprivation theory amongst others are discussed.

2.2 THE FRAMEWORK OF LABOUR FORCE UTILISATION

2.2.1 Introduction

Scholars from a range of disciplines have looked at the incidence of low-quality, inferior jobs, which all identify with work which results in underutilised labour in some way. For many years, research has exclusively focused on one side of the labour market, amongst other things, unemployment, making this measure the most reported (Domfe, Osei & Ackah, 2013:33). However, as maintained by Beukes *et al.* (2017:53) concentration has now shifted from differentiating between employment and unemployment to multi-dimensional labour market outcomes. As argued by Mitchell and Carlson (2002) there are other possibilities of labour resources wastage that are not captured by the unemployment rate, especially given the fact that labour markets never behave correctly like markets for other goods and services (Kaufman & Hotchkiss, 1999:2).

In particular, labour markets consistently experience variations between the demand for and supply of labour. This occurs in various ways, for instance, there are times where available labour resources are not fulfilled, which often means it is underutilised (Baum & Mitchell, 2009). At other times, the supply of labour exceeds the demand for labour, hence unemployment. On the other hand, there are instances of hidden unemployment, which is often experienced by discouraged workers, who according to Wilkins and Wooden (2011) would prefer to be in employment although they are outside the labour force (perhaps due to weak employment opportunities amongst others). This is the phenomenon Robinson (1936:225) devised as '*disguised unemployment*' to reflect the fact that some jobs have economic characteristics which lie between fair employment and unemployment. Most employers seem to be in favour of casual/part-time work agreements because of the flexibility and cost reductions they provide (Brown, Wong & McNamara, 2009:8). These kinds of jobs can have adverse effects not only on incomes but also on benefits such as health and pension protection. These workers are therefore not in '*good*' jobs, and as a result, they need '*better*' jobs (Sugiyarto, 2007).

This is a concern for economists, as labour underutilisation indicates inefficient labour market outcomes as loss of output that can never be regained (Mitchell & Muysken, 2008). These views are supported by Beukes *et al.* (2017:35) who reiterate the lost productive capacity and national income through underutilisation, raising concerns social exclusion for the affected individual. The effects of other forms of labour underutilisation, particularly underemployment are often underestimated given how inadequate research on the topic is (Li & McCully, 2016:1). Hence a grey area exists regarding a thorough understanding of other forms of underutilisation other than unemployment, fuelling an examination of what underutilised labour means, especially given the fact that the world is experiencing transforming labour markets where the prospects for a decent living wage and stable employment are not at all certain (Allan *et al.*, 2017:94). Therefore, it becomes important to refocus on the other forms of labour underutilisation within this study. The next subsection gives a thorough discussion of underutilisation and underemployment in their entirety.

2.2.2 Understanding underutilisation and underemployment: A conceptual clarification

For decades and decades, the unemployment rate has been one of the most widely reported single indicator of how an economy is performing (Herrera & Mercer, 2015:84). This meant that other employment statuses such as disguised unemployment hardly ever received public attention. As mentioned, unemployment in its entirety does not capture other avenues of labour resource wastage, which may be explained by other forms of labour underutilisation. Underutilisation may identify with persons who at present are out of work but have a willingness and can work, regardless of whether they are in or out of the labour force (Mitchell & Carlson, 2000). Unemployment thus constitutes a subcategory of underutilised labour. Underemployment refers to employed workers who are currently working few hours and earning less income than they desire or possess more skills than required by their job (Feldman, 1996:385-386). The ILO description of employment is wide and liberal and comprises all of those who worked for at least one hour for pay or profit in the reference week (ILO, 2008). In any case, a large portion of those working few hours do not regard their fundamental status as utilised or employed since they may wish to work more hours (Eurofound, 2017:7). In conceptual terms, a part of an underemployed worker is utilised, and a part is underutilised, despite the fact that they are characterised as employed (Mitchell & Carlson, 2000). So, these workers are employed in the primary sense yet are underemployed and represent an important category of labour slack.

Since the 1960s, the ILO has had progressions of labour statistics conferences to develop better measures and understand the scope of the various kinds of underutilisation. In response to some of the then present labour statistic shortcomings, Phillip Hauser (1974) developed the labour utilisation framework (LUF) (*see table 2.1*) as a means to operationalise the measurement of visible and invisible

underemployment in developing countries adopted by the 11th International Conference of Labour Statisticians (ICLS) (October 1966). The LUF is possibly the most prominent model of underemployment processes (Maddock *et al.*, 2012). Hauser (1974:4-5) wanted to build “*a conceptual framework and operating procedures to obtain a measurement of both visible and invisible underemployment*”, in order to enhance the operationalisation of the scope of employment statuses. The essence behind the LUF is the determination of the degree to which labour is adequately utilised in the labour market (De Anda & Sobczak, 2011:623).

Table 2.1: Labour utilisation framework (LUF) and the standard labour force (SLF)

LUF	SLF
Total work-force	Total labour force
Sub-unemployed including discouraged (<i>S</i>)	Unemployed
Unemployed (<i>U</i>)	
Utilised inadequately by: - Hours of work (<i>H</i>) - Income level (<i>I</i>) - Mismatched workers regarding occupation and education (<i>M</i>)	
Adequately employed (<i>A</i>)	Employed

Adapted from: Hauser (1974) and Sugiyarto (2007)

As seen in Table 2.1, the LUF went beyond the SLF to recognise different categories of economically inadequate employment based on hours of work (involuntary part-time work), income (poverty-level pay) and mismatched workers in terms of jobs and education (underutilised by skills), in order to more completely capture different forms of economic adversity that typical employment indicators ignore as can be seen in the SLF section (Lim & Schulker, 2010:14-15).

The LUF has developed since 1974 and continued to evolve in subsequent years to have a more elaborated set of subcategories. Yet its primary reason has still been to capture lost hours of work, income inadequacies, and the workers skills-employment mismatches (Clogg, Eliason & Leicht, 2003:746). Clogg and Sullivan (1983) later refined the LUF (see Table 2.2) for use in the United States (US). The majority of other measures of underutilisation (e.g. Berg’s 1970 mismatch measure; Flaim’s 1973 and Finnegan’s 1973 discouraged worker measure) formed part of Clogg and Sullivan’s 1983 scale (see Table 2.2) as M and S component. The U and H component were adopted from the US Bureau of Labour Statistics U1 – U7, Kemp and Bexk’s 1981 unemployed and involuntary part-time worker

measure and Wirtz 1972 four-component index. All these other approaches complemented the LUF instead of being an alternative to the measure (Dooley& Prause, 2004:47).

Table 2.2: The adjusted labour utilisation framework (LUF)

Component	Meaning
S (<i>sub-unemployment</i>)	An intermediary for discouraged workers
U (<i>unemployment</i>)	Alludes to those without jobs but are capable and willing to work (<i>uses the standard definition of unemployment</i>)
H (<i>hours of work</i>)	Refers to individuals involuntarily doing part-time work. Even workers who spent less than 35 hours of work in the previous week and recorded economic reasons for their job status are generally included.
I (<i>low-income</i>)	Full-time workers whose work-related income is beneath some societally-accepted minimum. Could likewise be those encountering working poverty.
M (<i>mismatch</i>)	Comprises those whose education is over and above that which is possessed by others in similar jobs.
A (<i>adequate employment</i>)	A proxy for those who are employed however not in any of the first classifications.

Source: Clogg and Sullivan (1983:118)

The original LUF continued to be utilised broadly and kept on being adjusted, however mainly incorporating comparable measures as in Table 2.2. For instance, Tipps and Gordon (1985) included intermittent work which was excluded in the first LUF to perceive the financial and economic difficulties of the individuals who have had a background marked by joblessness over the previous year. While others such as Dooley and Prause (2004:48-49) did not add the mismatch classification of the LUF, contending that skills-employment mismatch category lacks economic foundation as a type of underemployment. The LUF is nonetheless, unequivocally faulted for its inability to acknowledge the likelihood of individuals experiencing more than one form of underemployment (Maddocks 2012:21). Furthermore, Maddocks (2012:22) contends that the hierarchy of underemployment levels as suggested in the original LUF fails to mirror the significance or seriousness of the different types of underemployment for the individual. Which is why being underemployed by working hours to those desiring full-time employment or by income to those earning inadequately may undermine the issue of over-education amongst workers. As indicated in the 18th International Conference of Labour Statisticians (ICLS), the now broader underemployment model was actualised to cope with the limitations of the unemployment rate as an instrument that was used to measure underutilisation in the

labour market. Figure 2.1 shows the revised three components of labour underutilisation and their sub-components.

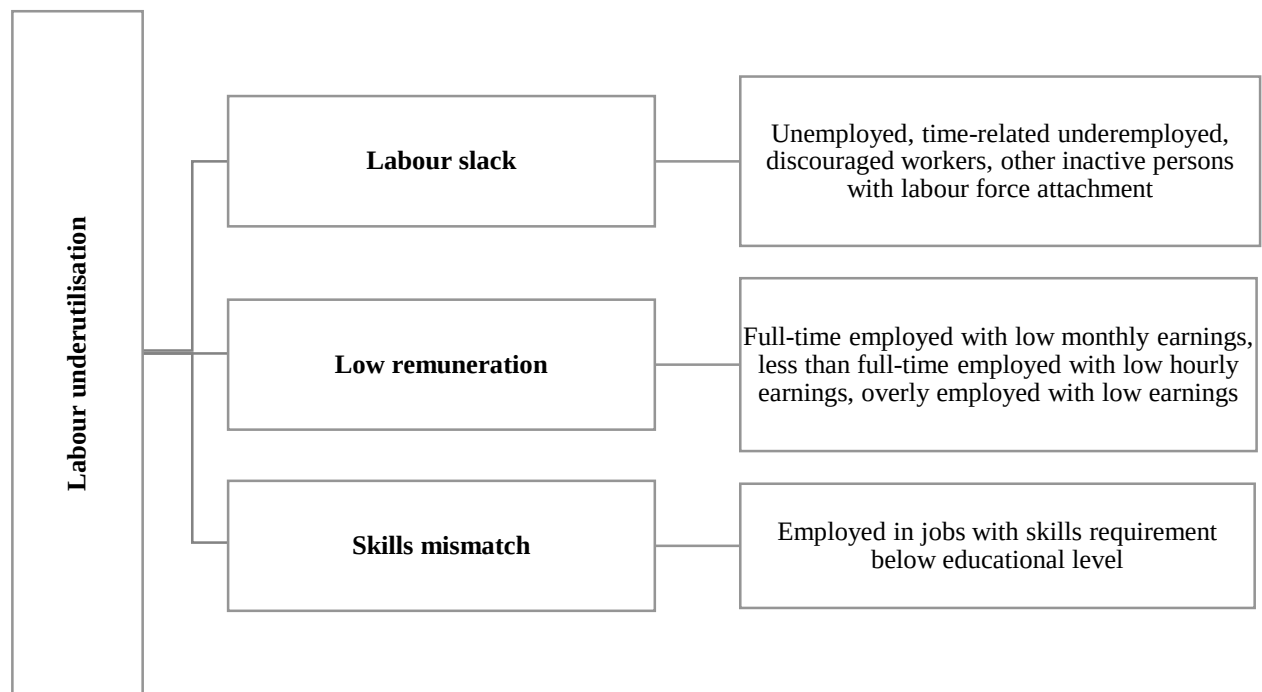


Figure 2.1: The revised LUF as indicated by the 18th ICLS

Adapted from: ILO (2008:17)

As can be seen in Figure 2.1, labour underutilisation contains unemployment and other types of labour slack. At least one form of underemployment (i.e. time-related, income-related and skills-related) can be observed under each component of labour underutilisation as indicated in Figure 2.1. Broadly, time-related underemployment, low remuneration and skills mismatch are subsets of employment, while discouraged workers and other inactive persons within the labour force are subsets of the non-economically active.

Labour slack is distinguished from low-income and skills mismatch by the fact that it reflects a deficiency in the volume of work (ILO, 2018c:18). Labour market slack (or essentially labour slack) is viewed as the shortage between the capacity of work wanted by workers and the actual capacity of existing work. It refers to the unmet interest for compensated work in a population (Eurofound, 2017:5). It is experienced when an individual does not have a job despite wanting and being available to work (*unemployed*), working for fewer hours than desiring to (*time-related underemployed*) and those that have given up job search even though they want to work and are currently available to do so (*discouraged workers*) (Sengenberger, 2011; Wilkins & Wooden, 2011:15). The underemployment rate

is sturdily counter-cyclical, rising noticeably in slack labour markets and vice versa (Barnichon & Zylberberg, 2019:40). According to the OECD (1995:44), labour market slack cannot be measured through a single measure and that it is crucial to supplement the unemployment rate with additional indicators to enhance labour market analysis. Labour slack disguises itself since it is a better circumstance than unemployment since a worker will only experience it if they are employed, which is a different argument from the ILO's 18th ILCS (*see Figure 2.1*). Barnichon and Zylberberg (2019:42-43) contend that the incidence of underemployment is critical, yet a disregarded labour market characteristic, and that the unemployment rate cannot entirely express the effects of an economic slack on the labour market.

The second LUF factor as indicated in Figure 2.1 is lower remuneration which is made up of persons who, despite being in employment, are low-income earners (ILO, 2008:22). Regardless of whether these might be substantial increments in employment, the European Central Bank (2017:31) maintains that if the growth rate in wages is repressed, that proposes a plausibility of a high level of underutilised labour. Lastly, the phenomenon of skills mismatch which is explained by having too much education or qualifications for a job in which a person is employed in (Clogg & Sullivan, 1983:119). Mismatches are categorised into two main forms, that is, qualification mismatches and skill- mismatches. Qualification mismatch transpires when a worker is either over-educated or under-educated for a job; whereas skills-mismatches would occur when the skills possessed by a graduate are higher or lower than needed to perform their job (Berlingieri & Erdsiek, 2012:5-6). At times, the mismatch can be as a result of a specific study field chosen by an individual in addition to wider education mismatches (Farooq, 2011:55). The existence of such mismatches have put higher education under scrutiny, particularly with regards to how effective it is in producing adequately skilled graduates. The incompatibility could be as a result of a number of factors such as scarcity of jobs and skills gap phenomenon within an economy (Mncayi, 2016:77-78).

Therefore, based on Table 2.2 and Figure 2.1 respectively, underutilisation goes beyond the narrow notion of unemployment to include other types of inadequate employment or other forms of disequilibrium from the labour market. It includes workers who are currently not working but who are willing and able to undertake work whether they are classified as being in or out of the labour force (Mitchell & Carlson, 2000). Comprehensively, labour underutilisation involves unemployment and other types of labour slack, including time-related underemployment, discouraged workers and other inactive persons attached to the labour force. It additionally entails workers receiving low earnings (be they full-time employed, part-time employed, or over-employed) and those mismatched to their jobs, meaning employment in jobs with skill requirements below the worker's level of qualification. *“At a macroeconomic level, the underutilisation of skilled labour represents a waste of resources that could*

be harnessed to make an effective contribution to productivity and economic growth” (Li, Duncan & Miranti, 2015:439-440).

On the other hand, underemployment is seen as a more expanded form of underutilisation, therefore a subcategory of the LUF. This phenomenon has been conceptualised in various ways in the literature (Collins & Long, 2015). As articulated by Feldman (1996:385), underemployment encompasses being overqualified for a job, being involuntarily employed in a job that is not related to one’s field, having more skills and experience than needed, being forced to be non-standard employment which is on a part-time or temporary basis or being in a job which pays less income than last job or relative to one’s peers. Researchers especially in economics have largely characterised underemployment mainly in terms of lower remuneration, over-education and irregular work (Addy, Nzaku & Ijaz, 2012:7-8).

Lester and McCain (2001:140) understood the idea of underemployment to consider both the capacity and inclinations, which were connected basically to human capital. Accordingly, underemployment would undoubtedly arise when a worker is employed in a job that is lower by certain standards (Maynard & Feldman, 2011:4; McKee-Ryan & Harvey, 2011:962). Put differently, this implies that there is a deviation between a worker’s expectations or desires and characteristics of their job (Luksyte & Spitzmueller, 2011:40). The worker who can only find part-time work even though they seek full-time work; the ‘*downsized*’ worker who has been compelled to take a job that is not within their area of expertise with a specific end goal of avoiding unemployment; the full-time temporary worker who has abilities, knowledge, and capabilities equal to those of her permanent colleagues but who is categorised as impermanent and deprived of benefits, these cases may all fit into underemployment (Lester & McCain, 2001:141). The African Development Bank (AfDB, 2012:105) refers to underemployment as ‘*vulnerable employment*’, which essentially signifies ‘*workers in unprotected forms of employment, with low productivity and high risk of poverty*’.

The ILO (2003:55) on the other hand, recognises that underemployment is a broad predicament which includes “*persons who even though they worked or had a job during the reference week, they were willing and available to work better or more adequately*”. However, the ILO provides a definition that inherently limits underemployment to involuntary part-time work, *inter alia*, time-related which is visible and easily measured since there are concerns relating to other measures of underemployment (Addy, Bonnal & Lira, 2012:217).

Other researchers have gone beyond the ILO definition to explaining underemployment as a situation where a worker is in a position that underutilises their skills and abilities (McKee-Ryan & Harvey, 2011:963). Implying that their current job is inferior to a specified norm or alternative employment. For Greenwood (1999:1) underemployment involves people who, despite the fact that amid the reference

or overview period had an occupation, they were eager and accessible to work better or more adequately. Couriel (1984:39) reports two ways in which underemployment can be defined: first as working limited number of hours and secondly, by the low-income a person receives in view of the conditions of productivity in which they work. This means that an employed person becomes available for more hours of work in order to increase his or her wage and salary income (Wilkins, 2006:371). Ross and Bateman (2019:8) base their definition of underemployment as the proportion of those in the workforce working full-time but who are earning less than minimum wage.

An overview of the literature presented shows no clear consensus about a clear definition of underemployment, and this is seen as a fundamental physiognomy of underemployment (Salin & Nätti, 2019:1). However, from the discussion provided, underemployment can therefore be seen as a multidimensional phenomenon that goes beyond just having a job to being in a job where one works less than desirable hours as explained by the ILO. It involves being in a job where a worker feels inferior compared to the one they feel they should be working in. This arises due to their skills, qualifications, education and abilities not being fully utilised, and as a result, they feel failure and disappointment which leads to lower job satisfaction and morale. Since the workers are not fully working, they are deprived of the earnings or income they could be earning had they been in a job fully utilising their skills. These workers have a preference - and are available for additional hours of work to increase their earnings (Wilkins, 2006:373)

While underemployment and unemployment signify the underutilisation of labour, the contrast between these two incidents is that in the former the individual is employed and getting wages while on the latter an individual cannot find employment although they are willing and able to work, implying that their working hours are entirely not used (Niyimbanira, 2016:117). This standpoint verifiably proposes that employment of any kind is better than no employment, and from the psychological impact perspective, underemployment is much more preferable than unemployment (Feldman & Turnely, 1995:692).

2.2.3 Understanding underemployment and labour hoarding

The phenomenon of labour hoarding has long been of research interest to labour economists, particularly those who wanted to understand why labour productivity exhibits considerable variation over the business cycle. The concept was first fully articulated during the 1960s by Walter Oi (1962), Arthur Okun (1963), Robert Solow (1964) and Edwin Kuh (1965) to also be used in the 1980s to help explain the pro-cyclical nature of labour productivity (Flanagan, Smith & Ehrenberg, 1984:179-180), which implied that productivity increased during the expansionary periods and declining during contractionary periods of the business cycles. Inherent in all labour hoarding debates is the observation that labour hoarding does not occur during periods of high demand and productivity, and almost

certainly during periods considered normal. Thus, in an attempt to avoid costs associated with getting rid of labour and receive negative marginal revenue, firms tended to hold excess labour during the periods of low demand (Orphanides, 1993; Toulemonde, 1999). This therefore means that firms tend to adjust labour utilisation rates (hours of work) rather than dramatically laying off the labour force itself (Leitner & Stehrer, 2012:2-3) in response to the temporary fall in demand and sales

This is what labour economists understand as labour hoarding; the difference between the man-hours of labour actually employed in a particular period and the man-hours that would have been required to produce the output of that period if the workforce had been efficiently employed (Siedule & Newton, 1980:4). Hence, frictions in the labour market make employment adjustments quite costly to undertake. Literature (see Aizcorbe, 1992) differentiates between two types of labour adjustment costs: i) hiring costs such as search costs as well as ii) training costs of newly hired workers intended to improve their productivity. In some instances, reference has been made to legal restriction costs (Pissarides, 1991:1). Firms would therefore hoard labour because of the existence of obstacles in the firing and hiring of workers, specifically, legal constraints and adjustment costs (Scott, 1973:811). As indicated by Okun (1963:7) the invariability of employment during these periods of low demand was explained by *“transaction costs associated with laying off labour and then in future, doing new hiring....and acquired skills that existing workers have learned on the job may make them particularly valuable to the firm, so it pays to stockpile underemployed labour”*. Indeed, costs of employing, terminating and training workers make it ideal for firms facing a short-run decline in demand to preserve more workers than technically necessary to produce current output (Biddle, 2014:198). These cost concerns give rise to the possibility of hoarding employment. Firms, therefore, keep workers on the payroll even when production is possible with fewer workers (Aizcorbe, 1992:861). This behaviour alone would cause labour productivity to behave procyclically (i.e. consistent with fluctuations in the business cycle), since excess labour is kept on during economic contractions (Taylor, 1982:592).

Taylor (1970:1) took the labour hoarding theory to another level when he anticipated its impact on wage setting. He contends that employers are more averse to respect requests of increased wages during labour hoarding periods. In other words, it is during periods of lower demand that labour unrests are less harmful to the employer as trade union demands for higher wages is contrarily related to the rate of labour hoarding. Therefore, on their quest to keep employment, labour unions avoid making drastic wage demands.

Therefore, underutilisation of employed labour during periods of labour hoarding arises from labour as a result of labour being regarded as a quasi-fixed factor of production (Nerlove, 1967), as argued Taylor (1970:2). Oi (1962) highlighted that because of unavoidable fixed employment adjustment costs, firms keep away from retrenching workers during periods of temporary lower demand since hoarding workers

may be substantively inexpensive than firing them and hiring and training new workers as soon as demand recuperates.

Labour hoarding relates to underemployment in the sense that hoarded workers are employed since they are working and being paid for time not worked but may be underemployed in the sense of working fewer hours than usual (Siedule & Newton, 1980:3; Pissarides, 1991:2). During periods where labour is hoarded, there is a reduction in worker utilisation relative to paid hours which eventually reduces measured productivity (Ohanian, 2001:1). This fall in the utilisation rate arises partly from the point made by Okun (1963) and Taylor (1970) amongst others that there is a reluctance by employers to lay off trained and experienced labour in the short-run, and also employers are not free to release labour in the short-run because of the existence of contractual commitments. In simpler terms, it is during periods of labour hoarding that workers may feel like they are underemployed given the contractionary product demand the firm finds itself in. So according firms keeps that labour even though productivity is low until prospects become better (i.e. until economic conditions start to improve or the economy recovers). Thus, as maintained by Wilkins and Wooden (2011:15) the few hours of work that the worker now works and consequently the low productivity of those hours leads to time-underemployment. However, when things get to normal; *inter alia*, there occurs a change in the utilisation rate after the labour market has undergone an adjustment of changing demand conditions (Pissarides, 1991). However, coherently, under circumstances of a permanent decline in demand and production, there would be no reason for the firm to keep labour that will not be needed for production production (Dietz, Stops & Walwei, 2010:126). As contended by Pissarides (1991:5), it would be to the benefit of the firm to bear labour hoarding costs, for example, losing already skilled workers amongst others with a specific end goal to decrease paid working time.

Labour hoarding has also been related to unemployment since hoarded workers represent reserve workers who may at any time be released and add to unemployment. This is true especially due to policy amendments as Pissarides (1991:3) argues that if laws that protect workers or even force firms to overemploy are abandoned, the immediate result is a surge in unemployment, a situation that further exacerbates labour underutilisation.

On the one hand, even as much as labour hoarding can in some cases help explain labour underutilisation, it is according to Wilkins and Wooden (2011:17) quite idiosyncratic to underemployment in the sense that even though hoarded labour is underemployed in the sense of having their labour underutilised, they are at the same time fully employed in the sense that they are working the hours they prefer. This observation mirrors the findings of Doiron (2003:306) in a study which investigated whether underemployment was due to labour hoarding in Australia. The raw statistics from the study showed that workers who are ‘underemployed’ in firms with contracting product demand (i.e.

hoarded) were on average working relatively long hours including some overtime hours. This firmly supports the remarks of Wilkins and Wooden (2011:13), and again the distinctiveness of labour hoarding to underemployment.

Another factor which makes labour hoarding quite different to underemployment is that labour hoarding is not inefficient given the presence of semi-fixed costs of labour, hoarding labour may, in fact, be an effective decision over the long (Wilkins & Wooden, 2011:30). This infers that the firm's decision to hoard labour as opposed to laying workers off implies that it would avoid various labour costs as previously mentioned and even loss of vital firm-specific skills which will be tedious and expensive to recover (Becker, 1975:18), specifically if the workers are properly trained.

Furthermore, different from underemployment and all its forms, Wilkins and Wooden (2011:14) maintains that the employer rather than the employee endures the costs of labour hoarding. These costs are associated with lower worker productivity, which consequently results in increased costs of labour and production, which may eventually negatively affect the firm's competitive position (Dietz *et al.*, 2010:162). However, other effects of labour hoarding such as a decline in skills utilisation during periods of labour hoarding are more associated with skills underemployment, indicating that ultimately, there is a connection between underemployment and labour hoarding (Lacmanovic *et al.*, 2016:338).

Another issue is that there have been more modern views on the aforementioned issue and therefore a change in labour market dynamics, particularly in as far as the cyclical behaviour of labour productivity is concerned. As mentioned in the beginning of this section, prior to the middle of 1980s both output and productivity growth tended to fall relative to trend in recessions and rise relative to trend in expansions (Flanagan *et al.*, 1984:190). However, there have been observations that the procyclicality of productivity has been vanishing (Gali & van Rens, 2019:2). This behavioural change in the labour productivity has been observed since the recovery from the 1980s recession, specifically around 1984. Productivity has since risen relative to trend in recessions and fallen relative to trend in expansions (The Economist, 2014). Labour productivity became less procyclical or acyclical with respect to output, and countercyclical with respect to employment (Gali & van Rens, 2019:22-23). This change in the cyclicity of labour productivity also affected wages, particularly of the newly hired workers, which post the 1984 period were much more volatile than the average wage in the entire work force, in the sense that they respond one-to-one to changes in labour productivity (Haefke, Sonntag & van Rens, 2008:2).

2.2.4 Determinants of underemployment

Numerous variables influence the likelihood of being underemployed. As argued by Grassby (2014), with the enormous inundation of job seekers entering the labour market every year, not every one of

them can promptly get a job that is identified with their studied courses. Even more so, not everyone will get their desired job hence workers tend to accept any work; even though it is part-time or pays less (Domfe *et al.*, 2013:33). This indicates that chances of experiencing underemployment and other forms of labour underutilisation are higher in the modern times (Dooley & Prause, 2004:182), given the prevalence of extended periods of weakening economies and unpredictable labour market outcomes. This section will delve deeper into understanding some of the factors that may lead to or fuel the probabilities of being underemployment. Broadly, these factors include those related to the economic environment, demographic and socio-economic factors, and employment related. These factors are discussed from a broad perspective, in both developed and developing countries, as stemming from an extensive literature review analysis.

2.2.4.1 *Economic environment factors*

A country's economic environment assumes a significant role in the overall development of its citizens. The labour market can again be a good determinant of the health of a country's economic environment, as its performance is of crucial importance for material well-being and the overall performance of economies (Vaitilingam, 2006:1). According to Feldman (1996:404), a weak environment is one of the factors that influence the underemployment state. Even more so, increases in the unemployment rate increases the probability of being underemployed (Tasci, 2006:299). If an economy is not performing, particularly experiencing low growth and a lack of job creation, some job seekers may be forced to jobs that they would not normally take in an attempt to escape unemployment (Abel & Dietz, 2014:3; Bell & Blanchflower, 2013:9). Even a negative view of the economy or the local labour market seems to accentuate the perception of underemployment (Bonnal, Lira & Addy, 2009:318), which then drives workers to both accept any new job over time (Virick & McKee-Ryan, 2017:322-323). Borowczyk-Martins (2017:107) argues that since many times most of these jobs are involuntary, they are associated with low-quality. Indeed, Feldman *et al.* (2002:455) found that, many laid-off workers become underemployed in jobs which they are overeducated for that even require less experience than they have, and in lower-level positions which pay sizably fewer than the jobs they had previously.

Tam (2010:8) and Lacmanovic *et al.* (2016:333) also found some evidentiary support that underemployment rises as recessionary pressures surges, which according to Pratomo (2015:528) affect overall business conditions. During these periods of slackening demand, reducing the working hours of workers is one of the strategies that employers can use to deal with the reduced demand for their services and products during times of general uncertainty in the economy (Kazan 2012:1-3). At the same time, employers can also reduce the working hours of existing workers, in some cases reassigning them from full-time to part-time work (Kamerāde & Richardson, 2018:286) in an effort to cut costs.

Additionally, these jobs are associated with low remuneration, irregular working hours (which may either be extended or shorter than desired) and are below one's capabilities and abilities (ILO, 2019:29). Consequently, this is not a good state, as an economy with many part-time workers who desire but cannot find full-time employment is less efficient than an economy with satisfied labour preferences for work hours (Mitchell & Carlson, 2002:7-8). The economy loses potential output that could be produced under full employment conditions. Thus, Virick and McKee-Ryan (2017:323-324) believes that individual circumstances like a worsening economy and having persevered through the longest unemployment state in addition to other things may provoke those without jobs to accept a situation of underemployment.

2.2.4.2 *Demographic and socio-economic factors*

Many of the demographic attributes observed to be related to unemployment are additionally identified with underemployment (Wilkins & Wooden, 2011:17). The occupations individuals hold are amongst the most imperative determinants of their prosperity (Kamerāde & Richardson, 2018:299-300). Specific factors may constrain an individual's ability to find jobs that make full use of their education, training, skills, and experience.

Gender, specifically being female is seen as one of the crucial determinants of underemployment and is associated with intermittent work (Sengenberger, 2011:55; Cam, 2014:14). To better understand this, gender has in fact been linked with marital status or family structure, where literature reveals that a woman's marital status influences her behaviour in the labour market (Angrave & Charlwood, 2015:1503). Family responsibilities may constrain the labour force behaviour of married women unlike that of single women (De Anda & Sobczak, 2011:622). For instance, due to family and home responsibilities and even religion, some women may be forced to seek employment with less hours than they desire, consequently also earning less income (McKee-Ryan & Harvey, 2011:976). However, some literature argues otherwise (see Thompson & Fiorito, 2012), with the relationship between underemployment and gender not statistically significant. On the other hand, Sackey and Osei (2006:221) found that being married reduces the probability of being underemployed. At times, some women may prefer part-time work while men may want to work more hours (Wilkins, 2007:255-256). Wilkins (2006:379) found the probability of underemployment to be higher for young females (15-24 year olds) than for mature females (55-64 year olds). Others found that men experienced greater underemployment (Ngniodem & Stephane, 2019:20), as a result of an increased number of dependent children and the age of the youngest child (Wilkins, 2006:380).

Age is additionally a determinant of underemployment, where young people are increasingly included to be employed part-time on fixed term contracts (Reynolds, 2012:9). While, in some cases, being older

is associated with higher underemployment (Erdogan & Bauer, 2009:564). In fact, the conflicting research suggests that the relationship between underemployment and age follows a U-shaped pattern, suggesting that underemployment tends to be present amongst both young and older workers (McKee-Ryan & Harvey, 2011:976). Tasci (2006:319) and Sackey and Osei (2006:221) on the other hand observed an inversely U-shaped relationship between underemployment and age, suggesting that the chances of underemployed initially increases with age and then declines. Slightly differing findings by Herrera and Mercerón (2015:103-104) and Beukes *et al.* (2017:47) find that age increases the chances of being underemployed.

Discriminative and bias practices in the labour market are likewise amongst the determinants of underemployment and often increases the likelihood of underemployment as maintained by De Jong and Madamba (2001:117). For instance, during the employment screening process, Glyde (1977:253) argued that, if a candidate's work history demonstrates various occupation changes (also known as job hopping) or long lengths of joblessness, their human capital may be undervalued, and thus end up being underemployed. Wilkins (2006:381) finds comparable results, that being without work for a long time fuels the chances of being underemployed. This impact is observed to be sturdier for female respondents than their male counterparts. A number of reasons could help clarify this; one being that at times, individuals who have been without work for a long period tend to eventually withdraw from the labour market. If they do decide to return, they may do so with skills that have depreciated and irrelevant training amongst others, limiting their likelihood of finding standard work. Unlike other further factors of production, if labour is not used when its available, it is lost forever (Mohr & Associates, 2015:401). Hence, an individual may end up accepting work they would otherwise not accept.

Racial minorities are often associated with negative employment outcomes. Non-white workers in comparison to their white counterparts have the highest probability of being underemployed (Bell & Blanchflower, 2013:17). A possible factor that can explain this is that some racial minorities (blacks in most cases) often follow courses with lower job market demand (Moleke, 2010:17), which is why study choice may add to the probability of being in underemployment (Caroleo & Pastore, 2013:19). Besides race, the quality of the HEI and subject of study are also a statistically significant determinant of underemployment likelihood (Mosca & Wright, 2011:5-6).

Even migration status is viewed as one of the significant determinants of underemployment with the likelihood of being in this state substantially higher for migrants than for those born in the country emigrated to (Li *et al.*, 2015:441; Mutuku, 2017:3). The majority of them are undocumented and in this way tend to accept any jobs, frequently low-paying that do not require any authorisations (Passel, as cited by Blanco, 2017). This is particularly valid in developing countries as the vast majority of the labour force primarily cannot bear to be entirely unemployed; they should go up against whatever

employment is accessible to sustain their lives (Sugiyarto, 2007:8). Therefore, it is likely that immigrants will find themselves accepting any kinds of jobs for survival purposes. Odds of being underemployed turned out to be less if the worker is from an English speaking country (Miranti, Cassells & McNamara, 2010), which implies that non-English speaking background immigrants have an elevated probability of underemployment.

Family background is also another important predictor of underemployment, a perspective that stems from the social determinants theory that the quality of an individual's life is determined by broad socio-economic, cultural and the environmental circumstances (Hagell, Shah, Viner, Hargreaves, Varnes & Heys, 2018:8). Applicants from well-off families have the advantage of securing full-time work in most cases (Glyde, 1977:252-253) in contrast to individuals from disadvantaged backgrounds. Interestingly, Wilkins (2006:380) found that family background (parent's employment status) was a significant determinant of underemployment for males. The study found lower probabilities of underemployment for males who when they were 14 years old lived with employed parents, particularly a father, in contrast to those whose fathers were not present or employed. Literature also finds the geographical location as another potential source of underemployment (Jensen, Findeis, Hsu & Schachter, 1999:435). According to Ngniodem and Stephane (2019:21) individuals who are from least developed regions are more likely to be underemployed regardless of whether they live in urban or rural areas. This then relates to the economic sector in which the worker may work. Underemployment seems to be high in rural localities, where agriculture is the main source of sustenance (Domfe *et al.*, 2013:37, Pratomo, 2015:529). This finding is driven by the nature of not so predominant economic activities in these localities. Even when workers from these non-metro areas are already underemployed, they are still less likely to become adequately employed (Denu, Tekeste & van der Deijl, 2005:8). On the contrary, Ansah (2012:109) found underemployment to be more prevalent in urban areas than rural areas. Hence, various contributing factors combined with economic, social, and geographic characteristics make underemployment unique to specific areas.

2.2.4.3 *Employment-related factors*

Education is one of the most important determinants of the success or lack in the labour market, and a significant influence on patterns of underemployment. This is what Glyde (1977:253) alluded to as '*credentialism*'. The relationship between educational attainment and underemployment finds its roots in the theory of human capital, which has reinforced the idea that employment benefits improve with the level of education and training received (Krul, 2010). Those with only lower educational levels are more likely to work in jobs that are inferior and temporal in nature (Hersch, 1995:611; Wilkins, 2006:382), which is why educational attainment beyond high school is associated with lower probability of underemployment since a higher level of education implies a broader set of possible work choices

and therefore the lower the probability of being underemployed (Domfe *et al.*, 2013:44; Herrera & Merceron, 2015:104). However, if the job market does not provide many jobs that require high levels of education, a given highly educated worker is likely to perceive that his or her probability of being underemployed is rather high. Even Yamada (2015:1) found overeducation as one of the sources of underemployment. Some research has found majors held by graduates to be significant predictors of underemployment, where the likelihood of being underemployed was lower for those with more technical majors than it was for those with degrees in general fields (Abel & Deitz, 2016). Hence, graduates with generic degrees (Economic and Management Sciences, Humanities and Arts) are most likely to take any job given the scarcity of jobs related to their studies fields (Moleke, 2006).

Another potential determinant of underemployment relates to job characteristics such as job type, career history, and job search strategies (McKee-Ryan *et al.*, 2009:575). A skilled individual is likely to feel underemployed if they are in a job that is elementary. The same is true if an individual is in a job that is repetitive, less challenging and less intriguing, they may feel that their skills and abilities are not fully utilised, leading to less job satisfaction (Grapsa, 2017:6). In terms of career history, Glyde (1977:245) argued that individuals who drop out of the labour force more often than the average will face a greater probability of underemployment than otherwise. They can find themselves in jobs of perhaps a short term nature or even in longer non-permanent jobs until the employer is certain of their capabilities and will not leave the firm. Similarly, these workers are also less likely to be promoted and hence are confronted with a high chance of experiencing transitional underemployment turning into permanent underemployment (Glyde, 1977:248). A possible explanation is that when the promotion process is not able to put all similarly qualified individuals in positions that utilise their capabilities entirely, workers may feel underemployment.

The type of industry and job is also one of the predictors of underemployment, and the probability differs for both females and males. Workers in the wholesale and retail as well as private household sectors were considerably bound to be underemployed relative to workers from other industries (Cam, 2014:15; Beukes *et al.*, 2017:50). Also, those working in the community, social and personal services as well as real estate, financial intermediation, insurance and business services occupations were significantly more likely to be underemployed (Felstead & Green, 2013:11-12; Mathebula, 2017:60). Underemployment is relatively more likely in lower-skill-level jobs with the exception of being male workers (Yu, 2009:21). Wilkins (2006) also found underemployment in the different industries to vary across gender. For females, education, manufacturing and personal service industries are associated with relatively higher probabilities of underemployment. Two industries stand out for males as having high rates of underemployment: education; and health and community services. Underemployment is also more likely for those working in the informal and public sectors (Ansah, 2012:107; Beukes *et al.*, 2017:50).

Underemployment is also triggered by job loss where those without jobs may be forced to accept any kind of job, even when they may be overqualified for it or it is inferior to their previous job. This view is supported by McKee-Ryan, Song, Wang and Kinicki (2005:54) who argue that at times, job loss creates an involuntary and an unexpected break to a career, consequently resulting in reduced earnings over time (Theunissen, Verbruggen, Forrier & Sels, 2011:111). The argument here is that a job loss results in mental and psychological stress and this distress according to Wanberg (2012:369) will be subsided by reemployment. Consequently, people who are currently without employment will attempt to find another job at the earliest opportunity as staying unemployed will exacerbate the distresses. Verbruggen, van Emmerik, van Gils, Meng and de Grip (2015:8) found that when laid-off individuals were able to find new jobs, these jobs were often with large reductions in wages or resulted in employment in a lower or inadequate job, leaving these workers underemployed.

Underemployment is likewise determined by years of work experience. Individuals employed with less working experience such as young people could be reluctantly underemployed, while those with longer years of experience may be the more elderly workers who work shorter hours as they are approaching retirement (Beukes *et al.*, 2017). Underemployment in the form of being over educated was also found to be prevalent amongst young workers with limited working experience (Fleming & Kler, 2008:1123).

Table 2.3 below presents a summary view of the determinants of underemployment discussed in this sub-section. As can be seen from Table 2.3, various contributing factors combined with economic, demographic and employment related factors make underemployment unique to specific economies, individuals, jobs and areas.

Table 2.3: Summarised determinants of underemployment from literature

Factors	Main determinant	Authors
Economic Factors	Poor economic growth	Feldman (1996) Abel <i>et al.</i> (2014) Bell and Blanchflower (2013)
	Negative economic perceptions	Bonnal <i>et al.</i> (2009)
	Recessionary pressures/negative business conditions	Lyonette <i>et al.</i> (2010). Pratomo (2015) Kamerade and Richardson (2018)
	Increasing and persistent unemployment / A lack of job creation	Tasci (2006) Virick and McKee-Ryan (2017)
	Gender (being female)	Glyde (1977) Altman (2009) De Anda and Sobczak (2011) McKee-Ryan and Harvey (2011) Sengenberger (2011)

Factors	Main determinant	Authors
Demographic and socio-economic factors		Rubery and Rafferty (2013) Cam (2014) Angrave and Charlwood (2015) Ngiodem and Stephane (2019)
	Gender (being male)	Tasci (2006) Tam (2010)
	Age (being young)	Ruiz-Quintanilla and Claes (1996) Fleming and Kler (2008) Tam (2010) McKee-Ryan and Harvey (2011) Reynolds (2012)
	Age (being older)	Sackey and Osei (2006) Tasci (2006) Erdogan and Bauer (2009) Tam (2010) McKee-Ryan and Harvey (2011) Herrera and Merceron (2015)
	Discriminative and bias labour market practises	Glyde (1977) De Jong and Madamba (2001)
	Race (non-Whites)	Mau and Kopischke (2001) Bell and Blanchflower (2013).
	Family background	Glyde (1977) Wilkins (2006)
	Migration status (foreigner) Being from a non-English speaking country	Sugiyarto (2007) Miranti <i>et al.</i> (2010) Mutuku (2017)
	Geographical location (least developed, rural regions)	Jensen <i>et al.</i> (1999) Denu <i>et al.</i> (2005) Sackey and Osei (2006) Domfe <i>et al.</i> (2013) Pratomo (2015).
Employment related factors	Credentialism (lower educational levels)	Glyde (1977) Hersch (1991) Ruiz-Quintanilla and Claes (1994) Domfe <i>et al.</i> (2013) Herrera and Merceron (2015)
	Quality of HEI	Mosca and Wright (2011) Yamada (2015)
	Being overeducated	Fleming and Kler (2008) Yamada (2015)
	Graduate majors (generic subjects)	Moleke (2006) Caroleo and Pastore (2013) Abel and Deitz (2016)
	Years of working experience	Fleming and Kler (2008) Beukes <i>et al.</i> (2017)
	Job type Low skilled jobs	Friedland and Price (2003) Grapsa (2017) Wilkins (2006)

Factors	Main determinant	Authors
		Yu (2009)
	Sector of employment (informal and public) Wholesale, retails and customer service industry Industry (real estate business service, financial intermediation and insurance)	Ansah (2012) Altman (2003) Cam (2014) Beukes <i>et al.</i> (2017) Felstead and Green (2013) Mathebula (2017)
	Career history (job hopping and long periods of non-employment)	Glyde (1977) Wilkins (2006)
	Job loss	McKee-Ryan <i>et al.</i> (2005) Verbruggen <i>et al.</i> (2015)

Source: Authors own compilation

2.2.5 Various forms of underemployment

Economics literature typically looks at three types of underemployment, which include *time-related underemployment* and skills-related and income-related underemployment which are often defined under an umbrella referred to as '*inadequate employment situations*'. Of the three, time-related underemployment is simpler to measure while both skills-related and income-related underemployment are more problematic to measure (O'Halloran & Skiba, 2014:175). As a result, time-related underemployment has generally been accepted and endorsed by the ILO as the main measure of underemployment given the presence of measurement issues which are encountered in the measuring of skills and income-related underemployment. Given these diverse issues, underemployment exhibits a theoretical dilemma. Nonetheless, this subsection will explain the various forms of underemployment. Figure 2.2 summarises the main forms of underemployment.

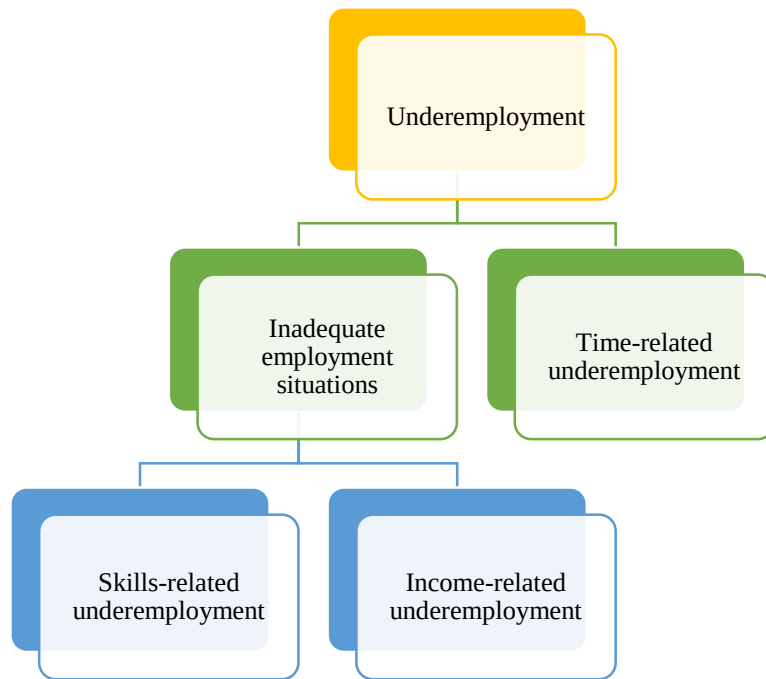


Figure 2.2: Main forms of underemployment

Source: Author's own compilation

2.2.5.1 *Time-related underemployment*

Time-related underemployment can be explained as the desire to work more hours than one is currently working, i.e. involuntarily being in part-time employment though desiring full-time work (Greenwood, 1999:4; Maynard, Joseph & Maynard, 2006:512). According to the definition adopted by the 16th International Conference of Labour Statisticians in 1998, time-related underemployment is defined as all persons in employment during the short reference period who satisfy the following three criteria of:

- willing to work extra hours,
- available to work extra hours, and
- working less than a threshold relating to working time.

In this context, underemployed part-time workers are a subset of persons who are considered as employed according to the ILO definition and include persons that wish to work more hours and are readily available to work more (Cymbranowicz, 2017:37). As described by Greenwood (1999:6), the willingness to work extra hours is the principle criteria and this implied that people in this circumstance were willing to firstly, change their current paid employment(s) for another employment with more hours of work, secondly, acquire an additional job in addition to the current job, thirdly, work more hours in their present job and lastly, a combination of the formerly mentioned factors.

The normal duration of work for an activity (normal hours) should be determined in the light of national circumstances and labour laws (Sugiyarto, 2007:1). Workers who for the most part work less than 35 hours every week but might want to work more are considered to experience time-related underemployment (Wilkins, 2007:252). Quantitative underemployment can be linked to time-related underemployment as an individual finds themselves working fewer hours than they would like to (Beukes *et al.*, 2016:3).

The availability to work additional hour's criteria implies merely that workers should be ready and have the time to work the extra hours of work, whether in the current job or a new one. According to Greenwood (1999:7), the last criterion simply aims to exclude those that are regarded as being fully employed, i.e., workers who are already working enough hours, which may be equal to the respective country's working hour's threshold.

2.2.5.2 *Inadequate employment situations*

Time-related underemployment on its own does not measure the full extent of underemployment, and as such, inadequate employment situations which fits within the concept of underemployment are used to broaden the understanding of the occurrence (ILO, 2016-77-78). "*Inadequate employment situations capture persons who during the reference period (1) wanted to change their current work situation, (2) for reasons that limit their capabilities and well-being and (3) were available to do so*" (Greenwood, 1999:8). These reasons have been understood by worker's subjective valuations of their job. The three main kinds of underemployment explaining inadequate employment situations are explained below.

- *Skills-related*

Skills-relation to underemployment denotes that it is the skills instead of the worker's time that is underutilised (ILO, 2016a:114). This kind of underemployment can be explained by job field underemployment which mirrors an individual employed in a job that is outside his or her formal education and training (Burke, 1998:83). This is known as a job field underemployment (McKee-Ryan & Harvey, 2011:974). It identifies workers who have above average levels of education and training for a given occupation (Lim & Schulker, 2010:10-11; Herrera & Merceron, 2015:103-104). Technically, this implies that the skills of the worker are underutilised and therefore undervalued (Glyde, 1977).

Skills-related underemployment can likewise be described as qualitative, where an individual is qualitatively underemployed when they are forced to accept a job associated with skills levels below their qualification, which consequently mean lower remuneration (McKee-Ryan & Harvey, 2011:963). This is referred to as experience underutilisation. Often (even though not generally) skills-related underemployment is associated with lower remuneration as compared to the remuneration received by

other workers with equivalent education and experience (Ruiz-Quintanilla & Claes, 1996:425). García-Aracil and Van Der Velden (2008:221) additionally contend that, undeniably, those working in jobs for which they are over-educated (over-qualified) for will frequently earn less than individuals with the similar education level working in jobs for which the education is adequate (appropriate level).

Other important forms of underemployment that are linked to skills-underemployment are known as intra-skill and inter-skill underemployment. According to Glyde (1977:247), intra-skill underemployment arises when persons from a particular skill group are not capable of using their skills in the same manner as the average person from this skill group. Factors behind this don't relate to the demand for those specific skills, instead it might allude to factors such as discrimination by employers or the manner in which those persons are seen in as far as their capacity or ability is concerned and the equivalent costs related to the employment of these individuals (Beukes *et al.*, 2016:2). On the contrary, inter-skill underemployment as stated by McKee-Ryan and Harvey (2011:966) arises when individuals within a particular skills group are less attractive or rather not in demand than other individuals who have made a comparable investment in education/skill on the grounds that the skill is unrecognised in the labour market.

Skills-related underemployment has been associated with overeducation (Wilkins & Wooden, 2011:28), or rather underutilisation of education. Overeducation means having more education than the minimum required for a job. It is regarded as a vertical education mismatch which refers to an excess of education that exceeds the level needed to perform a certain job (McGuinness, 2006:381). Overeducation is also connected to overqualification which according to Wu and Wang (2018:207) refers to the possession of a higher qualification than the job requires.

Concerns about overeducation amongst graduates, while not new (*see* Freeman, 1976), have received extensive research and media consideration from research. Freeman challenged the principle of an automatic relationship between educational qualification and economic success, and as a result, endeavoured to explain why the United States had an oversupply of graduates. Freeman (1976) viewed overeducation to result from of a distortion in the supply of graduates and the demand for graduates, largely as a result of demographic variations in the population which have triggered a surplus of graduates and a resultant decline in the economic rate of return to investment in higher education. The increased supply of highly educated workers which exceeds the demand consequently generates the phenomenon of overeducation.

Even though certain graduates accept jobs which require fewer qualifications or even non-formal degrees, and are still productive and satisfied workers, these jobs do underutilise their skills and education. Also, although it is expected that individuals will experience a change in interest and

occupations during their career lifespan, for new graduates, to accept jobs which are irrelevant to their education speaks to underemployment (Feldman & Turnley, 1995:692).

- *Income-related*

Underemployment can be income-related when a worker earns less income it would otherwise be or substantially inferior to the income earned in the previous job (Couriel, 1984:39-40). To Saunders (2015:72) income-related underemployment captures individuals who are willing and available to change their current work situation to increase their income. The ILO (2008:7) formally defined workers in income underemployment as those who amid the survey period, wanted and were accessible to change their present employment circumstances so as to expand their income. This is the income-related to all their jobs without increasing the number of hours (Greenwood, 1999:9).

Zvonkovic (1988:168) initially categorised income underemployment as a person currently earning 20 per cent less than in the past employment. Findeis *et al.* (2009:11) explained income-related underemployment as a situation where a worker's previous income is less than 125 per cent of the poverty threshold. According to O'Hollaren and Skiba (2014) the lower earnings can at the time be attributed to some of the employer or workplace such as a lack of on-the-job training or poorly organised work arrangements. Acosta-Ballesteros *et al.* (2018:28) linked income underemployment to an economic recession, in other words, this type of underemployment would occur where the income and/or working hours of workers have been reduced because employers or firms have reduced their production capacity, a situation that may be traced back to labour hoarding. As a result, the low pay can at times translate into poverty (Rutkowski, 2006:19), which may have severe effects on welfare.

- *Inadequate employment situations related to excessive hours*

Generally, experiencing excessive hours implies that a worker works more hours than they would like to. Formally, this means the worker is over employed as their actual working time is in excess of the upper limits set by the country (Sengenberger, 2011:92). Subsequently and as elucidated by Domfe *et al.* (2013:44), the worker seeks to work fewer hours either in the same job or a different job, with a equivalent decrease of earnings. In both cases, the reduction in the hours worked infers a decline in income earned (Greenwood, 1999:9). Hence, excessive hours relate to inadequate employment situations. Nonetheless, according to Wilkins and Wooden (2011:15) working excessive hours is not a form of underemployment, as to imply so is preposterous and inconsistent as it does not mean one is underutilised. Nonetheless, working excessively long working hours have detrimental effects on the workers' health and ultimately on families and overall life.

2.2.6 Measuring underemployment and underutilisation

Statistics on underemployment and underutilisation are very important as they can complement statistics on the circumstances of the country's economically active population. Although it has been possible to measure unemployment, underemployment, on the other hand, seems to have a number of problematic issues when it comes to measurement, given its multidimensionality. Many attempts have been made by academic researchers to measure underutilisation in order to have a more representative indicator that will, in the end, assist in understanding the dynamics of a labour market and also in employment situations (e.g. Dooley & Prause, 2004:218; McKee-Ryan & Harvey, 2011:962). Most countries have resorted to officially measure underemployment as the number of part-time workers who say they would like to be in full-time work, which Bell and Blanchflower (2018:3-4) argues could seriously underestimate the real situation. The primary objective of measuring underemployment and inadequate employment situations is to improve the analysis of labour markets, particularly, employment problems and to contribute toward formulating and evaluating policies and measures intended to encourage full and productive, and liberally preferred work (Sugiyarto, 2007:2). This is particularly important, as *“typical labour market tools for measuring unemployment produce numbers that differ with most people's personal experience and the anecdotal confirmation from friends and family, hence, focusing exclusively on the unemployment rate fails to take account of other numerically important manifestations of labour market slack (or simply labour slack)”* ((Bershidsky, 2018:7).. Nevertheless, McKee-Ryan (2011:974) maintains that measuring underemployment is immensely intricate disregarding its multidimensional nature but as a result of possible connections between its types. This section of the chapter attempts to thoroughly explain ways in which underemployment and underutilisation are measured across the world.

2.2.6.1 ILO underemployment measurement framework

The statistical measurement of underemployment is commonly limited to visible underemployment. The resolutions of the 16th ICLS in October 1998 recommended that measurements of underemployment be limited to time-related underemployment which is indicated by involuntary part-time work and short time work (Sengenberger, 2011:93), as it is easier to measure than inadequate employment situations. The ILO uses an underemployment measure that limits underemployment to working hours only (see Figure 2.3 below).

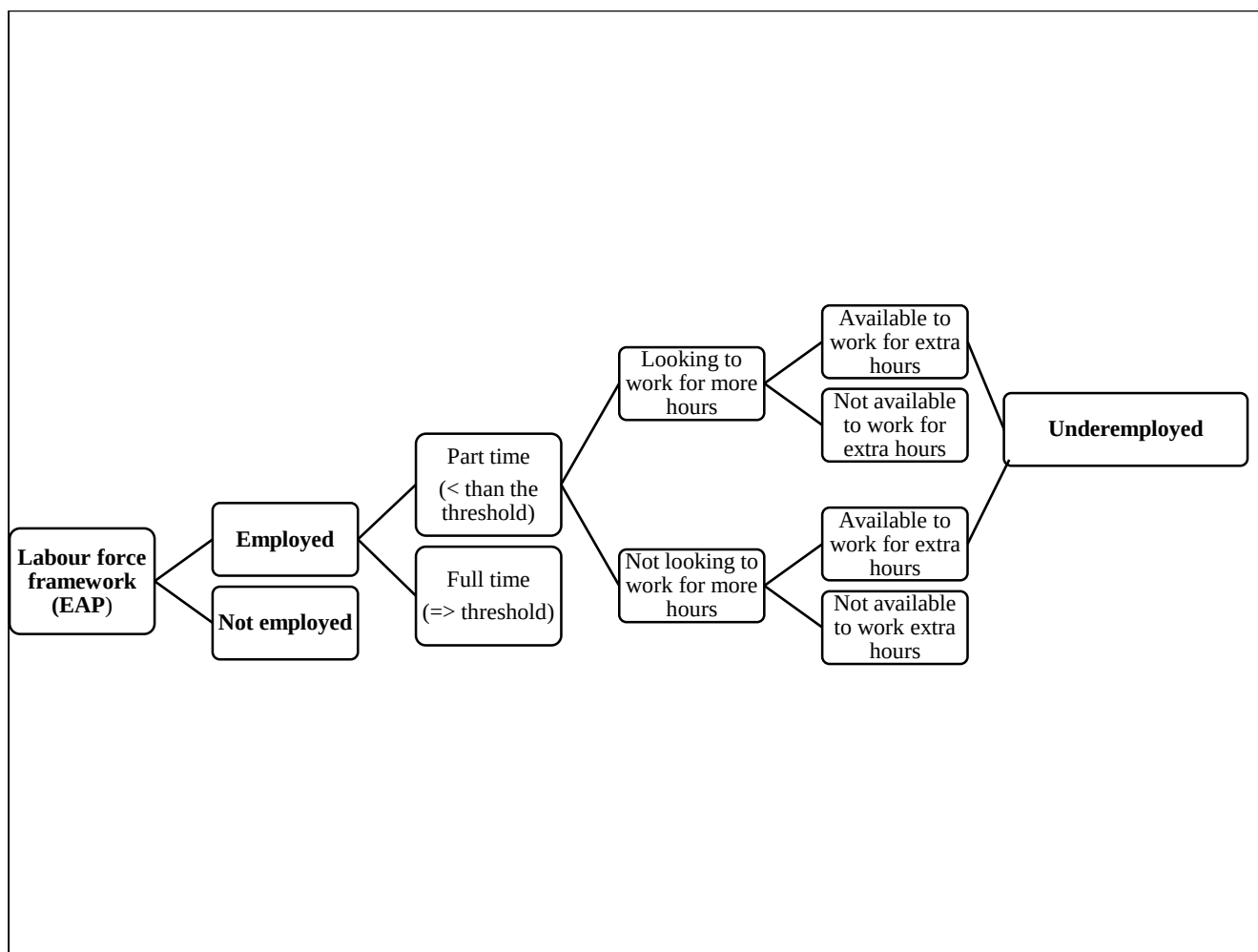


Figure 2.3: ILO Labour Force Framework for measuring underemployment

Adapted from: Hussmanns, Mehran. & Verma (1990); ILO (2008:27); Wilkins and Wooden (2011)

Figure 2.3 shows the ILO strict framework for measuring underemployment, which is entirely in view of underemployment as characterised by time or working hours. Given the fact that the last two criteria of looking and being available for additional work (in sub-section 2.2.5.1) are hardly ever used, most underemployment indicators are calculated based only on working less than the threshold (maximum working hours), which is country specific in most case (Sugiyarto, 2007:7). The ILO measurement has received criticism over the fact that it understates the severity of underemployment, especially given the fact that it overlooks other inadequate measures of skills and income underemployment.

2.2.6.2 Objective measurement and subjective measurement

Literature indicates that underemployment measures included both relatively objective measures and subjective valuations of the employment experience by the worker (Maynard *et al.*, 2006:511-512; McKee-Ryan, Virick, Prussia, Harvey & Lilly, 2009:562). The measurement of time underemployment

has always been straightforward in the sense that whether an individual is considered underemployed depended on the threshold is given, which differs from country to country. Measurement, however, is much more complex for inadequate employment situations given the difficulty in defining or identifying them. There is still an absence of a decided measure of underemployment both within and across disciplines (Allan *et al.*, 2017:94).

- *Objective measurements*

Skills-related underemployment is estimated within the overeducation literature, of which the objective approach includes '*realised matches*' of the average education level within an occupation and expert's job analysis examining job titles (Herrera & Merceroni, 2015:88). Despite the fact that the job analysis method is regarded as an objective measure, it is also seen as an objective measure that is grounded on subjective standards, or an opinion definition of matching performance (Bédoué *et al.*, 2005). The job analysis approach pertains to job analysts who assess the level of education mandatory for a job. Hartog (2000:133) describes this approach as an orderly valuation by specialised job analyst who determines the necessary level and type of education (even training) for the job titles in an occupational classification. Under the objective approach, the worker's work situation is contrasted with the standard match as identified by the expert's job analysis (Leuven & Oosterbeek, 2011:292; Baidoo, 2017:5), which is done autonomously, without the worker's insight. However, one drawback of the job analysis method is that since it requires extensive analysis from job tasks to even technology, the required careful, systematic work might be excessively costly, making it impossible to complete the assessment on a huge scale (Hartog, 2000:134).

There is also a different method, which is known as the '*mean plus standard deviation*' or the '*realised matches*' approach. With this approach, the required education is derived from what workers in the respondent's job usually have attained (Hartog, 2000:134). The realised matches calculate the distribution of education (based on completed years of schooling) for each job and workers who depart from the mean by more than one standard deviation are classified as being educationally overqualified for their job (Leuven & Oosterbeek, 2011:292). However, this approach as argued by Halaby (1994:49) overlooks the differences in educational requirements within a job. According to Farooq and Ahmed (2007:898) in case of changes in the labour market such as an occurrence of a surplus of labour, employers will hire highly educated workers than in fact required, which presumes that the method based on realised matches is inadequate for determining over- and under-education. Hartog (2000:135) additionally argues against the inability of the realised matches' method to uncover the requirements of the job in as far as technology is concerned. In addition, the problem with objective measures is that they compare jobs against a distinct threshold of low wages or working hours and it disregards the individual's prospects or experiences encountered in previous employment (Maddocks, 2012:22).

Others as previously mentioned (see Findeis, Shields & Shrestha, 2009:11) measure income underemployment as earning an income that is below the poverty line. However, a major drawback of this approach is a failure to adequately capture this phenomenon as workers in high skill occupations earn incomes that are significantly above the poverty line (Baidoo, 2017:12).

- *Subjective measurement*

Subjective methods on the other hand, rely on subjective measures such as comparing a worker's subjective assessment of minimum educational requirements of their job to the actual levels of their education and training (Verhaest & Omeij, 2006:421). These are known as indirect self-assessments approach which compares a worker's level of education to that which employers deem appropriate for the position. The subjective approach can likewise encompass direct self-assessments where respondents are enquired as to whether they are overeducated, undereducated or appropriately educated for their job (Wilkins & Wooden, 2011:16). It might be a direct and unequivocal specification of the kind of education required, or it may be indirect, comparing the worker's actual education (whether it is higher, lower or different) against that needed for the occupation (Hartog, 2000:136). Subjective or perceived underemployment is a social psychological mismatch, where an individual may still think that he/she deserves a better position in spite of not falling into the objective classifications of lower working hours or remuneration than in a former position, or the objective evaluation of the education and skills attained against those required for the position (Maddocks, 2012:23)

Worker self-assessments have the advantage of drawing on all local, up-to-date information (Hartog, 2000:134-135), since information is attained from the primary source, the worker's themselves. Nevertheless, this method does not go without criticisms, as according to Cohn and Khan (1995:68) workers may not have enough (or good) knowledge of the education requirements of an occupation, resulting in issues of bias. Another problem with this the subjective method is that there would be a probability of misreading questions and concepts (Maddocks, 2012:24). Workers may even exaggerate the requirements of their jobs to worsen the perceived status of their position (Hartog, 2000:140).

2.2.6.3 *BLS Alternative Measures*

The BLS does not formally evaluate underemployment since a measure that precisely quantifies the quantity of individuals who are underemployed and the real economic costs of underemployment has not been found (Dixon, 2018:4). Rather, the BLS measures other types of labour underutilisation notwithstanding the official unemployment rate. These measures are the alternative measures of labour underutilisation as done by the Bureau of Labour Statistics in the United States. The BLS began publishing the seven alternative measures of unemployment since 1977, with the marginally attached workers, *inter alia*, discourage workers being of particular interest (Addy *et al.*, 2012:217; Bureau of

Labour Statistics, 2018). The BLS measures have enjoyed global acceptance ever since their introduction. These measures continued to evolve until they were developed into six measures because of changes that were made to the questionnaire at that time. Of particular interest was the definition of the marginally attached workers of which discouraged workers formed part of. According to Mitchell and Carlson (2002:7), these are workers who overtly want employment, they are available for it and have looked at some point in the prior year, but they are not presently searching for different reasons. Discouraged workers on the other hand have given up job search completely despite wanting a job and being available. Table 2.4 defines the six BLS measures currently in use.

Table 2.4: BLS alternative measures of labour underutilisation

Measure	Meaning of the measure
U-1	Persons unemployed 15 weeks or longer, as a percentage of the civilian labour force
U-2	Job losers and persons who completed temporary jobs, as a percentage of the civilian labour force
U-3	Total unemployed, as a percentage of the civilian labour force (official unemployment rate)
U-4	Total unemployed, plus discouraged workers, as a percentage of the civilian labour force plus discouraged workers
U-5	Total unemployed, plus discouraged workers, plus all other marginally attached workers, as a percentage of the civilian labour force plus all marginally attached workers
U-6	Total unemployed, plus discouraged workers, plus all other marginally attached workers, as a percentage of the civilian labour force plus all marginally attached workers

Source: BLS (2018)

As can be seen in Table 2.4, the U-2 measure consists of those who are in temporary jobs, while the U-5 measure contains those who are marginally attached to the labour force. The U-6 measure depicts individuals who are in part-time employment for economic reasons (or ‘involuntary part-time workers’) (Eurofound, 2017:10). The economic reasons include but are not limited to a decrease of their working hours or failure to find a full-time job.

The contrast between the U-5 and U-6 measures gives the best portrayal of underemployment, at least between those who are in part-time employment but would rather be in full-time employments (Dixon, 2018:5). The U-6 measure is, in fact, the most comprehensive measure compared to the other alternative measures as it shows all unemployed, all marginally attached plus all persons working part-time for economic reasons (underemployed) as a percentage of the labour force augmented to include marginally attached workers. Economic reasons for this status include recession or business cycle effects, seasonal

fluctuations in demand, and inability to find full-time work (Addy *et al.*, 2012:216). Being the most extensive, the U-6 measure gives statistics about underemployment of presently working workers (Mitchell & Carlson, 2002:7-8). The U-4 and U-5 measures on the other hand specifies underutilisation of willing labour resources, who according to Bregger and Haugen (1995) must openly want and be available for work and have searched for work in the prior year despite the fact that they are not currently looking for a job because they do not think their job search would be fruitful. The greater the variance between U-6 and U-5, the higher is the incidence of involuntary part-time employment in the form of underemployment (Eurofound, 2017:10).

The BLS employment measures have received some criticism over the years. Addy *et al.* (2012:217-218) contend that the BLS fails to consider underemployment amongst full-time and voluntary part-time workers and as a consequence, provides inadequate information on the complete magnitude the underemployment situation, especially given that these kinds of underemployment have been recognised as underutilising labour somehow (Maynard *et al.*, 2006:512). The standard measures neither recognise subtle differences amongst jobless individuals nor capture important differences amongst individuals with jobs (Lim & Schulker, 2010:11). The U-6 measure has in some countries such as Australia, been expanded into U-6a and U-6b, where the former includes all part-time workers who preferred to work more hours and the latter one which includes only those working part-time who preferred to work more hours and who looked for full-time work (Australian Bureau of Statistics, 2014). At the same time, Bregger and Haugen (1995:19) argue that although the BLS alternative measures offer valuable labour market information, they are still not comprehensive enough. They further maintain that those who utilise the measures seem to confine their use to a contrast between the official measure of unemployment (U-3) and the highest available measure (U-6), while not much is heard the other alternative measures.

2.2.6.4 *Other alternative measures*

- *Extended non-employment index*

The extended non-employment index is another measure of the typical unemployment rate and incorporates all individuals who are not employed and accounts for insistent variances in their attachment to the labour market, giving an increasingly clear picture of labour market performance (Byrne & Conefrey, 2017:10). This non-employment index was proposed by Hornstein, Kudlyak and Lange (2014:2) and has come to be utilised in various countries and states in the world including Ireland and some states of the US.

This measure allocates scores to the different classifications of the non-employed centred on their transition to finding employment, viably an employability weight. In light of information from the US

Bureau of Labour Statistics, this non-employment index incorporates the official unemployment rate and other measurements alluding to classifications such as those considered to be '*out of the labour force*' – who are not in employment nor actively searching for one – and are involuntarily in part-time work (Eurofound, 2017:10-11). Specifically, as indicated by Eurofound (2017) these added classifications comprise the following subcategories:

- Persons who are not in the labour force but desire to find work - which is a subcategory of individuals who are marginally attached which likewise covers discouraged job-seekers).
- Persons not in the labour force and have no desire to find work – including those in retirement, the handicapped, still in school, or fall in other inactive groups, that is, neither retired, nor disabled, nor in school).
- Persons in part-time work for economic reasons, however, who prefer to work full-time, and thus may be regarded as underutilised.

This measure is broader than the vast majority of the standard extended unemployment measures, yet it likewise represents significant differences in the employability of individuals considered non-employed (Hornstein *et al.*, 2014:2-3). According to Eurofound (2017:10) analysis done on US data (1994–2013) indicates comparable movements in both the standard unemployment rate and the extended non-employment index, perhaps proposing that the former does not exaggerate the level labour utilisation.

- *Underemployment index*

Bell and Blanchflower (2013:14) additionally utilised the time based definition of underemployment, inquiring as to whether employees were working less hours than they desired. These findings were then used to construct an underemployment index to capture surplus labour given the unemployment rate's inability to completely capture the degree of excess capacity in the labour market (Eurofound, 2017:10). According to Beukes *et al.* (2017:39), this index is a broad unemployment rate as the worker's inclination to supply additional working hours is calculated. The Underemployment index has enticed the consideration of economists and policy makers since being published in 2013, and is already been regarded as an alternative labour market indicator for excess labour capacity in countries such as England.

- *Missing worker's estimation*

According to Shierholz (2013:3), the missing workers are potential labour market participants who are without work and are also not vigorously searching for work given scarce and poor work opportunities. They are not reflected in the unemployment rate since they are not active work-seekers. Thus, even

though an economy can recover from a weak economic situation, some individuals permanently exit or chose not to enter the labour market simply because of weak economy that is failing to create job opportunities. Statistics (2006 – 2017) in the US shows that the standard unemployment rate in fact vastly understates the weakness of the country's labour market as findings reveal that the unemployment rate (4.4%) would be higher (5.2%) if these missing workers were actively searching for employment (Economic Policy Institute, 2017). As a result, the estimation of missing workers is a good indication to policy makers about the overall health of the labour market.

2.2.7 Measurement issues

2.2.7.1 Time-related

Given the intricacy and multidimensional nature of underemployment, there are often some conceptual problems in measuring it. Sugiyarto (2007:9-10) mentions three issues which arise when measuring time underemployment. First, the question of '*looking to work for more hours*' may be translated as just desiring more working hours from the current employment, disregarding the other criteria of searching for an extra job or even a new one. Secondly, there is some ambiguity on what being available implies, as it might mean being only accessible for more working hours or being accessible for additional jobs. Lastly, the reference time frame for accessibility can allude to the survey's reference time frame or to the not so distant future, for example, the following week or month. This may particularly be valid as despite the fact that in many countries availability relates to the survey reference period while in some countries that may allude to the period after the survey. Also, the fact that working hours' threshold differs from country to country implies that the data gathered is often not internationally comparable.

2.2.7.2 Inadequate employment situations

Inadequate utilisation of skills or income is very difficult to measure (ILO, 2016a:132). Matching a worker to a job entails a lot of factors some of which are difficult to measure than the others such as abilities or preferences. Skills underemployment is often measured within the overeducated literature. The difficulties with measuring skills-related underemployment are associated with identifying the skills requirements of different jobs and even measuring skills levels (Wilkins & Wooden, 2011:3). Hence the ILO and national statistical services do not publish statistics on skills underemployment.

2.2.8 Consequences of underemployment

Underemployment has negative consequences for the individual, firm and society as a whole. Equally important is also the fact that an increased occurrence of job-mismatches imply an education system failure which is costly for economies, for firms and for workers (Levels, van der Velden & Di Stasio,

2014:343). It affects the financial, emotional and social well-being of the individual (Lacmanovic *et al.*, 2016:344). At the individual level, it is argued that undergoing a spell of negative employment outcomes might have long-term negative impacts on occupational accomplishment and future job finding rates (Anand *et al.*, 2016:11). At the firm level, underemployment brings about low productivity, low levels of job participation, and high numbers of workers who leave the organisation and may, in the long run, impede the effectiveness of the organisation (Maynard *et al.*, 2006:513). From a strict macroeconomics' standpoint, *“educational mismatch represents wasteful public investments and resources allocated to higher education sector, thus risks of not training enough graduates for industries that extremely need them and too much graduates for fields that do not have enough demands”* (Sam, 2018:2). Chevalier (2003:509) argues that there is a loss of output that could have been produced had the workers been fully employed but was not. This is related with the waste of resources and the forfeiture of efficiency (Budría & Moro-Egido, 2009:329) which can even affect the overall economic growth.

At the macroeconomic level, underemployment implies inefficiency and social welfare loss; disparities in income and access to productive jobs; lost output; slowing economic growth and competitiveness; higher poverty levels and reduced consumer demand (Lacmanovic *et al.*, 2016:343; Li *et al.*, 2015:441). *“As countries' productivity and welfare could be higher if overeducated workers' skills were fully utilised and tax revenues might be wasted on providing workers with skills that do not contribute to their productivity, economies suffer from a high mismatch incidence”* (McGuinness, 2006:388). This means that with inadequate income, consumer spending suffers, eventually decelerating the growth of firms, national output and employment; a vicious, downward spiral. In fact, Wilkins (2007:247) found the consequences of underemployment to be practically appalling as unemployment. When young people are not fully participating in the labour force, they become a burden on the economy, governments forgo tax revenue and incur the cost of social safety nets, unemployment benefits and insurance (Lopez, Gonzalez & Glick, 2015:2-3). Another factor is that young people without any economic opportunities are a political threat as they may become violent and threaten political stability and social cohesion (Flynn *et al.*, 2017:11; AfDB, 2012:1).

Reviewing the literature on underemployment, inadequate employment is connected to damaging effects on worker's well-being as a result of disappointment that comes with inferiority or reduced social status (Konrad *et al.*, 2013:367; O'Halloran & Skiba, 2014:175). In his research, Holmes (2000) argued that when a graduate is unsuccessful in finding a graduate occupation or only find a non-graduate occupation, they experience disappointment and disaffirmation of their identity as graduates and consequently feel incompetent and worthless as a graduate. This suggests that the sense of despondency and lack of enthusiasm experienced by the underemployed overflows into individual attitudes towards careers and their lives in general, an assumption also realised by Newman (1993:4). Implicit in this discussion is that persistent underemployment may prompt sentiments of dejection and vulnerability

(Feldman & Turnley, 1995:693). The well-being effect may even stretch as far as negatively impacting families. As indicated by Pratomo (2015:531) when an individual is unable to earn an adequate income to provide for his or her family in basic decency, they end up discouraged, families disintegrate, and wellbeing takes a plunge.

As a micro level, overeducation has been found to put forth descending force on wages and productivity (Bauer, 2002:222). Generally, people are believed to put resources into themselves dependent on the result they expect in the labour market. Thus, according to Daly *et al.* (2017:5), if the expected results are less, then fewer resources will be invested, constraining individual and generational flexibility or versatility. Individuals working in jobs that are outside their studied field of education endure income loss (Yakusheva, 2010:1125) at present or in future as their job position is lower than that of their fully employed counterparts. In addition, less income implies less consumption spending, investment and wealth, which eventually cause individuals and families alike to increasingly susceptible to socio-economic challenges. Be that as it may, some research (e.g. Green & Henseke, 2016:514) actually finds that graduates have remuneration advantages over non-graduates, even when they are in non-graduate jobs. Perhaps supporting the fact that having more education relative to not having one is associated with positive and improved labour market outcomes, i.e. higher education delivers pay advantages above secondary or professional tertiary education as advocated by the human capital theory.

The inability to work desirable hours negatively affects well-being (Bell & Blanchflower, 2013:1). The job attitude most commonly associated with underemployment is job dissatisfaction. It is important to note that being in a job that is inferior by some standard (e.g. income, time or skills) implies that the initial target or purpose (desire) has not transpired and such individuals are confronted with the frustration of unfulfilled expectations with income and promotional prospects (Montt 2015:4). On the other hand, Green and Henseke (2016:534) actually found job dissatisfaction to be more prevalent amongst workers in jobs that match their education and skills than those that are underemployed.

Persistent underemployment likewise results in the loss and deterioration of skills which adversely influences future job and career prospects (Lacmanovic *et al.*, 2016:342). Education accomplished at some period previously, yet not supplemented by work experience or even on the job training, may bring about the loss of human capital or skills similarly to the depreciation of physical capital when not used (Amadeo, 2018:1). This can again have long-term consequences for career progression, earnings potential and the accumulation of retirement income (Li *et al.*, 2015:439).

2.2.9 Other forms of labour underutilisation

2.2.9.1 Unemployment

- *Open unemployment*

An individual is in open unemployment when despite having the willingness and readiness to want to work, they cannot find any work. It occurs when a country's labour force does not get opportunities for adequate employment due to various reasons (European Union, 2018:24-25). The definition of unemployment is often based on the following criteria: “(1) without work, (2) currently available for work and (3) seeking work” (ILO, 2016a:94-95). This definition of unemployment has been set as a rule in characterising unemployment and is utilised by numerous countries in the world (Kingdon & Knight, 2001:4). When an individual is perceived as being without work according to the first criterion, it implies that they are not supposed to have been in any type of work where they were being compensated. The subsequent criterion means that in the event that one is to be viewed as unemployed, the individual must be accessible for paid work during the reference time frame. The last criterion implies that an individual must have made strides or been effectively searching for work through applying to a job post (Fourie & Burger, 2010:47).

According to Harris and Sabot (1982) the principal observation of unemployment especially in developing countries is that much open unemployment arises because of job search challenges. Baumann (2016:93) and De Jongh (2017:vi) also argue against a lack of effective job search as one of the reasons people fail to acquire work or become reemployed. According to Kingdon and Knight (2001:13) the unemployed are considerably affected, and dissatisfied with their quality of life, than they would be if they were in employment. Various factors seem to give rise to open unemployment, including a lack of education, skills and training, structural economic factors such as skills-job mismatches, changes to main production techniques, a lack of financial resources, deficient demand in the economy, amongst others (Strobl & Byrne, 2002:2-3). The costs of unemployment are many and persistent, extending from lost skills and experience, poverty, crime for survival, emotional frustrations and shock, which affects the victims and society at large (Gul, Mughal, Kakar, Hussain & Khaliq, 2012:53).

- *Long-term unemployment*

Long term unemployment arises as a result of a jobseeker having searched for employment for far too long with no success, pointing to stagnant labour markets and possible structural challenges (O'Higgins, 2003:23). This state is formally defined as one where individuals have been without a job for more than six months, even though they have been searching (Danacica & Mazilescu, 2014:236). The length

of unemployment an extremely critical facet in light of the fact that an expansion in the extent of long-term unemployment is indicative of deeply rooted problems in the labour market (ILO, 2014a:3). As maintained by Rutkowski (2006:22) meagre job prospects alongside skills and geographical incompatibilities lead to lengthier unemployment spells. Subsequently this as maintained by Axelrad, Malul and Luski (2018:2) makes it extremely difficult to return to the labour market, since an individual's skills and qualifications erodes with time. Which is why workers in long-term unemployment are considerably less likely to be employed again (Rothstein, 2016:1). High unemployment is not a major concern when it is only a transitory movement from one job to another or characterised by new labour market entries; it is alarming if endures for extensive periods (Garcia & Fares, 2008:61), and can even lead to a less productive economy (Ortego-Marti, 2017:1)

- *Hidden unemployment*

From a broader perspective, hidden unemployment covers those persons who are not counted as unemployed for various reasons like being in training. Discouraged workers who by definition are available for employment, but currently not actively seeking work because of previously failing to find work (Mohr & Associates, 2015:400), would often be counted as part of the hidden unemployment statistics. In other words, these job seekers have looked for work in the past although not recently but because of poor job prospects, they have given up job search (Kaufman & Hotchkiss, 1999:10-11). At times, poverty arises because of being without work for a very long time before totally giving up the pursuit of employment (i.e. discouraged) or making due with jobs that are not ideal. The greater part of those considered discouraged are frequently alluded to as inactive since they do not meet all conditions (such as active job search – see Section 2.2.2) of being regarded as unemployed (Eurofound, 2017:7).

Hidden unemployment arises from the deficient demand which stems from the poor macroeconomic environment (Taylor, 1970:1). It emerges during economic downturns and is mirrored by the cyclical sensitivity of the labour force. During an economic slump, firms amend their hiring decisions by reducing if not stopping hiring. A decline in employment from a recessionary effect is primarily followed by a sharp decrease in labour force participation (Davis & von Watchter, 2011:2). For as long as recessionary periods last, employment slows down, while some workers withdraw from the labour force because of the '*discouraged worker*' effect (Gong, 2010:2-3) by completely surrendering the pursuit of employment, even though they still want a job.

According to Sengenberger (2011:45), hidden unemployment has various manifestations. It is often maintained that a large number of discouraged job-seekers are affected by circumstances (Posel, Casale & Vermaak, 2014:66). Job search for discouraged workers is frequently hindered, if not hindered by challenges such as poverty, long duration of unemployment and poor economic environment (Kingdon

& Knight, 2001:13). Other discouraged workers purely consider themselves as being inadequately skilled for some jobs and therefore not needed by firms (Lehohla, 2004). Hence, they would not seek a job. The longer these discouraged workers remain out of the labour market, the lower their chances of returning in the labour market given that skills and education depreciate with time.

2.2.9.2 Non-standard work

The exact statistical characterisation of forms of non-standard employment differs from country to country (Sengenberger, 2011:50). Recent literature on employment has seen a rise in attempts by employers attain flexibility and lessen costs by making use of workers who are not their fixed, permanent workers (Rutkowski, 2006:15). This kind of employment contains temporary workers who are hired for a specific task and limited duration (Laird & Williams, 1996:664). This implies hiring workers on a temporary basis and perhaps using them only when they are needed to using temporary hiring agencies with the aim of filling employment gaps within a firm. Compared to workers in traditional employment, many workers in non-standard work are often regarded as involuntarily working part-time, perhaps raising the possibility that they may be constrained in terms of working hours (i.e. working less hours than they prefer) (Katz & Kreuger, 2016:25).

The use of temporary workers and subcontracting of non-essential functions has reduced firm's labour costs which has allowed firms to focus on their primary functions, accordingly, using their resources in a much more efficient way (Aleksynska & Berg, 2016). In addition, increased competition has expanded many firms' demand for flexibility and as a result is triggering fissuring³ where workers are being continuously categorised as working on a contractual (i.e. part-time) basis and work is being redefined to make more use of such workers and independent contractors (Weil, 2019:147).

However, according to Connelly, Wilkin and Gallagher (2011:146) flexibilising the labour market has given rise to increased fixed-term and other uncommon contingent forms of employment, consequently reducing employment stability. Such kinds of work have brought about low and unstable income, increased job security, and poverty (Schmid, 2010:4-6). In fact, the extent of secure employment has significantly declined, while that of casual, precarious jobs have increased (Rutkowski, 2006:3). The ILO (2016c:18) even alludes to non-standard employment as precarious⁴ in nature. A characterising feature for precariousness is that the dangers related to the job are borne by the workers as opposed to

³ *Fissuring stems from the Fissured Workplace Hypothesis, which is "fueled by firm's pressure to improve financial performance. In doing so, they start shedding activities not important to the core competency of the firm, from outsourcing payroll to activities like cleaning, maintenance and security facilities, consequently fissuring the employment relationship apart. Accordingly, the deeper the fissuring, the greater the incentive to want to reduce costs. And typically, the farther away the worker is from the ultimate beneficiary of that work/labour, the greater the chance of violation or exploitation"* (Weil, 2016:211-213).

⁴ Precarious work is explained in the following sub-section (2.2.9.3).

the employer that is employing the worker. Practically speaking, there are eight legitimate kinds of non-standard employment (see Figure 2.4 underneath).

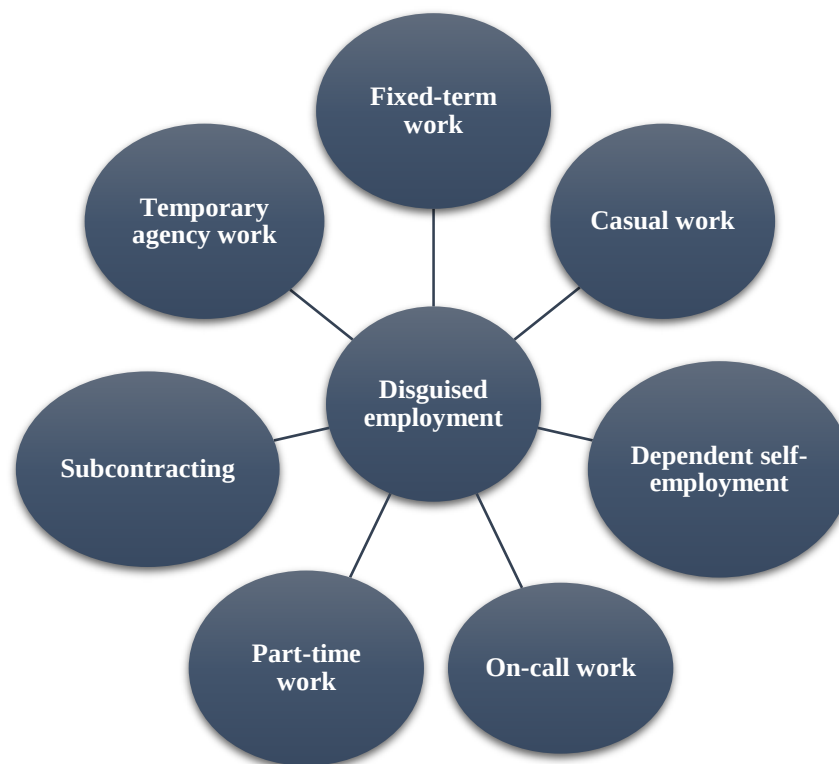


Figure 2.4: Main legal types of non-standard employment

Source: ILO (2016c), author's illustration

As indicated by the ILO (2018b), temporary agency work and subcontracting would occur where a worker is hired by a temporary work agency, and after that execute their duties under the observation of the agency's client (i.e. the employing company). The agency in this setting goes about as a third party between the employing company and the potential worker. An employment relationship does not suffice between the agency worker and the employing company, in spite of the fact that there could be legitimate commitments relating to safety and health by the employing company concerning the temporary worker who is hired by the agency (ILO, 2018b:2). What is important to note is that these kinds of work contracts have a number of restrictions particularly with regards to their continuation which in most cases is never guaranteed. The employing company pays fees to the agency, where the agency will then pay workers the wages. Budlender (2013:50) argues that adaptability for the worker and the employer is often one of the key component of temporary agency work.

Part-time work⁵ on the other hand revolves around the span of working hours, which in various countries suggests lower working hours than full-time working hours and is associated with casual work and on-call work (ILO, 2016c:25). On-call work or casual work are considered as arrangements where a worker is not guaranteed the least number of working hours or payment they will get when they are called in, raising the risks of income security. Most common in developing countries, these kinds of work arrangements are effected for a concise period, or now and again and sporadically, mostly for a particular period, be in terms of hours, days or weeks. Fixed-term work is explained by Mauno, Kinnunen, Mäkikangas and Nätti (2005:211) as an agreement which is characterised by specific conditions which are not limited to expiry date or the completion of a specific task, where workers are hired directly by the employer on a fixed-term basis, different to temporary agency work where as previously mentioned that recruitment is done by a third party (temporary work agency) on behalf of the client. In most instances workers on fixed-term contract as maintained by Nätti (1993:452) are required and expected to substitute permanent workers amid their nonattendance from work.

The rise of new employment model referred to as the ‘*on-demand*’ or ‘*gig*’ economy in recent years where work is mediated through online platforms (Bergvall-Kåreborn & Howcroft, 2014:214) has led to the rise of disguised employment and dependent self-employment. According to Jolley (2018:1) workers in the on-demand economy contribute part or full-time labour — not as employees with benefits, but as independent contractors. “*Under dependent self-employment, for instance, the worker performs services for a business under a contract different from a contract of employment but depends on one or a small number of clients for their income and may receive direction regarding how the work is to be done*” (WEF, 2018:23). These kinds of employment contracts are very ambiguous in as far as the law is concerned. Forms of work such as these that are in the Gig economy are part of a much vaster trend towards the casualisation of labour (Bowles & McPhail, 2008) which presents high chances of income instability, and exclusion from social security (such as unemployment insurance and health insurance) and labour protection coverage (Singer, 2014). Moreover, in many instances, workers are restricted from the right to trade union association because of the restrictive nature of labour laws on wages (ILO, 2018c:28).

Nightingale and Wander (2011:5-6 and Horemans, Marx and Nolan (2016:1-2) contends that the poor, who work fundamentally in these types of employment, may find it significantly more difficult than those in formal employment earning low wages to lift themselves and their families out of poverty through work alone since these kinds of work arrangements are primarily characterised by lower wages

⁵ Part-time work is discussed in section 2.2.9.4

and even lower likelihood for wage increases. These kinds of work offer the plausibility to hire and fire (De Stefano, 2016:6).

Be that as it may, it is argued that at times, there is increased willingness by some workers to take these jobs and supply temporary labour, which may only imply that perhaps non-standard jobs are not as bad. Also, the dangers revealed above are frequently said to be offset by the flexibility that come with being an independent worker since there are no permanent working hours and as a result, workers can supply their services on applications and platforms at whatever point they need (Hall & Krueger, 2015:1-2).

In particular, De Stefano (2016:5) maintain that some working women may have found temporary employment an attractive way to accommodate family responsibilities better. George (2015:6) also argues that some non-standard work may allow workers to better their education by acquiring training or even try out various jobs. These workers may perhaps have less education and training and accordingly may decide to take up temporary to get needed human capital (Lenz, 1996:556-557). Lester and McCain (2001:134) maintain that contingent work may at times act as a safety net that allows workers to avoid unemployment during the transition between a layoff and a new job. These kinds of employment may likewise provide on the job training. Also, temporary workers have been found to in reality be more pleased with their jobs and more dedicated to their employer than their permanent co-workers (McDonald & Makin, 2000:84). One conceivable reason according to Connelly, Wilkin and Gallagher (2011:147) is that if a non-permanent worker believes that their employer will in the long run furnish them with permanent employment, such optimistic prospects may fuel a positive view of their job and the company as a whole.

2.2.9.3 *Precarious work*

Precarious work is formally defined as “*uncertainty as to the duration of employment, multiple possible employers or a disguised or ambiguous employment relationship, a lack of access to social protection and benefits usually associated with employment, low pay, and substantial legal and practical obstacles to joining a trade union and bargaining collectively*” (ILO, 2011:7). Precarious work, from the worker’s perspective, is employment characterised by uncertainty, unpredictability, and riskiness (Kalleberg 2009:2). Precarious workers fill permanent job needs yet are denied permanent worker rights. Globally, workers in precarious work are subject to unstable employment, lower remuneration and more perilous working conditions, they seldom get employment benefits and are frequently deprived of the right of unionisation and even when they have the right to join a union, they are fearful of organising if they know they can be easily replaced (Sengenberger, 2011:50; ILO, 2011). Social groups encompassing women, minorities and refugee workers are more prone to fill these kinds of jobs.

Notwithstanding its prevalence in the international employment arena, the exact definition of precariousness is still tentative, given its multidimensional nature (Campbell & Price, 2016:315). Of particular interest are the two aspects, i.e. precariousness in employment and precarious work. Broadly, precariousness in employment refers to employment physiognomies that comprise of insecurity, such as inadequate levels of regulatory security, low-incomes, high job insecurity and very poor worker control over working conditions, wages and hours (Vosko, 2010). Equally important is precarious work, which according to Standing (2011:5) is understood as paid work showing numerous aspects of precariousness. Such occupations are frequently, however not generally, non-standard jobs (Vosko, MacDonald & Campbell, 2009), and these kinds of jobs, according to the ILO (2011:9) are a means for employers to shift risks and responsibilities onto workers. Likewise, an increasing number of precarious work has negative ramifications for income, employment prospects and in the long-run well-being for individuals and is most likely to undermine potential growth and output at the macroeconomic level (Eurofound, 2017:2).

2.2.9.4 *Involuntary part-time work*

ILO Convention No. 175 (1994) defines a part-time worker as an “employed person whose normal hours of work are less than those of comparable full-time workers”. In this way, part-time work would be involuntary when an individual works less than full-time but actually prefers full-time work. Involuntary part-time work is analogous to being part-time employed for economic reasons as a component of labour underutilisation (McKee-Ryan & Harvey, 2011:975; BLS, 2018). According to Valletta, Bengali and van der List (2018:2-3) involuntary part-time employment is the most readily obtainable form of determining evident underemployment, and in essence, it means workers are stuck in part-time jobs against their wills. Visible underemployment as set out at the 16th ICLS (ILO, 1998) comprises three groups of workers:

- Those who usually work full-time but are working part-time because of economic slack;
- Those who usually work part-time but are working fewer hours in their part-time job because of economic slack;
- Those working part-time because they could not find full-time work.

Families of workers employed on a part-time have a higher chance of falling into poverty compared to families of workers who are voluntarily in part-time employment, and both workers are most probable to fall below the poverty line than full-time employed workers. However, involuntary part-time work has an additional element, as employers usually provide part-time workers with fewer employment benefits and in some instances lesser earnings (Valletta *et al.*, 2018:17).

2.2.9.5 *Informal and undeclared employment*

Many economies in the world have been transitioning, and the effect this has had is on the labour market which has seen a surging growth in employment but most importantly in unemployment and underemployment. This changing nature of jobs has been associated with the growth of the informal sector, which by definition provides less secure jobs with fewer fringe benefits (Rutkowski, 2006:9), weak or risky working environments and normally little compensation and output (ILO, 2017:30). Undeclared work is regarded as '*informal employment*', and alludes to the production and sale of unregistered (concealed from tax) goods and services which in some respects are legal (Avirgan, Bivens & Gammage, 2005:1). According to Williams, Horodnic and Windebank (2015:296-297), both unpaid work and work (such as drug trafficking) in which the good and/or service provided is itself illegal are not included in undeclared work. This type of employment like many others, has unclear aspects. However, Nightingale and Wandner (2011:1) argue that despite the fact that a person is self-employed or working for other people, when they or even their employers do not disclose their profits or earnings for tax intentions, they are considered as being economy

On the other hand, there is an argument that informal work might be increasing somewhat because of growing globalisation. Because of expensive business start-up costs, some new entrepreneurs have now resorted to operating in the informal sector and paying workers lower wages with the aim of limiting costs (Nightingale and Wadner, 2011:1-2).

The growth of the informal sector has additionally been influenced by rapid rural-urban migration patterns which have been surged by population growth. As the population grew, large numbers of people moved from rural areas to urban areas in search of improved economic opportunities. Owing to the limited size of the formal sector, unskilled labour that could not get absorbed in the sector because of things like a lack of demand engages in any activity, even meagre work that they can find to survive (Portes & Schauffler, 1993:34-35). This is explained by the theory of modernisation, which suggests that informal sector expansions are a transitory side-effect of migrant movements of unskillful labour that has had been as a result of rapid urban industrialisation (Despres, 1988:3). According to the ILO (2017), the informal sector is a symptom of underdevelopment, underemployment and poverty.

2.2.9.6 *Low pay, earnings inequality and working poverty*

Low pay, earning inequality and working poverty are explained by vulnerable employment where workers in this employment status do not benefit from a social safety net if they lose their means of support or experience personal challenges (Sengenberger, 2011:68). According to the ILO (2009:27-28), workers in vulnerable employment are in jobs which are not safe and their labour rights are most likely not to be appreciated, an essential key form of precarious work. Specifically, earnings inequality

demonstrations an unduly large gap amongst the highest and lowest income earners in a labour market. Those in vulnerable employment earn very low-income, regardless of whether they are in full-time or part-time employment, hence it could be argued that being in this state regards them as underutilised by income.

The working poor, on the other hand, is defined as persons who are working yet are living below a recognised poverty line (Kapsos, 2005:1). Although these workers are in employment, they earn very little income, which is globally at US\$ 2 a day (Sengenberger, 2011:70). This definition is comprehensive as it combines poverty statistics and labour market characteristics which provide a much clearer depiction of the association amongst employment and poverty, than that which is provided by means of the typical poverty data alone (Kapsos, 2005:2). Decent employment is an essential prerequisite for alleviating poverty, as economic growth and income transfers alone are not sufficient (ILO, 2016b:28).

2.3 THEORIES OF UNDEREMPLOYMENT

2.3.1 Introduction

Various theories have been explored by different schools of thought in development and social studies towards the understanding of underemployment. The common theme in sociological/psychological management schools of thought was that underemployment is associated with employment that is inferior by some standard which can either be by working hours, education and skills, and income (e.g. McKee-Ryan & Harvey 2011; Luksyte & Spitzmueller, 2011). From one side of economics, underemployment is mainly from an economy that is characterised by low demand, which often results in firms deciding to adjust labour utilisation instead of the actual labour (Weitzman, 1982; Biddle, 2014). On the other hand, underemployment arises due to mismatches between educational achievements and job requirements (Barnichon & Zylberberg, 2019:43) or even certain institutional factors which force people to be in underemployment (Ihlanfeldt, 1999). Underemployment, therefore, represents a deviation from equilibrium, which is often referred to as a disequilibrium state (Pagano, 1990). However, most researchers from either disciplines would agree that both economic and sociological forces have some role in influencing labour market outcomes (van der Merwe, 2016).

Growing underemployment may be taken as a sign that the economy is moving away from equilibrium, mirroring the presence of the labour market's inability and inefficiency in matching worker to jobs (Green & Henseke, 2016:515). As much as these theories give a good explanation on underemployment, no single theory offers a comprehensive explanation (Grapsa, 2017), given than underemployment is a multidimensional and complex construct. The following sub-section seeks to discuss some of those theories as summarised in Figure 2.5.

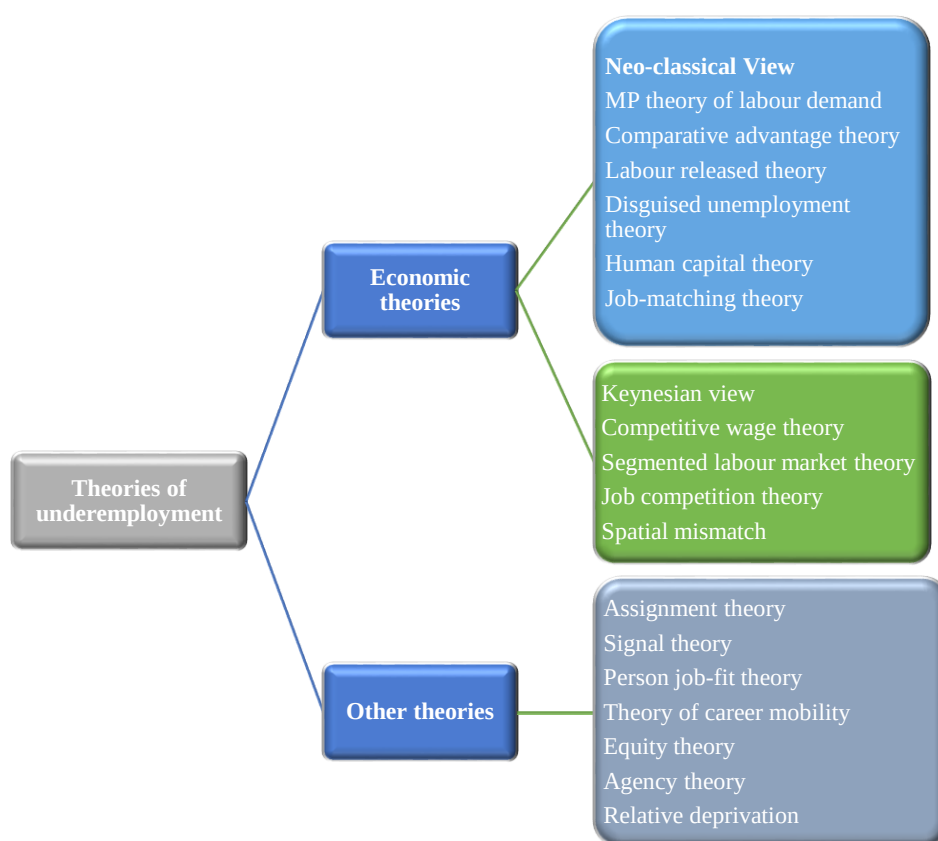


Figure 2.5: Theories of underemployment

Source: Author's own compilation

2.3.2 Economic theory perspective on underemployment

Within the scope of labour economics, there exist two distinct schools of thought, the neoclassical and the institutional schools. Both of these main paradigms have endeavoured to dominate the labour economics field. Most economic theories of a dynamic labour market, state that there will constantly be a certain extend of incompatibility between educational attainments and job requirements. At times, an individual's education will be more than required for a job, and they will be underemployed; others' vice versa. The theories are discussed below.

2.3.2.1 Neoclassical perspective of underemployment

The neo-classical school of thought came into existence earlier than Keynesianism through works of its main supporters including Alfred Marshal in the late 1880s, Paul Douglas between the 1920s and 1930s, and Milton Friedman in the 1940s through 1960s. Despite the outbreak of depressions in the 1950s which ought to discredit this economic theory, the 1970s saw this school of thought gaining prominence given the questionable Keynesianism views at the time.

The neoclassical theory presumed that individuals make every effort to maximise their wellbeing, continually motivated to attain the ideal outcome given the limitations they are confronted with (Kaufman & Hotchkiss, 1999:27-28). This is driven by the individual's capability to use rational choice. Another important element of the neoclassical theory relates to the nature and operation of the labour market, which is presumed to be highly competitive (Friedman, 1962). This ensures that there is steady equilibrium as determined by labour market forces of demand and supply.

In terms of underemployment, the neoclassical school believed that this phenomenon was to a great extent, an intentional incidence of free-market economies which are assumed to be efficient and in which individuals behave logically, and have an instinctive inclination towards causing full employment (Friedman, 1962). This voluntary nature of underemployment suggested that workers were choosing whether to work or spend time on leisure, as explained by the theory of labour/leisure choice. The labour/leisure theory assumes that every hour spent consuming leisure deciphers into a reduction in earnings, which means forfeiting the prospect to earn wages (Kaufman & Hotchkiss, 1999:45-46). If prices of goods and services were to increase and consequently suppress real wages, this theory assumes that workers are to leave their job and consume more leisure. Thus, according to Sengenberger (2011:73) individuals may perhaps decide to work not as much and spend more time in leisure as a reaction to momentarily low real wages. Otherwise, workers may as a harsh response, for an indefinite period, leave and amend their daily life to one of relying on benefits and casual, probably low remuneration assuming that real wages are not appealing. Hence an individual's allocation of hours into leisure or working is influenced by their choice and institutional limitations

This theory is not without some controversy and criticisms, as the traditional assumption that as a response to low wages, workers would consume more leisure, and even the already unemployed workers would stop seeking jobs and withdraw their labour supply offer in the labour market is far from the truth. The argument is that in reality, individuals have positions to maintain, including significant family responsibilities and other obligations to meet (Wells, 1990). *"The individual breadwinner without private means can never be in a position to refuse to work because real wages are too low to be worth the effort. He must earn what he can get or starve altogether. Even if he could retain his right to the dole after refusing a job at the ruling wage rate, he would find that the real dole had fallen as much as the real wage."* Robinson (1937:7). Hence it is believed that individuals would not just quit their jobs or completely exit the labour market because of low wages. Within the neoclassical theory lies the marginal productivity of labour theory explained below.

- *Marginal productivity theory of labour demand*

The marginal productivity theory is one of the utmost essential notions in neoclassical economics, dating as far back as the first half of the 19th century (Sari, 2000:27). Some of the very well-known

representatives of this theory are J. Hicks and Joan Robinson. This leading theory of wage differences posits the idea that wages at a microeconomic level are carefully linked to marginal productivities, which implies that workers' earnings reflect their productivity (Daly, Hobijn & Pedke, 2017:2). The marginal productivity theory relies on a number of assumptions such as profit maximisation, two production factors (capital and labour, the presence of the law of diminishing marginal returns), perfectly competitive labour markets, homogeneousness of labour, and wages as the only cost of labour (Kaufman & Hotchkiss, 1999:174). As maintained by Green and Henseke (2016:520), the standard corrections of an effective labour market and not government intervention ought to function to ease disequilibrium as it appears.

As suggested by economic theory, the number of workers a firm hire will depend on how much the worker will add to the firm, which is known as the marginal revenue product (Tilly, 2004:3-4). This theory proposes that total wages are explained by the optimisation of the production process at the microeconomic level (Sari, 2000:27). This theory of labour market allocation accepts that both work seekers and employers endeavour toward the most ideal match, given their inclinations, prospects and wants. Thus, the firm that wants to maximise profits should first determine the marginal increase in revenue from hiring one more worker and compare it with the marginal increase in labour costs of the last worker (Kaufman & Hotchkiss, 1999:181-182). For as long as the extra worker contributes more revenue than the costs incurred in hiring them, employment will increase. In other words, firms will employ workers who are anticipated to be the most productive and least costly. By the same token, those seeking work are assumed to maximise the returns to their educational investments, by seeking for jobs which will earn them the highest income given their level of education and experience.

The opposite is true when the hired worker adds revenues that are less than the labour costs that were incurred in employing them; employment will indeed decline if not stopped as the decision to continue hiring an additional worker whose productivity level is less than their hiring costs will reduce the firm's revenues (see the equilibrium conditions for a firm's labour demand below).

$$W = P \cdot MP_L, \text{ or } W/P = MP_L. \dots\dots\dots (2.1)$$

Where P is the product price (also marginal revenue for a competitive firm), MP_L represents the marginal product of labour (productivity), and W/P represents the real wage. As indicated in Equation 2.1, the firm should continue to employ labour as long as the marginal product of labour is greater or equal to the real wage. This is known as the firm's optimal employment level (Kaufman & Hotchkiss, 1999:185-186). Therefore, the theory arises with a suggestion that a more productive worker will earn a higher wage (Sari, 2000:27), with the opposite being true.

A number of economic factors can affect the marginal productivity theory of labour demand. Firstly, a change in the firm's product demand will affect its demand for labour. If for instance, the demand for the firm's product increases while wages remain constant, the demand for labour will increase since the marginal revenue product of each worker will increase as a further extension of production will see profits rise (Meager & Speckesser, 2011:3-4). The opposite will arise when the product demand decreases.

Harvey Leibenstein took a different explanation to the marginal productivity theory to help understand labour underemployment. He explained underemployment by the fact that some of the workers seemed to be employed but were, in fact, contributing nothing to production, amongst other things, they had zero marginal productivity (Leibenstein, 1957:92). This situation was typically because of an over-employment of labour that arises due to a large population and family setups predominant in underdeveloped economies with low literacy rates and a dominant agricultural sector which was mostly labour-intensive (Gupta, 2019). At times, only a certain number of workers would be required to work on a certain piece of agricultural land, however, because of family related reasons, there may be an extra number of workers working on the land, even though the land requires less labour than that available. This suggests that the extra workers who are not adding to output (i.e. with a zero marginal productivity) are underutilised.

Despite the neoclassical theory's ability to predict the optimal employment level, it has been subject to some controversial criticisms. The Neo-classical school of thought has shaped a lot of aspects relating to the labour market in particular, how suppliers of labour and firms behave based on many factors. Despite the rich and contributory work on issues of employment, in recent times and in some instances, the labour market does not always behave as predicted by the neoclassical school. Firstly, Lester (1947:139-140) believed the theory to have some unrealistic assumption of marginal productivity of labour (MP). Lester argued that although the determination of MP would be fairly easy for small firms with uncomplicated production processes, measuring MP for large firms with highly interdependent production processes would be a very complicated procedure. Secondly, the idea of the goal of profit maximisation is ruled out as it is argued that there are other goals besides maximising profits such as survival of managers and the firms which would only require minimum profits. This theory was also criticised for lacking the ability to explain the determination of factor process under conditions of imperfect competition in the factor and product markets since the theory works on the assumption of perfect competition in all markets.

Another criticism relates to the law of diminishing marginal returns, where critics argue that labour productivity seems to be varying directly with employment levels (Bernanke & Parkinson, 1991:440-441), which then implies that there are increasing returns to labour. Moseley (2014:10) argues:

“Diminishing returns is a short-run concept that does not apply over in which technology is changing significantly. With technological change, the return to capital should increase, not decrease. The assumption of constant technology makes the concept of diminishing returns even more unrealistic and inapplicable to real capitalist economies in which technological change is pervasive and continuous”. Moreover, the assumption that wages and labour productivity are not dependent on one another is argued otherwise. Akerloff and Yellen (1986) contend that reality seems to support the idea of an interdependence between wages and labour productivity. The argument is that higher wages fuel work effort and worker morale, improving productivity (Sari, 2000:35). This is explained by the efficiency wage theory, that for as long as current wages are higher than market-clearing wage, there will be a positive impact on productivity or efficiency. This infers that increasing workers’ wages allows them to improve their productivity because workers are most likely to respond to improved incentives or enticements offered by the firm. Since the firm’s main objective to maximise profits, productivity may be harmed through wage cutting. Hence, the improved labour productivity and/or reduced costs offset the increased wages.

However, Sanfey (1993:320-321) argues that even when efficiency wage considerations are considered, firms have no incentive to pay wages higher than the market wage. Another criticisms comes from the impracticality of measuring productivity, especially for workers involved in services. It is argued the output and productivity of workers in the service industry cannot be measured in a meaningful way. Even if indirect productivity measures such as educational completion and work experience are used, workers are still at different wage levels, despite the fact that they are in the same jobs, doing the same work and having the same educational qualifications and training (Yates, 2010:14-15).

- *Comparative Advantage (or Self-Selection) theory*

Roy (1951:135) and Champernowne (1953:318) first used the concept of comparative advantage to explain some of the phenomena within labour economics. Although this theory would be commonly used with the theory of international trade, this theory would still better explain factors such as wage distributions. At times, certain workers would receive relatively high level of wages while others received a relatively low level of wages. This according to Champernowne (1953:319-320) may stem from the co-occurrence of workers with different capabilities and different employment requiring various skills and capabilities. Teulings (1995:280) states that *“wage differentials are due mainly to skill differentials in the left tail of the distribution and to differences between jobs in the right tail.”* So, some workers, even though not capable would earn lower wages while the more capable workers would earn relatively lower wages, making them underemployed.

- *Labour Released theory*

A further extension of the marginal productivity theory is found in the concept of '*labour released*'. The labour released theory is used by growth economists to describe underemployment as the employment of people with zero marginal productivity in an economic sector (Jones, 1971:520). The footprints of this theory can be found in the explanation of the disguised unemployment theory which is related to the theory of surplus labour. The labour released concept stems from Arthur Lewis' concept of the dual economy in underdeveloped countries. He argued that economies of such countries contained two sectors, a small industrial sector (manufacturing) and a very large traditional sector (agricultural). According to Todaro and Smith (2011:115), the traditional sector usually has too many workers with zero marginal productivity and the industrial sector was characterised by high productivity. Leibenstein (1957:103) indeed showed that agricultural underemployment in backward economies implied that the traditional sector would at some point have more workers than actually needed. Although these extra workers are employed in actual terms, they were in fact not adding anything to the sectoral output, hence the zero marginal productivity. Hiring more workers would not increase output at all as there is already enough labour to produce the required output (Todaro & Smith, 2011:115-116). It is therefore contended that the underemployed workers (what Lewis referred to as surplus labour) would be released to go work in the industrial economic sector. Lewis (1954:140) argued on this basis that developing poor countries can boost sustainable development and promote industrialisation by shifting labour into the industrial sector (manufacturing), where it is more productive.

Wellisz (1968:23) maintains that the release of the underemployed workers would actually not lessen the sector's output, and their removal to other positions of work would, in fact, raise aggregate production and therefore, provide a basis for capital formation and significantly enable the economic transition.

Ragnar Nurkse in his analysis of surplus labour indicated that the now jobless workers could be moved from agriculture and hired in the job of building up social overhead capital (Nurkse, 1953). From the analysis, Nurkse showed that this decision would not influence agricultural production, assuming that remaining workers would be prepared to work harder to maintain increased output level (Wellisz, 1968:22-23), especially given that the reduced number of workers may drive wages up. However, the assumption was that the supply of rural labour was perfectly elastic at constant urban (industrial sector) wages (Todaro & Smith, 2011:116). This implied that the constant real wages would exist until the supply of surplus labour was exhausted.

The criticism of this theory is an extension of those advocated against the main theory of marginal productivity. In particular, the labour realised theory was criticised for poor theory application. Critics

argue that when a factor of production is removed from a sector, the sector would be so disorganised that the output loss would be higher than the possible productivity of the removed factor (Särkkä, 2009:122). This is especially true for small firms than larger ones. Thus, Wellisz (1968:25) maintains that unless the marginal productivity per worker is zero, the removal of labour results in a fall of output. Another criticism is based on the fact that the theory is only valid under the assumption of perfect competition. In actual fact, competition is imperfect and so is the world. Developments are ceaselessly occurring making the world more vigorous, which is the reason the genuine rewards of production factors do not comply with their marginal productivities.

Another questionable aspect is the notion of the existence of rural surplus labour in the traditional sector and full employment in the industrial sector. Most researchers have found this assumption invalid as findings prove that there is in fact little surplus labour in many rural sectors (Todaro & Smith, 2011:118). Lastly, the assumption of the industrial sector's constant real wages was found to be flawed, as one of the salient traits of urban (industrial sector) labour markets in developing countries is on the inclination for wages to gradually increase considerably, in relation to average traditional sector wages even in the manifestation of zero marginal productivity (Todaro & Smith, 2011:119).

- *Disguised unemployment theory*

The disguised unemployment theory explains underemployment from a hidden unemployment perspective. Disguised unemployment emerges when there are individuals who are noticeably employed but are not fully employed (i.e. their skills and abilities are underutilised) (Dasgupta, 1956:1011). In such a situation, more people are engaged in the kinds of jobs that fall short of their desired jobs which fully utilise their skills and abilities. According to Dasgupta (1956:1012) these sorts of employment are not entirely productive and production is not affected regardless of whether a portion of the 'supposedly employed' are removed.

This theory was explained regarding the traditional agricultural sector, which was regarded as the central form of economic activity in underdeveloped economies and where the prevalence of disguised unemployment was widespread (Todaro & Smith, 2011). This theory has some similarities with labour released theory. Disguised unemployment was then regarded as a situation where the marginal productivity of labour was zero (Rosenstein-Rodan, 1957:1). This implies that the proportion of labour concerning land and other resources is large to the point that the marginal productivity of labour is diminished to zero, even though average productivity is positive (Dasgupta, 1956:1011). In essence, there were more workers in the land than necessary (which is referred to as surplus labour). Although surplus labour can exist in both the urban and rural areas, the phenomenon of disguised unemployment was assumed to be heavily present in the traditional agricultural sector.

The notion of disguised unemployment appropriately linked to the US and England in the 1930s, when individuals possessed skills and training for which there was no demand for, as a result, they had to take up jobs that did not require what the skills they were trained in (Johnson, 1978:386), an option to avoid unemployment. Therefore, some workers will be underemployed as a result of a cyclical decline in the demand, when they are forced to be in jobs which underutilise their skills (Robinson, 1936:226).

- *Human capital theory*

The human capital theory stems from the neoclassical economic orthodox of Adam Smith (Kaufman & Hotchkiss, 1999:337) and is based on the underlying core that education furnishes people with human capital, which eventually increase their future income as well as improving their career path (Schultz, 1961:1; Becker, 1964; Galor & Sicherman, 1988:7-8). This neoclassical theory by Gary Becker adopts the idea that individual workers can liberally decide amongst extensive employment options in the present in the labour market which they base on their individual preferences and schooling-skills abilities and in so doing be rewarded based on their human capital talents (Leontaridi, 1998:64). In simpler terms, the theory explains the impact of higher education on job quality (Corominas, Saurina & Villar, 2010:17).

According to van Der Merwe (2010:108) this theory proposes that formal training and investment in higher education improves the productive capacity (employment) of individuals and earning potential, and it proposes that, in circumstances where there is a lack of work and an abnormal state of intensity, individuals who have invested in their education as a way to differentiate themselves will realise higher earnings (Becker, 1964). This view is based on the idea that notion that every single job requires skills which can only be learnt through formal education, hence an advanced education is now regarded as very important to get (Kyllonen, 2012:85); this decision to further one's education is influenced by thoughts of benefits which outweigh the costs as suggested by the theory (Freeman, 1976).

The assumption made by Becker (1964) was that employers will remunerate workers according to the additional product they produce as they are hired. In this way, wages will be equal to individual worker's marginal product, which is in turn explained by the level of human capital they have attained through formal education and on the job training. The human capital theory argues that underemployment arises because of the disparity between individual's human capital and their work or employment prerequisites (Becker, 1964). This would imply having more education than required by the job; a phenomenon referred to as overeducation, which is inefficient because the capabilities of the worker are underutilised. According to this theory, education-job mismatches amongst graduates are largely temporary, in other words, while they are searching for suitable employment or while firms adjust their production processes to completely use individual's human capital (Green & Henseke, 2016:518). In this perspective, therefore, underemployment is not a phenomenon of major concern.

One aspect that is seen as a factor reducing a graduate's odds of being in underemployment is vocational training. From a human capital point of view, vocational training would place vocationally educated graduates at a much better position to be perfectly job matched (i.e. not underemployed or over-educated) than generally educated graduates since there is an assumption that vocational training makes graduates much more productive with good skills that are in demand by employers (Zimmermann & Biavaschi, 2013:40). Vocationally trained graduates are accordingly more productive and employers have a motivating force to allocate them to occupations that in line with the skills they have attained during vocational training (Levels *et al.*, 2014:345). According to Sharma and Sharma (2017:1779) these new labour market participants may at first agree to take occupations that require lower capabilities than those they have attained and as they gain work experience and skills, they secure jobs that is in line with their qualifications.

However, some literature (see Hartog 2000) argue against some of the views of the human capital theory that at times, overeducation may be the outcome of a deliberate choice by a worker when a low-level job is potentially a worthwhile career opportunity. This is justified by the theory of career mobility, where workers would accept low skills requirement jobs because of career-related (promotion) opportunities which they believe would come to pass if they stick around in the job. Likewise, not all education qualifications provide positive net present values, others are poor while others diminishing returns (Moleke, 2006).

Furthermore, as argued by Corominas *et al.* (2010:28) there are issues with the human capital theory relating to its inability to really demonstrate that the supposed improved productivity identified with highly educated/skilled/capable workers originates from the investment they have made in their education. This argument is supported by Dobbs, Sun and Roberts (2008:788) who as a result of widespread access to higher education institutions question whether more years spent in school automatically imply more individual/worker productivity. As such, it should be realised that at times, individuals invest in their education not because of monetary incentives, but more so to secure intriguing and exciting employment, build up their own individual capacities, secure more learning and additionally attain social acknowledgment (Corominas *et al.*, 2010:27).

From the viewpoint of the signalling theory and in light of the vocational training contention, those with a foundation in vocational training may really be at a worse-off situation when entering the labour market, compared to generally educated graduates. Rather than signalling the attainment of particular skills, a vocational qualification might be a signal of lower ability compared to academically, i.e. generally educated graduates (Gesthuizen, Huijts & Kraaykamp, 2012:592). In the event that vocational training is a negative flag, vocationally trained graduate work-seekers may be put lower in the line,

which would in turn raise the probability that they would need to accept employment that is below or outside their field of study (Levels *et al.*, 2014).

Researchers have also observed that the rapid growth of education enrolments should have led to the more rapid growth of the economy. If anything, the opposite has happened, especially in developing countries, especially in Africa (Ighobor, 2017). Thurow concluded that as the supply of educated labour increases, individuals find that they must improve their education merely to defend their current employment (income) position (Thurow, 1975), even though the increased negative employment outcomes amongst educated individuals suggests that higher education does not yield economic returns (or at least higher returns) (Farooq & Ahmed, 2007:897). The human capital theory according to Mavromaras and McGuinness (2007:279-280) suffers from a lack of historical perspective by ignoring the considerable negative employment outcomes that at times, mismatches between job requirements and educational schooling may occur in the labour market. Several empirical studies carried out in different countries found that skills-job mismatches are insistent characteristics of labour markets (as will be seen in Chapter 3).

Fleischhauer (2007:21-22) argued that at the microeconomic level, the rate of return analysis assumes that individuals are remunerated what they are worth, but it is uncertain as to whether the enhanced earning potential indeed occurs because of education or not. Other contributing factors might be intelligence, family status or institutional mechanisms which automatically give good posts in bureaucratic organisations to those with educational certificates. Also, Dolton and Vignoles (2000:179) argue that additional schooling (more education) not always increase productivity and therefore will not always be rewarded with higher earnings. Furthermore, even though the human capital theory assumes that every worker is paid the value of their marginal product, the theory fails to explain the fact that some workers are in jobs that underutilise their skills, whether temporal or permanently (Farooq & Ahmed, 2007:897-898).

- *Job-matching theory*

The job-matching theory was posited by Jovanovic (1979:972) arguing that there is a negative relationship between wages and tenure. “Since workers differ in their suitability to different firms, only those workers who are matched well with a job continue to be employed or to receive higher wages, if this is not the case, the worker will be unemployed (either voluntarily or involuntarily) or receive lower wages” (Sari, 2000:34). A high frequency of mismatches is generally viewed as a sign that the education framework may be neglecting to move valuable skills to those leaving school and that the labour market work may be neglecting to viably assign similar school leavers the existing jobs (OECD, 2011).

2.3.2.2 *Keynesian view on underemployment*

The idea of underemployment equilibrium arises from examining underemployment in the context of the General Equilibrium Theory, a division of microeconomics. Literature ordinarily clarifies underemployment as an unemployment rate that is related to less than full employment (Jones, 1971:520), at unproductively low-level equilibria (Pagano, 1990:442-443). This explanation is found in Keynes's General Theory, where accordingly underemployment equilibrium meant less than full employment which implied that an economy is in a disequilibrium state' a typical situation in many economies. This is as a result of the unemployment rate being constantly beyond the natural rate of unemployment or a non-accelerating inflation rate of unemployment (NAIRU) because of the continuous weakening of the economy. Weitzman (1982:787) explains this as a situation where the main production factors are involuntarily underutilised (i.e. some resources are not fully employment) because of the existence of deficient aggregate demand. The underemployment equilibria imply that economic agents are producing less than what they may perhaps potentially produce in other appropriate equilibrium states (Herings, 2008)

All economies go through a number of equilibrium positions in a normal business cycle, some more appropriate than others, particularly when examining this from a societal perspective. Various aspects add to the presence of unwanted equilibria (underemployment in this case); an excess supply of the quantity and quality of labour and inadequate demand. During the short run period, employers react to market signals by hiring or laying off labour, while workers react by responding to job openings, moving between jobs or going for training (Green & Henseke, 2016:521). If there are disproportions or rather misalignment between the demand for labour and supply of labour, education and employment plans will be adjusted. Some workers may be forced to take up any job for survival, whereas firms may decide to employ on a temporary basis while waiting to fill in permanent, long-term positions. The underlying argument from this theory is that temporal mismatches between job requirements and educational attainments, including underemployment, will always be present in an economy.

The issue of insufficient demand in an economy can also explain underemployment. The significant indication is that deficient aggregate demand will cause the output to be below the full employment level (Weitzman, 1982:788). For instance, a skills-jobs mismatch moves an economy into a disequilibrium state. The disequilibrium state is fueled by the fact that workers want to work more hours than they are working or even earn more wages than they are earning. Consequently, workers are forced to settle for occupations that require less skills than they have, or that offer lower compensation or less hours than they might want or temporary jobs in which their productivity is less than in their previously held jobs (Robinson, 1936:226-227). Due to the high costs associated with laying off unwanted workers, and perhaps honouring employment contracts firms will often adjust to a deteriorating demand by

decreasing work working hours and consequently, wage rates a situation related to labour hoarding (Biddle, 2014:205). In addition, some job seekers may be employed on a temporary basis which will be easy to dismiss when the economy recovers (Azariadis, 1975:1183). Subsequently amid such periods, workers will be underutilised somehow since they are not producing their output they could potentially produce in the desired equilibrium state, which is optimal (Erdogan & Bauer, 2011:218).

The strength (or lack) of the labour market plays an important role in the extent of underemployment, which tends to rise when employment and the economy are weak. However, Weitzman (1982:804) warns that if an economy does not implement any counteractive actions, it can remain in an underemployment state for lengthy periods. This meant that governments might need to incur deficits to sustain the full employment state (Skidelsky, 2016). Advocates of Keynesian economics suggest that expansionary fiscal policy through deficit spending and monetary policy through increasing money supply and/or reducing interest rates and counter-cyclical demand management has to be implemented in order to drive the economy out of the underemployment equilibrium state to ensure full employment (Keynes, 1936), whereas micro-economic policy has to control inflationary pressures and promote efficiency, through regulations (Sengenberger, 2011:79). However, the 1970s era saw the resurgence of the neo-classical school of thought entirely revise the assessments on underutilisation. The monetarists rejected Keynesian propositions of expansionary demand management as it leads to inflationary pressures and an alert to a worsening trade-off between inflation and unemployment (Sengenberger, 2011:85).

2.3.2.2 *Competitive wage theory*

As previously mentioned, the neoclassical model assumes that markets are perfectly competitive with the determination of wages and employment are assumed to be practically identical to that of consumer goods in the goods market. Be that as it may, the actual wage fluctuates with the supply of labour at different skill levels (London, 2014). According to the model of wage competition, people contend with each other based on the occupational skills and capabilities obtained before entering the labour market (Leoranditi, 1998). At the point when numerous workers are forced into competing for low-skill jobs (perhaps due to an improvement in technological advancement) the actual wage upon which low-skill work is performed decreases (London, 2014). This competition affects the determination of wages and will see those with higher skills receive more pay than the low skilled. A number of other factors can also affect wage determination in this model such as a declining product demand. The competitive wage theory envisages that firms will react to this situation by reducing both employment and the real wage rate, contrary to the standard exercise of laying off surplus labour and remunerating fixed wages to the remaining workforce (Azariadis, 1975:1184-1185).

In fact, some economists contend that a silent, inherent implicit agreement exists amongst employers and workers. This contract infers that as a by-product of a guarantee by the firm of stable wages and employment to most of the work force (i.e. without going the retrenchment route), workers agree to work for sufficiently low wages to pay the firm to accept the risks to profits (Okun, 1981:4). The agreement is self-enforcing, implying that the contract can only be authorised by both employers and workers; an outsider cannot implement or meddle with the understanding, the understanding stands as long as both these parties trust that it is commonly beneficial and the gains from it outweigh the costs (Scott, 2003:1646). This suggests that in such periods, workers will be underemployed particularly by time and income until the firm's conditions recovers.

2.3.2.3 *Dual / Segmented labour market theory*

One of the assumptions of the perfect competitive model is that competition exists in a labour market. However, this does not mean any worker can work in any job they want, as there are certain factors which prevents that from happening. Although some researchers believed that most jobs are open to competition, others (Loveridge & Mok, 1979:27) believed otherwise. In fact, the widespread thinking was that there is a definite division in the labour market which averts certain workers from leaving their jobs to working in other sectors. While the neoclassical theory was based on the idea that individuals find work and therefore receive rewards based on their human capital, the segmentation theory, on the contrary, contends that labour markets are not distinct competitive markets, however, they are made out of an assortment not so related fragments where rewards to human capital vary due to institutional obstacles that prevent equal benefiting from education and training (Leontaridi, 1998:64-65).

Accordingly, these factors keep certain individuals from adequately competing for jobs in the other sector (Kaufman & Hotchkiss, 1999:30). Some of these barriers include individual human capital, discriminative factors such as race and geographical limitations amongst others. These ideas were derived from the institutional school of thought which is the main rival to the neoclassical school of thought.

After its conception, the segmented labour market theory resulted in a number of other theories which all contributed towards understanding the dynamic nature of the labour market. One such theory is the dual labour market theory. Dual labour market theory has its origin in the United States of America through a number of institutional economists (Doeringer & Piore, 1971). During the late 1960s to the 1970s, these labour economists were concerned about the worsening poverty and unemployment amongst poorer American cities, and the slower pace of reform to provide an explanation to these worsening challenges resulted in the emergence of the dual labour market theory. These researchers began to assert that underemployment, poverty, and career outcomes might best be explained by a

theory of dual labour markets within the overall economy (Bales, 1984:140). This theory assumes that the *“labour market divides between a primary ‘good’ segment and a secondary ‘bad’ one and argues that poor quality and low wage jobs or precarious positions are found to a greater extent in the secondary labour market segment”* (Kaufman & Hotchkiss, 1999:31).

The core premise of the labour market segmentation theory is that the economy has multiple, distinct labour markets in which working conditions, wage bargains, and job stability vary analytically. More specifically, and according to Wachter (1974:638), the dual labour market theory rests on three general hypotheses. Firstly, the economy contains two sectors, a primary sector which pays high compensation and a secondary sector which is confined to low wages. Secondly, the important difference for economic analysis is that between good and bad jobs rather than between skilled and unskilled workers. Thirdly, workers restricted to the secondary sector experience a lot of employment instability, frequent moves between jobs, and constantly into and out of unemployment.

These markets can also be classified as the formal and informal sectors (Golub & Hayat, 2015:136), inclusive of skilled and un-skilled labour which allow skilled workers to work in unskilled jobs or the core and the periphery economy (Bluestone, Murphy & 1973). The primary sector has good jobs characterised by high wages, promotion possibilities and other durable attributes make up the primary sector of the dual economy, while bad jobs compose the secondary sector (Uys & Blaauw, 2006:248). Another important aspect in this sector is the presence of trade unions which ensures worker and job protection (Harrison & Sum, 1979), a missing aspect in the secondary sector.

Conversely, the secondary sector contains the worse-off members of the labour force, who are not protected from the law and have no say in any wage bargaining processes (Uys & Blaauw, 2006:251). Jobs assumed to be in this market are considered to be sub-optimal, associated with lower pay, shorter working hours, unstable, generally unattractive and skills underutilisation, poor working conditions, low to no job security, few to non-existent promotion prospects (Muysken & Ter Weel, 1999:4). Jobs are sufficiently plentiful in this sector to employ all workers even those frozen out of the primary sector (Wachter, 1974:639).

The dual labour market theory explains the phenomenon of underemployment on an assumed duality that is present between the industrial and the agricultural sector (Yotopoulos, 1965:59). The number of skilled jobs in the primary sector is not responsive to the relative availability of skilled workers, which may mean the remaining number of skilled workers are confined to getting bad jobs in the secondary sector. Thus, there is disguised unemployment in the sense that workers may be trapped in bad jobs although they have the same skills as some of the workers in the right jobs (Gottfries & McCormick, 1995:1). Perhaps suggesting that expansion in human capital may not necessarily lead to improved job

structures as indicated by the human capital theory (Wachter, 1974:639-640). Muysken and Ter Weel (1999:4-5) explain it clearly where the argument is that “*employers demand skilled and unskilled labour to produce two types of goods. Since only a limited number of jobs are available in both sectors, an increased supply of skilled workers leads to full employment in the skilled sector, while the remaining skilled workers are temporarily hired in disadvantaged jobs*”, i.e. in the secondary market. Even though underemployment can exist in both the primary and secondary labour market, it is relatively more prevalent in the secondary labour markets given the aforementioned nature of jobs present in that market. Consequently, like some skilled workers who could not find jobs in the primary sector find themselves in the secondary sector, some unskilled workers will be crowded out of the labour market into unemployment (Borghans & De Grip, 2000). More questions arise, particularly as to factors which may keep good workers the secondary sector.

2.3.2.4 *Job competition theory*

The job competition theory incorporates the neoclassical ‘*firm optimisation behaviour*’, and it emphasises the significance of on-the-job training in influencing wages and employment in the labour market (Leontaridi, 1998:65). Thurow (1975) states in his theory of job competition (labour queue), that one of the most critical aspects that increase employment opportunities is the level of education. At the core of the job competition theory is the idea that there is job competition between workers with different levels of education, and as a result, their wages are dependent on the nature and quality of employment they get (Leontaridi, 1998:75), where they would now be ordered based on their trainability. Van Ours and Ridder (1995:1719) explain that job competition would then occur if employers have a preference for highly skilled workers over lower-skilled ones for jobs that were formerly occupied by lower-skilled workers. Therefore, the ideal workers are those who will cost the firm less to train concerning any job, which in this case are assumed to be workers with higher education (Phelps, 1998).

The job competition theory maintains that productivity is a characteristic of jobs, not of individual workers (van Ours & Ridder, 1995:1720). This implies that the characteristics of the job determine the productivity of the job, not the human capital stock of the worker (Montt, 2015:8). Hence, as elucidated by Sala (2011:1026), this theory suggests that that job characteristics may be the only determinants of earnings. Thus, the marginal product of labour is linked to the job rather than to individual characteristics. Given that education is a characteristic of the worker, in Thurow’s view, education per se does not raise productivity, but it is a sign of trainability. Concerning job competition that is based on skills, a high-skill worker moves down the occupational ladder with a specific end goal to find a job more straightforwardly and avoid competition from his high-skilled counterparts. Underemployment, therefore, exists not because there are many low-skills jobs, but rather in light of the fact that the

competition to land a low-skills position is, from the perspective of the high-skilled worker, less extreme (Barnichon & Zylberberg, 2019:42). This means that these highly educated workers end up in jobs of less-skill individuals, that is, those that require less education than they possess (known as over-education) (Tsai, 2010:608). In the process, these workers incur a substantial wage loss since they have moved down the job ladder, even though they a premium over low educated workers employed in the same job (Barnichon & Zylberberg, 2019:43).

The implication of this theory is that workers with lower skills are then driven out of the market (unemployment rises), putting them at a worse disadvantage (Barnichon & Zylberberg, 2019:43-4), yet at the same time, too many high skill workers are wasted working in low skills jobs in low productivity firms. Another criticism is based on the view that job competition is biased and favours the high-skills, because a highly skilled worker applying for a low-skill job is systematically hired over competing for low-skill applicants (Barnichon & Zylberberg, 2019:44-45), due to less costs that are required in training them. Thus because of the competition that exists for the jobs, individuals are forced to get more qualifications in order to compete with others, even though they might not get a job that fully utilises their qualifications (Grapsa, 2017:2).

2.3.2.5 *Spatial mismatch theory*

John Kain first enunciated the spatial mismatch theory in 1968, and from that point forward there has been an abundance of writings on the theory. The contention was that minorities from inner cities of the US were most likely to encounter poor employment outcomes (high unemployment and low wages) since they are secluded from the job opportunities (Kain, 1968:175; Gobillon, Selod & Zenou, 2007:2404-2405). Spatial mismatches ensue because there is an overflow of workers concerning the quantity of accessible jobs in the inner cities where the black minorities are primarily situated in (Kain, 2004:7; Gobillon *et al.*, 2007:2403).

The spatial mismatch theory holds the view that residential segregation has cut many disadvantaged minorities off from occupations most fitting to their ability levels, particularly given expanded suburbanisation (Ihlanfeldt, 1997:218). This theory believes that individuals in small local labour markets, which are usually situated in rural regions have a constrained ability migrate or travel and as such will probably be underemployed (Buchel & van Ham, 2003:482), as some may be forced to take up any jobs within their local labour markets. This theory describes underemployment primarily by travelling costs which may hinder the ability to access jobs (van Ham, 2002:4). This perception stemmed from the fact that transport costs may be substantial due to inadequate public transportation in most rural areas. The second channel is job search which is hindered by a lack of financial resources, no connections in obtaining a job and the time and transport costs associated with searching for an urban

job in rural areas (van Ham, 2002:61). Underemployment as accordingly is clarified as the spatial mismatch between where workers live and where jobs are situated (Ihlanfeldt, 2006:404).

One key criticism against the spatial mismatch theory is that it fails to provide a theoretical foundation that explains the association between the spatial supply of employment opportunities and underemployment (van Ham, 2002:4). Furthermore, the theory ignores the fact that some minority workers might want to stay in the geographically disadvantaged areas by choice. According to Gobillon *et al.* (2007:2403) workers might decline a job that includes long travels as that would be too expensive in view of the proposed wage. Additionally, the theory seems to overlook the fact that employers in the urban areas (where most jobs are in) may not want to employ these workers or even more so, they may actually find it better to remunerate low wages as they may be of the perception that since they travel long distances to work, they may be more tired or more prone to missing work, consequently, be more less productive (Gobillon *et al.*, 2007:2408). Ihlanfeldt and Sjoquist (1998:849) argue that there are three main ways of addressing spatial mismatch: people must be brought to where the jobs are, jobs must be brought where people are and most importantly connecting people and jobs.

2.3.3 Other theoretical perspectives on underemployment

2.3.3.1 *The Assignment theory*

The assignment theory by Michael Sattinger maintains that workers are assigned jobs according to their skills (Grapsa, 2017:3), and thus their productivity is limited by their job characteristics (Sattinger, 1993:831). The theory assumes that human capital returns depend on both the workers' human capital (individual attributes) and the match between the worker and the job (nature of the job). This suggests that marginal product and earnings will depend on both the individual and the job (Sala, 2011:1030). In other words, the supply of labour is not uninformed but is largely influenced by an individual's own decisions which are aimed at maximising their own earnings or satisfaction (Sala, 2011:1031). This approach employs the matching theory in the analysis of over education. The focal expectation from the assignment theory is that a satisfactory clarification of changes in the distribution of income or earnings advocates considering both individual attributes and job qualities.

The assignment theory looks at underemployment from a skills mismatch perspective. In this way, workers with more skills and education than average may underutilise their skills, as a result, be less productive and therefore receive lower pay than well-skilled workers with the same educational qualifications (Nieto, 2014:4-5). Sattinger (1993:831-832) contended that underemployment emerges when the education or skills of workers are not quite the same as those required for their occupations. The underutilisation of some of their acquired education is not being rewarded by higher earnings, leaving a gap amongst the real returns to education and those anticipated in the prior decision of

investment in education (Grunau, 2016:375). Following that line of argumentation, the overeducated worker will receive lower wages, career disruptions and probably feel dissatisfied with their jobs, whereas firms suffer productivity losses, which implies restricted growth potential for the overall economy (Sattinger, 2012:2).

Be that as it may, a number of studies did not agree with the foundation the theory was based on (Mavromaras, Mahuteau, Sloane & Wei, 2013:281). Although the studies found that there are wage differences between overeducated workers and undereducated one, with the overeducated being the most negatively affected, they argue that the pay or remuneration penalisation related to overeducation is essentially not described by underutilisation or the waste of the worker's skills, but the '*heterogeneity of worker's skills*'. According to Nieto (2014:3), the heterogeneity skills theory claims that the perceived earnings variations between overeducated and undereducated workers in comparison to well-matched workers with the same educational level could mirror distinct differences in human capital in educational levels. The theory cogitates that the productivity of workers relies upon the level of human capital attained, irrespective of the characteristics of the job. Specifically, overeducated workers have lower abilities than well-matched workers at the same education level (Wu & Wang, 2018:207). To put it differently, overeducated workers might not be fully productive for the reason that they have less human capital, not because their job enforces restrictions on their productivity levels. At times, high levels of education (as indicated by more years of education) are insufficient as modern labour markets require more specific skills and abilities (García-Aracil and Van Der Velde, 2008:220).

2.3.3.2 *The Signal theory*

Michael Spence introduced the Signalling theory in 1973. This theory gained prominence during the emergence of the credentialist theories (Spence, 1973:355) and was regarded as an alternative theoretical approach to human capital theory and saw higher education institutions being assigned a function of worker classification and selection (Corominas *et al.*, 2010:28; Kyllonen, 2012:85-86). In the job signalling model, firms are assumed to have imperfect knowledge about the productivity of workers, and therefore relies on the job seeker's human capital (education credentials and job experience) to recruit suitable individuals (Muysken & ter Weel, 1999:22). These factors act as a signal indicating applicants' underlying learning ability and quality (Kulkarni, Lengnick-Hall & Martinez, 2015:529). Underemployment according to Farooq and Ahmed (2007:896) arises because of the existence of imperfect information in the labour market. Spence (1973:370) argued that specific indicators such as education screen the right, productive workers, and therefore aid in solving the issue of inadequate information confronting employers during hiring periods. Subsequently, workers would then raise their odds of employment by obtaining more of the '*signal*'. The more information employers receive from educational credentials of applicants, particularly regarding their actual skills, the better

informed they will be during recruitment and final selections, and the lower the probability of job mismatches (Andersen & van de Werfhorst, 2010:339-340).

Similarly, the higher the number of workers with education, the more education levels will be attained. This is because when the job seekers have the same courses, a particular rise in schooling or education offers a considerable enhancement in the job position. If the educational requirements of the jobs stay the same, there will be a rise in the educational attainment of the workforce relative to the educational qualifications jobs require (Susanli, 2017:157). Underemployment would, therefore, arise when “*there is a signalling equilibrium under which it is optimal for individuals to invest in more education than is strictly required to perform the tasks of their jobs*” (Spence, 1973:368).

2.3.3.3 *Person-job-fit theory*

The person-job fit theory alludes to the match between the worker’s skills, abilities and desires and job characteristics and requirements (Edwards, 1991:283). French, Caplan & Harrison (1982) identify two main types of fits: i) the job demands-worker abilities as previously explained by Edwards and ii) worker needs-job supplies fit which basically describes the degree to which the characteristics of the job fulfil the desires and goals of the worker and objectives.

According to this theory, underemployment arises as a result of the gap between worker capabilities such as skills and knowledge and the demands and requirements of their jobs, implying that there is a lack of fit (McKee-Ryan & Harvey, 2011:974). As a result, this makes the worker hopeless and more prone to leave their job (Lee, 2005:175). The person-job-fit models emphasise that job appropriateness can be estimated by matching a person’s capabilities (desires) to the job-demands job (or the realisation of desires) (Edwards, 1991:284). Accordingly, the nearer a person’s capability levels are to those necessary for the job, the better and positive the work outcomes for both the worker and the employer (Fine & Nevo, 2011:240).

2.3.3.4 *Theory of career mobility*

The theory of career mobility is rooted in the reason to understand the essence behind more educated individuals who accept educationally short positions, which relates to understanding skills-related underemployment. This theory argues that individuals accept educationally unchallenging jobs (with low pay) for which they are overeducated for because they believe that these jobs offer better chances of more rapid promotion and better career prospects (Linsley, 2005:4). According to the theory, wage penalties for overeducated workers are compensated by better promotion prospects (Sicherman & Galor, 1990:169). Furthermore, economists have gained much ground in understanding that even though economic motivating forces are essential, there are other incentives that are not monetary in

nature that give people impetus to accept some employment positions or jobs (Fehr & Falk, 2002:687). As maintained by García-Aracil and Van Der Velden (2008:221) some occupations are intrinsically fulfilling, offering an inherent return to those performing them. Thus, monetary incentives are not the main factor driving employment acceptance.

For this reason, this theory maintains that underemployment, mainly by skills and education represents a temporary phenomenon which occurs mainly at the start of a working career (Sicherman & Galor, 1990:170-171; Büchel & Mertens, 2004:810) and is a standard feature of a well-functioning labour market (Rosen, 1972:326), and suggests that educated individuals are more likely to face greater career opportunities and therefore move to a higher level of occupation (Galor & Galor 1988:7). This is based on the notion of the human capital theory as explained by Becker, where schooling has a positive effect on career mobility (Becker, 1964). In fact, Sicherman (1991:101) found that overeducated workers frequently move from one job to another, perhaps suggesting that overeducation is standard in the early career stages.

Galor's theory argues that at any point in time, individuals face various promotion probabilities within the firm, centered on personal characteristics and occupation (Galor & Sicherman, 1988:6). Workers who are not promoted are those whose specific quality is revealed not to be high enough, which is why workers that did not receive a promotion, even though had a higher likelihood of being promoted will probably leave the firm than being laid off (Sicherman & Galor, 1990:186), and this likelihood is higher for the more educated workers than, the less educated ones. Changing economic conditions or even a bad match between the worker and position affects a worker's career which will influence their decision to leave their current employer to another firm (career mobility) (Rosen, 1972:328). Galor and Sicherman (1988:9-10) argues that when a career that an individual thought to be an optimal choice cannot be actualised in one firm, resigning turns out to be part of their ideal career path. Contrariwise, an understanding that the intent behind the failure to receive promotion will likewise hold in other firms may persuade the individual to remain in the current occupation/position (provided they are not laid off) within the firm (Sicherman & Galor, 1990:187). Therefore, underemployment is explained by the frustration and displeasure that has been brought by non-promotion.

However, some studies have come to question the foundations laid by this theory. In particular, overeducation at the beginning of a career is regarded as a trap. Baert *et al.* (2013:123) argue that *"by accepting a job for which one is overeducated rather than only accepting adequate job matches sees monthly transition into adequate employment falling by more than 50 percent amongst Belgian youth"*. Similar findings are reported by Meroni and Vera-Toscano (2017:120) in Southern (Italy, Spain and Portugal), Eastern (Czech Republic and Estonia) and Continental (Austria, Belgium-Flanders, France, Germany and The Netherlands) graduates. Büchel and Mertens (2004:812) report that overeducation

results in less upward occupational mobility and less wage growth in the German labour market. This is especially the case for young workers with low-quality education (Pollmann-Schult & Büchel, 2004:328).

2.3.3.5 *Equity theory*

The equity theory by Stacy Adams was first introduced in the 1960s and deals with the worker's observation regarding how they are treated in comparison to others (Adams, 1965:267; Weller, 1995:44). In other words, the theory proposed that workers' satisfaction with the rewards of their job be influenced by comparisons with their colleagues (Feldman *et al.*, 2002:465). The aim is to maintain equity between their input into the job and the outcome that they receive in return. Inputs are represented by education, determination, job experience, and commitment, while the outcome can be in the form of remuneration increases, promotion, and appreciation (McKenna, 2000).

The worker's satisfaction with earnings is determined by how much their job rewards to job inputs matches up against those of his or her co-workers (Adams, 1965:268-269). Which is why when the individual is not satisfied with their state in comparison to what those in the same position receive, they may feel underutilised. The inability to find equity between inputs and outputs compared to colleagues can lead to actions and decisions that eventually result to leaving the organisation or withdrawing through absenteeism (Ariola, 2017:50-51). Some criticisms to this theory are based on the argument that it largely rests on the subjectivity, thus, there is a tendency for individuals to distort or overestimate their inputs, especially in terms of determination, and make subjective comparisons (Beardwell *et al.*, 2007).

2.2.3.6 *Wage deferral and effort-incentive theory (Agency theory)*

The Agency theory suggests that a worker's income should differ whenever information about her effort surfaces and that all information on performance should be used in determining their compensation levels (Kosnik & Bettenhausen, 1992:309). The earliest and most important contribution here is Lazear and Rosen (1980), who argue that workers put forth determination to alter their prospect of receiving better earnings. According to this theory, a worker will earn less income than his marginal product at the beginning and more in future (Sari, 2000:35). "*The logic is usually simple: by deferring a performance-related bonus until a worker is older, incentives for older workers improve while maintaining incentives for the younger worker (because by working hard now, she can be in line for that bonus later)*" (Pepper & Gore, 2015:1049).

2.3.3.7 *Relative deprivation theory*

It is very strongly perceived that people regularly contrast themselves with others regarding income or status, amongst many other factors (Vogel, Rose, Roberts & Eckles, 2014:206-207). Relative deprivation stems from that foundation of the comparisons that individuals make. The relative deprivation theory addresses the role of comparisons in influencing attitudes of individuals (Feldman *et al.*, 2002:456). The concept of '*relative deprivation*' was first used by Stouffer, Suchman, DeVinney, Star, and Williams in 1949 to clarify why satisfaction levels amongst soldiers did not regularly correlate with their objective job conditions.

Underemployment, as explained by the relative deprivation theory comes about when workers compare themselves with ideal or desired work circumstances or even their peers who hold practically identical skills, education, experiences and qualifications (Luksyte & Spitzmueller, 2011:38), and in some way believe that their job should be better than it is. Thus, the more relatively deprived an individual feels, the more negative attitudes they are likely to develop towards their job. When the worker feels relative deprivation, they are less satisfied with their current job since it does not match up to where they feel it should be in (Kulkarni *et al.*, 2015:531), and as argued by Buunk and Janssen (1992:340-341), they may act accordingly by perhaps resenting their work, which may raise the probability of quitting (McKee-Ryan *et al.*, 2009:563). This theory proposes that how the adverse reaction to underemployment by the worker will rely on how much they want "*job rewards, feels entitled to those rewards, and his/her standards of comparison for assessing the fairness or justness of the rewards they do receive*" (Feldman *et al.* 2002:457). In a nutshell, the underemployed believe they should occupy better jobs over the ones they are in.

2.4 SUMMARY AND CONCLUSIONS

Underemployment has been regarded as an overlooked, yet important labour market indicator. Even though the global economy has been characterised by the growth of vulnerable employment, and weakening chances of finding stable employment, underemployment has received little research attention compared to unemployment. Despite labour market analysis having changed drastically over the years, there is a consensus that employment and unemployment measures have not been able to capture the complex nature of labour markets fully. The situation is also real in many developing countries, South Africa not excluded as there are many labour resource wastages that unemployment overlooks. Even though being underemployment might be seen as a better off position than unemployment, the fact of the matter is a look into the underemployed' life shows a different picture characterised by low working hours and consequently lower pay. In simple terms, their labour is underutilised.

The ILO has over the years had a series of conferences with the aim of developing better measures and to understand the scope of the various kinds of underutilisation. Phillip Hauser did this through the LUF framework which was meant to operationalise the measurement of visible and invisible underemployment and to determine the degree to which labour is adequately utilised in the labour market. Broadly, underutilisation includes labour slack, lower remuneration and skills mismatch. Labour slack reflects insufficient volumes of work, low remuneration essentially entails all those that are employed by are earning very low wages, while the skills mismatch category captured those that possessed more education and skills than required for their jobs. Both the unemployed and underemployment including others who are inadequately employed and the discouraged job seekers form part of the underutilised labour. Although the LUF evolved over the years, its primary aim remained.

Underemployment, on the other hand, is seen as a sub-category (most expanded form) of the LUF. In simple terms, underemployment has three main kinds, *“high-skilled employees with low-skilled jobs, part-time workers who want full-time jobs and skilled workers with low-paying jobs”* (Dixon, 2018:3). Based on the ILO definition, being underemployed means these workers were willing and available to work more adequately during the survey period, whether by time (working fewer hours than the legal threshold), income (less income than in previous job or than those in with the same skills and in the same job) or skills (having more skills than needed by one’s job) – which are all regarded as types of underemployment. Researchers have also characterised underemployment in terms of lower remuneration, over education and irregular work. In a nutshell, with underemployment, a worker finds themselves in a job that is inferior in some way and not fully utilising their capacity. From an economic perspective, underemployment was linked with the concept of labour hoarding, a practice most common during an economic recession where rather than retrenching workers, firms keep workers, and only reduces their working hours. The decision to keep more workers than needed for currently low production may arise because there are challenges relating to contractual agreements between the employers and the employees which if breached could yield a number of legal costs (see chapter 2, section 2.2.3). So, firms would rather keep workers and just adjust (shorten) their working hours until economic circumstances become better. It is in this instance that workers may be underemployed since they are working fewer hours than desired, consequently earning lower wages. This implies *“unemployment on the job”* and low labour productivity, which turned into lower incomes.

A number of factors contribute to underemployment. In general, a weak economic environment (besides hoarding of labour), demographic factors such as marital status and geographical location, and employment-related factors such as career history some job seekers may be forced to jobs that they would not normally take in an attempt to escape unemployment.

As much as underemployment is an important labour market statistic, measuring it has not been a straightforward procedure given some of its problematic issues such as its multidimensionality and potential overlaps between its types. Nevertheless, there have been a number of strides made in trying to provide a comprehensive measurement. The first measure is the ILO underemployment framework which limits underemployment to time underemployment, where an individual is regarded to be underemployment when they work fewer hours than the threshold. The threshold for the working hours is country specific. Additionally, there is the objective (relies on expert analysis and realised matches) and subjective (relies on the worker's subjective assessment) measures which are used in measuring income and skills underemployment.

Both these measures are not without criticisms as for instance there is a fear that when it comes to subjective measures, workers may exaggerate their situation while in the case of objective measures, it is argued that it may be costly to carry out on a large scale yet at the same time it overlooks the worker's perception is may give a more accurate picture of the situation. The last measure is the BLS alternative measure, particularly U-6 which is the most comprehensive measure of underutilisation. However, it has been criticised for failing to consider underemployment amongst full-time and part-time workers. Even though the measures above play an important role in understanding underemployment, there are still some issues surrounding them, particularly with regards to measuring income and skills underemployment.

Despite the questionable measurements, underemployment is still an essential indicator of negative consequences for the affected individuals, firms and economies at large. For the individual, the spell of underemployment may affect well-being and even their careers through job dissatisfaction and frustration. This can immediately bring about devastating effects to their families who bear the brunt of the breadwinners not earning enough to support families since they now work less hours. Although these workers technically have jobs, they do not have the opportunity to contribute as much as they can to society. At the firm level, productivity and profitability suffers and firms experience a large number of people leaving their jobs. While there is a loss of output for the economy that could have been produced but was not. The consequences are even distressing for young people, whom underemployment implies being unable to contribute effectively to national development and fewer opportunities to exercise their rights as citizens. Because they are underemployed, their earnings potential is cut and they will have less to spend as consumers, less to invest as savers, and ultimately being trapped in the vicious cycle of poverty (ILO, 2010:1). Effects on career prospects and progression are greater as the underemployed young workers have fewer chances of being promoted and hence are more likely to experience transitional underemployment turning into permanent underemployment (Friedland & Price, 2003; Li *et al.*, 2015:439; Grapsa, 2017:5-6). Frustrations of unfulfilled expectations with income further fuels the severity of underemployment (Montt, 2015:2). Unstable hours not only

imply unstable incomes but additionally put a strain on working families as they try and manage many of life's competing demands or pursue other career opportunities (Wolfe, Jones & Cooper, 2018:1).

Besides underemployment, there are still many other forms of underutilisation which include both open and long-term unemployment, non-standard work such as temporary/casual work, precarious work which entails work characterised by uncertainty and riskiness. Also, involuntary part-time work which relates to time underemployment, informal and undeclared employment and low pay, earnings inequality and working poverty which is the worst form of underutilisation.

Theories from various disciplines have greatly assisted in the understanding of underemployment. Within economics, two distinct schools of thought, i.e. the neoclassical theory and the institutional theories have dominated the discipline of labour economics. Although both these schools of thoughts agree that there will always be some degree of job-education mismatches in a well-functioning labour market, they both view the causes around that differently. In broad terms, the neoclassical school of thought believed that individuals would be rewarded based on their human capital, while institutionalism school of thought believed that mismatches in the labour market arise because of barriers outside the market such as discrimination.

On the other hand, researchers from sociology/psychology and management have also contributed a lot towards understanding underemployment, particularly from a sociological and psychological perspective. In comprehensive terms, most conclusions are that underemployment arises because workers feel that they are in jobs which are inferior by a certain standard. They, therefore, compare themselves with the desired work circumstance or even their colleagues who hold the same education/schooling as them. The underemployed may even feel that they are overeducated or overqualified for their jobs. Thus, when the gap between the worker's desires and their work situation widens, they may feel underemployed and the effects this may affect their morale and job satisfaction. In the next chapter, the discussion now turns to the state of underemployment amongst young people from a regional perspective. The focus is on South Africa's counterparts i.e. the BRIC countries as well as a brief analysis of developed countries with the United States of America (US) under review.

CHAPTER 3

A REGIONAL EMPIRICAL ANALYSIS ON UNDEREMPLOYMENT

“The labour market is perhaps the most widespread and effective poverty reduction mechanism that any country has, and an important policy question is whether there is a role for the public and private sectors in facilitating workers chances to access better job” ~ Firpo, Carvalho and Pieri (2015:2).

3.1 INTRODUCTION

The previous chapter had the aim to give a thorough understanding of what labour underutilisation is, particularly paying attention to underemployment. Underemployment, according to Bell and Blanchflower (2018), has replaced unemployment as the main indicator of labour market slack, yet at the same time remains rarely discussed and unreliably measured, leading to the underestimation of the situation by current official underemployment measures. Therefore, the previous chapter had an aim to give a thorough analysis on underemployment from a theoretical perspective. From a definition perspective, the chapter revealed that the nature of underemployment can vary from being explained by insufficient time or working hours, inadequate income or having more skills than required by a job. Most importantly, the thorough contextual background given on underemployment showed the incomprehensiveness of the unemployment rate as a tool providing the overall labour market health. Similarly, the employment rate fails to capture some dimensions of labour market slack. Hence, over and above a partition between unemployment and employment, what is important for young people is accessing productive and compensating jobs that offer them great career prospects (Scarpetta & Sonnet, 2012).

This chapter tends to the fourth theoretical objective laid out in Chapter 1. As such, this chapter has the aim to discuss findings of empirical studies conducted on underemployment. Given how scant studies on underemployment are, particularly amongst young people relative to unemployment research, this chapter has the objective of painting a picture of underutilisation, particularly underemployment from a global perspective. The literature in this chapter is not be restricted to simply scholastic work alone, however incorporates reliable and sound gray literature⁶ such as reports, government documents, and so on. Some new insights on the kinds of labour market experience that lie behind the underutilisation statistics may help in identifying significant changes in the employment experiences of various young people, specifically graduates. In addition, such comparative literature between countries may permit South African policymakers to recognise the likenesses, contrasts and inadequacies of every country

⁶ According to Paez (2017:233), gray literature often enhances the extensiveness of a review, while at the same time ensuring a more balanced view of existing evidence.

when it comes to underutilisation of young graduates in relation to South Africa's. As shown in Chapter 2, economic theory does support the idea that a country's human capital endowment is an important antecedent of wages, wage growth, firm productivity, competitiveness and overall economic growth. In fact, arguably Makiw, Romer and Weil (1992:407) posit the positive impact of investments in human capital on economic growth to be three times larger compared to investment in physical infrastructure. At the same time, young people are seeking to be a great leverage point for such investments as the earlier the investment, the longer the benefits and ultimately the lower the economic, fiscal and social costs over the long run (Gressani, 2001:7). Also, putting resources into young people to give them a reasonable shot in the labour market has never been a crucial priority in all countries (Scarpetta & Sonnet, 2012).

This chapter continues over by analysing the situation of underemployment amongst young people within the BRICS (Brazil, Russia, India, China and now South Africa as well). The South African situation is presented in chapter 4. The grounds for comparison are based on the fact that these economies collectively play a major role in the global economic arena. By 2020, the countries are expected to contribute nearly half of global GDP. The countries are presumed to have similar economic standing in their respective regions and also globally. The addition of a discussion of the situation in a developed country (the United States of America) will also assist in shedding some light into the youth underemployment situation from a developed country perspective. This chapter, therefore, has an aim to paint a picture of employment outcomes facing graduates and the comparison of the respective youth labour market. Also, this chapter assists in understanding how South Africa compares to its counterparts.

In this chapter, the discussion on each country is based on three broad points/factors: background on the economy, labour market situation, specifically youth labour market where attention is given to underemployment amongst young people, and lastly, policies that have been implemented in dealing with the labour underutilisation issue, underemployment in particular. The discussion for each country essentially highlights the links between education and underemployment, and also, poverty and underemployment. The last section concludes the chapter.

3.2 DEVELOPED COUNTRIES

Developed economies boast of the fact that has always been crucial to the economic wellbeing of the world economy and its citizens, and not just in terms of their contribution towards growth but also even when it comes to trade and most importantly resources (OECD, 2016b:7; Hamermesh, 2017:1). These economies have managed to be a cut above generally sound policies This has been one of the main contributors to their relatively strong labour market performance.

Nevertheless, economic recessions have exposed these countries to unusual labour market challenges. According to the 2016 '*State of the North American Labour Market*' by the OECD (2016c:8) although these economies pride themselves in terms of having economies that can create sufficient work, these countries have not been able to wither against other labour market challenges. Labour underutilisation, including unemployment, underemployment and inactivity rates remain stubbornly above their pre-crisis levels in almost all cases (OECD, 2016b:7). The most vulnerable group entails those who lost their jobs during the global economic crisis and have not yet found another one, and first-time work-seekers.

The United States of America (US) is one of the developed countries which extensively measures underutilisation, including underemployment, hence the choice to analyse it. Its economy has over the past three decades experienced a number of swings in performance such as the Great Recession, over shorter and longer time periods and consequently undergoing major structural changes which are evident in the labour market (Rossi, 2011:300). Since the global financial crisis, underemployment has become a major concern in most developed countries, including the US and European Union, following in the footsteps of an unemployment problem (Bershidsky, 2018:1). In other developed economies, young workers are not finding good jobs and are instead stuck with high levels of student debt and precarious work for which they are overqualified (Means, 2015:3). It is hoped that the analysis on the US will highlight the gap that exists between BRICS countries and developed countries in extensively measuring labour market situations that are most likely to be overlooked such as underemployment. Having a correct picture of the labour market allows a government to come up with suitable and appropriate policies and this will explain why the US has one of the lowest unemployment rate because it has realised that the issue is not a lack of employment but the kinds of employment that people find themselves in.

Underutilisation trends since the 1960s have shown divergent paths between the United States and the countries within the European Union, with the United States having moved from the position being a country with the highest unemployment rate to a country that has attained the lowest jobless rate amongst its counterparts. By contrast, the underutilisation rates moved in the opposite direction, from low to high (Sorrentino & Moy, 2002:15). Bell and Blanchflower (2018:5) single out underemployment as a reason why wage growth in the US has been slow even with very low unemployment levels. At the same time, many of these negative labour market outcomes have been fuelled by recessions and contraction, such as the Great Recession which was the largest recession since the 1930s Great Depression. Song and von Wachter (2014:2) reports that although some of the negative labour outcomes such as unemployment rates were comparable to those observed in the early 1980s, the long term unemployment rates were twice during and after the Great Recession compared to the early 1980s and

other recessions, while the employment-population-ratio was larger and more persistent comparably. This was the reality in many economies of the world, developed and developing.

Although productivity in the US has continued to improve, wages of workers seem to have been lagging behind this growth in productivity, raising levels of income inequality (OECD, 2016b:51). For most of these young people, entry-level positions are now becoming long term jobs (Bowman & Azpitarte, 2017) trapping them in poverty and limiting their lifetime earnings. Against, this background, this section of the chapter will give a discussion of the nature of the US economy. The youth labour market situation will then be discussed before delving into some of the policies that the country has implemented in addressing challenges facing its graduate labour market.

3.2.1 United States of America (US)

3.2.1.1 Economic background

The US economy has always been the backbone of the global economy, with one of the highest output growth and most diversified in the world according to the 2018 Index of Economic Freedom (The Heritage Foundation, 2018:426). At its simplest, the economy operates on three key sectors: consumers, businesses, and government (Cengage Learning, 2009). This economy operates as a mixed economy, dominated by the free-market system, with some limited government control, particularly in the areas of defence, medical care, labour market intervention through minimum wages (which is at \$7.25 per hour) and many other areas (BLS, 2018a). The US has one of the world's highest GDP per capita, at \$67.43 thousands (International Monetary Fund, 2019). However, despite the consistent economic performance, the US economy still faces economic challenges, threatening its long-term growth.

Since before the Great Recession, weak productivity and low labour participation have remained one of the most important strains on US growth over the longer term (Fernald, Hall, Stock & Watson, 2017:4-5; Hamermesh, 2017:4). Although the unemployment rate is at one of its lowest points (3.7 percent as of October 2018), the country suffers from other forms of labour underutilisation such as the increased persistence of non-standard employment, and high levels of involuntary part-time employment (underemployment) in particular (Valletta *et al.*, 2018:2; Golden, 2016:1). Persistently weak productivity gains in coming years could lead to a further slowdown in potential growth amid rising demographic pressures (World Bank, 2018a:37). This would further constrain wage growth, and make it more difficult to reduce inequality and sustain social safety nets.

The US economy like most economies has suffered from economic shocks even during its booming growth years. For instance, following the 1929 stock market crash which saw stock values dramatically drop, many buyers losing their life savings and stock, the US economy suffered a devastating downturn,

the Great Depression which lasted for more than decade (Hamermesh, 2017:3). From a classical perspective, this economic downturn was created and prolonged by government regulations, poor institutions and activist policy failures (Friedman & Schwartz, 1963; Higgs, 1997). Similar to any downturn in a typical business cycle, the Great Depression brought long-term unemployment which soared from an estimated 1.6 million (3%) in 1929 to nearly 12.8 million (25%) in 1933 and averaged at more than ten per cent throughout the 1930s (Reed, 2010:1). The “*downturn was worse than any known in the history of the country*” (Doeppers, 1991:512).

The Great Depression resulted in widespread questioning of the *laissez-faire* economic approach as advocated by Adam Smith in the eighteenth century that markets should be deregulated and that substantial economic freedom is the way to go (Holcombe, 1998:7; Mohr & Associates, 2015:29). Consequently, the Keynesian school of thought gained attention as promoted by John Maynard Keynes in his book the ‘*General Theory of Employment, Interest and Money*’ in 1936. Keynes argued for the strong government intervention through strong expansionary fiscal policy in the economy as a remedy for the ongoing economic depression in the US at the time (Keynes, 1936; Mohr & Associates, 2015:37). This wave of Keynesian economics emphasised macroeconomics, unlike microeconomics which was the main theme advocated by economics in the 1700s, and it also became the main policy approach by the US government following the World-War II period (Holcombe, 1998:10; Hickey, 2011). The 1960s proved to be a period of economic expansion due to the introduction of large scale social security and anti-poverty programmes by the Kennedy administration and sustained by President Johnson which included health care for both the poor and the elderly, employment programs, schooling and food assistance for those living in poverty (Haveman, Blank, Moffitt, Smeeding & Wallace, 2016:1-2).

By the early 1970s, forecasts started predicting negative growth amid increasing inflation rates and expectations of continuing inflation (Romer, 1994). The 1970s and early 1980s were unique because relationships which were considered natural and certain such as the negative association between unemployment and inflation during economic downturns were disproved by reality (Sahin, Song, Topa & Violante, 2011:5). Both inflation and unemployment increased by historical standards, while there was also output stagnation - this phenomenon being referred to as stagflation (Khan, Edward & Knotek, 2015:40).

The remainder of the 1980s gave rise to Reaganomics which comprised a chain of supply-side economics promoted by President Ronald Reagan. According to Niskanen (1988:1), Reagan's 1981 Program for Economic Recovery had four major policy objectives: (1) narrow a growing government spending, (2) reduce income tax on labour and capital, (3) deregulate markets, and (4) maintain price

stability by controlling the growth of the money supply. All these major policy introductions were in turn, expected to boost the US economy (Meltzer, 1988:534-535).

The 1990s was regarded as a decade where the US economy began showing signs of prosperity. As indicated by Anderson (2015), the US economy grew by an average of 4 per cent per year between 1992 and 1999. Employment in export-sensitive sectors followed a cyclical pattern, declining during the early 1990 - 1991 recession and the later Asian economic crisis (Hatch & Clinton, 2000:3). Real wages also increased around this time, raising consumer spending and confidence and consequently investment spending (Kahn, 2002). From the late 1990s through to the end of 2000, the economy was characterised by improved labour market performance, which saw investment and consumption spending grow significantly (Weller, 2002). Rapid growth continued through the late 1990s, with the unemployment rate falling below five per cent in 1997 while inflation remained subdued (Kotzé, 2002:1).

The economic expansion in 1999 was regarded as the longest expansion on record, surpassing that of the 1960s. By contrast, the Asian growth miracles, except for China, collapsed in the 1997 financial crisis⁷, while Japan's unreconstructed economy characterised by statism remained mired in a decade long stagnation (Kotzé, 2002:6). The crisis in the Southeast Asian region started in Thailand as a result of underlying macroeconomic deficiencies which encompassed factors such slowing exports growth; persistently large current account deficit increasingly financed by short-term inflows; and quickly rising external debt amongst others (Corsetti, Peesenti & Roubini, 1999:4-6), jeopardising the US's years of outstanding economic performance and raising recession possibilities (Pollard & Coughlin, 1999:33).

The period 2000-2010 is regarded as one of the lost economic decades in the US. From the 9/11 terrorist attack in 2001, to the 2007 housing bubble which resulted in the collapse of the US banking system and the 2009 global financial crisis which was termed as one of the Great Recession after the 1930s Great Depression. The Republican administration (2001 – 2008) returned the policy of Reagan and once again encouraged neoliberalism around the world, bringing about an economic depression in the US (Li, 2013:221). During this period, the US economy was sluggish, reaching the lowest negative growth rate particularly during 2008 and 2009, with an estimated 30 million people losing their jobs and the length of long-term unemployment doubling, and average family incomes decreasing by about 8 per cent (Kalleberg & Von Wachter, 2017:1-2). By the fourth quarter of 2008, real GDP growth rate was at -8.9 per cent before showing signs of improvement in the first quarter of 2009 at -6.7 per cent (US Department of Treasury, 2012).

⁷ This was the Asian crisis, which according to Harrigan (2000) began in the summer of 1997 following the currency collapses of some of the Asian Tigers (Korea, Malaysia, Philippines and Indonesia).

The economy continued to recover slowly from the third quarter of 2009, attaining a growth rate of 1.7 per cent. By the late 2009, approximately 16 million Americans were unemployed (BLS, 2009a). The official unemployment rate was just over 10 per cent, but if marginally attached and involuntary part-time workers are included, the rate increased to more than 17 per cent (BLS, 2009b). The national poverty rate substantially increased during this decade, peaking to 13 per cent in 2008, child poverty rate increasing to 19 per cent, which was seen as the highest rate since 1997, and working poverty rising to 12 per cent in 2008 (US Census Bureau, 2008). Following the aftermath of one of the worst financial crisis since the Great Depression (Kalleberg & Von Wachter, 2017:1), the US economy continued to strengthen, maintaining positive growth throughout 2010, although following a declining trend (US Department of Treasury, 2012). Compared to other advanced economies, the US economy experienced the lowest economic decline with Japan and the UK being the worst affected.

The initial signs of a recovery in economic activity appeared and strengthened in the developed economies and European Union region throughout 2013. The US economy was forecasted to grow by an estimated 3.2 per cent in the beginning of 2013 (US Commerce Department, 2014), however, the actual growth was slightly lower at 1.9 per cent, despite growth still on an increasing trend. This recovery played an important role in boosting economic activity, though it coincided with a global economic recovery and a loosening of monetary policy (IMF, 2014:1).

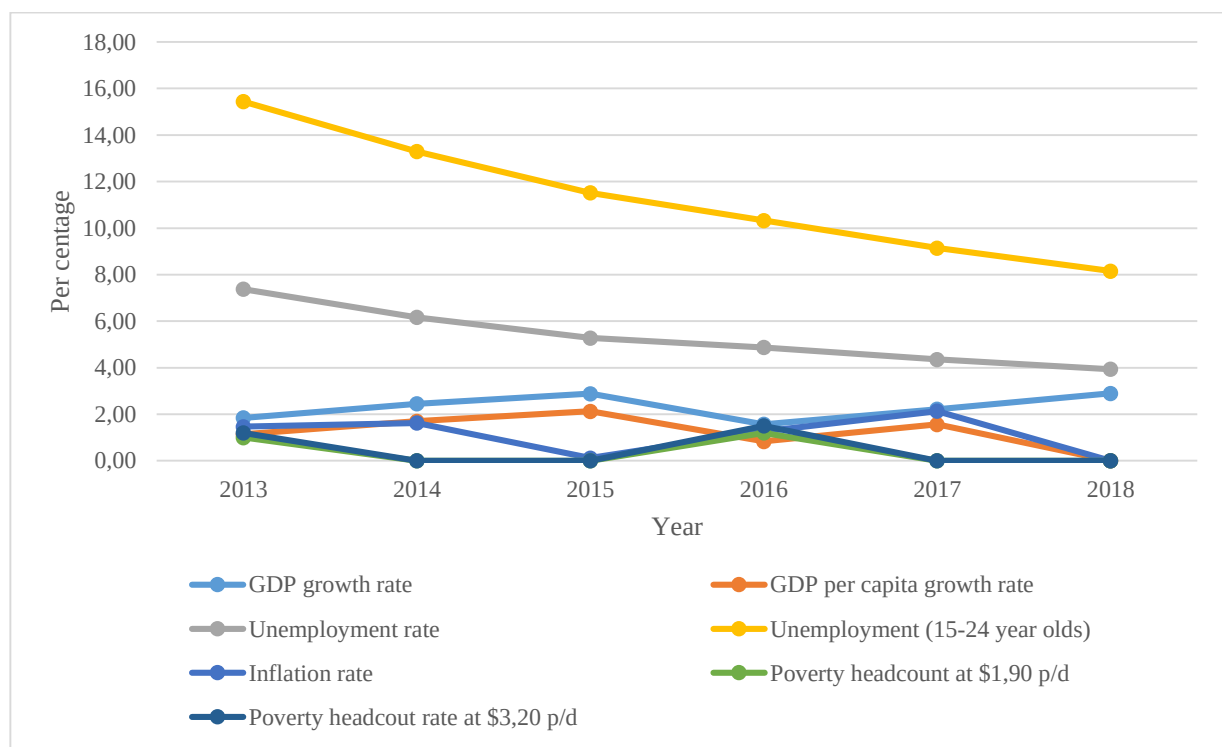


Figure 3.1: US macroeconomic statistics since 2013-2018

Source: World Bank Development Indicators (2019)

As can be seen in Figure 3.1, the US economy gained some momentum from 2014 going into 2015. Although there was productivity and competitiveness growth as the economy recovered, that was still not sufficient to close the large continued employment gap in the country. The inactive recovery in economic activity and the large gap in employment had fuelled a debate that GDP growth is too low for substantial employment creation (ILO 2014:41). In fact, unemployment levels were still very high at 9 per cent between 2013 and 2015.

From 2015, it was clear that the US economy was on an economic trajectory, and the employment recovery was becoming more extensive and gaining impetus, putting unemployment on a declining path (see Figure 3.1). However, many young people including the experienced matured workers were still facing employment challenges as the youth unemployment rate was still very high (between 8-9%) relative to the overall national average rate. Despite accumulating skills and making efforts to find work, many young people are struggling to find employment. Those that lost their employment during the financial crisis are struggling to get back in the employment scope, while those seeking work for the first time are facing challenges of entering the labour market, threatening their prosperity (Bednar, Bews & Cameron, 2017:4). The next section discusses the labour dynamics facing young people.

3.2.2.2 *Youth labour market dynamics*

There is some consensus that since the global financial crisis, employment challenges facing developed countries are more of an underemployment nature than unemployment (Bershidsky, 2018:1; Bell & Blanchflower, 2018:5-6). In countries such as the US, the challenge has also been more of a lack of good jobs than a lack of jobs in general. One observation is that the labour market is not creating enough jobs for all who want work, nor quality jobs (Hersh, 2014:1). The unemployment rate represents a good, although inadequate, measure of the challenges confronting young people in the labour market (Eurofound, 2017:1). According to Bershidsky (2018:7) most unemployment statistics produce very low numbers, often implying that people are in employment, however, such statistics are not in line with most people's perceptions of their labour market experiences. Furthermore, an important and growing number of young people who have left the education system are not (or no longer) looking for work and thus are not included in the official unemployment statistics (Scarpetta & Sonnet, 2012; European Parliament, 2013). At the same time, there is growing recognition that underemployment is one of the major challenges confronting US workers, predominantly those in low-wage sectors (Wolfe *et al.*, 2018:2).

According to Kahn (2002:3), the US labour market has long been less subject to institutional intervention by unions or the government than have the labour markets of other Western countries. Many people are assigned fewer work hours than they would like, involuntarily working part-time when

they would prefer to work full-time. Others are required to work long hours (with or without overtime pay), sometimes on short notice (Wolfe *et al.*, 2018:2). By the late 1990s, the United States had a considerably higher incidence of employment than other Western nations across a number of dimensions including but not limited to lower unemployment (also long-term) levels also within education groups, higher employment-to-population ratios (for both women and men), longer working hours, much smaller part-time work and temporary work (Kahn, 2002:10). In the early 2000s, employment-protection regulations were much more stringent in other OECD countries than in the US, although many of these other countries endeavoured to loosen such restriction during the 1980s and 1990s (Standing, 1999:583). These institutional differences strongly suggest that the US labour market is non-interventionist in nature.

Over the last 10 years, consequences from the Great Recession have negatively affected the employment prospects of young people who are mostly first time labour market entrants (Gould, Mokhiber & Wolfe, 2018:4). Very large increases in unemployment rates and durations have occurred and are experienced primarily by less-educated, younger workers – who had already experienced relative declines in their earnings and employment over the past three decades (BLS, 2018a). Although those with higher education qualifications faced better labour market prospects, blacks at all educational levels face poor employment prospects than other groups with similar levels of education (Jacobsen & Mather, 2010:3). Compared with those who graduated into the 2000 labour market, graduates of 2018 still face real economic challenges, as demonstrated by elevated levels of underemployment as well as worsened wage gaps, particularly for women and black workers (Gould *et al.*, 2018:1).

In as far as individuals considered to be marginally attached,⁸ comparably, the U-6 rate has always been higher than all measures, *inter alia*, U-1 to U-5. In 1994, the U-6 rate was at an estimated 11.8 per cent compared to the U-5 at 8 per cent, U-4 at 7 per cent. Although the U-6 decreased between 1994 and 2001, increased considerably from the beginning of 2008. The number of persons who were employed part-time for economic reasons rose by 2.9 million over the year, to 7.4 million in the fourth quarter of 2008 (Borbely, 2009:10). Between 2009 and 2010, the U-6 rate peaked at more than 16 per cent. According to Sok (2009) a rise in part-time economic employment due to slack work generally occurs before a rise in unemployment, because, faced with a decline in demand for their goods and services, many employers tend to reduce workers' hours rather than lay off workers. The economic recovery from 2013 saw all rates (U-1 to U-6) decrease as indicated in Figure 3.2.

⁸ See definition of marginally attached in chapter 2.2.6.3.

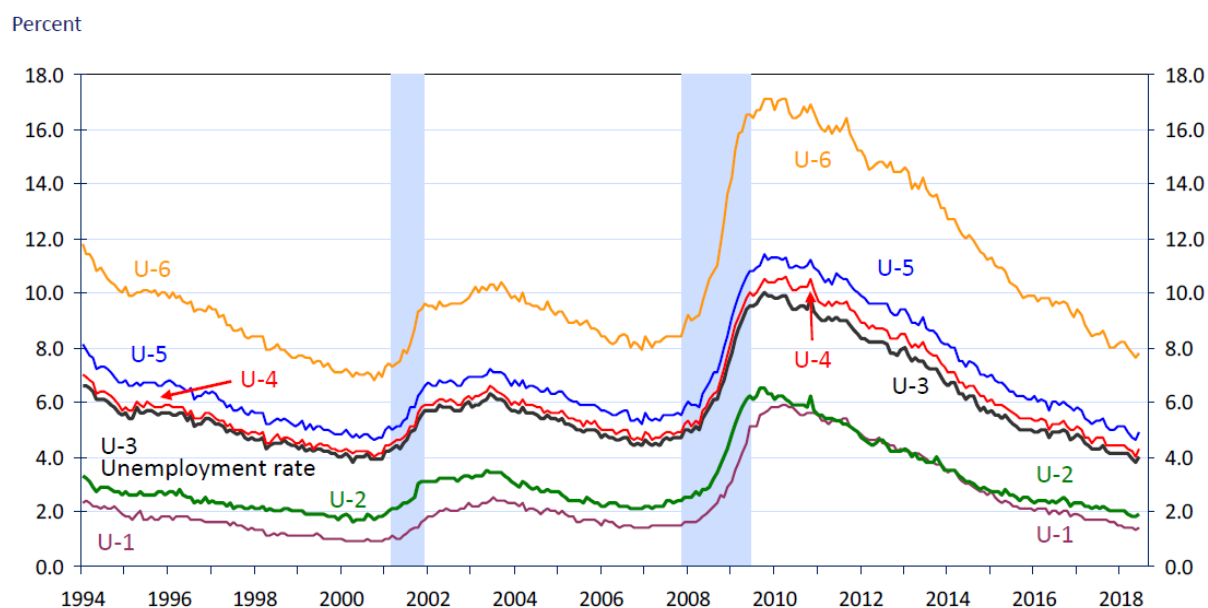


Figure 3.2: Alternative measures of labour underutilisation, 1994-2018

Source: BLS (2018a)

However, since 2005, the BLS has not been able to conduct a survey known as the Contingent Work Survey (CWS), which was one of its main survey for tracking non-standard employment in the US. Hence, Katz and Krueger (2016) filled this gap by conducting the RAND-Princeton Contingent Worker Survey (RPCWS), a version of the CWS, which they used in a study that was investigating the rise and nature of alternative work arrangements (non-standard employment⁹) in the US between 1995 and 2015. The study found (by comparing the 2015 RPCWS and the then 2005 BLS CWS), a substantial rise (from 10.7 to 15.8) in the incidence of alternative work arrangements for US workers, having increased from 8.6 million (57.2 per cent), from 15.0 million in February 2005 to 23.6 million in November 2015. Similar to unemployment rates amongst young graduates, underemployment rates remain higher than their 2000 levels, with a substantial number of US graduates in low-skill jobs, in essence showing underemployment to have been substantively larger than increases in the unemployment rate (Barnichon & Zylberberg, 2019:32-33).

Although the voluntary part-time group is much larger, interest in the involuntary part-time group has increased in recent years as its share of the workforce reached unusually high levels during the Great Recession of 2007-2009 and even though the US economy recovered from the recession, involuntary part-time employment remained relatively high (Valletta *et al.*, 2018:2). This is also true for young US graduates despite the underemployment rate having recovered; it still remains higher than it was prior

⁹ Non-standard employment in this instance is defined as work that is temporary in nature, on-call work, contract company work and independent contractors or freelancers.

2007. For young graduates, the underemployment rate was 11.1 percent in 2018, as compared with 9.4 percent in 2007 and 6.9 percent in 2000, suggesting that the underemployment rate has not recovered as much as the unemployment rate (Gould *et al.*, 2018:2). This, along with research on other forms of underutilisation, suggests that young graduates are taking less desirable positions than they used to (e.g. see Katz and Krueger, 2016). Figure 3.3 indicates that the underemployment rates for young graduates since 1990 until 2018 has always been higher when compared to the unemployment rate, suggesting that although the US economy has been on the recovery phase, it is still failing to create full-time employment for those with higher education qualifications, whom theory (see human capital theory in Chapter 2) assumes that are most likely to endure positive employment outcomes compared to their counterparts with lower qualification levels. Many young graduates are still having difficulty finding full-time jobs or are working in positions in which they are underutilised (Gould *et al.*, 2018:12).

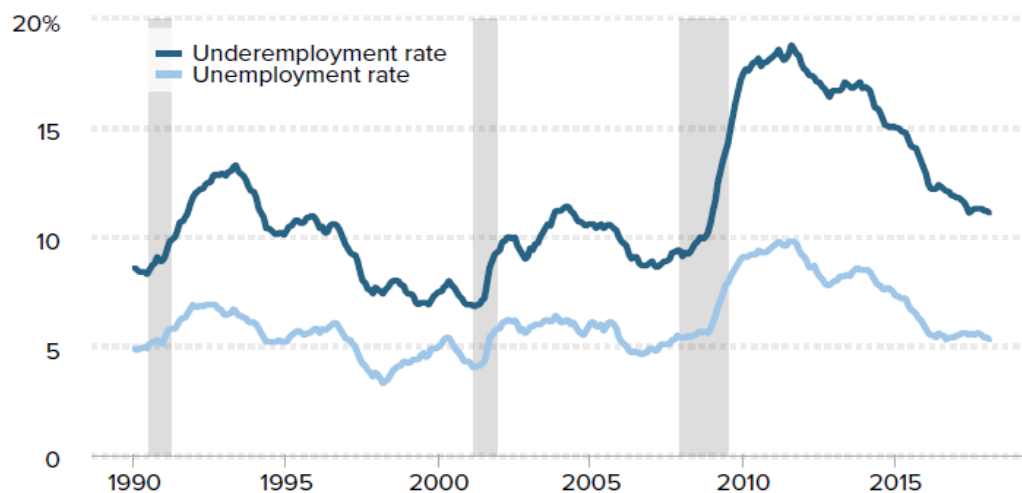


Figure 3.3: Underemployment rate amongst graduates aged 21-24, 1990-2018

Source: Economic Policy Institute (2018)

Figure 3.4 in particular shows the distribution of underemployment by race and gender in 2000 and 2018. In 2000, young women and men with tertiary degrees had fairly similar underemployment rates (7.1 per cent and 7.6 per cent, respectively), with the men's rate being slightly higher. Over the next 18 years, underemployment increased significantly for both groups, but slightly more for men (by 4.9 percentage points, to 12.5 per cent) than for women (4.1 percentage points, to 11.2 per cent), widening the gap (Gould *et al.*, 2018:15). However, while the underemployment gap between young male graduates and young female graduates is growing, this gap is still smaller than the gap between the male and female unemployment rates.

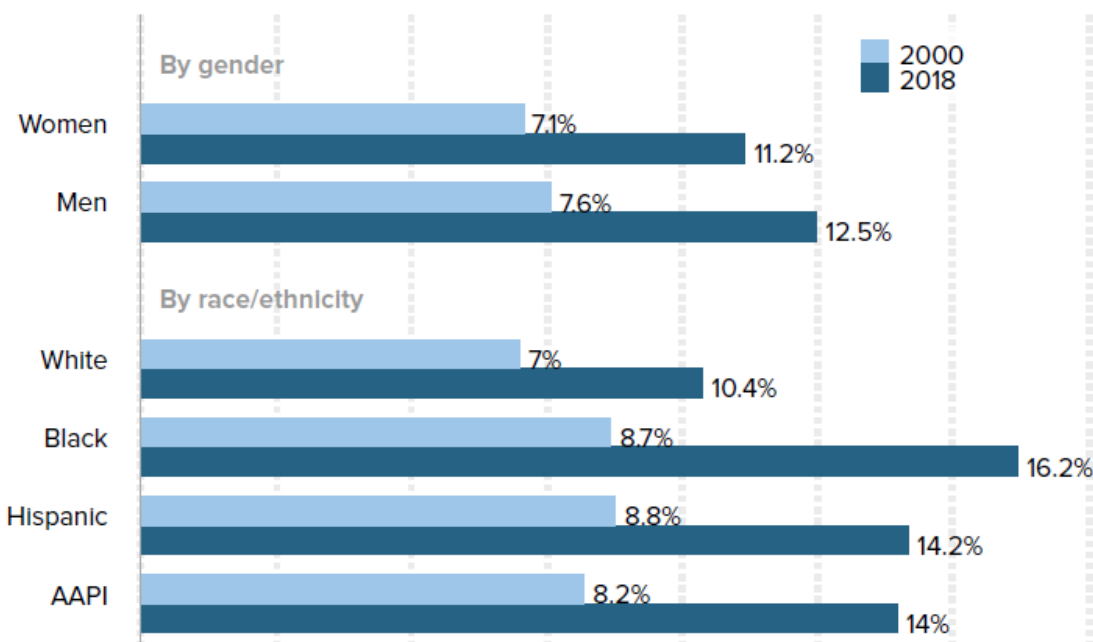


Figure 3.4: Underemployment by gender and race, 2000 and 2018

Source: Economic Policy Institute (2018)

In 2000, the underemployment rate of young black graduates was 8.7 per cent, higher than the rate for young white graduates (7.0 per cent). By 2018, the black underemployment rate had nearly doubled, increasing to 16.2 per cent, while the white rate rose to only 10.4 per cent. The underemployment rates of young Hispanic and Asian American/Pacific Islander graduates were also higher than the white underemployment rate in 2000 and grew more than white underemployment by 2018, increasing the already-existing disparities.

Surprisingly, looking at other types of underemployment, *inter alia*, by skills, research finds that there are still quite many young graduates in the US who are in employment outside their studied fields. Abel and Dietz (2014:4) argue that even in good economic times, a surprisingly high share of young graduates find themselves in jobs that do not necessarily require a HEI degree. According to Gould *et al.* (2018:18) the share of young graduates working in jobs not requiring a tertiary degree increased over the weak 2000–2007 business cycle, rising further during the Great Recession and its aftermath; and has been slow to fall since.

In 2000—when the labour market had many jobs and the unemployment rate was 4.0 per cent—38.3 per cent of employed graduates between the ages of 22 and 27 worked in jobs that did not require a degree (Federal Reserve Bank of New York, 2018). In 2007, 41.8 per cent of employed graduates under age 27 were working in jobs that did not require a tertiary degree. This share increased to 46.3 per cent

in the aftermath of the Great Recession and has been falling steadily since, reaching 42.5 per cent by March 2018 (Federal Reserve Bank of New York 2018). Furthermore, more of these workers are ending up in lower-quality non-graduate jobs than before (Gould *et al.*, 2018:6-9), proving that finding a good job is becoming increasingly difficult. It is possible to assume that the displacement produced by the Great Recession in 2007-2009 might have triggered a lot of workers to pursue alternative work arrangements when normal employment was not available (Katz & Kreuger, 2016:25). Findings of Katz and Kreuger (2016) indicate that workers in such work arrangements earn considerably less and work fewer hours than workers in regular employment. In a study which was investigating the determinants of involuntary part-time employment in the US, Valletta *et al.* (2018:5) found that the continued elevation in the rate of involuntary part-time work since 2016 has been mostly attributable to other more persistent features of labour markets, including a growing shift towards the service sector and the ‘gig economy’ fuelled by the prominence of the fourth industrial revolution (Abraham, Sandusky, Haltiwanger & Spletzer, 2018:2).

Unemployment rates in the US amongst young people are still explained by educational attainment, where those with lower-level education bear the most brunt compared to those with higher educational attainments. Between 1990 and 2018, the total employment rate for young graduates declined while the portion of those who are idled has increased (Gould *et al.*, 2018:2). As can be observed in Figure 3.5, since 1992, unemployment rates for those with less than a high school diploma have averaged at more rates that for those that possess a bachelor’s degree and higher qualifications.

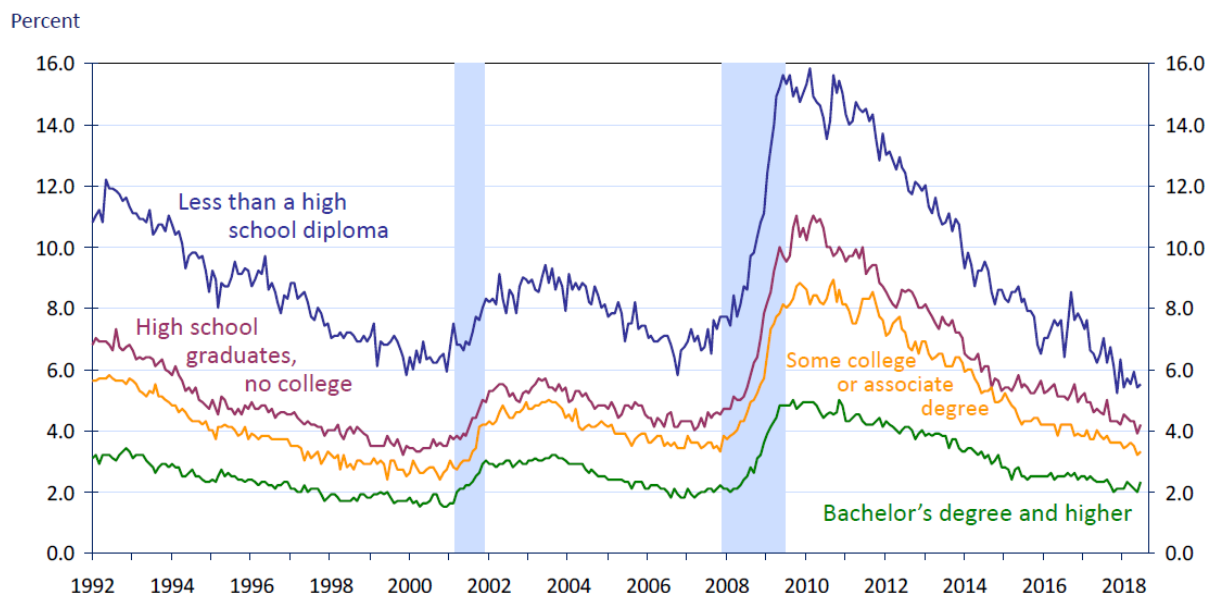


Figure 3.5: Youth unemployment rates (25 years and older) by educational attainment, 1992-2018

Source: BLS (2018a)

Employment and enrolment outcomes seem to vary by gender and by race/ethnicity (see Figure 3.6 below). Even more so, amongst those in the 21-24 years' category, whites and Asian American/Pacific Islanders are more likely than blacks and Hispanics to have a bachelor's degree, where two-thirds of those with bachelor's degrees are whites. Young Asian American and Pacific Islanders graduates are disproportionately more likely to be enrolled only, while young white graduates are the most likely group to be employed only and the least likely to be idled. This unemployment rate is more probable to take up little of the labour slack in the labour market, given that, in recent months, 7 in 10 recently employed workers were not vigorously looking for employment in the preceding month (Gould, 2018). Gould argues these workers would not have been counted in the official unemployment rate, although they were evidently interested in working. While the unemployment rate for white graduates has essentially recovered to within 0.5 percentage points of its 2000 level, unemployment rates for other racial/ethnic groups remain significantly higher than their 2000 levels (Gould *et al.*, 2018:2). At the same time, large differences are observed in job-losing rates versus job-finding rates with findings since 1980 and 2015 indicating blacks and Hispanics to have particularly high job-losing rates compared to whites (Cajner, Radler, Ratner & Vidangos, 2017:2)

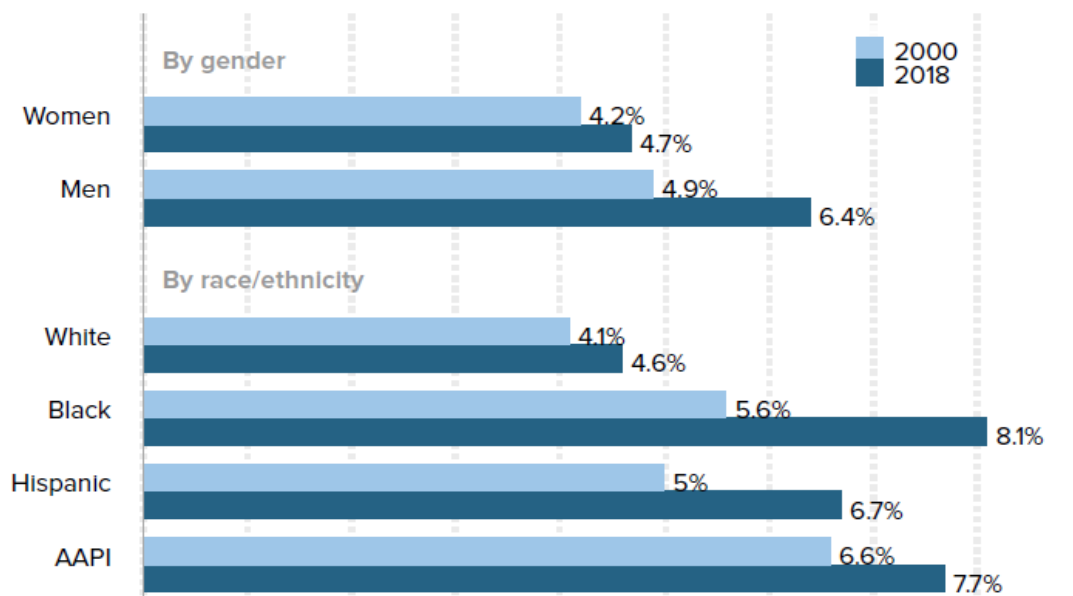


Figure 3.6: Comparison between unemployment rates amongst young graduates in terms of gender and race, 2000 and 2018

Source: Economic Policy Institute (2018)

Still on Figure 3.6, although it would be generally accepted to think there would not be large differences in the unemployment rates of young graduates who have the same degree and prior work experience, but the findings reveal otherwise. These factors still show disparities in unemployment across races

where young white graduates still have less elevated unemployment rates than blacks, Hispanics and AAPI graduates (Gould *et al.*, 2018:14). This suggests that other factors such as discriminative labour market practices, unequal access to professional networks that often result in employment prospects may be at play. Cajner *et al.* (2017) find that lengthier job searches and most negative labour market outcomes for blacks are not the result of obvious factors such as differences in age, experience or education, but other unexplained factors, indicating that black work seekers face different employment opportunities than their white counterparts.

In terms of gender, unemployment rates seem to have been higher amongst young male graduates than their female counterparts (Daly, Hobijn & Pedtke, 2017). However, Gould *et al.* (2012:13) mention an important point that the lower unemployment rate amongst female graduates is not an indication of women having higher employment rates or rather having high job finding rates. Instead, they argue that women participate in the labour force at lower rates than men.

On the other hand, the wage inequality seems to be widening in the US. Wages for blacks, regardless of gender have grown at a slower pace than those of their white counterparts (Wilson & Rodgers, 2016:6). While young graduates have lower wages than their older counterparts (which is likely given their relative lack of work experience), their wages depend largely on the level of education they hold (Gould *et al.*, 2018). Wilson and Rodgers (2016:5) attribute this growing labour market discrimination to growing racial gaps in the completion of higher education qualifications. Economic theory¹⁰ indicates that workers earning are largely a reflection of their productivity and that factors such as institutions, historical pay norms, discrimination, and the effects of public policies like the minimum wage have an impact on wages (Daly *et al.*, 2017:3).

The wage inequality also seems to vary by race or ethnicity, where Gould *et al.* (2018:3) reports that between the late 1990 and 2000, earnings received by black graduates seem to be catching up to their white counterparts, however, the trend was soon reversed where black wages have seen large declines transforming into lower wages (see Figure 3.7 below). It is during recessionary periods (see grey shaded areas) that the gap between black and white workers, regardless of gender, widened. This substantial gap between the earnings of blacks and white workers has risen over time and the data for women reflect a similar pattern (Daly *et al.*, 2017).

¹⁰ See Chapter 2.3.2.1

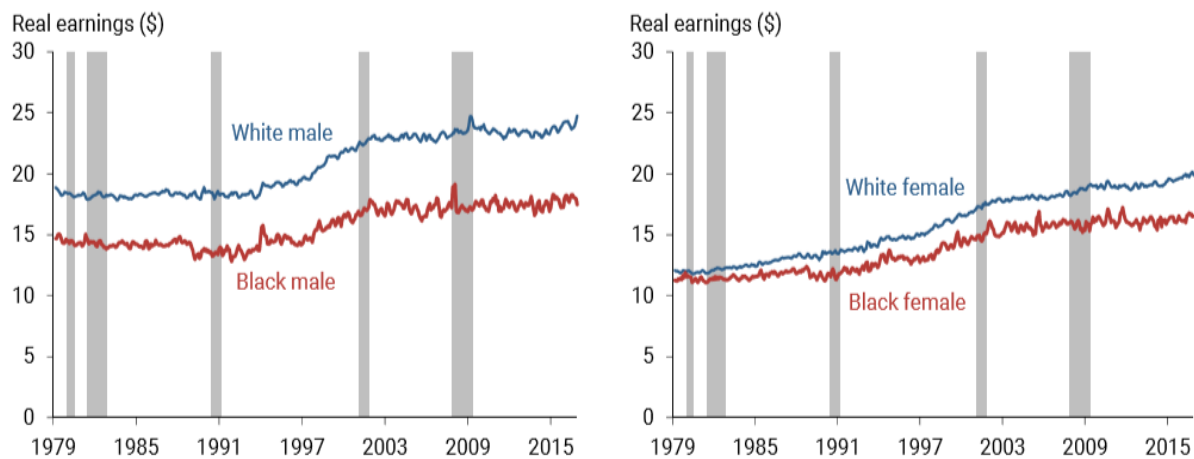


Figure 3.7: Average hourly earnings differences between black and white workers 1979-2015

Source: Daly *et al.* (2017)

Today, young black graduates earn 16.8 per cent less relative to their white counterparts, a figure Daly *et al.* (2017:4) attributes to differences in educational attainment, such as discrimination, differences in school quality, or differences in career opportunities. This is additionally indicative of an economic slowdown in wage growth¹¹, determined both by a lack of demand for workers and by the loss of workers' power to bargain with their employers for higher wages (Bivens, Gould, Mishel & Shierholz, 2014:4-5). At the same time, changes in the macroeconomy exacerbates existing wage gaps in the sense inequality widens when the economy is weak, and narrowing when the economy is expanding (Wilson & Rodgers, 2016:10). These patterns suggest that addressing the problems of stagnant wages and racial wage disparities has now become a dual imperative (Wilson & Rodgers, 2016:8). Nonetheless, the US has made a lot of strives towards improving labour market outcomes for young people, which are discussed below.

3.2.1.3 Policy analysis

The improving recovery of the US labour market in the last few years has contributed significantly to reducing the gaps that had widened dramatically as a result of the Great Recession (Cajner *et al.*, 2017:1). As indicated, the racial inequality in key labour market outcomes for men and women show that negative employment outcomes such as involuntary part-time employment are explained by race and gender. Despite these, the US government has implemented a number of strategies aimed at recovering over 40 years of labour market disparities, particularly those directed at underemployment.

¹¹ "There has been a growing earnings inequality in general, where regardless of one's race, gender and labour market experience, wages of most workers, especially less skilled workers have stagnated over much of this period, and this trend contributes to the widening of black-white wage gaps because the typical black worker is paid the wage of a low- to moderately skilled white worker" (Wilson & Rodgers, 2016:51).

- *Fair workweek law*

In response to the issue of underemployment in the US, whether by working hours, skills or income, while also acknowledging that unpredictable, unstable and often insufficient working are a key issue, several state and local governments have since 2014 enacted a law referred to as the ‘*Fair workweek*’ law. These laws address a wide range of concerns faced by workers. According to Wolfe *et al.* (2018:3), these laws provide workers with greater stability, security and flexibility in their work schedules; in many cases, they also require employers to give part-time staff opportunities to increase their hours before adding new workers.

Only five cities and one state have passed comprehensive fair workweek laws. These comprehensive laws primarily apply to retail and fast-food workers—who are more likely than other workers to be subject to volatile work hours (Wolfe *et al.*, 2018:3-4). A growing body of research has also found that increasing predictability, stability, and flexibility of worker schedules can lead to higher productivity and increased sales for retail stores (Williams *et al.*, 2018:5-6; Ton, 2012), so such laws can also benefit employers and the greater economy.

Each Fair workweek policy is to some extent diverse in its details, but the policies largely entail provisions such as advance notice of work schedules, added compensation for sudden work schedule changes, the right to accept or decline extra working hours, compulsory leave days, and the right to request scheduling accommodations (Wolfe *et al.*, 2018:3). The various Fair workweek laws are described in Table 3.1 below.

Table 3.1: Specific types of ‘*Fair workweek laws*’ and their coverage

<i>Jurisdiction</i>	<i>Policy</i>	<i>Sector covered</i>	<i>No. of workers covered</i>
<i>San Francisco</i>	Formula Retail Employee Rights Ordinances (March 2016)	Retail trade	23 000
<i>San Jose</i>	Opportunity to Work Ordinance (March 2017)	Private sector	175 000
<i>Emeryville, Calif.</i>	Fair Workweek Ordinance (July 2017)	Retail trade and fast food	2 500
<i>Seattle</i>	Secure Scheduling Ordinance (July 2017)	Retail trade and fast food	40 000
<i>Oregon</i>	Fair Work Week Act (August 2017)	Retail trade and accommodation & food services	172 000
<i>New York</i>	Fair Workweek Law (November 2017)	Retail trade and fast food	372 000
			<u>739 000</u>

Source: Wolfe *et al.* (2018), Economic Policy Institute.

- *Anti-discrimination laws*

The increased federal minimum wage, establishment of scheduling principles, and meticulously imposing wage regulations intended at avoiding wage theft has aided the US economy with dealing with underutilisation. The *Fight for 15 campaign* has been influential in obtaining minimum wage increases in a number of states and districts and the Department of Labour's recent updating of the overtime income threshold will directly benefit 12.5 million workers (Wilson & Rodgers, 2016:53). The National Employment Law Project (NELP, 2018:1) reports that since 2012, *Fight for 15* has made the strain to win 22 million low-income earning workers a sum of \$68 billion in yearly wage increases through state and nearby enactment increasing the minimum wage and employers are now forced to raise their minimum pay. The wage increases from the minimum wage of \$15 an hour is approximately 15 times higher than the minimum wage increases in the last federal minimum wage increase, legalised in 2007 and as such will benefit at least 22 million workers throughout the US (NELP, 2018:2).

The minimum wage is also important for raising the share of women participating in the labour market and according to Appelbaum *et al.* (2004:5). This is because women assume a larger share of workers who earn less compared to men, and as such, minimum wage laws tend to benefit them more. when the minimum wage is increased.

Additionally, there has been a more noteworthy move towards ensuring that those working in the *gig-economy or on-demand work*¹² are protected by the law and are given legal alternatives which are similar to workers in traditional employment situations. Although, the online gig-economy is comparatively small compared to other forms of alternative work arrangements, it is still growing very rapidly (Farrell & Greig, 2016:3-4).

From the discussion above on the US labour market situation facing young people, it can be seen that underemployment is slowly becoming a cause for concern in the US. The declining wage growth levels are also not easing the situation besides confirming that those who get employed from now on may be earning low wages. This is especially true for Black and Hispanic graduates, who after decades and decades, still encounter negative employment outcomes. It stands to remain whether the effort by American law makers to ease the underemployment situation will yield the desired results.

¹² The Gig economy or on-demand work is discussed in Chapter 2.2.9.2

3.3 BRICS¹³

BRICS is a country grouping that entails five major emerging economies; Brazil, Russia, India, China and South Africa. Formerly, it was coined by Jim O'Neil ¹⁴ in 2001 as BRIC indicative of all the countries before South Africa had been invited to join in 2010. The BRICS economies are known for their economic growth potential, despite challenging economic and political woes facing each of the countries. They are also known for their substantial effect on regional activities through economic cooperation with low-income countries, challenging traditional western donors such as the EU (Morazan, Knoke, Knoblauch & Schafer, 2012:1). Combined, the BRICS represents an estimated 40 per cent of the global population (Plecher, 2019). These countries went from accounting for 11 per cent of the world's GDP in 1990 to almost 30 per cent in 2014 (Bremmer, 2017:3). *“The BRICS can be divided into two groups—those that took advantage of globalisation's march to integrate themselves into global supply chains (primarily China and India) and those that took advantage of globalisation to sell their abundant natural resources (primarily Brazil, Russia and South Africa)”* (Bremmer, 2017:4).

The BRICS economies have experienced positive growth potential over the years but have also not been able to wither in the face of global economic challenges. Interest rate increases by the US Federal Reserve over the years have not brought economic relief to these countries besides contributing to their mounting debt burden while declining global commodity prices have affected growth in the countries, since they rely heavily on export-led growth (Esposito, Kapoor & Mathur, 2016:2). For instance, Brazil in the last three years experienced an average growth of -2.29 per cent, while over the same time periods, South Africa's growth rate had fallen from 5.41 per cent to 1.09 per cent; Russia's from 7.69 per cent to -0.77 per cent (Bremmer, 2017:9).

Research argues that even though the BRICS seem to have some economic trends in common, their social environments continue to be very diverse in many aspects. A cross-country comparison for the BRICS shows that economic progress alone may not necessarily translate into a higher quality of life for these economies (Esposito *et al.*, 2016:10). For instance, although Brazil lags behind Russia in terms of GDP per capita, but Brazil seem to be doing better socially as indicated by the SPI (Social Progressive Index)¹⁵ ranking 49/146 countries compared to Russia which ranks 60/146 countries (SPI, 2018). Similar observations are found in other in countries such as the US (has very high GDP per capita but

¹³ South Africa is discussed in Chapter 4

¹⁴ Former Chairman of Goldman Sachs Asset Management

¹⁵ The SPI ranks countries in terms of provision of certain services (such as nutrition and basic medical care, water and sanitation, shelter, personal safety) towards the attainment of basic human needs; well-being (in terms of access to knowledge, information and communication, health and wellness and environmental quality); and lastly opportunities (personal rights, personal freedom and choice, inclusive ness and access to advanced education) (Social Progress Imperative, 2018).

seem to have regressed in terms of social progress, declining both in absolute terms, relative to its wealthy, world-power peers, ranking 25th in social progress (Social Progress Imperative, 2018). Saudi Arabia too, seem to be doing exceptionally well in terms of GDP per capita, ranking 9/146 countries but performing very poorly in terms of social progress ranking 85/146 countries. On the other hand, countries such as Ethiopia and Gambia, which ranks low in GDP per capita rankings, continue to demonstrate significant improvements in terms of social progress.

In terms of the competitiveness as measured by the Global Competitiveness Report of WEF, China has always been an overall leader within the BRICS economies, ahead of Russia, India, South Africa and Brazil. In the 2018 index, the countries ranked 28th, 43rd, 58th, 67th and 72nd respectively out of 140 countries (WEF, 2018a:27). Additionally, Coleman (2013) argues that BRICS upholds considerably diverse political structures, from active democracy in Brazil to deep-rooted oligarchy¹⁶ in Russia, and their economies are less integrated and are different in size by orders of magnitude. Furthermore, the great difference in GDP, influences the reserves, for China taking up of over 41 per cent of the contribution, which in turn leads to bigger political say within the association. The BRICS seems to have also made improvements in employment, particularly reducing vulnerable employment¹⁷ and agricultural employment by 6.6 and 13 percentage points respectively between 2010-2017 to moving to paid and formal employment (ILO, 2018a:1). However, labour market outcomes, particularly for young people remain poor, more especially in South Africa (exceeding 50%) and Brazil (close to 30%), with young women experiencing the more negative employment outcomes than young men in all BRICS except China (Stats SA, 2018; ILO, 2018a). Figure 3.8 shows the share of young people in various kinds of employment in the BRICS between 2005-2015

¹⁶ Defined as “a small group of people having control of a state or a state governed by a small group of people” (Soanes, 2006:705).

¹⁷ See Chapter 2.2.9.6

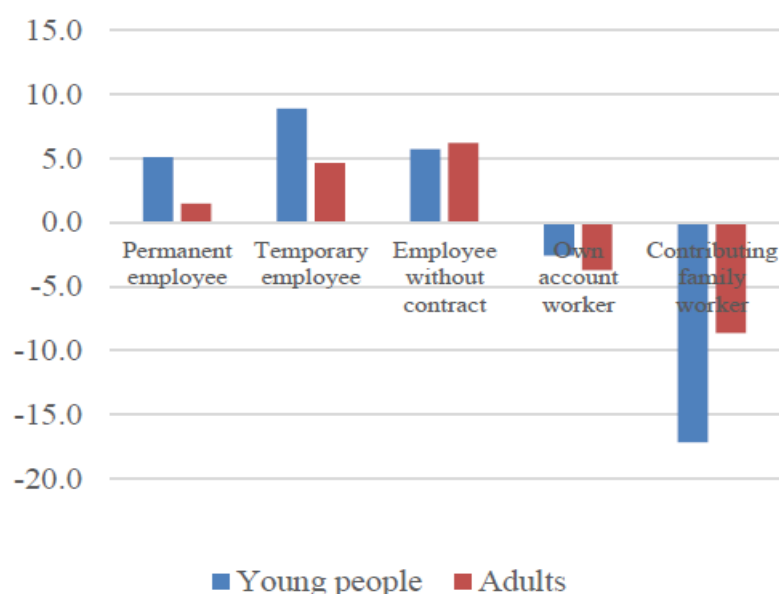


Figure 3.8: BRICS average in changes in different forms of employment between 2005-2015

Source: ILO (2018a)

The BRICS countries have started to implement a number of policies in trying to improve labour market outcomes of young people. The frequency of economic shocks has resulted in the reconsideration of economic policies which have seen mandates of central banks being broadened to support full employment and growth in addition to the conservative role of promoting price stability (ILO, 2018a:3). A number of BRICS countries have executed measures to transform education and training systems which have continued to enhance their economies

Against this background, this section of the chapter provides a review on the BRICS economies (excluding South Africa). Attention is paid to the employment situation facing young people, particularly graduates (i.e. those with a higher education qualification) without neglecting each country's economic background. Lastly, measures taken by each country to address labour market outcomes facing graduates will be discussed.

3.3.1 Brazil

3.5.1.1 Economic Background

Brazil forms part of the Latin American and Caribbean country region which as a region, is known for its vigorous economy with potential growth opportunities. Generally, Brazil has been ineradicably noticeable by social disparity. According to De Oliveira and Filho (2011:585), this social inequality has shaped its economic policy. Brazil integrated itself to the global economy through its agricultural and commodity wealth. As a commodity-exporting country, Brazil has benefited from high commodity

prices and high global demand, which has stimulated substantial economic growth in years leading up to 2012 (Sandoval, 2012:4). The late 1990s until early 2000s saw the renaissance of growth and expansion in the global economy, particularly in China, and the re-organising of Brazilian industry, which allowed Brazil not only to achieve consistent growth, but to maintain it. Advocates of neo-classical economics at the time believed that if such economic growth is to be prolonged, there needed to be greater human capital investments, particularly in higher education. This saw the Brazilian government acknowledging and including this postulate in their economic policy, expanding access to higher education, together with the private sector (De Oliveira & Filho, 2011:586-587).

The development route between 2003 and 2010 was valuable for the overall economy and labour market, which saw more jobs being created and declining unemployment, amongst other things (Campos, 2013:2). Although the economic prosperity until the first quarter of 2008 benefited Brazil's economy immensely, it came under threat in the second to third quarter of the same year due to the global financial crisis. Cardoso and Teles (2009:16) argue that each period of growth over the last hundred years in Brazil has been followed by an external crisis that erases any advances gained. However, combining that economic boom with innovative social policies helped move an estimated 29 million Brazilians out of poverty, particularly between 2003 and 2014 (Bremmer, 2017:5; IMF Regional Economic Outlook, 2018:92). Both inequality as measured by the Gini coefficient and income levels of the poor saw a significant improvement. The Shared Prosperity Premium, which shows the growth of the bottom 40 per cent indicated a growth of 1.61 between 2011 and 2015, with the Gini Index declining from approximately 59.4 in 2009 to 51.3 in 2015 (World Bank Poverty and Equity Brief, 2018).

As the largest economy in South America, the economy's competitiveness comes primarily from its relatively large market size (Roberts, Schreiber & Scissors, 2012:1). However, according to the WEF (2018:32) the country suffers from an inability to integrate policies and coordinate the private and public sectors successfully. Human development has not risen proportionally to economic growth, which has implied high inequality levels (Sandoval, 2012:4). Since 2015, the pace of the reduction in inequality and poverty seem to have been on a stagnating trend, combined with a depressed economic activity (World Bank Brazil, 2018a:1). The low attainment and low-quality education have been significant contributing factors to persistent income inequity (Sandoval, 2012). While it spends more relative to GDP than any emerging market peers, Brazil underperforms in the delivery of quality services in health, education, public security, and infrastructure (World Bank, 2018b).

The political instability that has been present has fuelled the weak economic performance. Even though its economy has experienced positive economic growth since the late 1970s to early 2000s, the growth rate was low in average terms, with significant costs on the labour market (Justesen, 2008:4). There was, therefore, a need for economic reforms, which were aimed at liberalising international trade and

financial flows. According to Marshall (2004) these reforms brought negative repercussions for employment. Figure 3.9 indicates Brazil's macroeconomic indicators from 2003 until 2018.



Figure 3.9: Brazil's macroeconomic indicators (2003-2018)

Source: World Development Indicators (2019); Trading Economics (2019).

The early 2000s, particularly between 2003 and 2006 saw Brazil's economy on a slight economic decline, with GDP growth rate declining to 3.2 per cent and the number of people not in employment increasing to 9.3 per cent from 8.7 per cent in 2004. Despite the declining economy, the youth unemployment rate was declining, with significant improvements in both the poverty headcount (\$1.20 or \$3.20 per day) as the employment-to-population ratio grew. The onset of the global financial crisis in 2007 resulted in Brazil's macroeconomic indicators experiencing substantial decline. The significant contraction in Brazil's economy between 2011-2014 and 2015-2016 was fuelled by the country's inability to carry out necessary fiscal reforms at spheres of government, thus undermining consumer and investment confidence (World Bank Brazil, 2018b:2). The situation in Brazil carries considerable weight in regional averages since it is Latin America's largest economy and home to nearly 40 per cent of the labour force. For instance, without Brazil, the youth unemployment rate in the Latin American region seems to have been decreasing, while the inclusion of Brazil puts the region in a much worse off

labour market performance (ILO, 2017). The rising unemployment rate amongst young people since 2015 threatens to undo some of the social achievements the country made previous decade.

Fiscal sustainability also remains a rising challenge, hence there has been strives towards reforming the country's fiscus. Brazil also spends more on social security and pensions than it can afford and the system is highly unsustainable (World Bank, 2018c). A comprehensive social security reform will also be required to limit the projected increase of the pension deficit (World Bank Brazil, 2018a:3). The subsequent section delves deeper on the labour dynamics facing young people in Brazil.

3.5.1.2 Youth labour market dynamics

The labour market in Brazil today presents several challenges for workers, somewhat reflecting the country's recent economic performance. After strong economic and labour market performance in the early 2000s, economic growth has been on a stagnating trend since 2014, even though slight growth period was experienced in 2017. During this poor economic period, young people were most affected in comparison to adults, notably in terms of how quickly they were absorbed in the labour market, employment, and to some extent unemployment. Neri and Thomas (2000:16-17) conclude that negative shocks carry more weight for youth, less educated and poorer workers since the subsequent chances of recovery are slimmer. Even when the economy started growing, young people did not catch up on adults; in fact, the gap continued to widen (see Figure 3.10).

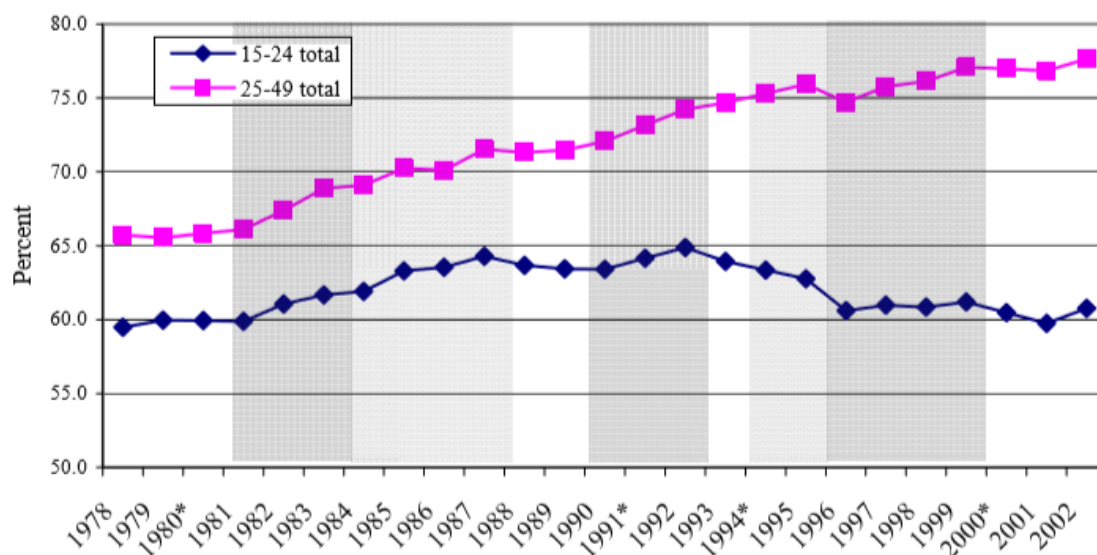


Figure 3.10: Labour force participation rates between adults and youth in Brazil (1978-2002)

Source: Justesen (2008)

From Figures 3.10, it can be seen that the labour force participation rates for adults, *inter alia*, those between 25 and 49 years of age have been continuously increasing, with young people (15-24-year-olds) lagging behind and declining further in the late 1990s. The labour force participation and employment for young people rather than for adults have been on a continual decline since the 1990s, simultaneously reducing the young people's earning potential because of decreasing wages and rising unemployment rates (Justesen, 2008:4).

The reforms to liberalise trade, political instability, hyperinflation and volatile exchange rate fluctuations between 1978 and 2002 had stern effects on the youth labour market. Labour market performance declined considerably from within a year (2017-2018), a sign that the reforms implemented in 2017 to boost the labour market are yet to produce their desired effects (WEF, 2018:32). Most of the adopted labour policies are costly to implement and focus on income support with little attention to re-skilling while at the same time, youth disengagement is a growing problem in a rapidly ageing society (World Bank, 2018c).

Campos (2013) argues that unemployment is not so much of a major issue for young people in Brazil since most of them are already in employment (see Figures 3.11). Of those that are employed, more than 60 per cent are in paid employment; however, young people still face some instability which is often fuelled by substantial racial disparities, lack of employment protection, low earnings and unstable employment which produces uneven outcomes for young people of different races. The fact that young Brazilians of today are the most educated, particularly those at the bottom of the income distribution has also not resulted in improving labour market outcomes. Almeida and Packard (2018:11-13) contend that Brazil's low-quality education system that is heavily directed at memorisation rather than critical thinking is one of the factors driving the education-employment puzzle.

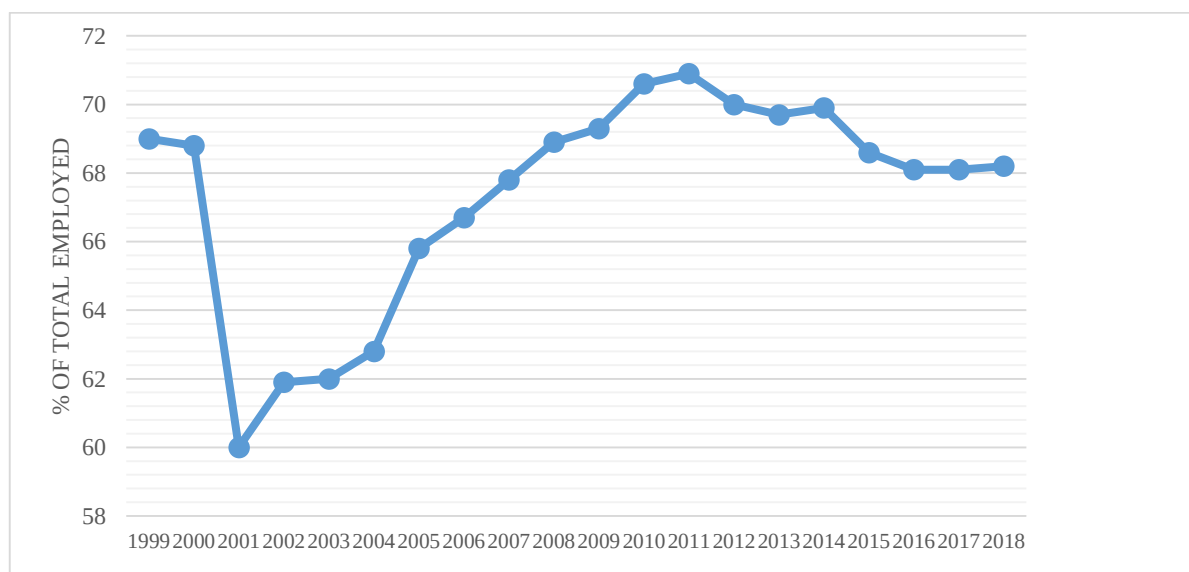


Figure 3.11: Wage and salaried workers, total (% of total employment) (1999-2018)

Source: World Development Indicators, Sustainable Development Goals (2019)

Even though many young people are in employment, the cause for concern is on the kinds of work they are in, as there is a significant incidence of working conditions which are perilous. Vulnerable and informal employment¹⁸ is widespread, accounting for 27.5 per cent and 46.0 of employment, respectively (ILO, 2018a:4). On the other hand, a large proportion is subjected to excessive hours that exceed 44 hours a week (Campos, 2013:5). The declining education-earnings premium has reduced young people's incentive to invest in education.

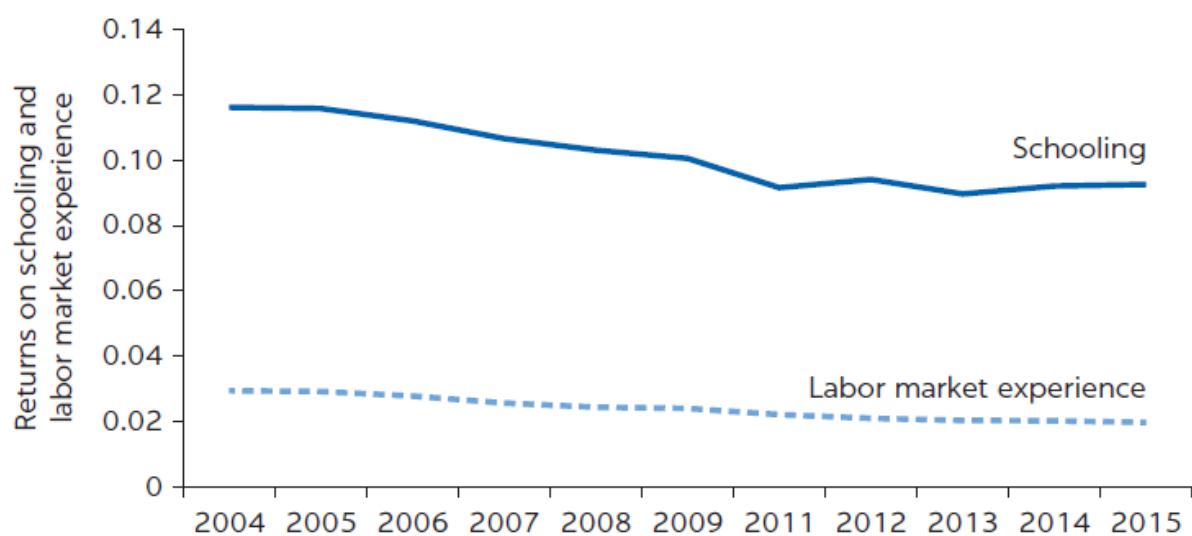


Figure 3.12: Brazil's education earnings premium (2004-2015)

Source: Almeida and Packard (2018:14)

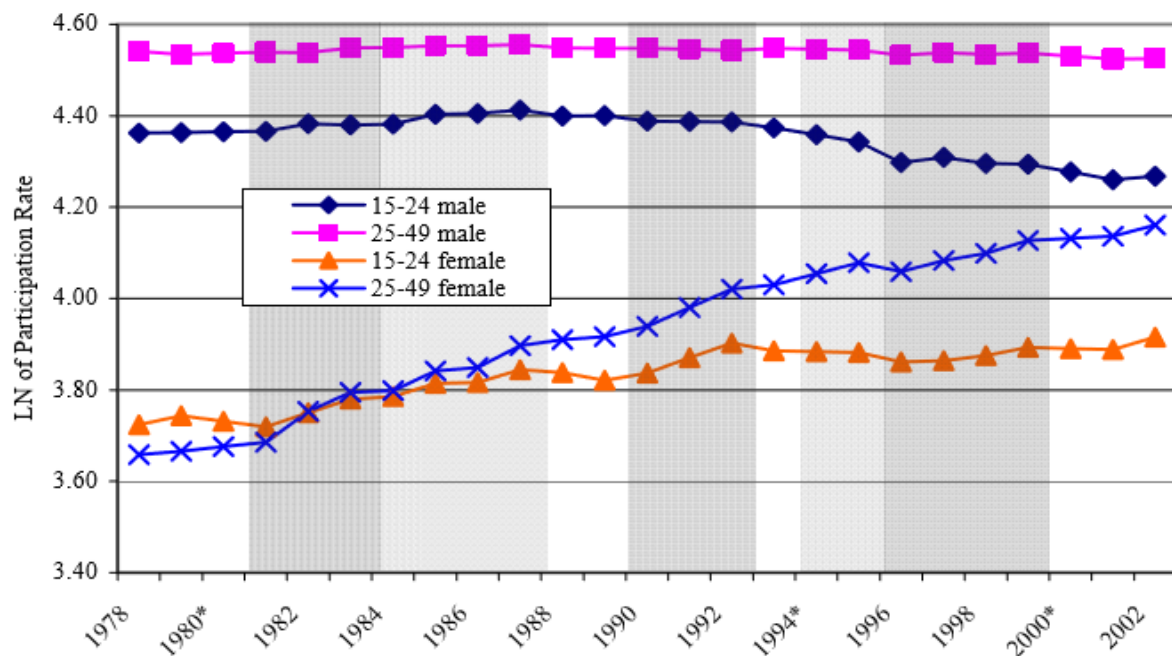
The labour market situations of young¹⁹ people have been particularly plagued by poor performance, with the risk of life-long consequences in terms of lower earnings prospects and chances of accessing decent employment. A study by Romanello (2018) which investigated school-to-work transition, focusing on informality amongst young Brazilians found evidence that educational attainment level plays a substantial role in shaping young people's decision to pursue formal and informal employment opportunities. Large heterogeneous individual earnings return exists amongst various kinds of higher education institutions, with those in possession of a university degree (irrespective of study field) experiencing higher earnings returns relative to those with qualifications from professional institutes, technical trainings and TVET (Almeida & Packard, 2018:13).

¹⁸ See Chapter 2.2.9.5

¹⁹ The national definition of young people is those between the ages of 15-29 (Brazil Youth Statute, 2013).

Given that lower education qualifications are associated with negative employment outcomes, the frustration of struggling to find formal employment might force some young people into resorting to work in the informal sector, trapping them in the cycle of poverty. This view is supported by Costanzi (2009) who maintains that earlier entrance in the labour market (as is the case with Brazilian workers (Campos, 2013:3) tends to result in informal labour²⁰, leading to more loss of a person's educational training, in the long run contributing the vicious cycle of poverty. The incident of working poverty is still relatively high, with as many as 6.6 per cent of young people aged 15-24 years old not earning enough to lift themselves and their families out of poverty (US\$3.10 per day) (ILO, 2018a:6).

Labour market outcomes for women remain poor and have always been since the late 1970s (see Figure 3.13), even though gender gaps in education and labour market have been on a continual decline (Justesen, 2008:12; OECD, 2017:232). As can be seen in Figure 3.14, labour force participation rates for females, in general were still very low compared to their male counterparts, even though adult females (25-49-year-olds) were catching up with their male counterparts. This according to Justesen (2008:12) was because of significantly increased average years of schooling for females more than males, hence by 2002 both young and adult females had more years of schooling than males on average. However, the OECD (2016c) reports that many jobs held by women in emerging economies (including Brazil) are still informal, although gender differences in formal employment are not wide.



²⁰ The rate of informal employment is higher for working people of ages 15-24 than it is for the overall employed labour force (Almeida & Packard, 2018:16).

Figure 3.13: Labour force participation by gender in Brazil (1978-2002)

Source: Justesen (2008).

In terms of education, Brazil spends more on education than the average OECD country and much more than many middle-income countries, however, education outcomes remain poor (World Bank, 2018b), and gross inefficiencies undermine this investment (Sandoval, 2012:5). In the last few decades, the school-to-work transitions have been poor (Romanello, 2018:145), fuelled by the country's poor quality of public education and deteriorating macroeconomic performance. This has implied that those with lower education would have a higher likelihood of transitioning into informal employment or being unemployed compared to those with relatively higher schooling or education (Rocha & da Silva, 2015:6). This view that education eases the levels of informal labour is confirmed by Barbosa Filho and De Moura (2012) who found that education explains about 60 per cent of the decline in labour informality that occurred between 2003 and 2011 in Brazil.

On the other hand, higher education qualifications seem to carry a considerable employment and earnings advantage in Brazil. This has been the case since the 1980s until recently. Between 1982 and 2002, highly skilled workers generally performed better concerning employment than low skilled workers (Justesen, 2008:16). Jacinto and García de Fanelli (2014:59) find that although most TVET graduates find employment in the formal sector of the economy, they are still paid considerably less than university graduates. According to the *'2018 Education at a Glance'* report, the relative earnings for full-time and part-time workers are largest in Brazil where those with tertiary education earn 150 per cent more than those with upper secondary education (OECD, 2018a:90).

According to the *'2014 Education at a Glance'* report, significant increases in educational levels have been witnessed during the last few decades across the world (OECD, 2014:10-11). Since 2003, access to higher education in Brazil, particularly university, has been increasing through a series of government investments. This has been particularly because of the positive effect higher education seem to have on economic growth (Holland, Liadze, Rienzo & Wilkinson (2013). Consequently, countries are encouraged to spend on education. Because Brazilians with an undergraduate degree earn on average two-and-a-half times higher than those without one, Brazil's government saw expanding access to higher education as a way to increase social mobility and reduce persistent economic inequalities (Long, 2016). However, this increased university access has exposed many Brazilian graduates to underemployment or inactivity (since they account for a huge number of untapped potential).

Educational mismatches have increased, forcing some graduates to accept any job, even one that requires less education than they hold on to a bit to survive. This is worsened by the fact that economies are not creating enough employment. In its report on employment in Brazil, McKinsey Global Institute

(2018) reports that there are at least 13 million people who work less than they could. Another study by da Silva-Marion (2017) which was also examining overeducation in the Brazilian labour market, found one-quarter of the Brazilian formal labour market to be overeducated, and one-quarter undereducated. This overeducation amongst Brazilian graduates according to Reis (2016:180) seems to be negatively affecting most worker's earnings. Those in mismatched jobs get paid substantially less than their well-matched counterparts (da Silva Marioni, 2017:26).

The irony of the situation is that numerous young people are underemployed and are unable to find quality employment (good/better jobs), while numerous employers are confronted with skills shortages, preventing them from locating the right candidates to fill existing jobs. A study that surveyed young people, education providers and employers in nine countries including Brazil, Mourshed, Farrell & Barton (2012:19) found that 48 per cent of employers in Brazil reported a lack of the right skills as the main reason why they are unable to fill existing employment opportunities. This is especially articulated in Turkey (56%) and India (53%). Additionally, several jobs are in danger of mechanisation, inferring that numerous people will confront huge changes in their working lives. In Brazil, an estimated 15.7 million full-time occupations (approximately 14% of total full-time jobs) could be displaced by 2030 as a result of mechanisation (McKinsey Global Institute, 2018:4). This has the potential to push people into involuntary part-time work and other forms of precarious work.

Even though overeducation give rise to serious economic and career problems in developing countries, according to Mehta, Felipe, Quising and Camingue (2011:1334) *"it does not seem to be a consequence of a great quantity of educated workers. Instead, it seems to be due to the lack of quality education, as poorly educated workers are not qualified for jobs that require the same level of schooling they completed."* In other words, low educated workers are not qualified to perform jobs for which they studied and then they end up in unskilled occupations, explaining the incidence of over-education in Brazil. In a study on education and the labour market in Brazil, De Oliveira and Filho (2011:585) found high proportions of under-education (under-qualification), which according to Reis (2017) suggests the need for the provision of quality schooling and better matching between the educational system and labour market needs. For Brazil, some of these education mismatch challenges are related to the fact the reforming of the higher education sector was started very late, and failed to develop quality teaching and academic professions could provide the needed support for education policies devoted to fairness, quality and effectiveness (Schwartzman, 2003:2). As maintained by Chapman and Chien (2014) some higher education institutions in developing countries (in addition to widened university access) might have grown at a faster rate than the number of qualified academicians (lecturers) which affects the quality of teaching.

From the statistics mentioned above on Brazil, it is evident that the Brazilian youth labour market is confronted by challenges which require working in alignment with the higher education sector and most importantly the government. This country has established a resilient obligation to addressing labour market challenges facing young people. In 2011, the country became the first in the world to introduce a national agenda for decent work for young people, acknowledging the need for complete policy action (ILO, 2018a:6). The impact of these policies and programs have crucial effect on profit and employability of youngsters. The training programs seems to have the most impact amongst women than men. Whereas some studies (e.g. Attanasio, Kugler & Meghir, 2011:188) report positive impact on earnings and employment for women only, others (Delajara, Freije & Soloaga, 2006) find the impact to be significant for both men and women, however longer-lasting for women. Programs and policy responses by the Brazilian government are discussed in the next subsection.

3.5.1.3 *Policy/Programme responses*

This subsection discusses in detail the kinds of policies that the Brazilian government has implemented in a strive to improve the underutilisation facing young people. There is a growing concern that the country's policy interventions have worsened the labour market challenges confronting young people (Almeida & Packard, 2018:18). Although the employment impact of labour policies on the workforce as a whole is actively debated in many countries, a growing consensus is that restrictive labour regulations are particularly detrimental to the employment prospects, particularly of young people and can result in more underemployment and unemployment (Almeida & Carneiro, 2009:29). Policies discussed are those that are specific to young people.

- *National Decent Work Agenda for Youth*

Broadly, this policy brings together relevant stakeholders, including the government, trade unions and employers, to dialogue and find ways to decrease informal employment amongst young people in Brazil. The policy's core objective is to promote and ensure proper inclusion of young people in the labour market, by creating quality employment (Rocha & da Silva, 2015:11).

- *Microempreendedor individual (MEI)*

Brazil, in accordance with different countries in Latin America, and because of the recommendations of international agencies (for example, the ILO and the World Bank), has adopted the MEI intending to render formality progressively alluring to individuals who have so far disregarded formality. Microempreendedor individual, in essence, aims at lessening the cost of formalisation, and as a result, promotes formalisation through the generation of incentives (Cardoso, 2016:332).

The individuals who meet all requirements for MEI should not have annual turnovers surpassing 60 thousand Brazilian Reais and cannot be a partner in another business (Cardoso, 2016:332). It ought to be noticed that even though this strategy does not target young people per se, its widespread character guarantees that young people likewise advantage from it. The goal is to advance the establishment of formal enterprises, ensure that informal enterprises are formalised, and support the creation of formal employment (Richo & da Silva, 2016:6). According to Secretariat of the Internal Revenue Service of Brazil (2016), in early 2015, there were an estimated 4.8 million active MEIs. Corseuil *et al.* (2013) found that the program has expanded the likelihood of formalisation of individuals that are self-employed and small enterprises, an occupational category and business that generally have had very high rates of informality.

- *National Programme for Access to Technical Education and Employment (PRONATEC)*

Founded in 2011, the PRONATEC is more of an instrument of an education policy than employment since it focuses on the skills needs of the country's productive sectors. The Brazilian government presented this approach with the point of tending to under-qualification in technical occupations by expanding training structures through improving vocational education and training (ILO, 2018a). The objective of the PRONATEC is to remove any stumbling blocks that are preventing the provision of employment skills and training that have been recognised in certain productive sectors and jobs (Dedecca, 2014:41). The main objectives of the policy are summarised in Figure 3.14.

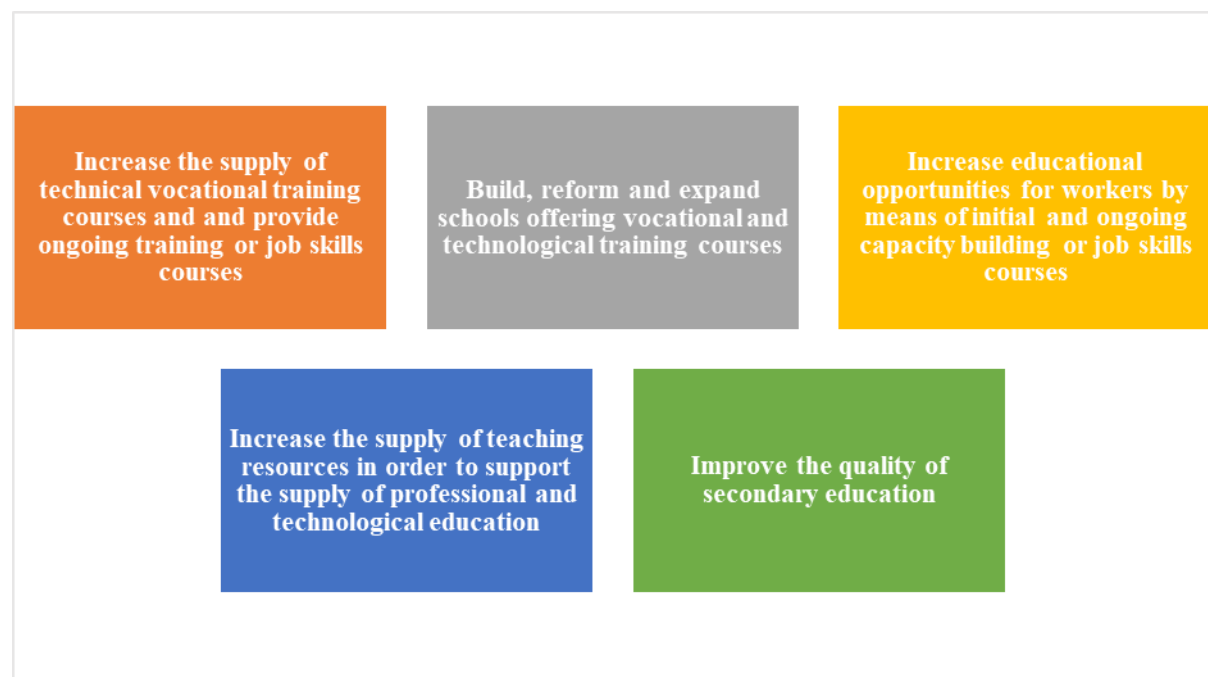


Figure 3.14: The broad objectives of the PRONATEC

Source: Dedecca (2014:41)

Through this programme, grants have been offered to young people to decrease dropouts (since there is evidence that high dropouts originate from poverty), in order to ensure that those from low-income families complete their studies (Brazil Employment Plan, 2014:5). Through this policy, between 2011 and 2014, more than eight million people enrolled for technical courses while some continued their education (Rocha & da Silda, 2015:4). Quality education can realise substantial development and poverty reduction (Sandoval, 2012:15).

- *Plano Nacional de Aprendizagem Profissional*

This programme aims to advance the employment of young people in the private sector through the Apprenticeship Law, which came into force in 2000, by which every medium and larger sized enterprises are committed to employing young people in the 14 - 24 age category through a unique work contract that does not exceed two years) (Brazil Employment Plan, 2014:15). Every one of the apprentices is given proficient training amid this period with no expense for either employers or apprentices. According to the Work and Employment Ministry Administrative Registers (2014) between 2005 and 2013, more than 1.7 million apprentices were enlisted in Brazil. A report by the World Bank on *'The Brazilian Employment Policies'* indicates the programme to have a high retention rate, where more than half of the employed apprentices have kept the occupations after the end of the apprenticeship.

- *Plano Nacional de Desenvolvimento de Startups*

This approach advances youth entrepreneurship which will see young people not only lifting themselves out of poverty but also creating employment opportunities for their peers too (ILO, 2018a). This done through increased access to finances, and the provision of entrepreneurial and managerial skills.

- *Minimum wage law*

The introduction of the minimum wage law in 1940²¹ and its continuous increase in the last two decades have become one of the most important policies affecting earnings in Brazil. Between 2001 and 2015, the minimum wage had real increases of 91 per cent, consequently reducing the phenomenon of informal employment in the Brazilian labour market, although it is as yet thought to be high according to international comparisons (Firpo & Pieri, 2018:4). Even in the midst of a deep recession, its nominal value increased from R\$678 per month in 2013 to R\$937 in 2017 making it higher than the average

²¹ Nevertheless, the minimum wage policy was only adopted in 2007 and became a law in 2011 (Dedecca, 2014:22)

minimum wage of the OECD and BRICS (Almeida & Packard, 2018:20). Unfortunately, after a long period of decline, the share of working people earning less than the minimum wage in the country is rising again, along with unemployment, especially for young Brazilians (Almeida & Packard, 2018:19) (see Figure 3.15). Consequently, the minimum wage left a large proportion of workers uncovered, and as a result, is believed to have widened the already present earnings inequality in Brazil. Findings of Firpo and Pieri (2018:4-7) suggest that the possible effect of these real increases in the minimum wage is that firms are enticed to employ workers without formal work subsequently making the minimum wage non-binding and consequently increasing informality in the labour market.

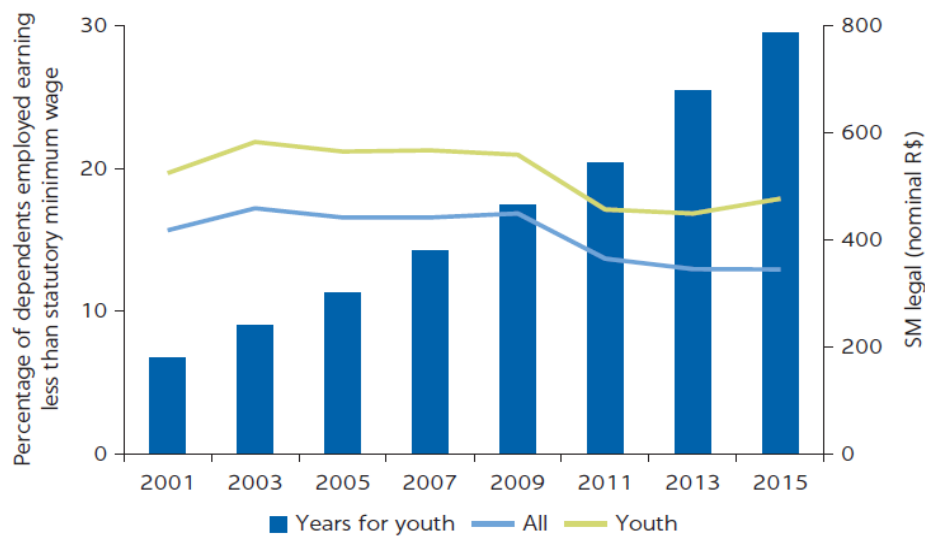


Figure 3.15: The share of Brazilians earning less than the minimum wage

Source: Almeida & Packard (2018)

Consequently, the minimum wage left a large proportion of workers uncovered, and as a result are believed to have widened the already present earnings inequality in Brazil. Findings of Firpo and Pieri (2018:4-7) suggests that the possible effect of these real increases in the minimum wage is that firms are enticed to employ workers without formal work subsequently making the minimum wage non-binding and consequently increasing informality in the labour market. As a result, and also due to the weak Brazilian economic performance, many of these workers were moved from formal employment and employment in general (Dedecca, 2014:5). There is in this way a need to come up with policies that will ease the costs of employing a formal worker, specifically to improve earnings.

- *Programa Nacional de Inclusão de Jovens (PROJOVEM)*

This is a National Programme for the Integration of Young People which according to Moraes and Bacic (2013:7) aims to advance the social incorporation of 18 to 29-year-olds who, in spite of the fact that are not considered uneducated, have not yet completed their basic education. It tries to reintegrate them

into education and the labour market so as to create prospects for their development which will see them becoming effective citizens.

- *Programa Nacional de Estímulo ao Primeiro Emprego (PNPE)*

This is a form of employment subsidy that has been in force since 2003 to improve employment opportunities for young people by creating incentives for firms to employ young people (ILO ALMP, 2016:70). The subsidy is for unemployed young people who are in the 16-24 age category for their first working experience. Moreover, they have to be part of a household with an income per capita below half of the minimum wage.

Although programmes intended towards enhancing young people's access to quality employment tend to pay particular attention interventions to improve the supply of labour (e.g. like skills training) and the demand side (e.g. encouraging firms to employ through youth wage subsidy), the approach followed by Brazil included a more extensive accentuation on social protection that gives young people more and better employment alternatives (Randolph, 2014:31). Even with increased employment in Brazil, there are still gaps in the current development model, especially regarding the value of work and the high rate of informal employment (Campos, 2013:2), which will need to be addressed if Brazil's overall labour market outcomes are to be improved.

3.3.2 The Russian Federation

3.3.2.1 Economic background

Russia is viewed as one of the biggest performing economies in the Eurasian region as showed in the 2018 Global Competitiveness Report (WEF, 2018a). According to Hale (2010:33) most Eurasian nations consolidate significant components of both egalitarianism and authoritarianism somehow or another, and Russia is viewed in that capacity This country is by a long shot the biggest of the previous republics of the Soviet Union in both populace and land zone; in reality, it is the biggest nation on the planet in as far as land is concerned. The significance of Russia is explained by its geographical location which has placed it in a position of influence on issues in a number of regions that major countries such as the USA is intrigued by, and no country except the US has more vital military capacity than it (Evans, 2011:41).

Soviet societies signify qualities of socialism mainly because the broader Soviet Union of which Russia was a member, implemented this kind of system years before other countries did and afterward spread it to the rest of the world (Buck, 2015:851). The main ideologies of Karl Marx which were against many facets of capitalism (e.g. private property) on the basis that it worsens inequality had a major influence on the principal belief system that numerous Soviet nations pursued. As a result, the Soviet governments

facilitated the control of all parts of society from the mid-1970s as argued by Evans (2011:41), many rigid and authoritative systems were supplanted in numerous nations, and the political frameworks in some of those nations hinted at becoming progressively more independent, and in certain instances, these countries encountered very important changes. Indeed, closer to the late 1980s, many soviet societies saw symptoms of stagnating economic conditions which were accompanied by a considerable decline in economic growth rates, poor economic competitiveness, declining productivity levels and worsening living standards (Sakwa, 2013:66). In the early years of 1990, after the Soviet coalition had vanished and the Soviet Union itself divided, there were decisions by many governments that had been under socialism to standardise democratic principles.

The main fundamental reasons that led to the collapse of the Soviet economies entailed a sudden drop in the oil costs, especially given that oil was one main exported hydrocarbons between 1970 and 1980 (Akindinova, Kuzminov & Yasin, 2016:224). Buck (2015:852) contends that even though prior to the collapse of the socialism system inequalities were somewhat narrowed though certain policies of social homogeneity, as the Soviet societies were still plagued by profound status and power.

The privatisation of state-owned enterprises which formed part of Russia's rapid economic reforms²² in the early 1990s proved well for its economy, even though there are arguments that the reforms were weakened by the transfer of substantial government assets by the Yeltsin administration, to those that had close ties with the government; an act which consequently created a powerful small elite circle (Appel, 2004:97; Evans, 2011:44). According to Buck (2015:854) the implementation of policies that the previous Soviet Union nations adopted to create market-based economies had damaging consequences for economic growth and inequality throughout the 1990s with resulted in an economic crisis and high unemployment rates. By the late 1990s, Russia's economy plummeted, suffering from an unexpected economic crisis that resulted in a debt default, devaluated currency and on its financial environment (Eggers, Gaddy & Graham, 2006:210-2011). More Russians were pushed into poverty as unemployment rates soared resulting in an overall decline in the standards of living. However, between 2000 and 2001, Russia's economy recovered, with growing employment rate its cause and its effect (Gimpelson & Kapeliushnikov, 2017:4). The high growth rates throughout the 2000s indeed narrowed the gap between Russia and developed countries even though the growth widened between 2014 and 2015 (Akindinova *et al.*, 2016:219). From 2014 – 2016, inflation was in double digits and the economy in recession; however, according to WEF (2018:28), the adjustment of its macroeconomic setting following the period assumed a focal role in Russia's economy, resulting in a relatively low inflation rate (5.4%) and government debt (17.7%)

²² Be that as it may, Akindinova *et al.* (2016) argue the collapse of the Soviet system to have started with political liberalisation instead of economic reformulation as was the case in China.

Russia's ample reserves of energy sources and minerals assumed a pivotal job in stimulating the economy. The number of people living below the poverty line declined to 11 per cent in 2012 from 29 per cent in 2000 (Bremmer, 2017:8). Additionally, there were also significant improvements in the absolute (declining by 14.8% between 2001 and 2011) and relative (income-based) poverty (declining to 13% in 2011 from 21% in 2001) (Denisova,2012) as cited by ILO, 2014b:7).

Be that as it may, one of the repercussions brought by the fall of the order socialist framework under the Soviet Union and hence economic reforms were the wide gaps between the few rich and the many poor. Although Russia has been performing well in as far as per capita GDP is concerned, it is still instinctively regarded as a relatively poor country given its high level of social inequality, which has been continually increasing even during periods of rapid economic growth (Akindinova *et al.*, 2016:220).

Despite the fact that inequality (as measured by the Gini-coefficient) declined between 2007-2015 to 38 from 42, the economy is still lagging behind in as far as the creating of secure sustainable employment is concerned given that the number of people employed in the informal economy is increasing World Development Report, 2019:9). In fact, there is confirmation from labour market data that Russia's labour market is characterised as being dual in nature, i.e. one for insiders and outsiders, which the former entailing those working in stable, formal and secure employment, while the latter encompasses those who in general are caught in precarious and informal employment which is temporal in nature (ILO, 2014b:xii). Figure 3.16 demonstrates a comparison of the Gini-coefficient and GDP since 1990.

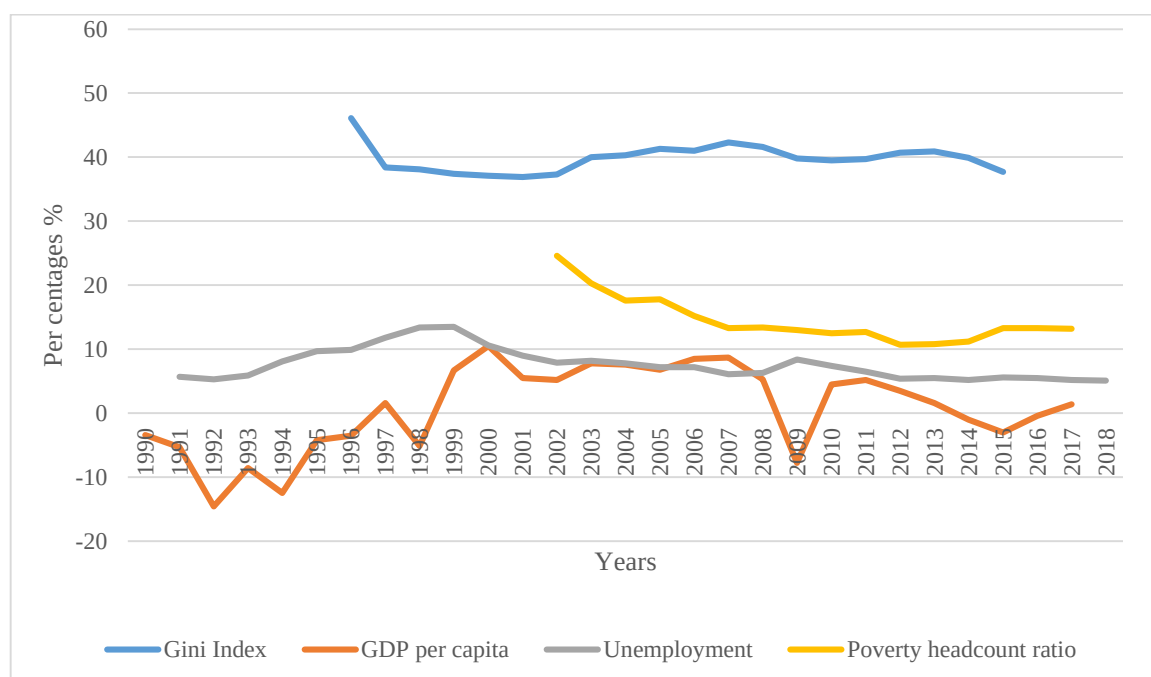


Figure 3.16: Income inequality and GDP growth rate between 1990 and 2018

*Note** Unemployment (% of total labour force – narrow definition. Poverty headcount ratio at national poverty lines. Some gaps in years due to unavailability of data. ** It should be noted that per capita GDP and annual GDP growth rate were moving at almost the same pace.*

Source: World Development Indicators (2019)

The impact of the 2008/09 global economic crisis in the Russian Federation was severe in terms of output decline as can be seen in Figure 3.16 that per capita GDP significantly declined in 2009 by almost 8 per cent fuelled by falling domestic demand and declining oil and commodity prices, but the impact was relatively mild in terms of job losses, with young people taking most of the brunt. Employment losses and unemployment surges were contained, as the labour market adjusted mostly through labour hoarding practices, *inter alia*, cuts in working hours and wages (ILO, 2014b:viii).

Another economic problem threatening Russia's macroeconomic environment is inflation. As explained by Black *et al.* (2013), high inflation rates reduce the value of money and savings in particular, hampering the development of the domestic financial sector. The high inflation rate is one of the fundamental factors hindering investments in Russia (Akindinova *et al.*, 2016:221).

The rising inflation and declining productivity growth have been fuelled by uncompetitive key markets. Between 2000 and 2018, Russia's competitiveness has declined from 52 to 43 most competitive country out of 140 countries (Cornelius & McArthur, 2002:15). Albeit extensive improvement in recent years to improve financial stability and competitiveness through the closure of weak financial institutions, according to the IMF - World Economic Outlook (2018:27) the introduction of reforms to discourage unsecured consumer loans could prove beneficial for the economy in the long-run.

Russia has likewise observed an ascent in the size of the informal economy which has been driven by an increasing tax burden on the working population which has been obligated to finance the country's growing social welfare. This according to Akindinova *et al.* (2016:225) has forced "*a significant portion of entrepreneurs into the "shadow" increasing the share of informal contracts and labour relations as the economy continued to grow.*" According to the 'Women and Men in the Informal Economy' report by the ILO (2018c:89), the size of informal employment as a percentage of total employment has increased to approximately 35.9 per cent since the late 1990s. Informal employment presents a number of economic disadvantages in the sense that those in informal employment do not pay income tax which may rob the economy of potential tax revenue that would have otherwise been earned. The gender aspect of this share of informal employment is unexpectedly lower for women (32.7%) in comparison to men (39.1%) (ILO, 2018e). The modern-day rise in the flexibilization of labour (such as temporary contractual arrangements) has also exposed many people of working-age,

particularly young people to declines in labour (ILO, 2014b:viii). The subsequent section delves deeper on labour market dynamics facing young people.

3.3.2.2 *Youth Labour Market Dynamics*

Other than labour market conditions, economic environment and social setting, quality education plays a crucial role in people's transition from school-to-work (OECD, 2018). There are entrepreneurial, innovation and productivity gains associated with having better educated and younger workers (Gimpelson & Kapeliushnikov, 2017:2). The successful modernisation of an economy relies upon the quantity and quality of the economically active population; which are then explained by age and education

In this day and age, access to work (employment) has turned out to be one of the key variables which determine personal satisfaction, with all its social angles, for example, fulfilment and social strains (Szafraniec, Szymborski & Wasielewski, 2017:6). At the same time, due to a variation of situations, employment has become a scarce resource, and this scarcity as such often push people into all sorts of work (unstable work which is often temporary) in an aim to avoid being without work. For many years, adults have experienced better labour market outcomes than young people, disregarding the importance of young people in the labour market. Young people are the main source of innovative ideas emerging in all spheres of the society and its economy and effective employment for young people determines not only the present state of a country's economy, but its future in general (Mishalchenko, Tarando, Borisov & Malinina, 2016:344; Sankova, Bogachenko & Otstavnova, 2018:527). Equally important is high-quality education.

In addition to the macroeconomic, demographic and structural environment, policies and institutions play a crucial part in the labour market outcomes facing young people (Demidova, Marelli & Signorelli, 2015:44). Even though Russia acquired a genuinely well-built education framework from the previous Soviet Union, especially concerning literacy and access to education (Baskan & Erduran, 2009:348); poor employment prospects, a lack of employment opportunities and overall worsening living standards, particularly in the rural regions has constrained numerous young²³ Russians to migrating in search for better lives.

According to Mukhanova (2014), within eight years from 2002, the number of Russians in rural areas had declined by 1.2 million. As elucidated by Prokhorova (2007) educational reforms brought by the end of the Soviet Union²⁴ brought about undesirable ramifications on the educational hopes of young

²³ In contemporary Russia, young workers constitute 22.95 per cent of the total workforce (Sankova *et al.*, 2018:527).
²⁴ For example, the collapse of the Soviet Union brought the end of research interns who worked on the basis of fixed-term labour contracts for two to three years (Vorotnikov, 2019:9). This helped curb graduate unemployment.

people, especially those living in the fringe regions, thusly influencing their choices and opportunities in as far as education and careers are concerned. For instance, the Soviet times did not allow individuals older than 36 to enrol for university education, which inferred that those who are older would not only struggle to acquire higher education but also improve their socio-economic status Mishalchenko *et al.*, 2016:346). As a component of the Soviet framework referred to as '*raspedyelyeniye*', which is '*assignment*', the government controlled courses that students enrolled for, which were always swayed in the fields of space and military technology and where they studied, and then assigned them to employment, and as such the framework (Hays, 2008:26).

Notwithstanding these transformations, higher education stayed sought after amongst young people, fundamentally spurred by the need to secure well-paying employment, in this manner, allowing these young people to have better standards of living (Szafraniec *et al.*, 2017:12). Indeed, labour market outcomes began improving for young people with higher education, particularly seeing those with at least secondary education experiencing low unemployment rates. Unemployment rates for 25-34-year-olds with higher education are relatively lower (about half the rates of younger adults without higher qualifications) (OECD, 2018:73).

With the dissolution of the Soviet Union, one would have expected spending on higher educational institutions to have significantly increased, in an attempt to try and uplift those that had been oppressed by the socialist-system. However, the OECD (2018:258) reports Russia as one of the countries with the lowest GDP share of expenditure on higher educational institutions (approximately 2% of GDP) also on primary, secondary and post-secondary non-higher (less than 3% of GDP). Regardless of this, Russia has managed to reduce the proportion of uneducated people who are 25 years and above. According to Szafraniec *et al.* (2017:13) between 1990 and 2010, the number of individuals with secondary and higher education in Russia increased by 16.7 per cent.

One of the main features of the youth labour market in the 1990-2000s period was the increased demand by employers for higher education, particularly university degree, which resulted in a considerable rise in the number of higher educational institutions, expanding the size of the graduates from these institutions (Mishalchenko *et al.*, 2016:346). In this regard, the change of the political framework in this nation had brought about increased educational and social opportunities. Table 3.2 presents crucial statistics relating to graduates of higher education institutions between 2000 and 2017.

Table 3.2: Main indicators of graduates (2000 – 2017)

INDICATOR	2000	2010	2015	2016	2017
<i>Higher professional education institutions and scientific organizations providing education programs for bachelor, specialist, master</i>	965	1115	896	818	766
<i>Students in education programmes for bachelor, specialist, master, thou. Persons</i>	4741	7050	4766	4399	4246
<i>Students in education programmes for bachelor, specialist, master per 10 000 population</i>	324	493	325	300	289
<i>Admission to education programmes for bachelor, specialist, master, thou. Persons</i>	1292	1399	1222	1158	1142
<i>Graduated bachelors, specialists and masters, thou. Persons</i>	635	1468	1300	1161	969
<i>Graduated bachelors</i>	71.0	126.6	589.8	762.6	7320.6
<i>Graduated bachelors, specialists and masters per 10 000 employed population, persons</i>	99	217	180	160	134
<i>Gross enrolment rate in secondary vocational education and higher professional education programs</i>	20.5	23.8	19.5	18.9	19.2

Source: Russian Statistical Yearbook (2018:179, 200)

From 1990 enrolment in university-level institutions realised significant expansion with young women performing better than men in higher education (ILO, 2014b:1). However, Gimpelson and Kapeliushnikov (2017:12) contend that the unprecedented expansion carried new human capital induced worries of its underutilisation because of increasing educational and employment incompatibilities. In most instances, incompatibilities in education and employment are most common in emerging and developing economies than in developed economies mainly because a low-quality institutional environment discourages the creation of employment and the demand for skilled labour (McGuinness, Pouliakas & Redmond, 2017:36). This was no exception for Russia as irrespective of invested efforts, paying little mind to the exertion contributed, a countless number of young Russians with education (higher education) end up being disappointed.

Worryingly, most young people in rural areas still face relatively more negative labour market outcomes, including insecure working conditions and unstable work mainly because they still do not have higher education qualifications, and young women are the most affected (ILO, 2016d:143). As maintained by Szafraniec *et al.* (2017:21) they frequently complete their education at a very low level, leave school way ahead of time or choose to enrol for vocational education, entering the labour market is considerably difficult in the case of these education qualifications.

The school-to-work transition is often accompanied by the need for choice between being in employment and accepting lower wages or being unemployed (Sankova *et al.*, 2018:528). Even though the higher education expansion in the 2000s proved well for the economy, there are concerns that it may have resulted in a decline in the economic value of education. One of the factors compressing the wages according to Gimpelson and Kapeliushnikov (2017:15) is the increased competition amongst graduates on the labour market which often results in limited demand for their services. The higher education wage premium (37 per cent higher wages compared to young people with basic education) which is accompanied by an ease transition to stable, secure and suitable employment is weakened by high rates of over-qualification amongst young graduates (38.8 per cent) and the pervasiveness of employment in occupations exposed to atypical work arrangements and lower wages (ILO, 2014b:ix).

Higher education qualifications of lower-level which traditionally have always provided an assurance especially for young people in rural areas is demonstrating to be inadequate for employment security and social progression. According to Szafraniec *et al.* (2017:16), economic performance, the misalignment between qualifications and labour market needs and people's misrepresented faith in the influence of lower-level higher education qualifications such as the diploma have limited employment prospects for those with high formal qualifications. Sankova *et al.* (2018:527) propose the changes in the Russian youth labour market to be explained by the rising trend of a number of factors including: growth of technology and information, globalisation, flexibilization in the labour market which has seen a rise in non-standard employment contracts between labour market participants and employers.

Even when they are in other countries, highly educated and skilled Russian migrants are almost certain relative to native-born individuals to be underemployed and overeducated for their employments (Wasserman, Fujishiro & Hoppe, 2017:77). A number of barriers appear to add to this outcome, for instance, Vinokurov, Trickett and Birman (2017:42) suggest limited English competency and non-transferable abilities and qualifications as some of the factors that have resulted in the Russian migrants encountering difficulties in fitting into foreign labour. Reiterating these reasons is Painter (2014:754-755) who maintains differences in professional recognition and education in home countries and the host country as well as the absence of formal work experience in the host country.

The gender gap remains relatively large in Russia, with males having more positive employment outcomes than their female counterparts. Compared to OECD countries where the wage gap is just below 15 per cent, on average, full-time employed female workers earn about 24 per cent less than their male colleagues in emerging economies (OECD, 2017:232). The wage gap is even higher in some BRICS countries such as Russia, Brazil and South Africa. Despite these earning inequalities, educated young females in Russia are establishing their presence in industries that are conventionally dominated by males. Russia has likewise started to prioritise gender equality and according to Lalthapersad-Pillay

(2014:146) the effect this has brought about as evidenced by the quantity of females employed at senior management positions and the increased female participation in firm ownership relative to its other BRICS counterparts like South Africa. This rise according to ILO(2018a:3) has been the strongest for higher-skilled young women at the skilled and professional levels.

Be that as it may, statistics on employment distribution by gender and occupation show more females (47.8% in 2017) to still be in elementary occupations concerning men (52.2% in 2017) (Russian Statistical Yearbook, 2018:119), hence why females could be earning less. At the same time, the share of females in strategic economic sectors (mining, manufacturing and electricity and gas supply – generally known to be paying more than sectors such as retail and trade) is still very low relative to the share of males (Russian Statistical Yearbook, 2018:118). This concentration of female employment in economic sectors that are increasingly impacted by working poverty and low-paid work (e.g. agriculture and trade,) raises grave concerns (ILO, 2014b:ix).

On the other hand, analysis of the school-to-work transitions of young people in Russia and its other post-communist counterparts such as Poland and Romania demonstrates that regardless of noteworthy investments in higher education, the experiences of young people from these countries are difficult and distressing compared to that of their peers in developed countries (Szafraniec *et al.*, 2017). In fact, uncertain and unstable career trails are distinctive of this age category, and they are every so often confined to occupations of a temporal and informal nature, alternatively be self-employed (Szafraniec *et al.*, 2017). Figure 3.17 shows the labour force participation rates for young people aged between 15 and 25 years. This is especially true for young people in rural labour markets.

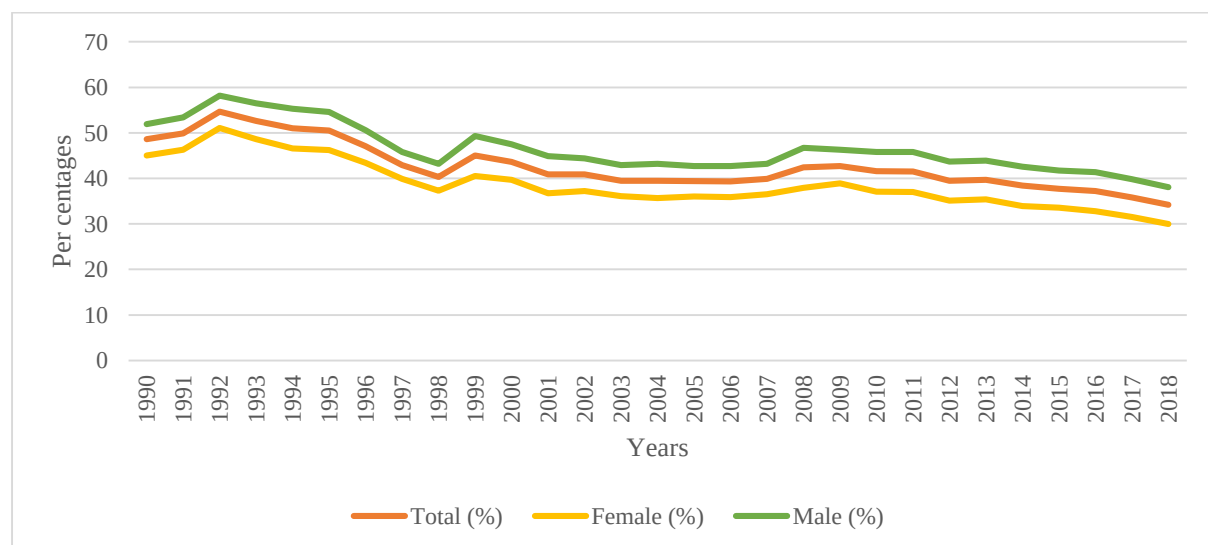


Figure 3.17: Labour force participation amongst young people in the 15-24 years (1990-2018)

Source: World Development Indicators (2019)

As can be seen in Figure 3.17, labour force participation rates for young people seem very low, averaging at 50 per cent since 1990. Young females seem to be facing worse labour market outcomes compared to young males, implying that they do not quickly get absorbed in the labour market. As such, unemployment amongst young people seems to be much higher than general unemployment rates (see Figure 3-23). International evidence shows that young people are often slow to recover in the labour market following economic recessions and crises, experiencing employment insecurity, falling wages and more barriers in the formal sector (Sankova *et al.*, 2018:529). According to Gimpelson and Kapeliushnikov (2017:14) the decline in the relative wages is the cost paid for stable employment and consequently avoiding unemployment.

Young Russians are likewise more exposed to informal employment which is low paying preventing many from lifting themselves out of poverty. In 2012, the quantity of young people (between the ages of 15 and 24) working in the informal economy was 24.4 per cent compared with the national average of 17.1 per cent (ILO, 2014b:ix). Figure 3.18 shows that unemployment rates for young people irrespective of gender are still very high, averaging at 17.6 per cent for females and 16.4 per cent for males, in contrast to the national unemployment rate which has during the specified period averaged at 7.2 per cent. The younger they are, the lower their educational qualifications and smaller their residing area, the higher the risks of employment barriers (Sankova *et al.*, 2018:529).

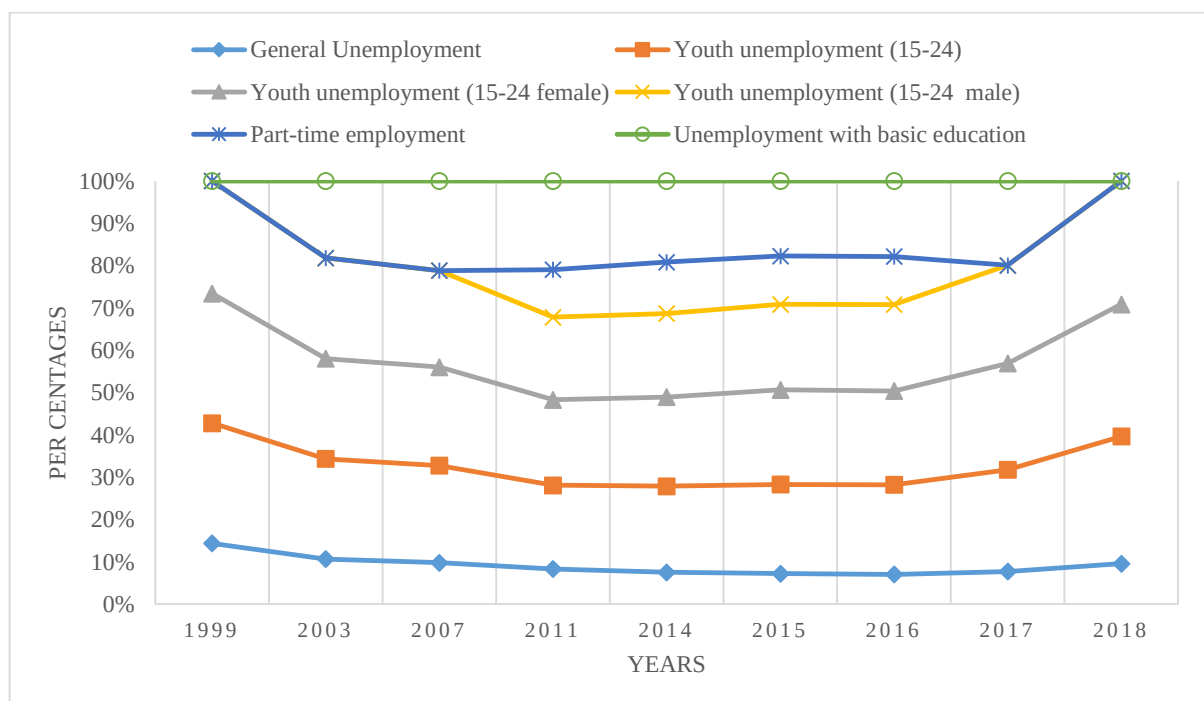


Figure 3.18: Selected employment indicators, ILO estimates (1999 – 2018)

*Note**rates based on ILO estimates*

Source: World Development Indicators (2019)

Worse employment outcomes are much more common and pervasive amongst young people in the 15-24 age category relative to those between the ages of 25-29 years. Looking at Table 3.3, there is a relatively low share of young people (below 34) in employment compared to adults. One could argue that employment patterns in Russia have followed an inverse U-shape, where employment is lower and tends to rise with age until mid-40s to start declining.

Table 3.3: Employment by age groups in Russia (2000 – 2017)

Year	Age category									
	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-72
2000	2.6	9.6	12.1	11.6	15.0	15.8	14.1	9.8	4.4	5.0
2010	1.0	9.4	13.6	12.9	12.5	11.5	13.7	13.0	8.3	4.2
2015	0.6	7.0	14.5	13.9	13.0	12.2	11.4	13.0	9.3	5.1
2016	0.6	6.4	14.5	14.3	13.2	12.5	11.2	12.7	9.4	5.3
2017	0.5	5.7	14.4	14.6	13.6	12.7	11.4	12.1	9.6	5.3

Source: Russian Statistical Yearbook (2018:120)

With reference to Figure 3.18, part-time employment is still very low, having averaged at 9.1 per cent from 2009 only due to data unavailability. The low general unemployment rates in Russia have raised eyebrows with contentions on how the rate is calculated, including the possibility that the low rates may not necessarily imply that many working-age people are employed or in decent employment. In fact, there have always been vast differences in the official unemployment rate in Russia as estimated by the ILO and its government employment services (see Table 3.4).

Table 3.4: Unemployed persons in Russia as estimated by both the ILO and Russian government employment services (2000 – 2017)

Year	ILO estimate			Russian Federal Labour and Employment	
	(thousand persons)	%	Total rate of unemployment	Service (thousand persons)	%

			<i>and potential labour force</i>		
2000	7 700	10.6		1037	1.4
2010	5544	7.3	9.4	1589	2.1
2015	4264	5.6	7.2	1001	1.3
2016	4243	5.5	7.0	895	1.2
2017	3967	5.2	6.6	776	1.0
** The Russian Federal estimates represent the number of unemployed registered at the bodies of employment services					

Source: Russian Statistical Yearbook (2018:50, 111)

An observation of the Russian labour market between 1991 and 2015 reveals that protective labour legislations have forced employers to cut remuneration rather than dismiss workers (can also be related to labour hoarding) (Yegorov, 2019:4-5). This suggests that many Russian labour force members may be underemployed by choice instead of voluntarily leaving their jobs as they will be receiving unemployment benefits (which is between US\$24 – US\$124) which is of lower value compared to the lowest wage of US\$175 they can earn if they opt for working (Yegorov, 2019:8-10).

Consequently, the low unemployment benefits and the ties that come with receiving unemployment benefits (such as agreeing to take two jobs offered by the state employment centre regardless of how low-paying they may be) force people not to register as unemployed hence the number of officially unemployed people in Russia is low. Even more importantly, the labour market gains noted amid 2010 and 2015 accrued more to adult workers than young workers (15-24 years) because the 2014 *‘Review of Policies for youth employment in the Russian Federation’* report maintains that working conditions amongst young workers did not improve, with many young Russian workers increasingly exposed to non-standard forms of employment, low earnings, underemployment and stubbornly high levels of informal employment (ILO, 2014b:viii).

In as far as education is concerned, those with advanced education still have better employment prospects relative to those with basic education. In fact, education seems to safeguard young workers, especially those between the ages of 25-29 years, against any risks of layoffs (Cherednichenko, 2010:56). Unemployment amongst those with basic education has averaged at 14.7 per cent relative to the 6.2 per cent unemployment rate for those with advanced education (see Figure 3.19). Young people in possession of only a general secondary education struggle most with securing employment (Sankova *et al.*, 2018:529). Hence informality is the highest amongst young workers with qualifications at the lower end of the educational attainment scale (ILO, 2014b:26).

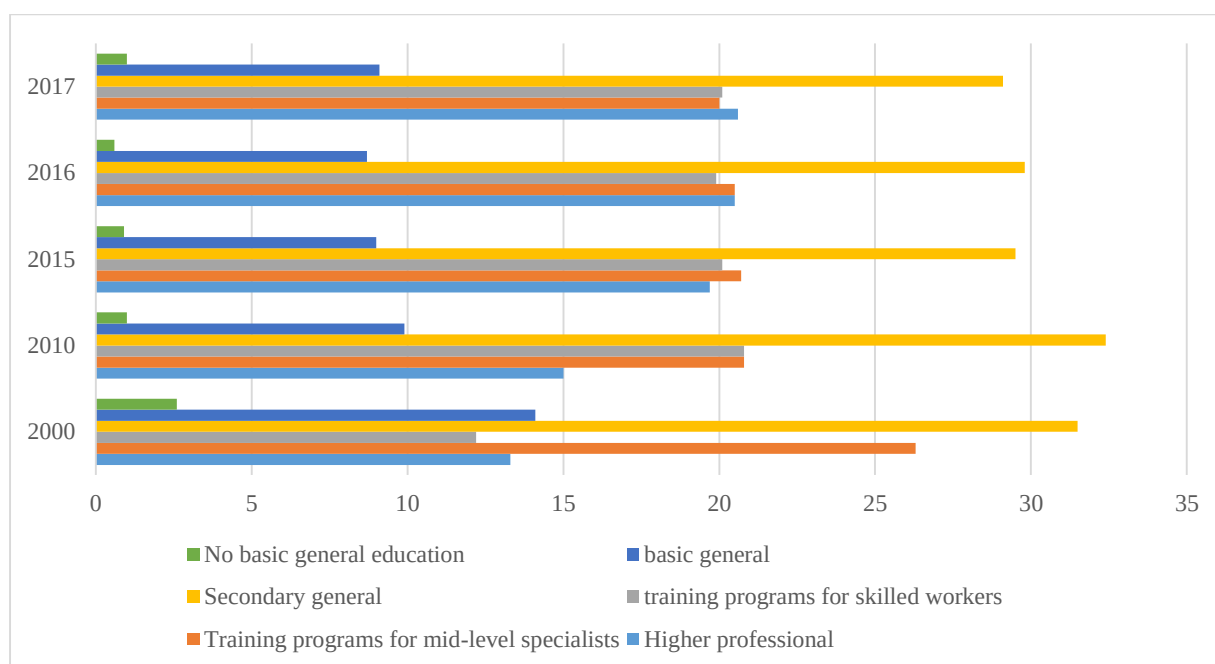


Figure 3.19: Unemployment by educational attainment (2000 - 2017)

Source: Russian Statistical Yearbook (2018:125)

Be that as it may, the ILO (2014b:ix) warns that young university graduates still have generally similar odds of being unemployed as those with basic and secondary vocational education. With reference to Figure 3.19, one can observe that graduates with higher professional education and those with skilled workers' training programmes are still relatively facing higher unemployment rates which as at 2017 was slightly over 20 per cent. Higher unemployment rates in 2015 were reported for graduates in the fields of humanities, agriculture and fisheries, economics and management, with rates ranging between 4.5 and 4.7 per cent compared to other fields (The Russian Statistic Office, 2015). Numerous factors seem to be contributory to this employability issue with Russian employers indicating the lack of technical skills and most importantly socio-behavioural skills impeding many young graduates from securing employment after graduation (World Development Report, 2019:80). The synchronicity of high graduate unemployment rates and employers reporting serious shortage of crucial skills infers the presence of skills-employment mismatches in the Russian youth labour market (ILO, 2014b:ix). According to Chistyakova, Semenova, Spitsin, and Phillip (2015:310) the structure of university education does not constantly meet the requirements of the Russian labour market, and the quality of education in certain domestic higher education institutions fails to allow graduates to be demanded at global labour markets. While at the same time, required professions in the labour market are not highly demanded by graduates, with many of them opting for qualifications of lower employment prospects. The reforms following the dismantling of the Soviet Union throughout the 1990s put an end to a government employment distribution policy that used to provide employment guarantees for everyone,

including young people, thus as stated by Mishalchenko *et al.* (2016:346) realising the right to work. The effect this might have brought would be on the graduate's struggle to find employment.

In addition to the poor quality nature of higher education, the complex nature of the Russian economy has additionally been fuelling the high graduate unemployment, where one out of four graduates are not capable of finding employment within a year of graduation (Vorotnikov, 2019:4). The youth labour market in Russia is characterised by obsolete educational standards which seem to be misaligned with modern careers (Russian Federation Employment Plan, 2014:6); the logical inconsistency between the growing ageing of the workforce maturing and the absence of compelling systems for its restoration recharging, along with the lack or absence of efficacy of the social flexibility means, which prevents the advancement of young people in their selected field (Mishalchenko, 2016:345; Lopatkin, 2015:6). Consequently, this has had a negative impact on returns to higher education. Moreover, enrolment into university-level education has been accompanied by simple prerequisites and has made it open to low-capacity students while on the other hand these studies have attracted in young people with no educational fundamentals (Gimpelson & Kapeliushnikov, 2017:15). Those in the humanities and social sciences fields and women are often the worst affected. According to the Russian Statistical Yearbook (2018:129), on average it takes young people between the ages of 25 to 34 years' category more months to find employment compared to their younger counterparts. Unemployment rate is even higher amongst those who have been unemployed for more than 12 months, at 46.2 per cent in 2000 to 30.4 per cent in 2017 compared to those who are considered to be non-factually unemployed since they are most likely to find employment soon (Russian Statistical Yearbook, 2018:127).

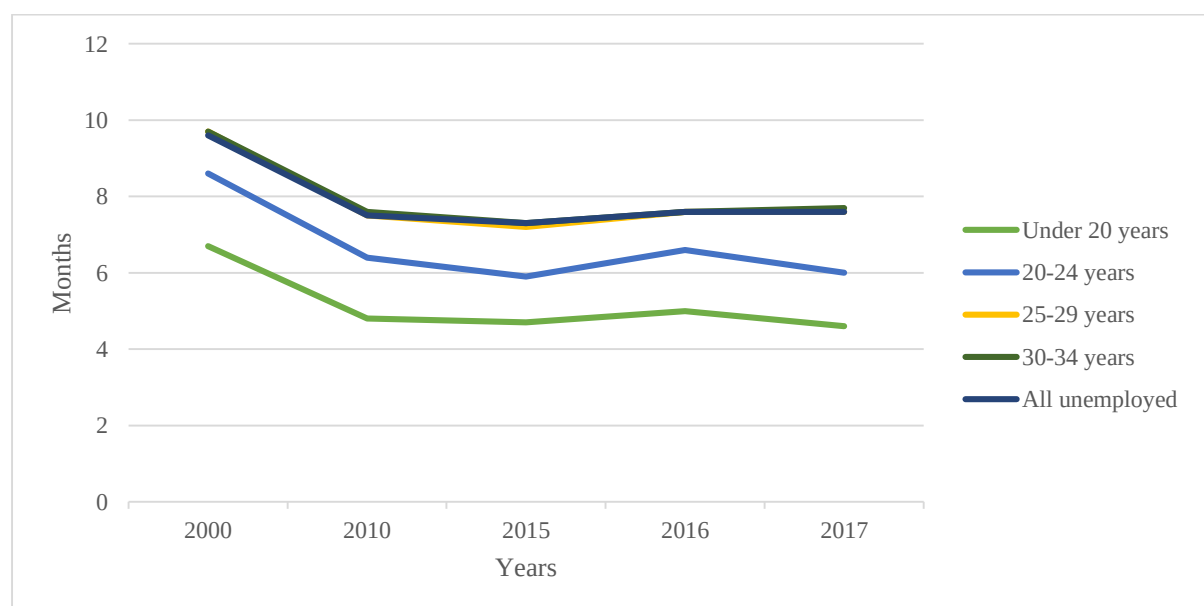


Figure 3.20: Average duration of job search by age groups (2000-2017)

Source: Russian Statistical Yearbook (2018:129).

The *'Labour Market Transitions of young women and men in the Russian Federation'* reports the majority of young workers to engaged in permanent, but unsatisfactory employment, with young women slightly more likely to be working in employment that is not satisfying (51.9 per cent) compared to young men (48.1 per cent) (ILO, 2013).

Another rising pattern amongst young Russians has been the frequency to opt for employment in the informal sector. In 2011, 40 per cent of young people aged 15-24 and 30 per cent of those aged 25- 29, were in informal employment (compared with 24% in older cohorts) (Szafraniec *et al.*, 2017:20). Informal employment is even higher amongst young people as in 2015, the given indicator for persons between 15 and 19 years of age was at 49.6 per cent, for the age group of 20-24 it was at 25 per cent, and for the 25-29 age group it was at 20.4 per cent (Sankova *et al.*, 2018:529). The share of young people in the informal sector is even larger (87%) in rural areas, mainly because many of them have less than secondary education (Mukhanova 2014:144-145). These issues are then evidenced by the rising incidences of underutilised labour either in the form of unemployment or underemployment. For many, work in the informal economy is a means to acquire job related skills and work experience. The figures show the highest peak of informality occurring for young workers aged 20 to 24 years old to then progressively decline at workers age (ILO, 2014b:26).

The agricultural sector, which still toward the end of the twentieth century would fuse any additional workers and along these lines give an option in contrast to unemployment, is no longer a possibility for young people in recent years. Since 2010, the number of people employed in the agricultural sector has been declining, regardless of gender. The number of males employed by the sector has deteriorated from 9.9 per cent in 2010 to 7.6 per cent in 2017, while that of females declined from 5.6 per cent to 4 per cent within the same period (Russian Statistical Yearbook, 2018:118). According to the 2015 *'Global Employment Trends for Youth'* (ILO, 2015) the agricultural sector employs less than 15 per cent of young people; a substantial decline according to Mukhanova (2014:129) who argues that since the mid-2000s the average number of young people leaving the agricultural sector is projected at 400 000 annually and it considerably surpasses the median number of people leaving the sector. The agricultural sector is characterised by more pervasive work of a casual nature of which young people are not excluded from. Hence those seeking work do not see the sector as having an employment or career-advancing opportunities (ILO, 2016d:142).

3.3.2.3 *Russia's policy intervention tools towards reforming labour market outcomes for young graduates*

It is with no doubt that negative employment outcomes may negatively affect an individual's overall quality of life. With rising or worsening labour underutilisation, especially over the past 20 years amongst young graduates in the country, the Russian government has over the past recent years been making strides to solve this issue through proposed packages of measures, and these employability challenges have come to having the quality of higher education in Russia questioned. Policy intervention methods date back immediately following the reforms of 1990 after the collapse of the Soviet Union of which Russia was a part of. The biggest challenge the economy faced was not only centred on reviving the economy, but also reform other important sectors such as higher education and the overall labour market to increase productivity and long-term economic development of the country (Cooper, 2013:57-58).

Following the end of the Soviet Union, Russia began restructuring its economy including the labour market and industries to grow the economy and improve the lives of its citizens. From as early as 1991, more policy reforms aimed at improving labour market outcomes and ultimately the lives of young people (Gimpelson, 2019:2). Table 3.5 shows the policies implemented and the effects they had on their proposed recipients.

Table 3.5: Youth policy interventions introduced between 1991-2013

Year of introduction	Policy reforms	Recipient number
1991	Payment of unemployment benefits, including to youth unemployment benefit regarded as formally without work as well as those seeking employment for the first time Motivation behind the benefit was to give unemployed individuals provisional means of support until they secure employment.	16-29-year olds. 2013 – 238 000 individuals.
	Urge young people to look for suitable employment effectively.	14-29-year olds: 2012 – 2 105 587 people 2013 – 1 925 197 people.
	Organisation of specialised placement of young people to assist them with choosing their field of occupation, work and professional education and training. The main objective is to facilitate the selection of optimal occupations that meet the needs of employers and also improve the labour market situations	14-29-year olds: 2012 – 1 540 916 people 2013 – 1 408 392 people
1996	The provision of psychological support for unemployed youth to motivate them to search for work.	14-29-year-old: 2012 – 53 339 people. 2013 – 46 370 persons.
2003	Arranging short-term employment to acquire professional skills	14-27-year olds
2004	Encouraging unemployed young people to become entrepreneurs and start their own businesses by creating conditions conducive for this. Self-employment of unemployed people, including youth.	Those aged 14-29-year-olds 2012 – 24 735 people. 2013 – 20 069 people.
2004	This programme was aimed at providing job-searching skills including interview skills, resume writing and other important skills.	14-29-year-olds: 2012 – 84 791 people 2013 – 76 381 people
2005	Temporary employment arrangements of unemployed youth between 18-20 years with secondary vocational education and first-time work-seekers	18-19-year olds 2012 – 34 872 people 2013 – 32 867 people
2009-2013	The arrangement of internship programmes to obtain graduates of practical experience required by profession (specialty), advancement of new innovations, structures and techniques for work association at the working environment.	232 000 people

Source: Russian Employment Plan (2014:23).

Most of Russia's youth employment policy arrangements involve employment strategies which concentrate on connecting people with employment by giving unemployed individuals access to the labour market and most importantly good occupations. The policy-setting by and large aims to enhance and promote labour force participation through improved flexibility, education and training (Russian Employment Plan, 2014:9) to improve employment readiness. In essence, the policies aim towards improving labour market institutions, particularly of young people. Russia's most recent policy was

adopted in 2014 and has a target of 2020 and emphasises on having an active employment policy, provision of social support to individuals that are unemployed amongst other issues

Table 3.6: Selected policy intervention tools for young people

Policy Section	Explanation
Quality employment	To ensure the compliance by employers on ensuring that existing and newly created occupations are decent of good quality
Labour productivity	Enhancing productivity through continuous professional development for workers
Labour participation	• Enhancing motivation and incentives for employers to employ young people. These incentives could entail wage subsidies. • Invigorate graduate student internships encourage permanent employment. • To support young entrepreneurs through the provision of skills and development, removal of barriers that may prevent the survival of small businesses. • To agree to processes intended at equally increasing employment in the formal sector. • To undertake measures to increase the effectiveness of young people in labour market.
Fostering structural changes by increasing labour mobility and improvement of vocational training programmes	To encourage employers to fund and invest in training and skills development initiatives of vocational education institutions
Graduate internship and employment programme	This programme intends to help graduates and young people between the ages of 18-29 years from higher educational institutions get work experience to narrow the gap the capabilities acquired and occupations that graduates work at. The duration of the training programme is six months and by 2015, more than 13 000 graduates had been assisted.

Source: Russian Employment Plan (2014:9-10)

With the strides made by the Russian government to improve labour market situations of unemployed young people, particularly graduates, the situation is still problematic as discussed in the previous section. In as much as many young graduates are finding employment relative to those with low-level education, an equally greater number are still encountering negative employment outcomes. As cited by Vorotnikov (2019), a number of initiatives have been proposed and these entail:

- Training quota – This will incorporate setting unique quotas for the training of experts for specific economic sectors of the Russian economy.
- Postgraduate assistance – Subsidise more postgraduate schools and expand the period of study in these institutions with the aim of getting more graduates to enrol for their postgraduate schooling.

- Research interns – The government likewise has an objective to re-establish the utilisation of research interns – brought down after the collapse of the Soviet Union – who will be working on the basis of fixed-term contracts for two to three years.
- Additional funding – While continuing to offer students preferential educational loans subsidised by the government to keep the interest rate down, the government is considering allocating additional funds to pay off part of these loans for 2019.
- Performance evaluation – There are also plans to begin regular monitoring of the employment of graduates of domestic universities and to cut state funding of those universities whose employment outcomes are lowest. Employment guarantees – In addition, the government wants to draw up a state order for graduates of domestic universities, which guarantees their employment after graduation. There are also plans to retrain graduates who received a degree in a specialty where job demand is low.

3.3.3 India

3.3.3.1 Economic background

South Asian countries have accomplished considerable progress in as far as the macroeconomy is concerned, particularly in the area of economic reforms, from deregulation in the manufacturing industry to fiscal reforms (Rana & Chia, 2015:3). After its independence, India acquired a small but effective government from the British which had been administered by civil servants and well-governed (Rana & Chia, 2015:3). The socialist policy framework played an important role in India's early (1950-1980) economic growth, ending the balance of payment crisis that ensued in the late 1970s (Devarajana & Nabi, 2006:22). As indicated by Cagliarini and Baker (2010:21) during the course of the 1980s, different market-based changes were slowly acquainted and applied to number of sectors. Policy makers started a drive opening up the economy through institutional reforms.

Consequently, under the socialist model of development, government's role in the economy was extended which included being responsible for employment amongst other things, however, the capability and competence of the public sector was not reinforced regardless of the suggestions of numerous studies and international organisations (Rana & Chia, 2015:3). The economic reforms in the 1990s, sequentially, pulled in significant inflows of investment funds from all over the world, in turn, contributing to India's emergence as a global economic player (Devarajana & Nabi, 2006:22). These orthodox economic reforms improved growth and fuelled poverty reduction (Nagaraj, 2000:2831).

Since 2000, economic growth has more or less stood at around 7 per cent annually, up from an annual average of 4.5 per cent over the past four decades leading up to 2000s (Cagliarini & Baker, 2010:9).

Figure 3.21 shows India's average growth in GDP and GDP per capita before large scale economic reforms and after that. To some extent, this improvement mirrors a progression of the previously mentioned reforms that have altogether opened up the economy and stimulated investment spending. This surely has demonstrated that good economic policies can assist in growing the economy and reduce poverty, poor policy approaches hinder development and impedes poverty reduction (Rana & Chia, 2015:4).

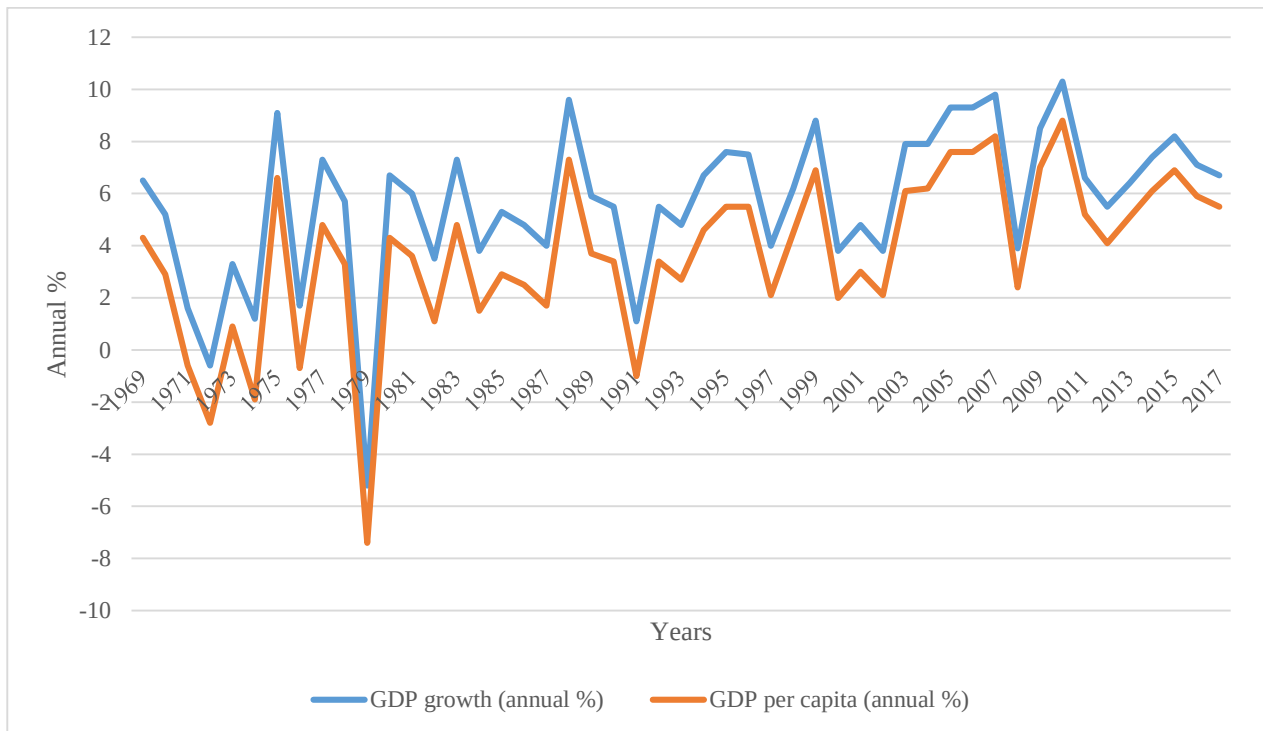


Figure 3.21: India's average GDP and per capita GDP between 1960 – 2017

***Employment estimates are modelled by the ILO*

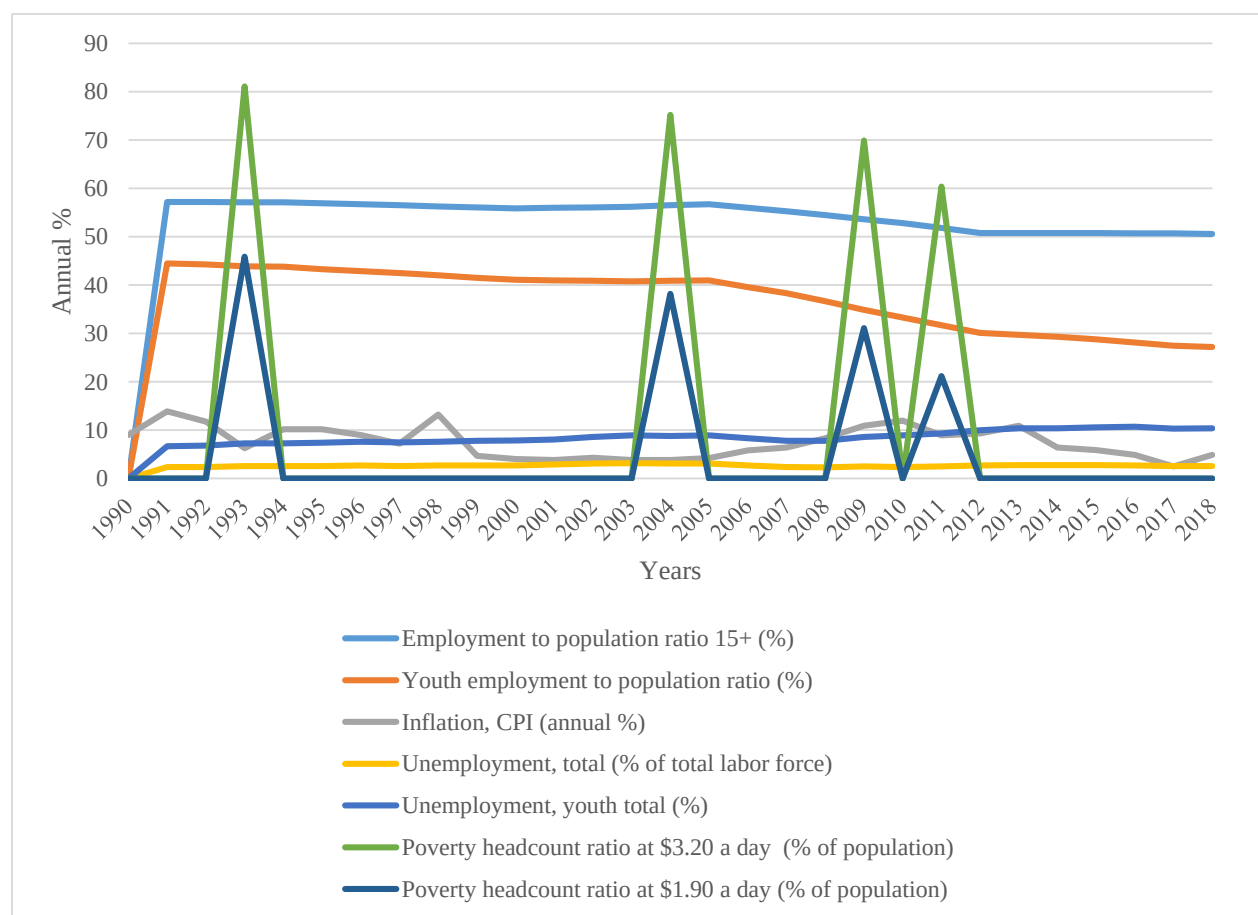
Source: World Development Indicators (2019)

The earlier slow rate of capital accumulation (*which was a result of a highly regulated Indian manufacturing industry which in most instances limited output growth*) contributed to the low per capita income between the 1960s and the 1980s (Cagliarini & Baker, 2010:20). The oil shocks of 1973 and 1978 negatively impacted the Indian economy and as a result, growth objectives became difficult to attain, inflation excessively increased to figures over 10 per cent, manufacturing output was hindered, slowing employment growth and tightening labour markets (Hill, 2009:398).

Per capita GDP growth rate in the period following the economic reform averaged at 4.2 per cent compared to 2.5 per cent prior the economic reforms (Rana & Chia, 2015:4). Although the country's dilapidated infrastructure did not hamper exports of some services such as those relating to internet

services, but it did affect the competitiveness of trade in goods (Devarajana & Nabi, 2006:13). As can be seen in Figure 3.21, there was a sharp decline of GDP in 1991, which was a result of the balance of payment crisis, prompting a more comprehensive set of market-oriented reforms under the new industrial policy (Mohan, 2006). In 2018, GDP growth rate peaked at 7.6 per cent, making India one of the fastest growing developing countries in the world with Rwanda and other countries (Trading Economics, 2019).

Nevertheless, almost 50 per cent of Indians continue to be vulnerable, slipping back to poverty, at the same time, the economy has become defenceless against mechanical changes that carry mechanisation into the work environment on a bigger scale (Bremmer, 2017:14). Figure 3.22 shows that even though the poverty headcount ratio for those living below \$1.90 a day has been on a decline since the 1990s, nonetheless it remains high. In view of the positive growth story in India, it is feared that while a small share of workers gained from this (e.g. those in the service sector), a relatively larger share of those employed in the agriculture and manufacturing sectors were feeling the brunt of declining output levels resulting into lower income per capita (Vatta, Sato & Taneja, 2016:108). In fact, India has more people living in poverty than the total population at the time of independence (Nayyar, 2006:1457). Figure 3.23 shows a summary of India's main macroeconomic indicators.



***Employment estimates are modelled by the ILO*

Figure 3.22: India's macroeconomic indicators (1990-2018)

Source: World Development Indicators (2019)

Hill (2009) maintains that labour market flexibility and social protection are amongst the persistent challenges India is confronted with. Solid economic growth rates since the 1990s all through the 2000s has realised a decrease in standard formal work at the same time, seeing rising growth in unregulated informal work, which is one of the essential characteristic of India's labour market.

For instance, despite economic growth progress, in 2012, the informal employment as a percentage of total non-agricultural employment was at 74.8 per cent, while the employment-to-population ratio has continued to decline from 58.6 per cent in 1994 to 51.8 per cent in 2018 (World Development Indicators, 2019). In some findings (see Dasgupta & Kar, 2018), the number of people in informal employment is valued at more than 90 per cent, with no job security or protective labour regulation. This has opposed the universal theory of economic development which expect that as an economy builds up, the informal sector will disappear as work is restructured and formalised (Hill, 2009:404). In addition, labour force participation rates were declining, especially for young women and men, despite the fact that real GDP grew significantly (Dasgupta & Kar, 2018:1).

Over the longer term, most South Asian countries are expected to register high economic growth rates. A report by the Asian Development Bank (ADB, 2009) has suggested that over the next 30 years, India's economy can possibly grow by more than 9 per cent annually, seeing the economy progress from a poor developing economy to an advanced one. However, the consensus is that for India to realise this growth potential, it is important to ensure that more sustainable new sectors are developed as opposed to attempting to pursue China's prosperity (Rana & Chia, 2015:9). The subsequent section describes the nature of India's labour market, with a focus on young people.

3.3.3.2 *Youth labour market dynamics*

South Asia appears to be suffering from the challenge of jobless growth, and any growth that has happened following the global financial crisis in 2009 has mainly been vulnerable and informal (Bolton, 2016). The 1990s economic reforms delivered various prospects yet it additionally represented a few difficulties to the Indian economy. Specifically, India ranks as 75th in terms of the labour market performance which may be fuelled by the fact that the country performs relatively poorly in the human capital category, ranking 108 in terms of health and 96 in terms of skills (WEF, 2018:280). The rising inequality is explained by a number of factors, including very skewed patterns of returns over various levels of education (Vatta *et al.*, 2016:109).

Under the current development policy, women workers experience several obstacles including low labour force participation rates (Hill, 2009:407), which ranges between 25 to 27 per cent. The low female participation has been credited to social standards related to women being hampered by family and household obligations, including the comparatively lower-levels of education (Bolton, 2016). By and large, women work in less economically productive sectors and in jobs with potentially lower learning prospects (World Development Report, 2019:96). In their analysis on gender segregation in education and its impact for labour market outcomes in India, Sahoo and Klasen (2018:26) suggest that in the context of India, being a female leads to selecting the kind of education which brings about relatively poor labour market outcomes. According to the Findings of *'The Pursuit of Gender Equality'* report in 2017, regardless of whether women are working, they are regularly in jobs of low-quality as demonstrated by less earnings and security, less professional stability and a more serious danger of incredibly low pay, at the same time, they remain significantly underrepresented in managerial positions (OECD, 2017:231). Sharma and Sharma (2017:1787) report female workers relative to their male counterparts to also be more likely to be under-educated as opposed to being over-educated. They further find that the probability of over-education declines significantly for women over 35 years of age, implying that younger Indian women have higher chances of being over-educated in comparison to their older counterparts.

Unemployment amongst young people seem to be increasing with the level of education. According to the ILO (2018a:9) young people with higher levels of education face unemployment rates surpassing 30 per cent in contrast to those with less than basic education who are most likely to experience unemployment rates below 5 per cent. Often, skilled young people exit the higher education sector not sufficiently prepared for the labour market. This not only result in high unemployment rates, but large shares of young people working in jobs not linked to their studied fields of education; an important source of over-qualification. The unemployment rate in India is also fuelled by the fact that many young people are unable to read and write. In 2018, 24 per cent of those between the ages of 18 and 37 years who drop out of school before finishing the primary level education could read (World Development Report, 2019:81). This lack of vital skills required in the workplace puts these young people at a disadvantage, lessening their chances of finding employment, if anything else, good quality employment.

The informal sector is sluggish to transform, as since 1999, India's informal sector has remained at about 90 per cent (World Development Report, 2019:94). Figure 3.23 shows the share of workers in formal and informal employment since 2010. The share of workers in unorganised work (informal sector) has been significantly high compared to those in organised jobs (formal sector). Even if young people find employment, they often work in the informal sector, in jobs of poor quality, non-standard work or in jobs that are not legally protected (ILO Employment Trends for Youth, 2017). Despite the

fact that the number of young people in working poverty declined from 34 per cent to 14 per cent between 2007 and 2017, India still has a high number of youth working poverty rates compared to its other BRICS counterparts such as Russia (with less than 0.2 per cent youth working poverty rates) (ILO, 2018a:9).

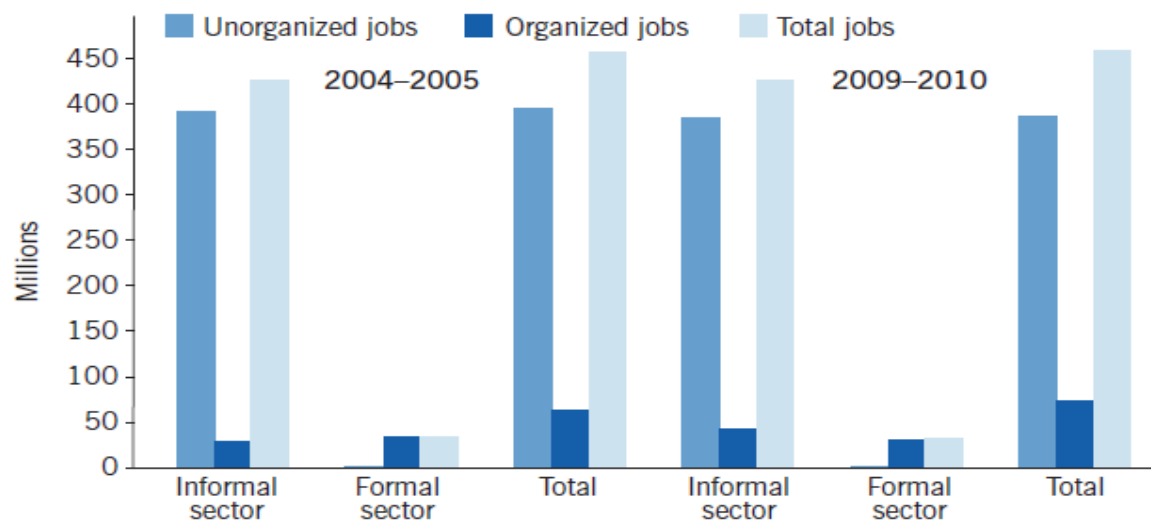


Figure 3.23: Share of formal and informal employment in India since 2004

Source: Dasgupta and Kar (2018:7)

As mentioned in Chapter 2, education plays an important role in attaining economic development. Nevertheless, returns to education may differ significantly across different population segments and even regions. The skills that many young people enter the labour force with are most likely to have an effect on their direction and pace in the labour market (Aggarwal, Frefuflia, Johnes & Spricigo, 2012:2). In a study investigating the returns to education in India, Vatta *et al.* (2016:125) found the returns to education do differ wildly amongst workers of various regions. They found the returns for regular workers in urban areas to be higher than that for regular workers in rural areas, suggesting that even when both rural and urban counterparts have the same level of education, earnings for urban workers are higher for individuals from urban areas as compared to rural. This might be explained by the spatial mismatch theory²⁵, that at times, workers from rural areas are most likely to encounter poor employment outcomes (high unemployment and low wages) since they are secluded from the job opportunities (Gobillon *et al.*, 2007:2408-2409). Vatta *et al.* (2016) also found returns to education in India substantially increased for those with secondary schooling and higher education qualifications (i.e. at graduate level). The increasing trend was especially true for female workers.

²⁵ See Chapter 2.3.2.6

Most young people seem to be working in the agricultural and construction sector (which are known as sectors with the most unskilled labour), which would explain why many young people find themselves in working poverty and poor-quality jobs. In 2012, an estimated 42 per cent of those between 15 and 29 years of age were working in the agricultural sector, while the share of those in construction had increased to 5.5 per cent (ILO, 2018a:10). During the same period, the manufacturing share only increased by 2 per cent. Figure 3.24 shows the employment share by status classification in India since 2011. Based on the figure, between 2011 and 2016, almost half of the labour force was self-employed, whereas nearly a third was working in casual work. Almost one-sixth were earning regular wages or salaries, and more than three per cent of all workers were contract workers. The future of an estimated 68 per cent of jobs in the aforementioned sectors is also facing the risk from automation (World Bank, 2018a:184).

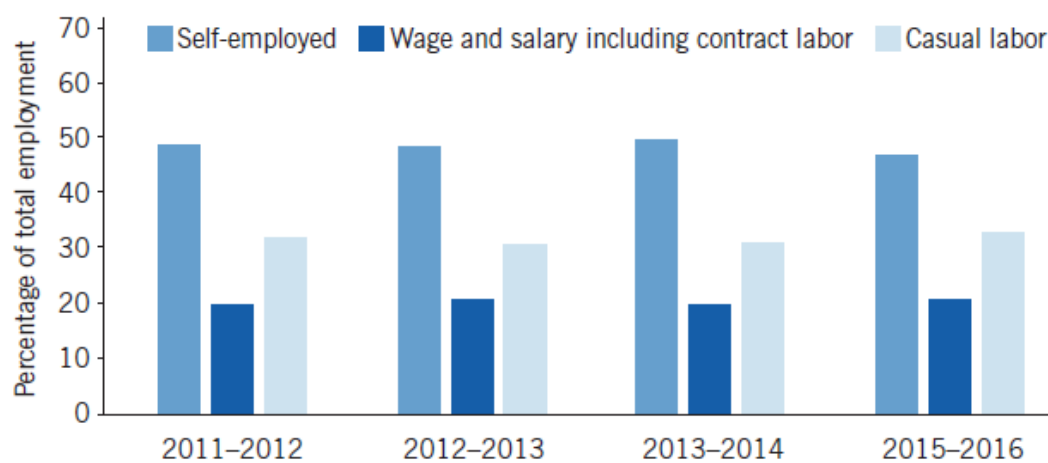


Figure 3.24: Employment share by status classification between 2011 and 2016

Source: Dasgupta and Kar (2018:6)

The incidence of educational mismatches is quite common in the Indian labour market. There has always been a trend towards over-supply of over-educated workers which consequently reduces the reservation wage (Ahmed, 2016:98). In a 2017 study investigating educational mismatches and its impact on wages in the Indian labour market, Sharma and Sharma (2017) found that even though returns to over-education are positive and significant, the over-educated would still earn less than the workers who have the same education level, but who are engaged in jobs for which they are sufficiently educated. This still infers that educated graduates who cannot find employment within their fields of study, are most likely to just accept any job (*whether it is for survival, or with the hope that they will have higher chances of good jobs in future*), even the one requiring the level of education that is below the one they attained. Consequently, accepting such a job would imply less earnings, *inter alia*, be underemployed by both skills and income. Interestingly enough, Sharma and Sharma (2017:1781)

report the share of workers with adequate level of education to be highest for white-collar employment (Administrative, executive and managerial work and Clerical) and lowest for the blue-collar employment (production related work and farmers), suggesting inadequate employment opportunities vacant for the highly educated workers in the Indian labour market.

Several reasons explain the positive relationship between the level of education and underemployment in the Indian labour market. Firstly, according to Blom and Saseki (2011) the poor quality of education existing in the country's higher education sector implies that even the educated workers might not have the skills essential for white-collar employment. In addition, the reforms in the higher education sector resulted in a situation where the number of educated workers in the labour force outstrips the number of existing employment opportunities for them (Chitnis, 1993; Sharma & Sharma, 2017:1788). Many graduates with vocational educational and training (VET) courses face high unemployment rates, perhaps raising concerns that these courses might relate to lower-levels of general education.

Another factor is that the largest share of Indian graduates is in the field of social sciences (OECD, 2018:208). Previously, research (see Altbeker & Storme, 2013:14; CHEC, 2013; Moleke, 2010; Van Broekhuizen, 2016) has shown that graduates from generic courses that do not directly prepare graduates for a profession often have relatively negative employment outcomes. A study in the UK (see Chevalier 2003) found that students who graduate in study fields like education, engineering and mathematics are less likely to be underemployed than those who had graduated in humanities. Another study found that Indian female graduates who have studied in the technical stream, especially science, have significantly better labour market outcomes in adult life than those who studied humanities (Sahoo & Klasen, 2018:24). From this analysis, it can be deduced that despite a successful economic turnaround, informality and underemployment seem to be a main feature in India's labour market and it is very much explained by the level of education and age, aside from gender, where being young and female seem to be associated with poor labour market outcomes. A number of initiatives have been undertaken by India in a bit to address employment challenges facing young people. The section to follow highlights on policies the Indian government has adopted in trying to improve underemployment and overall labour market outcomes facing young people.

3.3.3.3 *Policy / Programme responses*

- *MNREGA public employment programme*

Pradhan Mantri Kaushal Vikas Yojana (PMKVY) – This policy seeks to target an additional 10 million young people between 2016-2020 by providing relevant industry training and skills certification (Indian Ministry of Skill Development and Entrepreneurship, 2018).

- *India's Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA)*

The MGNREGA provides 100 days of work in public works per household at minimum wages, has served as an inspiration for many countries. According to Bárcia de Mattos and Dasgupta (2017), this act has been helpful in safeguarding paid employment for women, and has had a positive and significant effects with increased chances of older girls spending more hours in school. This initiative plays an important role in addressing the gender gap in education and youth employment (ILO, 2018a:11).

- *Make in India Initiative*

Given that a large share of young people work in the agricultural sector, this initiative seeks to increase employment creation in the manufacturing sector including through appropriate education and skills development policies (ILO, 2018a:10). This will assist in moving young people out of poverty and unstable low-paying jobs in the agricultural sector.

3.3.4 China

3.3.4.1 Economic background

China is frequently viewed as an economic wonder, from a closed economy (prior 1979 economic reforms) to the second biggest economy in the world and also in terms of trade (WEF, 2018:27; Zhang & Wu, 2018:1). The formation of the People's Republic of China in 1949 came with increasing support for the '*leap-forward*' strategy advancement of the heavy-industry sector (also-called the manufacturing) was the case in the Soviet Union with an aim of catching up to the industrialised countries of the west (Wang, 2016a:867). Auxiliary to its communist vision of flourishing and wealth for the general population and the country, the Chinese government needed to utilise a command (centrally planned) economic system that mightily apportioned scarce resources²⁶ to its manufacturing industry (Li, 1998:148). The Chinese government largely controlled the three economic questions (What should be produced, how should it be produced and for whom should it be produced). Thus, every main market (price and wages) in the economy was to a great extent by the government from labour to raw materials. China basically had no labour market before the 1980s since the government determined wage levels even for who work and who do not (Zhang & Wu, 2018:5). This policy approach proved unsuccessful (as was the case in many other socialist countries such as in the former Soviet Union) since it could not fast-track economic development, which is a crucial manifestation if the general population is to flourish

²⁶ It was a well-known fact that China has an abundant labour supply with very scarce capital. So the implementation of the heavy-industry ordained strategy relied on more capital

The dismal failure of the leap-forward strategy led to the implementation of a new development strategy for China, leading to the introduction and implementation of reforms that prompted large scale economic reforms in 1978/9, giving more consideration to market incentives, restricting government intervention in the economy, creating a certain policy environment, a more prominent accentuation on the standard of law, liberalising trade with the global community and unifying its currency (Taylor, 2016:282). Even though these economic changes were continuous²⁷, their aggregate impact has been extensive, and they have been surprisingly effective which is very in opposition to the advocates of '*big bang theory*' of transforming rapidly and as indicated by an exhaustive arrangement McMillan & Naughton, 1992:130)

Fifteen years after the commencement of economic changes, China continued to reform public administration and bureaucracy to guarantee that a reinforced government rose to address new difficulties and requirements (Rana & Chia, 2015:4). The continual reforms brought three long decades of a booming economy, with growth rates averaging at 10 per cent annually (Taylor, 2016:282). China's competitiveness also improved considerably, averaging at 29 from 2007 until 2018, reaching an all-time high of 34 in 2008 and a record low of 26 in 2012. Specifically, the country was the 28 most competitive nation in the world out of 140 countries ranked in the 2018 edition of the Global Competitiveness Report (WEF, 2018a).

With foreign trade being opened up implied that China gained from globalisation, experiencing a competitive advantage in manufacturing exports because of low labour costs amongst other factors. According to World Development Report (2019:30) China decided on putting more resources towards the development of infrastructure, special economic zones, and most importantly, human capital, which produced a quality labour force linked to the rest of the world.

Some export-dependent Southeast-Asian countries moved their export destination to China to profit from the economic recovery of China. According to Tanaka (2010:7) this shift of export destination to China, evident in Malaysia and Thailand, exemplifies China's vital part in driving the region's recovery. Between 1992 and 1999 China's nominal GDP grew by almost 7.3 trillion, with trade volume increasing from US\$ 165.53 billion to \$474.3 billion, realised foreign direct investments (FDI) rose to \$40.72 billion from \$11.01 billion annually (cumulative FDI reaching \$323.31 billion), and foreign exchange reserves experienced a substantial increase from \$19.44 billion to \$165.57 billion (Hou, 2011:428) making China one of the countries with the largest foreign exchange reserves (Mohr & Associates, 2015:309).

²⁷ No ultimate goal was announced, nor was any time frame for the transition given.

This has immensely helped China's overall economy, at the same time, China seems to have benefited a lot from trade openness, where export-led economic growth raised standards of living, seeing the quantity of individuals living on under US\$3.20 per day decreasing from 890 million to 129 million between 1996 and 2014 (World Bank, 2019:81). Between 1992 and 2000, the per capita disposable income of urban households increased from 2026.6 Yuan to 6280.8 Yuan, while for rural residents it rose from 784 to 2253.4, with the total revenue to the government increasing from 348.34 billion Yuan to 1.34 trillion Yuan (Hou, 2011:428). Regardless of the improved and expanded per capita in the course of recent years, skilled residents from rural China still get meagre wages than their skilled urban counterparts (Pan *et al.*, 2019:191), suggesting that economic improvements have been accompanied by widening inequality.

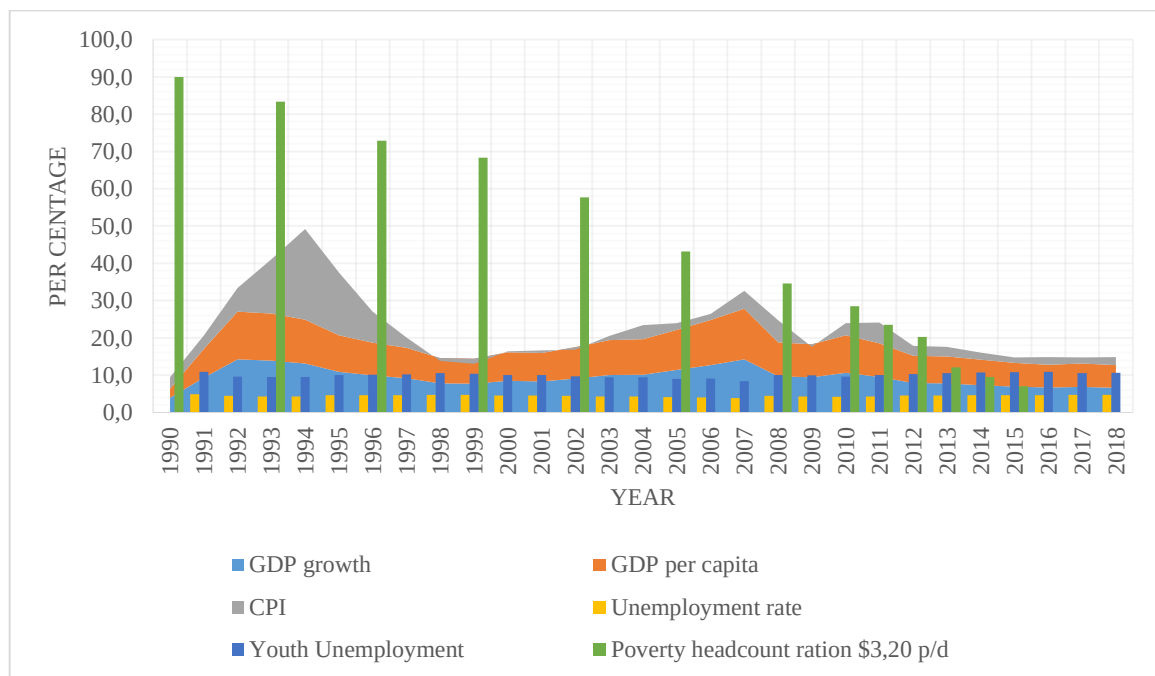


Figure 3.25: China's Macroeconomic Indicators, 1990-2018

***Note poverty headcount ratios is not available for 2015-2018*

Source: World Development Indicators (2019)

As can be seen in Figure 3.25, China's economy has grown immensely with GDP growing at an average of 10 per cent, despite the slowdown in the last five years or so. Observing the patterns in the unemployment rate as shown in Figure 3.25, the number of people without employment seems to be very low at less than five per cent, seen as *'irregularly low and doubtfully steady'*²⁸. Critics contend that the definite counting of the unemployment rate by the Chinese labour statistics has been questionable, despite the fact that the unemployment rate definition is in accordance with the globally

²⁸ See Feng *et al.* (2015)

accepted definition (Knight & Xue, 2006:1; Duckett & Hussain, 2008:211). Although China's unemployment rate has grown to some degree after some time and in this manner the gap amongst it and other upper income middle-income countries has tightened, it has never ascended to reach even the level typical of low-income countries, although the World Bank characterises this country as an upper-middle-income country (Feng, Hu & Moffitt, 2017:304-305). According to Schucher (2014:10), China only measures the unemployment rate for urban areas and for '*persons with an urban household registration*' despite the fact that there are, in any case, numerous holders of a rural *Hukou* amongst the urban labour force. This has consequently brought about grave underestimation of the unemployment rate and according to Liu (2012:19-20) this is likely to be especially serious for the accompanying reasons:

- a large segment of the population is not registered for the urban household status (*Hukou*) and subsequently numerous unemployed people are not able to register
- even qualified unemployed individuals may not have the impetus to enlist in light of exceptionally low unemployment benefits, and
- the complete number of registered individuals are collected bottom-up within the bureaucratic framework, hence subject to inaccuracies and possible data aggregation influences

Numerous scholars (see Cai, Du & Wang 2013:128-129) have endeavoured to evaluate China's accurate unemployment rate and typically end up with numbers essentially higher than officially estimated rates. Feng *et al.* (2015:5) report that by approximately 2002, the unemployment in China was essentially higher than that of high-income countries, precisely the opposite suggested rates by the official series. This disproportionately low representation of such important indicators may prompt the implementation of unsuitable and inappropriate policies, while on the other hand, it may not warrant any reaction from the government and policy makers, delaying progress and worsening things over the long-run. Perhaps the underestimated unemployment rate can also explain why the poverty rates in China are very low. Contrariwise, China's economy has been hindered as higher wages make manufacturing progressively costly (World Bank, 2019:45), although the economy more than trebled its manufacturing output from producing less than three per cent of the global manufacturing output in 1990 to roughly 25 per cent by 2015 (Bremmer, 2017:5). The annual GDP growth rate has been declining, with the per capita GDP growth rate following the same trend.

Regardless of a declining economy in recent years, China remains the biggest beneficiary of foreign direct investments (FDI) amongst developing countries, additionally being the biggest outward FDI provider, demonstrating the maturity of China's firms (Hou, 2011:429). As much as China benefited from global trade with the West, Western economies additionally benefited tremendously. The FDI firms practically all earned considerably higher returns in China than their countries of origin, many of

China's trading partners additionally picked up fundamentally with a chance to import various low-cost merchandise from China that brought down domestic inflation and profiting the consumers whereas China's rising economy and buying ability permitted the US to China (Hou, 2011:428).

China's expeditious economic dominance has however accelerated numerous difficulties, including high disparity, rapidly growing urbanisation; corruption, difficulties pertaining to ecological manageability; and other external irregular challenges. China additionally is struggling with demographic burdens identified with a maturing population which has put pressure on government finances and internal movement of labour from rural to urban areas (World Bank, 2018d:4). The pace of urbanisation has quickened seeing the quantity of individuals living in urban communities expanding to 53.7 per cent in 2013 from approximately 17.9 per cent in 1978, the number of urban areas ascended from 193 to 658, and the quantity of individuals living in urban communities rising from 170 million to 730 million (Pan *et al.*, 2019:191). Beside rapidly rising urbanisation, there has been an increasing number of migrant workers from 147 million in 2008 to 245 million in 2013, implying that the number of rural migrants entering the cities in search of employment has been on a steady rise (Pan *et al.*, 2019:192). Eventually, this puts a downward pressure on urban wages, displacing a lot of urban workers. This is explained by Feng *et al.* (2015:7) who maintain that when rural migrants come to urban areas, many urban workers leave the labour force or become unemployed as opposed to remaining in low wage employment.

Although China's GDP has turned into the world's second biggest, its long-term economic growth with rapid and enduring '*efficiency first*' policy direction, has brought the economy into an intricate existence of grave disparity making it one of the most serious problems confronting the economy (Han, Zhao & Zhang, 2016:24). The economic benefits have not been realised by all people, with widening disparities across regions and population groups. Bramall and Jones (1993:43) confirms that China's Gini coefficient (a prominent measure of income inequality) had expanded to 0.42 in 1990 from 0.28 before the major economic reforms.

Zhuang and Li (2016:1) ascertain four main factors that have been driving widening income inequality in China since the mid-1980: rising skill premium²⁹ which has seen real wages of the less educated (unskilled) workers' decline, deteriorating portion of employment income, growing spatial disparity, and widening inequality in terms of wealth distribution. At the same time, this also suggests that the inversion of these key drivers, except for wealth disparity, could somewhat clarify the stabilisation in income disparity after 2006 (Kanbur, Wang & Zhang, 2017:3). Even though per capita income grew from \$411 in 1992 to \$945 in 2000, expanding to \$3383, disparity then again appears to have been

²⁹ Defined as the ratio of the wage of skilled workers over the wage of unskilled workers (Autor, 2014:843)

widening with the Gini coefficient record expanding from 36.3 in 1995 to 40.2 in 2015, which is near hazardous line of 0.5, with the share of national income accruing to the top 10 per cent population also increasing from just 33 per cent to 41 per cent, see Figure 3.26 (Piketty, Yang & Zucman, 2017:26-33).

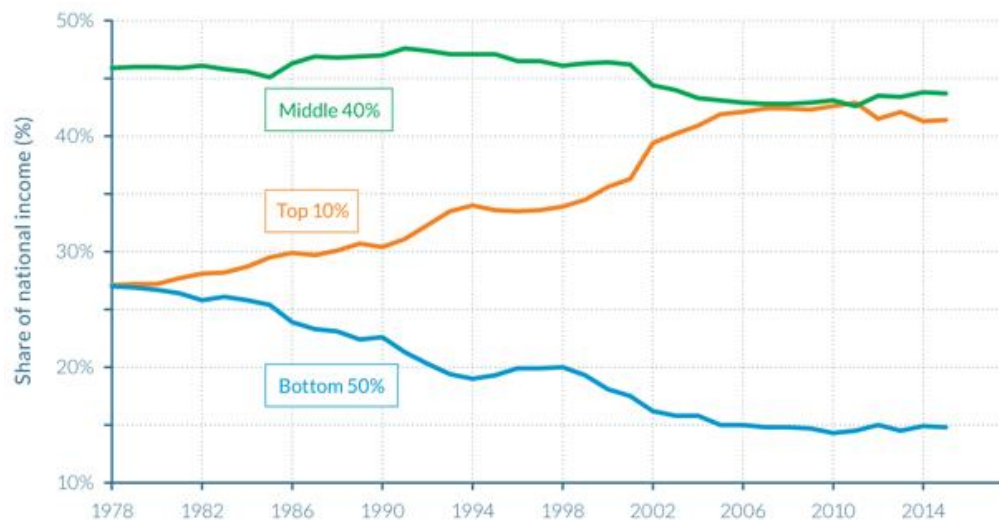


Figure 3.26: Household income share in China between 1978 and 2015

Source: Piketty *et al.* (2017); World Inequality Report (2018)

Figure 3.26, illustrates how the share of national income has changed since 1978, demonstrating a clear widening gap between the rich and the poor. Even though national income accruing to the middle 40 per cent has declined, on average it has been steady. The growing Chinese economy implied that the top 10 per cent household earned more, while the bottom 50 per cent earned less from the national income. Arguably, if unlawful salaries of corrupt authorities are considered, the gap between the rich and poor in China could achieve multiple times (Han *et al.*, 2016:27). Actually, different sources show slightly different Gini coefficient values, which have been affected by the unavailability of data (see Figure 3.27). This stabilising income inequality may not be a true reflection given the unavailability of data on high-income taxpayers since 2011 (World Inequality Report, 2018).

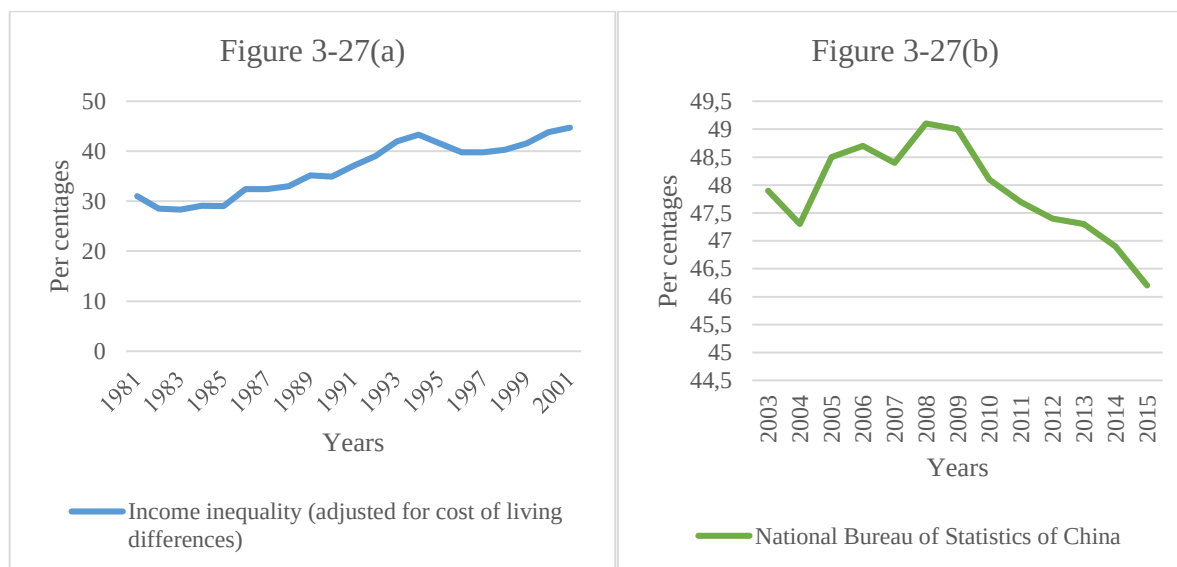


Figure 3.27: China's Gini coefficient 1981-2001 (a) and 2003-2015 (b)

Source: Ravallion and Chen (2007); National Bureau of Statistics of China (2015, 2016)

As can be observed in Figure 3.27(b), estimations by the National Bureau of Statistics of China for recent years demonstrate a progressively steady pattern. Income inequality dipped in 2008 with a Gini coefficient of 49, and has since been on a slightly downward spiral, achieving its most reduced level of approximately 46 in 2015. Although China's Gini coefficient is low compared to its BRICS counterparts like South Africa, it is still above the warning line of 0.4, and also relatively higher compared with many countries in Asia (Asian Development Bank, 2012). It is likewise notable that from a worldwide viewpoint, China's income disparity is additionally higher than that of developed countries and Asia's average (0.3513), North America (0.374), European Union (just over 0.3) and Northern and western Europe (below 0.3) (Han *et al.*, 2016:28). Inequality in human capital also arises because wealthier households invest (save) more, have better access to education and health than poorer households and in turn receive higher capital returns (Zhuang & Li, 2016:7). Corruption is additionally one of China's primary challenges, further widening the income disparity gap, as it has turned out to be across the board and goes up high amongst government positions (Hou, 2011:430). However, Wang and You (2012:415) points out that China's corruption might be a '*productive*' one in contrast to countries such as India, as arguably it generates economic opportunities that generally may not exist. Regardless, the bribes and rent seeking distortions are overall harms that cannot be avoided as an economy ascends. However, China remains a developing country (its per capita income is still a fraction of that in advanced countries) and its market reforms are not yet complete (World Bank, 2018d:3).

3.3.4.2 Youth Labour Market Dynamics

Association of Southeast Asian Nations (ASEAN) countries, with the exclusion of Singapore, have dual economies and, consequently, dual labour markets and skill requirements (Martinez-Fernandez & Powell, 2009:5). The Chinese government attributes considerable prominence to the issue of employment and takes employment as the first priority of people's livelihood and as the top strategy for ensuring the stability of its society (Yan, 2006:1). Only three decades' prior, higher education in China was an uncommon benefit appreciated by a little, urban selected. Since the late 1950s, China has attempted enormous endeavours to improve education, with the point of advancing economic development and fortifying fundamental human rights (Rong & Shi, 2001:107). The late 1990s saw the Chinese government go on a plan to fundamentally grow university and college enrolment and participation (Wang, 2016a:867). In particular, in 1999, university admissions increased by 50 per cent and this average annual growth rate endured for the following 15 years, producing the biggest inflow of university educated workers into the labour market in history (Stapleton, 2017:2). In response to the economic slump and increasing unemployment rate, particularly amongst young people as a result of the 1997 Asian financial crisis, the Chinese Education Ministry reported a rapid rise in university places of about 47 per cent (Li, Loyalka, Rozelle & Wu, 2017:33). This was trailed by increments of 38 per cent and 22 per cent in 2000 and 2001 individually and resulting progressively unobtrusive yet significant twofold digit growth year on year by and large for the following decade (Che & Zhang, 2017). Figure 3.28 demonstrates the impacts of this mass policy approach.

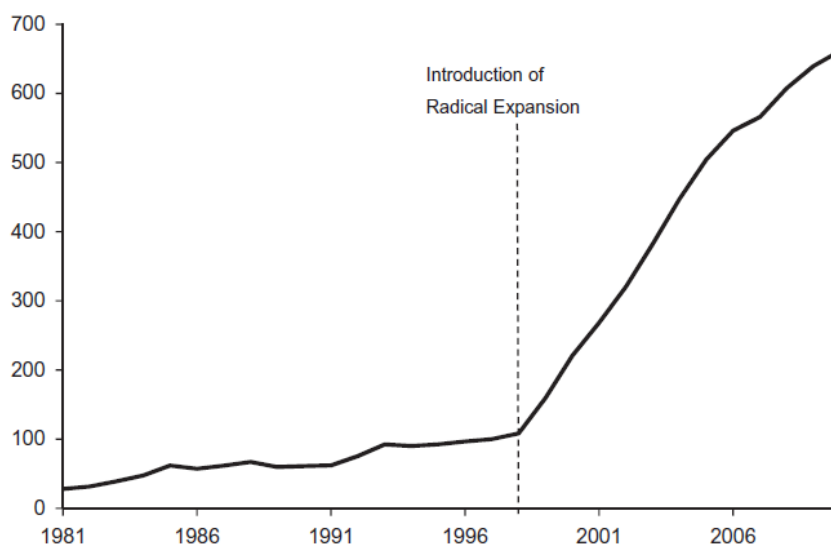


Figure 3.28: Effects of the higher education reforms in China

*Note** Figures are in 10,000*

Source: Wang (2016a:868)

As indicated in Figure 3-28, the defining moment was in 1998 when enrolment increased by more than 500 000 to more than 1 500 000 in 1999 (Wang, 2016a:868). In the year 2000, concerns regarding the quality of higher education started to rise. On the other hand, there were contentions that more enrolments guaranteed more tuition money for local higher education institutions. As a result, enrolment extension was a critical way for such higher education institutions to get to the monetary resources required to support their curriculum redesigning and rapid improvement (Wang, 2016a:879). Zhang, Jin and Shenglin (2011:542-543) distinguish the year 2003 as when China crossed the alleged '*Lewis defining moment*', when the overflow of low-cost rural labour to the urban sector reached an end for the most part because of the expansion in higher education. It is simply after the 2008 Global Financial Crisis that the Chinese government chose to force a more tightly control on enrolment growth rate (Dai, Cai & Zhu, 2018:40). Amid the most widely held courses, engineering encountered the biggest increment as a major aspect of government's push of specialised workforce which is viewed as one of the key drivers of development. Furthermore, and as indicated by the labour market incentive approach³⁰, the prospect of higher future returns in the future played a role in encouraging demand for higher education (Checchi, 2006:19). Other courses such as arts and design, legal affairs, investment and wealth management and language education are the vocational college majors which have come to be associated with less opportunities of finding employment (Molnar, Wang & Gao, 2015:14).

This massification of higher education subsequently delivered an increasing number of college and university graduates work-seekers in the labour market. Despite this improved access to university and graduates thereof, Chinese graduates are still confronted by negative employment outcomes, as in striking deformities remain and still lie ahead. Graduates have started to question the impact of higher education expansion on bringing more impartiality in admission and on bettering their ability to compete in the labour market (Mok & Jiang, 2016:1).

Many tertiary graduates are struggling to find employment while at the same time, many employers are finding it difficult to match workers to existing jobs, perhaps suggestive of the existence of skills-job mismatches (Molnar, Wang & Gao, 2015:3). Albeit unemployment amongst graduates is moderately low and has been since the mid-2000s (see employment rates in Figure 3.29), there are contentions that the unemployment rate has been covering the subtler issue of underemployment (overeducation) in light of the fact that while most graduates in the end find employment after graduation, a large number of them end up in part-time low paying work (Stapleton, 2017:5). That implies that as opposed to unemployment, it is unsatisfying employment prospects coupled with poor opportunities that might explain the employment prospects of Chinese graduates (Schucher, 2014:21).

³⁰ See the *Human Capital Theory* explanation in Chapter 2

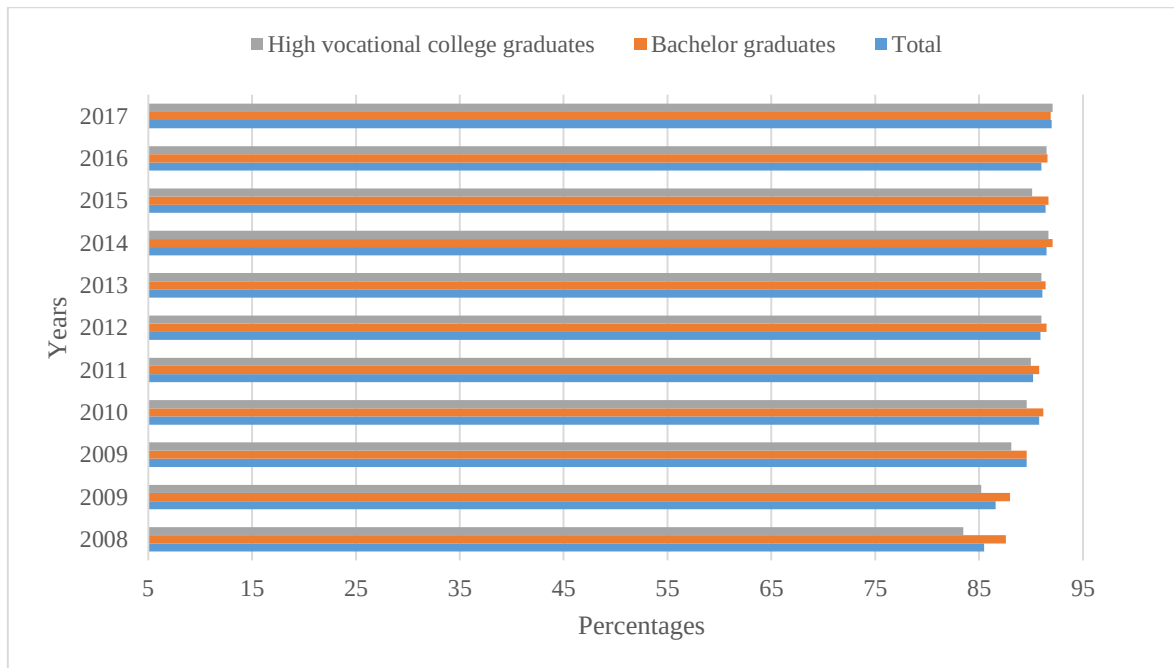


Figure 3.29: Employment rate of university graduates in China 2008-2019

Source: National Bureau of Statistics of China (2019)

Other findings (see Litao & Yanjie, 2010:i) reveal that the real unemployment rate could be higher than this official number, with many tertiary graduates having to lower their expectations to take occupations that high school graduates would qualify for. Also, structural changes in the economy exacerbate the lack of abilities in recently emerging sectors, and this has suggested that with China's turn towards being dominant in manufacturing, graduates in other fields are destined to battle finding the right kinds of employment (for example one in their attained study field) and in this way end up settling for any employment just to avoid being unemployed (Molnar *et al.*, 2015:3). This is just one of the many arguments against conventional wisdom that higher education provides young people with better employment prospects. Global research on young graduate employability (see Robertson & Dale 2013) has plainly demonstrated that being highly educated does not always result in better employment opportunities. The dramatic increment in the higher education enrolment rates in the mid-2000s saw a large number of graduates entering the labour force, in the meantime, not all of them were able to find employment, likewise increasing the unemployment rate, with the general pattern for employment rate declining (Mok & Jiang, 2016:15). According to Schucher (2014:3) the inadequate employment situations encountered by numerous young people are in reality more terrible than the deficient estimations of unemployment demonstrate. The average starting salary after university is even lower for students who choose arts and humanity subjects at high school level, when compared to their cohorts who did not go to university. Molnar *et al.* (2015:14) report that out of the 50 most popular graduate employments, 30 per cent are in the low-skills category and do not need a degree, misalliances that

appear to force a significant share of graduates to accept occupations irrelevant to their studies. The low starting salary and narrow career development have caused many of these graduates to question the value of higher education (Stapleton, 2017:7). According to Hancock (2017:6-8) the quantity of employment for graduates is to a lesser extent an issue than the quality of employment, with numerous Chinese graduates feeling discontented with their earnings and in the end their general work. In their study, He and Mai (2014:333-334) additionally argued an increasing number of Chinese graduates' being progressively disappointed with their employment, especially those from rural regions, presently being delegated the working poor. They contend that if the expansion of higher education does not meet the dynamic and changing needs of the market, graduate entrants in the labour market may experience unsatisfactory socio-economic environment amid their school-to-work transition.

A study by Elliot (2016), is proposing that the value of a university degree has deteriorated mainly as a result of the fact that the higher education sector seems to be supplying more graduates than the labour market can absorb. Graduates frequently end up in occupations disconnected to their study majors (31% of university and 38% of vocational school graduates) somewhat in light of the fact that there are not adequate positions identified with their major (16% of university and 12% of vocational school graduates who start a profession different from their major) or on the grounds that they fall short on the requirements for positions identified with their majors (11% of college and 13 per cent of professional school graduates who take jobs that are not related to their studied field) (Molnar *et al.*, 2015:14) (*see* Table 3.7 below). To the extent that education is a positional good³¹ an expanding higher education sector diminishes the estimation of upper secondary education, and even the value of higher education (Mok & Jiang, 2016:12). This would be one the reasons why many graduates would be earning lower salaries than they would simply because the competition for employment is too high. In fact, tertiary-sector graduates make up approximately half of all young people entering the Chinese labour market each year and are the ones most influenced by the current unproductive and discouraging employment prospects (Schucher, 2014:3). At the same time, findings from Zhang and Wu (2018:1) reveal that the labour force in China is costlier than in numerous other developing nations, and as a result, various foreign firms have moved their activities outside China. Employment satisfaction in China seems to vary with the type of sector a graduates finds their first employment in. According to Wang (2014:5), the public sector and state-owned enterprises offer the highest employment satisfaction due to the fact that they offer more stable employment with relatively higher starting wages or earnings. Conversely,

³¹ As stated in a well-known example by Hopkins and Kornienko (2004:1087-1088), "*the Jones family's choice of a new car will depend not only on whether it is big enough for their own needs, but also (if possible) on whether it is bigger than that of their neighbours.*" Therefore, positional goods are consumed for relative rather than absolute value (Fiorito & Vatterio, 2011:1)

employment in the private sector is the least satisfying as even though it seems to absorb a growing number of employment seekers, it however, pays less (Gan, Yin, Jia, Xu, Ma & Zheng, 2014:22).

Table 3.7: The percentage of Chinese university and vocational graduates who are skills-related underemployment (2011, 2012 and 2013 graduate cohort)

	2011 graduates (%)	2012 graduates (%)	2013 graduates (%)
University graduates			
<i>The job related to major does not meet my career expectation.</i>	43	43	33
<i>Because of living pressure, have to find a job, then think about career.</i>	—	—	25
<i>There are few jobs related to major.</i>	27	24	16
<i>Cannot reach the requirement of the job related to major.</i>	15	14	11
<i>Job which is not related to my major pays better.</i>	10	12	9
<i>The working environment of the job related to my major is bad.</i>	6	7	6
Vocational college graduates			
<i>The job related to major does not meet my career expectation.</i>	39	38	29
<i>Because of living pressure, have to find a job, then think about career.</i>	—	—	29
<i>There are few jobs related to major.</i>	25	19	13
<i>Cannot reach the requirement of the job related to major.</i>	19	19	13
<i>Job which is not related to my major pays better.</i>	10	14	10
<i>The working environment of the job related to my major is bad.</i>	7	10	7

Source: Molnar *et al.* (OECD, 2015)

Findings of Molnar's study further reveal that unfulfilled career expectations and occupations that do not coordinate interests are the fundamental explanation behind disappointment with occupations amongst university graduates in China. In other related studies in the BRICS partners South Africa, Mncayi and Dunga (2016:420) infer that graduates appear to be often misled about the speed of achievement in the working environment; expectations surrounding wages and careers are frequently so high, demonstrating that students are not mindful of the actuality of entry level employment and wages after graduation. A lot of times, many of these graduates cannot afford waiting for the right match and subsequently take up positions that are irrelevant to their attained studies (Molnar *et al.*, 2015:15).

Another worrying concern confronting the Chinese labour market is the growing wage gap between graduates and non-graduates. According to Weale and Adams (2016:3) the significant upsurge in the number of young people going to university has prompted a decrease in wages of graduates relative to non-graduates (i.e. school-leavers). Other main determinants of wage gaps in China have also been attributed to skills heterogeneity as measured by the level of education (Pan, Mukhopadhyaya & Li 2019:191). Figure 3.30 demonstrates the wage growth between the low-skill and high-skills³² sectors in China in a period of 10 years since 2004.

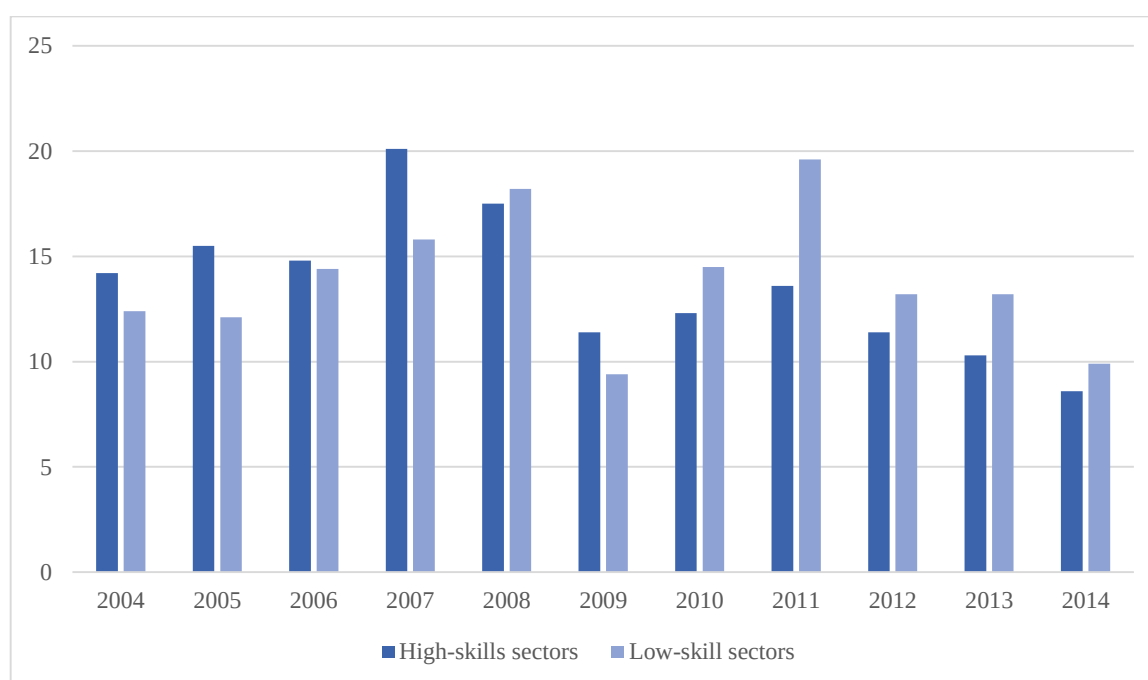


Figure 3.30: Nominal wage growth of low-skill and high-skill sectors in China, 2004-2014

Source: National Bureau of Statistics of China

Graduates well-matched to their jobs have systematically higher abilities relative to the overeducated just as the theory of heterogeneous skills³³ predicts, with tertiary education holders suffering more significant losses than those who are well-matched to their jobs (Wu & Wang, 2018:206-207). More specifically, Wu and Wang's study³⁴ found that there is a more than 20 per cent wage loss for educated (overeducated) Chinese graduates compared to well-matched workers, and neither do they necessarily enjoy faster wage growth.

³² "High-skill sectors: Mining; Production and supply of electricity, heat, gas, and water; Transport, storage, and post; Information transmission, software, and information technology; Financial intermediation; Scientific research and technical services; Education; Health and social service" (Zhuang & Li, 2016:10)

³³ See Chapter 2.3.3.1

³⁴ The study uses the World Bank Skills Towards Employability and Productivity (STEP) survey data

Various factors can clarify the declining skills premium in China, which include the expanded enrolment rates which have not been accompanied by increased graduate employment. As previously mentioned, China's higher education has unquestionably expanded more quickly than its economy has (Schucher, 2014:14). As indicated by Knight, Quheng and Shi (2016), a considerable number of these graduates have struggled with finding employment, prompting high unemployment rates, thus putting a descending weight on wage rates amongst graduates. Almost six months after graduation, 25 per cent of Chinese graduates earn salaries lower than that of migrant workers with graduates with generic majors such as history, law and literature having some of the lowest entry level earnings and also the lowest employment rates, according to MyCOS data (Stapleton, 2017:6). Some studies (see Luo & Zhang 2009:25) have pointed to the decline in wages and maintains that they have stemmed from increased privatisation, foreign direct investments and economic development. On the other hand, the gap between graduates' expected and actual wages is widening, with more than three-quarters of those surveyed paid less than their expectations; female graduates are worst off: they are paid Rmb750 less than men per month (Hancock, 2017:11) (see argument by Mncayi & Dunga 2016 in previous page).

As China's economy moved from a centrally planned economy to a more market driven system, its employment system encountered a substantial change. As maintained by Martinez-Fernandez and Powell (2009:5), in the centralised planned system, employment was set under a nationwide planning framework where the local government was largely in control of the labour market and everything surrounding it including education and training. The 1980s economic reforms not only opened up China's economy but also prompted major developments in the labour market which brought about serious employment losses (ILO, 2016d:66). To exacerbate things, most of uprooted and displaced workers are likely to be uneducated and unskilled rural migrant workers (Cooke & Brown, 2015:20). These labour market changes significantly expanded work versatility, yet additionally prompted the substitution of lifetime employment, with other, increasingly adaptable and different types of non-standard employment³⁵ (Zeng, Lu & Idris, 2005:1). At the same time, the rise of more flexible types of employment has created employment opportunities to ingest surplus rural labour, a large number of whom would some way or another be less financially well-off (Cooke & Brown, 2015:62).

Albeit official information just reflects trends between full-time and part-time employment, Schucher (2014:19) finds that university and college graduates have issues of securing suitable employment in urban areas after graduation, along these lines frequently taking unusual occupations while they hang on tight to run into their preferred employer. Zeng *et al.* (2005:1) argue that it is more difficult for those with a college or associate degree to find a job than those with a bachelor's degree.

³⁵ See Chapter 2.2.9.2

One of the crucial issues confronting the Chinese government is to make certain that young people who exit the higher education system have suitable and relevant skills to find employment as a low-skilled labour force might be confined in non-productive employment. However, the skills attained by the time of graduation do not seem to match those needed to perform a job or even more so, demanded by the labour market. A study by the OECD (Molnar *et al.* 2015:7) found that university graduates in China experienced the greatest mismatch in certain needed skills compared to their vocational college counterparts. Even though Chinese graduates seem to find employment within six months after their graduation³⁶, vocational college graduates display higher unemployment rates than university graduates (Molnar *et al.*, 2015:13). Declining global demand and uncertain economic growth prospects in China has decreased employment opportunities and left many graduates with weak employment prospects; additionally, there is also employment competition between returning exchange graduates and domestic ones (Schucher, 2014:15). The increasing number of unemployment amongst young graduates is a political risk as well as an economic concern, and now and again, it prompts an influx of migration, social distress, or political turmoil (World Development Report, 2019:82). The 2010/2011 Arab Spring was fuelled by deficient economic opportunities and negative employment outcomes for a large number of educated young people (Mulderig, 2013:3). This was additionally the situation in China, with the possibility of a large group of university-educated yet unemployed young people spurring fears of potential social unrest (Hancock, 2017:7).

The incidence of time-related underemployment in China seems to vary on the nature of employment, particularly as to whether a worker works in informal employment or formal employment. The 2018 *‘Women and men in the informal economy’* report shows the number of workers in time-related underemployment to be higher for workers in formal employment (approximately 11%) compared to informal employment, where the incidence of time-related employment to be at an estimated 8 per cent (ILO, 2018c:64). This may suggest an absence of other available options rather than a choice to work fewer than desired hours in the formal employment. Even when they work fewer hours, workers in the formal employment are in the least protected by law. This ILO report also reveals the increased tendency for workers in informal employment to work excessive working hours which exceed 48 hours a week. This is especially true for workers in Asia and the Pacific (52%). More than 50 percent of workers employed in informal jobs in developing and emerging countries work excessive hours (ILO, 2018c:64), perhaps inferring why time-related underemployment is not high in the informal economy. Findings of Schucher (2014:19) point to the presence of underemployment to be higher for college graduates compared to university graduates, and more prevalent for women than men. A growing number of Chinese graduates work as interns that are low paying without any permanence, with others

³⁶ Roughly 82% of the 2013 graduates in the My China Occupational Skills (MyCOS) survey data took up a full- or part-time position

willing to work with no income for one month or even longer with the hope of gaining work experience and improving their employment prospects (Chen, Liu & Ren, 2010:6). Sometimes, graduates deliberately stay underemployed in the urban region than agree to take a relatively well-paying position in smaller, more rural regions (Schucher, 2014:20).

China's rising development since the 1990s has been joined by an ascent in the incidence of informal employment. *"The problem of mass informality is rooted in the inability of growth patterns to create sufficient formal jobs to absorb all those who want to work (either new entrants or those trapped in the informal economy)"* (ILO Informality and Non-standard forms of employment, 2018:4). In 2018, the share of informal employment in total employment was at an estimated 53.5 per cent, with the rural economy having the highest share of informal employment, and as with Russia, there seems to be more men (50.2%) in informal employment than women (45.6%) (ILO, 2018f:106-129). According to Molnar *et al.* (2015:16-17) personal opportunity is to a great extent decided very early on in life, where, being born in a rural or an urban area assumes a significant role in a person's overall life and career life specifically, and as such, those from rural areas have less chances to take part in any form of schooling (including, pre-school, secondary schooling and higher education). Additionally, they are more probable not to have access to the financial resources unlike their urban counterparts to have tutoring classes throughout their study life preparing them for higher education entrance exams. However, in most cases, it is young migrant workers and college graduates that are most likely to be affected by employment informality compared to university graduates (Schucher, 2014:19).

The unavailability of data on non-standard employment in China has implied Chinese scholars to provide different estimates of non-standard employment (ILO, 2016d:107). In 2012, more than 33 per cent of all formal sector employment was considered non-standard, which itself accounted for more than 60 per cent of the total labour force (Zeng *et al.*, as cited by ILO, 2016d:68). These are the workers who receive lower incomes, as some studies (*see* ILO Informality and non-standard forms of employment, 2018:9) find that there is a wage penalty for temporary workers relative to permanent workers, where workers who enjoy the highest hourly wage are those with permanent contracts, fixed-term and workers without contracts, respectively.

Despite rapid economic growth from the beginning of 1980s, female labour force participation in China has shown an overall deteriorating movement. Since the 1980s the gap between men and women employment rates has been increasing, with continually declining female labour force participation (Chi & Li, 2014:708; Chen, 2019:267). At the same time, the returns to education also appear to vary by gender, with lower returns to women except when they are the only child in the family (Dai *et al.*, 2018:1). The labour force participation rates amongst young female and males since 1990 are indicated below.

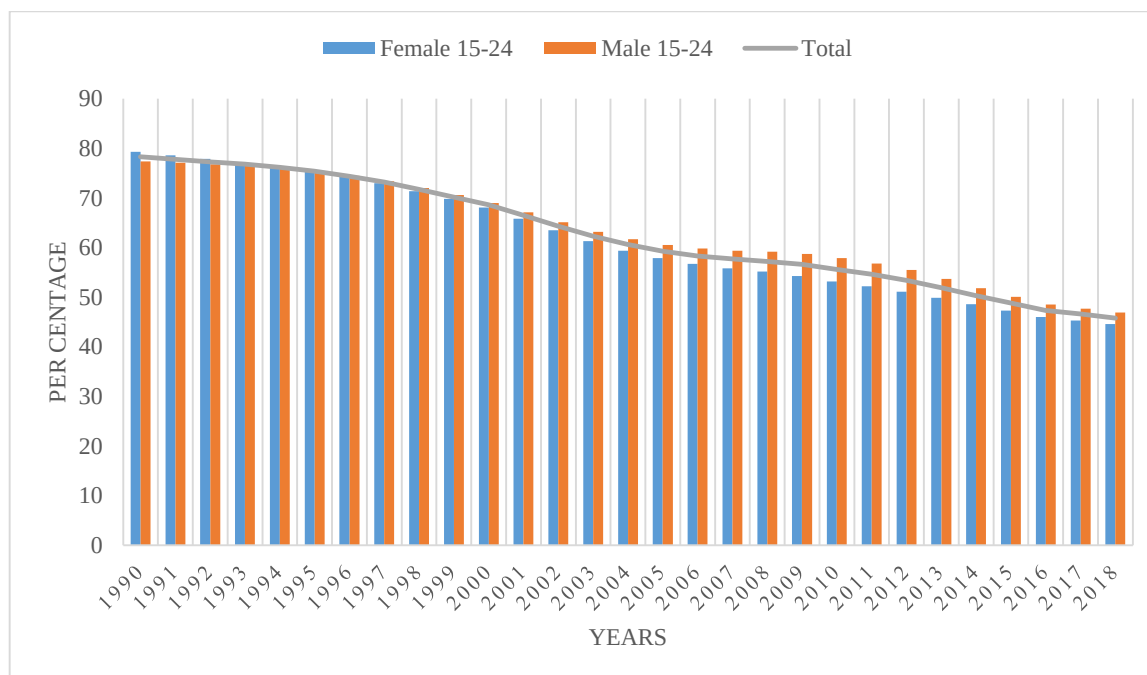


Figure 3.31: Labour force participation rates amongst young male and females, 1990-2018

Source: World Development Indicators (2019)

From Figure 3.31, what can be observed is that labour force participation rates for young people have been on a continual downward trend, regardless of gender. However, young females still struggle getting absorbed in the Chinese labour market, since they face lower participation rates relative to their male counterparts. Female labour force participation rates declined from 79.3 per cent in 1990 to 44.6 per cent in 2018. Male labour force participation rates on the other hand also declined to 46.9 per cent in 2018 from 77.4 per cent in 1990. An interesting trend however was that female labour participation rates seem to be higher than that of males between 1990 and 1995, before being higher till 2018. While from one viewpoint, young people confronted by uncertain economic vulnerability may decide to preferably take non-standard occupations to avoid unemployment, on the other, the very same young workers atypically employed might be first in the laid off queue in an economic decline (Schucher, 2014:9). By and large, individuals without higher education, young people, and females are more prone to facing labour slack than their progressively instructed, more their more educated, older, and male colleagues (Feng *et al.*, 2015:4).

3.3.4.3 *China's policy responses towards labour market outcomes confronting young Chinese graduates*

China's active labour market approaches perceive the need to move individuals into growth industries (heavy steel industries in particular) and the significance and upgrading of skills that will improve

employability and encourage entrepreneurship. According to Martinez-Fernandez and Powell (2009:67), various activities are being executed to empower the improvement of employability aptitudes, including sending 3000 employees to schools all over China to give training to an estimated 2 million workers on skills-related demands.

Other than the availability of institutions that provide training, China has a broad scope of training programmes for those who have not found employment yet, on-the-job (which is mostly left to employers to provide) and some support for those between occupations who may require some retraining. According to Wang, Liu and Lai (2012:336) the experience of China demonstrates how difficulties presented by poor graduate employment outcomes may end up being another chance to restructure and modify higher education so as to address issues unique to the society in a better way. As maintained by Hancock (2017:10) distresses pertaining to the issue of many graduates finding themselves in low-quality jobs has been featured lately by extending positions of graduates placed on internship programs in the manufacturing and service industries, regularly including underpaying and menial work.

Henceforth, the Chinese government has put outstanding endeavours in place in making elective efforts through which graduate employment outcomes may be enhanced and employment pressure on tertiary graduates may be alleviated (Wang *et al.*, 2012:340). Unemployed young people who cannot acquire employment in the formal sector are given training and skills on entrepreneurship to enable them to start their own businesses, including the provision of credit facilities and even career guidance (Martinez-Fernandez & Powell, 2009:68). There is a strong urge for young people to pursue entrepreneurship which will not only resolve their own employment issues but additionally help to extend employment opportunities to others. The different avenues are discussed below.

- *Enhancing Work Preparation through Voluntary Work*

The Chinese government acquainted this strategy with the aim of giving unemployed graduates practical work experience in light of their failure to enter the labour market. The practical experience is on the fields of health, education and agriculture, empowering graduates to develop a set of necessary skills including team building and leadership and most importantly contribute towards the development of local areas (Wang *et al.*, 2012:341). At the same time, the graduates are given an opportunity to retrain and be able to get a professional qualification at one of the senior vocational colleges (Martinez-Fernandez & Powell, 2009:68). The Chinese government gives participating graduates in the programme a monthly subsidy averaging at 800 Yuan with an opportunity to apply for postgraduate studies and positions in the public sector upon completion of their volunteer service (Wang, 2009).

- *Preparation Training for Youth*

The Preparation Youth Training is a programme that offers young people the chance to be part of internship programmes and get some industrial experience and a comprehension of how businesses work. According to Martinez-Fernandez and Powell (2009:68) the flexibility of this plan allows young people to study at vocational colleges, either full-time, part-time or through distance learning, while at the same time providing them with an opportunity to improve their qualifications accumulatively.

- *State-Wide Tax Exemption*

In a bid to try and confront employment challenges facing young people, particularly unemployment, the Chinese government has introduced a scheme exempting firms employing young people from paying tax. The State-Wide Tax Exemption incentive exempts employers from taxes for three years if 60 per cent of its employees are young people (Martinez-Fernandez & Powell, 2009:68). Organisations with a specific extent of recently employed unemployed graduates can apply for an advance of up to 2 million renminbi (RMB) and can also get a fiscal discount (ILO, 2016c:3). New graduates engaged in self-employment are additionally granted favourable tax reductions for the initial three years.

- *Employment services*

China's extensive network of employment service centres across various geographical areas encourages better employment opportunities for numerous young migrants. According to the ILO (2016c:4) these services have assumed a significant role in enabling improved systems that better matches work-seekers to occupations, provision of labour market information and programmes, employment counselling and ensuring that private recruitment agencies are regulated and monitored.

- *China Vocational Training Holdings (CVTH)*

CVTH is one Chinese dominant training institutes for the car manufacturing sector. According to Mourshed *et al.* (2012:79) the institute ensures that students are employed and that an estimated 1800 employers who are part of the institute employ young people and even support their education and at the end of it, offer them a full-time position. Students are matched to their ideal employment based on the preference they have indicated in the CVTH surveys which are usually done before graduation, and if they are not happy with their job placements, then they are provided with support for a year. The success rate of this scheme is so positive that that employment rates few months after graduates is at 80 per cent and in most cases, graduates without employment usually proceed to seek postgraduate qualifications or change sectors (Mourshed *et al.*, 2012:80).

- *Labour Contract Law*

While this law (enacted in 2008) is not specifically directed at young people or graduates for that matter, it is targeted at improving the quality of non-standard employment and encouraging employers to employ workers on a permanent basis.

- *Affirmative Action*

China's education policy following the 1989 reforms implemented an extensive affirmative action policy that is targeted at improving university admissions for minorities (Zang 2008). The findings of Ding *et al.* (2017) suggest the effectiveness of this policy at improving the education and employment outcomes of minorities. The findings further reveal that the prospects of acquiring a bachelor's degree from good and very highly ranked colleges or universities are higher for minorities in contrast to the Han majority (Ding *et al.*, 2017:9).

- *The Grassroots Level Program (GLP)*

The GLP is an inventive scheme tested to address employment challenges facing young graduates as well as the engrained issue of (Wang *et al.*, 2012:341). According to State Council (2012) projects were propelled in 2005, further reinforced in 2009 after the Global Financial crisis and re-iterated in 2012 to encourage college and university graduates to contribute to local development by working in rural areas affected by poverty. As indicated in the National Guidelines for Med-Term and Long-Term Human Resources Development issued in 2010, the objective is to have at least one HEI graduate in all of the villages in China by year 2020 (Chinese Ministry of Education, 2010:4).

Additionally, inside this programme, is a teaching plan for graduates majoring in education programmes who are urged to teach in schools situated in rural areas. The central government finances the yearly compensation of 18,960 Yuan for every individual while local governments are under obligation to cover the distinction if the local compensation level is higher than the central government's subsidy (Wang, 2009:12). Graduates serving in the military and in national scientific research projects are altogether ensured with insurance packages, a reimbursement of their tertiary education tuition up to 6,000 Yuan annually, and special consideration towards admission for postgraduate studies (Wang *et al.*, 2012:340).

3.4 LESSONS FROM THE WORLD: BEST POLICY PRACTICES

There is no doubt that human capital, particularly higher education is of utmost importance for productivity growth since it carries large positive externalities that do not only accrue to the individual concerned but the society at large, both current and future generations (Romer, 1990; European Commission, 2010:20-21). In fact, economic theory is in full support of human capital as one of the

components that can drive economic growth (Romer 1986:1002 & Lucas 1990:93). However, evidence as seen in both this chapter and Chapter 2 shows that higher education is by no means a guarantee for employment security owing to phenomenon such as unemployment and underemployment.

Solving employment issues and other negative labour market outcomes amongst young people requires a lot of work from governments and institutions of higher learning. There is an urgent need to ensure a balance between what is learnt at higher education institutions (HEI) and what is required in the labour market, particularly since development progressively relies on quality human capital and innovation. The school-to-work transition will be smoothed out once the higher education sector and the labour market are in full convergence.

From this chapter, we saw that transforming the higher education sector is of utmost importance and should particularly be backed up by adequate financing which depends on the efficiency and effectiveness of government finances and spending. China and Russia provides some lessons on approaches for ensuring sustainable employment for young people after graduation which is tied to an industrial policy that actually targets growth sectors that have the potential of creating decent and productive long-term employment. This will actually smooth the process of matching the demand and supply of skills by both the government and HEIs. Unfortunately, narrowing the earnings gap for Brazil is still a challenging task that will require reforming the country's education policy. Furthermore, more should be found out about the most economical approaches to providing education of quality that meets the needs of the labour market. BRICS policymakers need to examine education systems of countries that reliably achieve quality at a lower cost.

The US also provides some lessons, particularly on the extensive measuring of labour underutilisation over and above the unemployment rate. Having extensive knowledge on the labour market situation in a country may aid with the implementation of appropriate policy approaches since this will give direction as to which labour underutilisation problems are more prevalent. A growing economy is essential to reducing unemployment amongst young people. The demand for labour including improved employment quality will be enhanced by private sector development which needs an economic environment conducive to the growth of businesses. At the same time, all these approaches will not work unless businesses themselves invest in young peoples, which can be encouraged through an incentive or tax exemption scheme for firms employing young graduates just as China did. Additional lessons from China are the use of unemployment graduates in teaching where there is a need and a serious shortage of teachers, i.e. in rural areas. This will ensure that skills and qualifications acquired do not become obsolete. In this way, both the government and graduates benefit.

For Russia, perhaps funding could be cut for HEIs whose graduates struggle to find employment. This will actually stop the production of incompetent graduates. HEIs will therefore need to also amend their education policies to ensure that it provides graduates with skills and capabilities necessary for the successful school-to-work transition. Like Brazil, other BRICS countries should perhaps enact laws relating to apprenticeships which in the case of Brazil have proven to have high retention rates. Contrary, India needs to do more to assist in the improvement of graduate labour market outcomes, from narrowing the gender employment gaps to ensuring that there is a supply of skills relevant to the needs of the Indian labour market. Given that most jobs seem to be concentrated in the informal sector, perhaps there is potential to tapping into that sector. The challenge will however be in regulating and legalising the informal sector. The lessons from the countries analysed above are summarised in Table 3.8. These lessons prove key for South Africa in confronting labour market slack, particularly amongst higher education holders.

Table 3.8: Top ten principles and lessons for South Africa from the US and BRIC countries

1. Cooperation from government, private sector and higher education institutions
2. Convergence of higher education sector and labour market through the supply of relevant skills
3. Reform the higher education policy to ensure quality education standards
4. Adequate financing for higher education by government and other stakeholders
5. Youth employment plans be linked to industrial policy targeting growth sectors that have the potential of creating decent and productive long-term employment
6. Provision of quality education at lower costs meets the needs of the labour market.
7. Going beyond unemployment and extensively measure labour underutilisation to aid with the implementation of appropriate policy approaches
8. Funding to ineffective higher education institutions be reduced
9. Enact laws relating to apprenticeships to give graduates the needed work experience
10. Inclusive and sustainable economic growth

Source: Author's own compilation

3.5 SUMMARY AND CONCLUSION

Chapter 3 had the aim of addressing the fourth theoretical objective as indicated in Chapter 1. The objective was to discuss findings of empirical studies conducted on underutilisation, underemployment in particular. This was done on developed countries (the US) and developing countries (BRIC countries) to provide a global perspective on the issue. The discussion under each country highlighted the link

between higher education and the labour market. The broad theme to emerge in this chapter is that negative labour market outcomes cut across countries, irrespective of income status. The rise of underemployment amongst all these countries is emerging and showing signs of divergence between supply of and demand for skills in the labour market. The misalignment between the higher education sector and the labour market necessitates the importance of dialoguing on the issue. The growing earnings gaps which are defined by gender, type of HEI and study field prove to be structural in almost all economies that were discussed. Despite this, some countries still fare better in certain instances, particularly those that reformed their higher education such as China and Russia. However, each of the BRIC countries can learn from one another as discussed in section 3.4. The US on the other hand, also provides valuable lessons to all BRIC countries particularly on the importance of comprehensive measurement of other forms of labour underutilisation, over and above the unemployment indicator. The next chapter focuses on South Africa as one of the BRICS countries and the study area.

CHAPTER 4

PROFILING UNDEREMPLOYMENT IN SOUTH AFRICA

4.1 INTRODUCTION

This chapter presents an overview of underutilisation, particularly underemployment amongst young graduates in South Africa; a reason that motivated this study. This chapter is divided into nine sections. Section 4.2 gives an overview of South Africa's economic performance which is followed by section 4.3, which gives a synopsis of youth employment trends. Section 4.4 highlights the dynamics characterising the South African youth labour market. Section 4.5 pays particular attention to understanding the demand and supply of skills in the country, further touching on the issues of skills mismatches. Section 4.6 provides a brief discussion of the extent of working poverty in South Africa while section 4.7 touches on involuntary part-time employment. Section 4.8 examines policies and strategies that the South African government has implemented to try and address labour market challenges facing young people, above all, graduates. The last section summarises the chapter. The literature in this chapter is not be limited to academic work alone, however integrates reliable and sound gray literature, which as mentioned in Section 3.1, ensures a comprehensive review and provides a balanced view of prevailing evidence.

4.2 ECONOMIC PERFORMANCE IN SOUTH AFRICA: A BRIEF OVERVIEW

Structural socio-economic challenges have consistently tormented the second largest economy in Africa after Nigeria (Oyekunle, 2019:3; Whiting, 2019), from a historical past characterised by intensely entrenched disparity which spread across every societal sphere to having one of the highest unemployment rates in the world. According to Triegaardt (2009:1), this disparity is additionally shown through a dual health and education framework; increased poverty and unemployment, lack of housing and other socio-economic dimensions. Even though considerable strides have been made since the country's democratic transition towards the improvement of societal wellbeing, the progress has been very slow (World Bank South Africa, 2019:4). The country's reputable years of slow economic growth and development has reinforced the vicious cycle of economic hardships for those previously held back by apartheid. The country's failure to create the much-needed employment opportunities to fight many of its development challenges has also aggravated many of its developmental challenges (New Growth Path, 2010:3). Indeed, even though the present South Africa is different from the one left in 1994, much has not changed for many poor South Africans, emphasising grave inadequacies in the development path the country follows (National Development Plan, 2011:1). These challenges have influenced

political and economic stability including the development path the country pursues, which has placed a burden on the fiscus.

South Africa is a country that boasts enormous mineral wealth compared with its counterparts in other developing countries. Since apartheid, the country relied heavily on the exports of these minerals for decades, contributing to the growth and development of its overall economy. However, as Fox, Senbet and Simbanegavi (2016:6) contend, a development that is solely dependent on mineral wealth brings about unique youth employment challenges when the country becomes wealthier. According to Heystek (2013) after growing rapidly in the 1950s and 1960s, South Africa's macroeconomic environment stalled in the late 1970s and most of the 1980s, affected by intensifying political turmoil (see Figure 4.1). The political landscape spread throughout the economy, forcing the idea of economic seclusion, particularly from the rest of the world. Important economic data was also not consistently collected/released with some only being available from the early 1990s (Figure 4.1).

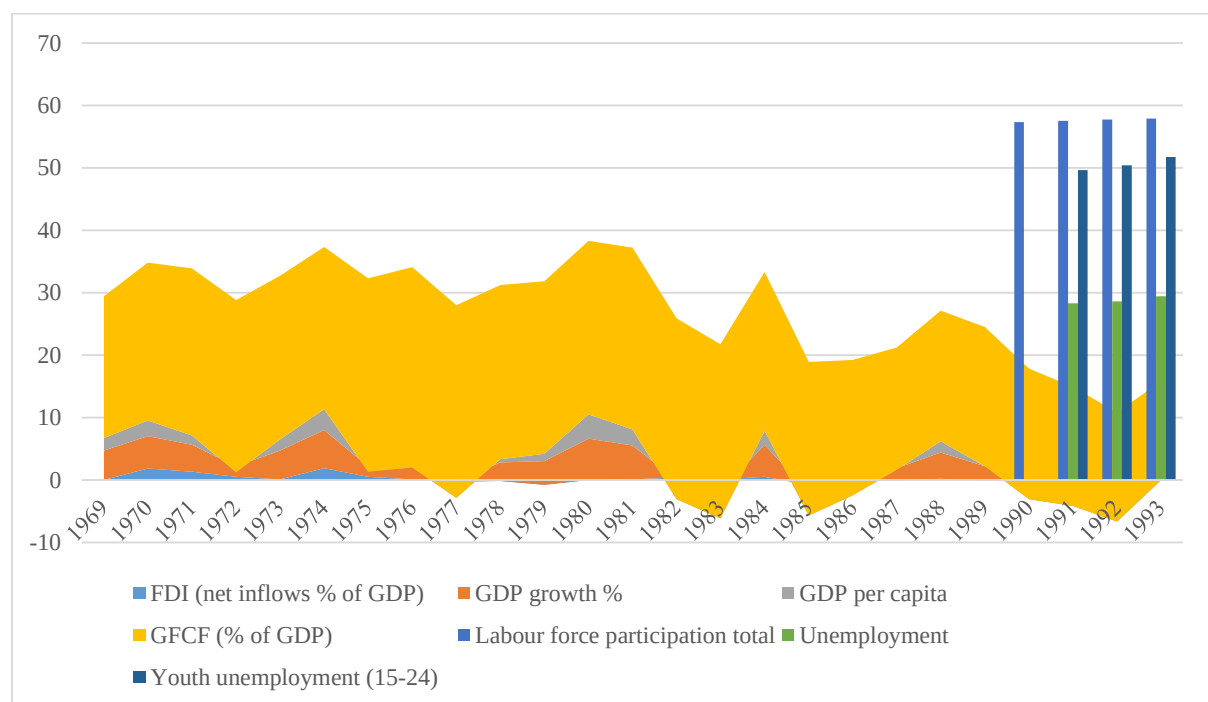


Figure 4.1: South Africa's macroeconomy 1969-1993

Source: World Development Indicators (2019)

Figure 4.1 shows that after performing well in the early 1970s and 1980s, South Africa's macroeconomic performance faced a continual decline. Foreign direct investment was non-existent after 1975, while growth experienced rising periods (1978-1981, 1984, 1987-1989) with other years seeing economic growth decline. During the Apartheid period, the segregation laws forced many black people to live in economic peripheries, secluded from economic activity and even education, ultimately

diving deeper into poverty and unemployment. The country's economy and political landscape were subject to the white minority and even though the segregation regime was beginning to lose its momentum from the 1980s, the black majority continued to be economic and politically disadvantaged. The inheritance of the Apartheid administration limited blacks who did not already have jobs to isolated townships and prevented the unemployed from migrating into urban areas. Regulation barriers such as licensing requirements weakened the informal economy (Rodrik, 2008:782) which further fuelled challenges of unemployment, poverty and inequality. According to Murwirapachena (2011:26) the unemployment rates between 1980 and 1993 were largely caused by massive political and economic instabilities which fuelled unrests.

The end of the apartheid regime in 1994 saw South Africa's economy realise positive economic performance, particularly between 1994 and 2012 in which real GDP grew by an annual average of three per cent (Bhorat, Hirsch, Kanbur & Ncube, 2014:2). Between 1996 and 2000, the country implemented a fiscal policy that was aimed at reducing government debt (Manuel, 2007:3). The logic was that by lowering the debt level and cost (by 2.4% between 1998/99 – 2006/07), government would have more money available to spend on social spending and other needs of the society. As maintained by Faulkner and Loewald (2008:5) substantial increases in social spending (e.g. universal social security) further increased disposable income of households, hence household consumption, which provided further impetus to growth. The strong domestic demand fuelled a positive investment performance in years leading to 2007 (Manuel, 2007:5).

The politically nominated government headed by the African National Congress (ANC) was able to bring about a steady and racially representative political regime characterised by civil rights and political freedom (Rodrik, 2008:770). Intending to integrate a previously closed economy suffering from economic sanctions, the newly elected government implemented principles of free-market such as deregulation in an effort to spur investment spending and ultimately rapid growth. According to Manuel (2007:4) a flexible trade policy characterised by no trade barriers played a significant role in stimulating investment and productivity growth.

Despite this, the South African economic performance was still deemed disappointing owing to the most observable challenges of very high unemployment rates and low economic and investment growth rates (Makgetla, 2004:263). The failure of the post-apartheid economic policies to achieve economic and employment growth raised concerns about the government's intervention and leadership strategy. The slow progress in improving the wellbeing of the country's citizens further perpetuated the country's socio-economic woes.

The labour market suffered tremendous effects, plagued by negative employment outcomes and other challenges fuelled by a sluggish economy. To date, the number of people without employment has widened to 6.7 million, which brings the unemployment rate according to the narrow definition at 29 per cent (the highest in the world) and the expanded underemployment rate which is inclusive of discouraged work-seekers at 39 per cent (Stats SA, 2019c:17). The unemployment rates amongst young people (15 – 34 years) exceed 50 per cent. Females continue to be the most affected by enduring negative employment outcomes compared to their male counterparts (Ryan, 2012). Most notably, labour market outcomes are defined by race, over and above the gender aspect, with Black work-seekers suffering the most, followed by Coloureds when contrasted with the Asian/Indian and White counterparts (Branson *et al.*, 2019:2). A number of reasons suffice as a cause to the continually weakening labour markets including very high labour costs and actively involved labour unions and wage bargaining which undermine the determination of wages (Rodrik, 2008:772).

The country's declining manufacturing sector (high labour productivity sector) has been on the brink of collapse which has deprived the economy from growth prospects that many other economies have been able to expand from (McCamel, 2018:2). The failure of the economy to structurally transition from low-productivity agriculture to successful non-agricultural sectors has led to the employment structure not changing much (Fox, Senbet & Simbanegavi, 2016:i13). Given that the country has a large number of unskilled to low skilled labour and a low number of skilled labour, the shifting demand in the labour market has implied that available jobs have not been able to absorb the large numbers, which has tended to raise the unemployment rate levels. Figure 4.2 presents the country's macroeconomic performance since the end of apartheid in 1994. Despite improved economic growth since the end of Apartheid, many of these indicators have continued to worsen, which is a sign that realised economic growth have not been sufficient to deal with these aspects. Economic performance declined from 2008, with many of the indicators worsening. The poor economic growth was brought by the electricity crisis by Eskom, increasingly high levels of interest rates, high prices of food and low demand in the wake of the debt crisis in the Eurozone region was of no help to the economic situation (ITRISA, 2015:313).

The low labour force participation rates have implied that those without work resort to the informal sector which as seen from Figure 4.2 has been growing while at the same time those struggling to find full-time employment have also resorted to part-time employment. The problem with this rise is that the informal economy is characterised by high levels of inequality, poverty and a lack of decent work which presents severe and persistent challenges (World Employment and Social Outlook, 2018:14). However, even though informal employment has been growing, Fox *et al.* (2016:i8) contends that South Africa's informal sector is still unable to absorb the large numbers of least educated young people as opposed to poorer African countries and other middle-income countries outside Africa. On the other hand, the failure of economic policies to curb the pervasive socio-economic issues is also one of the

country's main challenges. Despite the goals of the GEAR to increase job creation by approximately 400 000 by the year 2000 and the ASGISA policy to halve the unemployment rate by the year 2014, analysis between 1994 and 2012 shows that the South African economy was only able to create 950 000 new jobs (Industrial Development Corporation, 2013:20).

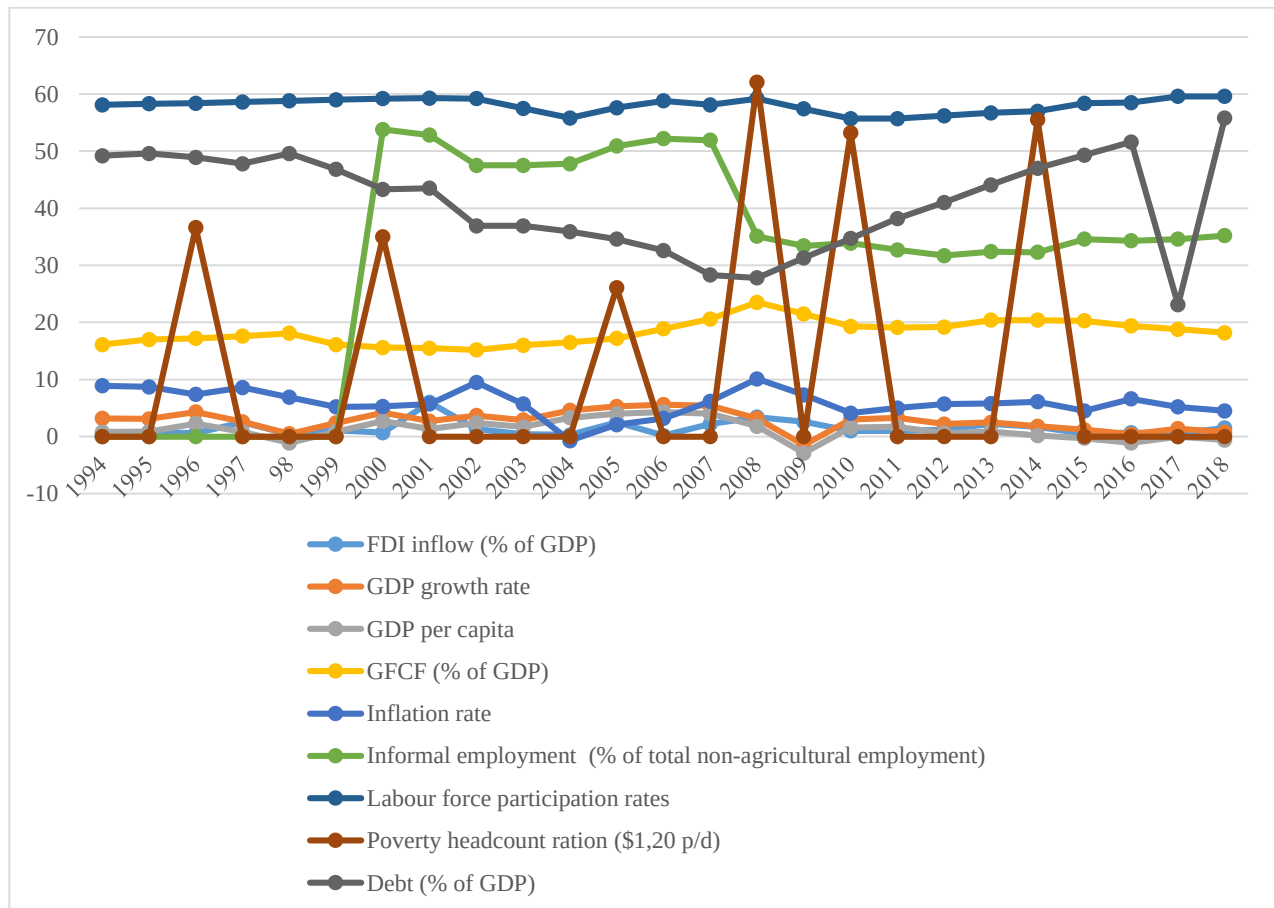


Figure 4.2: South Africa's macroeconomic performance (1994 – 2018)

Source: World Development Indicators (2019)

Looking at spending, a growing debt burden is argued as South Africa's main challenge (Mellet, 2012:78; Vollgraaff & Cohen, 2017). Government debt as a percentage of GDP has also been rising from an estimated 43 per cent in 2000 to over 50 per cent (55.8%), expected to expand to 70 per cent of GDP by 2022 (Brand, 2019:1). The main concern is that this increased debt has been used to finance current spending such as the large public sector wage bill instead of productive capacity, which has brought increased risks to the country's fiscus. Inefficient state-owned entities such as Eskom through bailouts have also assumed a large portion of governments' liabilities (National Treasury, 2018:40). Such spending has hampered growth and development since the country spends resources that could be used elsewhere (e.g. housing and education) are used on interest payments (Mothibi & Mncayi,

2019:17). The country's established years of sluggish economic progress from growth rates of 5.6 per cent in 2006 to 0.8 per cent in 2018, which many economists warn is not enough to deal with the socio-economic challenges. This growth problem has proven to be structural, beyond the reach of economic policy (Kganyago, 2019:2). In terms of economic competitiveness, the country declined in its ranking to the 67 position globally from 62, and amongst its main weaknesses, health and security remain one of the worst in the world hampering economic and human development in the country (WEF, 2018a:36).

Poverty being a crucial measure of broad-based economic progress (WEF, 2018:15) and being caused by low productivity (high unemployment) has been rising in South Africa. The latest (2015) statistics reports more than 50 per cent of the population living below the poverty line (Stats SA, 2017a:18). According to Naschold (2002:1), poverty and inequality affect each other through their association to economic growth. The fact that poverty is explained by race, age, gender and geographical location is also a clear symptom of substantial inequality which is one of the highest in the world (GInI coefficient at more than 65) (Triegaardt, 2009:2; Anand *et al.*, 2016:4). It can therefore be argued that indeed the high poverty and inequality rates have suppressed the country's economy from reaching its potential growth rate. Even Berg and Ostry (2011:13) propose a positive association between inequality and growth, which means more inequality is linked with less sustained growth. Despite the country's track record of exemplary economic policies, implementation seems to be one of its main challenges, many of the policies including the new growth path to the national development plan is over-ambitious, contradictory and fail to elaborate on how goals are to be attained (COSATU, 2013:1). There is a need for consistent economic policies that are clear not only in terms of their vision but most importantly implementation to ensure realised goals. The next section focuses specifically on the youth employment trends.

4.3 YOUTH EMPLOYMENT TRENDS IN THE SOUTH AFRICAN ECONOMY: A BRIEF OVERVIEW

Employment creation is a very contentious issue in South Africa. It represents a fundamental challenge which is mostly connected to years of established lethargic economic performance, proven to be systemic in nature (Cloete, 2015:513). Unemployment, particularly amongst young people as shown in the previous section remains very high according to global standards, further fuelling poverty and inequality. Young first-time work-seekers are confronted by difficulties of securing employment and gaining access into the labour market (Leibbrandt, Woolard, McEwen & Koep, 2010:5). The country's labour market has been characterised by uncertainty and volatility. In light of these conditions, quality employment and decent wages have proved important and necessary, however, existing labour market conditions have not been conducive to this feat (De Jongh & Mncayi, 2017:121). Although significant tides have been made to grow employment and improve economic growth, such increases have been

unable to keep up with the persistently rising labour supply (Moleke, 2010:88). According to Schoeman, Botha and Blaauw (2010:286) the fact that an economy and labour market is not able to absorb all its excess labour and has not been able to for more than 20 years, and more so becomes more capital intensive as a result is an indication of structural challenges, which is the case in South Africa.

At the same time, the gap between the national unemployment rate and the youth unemployment rate has continued to widen (see Figure 4.3(a)), with unemployment rates amongst young people, particularly those in the 15-24 age category more almost doubling the national unemployment rate. Those between the ages of 25 and 34, although lower than the national average, their unemployment rate in the last decade has been on a steady rise, exceeding 30 per cent as of the third quarter of 2019. Oluwajodu, Blaauw, Greyling and Kleynhans (2015:3) attribute these large gaps to the fact that young people's lack of work experience has put them at the brink of recruitment preference beneath older workers. The worsening of the economic climate fundamentally due to an insubstantial political environment, weak global commodity demand, and restrained foreign and private investment have also played an important role in these rising unemployment rates according to Kumo, Chulu and Minsat (2016). This has lowered the demand for young workers which is fuelled by their lack of previous work experience.

The OECD (2013) on the other hand points to young people's lack of seniority and employment protection compared to adults, which in most cases implies that young people are always the first to encounter job losses relative to their adult counterparts. Besides, the existence of significant job discouragement in the youth labour market has led to continuously rising incidences of long-term unemployment (Development Bank of South Africa, 2012), a factor which fuels lower chances of finding employment. Discouragement (see Figure 4.3(b)) is also another factor as can be seen in Figure 4-3, there are large gaps between narrow rates and the expanded rates, which is an indication of growing numbers of working-age people giving up employment search. For instance, the expanded rates are higher for young people in the 15-24 age category where in 2019, almost 70 per cent (69.1%) of them had stopped searching for employment compared to approximately 45 per cent (44.8%) of those between the ages of 25 and 34.

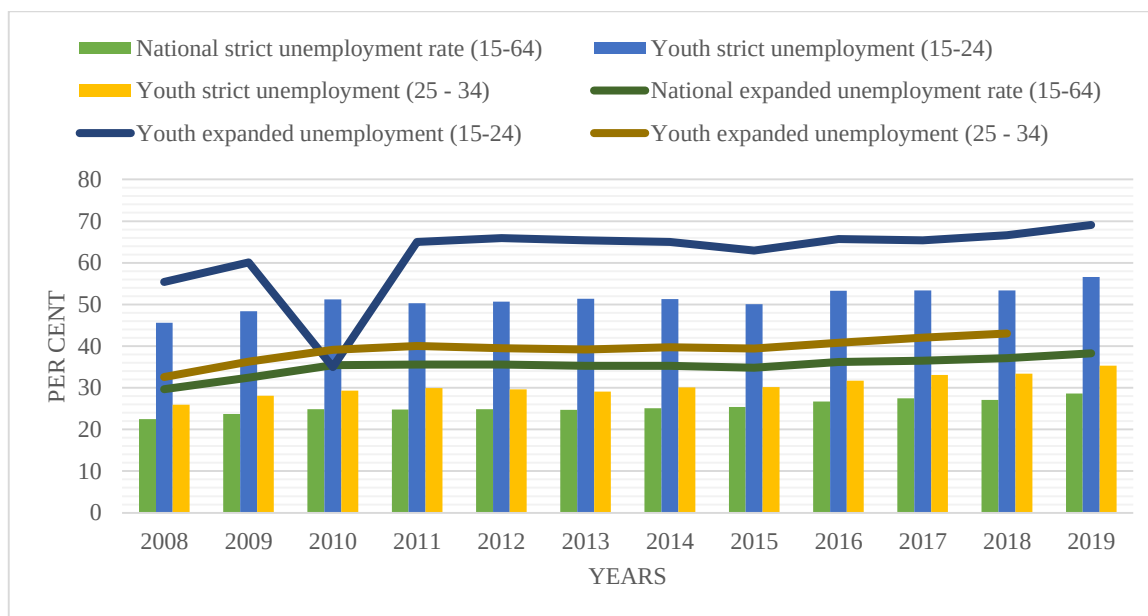


Figure 4.3(a): Comparing the national and youth unemployment rates (2008 – 2019) – strict and expanded definition

***The unemployment rates for 2019 are an average of three quarters*

Source: Statistic South Africa (2019 – QLFS 3), Calculation by author

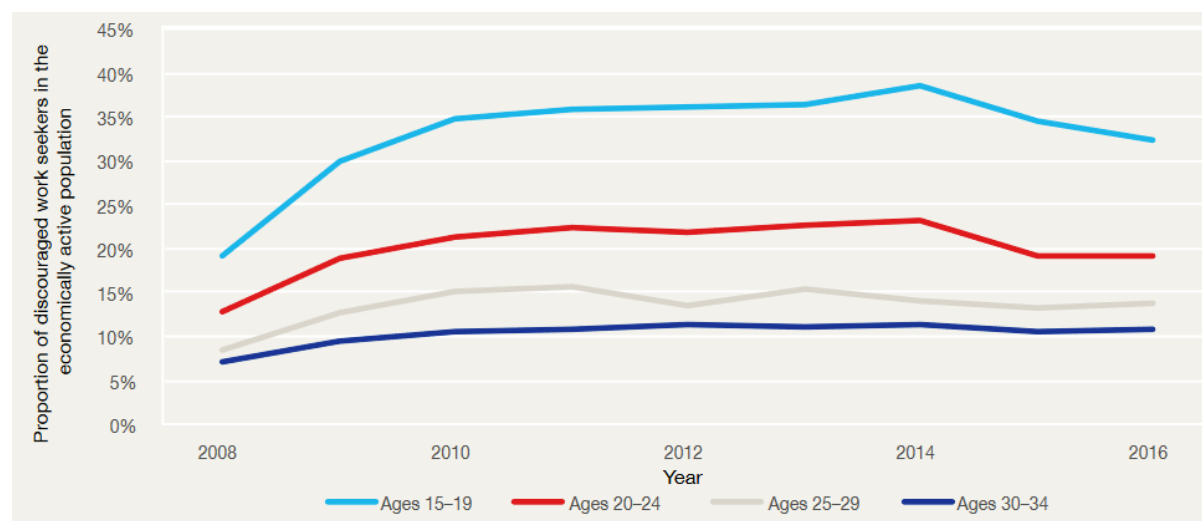


Figure 4.3(b): Discouragement rates by age category (15-34) (2008-2016)

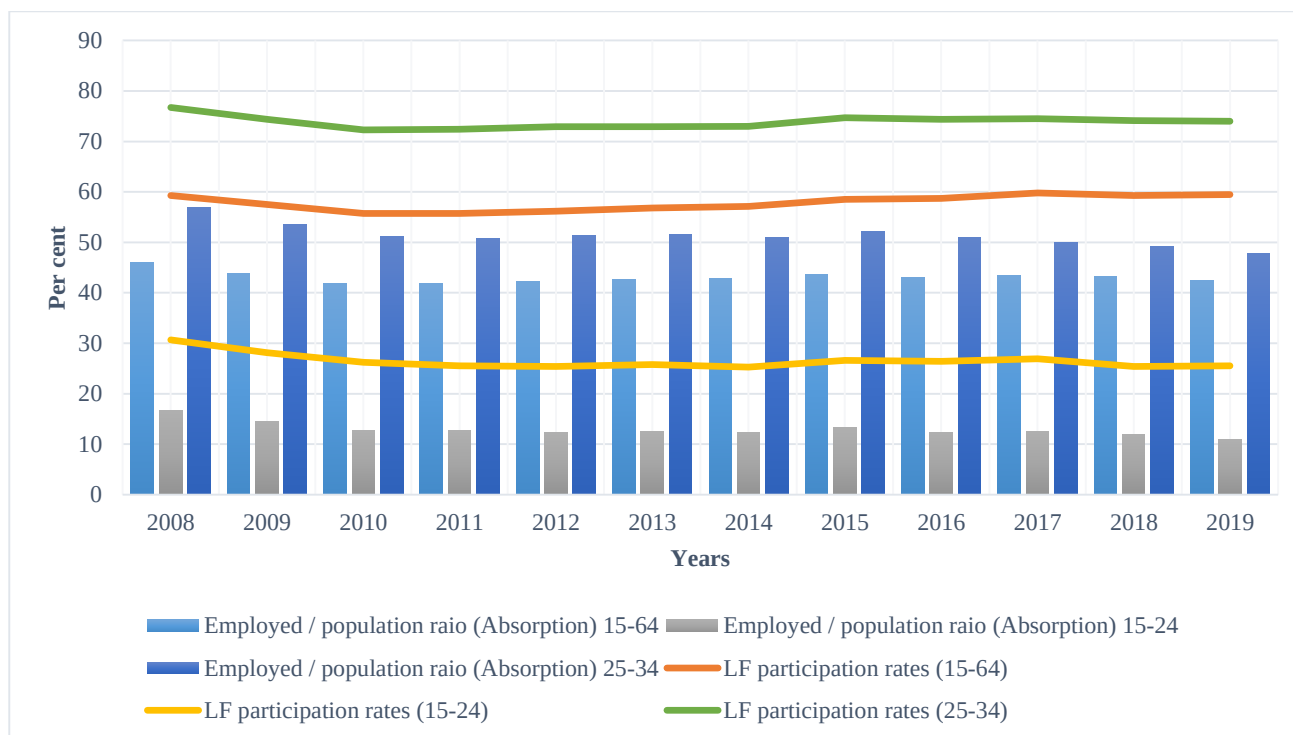
Source: De Lannoy, Graham, Patel and Leibbrandt (2018:8)

In their study which was investigating the reasons why young South Africans are not looking for employment, Mncayi and Mdluli (2019:302) find that the scarcity of employment in the area is one of the main reasons, in addition, the lack of financial resources to assist with work-seeking. Mlatsheni and Ranchhod (2017:8) cite that financial constraints often inhibit active employment search which is

accompanied by low chances of finding work which shows the importance of the accessibility and usage of networks in finding work. From Figure 4-3(b) it can be seen that discouragement seems to be declining by age which implies that the older young people become, the more likely they are to find their way back in the labour market.

Following these enormous employment challenges, education has proven to become a significant force against unemployment (Leibbrandt *et al.*, 2010:5). This importance of education in getting employment is illustrated in the unemployment levels according to levels of education, where for instance, unemployment rates are lower as one becomes more educated (Archer & Chetty, 2013:135). However, there are arguments that despite the rapid progress in educational attainment, South Africa's education system has not been successful in producing the desired employment outcomes (Matsilele, 2015:4; Van der Berg & Gustafsson, 2019:25). Poor skills, growing high-school drop-out rates and highly polarised educational attainment continue to hinder the school-to-work transition (Stats SA, 2020b:91). Since 1994, South Africa's education system has always been ranked at the bottom of the global competitiveness rankings, in 2018 ranking 140 out of 143 countries with poor education systems (WEF, 2018a). All of these challenges carry substantial limitations on the sustainable growth rate including the kind of growth that can and must be followed (Fourie & Burger, 2010:14). The main concern is that very high youth unemployment rates eventually threatens social, economic and political stability (Lefko-Everett, 2012:7).

Skills shortages have also been a major constraint on growth; the failure of higher education in producing graduates with the necessary skills for a rising economy is brought by the poor quality of basic education and academic performance at senior levels (Dinokeng Scenarios, 2007). According to Harry, Chinyamurindi and Mjoli (2018:2) this misalignment between what higher education institutions produces and what the labour market demands has been problematic which has resulted in mounted pressure for higher education institutions to narrow this gap. The results have been very weak employment-to-working-age population rates and participation rates in the labour market (see Figure 4.4). As contended by Rees (1986, as cited by Mlatsheni & Ranchhod, 2017:6) the lower opportunity cost facing employers when it comes to retrenching young workers than adults make them the first in line of job cuts which over and above their lack of working experiences (de Jongh, 2017), young people are more likely not to belong to a union or be safeguarded by the law, which makes them more likely to be fired.



***The unemployment rates for 2019 are an average of three quarters*

Figure 4.4: Trends of various employment statistics (2008 – 2019)

Source: Statistic South Africa (2019 – QLFS 3), Calculation by author

Figure 4.4 demonstrates the labour absorption rates and labour force participation rates of the various age categories. The proportion of those that are employed in the 15-24 age category has over the past decade been under 20 per cent, where in 2019, the absorption rate for this age category stood at 11 per cent. In contrast, young people between the ages of 25 and 34 encounter better absorption rates averaging slightly over 40 per cent. This is an indication of the lack of employment opportunities for young people relative to the national average. Figure 4.5 illustrates a comparison of the labour absorption rates amongst the BRICS. Since the inception of the grouping, South Africa continues to underperform, followed by India and Russia. In 2019, India and Russia's labour absorption rate for the indicated age category was at 27 per cent respectively. According to the Development Policy Research Unit (DPRU, 2017:2) the low growth in absorption rates may be attributed to the aftermath of the global financial crisis, which did not spare South Africa as an emerging economy. The DPRU further maintains that even though the economy began to recover from the crisis at least four years later through increased employment levels, these however have not been adequate to curb the growing unemployment rates. The global trend has been that young people are faced with substantial challenges in finding decent employment, let alone any employment. From the time when the global financial crisis started, the number of young people in employment has declined by more than 15 per cent in comparison to the

number of employed adults which has been on a continual increase (United Nations Economic Policy Division (2019:1).

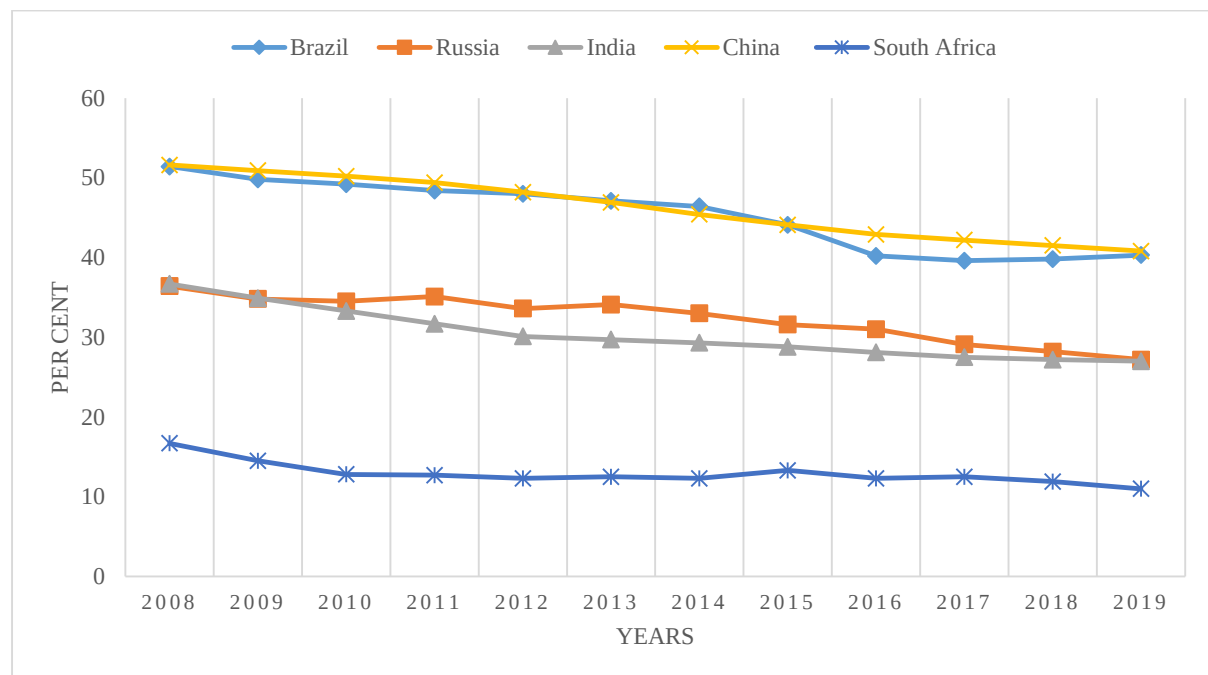


Figure 4.5: Trends in labour absorption rates in the 15-24 age category amongst BRICS³⁷ (2008-2019)

Source: Stats SA (2019c); World Development Indicators (2019)

In terms of the labour force participation rates amongst young people (15-24 years), South Africa has generally underperformed when compared to other emerging markets including the BRICS as can be seen in Figure 4.6. Workers between 15-24 years constitute the demographic group that has since 2000 experienced one of the most substantial declines in labour force participation rates. The decline between 2008 and 2009 saw South Africa shed about 1 million jobs (IMF, 2015). Moreover, by 2011 employment had stayed lower than the pre-crisis level (Mlatsheni & Ranchhod, 2017:5). The comparison within the South Africa's young people (see Figure 4.4) shows very low participation rates that out of the working-age population an average of less than 30 per cent of persons in the 15-24 age category are members of the labour force according to the narrow definition, which are far lower participation rates compared to the BRICS counterparts with Brazil (56.9), Russia (38.4%), India (33.6%) and China (51.5%) (World Development Indicators, ILO estimates, 2020). The slow growth of wage employment, inability of the informal sector to absorb uneducated/unskilled young people, high minimum wages in the agriculture sector which has led to the rise in the use of capital intensive

³⁷ Please take note that BRICS was formed in 2010

methods of production have had a hand in South Africa's low labour force participation rates (Fox *et al.*, 2016:i8).

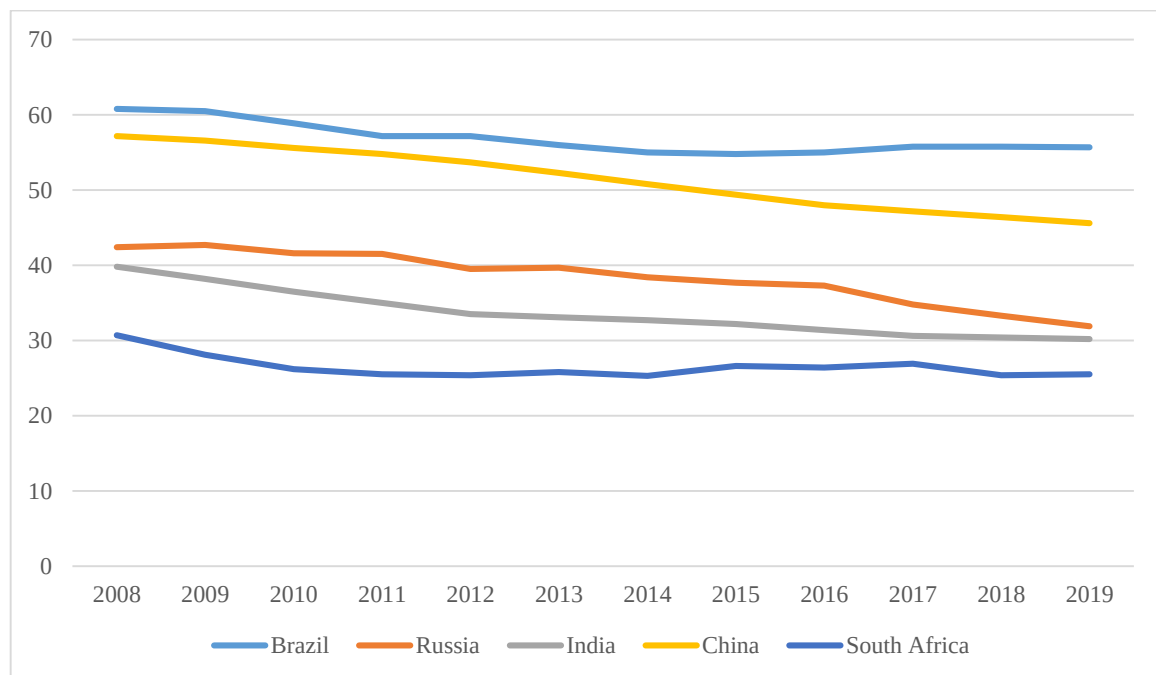


Figure 4.6: Trends in labour force participation rates (15-24 years), South Africa and BRIC countries (2008 – 2018)

Source: Stats SA (2019c); World Development Indicators (2019)

The declining labour force participation in this age category could firstly correspond to a higher proportion of them attending school and NEET (not in employment, education or training) (Canon, Debbaut & Kudlyak, 2013). Between 2005 and 2018, South Africa had one of the world's highest number of young people categorised as NEETs (37.2%) ahead of at least 40 developed and developing countries (OECD, 2020)³⁸. The impact of the NEET in South Africa is brought by crime statistics that disclose that the majority of house robbers in the country are between the ages of 19 and 25, and that approximately 90 per cent of those who are arrested have not passed grade 12 or are unemployed (Cloete & Butler-Adam, 2012). Many did not finish school for numerous reasons including family responsibilities, a lack of financial resources and many other reasons.

Table 4.1: Trends in the NEET rates by age group (2013-2017)

NEET	2013	2014	2015	2016	2017
	%				

³⁸ The NEET measure is not generally available for most developing countries (Assaad & Levison, 2013:2).

15-24 years	32	31.3	30.5	31.2	31.2
25-34 years	45.1	45.4	44.3	45.4	46.4
35-60 years	39.5	39.4	39	39.5	38.8
Total	38.7	38.6	38	38.7	38.7

Source: DHET (2018)

The issue of decent employment has also been one factor that seems to have been on the rise. While the NEET measure captures an extensive classification of young people for whom work is either impossible or at least not worth actively searching for, it does not consider young people occupied with unproductive or peripheral employment (Assaad & Levison, 2013:2). The upsurge in informality amongst young workers and therefore working poverty has raised concerns of problems of underemployment, which shows that the added advantage in the labour market brought by education has not been enjoyed by all graduates (Spaull, 2013). The main concern is that although being in employment is always better than being unemployed, the truth is it does not always guarantee a decent living and young people continue to exhibit larger working poverty rates than adults. In their study, Lilenstein, Woolard and Leibbrandt (2016) found that an estimated 30 per cent of workers in South Africa are in working poverty and earning low wages. This persisting underemployment in South Africa according to Schoeman *et al.* (2010:286) is explained by labour conflicts. The argument is that a switch in technology as a result of bad labour relations caused by labour conflicts is a channel through which underemployment results. Van Der Berg (2016) and Green and Henseke (2016:535) argue that earning prospects are often limited by the lack of higher education, which is why those in working poverty are most likely to have secondary, primary education or no education compared to those with tertiary education. Good quality education remains one of the most pivotal means to reducing poverty, unemployment and inequality (Budget Review, 2013:88). The next section delves deeper into the youth labour force to look at the distribution in terms of those that are employed and unemployment according to a number of demographic variables.

4.4 THE SOUTH AFRICAN YOUTH LABOUR FORCE

This section of the chapter looks at the young labour force, i.e. looking the unemployment and employment figures according to gender, race, spatial distribution, age profile, education levels as well as sector and education. The focus is on those between 15 to 34 years of age. The aim is to give a complete picture as to where the labour market stood as of 2019. In term of the unemployment numbers, provision is made for the two definition often used in collecting the variable which includes the strict definition and the expanded definition.

4.4.1 Gender

Research proves that females are the most vulnerable group over males in the labour market. They face more negative employment outcomes and they are most likely to be in poverty despite them being more educated than their male counterparts. For young females, the transition to adulthood can be a solitary one as they navigate societal standards that tend to limit their development and employment choices (Verick, 2014:6; Fox *et al.*, 2016:i10) and this is especially true in Africa. In Mozambique for instance, the burden of household care and the lack of water supply has implied that females, relative to males, particularly in rural areas have fewer hours for income-generating activities such as employment overall affecting their labour force participation (Curtis, 1998:13; World Bank, 2012:46). With young people in South Africa already experiencing very low labour force participation rates compared to other age categories, females in general still encounter very low labour force participation rates. The youth labour force trends between males and females are illustrated below.

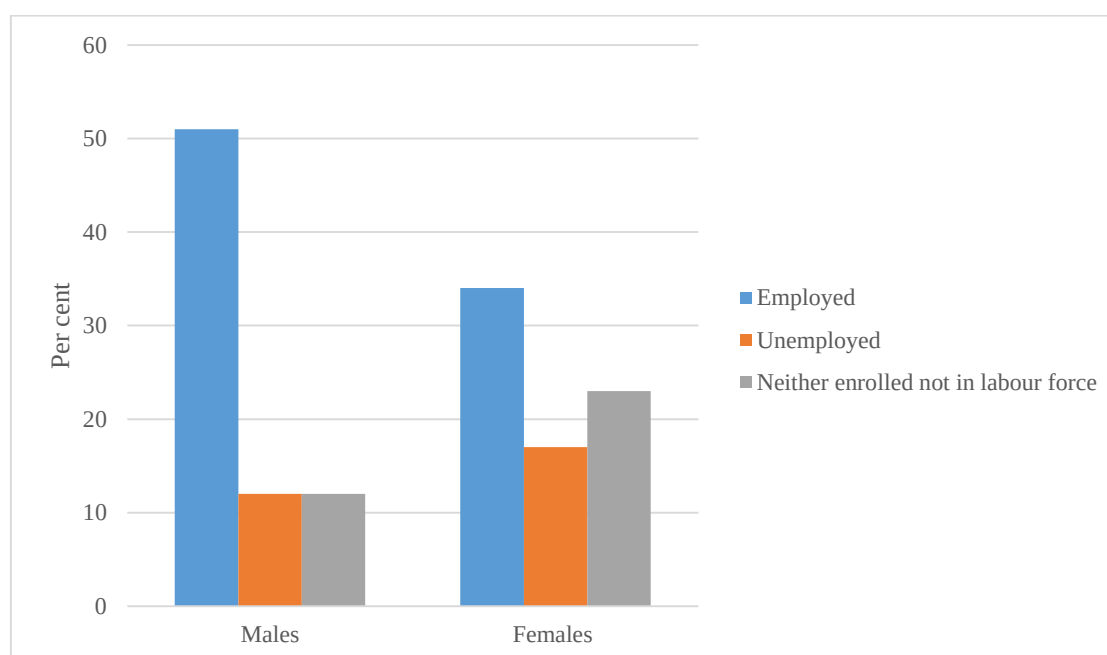


Figure 4.7: Youth labour force trends by gender (2017-2019)

Source: Branson *et al.* (2019), National Income Dynamics Study

From Figure 4.7, young females remain the most vulnerable group in the South African labour market where they encounter high unemployment rates and low employment levels (Bhorat, Lilenstein, Lilenstein & Oosthuizen, 2017a:2). The gender gap in unemployment remains wide but has narrowed slightly with the unemployment rate for males increasing more rapidly than for females (DPRU, 2017:13; Stats SA, 2019b). According to the '2018 Labour Market Dynamics' report, young females in the labour force have attained higher levels of education than young males (Stats SA, 2020b:92), but

undeniably, males still have a distinctive benefit in finding work in contrast to females (Mlatsheni & Ranchhod, 2017:3). However, employment seems to be increasing with age, i.e. as young people's age and employment levels reach 54 per cent for females and 75 per cent for males 30 to 34 years of age (Branson *et al.*, 2019:2).

The reality is that many young people, specifically females, are not investing in and acquiring relevant skills and experience needed by the labour market which negatively affects their employment prospects (Mncayi & Mdluli, 2019:306; Branson *et al.*, 2019:2). In the '*A Survey of Time Use*', Stats SA (2013:4) found large gender gaps with regards to time on non-income-generating activities such as care work. The report indicates that South African females spend 3 hours and 15 minutes on household care which is more than their male counterparts spend which is just 1 hour and 28 minutes. Such instances are supportive of the low labour force participation rates that females encounter compared to males. Females are losing hours that they could have used on income-generating activities or searching for employment on unpaid care work. The vulnerability of females to undesirable labour outcomes is also very much influenced by race, with Black/Africa females encountering substantial negative employment prospects (Bhorat *et al.*, 2017a:2-3), with unemployment rates over 30 per cent in 2019 (Stats SA, 2019a). These continual disparities between males and females is one of the factors indicating that much work still need to be made before females can achieve equality in the workplace (Department of Labour, 2017:24).

4.4.2 Race

Employment outcomes for young people seem to be shaped by race. Research demonstrates that despite being young, Blacks represent a large share of the unemployed and also a low share of the employed (van de Rheed, 2016; Bladry, 2013:56; CHEC, 2013; Rogan *et al.*, 2015; Stats SA, 2020b:v). Figure 4-8 also reflects these findings for 2019 (see below). Not only are they least likely to be employed but even if they are successful in their employment search, they are most likely to be in insecure and unstable employment compared to their White counterparts (Branson *et al.*, 2019:3-4). In 2015, 37 per cent of black young people were unemployed (Stats SA, 2015a). The likelihood of skilled positions is even lower for coloured young people while Indian/Asians although lower, are still better off than both blacks and coloured (Stats SA, 2015b:12). In terms of time underemployment, whites had the lowest rate (1%) compared to Indians/Asians (1.6%), coloureds (3.6%) and blacks (5.4%) in 2017 (Stats SA, 2017b:49).

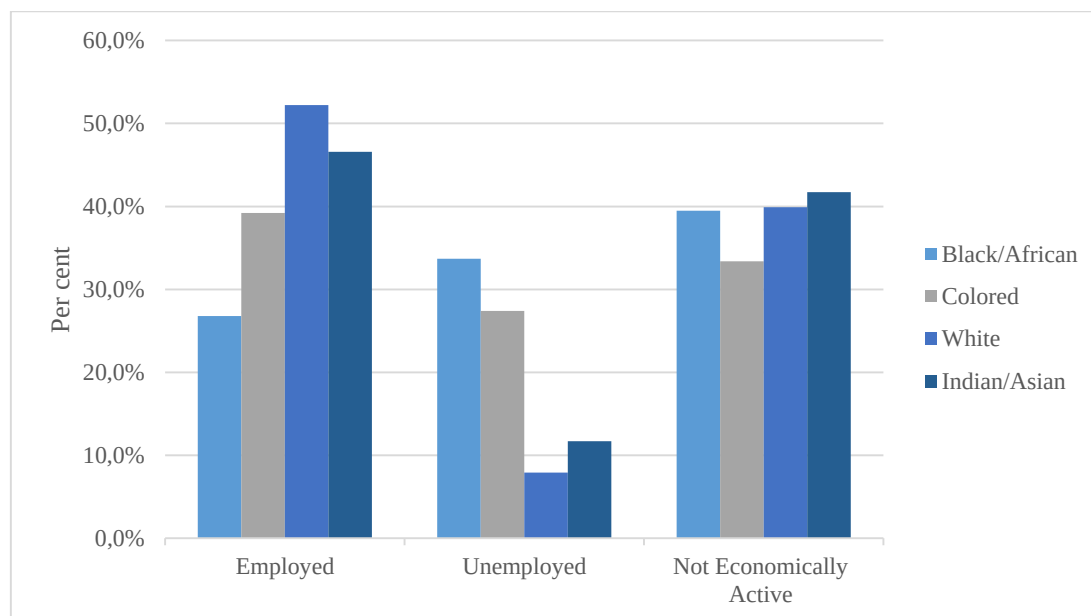


Figure 4.8: Race and employment status (15-34), 2019

Source: Stats SA (2019b), Own Calculations

Arguments regarding the uneven quality of universities and the relevance of their core curriculum also enter such debates, where it is contended (e.g. see Moleke, 2009) that young Black graduates from historically disadvantaged universities which have traditionally been perceived by employers as under-resourced and providing education of a relatively lower quality (Morrow, 2008; Van der Berg & Van Broekhuizen, 2012:17), seem to be encountering lower absorption rates in the labour market than graduates from historically advantaged universities. As maintained by Fongwa (2018:7) poor schooling quality seems to restrict university options, particularly for many Black students. Low admission points from matric and unavailability of subject choice assistance at school level also force them into being enrolled in courses with low employment possibilities such as general courses like humanities as compared to courses that unswervingly prepare individuals for a profession (Moleke, 2010:89; Cosser, 2010:12-13). Nonetheless, Black graduates are still overrepresented in youth unemployment statistics irrespective of their qualifications and higher education institution (Bhorat, Mayet & Visser, 2012:6).

4.4.3 Spatial distribution

The differences in employment amongst urban and non-urban areas highlights that South Africans living in non-urban areas have been disadvantaged in terms of employment opportunities (DPRU, 2018:4). As Kalleberg (2009) states, those living in secluded areas which are at the periphery struggle getting to areas with suitable employment opportunities mainly because of a lack of financial resources among other reasons and in such instances, individuals cannot make use of their qualifications and

skills. Young people from urban areas have higher rates of employment (Branson *et al.*, 2019:7) and they enjoy added benefits in their labour market entry experiences, hence young people from rural areas would migrate to urban areas to better their chances of finding employment (Mlatsheni & Ranchhod, 2017:3). Figure 4.9 shows the labour force statistics for young people by geographical location.

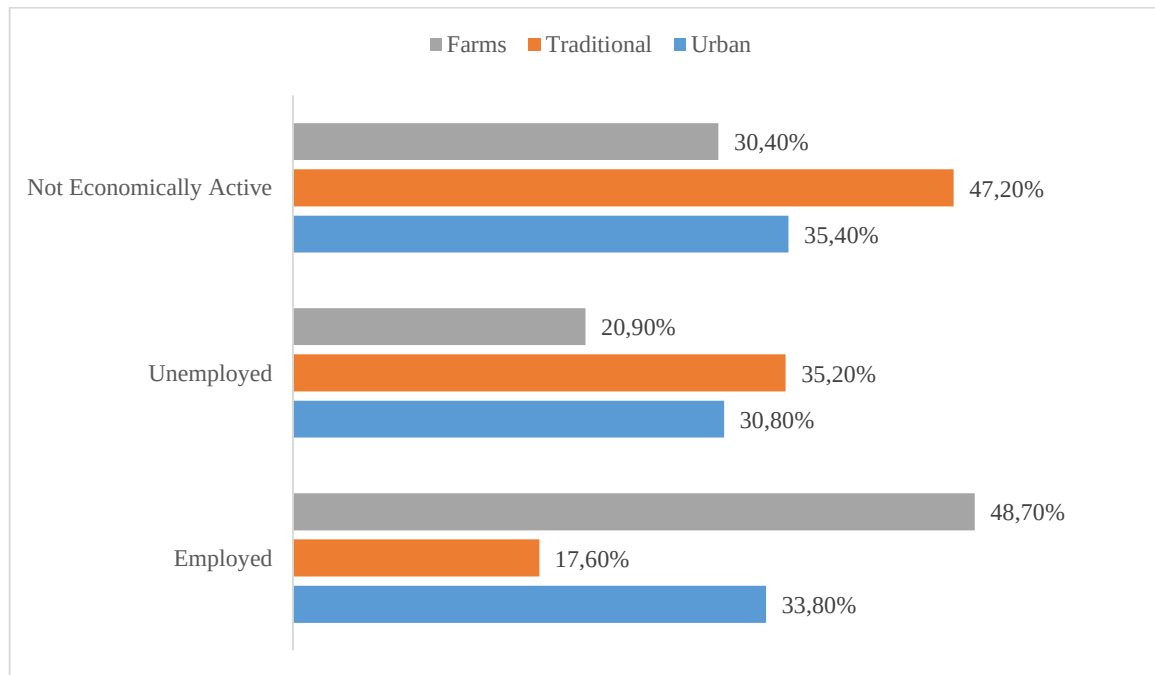


Figure 4.9: Labour force by geographical location (15-34), 2019

Source: Stats SA (2019b), Own Calculations

Young people's employment prospects become better after moving to urban areas, proving to enhance the probability of finding work. Typically, provinces with a more industrial focus (Western Cape and Gauteng) usually have the highest rates of labour absorption compared to their focused agricultural provinces such as Eastern Cape (Stats SA, 2017b:36). Time underemployment rates have also followed the same observation with highest rates between 2012 and 2017 recorded in rural provinces and lowest rates in the urban, industrial ones (Stats SA, 2017b:50). The extensively differing provincial labour market performance reflects various factors that are due to provincial business economic cycle, provincial individual skills level and educational achievements, amongst other factors (Department of Labour, 2017:20),

4.4.4 Age profile within youth

Young people in general are more likely to encounter negative employment outcomes, i.e. they represent a larger share of the unemployed and a smaller share of the employed (Stats SA, 2020b:v). Table 4.2 confirms this where compared to the mature young people (i.e. those between 25 and 34),

younger workers have had the most decline in the number of employment levels. This coincides with the low labour absorption rates that are depicted in Figure 4.5. In terms of the trends in the unemployment numbers, a peculiar observation is made where those in the 25-34 age category have since 2008 experienced more increases in unemployment than those in the 15-24 age category, however, a look at the inactivity rates shows that young people in the latter age group are inactive, i.e. not in the labour force and the gap between them and those between the ages of 25 and 34 has been wide and on the rise since 2008. In fact, inactivity rates amongst mature young people have decreased from 24 per cent in 2008 to 23 per cent in the third quarter of 2019, which suggests that people in this age group have found their way back into the labour force given their preference by employers in the labour market.

Table 4.2: Labour force trends by age (2008 Q4 – 2019 Q3)

Labour force	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Change
	Thousand (‘000s)												
Employed													
15-24	1 598	1 369	1 230	1 275	1 244	1 330	1 291	1 317	1 333	1 305	1 173	1 102	- 496
25-34	4 927	4 529	4 491	4 629	4 608	4 872	4 803	5 054	4 954	4 790	4 965	4 803	-124
Unemployed													
15-24	1 303	1 290	1 232	1 250	1 280	1 274	1 231	1 337	1 382	1 365	1 417	1 536	+233
25-34	1 636	1 837	1 810	1 808	1 954	1 922	2 20	2 075	2 319	2 397	2 450	2 716	+1 080
Inactivity rate (%)													
15-24	70.3	73.1	75.3	74.9	75.2	74.5	75.4	74.2	73.7	74.1	74.9	74.4	+4.10
25-34	24.3	26.5	27.9	27.4	27	25.8	26	24.2	23.6	24.5	23.4	23.1	-1.20

Source: Stats SA (2019c)

4.4.5 Education levels

Research shows the existence of a positive relationship between education attainment and participation rates, with more highly educated individuals more likely to participate in the labour market (DPRU, 2017:5; Bhorat *et al.*, 2017a:4). The contribution of education towards improved employment outcomes and earning potential is reiterated by Moleke (2010:88), Fourie (2012:10) and Mncayi and Dunga (2016:414) who finds that there is an additional benefit in the labour market for those with higher levels of education since they are most likely to possess more skills and therefore be deemed an important investment by employers. One of the reasons for this according to Banerjee, Galiani, Levinsohn, McLaren and Wooldard (2007:8) is the existence of the premium on skills which implies that employers have increased their demand for graduates who are better skilled compared to those with school-leaving

certificates. In addition, the kind of growth path South Africa followed following the end of apartheid was accompanied by growing hi-tech sectors such as financial services which when compared to other sectors such as agriculture (which have traditionally been able to absorb a large number of unskilled labour) have typically been known to demand higher skills, hence the increased preference for graduates over young people school-leaving certificates (Seekings & Natrass, 2005). These important research findings are observed in Figure 4.9 which shows that regardless of age levels, graduates have better employment outcomes than those with lower levels of education. Differences across age groups demonstrate unemployment numbers to decline as young people become older. Specifically, for graduates, those between 15 and 24 years face higher unemployment (31%), compared to those in the 25-34 age category (12.9%) and adults (4.3%).

Be that as it may, the successful school-to-work transition seems to be differ according to fields of studies, with graduates of certain fields taking longer to successfully find employment than others (Graham, Leilanie & Chisoro, 2019:361). Even though as can be seen in Figure 4.10 negative labour outcomes decline as young people attain more education (Reddy, 2016), the lack of homogeneity amongst graduates with regards to returns to higher education is becoming a cause for concern. These different returns are also observed in earnings potential where graduates compared to those without post-secondary qualification earn more (Livanos, 2010).

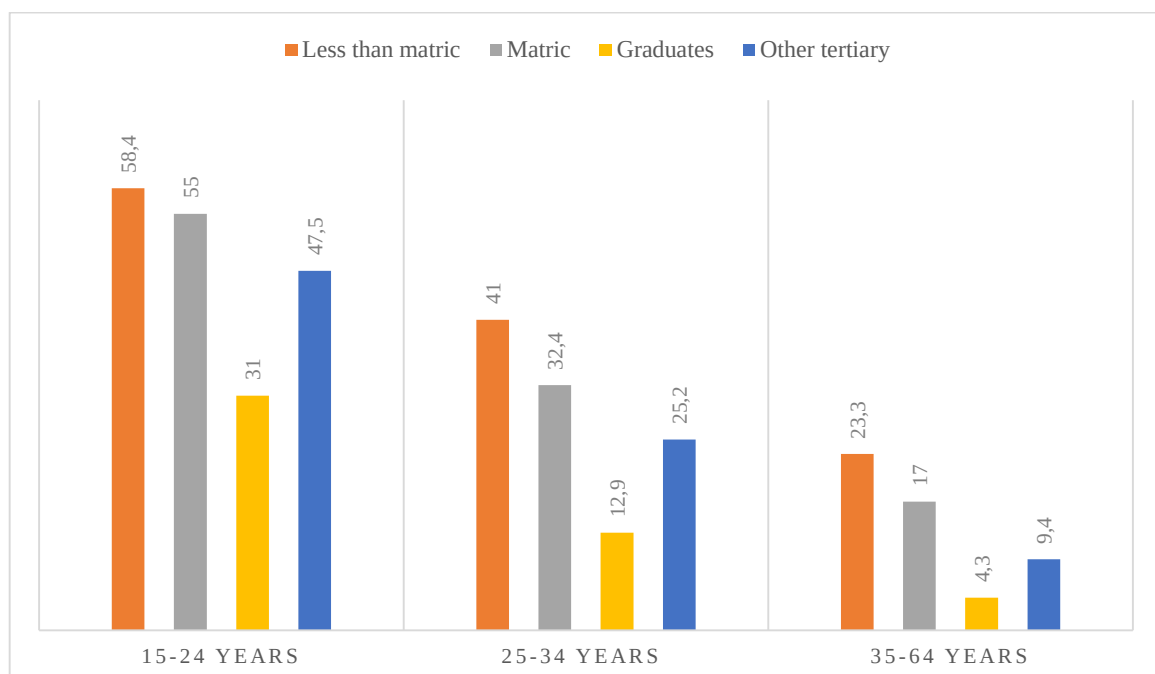


Figure 4.10: Youth unemployment rates by levels of education (2019) (%)

Source: Stats SA (2019c)

In their study which was investigating the reasons behind the struggle of unemployed graduates in finding employment, Graham *et al.* (2019:360) find that factors such as the lack of necessary work experience, not having the information needed for effective employment search while simultaneously at wits' end with the financial costs associated with employment search is hindering many young graduates from securing employment. Most often, employers prefer to employ those with prior work experience and a higher level of education (Stats SA, 2017b:96). Hence the provision of work experience, formal or informal, remains the key to reducing unemployment in the short-run (Anand *et al.*, 2017).

4.4.6 Sector and occupation

As previously mentioned, young people's increased probability of encountering negative employment outcomes, for reasons relating to their labour market inexperience, lack of needed qualifications and skills and other factors suggests that if they find employment, it is most likely to be in the lower-skilled occupations. Ingle and Mlatsheni (2017:10) report that the largest share of young people who are in regular employment are employed in elementary occupations which as can be observed in Figure 4.11(a) in the low-skilled occupation category, which is consequently accompanied by meagre earnings.

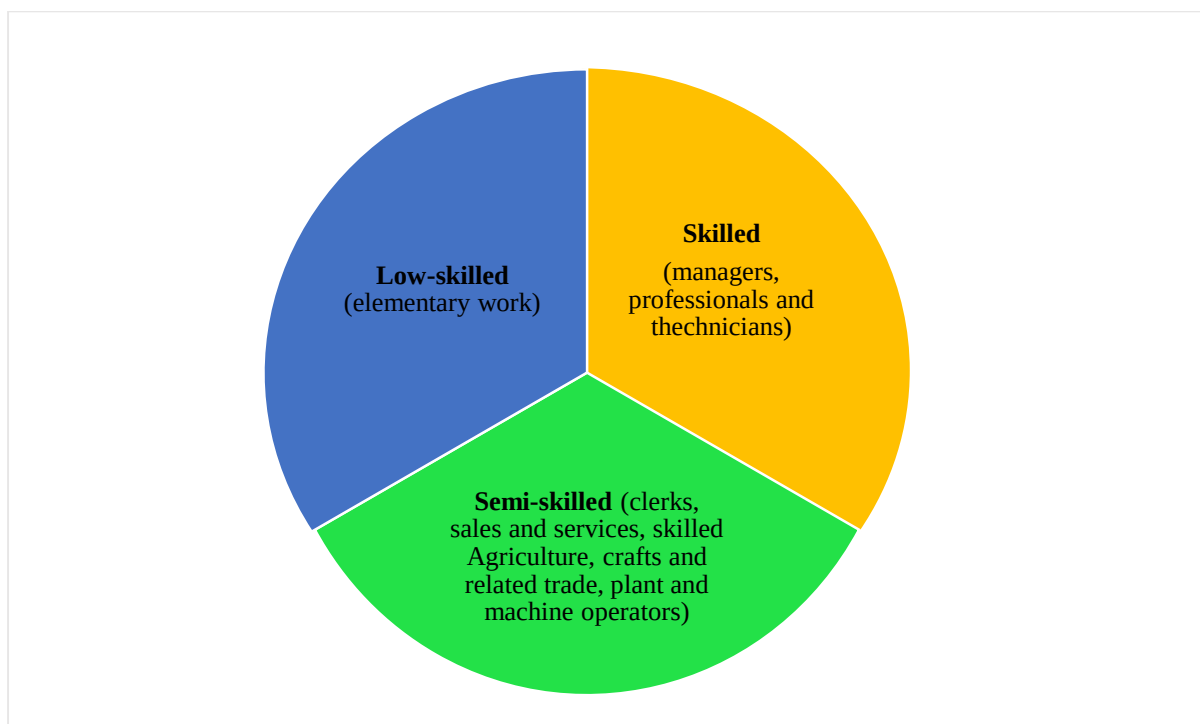


Figure 4.11(a): Occupation classifications

Source: Bhorat and Oosthuizen (2008)

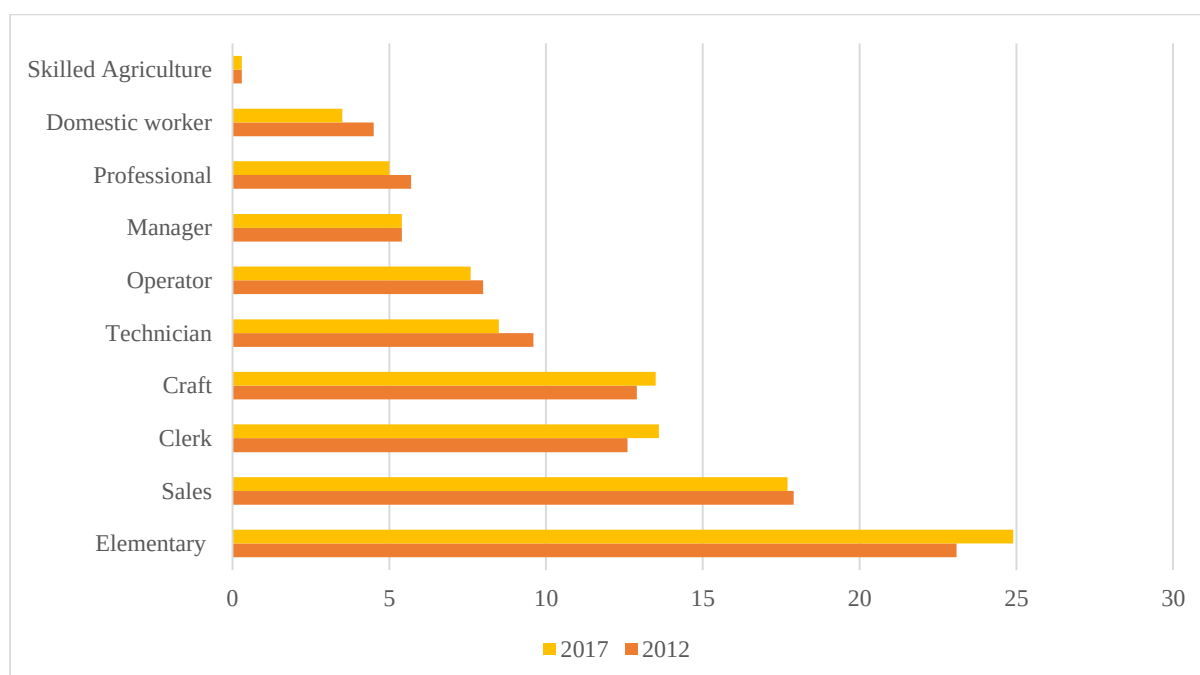


Figure 4.11(b): Employment amongst young people by occupation (2012 - 2017)

Source: Stats SA (2017b)

Certainly, long-term observation in Figure 4.11(b) illustrates that young people seem to be more employed in the low-skilled to semi-skilled occupation. Between 2012 and 2017, most young people were employment in elementary occupations, followed by Sales; while skilled agriculture accounted for the lowest portion of youth employment (Stats SA, 2017b). This was still the case even in the 2018 Labour Market Dynamics report, which is concerning because between 2013 and 2018, a higher share of workers underemployed by time were found to be working in both low-skilled and semi-skilled occupations (Stats SA, 2020b:40-41). Remarkably, and although they have low employment rates, a greater share of young female workers are in skilled occupations than their male counterparts (Bhorat *et al.*, 2017a:3; Stats SA, 2020b:vi), and such occupations are characterised by very low time-underemployment rates (Stats SA, 2020b:41). This according to the DPRU (2018:8) could reflect the growing employment levels in the high-skills service sector, which typically has low obstacles to entry for females relative to other sectors such as mining and manufacturing.

Employment analysis by sector shows that even though the formal sector employs a growing share of young workers (70%, see Figure 4.11(c), employment in the informal sector has also been on the rise, including non-standard employment. Young people between 15 and 24 assume the largest share of unstable and low paying work, which is more than double that of adult workers (Cichello, Leibbrandt & Woolard, 2012). Although the 2017 Labour Dynamic Survey shows that between 2012 and 2017, overall number of informally employed young people (15-34 years) marginally declined from 16.7 per

cent to 16.3 per cent, the numbers may have increased for those in the 15-24 age group to being 57.5 per cent (Branson *et al.*, 2019:3). The percentage is even explained by education level with the numbers increasing with lower-levels of education. The risk in this is that the informal sector does not provide for stable employment (Stats SA, 2020b:iv).

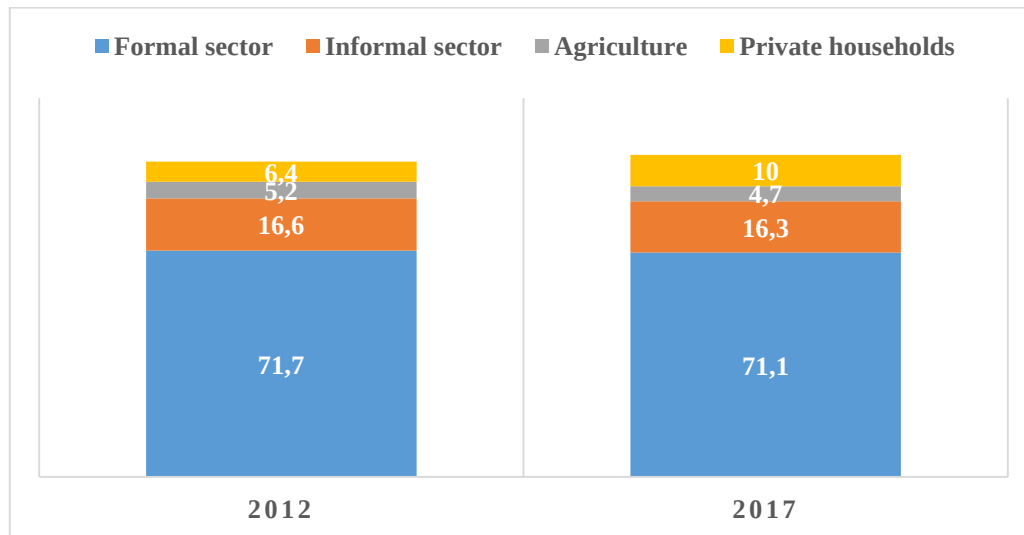


Figure 4.11(c): Employment amongst youth by sector (2012 and 2017)

Source: Stats SA (2017b:95)

4.5 UNDERSTANDING THE DEMAND AND SUPPLY OF SKILLS IN SOUTH AFRICA³⁹

The issue of skills has gained considerable attention over the last decade, necessitated by the reintegration and transitioning of South Africa's economy to the global economy. The economy finds itself having to deal with the legacy of apartheid education and its resultant skills shortages (Daniels, 2007:5). Fuelling these debates is the emergence in the fourth industrial revolution which is set to change the nature of employment and skills as typically known. The ILO in '2018 Skills and the Future of Work' report argues that the world of work is set to become uncertain and volatile as the years pass by which is associated to the demand and supply of skills (ILO, 2018g:1). As labour markets around the world shift, employers are prone to changing their preferences in trying to keep up with changing consumer markets. This has an impact in the kinds of education, training and skills that potential workers pursue as this will have a direct bearing on their school-to-work transition. This section of the chapter provides an overview of the demand and supply of skills within the South African context. Generally, skills are assumed to denote to both qualifications and experience (Daniels, 2007:2). The

³⁹ Investigates the existence of skills-underemployment

issue of skills is investigated from the perspective of employers and also from that of universities as hubs linking students to skills and the labour market, before looking the persistence of skills mismatches, a topic which has also received unprecedented attention in labour market research in the last 20 years (see Moleke, 2006; 2010; Griesel & Parker, 2009; CHEC, 2013; Mncayi & Dunga, 2016).

4.5.1 Skills demand

A skilled labour force is normally regarded as a key engine for economic performance (Becker, 1961; Acemoglu & Pischke, 1999:539). This therefore suggests that skills constraints or scarcity may potentially prevent an economy from growing faster and consequently creating more employment (Van der Berg & Van Broekhuizen, 2012:8). In the case of South Africa, Tsotsotso, Montshiwa, Tirivhanu, Fish, Sibiya, Mlangeni, Moloi and Mahlangu (2017:410) maintain that despite the implementation of various initiatives such as SETAs in narrowing the existent skills deficit and improving employability particularly that of previously disadvantaged persons, the mismatch between the skills possessed by labour and those demanded by employers is still prevalent. Within this context, “*scarce skills refer to occupations in which there is a scarcity of qualified and experienced people, currently or anticipated in the future, either (a) because such skilled people are not available, or (b) because they are available but do not meet employment criteria*” (DHET, 2014:5). According to Daniels (2007:2) this scarcity may result because of absolute scarcity of these skills or relative scarcity, where the former refers to the unavailability or insufficiency of appropriately skilled people, while the latter on the other hand where appropriately skilled people are available however they fail to meet certain requirements of employment such as not meeting that of Black Economic Empowerment.

From a theoretical perspective, literature identifies four main types of work skills: “*cognitive skills associated with subject matter areas; generic skills such as problem-solving and communications; technical or occupation-specific skills; and soft skill*” (Stasz, 2001:386). This confirms the view that an academic record and a mere university no longer guarantee employment (Razak, Yusof & Syazana, 2014:169), as employers are now much more concerned about aspects beyond that (Pitan Oluyomi & Adedeji, 2012:91). They want workers who are already made to perform given how competitive markets and costly on-the-job training have become. The shortage of critical skills, which refer to specific skills within an occupation (Daniels, 2007:2) accounts for most problems when firms go through technological changes. Despite South Africa having a number of systems in place to estimate skills needs (Reddy, Rogan, Mncwango & Chabane, 2018:11), there is a concern that these systems are proving to be less effective. For instance, SETAs have failed on their obligation to provide skills training for the unemployed (Daniels, 2007).

The '2018 Global Talent Shortage Survey', shows that 32 per cent of sampled employers in South Africa were struggling to fill in vacancies, particularly skilled-trade positions such as welders (ManPower Group, 2018:5). The difficulty is even higher in South Africa's BRICS counterparts such as India, where 56 per cent of sampled employers struggle to find suitably skilled workers. The most important determinants of skills demands are changes in competition, technology, ageing employees, market conditions and government regulations (Tsotsotso *et al.*, 2017:420). The deterioration of primary sectors such as mining as resulted in structural unemployment particularly for workers who do not have skills needed to transition in growing sectors such as tertiary. This has resulted in potential skills shortages. When asked about reasons for failing to absorb the existing supply of labour, employers allude to lack of applicants (20%), lack of experience (20%), lack of hard (human) skills to accomplish their roles (19%), and higher reservation wages (12%) (ManPower Group, 2018:7). These findings are also reiterated by Ngarachu, Schimmelpfennig and Schöer, (2015:3). This apparent paradox has come to be known as the mismatch between labour demand and supply, and therefore the subsequent sections briefly describes skills/labour supply.

4.5.2 Skills supply

Generally, higher education institutions have played a significant role in supply of a skilled workforce that fundamentally generates economic growth and development (Jonbekovi, 2015:169; DHET, 2019:26) and none more so has this been evident in South Africa. Employment outcomes are related to higher education, over and above other factors. Since the end of apartheid, returns to educations have increased significantly with improved labour market outcomes and career growth prospects (Maluccio, Haddad & May, 2007). However, the dual nature of the country's higher education sector has raised questions not only about the provision but also around the quality. Despite the increased accessibility to the previously disadvantaged individuals of fields that were only open to white people, blacks still hold a small share of those in public higher education (16.3% compared to 55.6% for whites between 2010-2016) compared to their overall population numbers in the country (DHET, 2019:i, 26-27; Stats SA, 2019c). Apartheid brought with it wide disparities in education opportunities observed across different races. In particular, historically black schools (referred as township schools) have always been insufficiently resourced, with numerous problems relating to administration and quality teaching amongst other factors (Msila, 2005:173; Zoch, 2017:3). Model C schools (formerly white and Indian schools) have remained well-resourced, providing quality education which has been proven to increase the probability of passing matric by 30 per cent compared to poorer schools (Zoch, 2017:26). According to Spaull (2019:4) these education quality differences imply that historically disadvantaged schools have not been able to teach the much-needed mathematical and literacy skills. And even when they do pass their matric examinations, only a handful attain subject scores, particularly in mathematics and science, which qualify them for university entrance. This according to Reddy, Bhorat, Powell, Visser

and Arends (2016:9) is not in line with the skill demanded in the country which are mostly science-based. With no other option, most matric students are often forced into the so-called non-technical courses which do not require higher APS scores (Mncayi & Dunga, 2016). As a result, there has been a rise in the skills-job mismatch challenge where many graduates graduate with qualifications that are not sought by employers.

These structural aspects are still prevalent even more than two decades after the end of apartheid (Bhorat *et al.*, 2017:4), where Bhorat and Kimani (2015:3) maintain that with a wider range of courses at their disposal, whites were exposed to more skills than was the case with blacks who represent the majority at most historically disadvantaged institutions (HDI). This can also be connected to funding received by these institutions which has on average always been more for historically advantaged institutions. According to Bhorat *et al.* (2017a:4) the apparent skills-mismatches within the South African labour market may therefore be explained by the low-quality of HDI, whether they are existent or supposed. These views are echoed by the findings of Wildschut, Rogan and Mncwango (2019) which confirm a robust and substantial relationship between type of HEI South African students graduate from the prospect of employment, regardless of race, gender and field of study a qualification is obtained. These factors confirm the fact that a myriad of factors influence mismatches that are existent in the labour market.

4.5.3 Skills mismatches

Skills-mismatches refer to “*the inadequacy of a worker’s skill relative to the requirements of the job he/she is currently in (e.g. having a lower qualification than generally required for the job, or being trained in a field of study other than the one generally required for the job), or to the opposite phenomenon whereby a worker’s skills exceed those required by the job (e.g. having a higher level of qualification than required for the job)*” (Berlingieri & Erdsiek, 2012:4). Mismatches can be measured according to qualifications, field of study or skills (OECD, 2016a:29).

In South Africa, Reddy *et al.* (2016:9-10) categorise skills mismatches into three specific types i) demand mismatches ii) educational supply mismatches iii) qualification-job mismatches. Demand mismatches arise when there is a misalignment between available work-seekers and workers needed by the employers. In other words, this type of mismatch would arise when the labour market requires highly-skilled workers but there is an oversupply of low-skilled workers. Educational supply mismatches on the other hand would occur when graduates graduate with qualifications/skills that are not sought by the labour market. Lastly, qualification-job mismatches observe the gap between qualifications needed in a typical occupation, e.g. managers and the actual qualifications that workers have.

Mismatches are also said to be horizontal (level of schooling is appropriate; type of schooling is not) or vertical (overqualified or underqualified) (Farooq, 2011:533). Another distinction is drawn between skills shortages which relate to the internal labour market and that which is external (Reddy *et al.*, 2017:6). Skills shortages in the internal labour market relate to workers possessing fewer skills than those required by a firm, while skills shortages in the external labour market, are related to recruitment difficulties (Holt, Szymon & Sloan, 2010).

Skills mismatches in the context of South Africa show that employers are of the opinion that many young graduates seem to be lacking skills needed by the labour market, thereby failing to apply and adapt themselves (Griesel & Parker, 2009; OECD-Getting Skills Right Report, 2017). In 2019, South Africa had the largest share of mismatched workers with skills mismatches of more than 50 per cent and the lowest productivity levels (BusinessTech, 2019). Beukes *et al.* (2017:41) found that between 1995 and 2016, overeducation in South Africa increased from 15.7 per cent to 27.7 per cent. Grapsa (2017:22) differentiated between education mismatches and skills mismatches and found the incidence of educational mismatch to be very high in South Africa, with more than 50 per cent of South African workers being mismatched, where 26 per cent are overeducated and 27 per cent undereducated for their occupations. Skills underutilisation was only observed between occupation types (35 per cent in elementary occupations) and marital status with higher likelihood for those never married (Grapsa, 2017:15).

Graduates seem to be graduating in courses/study fields that do not directly prepare them for a profession and therefore opt for generic courses which are associated with less chances of finding employment (Jonbekova, 2015:171; Mncayi & Dunga, 2016:420). According to the '*2019 Post-School Education and Training Monitoring*' report, between 2010 and 2016, the field of humanities (generally known to be more generic in nature) had the highest number of graduations (6.6%) followed by science, engineering and technology, business management and education with graduation rates of 5.5 per cent, 5.2 per cent and 1.8 per cent respectively (DHET, 2019:36) (see Figure 4.12). This essentially implies that the oversupply of graduates has not been able to be absorbed by the number of jobs available in the humanities field (Moleke, 2010:88; Bhorat *et al.*, 2017:12). Notably, Moleke's study states that there is still substantial demand in the public sector for Humanities and Social Sciences, although most of the jobs created in the sector are limited to skilled professionals. This may be at the detriment of young people who are entering the labour market for the first time.

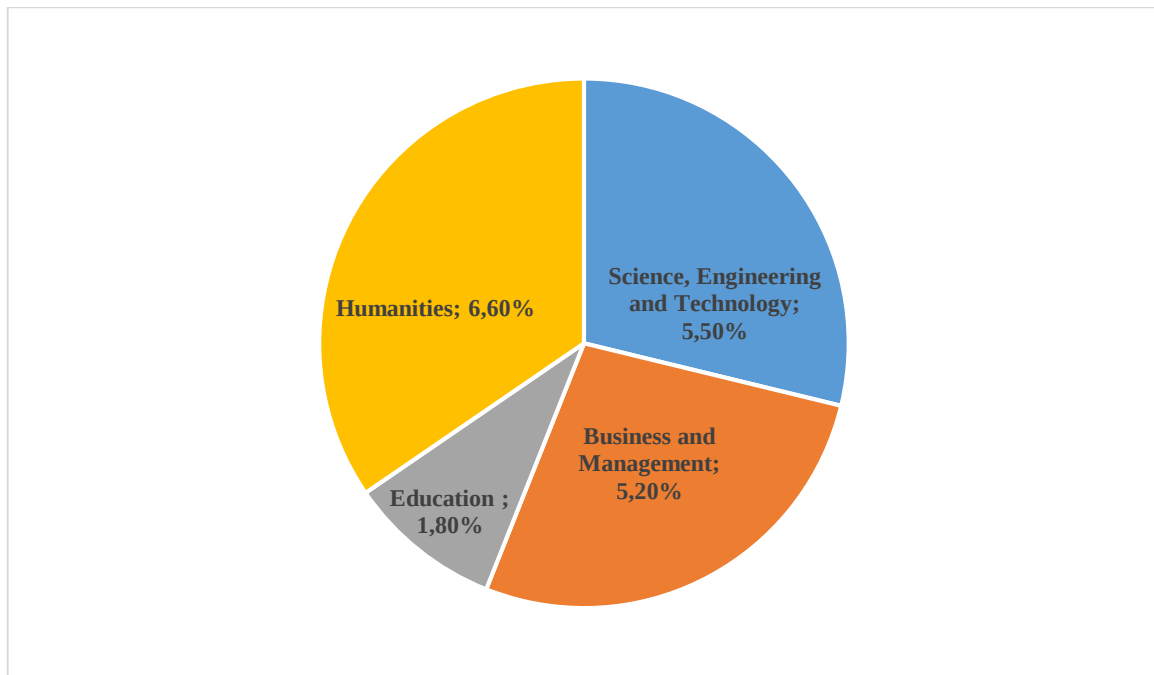


Figure 4.12: Graduates by field of study in public universities (2010-2016)

Source: Department of Higher Education and Training (2019:36)

These mismatches have been pervasive with some studies pointing them as systemic (Mogomotsi & Madigele, 2017) connected to many factors. While the massification of higher education following the end of apartheid increased the supply of graduates to the labour market, demand was not growing at the same pace with the subsequent outcome of an oversupply of graduates (Graham *et al.*, 2019:362). Another elucidation, which proves to be more structural relates to the country's poor education system that is failing to produce graduates that are not only work-ready but can meet the demands of the labour market. Circumstances, some beyond their control, have forced a large number of students enrolled in general courses. At times, lower marks in matric often push students towards deciding to either be at university (or enrol for courses that require low admission points) or staying at home. Letseka, Breier and Visser (2010:33) have linked this to the public education system which is poor by global standards. On the other hand, labour market advantages are not equally enjoyed by all graduates (Kraak 2010). Mncayi and Dunga (2016:415) argue that the country's economic focus on the science and technology fields often emphasised as critical skills has resulted in the creation of more jobs in these fields than in other fields, may help to explain why graduates in general fields of studies such as humanities and social sciences (Moleke, 2009; Altbeker & Storme, 2013:14).

As discussed in Chapter 2.2.8, skills mismatches bring about significant economic and personal consequences. The lack of skilled and well-qualified workers implies that firms may find it difficult to attract suitable labour, in order to expand their operations, lowering aggregate productivity relative to a

situation where workers are reallocated to achieve a more efficient match (McGowan & Andrews, 2015:3). Skills mismatches also impose a limitation on the use of skills and competencies than when a graduate is well matched to their job, which negatively affects not only productivity but also wages and job satisfaction (Allen & De Weert, 2007:59). Employers have responded to skills shortages by upskilling their own workforce. The '2018 Talent Shortage Survey', 54 per cent of the sampled employers in over 43 countries (including South Africa) began providing additional training and development which is an increase from 2016 (ManPower Group, 2018:8). The next section describes the incidence of working poverty in South Africa.

4.6 WORKING POVERTY: A BRIEF OVERVIEW⁴⁰

Since the end of apartheid, there has been a considerable amount of research on the levels and trends in poverty and wage inequality in South Africa (e.g. Armstrong & Burger 2009; Leibbrandt, Wegner & Finn 2011; van der Berg 2011). By global standards, the country is well known for its high unemployment rates owing to the shortage of wage employment, pervasive poverty (more than 50% of population living in poverty) and being one of the most unequal societies in the world (Gini-coefficient of 0.67) (Vermaak, 2011:256; Stats SA, 2019a). Decent and secure employment which is evidenced by decent earnings has therefore become one of the best ways for individuals to escape poverty (Khan, Lilenstein, Oosthuizen & Rooney, 2017:2). However, the observed inefficiency in the South African youth labour market due to skills mismatches and unavailability of employment has acted as obstacles to economic development. Developing economies, mostly in the Sub-Saharan Africa have not created sufficient number of labour-intensive firms offering the needed low-skill jobs to absorb young people (Fox *et al.*, 2016:8). Wage inflexibilities (including the implementation of minimum wage laws), seem to have placed a significant upward pressure on wages, consequently reducing the demand for labour, particularly for young people who do not have enough (Bhorat *et al.*, 2016:6). A skills-biased growth path has in turn sustained the comparatively high demand for skilled workers who, being in short supply, preserve a substantial wage premium (Bhorat & Khan, 2018:17), while lower-skilled labour is left in unemployment or vulnerable types of employment.

Despite many young people finding full-time employment, low earnings and widespread underemployment especially in rural areas has been rising (Fox *et al.*, 2016:9). The challenge of poor-quality employment, evidenced by the high incidences of vulnerable and informal employment remains a primary challenge in Sub-Saharan Africa (World Employment and Social Outlook, 2018:14). In South Africa, very few studies focus on working poverty, particularly amongst young graduates, however, the ILO projects the level of non-agricultural informality to be 34 per cent in South Africa, demonstrated

⁴⁰ Investigates the existence of income-underemployment

by high poverty levels, inequality and a lack of decent work (World Employment and Social Outlook, 2018:14). The effects brought about by informal employment are evidenced by average earnings which are low by standard (monthly wage of R1 845) and when compared to the average earnings of workers in formal employment who earn R6 260 (Cassim, Lilenstein, Oosthuizen & Steenkamp, 2015:4). In trying to track poverty in South Africa, Vermaak (2011:25) found that between 2001 and 2006, the number of workers considered poor as well as the extent to which wages fell below the poverty line declined. However, these numbers soon began increasing. The gap in earnings is even wider when considering age, where Bhorat and Khan (2018:22) find that between 1995 and 2010, adult workers on average earned more (2% - 5% range) than younger workers. The average earnings gap is even higher when considering gender (17%), race (26% for black-white), marital status in favour of being married and staying in urban areas (8% - 16% range). These earning gaps are also observed amongst occupations types and education, with all occupations earning more than workers in elementary positions (Bhorat & Khan, 2018:22). This a worrying trend which cements the view that working poverty and wage inequality are more substantial amongst the marginalised in South Africa. For young people, the decision to settle for substandard employment is fuelled by the growing number of people with university qualifications which raises the competition for jobs (Ndebele & Ndlovu, 2019:95).

The gender differences are also observed where a persistent feature of the South African labour market has been that occupations in which females are concentrated in, pay them substantially less than those in which males are (Department of Labour, 2017:24). A relatively large share of employed females (48%) work in the informal sector in contrast to employed males (31%) (Stats SA, 2018). Apartheid laws in fact forced many female workers into informal work which is casual and unprotected in nature simply because they were prohibited from entering the paid labour force, hence domestic work became the one work that absorbed an increasingly large number of females, or at least that they were forced into (Du Toit, 2013; Ncube, 2012).

The challenge of working poverty is worse for young people in Sub-Saharan Africa, South Africa included. The ILO (World Employment and Social Outlook, 2018:14) highlight a central point which demonstrates that vulnerable employment as opposed to unemployment is one of the primary labour market challenges in emerging and developing countries as unemployment rates are much lower than they are in these areas when contrasted with developed countries. For example, according to Lilenstein, Woolard and Leibbrandt (2016) an estimated 34 per cent of all workers in South Africa are in both low wage employment and poverty, and not surprisingly, those in low-skill jobs, black. Similarly, average monthly wages are below R1 500 for black and coloured young people increasing to an average of R3 000 by the age of 35; in the meantime, average monthly wages for a white young individual begin at R 3000, increasing to an average of R13 000 by the age of 35 (Salisbury, 2016:48)

Low university completion rates amongst young South Africans have also added to the challenge (Wangenge-Ouma, 2013:5-6). For young people in South Africa, entering the labour market at an early age perpetuates the likelihood of being in precarious employment which is characterised by low wages amongst other factors. Despite acknowledging the value of education as promoting positive employment outcomes, the decision to enter the labour market early is propagated by limited resources such as finances and poverty (Mlatsheni & Ranchhod, 2017:7). In deciding for earlier labour market entry, these young people often end up accepting any work, which is low paying and mediocre in order to increase their family income, and therefore look after themselves and their families. The failure to gain the right skills and education can make young people vulnerable to unstable, insecure and low paying employment, and if they do not find any work, they may be prone to lengthy spells of unemployment (World Development Report, 2007:4). Persistent vulnerable employment in the environment of an increasing and young working-age population has the potential to compromise forthcoming development opportunities (ILO, 2018b:14). The next section describes the incidence of part-time employment in South Africa.

4.7 INVOLUNTARY PART-TIME EMPLOYMENT⁴¹

Various labour markets in the world are undergoing changes. Labour market arrangements are changing as we know them, with many employers opting for non-standard forms of work all in the name of flexibilizing and reducing costs, over and above other factors. Work security is worsening combined with an increasing share of involuntary part-time employment, a deterioration in coverage of collective bargaining and increasing inequality (OECD Employment Outlook, 2017:4). The rising trend of the '*gig economy*' has also brought about significant implications for businesses. Economic conditions within the country have also provided a ready supply of labour, including workers willing to engage in poorly remunerated employment due to lack of other options but very low-quality jobs (Hunt, Samman, Tapfuma, Mwaura & Omenya, 2019:18). A long-term observation of time-underemployment trends shows that between 2013 and 2018, time-underemployment⁴² increased from 4.1 percent to 4.5 percent, and this situation was found to be more prevalent amongst females (6% compared to 3.3% for males), blacks (5.4% compared to coloureds at 3.6%, Indian/Asian at 0.8% and whites at 0.9%) and persons residing in relatively rural provinces (i.e. Eastern Cape and Free State). In his study which was characterising time-related underemployment in Mpumalanga, Niyimbanira (2016:127) found that the more education the participants had, the lower their chances of being underemployed by time. The

⁴¹ Investigates the existence of time-underemployment

⁴² This is the only underemployment statistic measured by Stats SA

absence of other forms of underemployment, other than time-underemployment⁴³, by Stats SA also makes the issue of underemployment particularly difficult to understand.

There seems to have been a rising growth in the number of people on temporary work⁴⁴, predominantly amongst females. Between 2008 and 2014, women were over-represented in temporary employment (Figure 4.13). In the ‘2015 *Measuring and Assessing Job Quality*’ report, South Africa alongside Greece and Spain had the highest levels of labour market insecurity (Cazes, Hijzen & Saint-Martins, 2015:31). Stable employment also seems to relate to education in South Africa, with stable employment rates being high for young people with tertiary education (77%), followed by those with matric (58%) and less than matric (46%) (Ingle & Mlatsheni, 2017).



Figure 4.13: The evolution of temporary employment by gender between 2008 and 2014

Source: ILO (2016d:131)

In terms of the hours worked in the South African labour market by gender, an indicator of decent work (underemployment) shows that males are more likely to work more than 40 hours relative to females because they are employed in occupations that necessitate them to almost certainly work long hours (e.g. managerial), while on the other hand their female counterparts are probably working in vulnerable employment that do not require long hours of work (Department of Labour, 2017:19; Stats SA2019c:40). In 2017, black females were predominantly working in the informal sector (17.1%)

⁴³ According to Stats SA (2008:10), time-related underemployment “refers to those persons who worked less than 35 hours in the reference week and were available to work additional hours.”
⁴⁴ See discussion on this type of employment in Chapter 2.2.9.2

compared to their coloured (7.2%), Indian/Asian (7.6%) and white (6.9%) counterparts, a trend which has been continual over-time (Stats SA, 2017a).

The incidence of part-time employment amongst young workers is not as prevalent in South Africa compared to other parts of the world (see Figure 4.14). In fact, what Figure 4.14 reveals is that part-time employment amongst young people is much higher in developed countries than it is in developing countries. A number of factors can explain this, firstly, voluntary part-time employment would only imply that an individual would like to combine education and work, as well as enabling them to manage family or other personal circumstances while still being the labour market (ILO, 2016d:141). Involuntary part-time employment on the other hand, may reflect the lack of full-time employment, seeing people underemployed. In the '*2018 Labour Market Dynamics Survey*' individuals employed on a contract of a limited and unspecified duration were less likely to retain employment on these contract types and were, therefore, more likely to move out of employment (Stats SA, 2020b:iv).

As can be seen in Figure 4.14, part-time work is more widespread amongst those between the ages of 15-24 years in almost all countries.

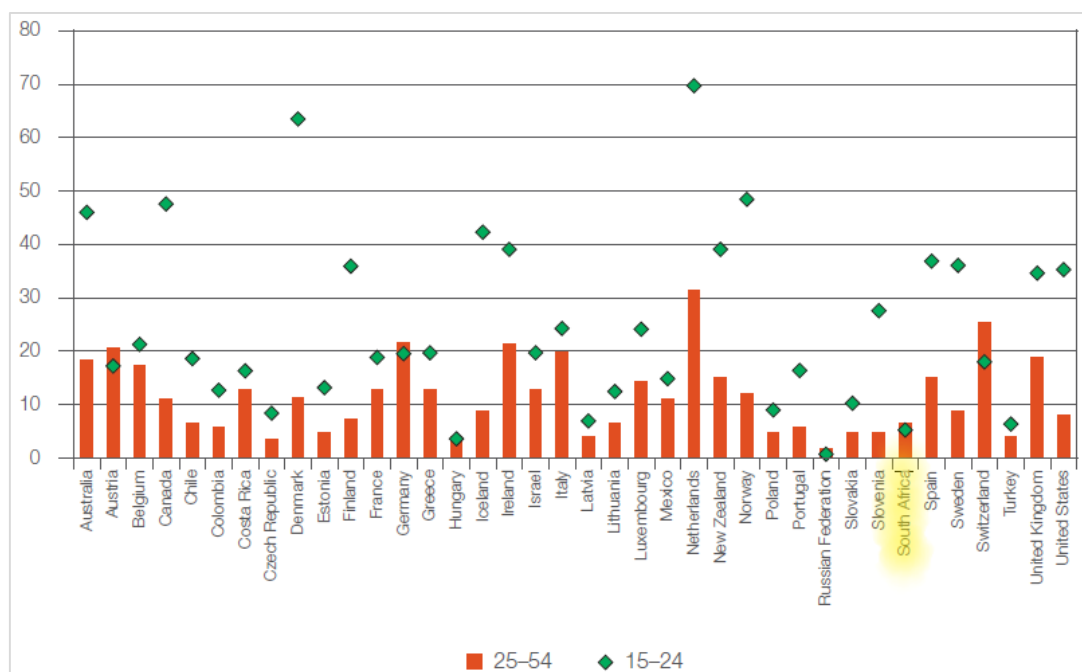


Figure 4.14: Part-time employment amongst young people and adults (2014)

Source: ILO (2016d141)

Recent evidence from South Africa shows that non-standard employment had a major influence in strike actions including violent strikes causing substantial interruptions in production and resulting in reputational risks for the firm in the longer term (ILO, 2016d:191). In the 2018 labour and skills supply

and demand study on Gauteng, Limpopo and KwaZulu Natal, 32 per cent of employers in those regions have increased part-time employees which has important implications for the development of skills (Manufacturing, Engineering and Related Services Seta (MerSETA), 2018:76). Employers are less likely to want to invest in skills for casual labour or may only concentrate on elemental training (for the immediate job at hand) which does not contribute to holistic development of people.

Usually the wage penalty from these kinds of employment are extensive, implying that people are unable to lift themselves out of poverty. However, in South Africa, part-time work is not widespread, although those that do work part-time are usually paid higher hourly rates than full-time workers (ILO, 2016d:226). Evidence from developed countries advocates that even though part-time work is often a good option for those looking for flexibility, it can trap them in low-quality jobs even after that flexibility (World Bank, 2011:9). The next section looks at the labour market policy landscape surrounding young people.

4.8 ANALYSIS OF THE POLICY LANDSCAPE ON GRADUATE LABOUR MARKET CHALLENGES

Having looked at the existence of labour underutilisation in the South African youth labour market, this section of the chapter analyses South Africa's policy landscape. The aim is to map out a picture of government's efforts, if any, on trying to combat labour market challenges facing young people, particularly graduates. Even though unemployment is growing in South Africa, while at the same time employment has been on a positive trajectory, the findings of the 2019 third QLFS show that a large number of these jobs are created in elementary positions, which are characterised by low pay. Points often overlooked include the existence of working-poverty, which is regarded as encountering poverty despite being employed, and informality, which may be more extensive than thought. At the same time, the previous sections highlights that young South Africans experience more negative labour market outcomes than any other age category, experience prolonged unemployment spells, do find employment but mostly casual and informal in nature, receive lowest pay than other age categories, and are sidelined when it comes to equality in the labour market. These worsening labour market outcomes for young people may be suggestive of the possibility that perhaps government's policy is not being effective, fuelled by a sluggish economic performance.

This section of the chapter looks at the policy landscape in South Africa, particularly in as far as higher education and employment for young people are concerned. Governments globally have attempted with different sorts of intercessions to battle difficulties of underutilisation amongst young people (Rankin, Roberts & Schöer, 2015:7). A significant point to recall on account of South Africa is that apartheid significantly affected the country's labour market, henceforth the skills and employment policies

complicatedly identified with that, with the effort to improve injustices brought by the education and labour market prior the regime as one of the ultimate goal (Daniels, 2007:1). Therefore, at the focal point of post-apartheid policies has been the transformation of the education system that during apartheid put off black people and encircled an enormous portion of them at the precarious edge of low to no skills (De Lannoy *et al.*, 2018:14), with restricted prospects, and at the mercy of low pay, vulnerable employment, which ultimately trapped them in the vicious cycle of poverty.

As will be seen in this section, almost all policies including the country's main policy document, that is, the National Development Plan (NDP) stress the importance of education and training as well as economic growth that will absorb the growing labour force. The contention is that regardless of the government's dedication towards the advancement of skills and education, including growth and employment creation; difficulties of employability despite everything remain (World Bank, 2014:10). Different factors as learnt in the previous section are structural in nature (e.g. race) while others have been connected to the absence of work experience, a lack of social capital and networks, and the misalignment between higher education qualifications and the needs of the labour market amongst others. Figure 4.15 provides a record of policies implemented by the South African government between the early 1990s and 2016.

EARLY 1990s	1994–1995	1996–2003	2004–2007	2008–2016
Policy debates on overcoming apartheid legacies	Reconstruction and development	Focus on macroeconomic instability	First and second economy; War on Poverty	Overcoming triple threat of unemployment, poverty and inequality
Discussion Document on Economic Policy; Ready to Govern; RDP	RDP White Paper Special Poverty Relief Allocation	GEAR Jobs Summit	AsgiSA, JIPSA Growth and Development Summit	National Growth Path, National Development Plan
				Employment Tax Incentive Jobs Fund
Special employment creation programmes	National Public Works Programme, Working for Water		EPWP	
			National Youth Service Policy Framework	Kh Ri Gude, Masupatsela, NARYSEC
National Training Strategy	South African Qualifications Authority Act	National Skills Act, Skills Development Act	Department of Higher Education and Training; Department of Basic Education	Green and white papers on post-school education and training
Education Renewal Strategy and Curriculum Model for South Africa	White Paper on Education and Training	Further Education and Training Act	Revised National Curriculum Statement	Curriculum Assessment and Policy Statement
	South African Schools Act, National Education Policy Act	Outcomes-based education/Curriculum 2005		National Skills Accord, Basic Education Accord, Youth Employment Accord
	Labour Relations Act (LRA)	Basic Conditions of Employment Act (BCEA), Employment Equity Act	Employment Services of South Africa	Amendments to BCEA, LRA, EE; Public Employment Services Act
		BEE Commission Report	B-BBEE Act	B-BBEE Amendment Act
National Youth Development Forum		Umsobomvu Youth Fund		National Youth Development Agency
		National Youth Commission		
Small Business Development Corporation	White Paper on a National Strategy for the Development and Promotion of Small Business in South Africa	Nstika Enterprise Promotion Agency, Khula Enterprise Finance	Small Enterprise Development Agency; Small Enterprise Finance Agency	Department of Small Business Development; Youth Enterprise Development Strategy

Figure 4.15: Policy development regarding youth employment by political period (1990s – 2016)

Source: De Lannoy *et al.* (2018:12)

From Figure 4.15, the South African government has undergone a period of significant policy changes to stabilise the country's bleak labour market through the creation of employment and reducing the unemployment rate, most especially amongst young people. Some policies achieved their set objectives while others fell short. The subsequent section discusses a few selected policies, particularly those whose target years have not yet lapsed.

4.8.1 National Development Plan

Youth unemployment remains a critical challenge faced in South Africa, as reflected in the National Development Plan (NDP) objective of reducing unemployment, mainly amongst young people (NDP, 2011). This policy, proposed in 2011, was created so as to achieve a situation in which working-age persons have employment based on the premise that standards of living and dignity of many South African's can only be improved through decent work and sustainable incomes. The focal theme of the

strategy is that a synchronous increment in employment, productivity and incomes will be a certain sure means of narrowing the income inequality gap which as shown in the previous section is high by global standards (National Planning Commission, 2011:24). The NDP point to the necessity for high, medium and low skills in the services sector and manufacturing industry (Reddy *et al.*, 2016:68). In addition, it gives emphasis to the expansion of labour-intensive services and industry and in light of that, aims to create 5.9 million job by 2020 and increase that number to 11 million jobs by 2030 (Reddy *et al.*, 2016:99).

The NDP has been under criticism since its inception, with opponents arguing against its lack of direction and inability to disclose how objectives are to be accomplished. Despite the fact that projects often sponsored by the government do encourage a progression into employment, the effect is ordinarily on a little extent of unemployed youth (Bernstein, 2008). Moreover, the policy is not effective enough in addressing youth labour market challenges and even though graduates do find employment (evidenced by relatively low unemployment rates) and it is a good thing at face value, the kinds of employment they are in matters more.

Akoojee (2012) contends against endless policy changes which have negatively affected the realisation of objectives, neglecting to bring about the delivery of fundamental and hi-tech skills important to start and fuel economic growth and therefore employment. Furthermore, the lack of discussion amongst the appropriate participants comprising employers and higher education institutions has implied that skills have not been viably decided given the shortage of critical skills that are still required by the labour market (this has only been corrected recently through the implementation of the Labour Market Intelligence Partnerships (LMIP). An additional criticism lures attention to the lack of thorough assessment in South Africa on the effect of projects and policies aimed at reducing employment challenges amongst young people (Bernstein, 2008).

4.8.2 National Skills Development Strategy (NSDS)

It is now widely accepted that a skilled labour force has a positive impact on the global competitiveness of a country (Kruss, Wildschut, Janse Van Rensburg, Visser, Haupt & Roodt, 2012:ix). In South Africa, skills development policy, learnerships and apprenticeships have become crucial policy instruments envisioned to augment employability, to train unemployed young people with necessary skills, and to enhance the skills of those already in employment (Kruss *et al.*, 2014:1). At the backdrop of this, a policy was launched in February 2001, which is the National Skills Development Strategy (NSDS) which had the aim of addressing existing and earlier inequalities relating to access to education and training and well as high unemployment rates which have a race and gender element (Du Toit, 2003:18). It is believed that the development of skills is the key to reducing the triple challenges of unemployment,

poverty and inequality as well as speeding up equity and growth in the context of an underperforming economy (Department of Higher Education and Training, 2013:4). In trying to facilitate a successful transition to employment, the NSDS places emphasis on learning in the workplace environment with the argument that the requirements of the labour market should direct learning, that is, both the employers and the employees (Squire, 2011).

The objectives of the NSDS were to be achieved through the Skills Development Act and the Skills Development Levies Act. The main purposes of these acts are to introduce new institutions, programs and funding mechanisms to increase investment in skills development that is linked to economic and employment growth (Du Toit, 2003:18). The NSDS II (2007) again placed importance on equity and skills development and training of a quality nature. According to Squire (2011), NSDS II focused on improving employability which was possible through mechanisms that would assist designated groups in gaining experience and knowledge. The quality of the provision was identified as a problem area needing improvement.

The NSDS III, *“through both the mandatory and discretionary grants of the SETAs, supports training of employed workers and encourage employers to expand such training, in order to improve the overall productivity of the economy and address skills imbalances in our workforce in particular, and the labour market in general”* (National Skills Authority, 2019:8). NSDS III It promotes the growth of FET Colleges in order to address national skills needs. (Squire, 2011). The NSDS III provides beneficiary programmes and activities which are aimed to benefit the vulnerable individuals within South African economies which are blacks, the poor, women (particularly black women), those from rural areas, young people (specifically unemployed young people), the disabled (physical and intellectual); HIV and AIDS (National Skills Authority, 2019:11).

In general, the present NSDS III shows that learnerships and apprenticeship systems indeed lead to employment. In tracking the trajectories of individuals after they completed these programmes, Kruss *et al.* (2014:2) find that more than 70 percent of the apprenticeship and learnership participants encounter a successful transition into stable and permanent employment. in reducing the unemployment rate among young participants. A major criticism of the SETAs is that there is no consistent reporting on targets set against key outputs of the national strategy, thus there are many instances where targets and achievements are unknown, which makes it difficult to track progress (National Skills Authority, 2019:16).

4.8.3 National Youth Wage Subsidy – Employment Tax Incentive (NYWS)

This enormous scale wage subsidy programme was proposed in 2006, propelled in 2010 and executed in 2014 to promote the employment of young people (O’Higgins, 2017:47). This is one of the active

labour market strategies that Government introduced to encourage job creation for the youth (Department of Labour, 2017:19). The NYWS is based on the premise that it could lower the cost of employing young people whose productivity level is difficult for the employer to establish given their inexperience although they may be relatively more educated (National Treasury, 2011; Rankin *et al.*, 2015:6). The impact of the subsidy following its pilot process provides mixed results. In their assessment of the programme, Levinsohn *et al.* (2014) found that the probability of being employed increases to 25 per cent 12 months after the vouchers have been allocated, while the probability declines two years after allocation, with chances of being employed declining to just 10 per cent.

As opposed to the original scheme, which offered direct payments at a moderately significant level, the new scheme offered tax incentives for up to two years to businesses who, after 1 October 2014, employed young people in the 18 to 29 age group, who are earning less than R6 000 (O'Higgins, 2017:69). Evaluations of the full scheme have been unsatisfactory, having not had a significant impact on youth unemployment levels (Ranchhod & Finn, 2016:199; De Jongh & Meyer, 2015). Although the aforementioned policies could assist with combatting youth employability issues, it is important to note that successes of the policies rest on the domain of a generally sound economic environment. According to the UNDP (2014b:29), even though wage subsidies might be effective at making a few employment gains in South Africa, they ought not be viewed as the essential or prevailing tool for dealing with the wider unemployment challenge, they should somewhat be connected to arranged workplace training and be directed at sectors where employment is quick to respond to changes in costs of labour (Burns, Edwards & Pauw, 2010).

4.8.4 Labour Market Intelligence System (LMIS)

The LMIS is more of a research innovation tank than a set policy, in the sense that the government believes that through comprehensive analysis of the labour market demand, important information relating to skills could have an influence on supply (DHET & European Union, 2015). In other words, full information of the labour market relating to skills could eliminate or rather reduce possible labour market frictions such as mismatches and unemployment amongst other factors. If students and those seeking employment are better informed, then education and skills choices will be more informed. Such information may assist the government in its continual observing, planning and policy-making of effective skills development (National Skills Authority, 2019:18). Moreover, higher education institutions will be in a better position to effectively respond to changing labour market demands, while employers will have the option to settle on better strategic choices in coordinating skills demand and supply, resulting in increased productivity and profitability (National Skills Authority, 2019:18).

4.8.5 National Skills Fund (NSF)

The NSF was established in 1999 in terms of section 27 of the Skills Development Act, 1998 (Act No. 97 of 1998). The fund's main sources of revenue include 20 per cent of the SDL, interest income from investments held at the Public Investment Corporation and uncommitted surpluses from SETAs (DHET, 2020). The NSF plans to reserve finances that will contribute in creating graduates who are employable, especially in critical skills, for example, artisan training by framing viable associations between employers as vital partners, and TVET colleges, as institutions that will be chosen for providing training (National Skills Authority, NSDS III, 2019:6). Essentially the aim of the fund contributes towards employment creation to ultimately reduce poverty and inequality (NSF Strategic Plan, 2016:10).

4.8.6 Sector Education and Training Authority (SETA)

SETAs laid the foundation for the emergence of learnerships through the Skills Development Act (SDA) of 1998 and Skills Development Levies Act (SDLA) of 1999. These acts according to the Department of Labour (1999) had an aim to address challenges of previous policies which entailed the National Training Strategy (NTS) of 1991, White Paper on Education and Training of 1995, Green Paper on Skills Development Strategy for Economic and Employment Growth in South Africa of 1997 and the Green Paper on Further Education and Training of 1998. The common goal to emerge from the policies was the need to accomplish more prominent value in education, and regulating and harmonising the education system where it was acknowledged that pre-apartheid higher education was never again fit to the requirements of the post-apartheid economy (Department of Education, 1995, 1998; Department of Labour, 1997; De Lannoy *et al.*, 2018:13). Additionally, the policies noted the existence

of a misalignment between the skills training supplied and the skills training that is needed by employers, as well as how poorly funded skills training was the time. Therefore, both the SDA and SDLA were implemented to address the challenges identified by the previous policies through the SETA (Kraak, 2004; UNDP, 2014b:32).

SETAs were intended to create an incentive for employers to train, to support training, and to supply information about the training needs of each sector. Since 80 per cent of the skills-levy contributions made by employers go towards the SETAs, the remaining 20 per cent goes to a National Skills Fund, which was intended to fund training for disadvantaged groups, particularly the unemployed (Allais, 2012:633). The Department of Labour also ensured that there were increases in the contribution of employers towards the SDLA. Young people have been granted the opportunity to gain work experience through learnerships and internships to better their chances of finding permanent employment. The average age in 2010 of those on apprenticeship programmes being 26 years old, and the average age on learnership programmes being 28, which is slightly more than the typical age range of 20-24 as shown by OECD (Kruss *et al.*, 2012:16).

One of the criticism of the SETA programmes is the failure to meet set targets which Kruss, Wildschut, Janse Van Rensburg, Visser, Haupt and Roodt (2012:13) attribute to the programmes' limited geographical spread where two-thirds of learnership and apprenticeship opportunities are concentrated in affluent metropolises found in Gauteng, Western Cape and Kwa-Zulu Natal with little provision of and access to programmes in poorer provinces where the need is the greatest to assist in regional economic development. These programmes seem to cater for a small number of young people despite there being mass demand from young people for training and certification to enhance labour market success (Kruss *et al.*, 2014:4).

In addition, a large share of learnership enrolments have historically been concentrated at basic and intermediate skills levels which brings up issues on whether this low-skills inclination promotes an economy characterised by multi-level skills. An existing policy concern is that South Africa is falling short of the quantity of skills necessary for economic development and global competitiveness (Kruss *et al.*, 2014:4). Another criticism comes from the side of employers who may not see value in the role and capacity of SETAs given the lack of detail on what SETAs should be doing (Daniels, 2007:11). Daniels further argues the compliance with SETA procedures may deteriorate, more especially if the perceptions of employers remain negative.

4.8.7 Joint Initiative on Priority Skills Acquisition (JIPSA)

JIPSA is a strategy that was created on the basis of the lack and therefore shortage of critical skills, which are accepted will develop and build up South African's economy and improve its competitiveness

globally. According to De Lannoy *et al.* (2018:14) there has been a continued emphasis on skills development as part of a strategy to initiate industrial growth JIPSA, launched in 2006, is such a policy that has identified priority skills areas and developed training opportunities for skills development through internships. The policy additionally aims to enhance skills training such as artisan, engineering, improving TVET while ensuring there is cooperation between the education that is provided and the needs of the labour market (DHET, 2013 – White Paper for Post-School Education and Training).

4.8.8 National Youth Policy (NYP)

The NYP is a policy relating to young South Africans (15 to 34 years) developed with the main purpose of rectifying imbalances of the past and dealing with challenges and needs of young people (National Youth Development Agency, 2015:2). From 2000s there has been various recapitulations of a national youth policy, each with a varying concentration on youth unemployment and ways to address it. The first NYP 2000 was introduced in 1997, although never formally adopted.

The NYP 2009–2014 assumed a significant part in orientating government’s approach on the development of young people while simultaneously paving a way for the National Youth Development Agency (NYDA) which aims to develop entrepreneurship amongst young people (UNDP, 2014b:33).

The NYP 2020 aims to create an environment conducive to the growth of young people and ultimately allow them to reach their full potential. The policy acknowledges that South Africa is an open economy that affected by global economic challenges, but still offers tools and systems that will act as incentives to reduce socio-economic bottlenecks and ultimately accomplish the positive environment (NYDA, 2015:2). The vision of the NYP 2020 is still consistent with earlier national youth policies.

Despite the policy having achieved the goal of increasing access to education and overall skills development, the quality of educations remains a worrying concern. For instance, South Africa is still placed very low the Global Competitiveness ranking on the quality of education. As seen in the discussion in Section 4.3 above, the number of young people in the NEET category is still very high and continues to grow. This raises concerns regarding its effectiveness in addressing basic challenges relating to education before even looking at the youth’s employability.

4.8.9 Expanded Public Works Programme (EPWP)

Having been functioning since 2004, the EPWP has placed emphasis on ensuring that young people are absorbed in the labour market, aided by the offering of on-the-job training to ensure that young people are given the necessary skills. The programme offers work opportunities which are specifically for young people, as a result, 40 per cent of its positions are strictly for young people (UNDP, 2014b:6).

One of the main objectives of the EPWP is to develop key aims of the EPWP to reduce poverty and unemployment through the use of labour-intensive infrastructure projects. There is no doubt that this policy has had very little success in as far as transforming youth unemployment is concerned (Nzimakwe, 2008:211). This is evidenced by the persistently growing youth unemployment rate which is one of the highest in the world as shown in Section 4.3 above. At the same time, the '*2018 Labour Market Dynamics*' report shows that about 74 percent of those who participated in the EPWP did not have a matric, which is worrisome because the chances of transitioning into full-time employment are slim for those whose level of education is below matric (Stats SA, 2020b:vii).

4.8.10 Youth Enterprise Development Strategy (2013-2023)

Through this strategy instrument, the government aims to increase the participation of young people in the economy by purposely encouraging youth entrepreneurship which is capable of contributing substantially to gross domestic product (GDP) (Department of Trade and Industry, 2013:4). These interventions consist of mentorship programmes; business incubation; business infrastructure support; linkages to procurement opportunities; youth entrepreneurship awards; youth entrepreneurship promotion and awareness; special youth projects and sector-specific enterprise creation; national youth service programme; and the youth entrepreneurship collateral fund.

4.9 SUMMARIES AND CONCLUSIONS

This chapter provides a profile of labour underutilisation, particularly underemployment amongst young people. What emerged from the discussion is that South Africa is confronted with serious socio-economic challenges, including an already known high and growing youth unemployment rate, widening inequality and poverty. Young people are overrepresented in the NEET numbers, which is concerning and a threat to social stability. Youth labour market dynamics also seem to show wide differentials across races, gender, occupations and most importantly education levels. In these statistics, blacks, females, elementary occupations and below primary and secondary education encounter more negative employment outcomes relatively. Even though university graduates face lower-levels of unemployment, the discussion in this chapter shows that the problem with young graduates is not so much unemployment but more so with underemployment, in other words the kind of employment they find themselves in. Equally important is also the fact that employment benefits are not equally enjoyed by all South African graduates, with negative employment outcomes most likely to be higher amongst graduates with general courses relative to the technical, particularly within the STEM field.

Low earnings are also another worrying concern where most young people are involved in casual, low-pay and informal employment. Even though part-time employment has been growing, the discussion from the chapter showed that South Africa still fairs relatively better globally. The country's main

strengths lie in increased access to higher education which has better improved chances of finding employment and the economic strides made since the start of democracy in 1994. The main problems are a lack of follow-up on implemented policies to evaluate their effectiveness in attaining set goals. South Africa continues to come up with good strategies, however, there is a lack of detail as to how goals are to be achieved, and for as long as no evaluation is done on implemented policies, the country will continue to find itself in a vicious cycle of deepening problems. In addition, the statistical agency needs to consider having comprehensive measures of labour underutilisation which go beyond unemployment and time-underemployment, as is the case in the US and other BRICS countries. The challenge for the country's policymakers is coming up with policies actually to solve the current structural development challenges. While strong economic growth in the past recent years supported the economy in dealing with these development challenges, the growth rate has not been sufficient. Increased employment will primarily require a rapid, sustained and inclusive growth. The next chapter presents the research methodology adopted in the study.

CHAPTER 5

RESEARCH METHODOLOGY

“Research is formalised curiosity. It is poking and prying with a purpose” – Zora Neale Hurston

5.1 INTRODUCTION

This chapter focuses mainly on the methodology adopted in this study. This chapter has several sections. The research paradigm and philosophical foundations adopted in the study are presented in Section 5.2. The approach and the design followed in the research are given in Sections 5.3 and 5.4 respectively. Section 5.5 presents the sampling techniques used. The description of the data collection process is given in Section 5.6. This section will also highlight the ethical consideration pertaining to the study. Section 5.7 presents the model and techniques of analysis used in the study, while the summary is presented in Section 5.8.

5.2 RESEARCH PARADIGM AND PHILOSOPHICAL FOUNDATIONS

Research by its very nature is about unearthing the unidentified, producing and disseminating knowledge (Kramer, Fynn & Laher, 2019:1). In fact, according to Dunga (2018:110) the nature of human beings has always revolved around finding new insights, particularly on how life can be improved. Formally, Woody (1927:172) defines research is an academic activity that entails *“defining and redefining problems, formulating hypothesis or suggested solutions, collecting, organising and evaluating data, making deductions and reaching conclusions, and at last, carefully testing conclusions to determine whether they fit the formulating hypothesis”*. It is an intentional search of the truth or rather things that one did not know. This enquiry according to Walliman (2011:1) is done with the sole purpose of uncovering interesting or new facts, ultimately to advance the scholarship of knowledge. Research is tied in with learning and creating understanding, gathering evidence and deciphering it to develop an image of the world we are surrounded by (Walliman, 2011:15). Research methodology will then provide an orderly and theoretical scrutiny of the techniques to be applied in the study. This includes concepts on the philosophical foundation adopted by the researcher, hypothetical model, and approaches whether quantitative, qualitative or mixed-methods (Ugwuowu, 2016:4)

The term research philosophy on the other hand has to do with beliefs and assumptions about the development of knowledge (Saunders, 2009:124). Essentially, research philosophies entail crucial assumptions about how the researcher views the world and will highlight the methods and strategies that must be followed in trying to get answers to the research questions (Saunders, Lewis & Thornhill, 2007:101). The researcher’s interpretation of the world is led by aspects such as preconceptions of their

paradigm (Bailey, 1987:24). The importance of paradigms is explained by the direction they provide on the overall research, particularly in as far as the introduction, body and conclusion is concerned (Kuhn, 1962:42).

As such there are many research world view paradigms and consequently, no research falls exclusively into one worldview (Bailey, 1987:25). The present study centres comprehensively on analysing underemployment among university graduates in South Africa. The research question necessitates the adoption of the quantitative method approach of data collection and analysis. As a result, the world view that best fits this research type is the post-positivism approach.

Post-positivism alludes to the intuition following positivism, testing the conventional thought the complete truth of what knowledge is and coming to terms with the fact that there is no absolute objectivity in cases of learning when examining the conduct and actions of people (Phillips & Burbules, 2000:8; Trochim, 2006:5). In a positivist worldview, science was regarded as the only way the truth can be discovered and the world be understood to enable men to envisage and control it (Creswell & Creswell, 2018). Whereas positivists are objective in their enquiry and therefore of a strong view that a researcher does not have to be a part of the world to comprehend it (Healy & Perry, 2000:119), post-positivists on the contrary fail to exclude reality from theory as they believe these two aspects are part of understanding the world, hence post-positivists endeavour to participate with the respondent by trying to comprehend their perception of things (Ryan, 2006:12-13). In other words, post-positivism questions the researcher's ability to know reality with certainty.

The use of empirical testing to research problems also affirms the advantage of the post-positivism worldview since the absence of such testing implies that a problem can never be confirmed as completely accurate (Guba & Lincoln, 1994). Since all measurement is imperfect, post-positivism accentuates the significance of numerous methods and observations in trying to get a better comprehension on what is happening in reality (Trochim, 2006:6). Henderson (2011:343) further argues the research value added by post-positivism to be evidenced by the paradigms' ability to emphasise meaning while clarifying problems that result in societal change. Hence, according to Creswell (2003:7) research problems examined under post-positivism necessitates studying causes that affect conclusions. There are three main types of research approaches that are appropriate for the different types of research projects. The choice of approach is determined by the nature of the problems posed by the research aims, and these approaches are discussed in the next sub-section.

5.3 RESEARCH APPROACH

The research approach is primarily categorised in three categories that include either qualitative, quantitative or a mixed-method approach (Williams, 2007:65). Each of these approaches provides an

outline of how a research study is going to be conducted with the primary goal of finding solutions to the research problem (Malhotra, 2010:102). The quantitative research approach supports the post-positivist angle. According to Creswell (2003:18) a quantitative approach is one in which the researcher largely uses post-positivist assertions for creating knowledge, uses tactics of analysis such as experiments and surveys and collects data on pre-set tools that produce statistical data. The use of the quantitative approach would be necessitated by research questions that have an objective of identifying factors that have an impact on an outcome, or that aim to understand main factors that predict an outcome (Creswell, 2003:22). One of the main advantages of quantitative research is that it is impartial and as a result can give results that are free from bias (Ditsa, 2004).

The qualitative research approach on the other hand integrates several research approaches (Struwig & Stead, 2010:11). The main characteristics of qualitative approach according to Ryan (2006:21) is that i) it attempts to understand a phenomenon historically or culturally; ii) values the participant's interpretations of their worlds; and iii) aims to provide a clear and in-depth picture of a problem. The qualitative approach often incorporates open-ended questions and interviews among others seeking to offer a detailed depiction of the research problem. The main advantage of this approach is that it permits the researcher to obtain unanticipated results and they may define the real view of the respondent (Floyd & Fowler, 2014:88).

Lastly, the mixed-method approach takes into consideration both qualitative and quantitative approaches in the methodology of the study (Johnson & Onwuegbuzi, 2004). The inceptions of a mixed-methods approach go back to the late 1950s where scientists started fusing various techniques for gathering and breaking down information (Creswell, 2003:25). One can subsequently express that these numerous techniques were utilised so as to have various outcomes or rather observe the issue from different points of view (Almalki, 2016:288). As indicated by Creswell and Plano Clark (2007) mixed-method approach can either be quantitative predominant, qualitative dominant or completely mixed. Since the study utilised the survey type of research, a quantitative research approach is regarded as appropriate and fit for the purpose of the study

5.4 RESEARCH DESIGN

A research design is a type of study or inquiry within the three main research approaches, i.e. qualitative, quantitative and mixed-methods. According to Creswell and Creswell (2018:11) these designs provide a researcher with the direction for procedures to be undertaken in the research study. Research designs in quantitative research stem from the post-positivism paradigm and include experimental designs, non-experimental designs and longitudinal designs. Designs under other research approaches are summarised in Table 5.1. Even though quite a few research designs are accessible to choose from, no

specific design best suits a research problem (Sreejesh, Mohapatra & Anusree, 2014:18). In the discussion to follow, only quantitative designs relevant to the current study are explained.

Table 5.1: Broad categories of research designs

Quantitative approach	Qualitative approach	Mixed-methods approach
• Experimental designs • Non-experimental designs • Longitudinal designs	• Narrative research • Grounded theory • Phenomenology • Case study • Ethnographies	• Explanatory sequential • Exploratory sequential • Convergent • Complex designs with embedded core designs

Source: Creswell & Creswell (2018)

5.4.1 Research design adopted in the study (survey research)

According to Ponto (2015:168) survey research includes cross-sectional and longitudinal studies using questionnaires or structured interviews for data collection, with the intent of generalising from a sample to a population. This research technique is often used to gather primary data (Babbie, 1990), where a group of people are selected to gather data from some of them to get an impression of how the whole group thinks or does things (Leeuw *et al.*, 2008:1). This is reiterated by Creswell and Creswell (2018:12) who maintains that a survey research provides a numeric explanation of approaches or views of a population by investigating a sample of that population. Their answers will then be the data that is going to be analysed (Creswell, 1994:117; Kelley *et al.*, 2003:261) with the intent of generalising from a sample to a population (Fowler, 2014).

The use of surveys has over the years gained so much usage as a results of the versatility it offers in obtaining data. Surveys can be delivered in three ways, *inter alia*, in person, via post or through the internet, and the adoption of either method will depend on the requirements of the researcher (Sreejesh *et al.*, 2014:17). In this study, data were collected through an electronic survey, an online survey in particular. The questionnaire was stored into a Google Forms server where the questionnaire received a unique link that was to be followed by the respondents. Given how difficult it would be to access email addresses of graduates, access was then requested from the university in question to have the survey link with the informed consent (see Appendix 1) sent to its alumni database. The respondents were then asked to visit the website by just clicking the e-mailed link and respond to the survey.

The advantages of using online surveys seem to outweigh its disadvantages (Ditsa, 2004:764). Surveys according to Walliman (2011:97) are a useful way for gaining quantitative data, as a data collection method, surveys are easy and convenient for respondents, in addition to being inexpensive and fast

to administer to a large number of cases covering large geographical areas. Online surveys in particular allow for a large number of variables to be measured without affecting time or costs, proving the design to be much more efficient (Krosnick, 2010:160). Additionally, online surveys are free from bias or personal influence by the researcher on the respondents and most importantly, ‘embarrassing’ or awkward questions can be asked with a reasonable probability of receiving honest answers or responses (Bailey, 1987:148). Lastly, the use of online surveys can actually result in quick responses and large feedback, while at the same time being less expensive than traditional survey methods (Kelley, Clark, Borwn & Sitzia, 2003:261; Sreejesh *et al.*, 2014:10).

However, the use of survey research has some disadvantages. The chances of getting no responses are higher for online surveys (Lynn, 2007:35) as the respondent’s may put it off to later and may even forget to complete it (Bailey, 1987:149). The ‘why’ type of questions may raise even more questions; and generalisation can also be risky except if careful procedures are taken by the researcher to avoid it (Singleton *et al.*, 1993:12). Besides requiring time and skill to design and develop, not everyone can complete questionnaires (Walliman, 2011:97). Sreejesh *et al.* (2014:11) alludes to the lack of internet availability as an additional disadvantage of online surveys. Online surveys can also produce data that are likely to lack details or depth on the topic being investigated (Kelley *et al.*, 2003:262). Having identified and explained the research design, the next section describes the sampling strategy adopted in the study.

5.5 SAMPLING STRATEGY

Sampling is a procedure that is followed to ensure that a sample as a sub-set of the whole population is fairly representative of the population (Landreneau, 2011). In quantitative dominant study, representation is a crucial element used to evaluate the quality of the sample, and according to Sreejesh *et al.* (2014:19) a wrongly selected sample will result in erroneous and dubious outcomes since the sample will not be reflective of the physiognomies of the whole population. The sampling procedure entails five main aspects as indicated by Salant and Dillman (1994): description of the target population, selection of the sampling frame, sampling technique, and sample size determination. Data collection is discussed separately in section 5.6. This section provides a detailed discussion of the various sampling strategies with emphasis on the ones adopted in this research study.

5.5.1 Target population

A target population is explained as a population that a researcher intends to study and produce results from (Neuman, 2011:246; Landreneau, 2011). Whilst the survey attributed the collection of data across all ages of graduates, for the purpose of this study, the sample was restricted to young graduates in the 20-34 age category. These graduates had to be in possession of a higher education qualification (i.e. at

least a bachelor's degree or equivalent) at a traditional university in South Africa. "*At least three years of hard labour spent in colleges and universities*" (South African Graduates Development Association, 2012:3).

5.5.2 Sampling frame

The next aspect of research includes the sampling frame. The sample frame encompasses the individuals who have been included in the sample. More formally defined, the sampling frame according to Adams *et al.* (2007:88) indicates the section of the population from which the sample is selected. In this study, the sampling frame included a random selection of university graduates of any age who have a least a three-year higher education qualification, where afterwards, data were then restricted to young graduates under the age of 35.

5.5.3 Sampling technique

The third step followed in the sampling procedure comprises the selection of the sampling technique. Samples can be selected from a population either through probability sampling or non-probability sampling. Within the probability sampling technique, a sample is drawn randomly in such a way that there is fair representation, while with non-probability sampling technique, little or no attempt is done to have a representative sample (Sreejesh *et al.*, 2014:19), since the sampling depends on the researcher's subjective assessment affecting the reliability of results (Dunga, 2018:116). Probability sampling is regarded as having larger confidence which is attributed to its equal and independent probability of choosing population elements (Landreneau, 2011). Maree and Pietersen (2012b:172) maintain that "*with probability sampling, the selection process is free of human and subject interference*", which is considered to be one of the most important advantages of this method (Singleton *et al.*, 1993:143).

The four main types of probability sampling consist of the simple random sampling, stratified sampling, systematic sampling and cluster sampling, while non-probability sampling techniques include quota sampling, convenience sampling, snowball sampling and purposive sampling. Kelley *et al.* (2003:264) stress the need for using the most correct and appropriate sampling method and at the same time also know both its benefits and limitations. As previously mentioned in section 5.5.1 the study adopts random sampling techniques where the survey link was sent to the alumni database of the university in question and any graduate could complete the survey randomly disregarding their age. After the survey, the sample was then restricted to only include graduates between 15 and 34 in order to fit in the young graduate classification.

5.5.4 Sample size

Another crucial facet of sampling is the decision on the size of the sample. In other words, the adequacy of a sample size. A researcher needs to be mindful of the fact that the final sample size may be much smaller than the initially chosen sample size mostly due to factors such as a lack of response, unfitness of data or both. However, in most cases, especially when it comes to quantitative methods, a larger sample gives a better estimate of the population although it can be difficult to obtain an adequate number of responses (Kelley *et al.*, 2003:264; Sreejesh *et al.*, 2014:20).

Given the shortage of studies on graduate underemployment in South Africa, only limited studies were found at the time of writing (e.g. see Baldry's 2016 study which aimed to examine the influence of demographic and educational characteristics on the employment/unemployment status of South African graduates), which had a sample of 1175 respondents. Other studies, like Allan *et al.* (2017:99) had a sample of 678, also 513. Owing to the challenges of non-response, the overall sample size, disregarding the respondents age was 1072, where graduates younger than 35 were only 576 in total. Statistically, the 576-sample size is reasoned to be adequate, as normal approximation and the central limit theory requires a sample size of more than 30 (Gujarati & Porter, 2010; Swanepoel *et al.*, 2010). Furthermore, the selected sample size is also in line with the proposed recommendations that the use of multivariate statistical analysis requires sample sizes between 200 and 500 (Avikaran, 1994:29). The data collection method is explained in the subsequent section

5.6 DATA COLLECTION METHODS

The next step which links to the sampling process involves the determination of the data collection process which entails collecting and measuring information to allow the researcher to answer the research problem ultimately, assess the hypothesis and evaluate results (Creswell, 2009:161). With data collection as one of the most imperative phases in conducting research, making certain that data is collected honestly and accurately will ensure that quality evidence is captured, translating into rich data examination that will permit substantial solutions to the posed research inquiries (Kabir, 2016:202).

There are two broad categories through which data can be gathered: primary data collection methods as well as the secondary data collection methods. Primary data collection can be quantitative or qualitative, inclusive but not limited to interviews, questionnaires (surveys), focus groups, observations and so on, while secondary data collection method is a type focuses on data that has already been made available in books, the internet and so on. For this study, both primary and secondary data collection methods were employed, where primary data collection necessitated the use of a survey research, online survey in particular, whereas previously mentioned, the survey link was distributed to the alumni database of the university in question. The survey tool was developed through literature and empirical reviews in

Chapter 2, 3 and 4. Secondary data collection method was used in writing the literature chapters. The section that follow provides a discussion on the details of the measuring tools that was used.

5.6.1 Questionnaire design

A questionnaire assumes a crucial role in primary data collection and as such general rules for questionnaire designs follow that a well-designed questionnaire is not only clear, but also concise to the reader (Salkind, 2012:149) and short to complete, i.e. not taking more than 20 minutes of the participant's time (McDaniel & Gates, 2013:359). As maintained by Dickinger (as *cited* by Lang, 2007:113) correctly developing and administering the survey tool will successfully contribute towards answering the research problem. It therefore follows that well-structured questionnaires will have a logical flow, avoiding long and confusing questions and at the same time ensuring that questions are short and straight to the point (de Jongh, 2017:112).

In designing the questionnaire of the current study, careful attention was paid to the respondents in mind, ensuring that the questions asked are not only less confusing but also still assist in answering the research problem. The questionnaire underwent a peer review process to make certain that there are no technical and applicability issues. The pilot-testing of the survey (which explained in detail in section 5.6.4) also confirmed that the length of the questionnaire completion was less than the prescribed 20-minute duration and only took fewer than 10 minutes to complete. All this information was indicated in the cover letter with the questionnaire link sent to the respondents. Once online, the first page had clear instructions pertaining to how the sections should be completed and upon having read these, the respondents had to provide consent on whether they agree to complete the survey or not. Both the cover letter and the questionnaire are attached in the appendix section.

5.6.2 Questionnaire format

The data collection instrument was developed according to the set empirical objectives clarified in Chapter 1. The ideas of the survey were mostly adopted from the various ILO International Conference of Labour Statisticians (ICLS) working documents all to try to go beyond unemployment and focus on other forms of labour force underutilisation, particularly underemployment and inadequate employment situations. In addition, more ideas were adapted from the BLS Alternative Measures of Labour Underutilisation since the USA is one of the countries in the world that comprehensively measures labour underutilisation over and above unemployment (see Chapter 2). This was important since as mentioned in Chapter 1, Stats SA only measures time underemployment, so the use of questions from the ILO and BLS provided an opportunity to now measure and understand underemployment more broadly in the South African context. More ideas were also taken from the literature review in Chapter 2 (for instance from, Berger, Bollinger & Kentucky, 2003; Bonnal, Lira & Addy, 2009 among others).

Another aspect of the survey included the use of a newly validated subjective underemployment scale by Allan, Tay and Sterling (2017:94-95) which is categorised into six dimensions: pay status, field, hours, involuntary temporary work and poverty-wage employment (see Table 5.2) with 37 items in total. The scale actually touches on the most important aspects of underemployment as indicated in literature and is the first to measure underemployment in this way expansively, and the at the time of the current study, there was no indication of the use of the scale in South Africa, also on university graduates.

Table 5.2: Subscales of the SUS

SUS subscales	Explanation	No of items under subscale
Pay	This dimension entail an employee's view of whether they are underpaid relative to their former employment or to people with similar skills, abilities, knowledge, qualifications (SAKQ) and other characteristics (Feldman, 1996)	7
Status	Status underemployment is when people have a position they perceive to be of a lower hierarchical or societal status than a previous position or relative to peers with similar SAKQ	6
Hours	This subscale defines underemployment as working fewer weekly hours than desired (involuntary part-time work)	6
Temporary work	Temporary work in this instance refers to work that is temporary (time-limited), conditional, precarious, or irregular.	6
Field	Field based definitions explain underemployment as working outside a person's area of education, training or expertise	6
Poverty-wage employment	This means being in employment that fails to provide a reasonable income to enable decent living, typically referred to as the working poor.	6

Source: Allan *et al.* (2017:94-95)

The SUS scale made use of a Likert scale as a form of scaling technique which ranged from 1 = strongly disagree, disagree, slightly disagree, neither agree nor disagree, slightly agree, agree to 7 = strongly agree. One of the limitation of the scale as mentioned in Allan *et al.* (2017:103) was that it was tested on a sample that was largely white (76.5% white respondents, followed by Africans 9.9%, Hispanic 5.2%, Asian 4.3%, Multiracial 2.5%, Native Americans 1.1% and Arab 0.4%) and the second study still had a similar representation, so the current study validated the use of the scale in a different population which as seen in Chapter 6 was rather diverse although still dominated by the white race. In validating the scale, Allan *et al.* (2017:97) conducted two studies (N=678 for study 1 and N=513 for study 2, where exploratory factor analysis (EFA) was used for each underemployment construct and then confirmed with confirmatory factor analysis (CFA). The SUS initially had an item pool consisting of 78 items: pay (20 items), status (17 items), field (12 items), hours (10 items), involuntary temporary work (6 items), and poverty-wage employment (13 items). These were tested through the use of EFA,

item reduction through CFA was done and the resulting items were scaled down to 37 items after having removed 32 redundant items. All this was done in study one. Study two followed intending to confirm the factor structure from study one and establish convergent validity of the scales. The scores resulting from the scale demonstrated acceptable reliability. Table 5.3 shows the established reliability and validity of the constructs.

Table 5.3: Reliability and validity of the SUS

SUS subscales	No of items under subscale	Estimated internal consistencies (α)
Pay	7	0.97
Status	6	0.96
Hours	6	0.95
Temporary work	6	0.97
Field	6	0.95
Poverty-wage employment	6	0.96

Source: Compiled by Author

The correlational model was the best fit to the data in Study 1 ($\chi^2(614) = 1343.69$, $p < 0.001$, AIC = 1521.69, CFI = 0.95, RMSEA = 0.06, 90% CI [0.06, 0.06], and SRMR = 0.04, and all indicators loaded on their factors at values of 0.76 and above: pay (0.84–0.93), status (0.76–0.87), hours (0.77–0.89), temporary work (0.88–0.91), field (0.84–0.93), and poverty-wage (0.88–0.94), and the bifactor and correlational models were the best fit to the data in Study 2 ($\chi^2(614) = 1683.45$, $p < 0.001$, AIC = 1861.45, CFI = 0.95, RMSEA = 0.06, 90% CI [0.06, 0.06], and SRMR = 0.04, and all indicators loaded on their factors at values of 0.82 and above. Regardless, the correlational, higher-order, and bifactor models did not differ practically from one another in either study. Taken together, the results of the studies are mixed but advocate that the dimensions of underemployment, though being unique constructs, share underlying variance. The next section describes the layout of the measuring instrument used in the study.

5.6.3 Questionnaire layout

The study's empirical objectives assumed an imperative part in the development of the questionnaire. The aim was to ensure that not only are the actual questions carefully constructed but that they also flow logically so as to ascertain less confusion to the respondents. The use of closed-ended questions made it easier for the respondents since this was an online survey rather than a physical one with enumerators. This also simplified the data analysis and interpretation process. The actual questionnaire had six sections, where section A entailed demographic information such as gender and age. Section B followed with the respondents' higher education, where the aim was to produce information on the field

of study and factors that influenced their choices. In section C, respondents had to indicate their employment status, i.e. whether they are employed (part-time or full-time) or unemployed, where choosing the latter would enable the respondents to proceed and complete section D, and choosing the former would necessitate the completion of both section E and F, which is where the crux of the study lies. Even though unemployed respondents only completed section D at the time of the survey, it still entailed important questions which would assist the researcher in understanding the nature of the respondents' unemployment status. Questions asked included those on whether the respondent would decline a job offer below their qualifications, whether they would take a job below the average market salary of those with similar skills, abilities and qualifications, and whether they would take a part-time job.

As aforementioned, sections E and F were to be completed by employed graduates at the time of the survey. Section E in particular had the purpose to understand the nature of the respondents' employment including the reasons why they took their current employment, their work experience, their opinion about their jobs and whether or not they would consider themselves as underemployed, be it by working hours, qualifications/study field or income, and most importantly why that is the case. The last section was on the Subjective Underemployment Scale (SUS) which as previously mentioned was on a Likert scale, with statements under each of the seven subscales. Respondents had to indicate how much the statements apply to them considering their main job where they spend a large portion of their time. The overall intention of the section was to address the respondents' perceptions of their underemployment status. Table 5.4 illustrates the questionnaire sections that helped answer the empirical objectives of the current study.

Table 5.4: Questionnaire items that helped answer the empirical objectives of the study

Empirical objectives	Questionnaire section	Items
To analyse the extent of underemployment among graduates.	Section E	3; 5 – 7A; 8; 9A
Examine underemployment variations by historical nature of the campuses of the university in question	Section A	1; 3; 4
Determine the relationship between the graduate's demographical variables (biographical differences), social, economic background and underemployment.	Section A	A2 – A6;
	Section B	A1; 2;
	Section E	1 – 9A
Determine the perceptions of graduate underemployment.	Section F	
Determine factors which influence underemployment status and also according to the time-related, skills-related and income-related definition of underemployment.	Section A, B and E	

Source: Author's own compilation

The subsequent section highlights how the pre-testing techniques used in the measuring instrument before the finalisation process.

5.6.4 Reliability and validity (Pilot testing of the survey)

Reliability is the extent to which a measuring instrument is repeatable and consistent (Pieterse & Maree, 2012:215). In simple terms, with reliability, the findings should be the same when the same measuring instrument is utilised at different times or administered to different subsets from the same population. By validity, a measuring instrument is valid if it measures what it is meant to measure (Pieterse & Maree, 2012:216). In this study, the SUS was still subject to internal reliability through the use of Cronbach's alpha coefficient and results were all above $\alpha = 0.80$ showing moderate to high reliability. In order to validate the survey tool, both face and content validity measures were applied which was through the use of a pilot study. Face validity is the extent to which a measuring instrument appears to measure what it purports to measure. It refers to the pellucidity or relevance of an instrument as it appears (Gravetter & Forzano, 2012) or in simple terms, whether or not it looks valid (Pieterse & Maree, 2012:217). Content validity on the contrary, give credit to the assessment of the questions contained within the instrument and if these items accurately reflect the topic of interest (DeVon *et al.*, 2007:157).

According to Creswell and Creswell (2018:154) "*pilot testing is important to establish the content validity of scores on an instrument, to provide initial evaluation of the internal consistency of the items and to improve questions and instructions*". In other words, pilot study is defined as a small-scale version or trial run done in preparation for the major study (Polit *et al.*, 2001:467). In the study, a number of experts in the field were identified to test the questionnaire and their comments were used to revise the final instrument. In order to identify and eliminate potential problems with the questionnaire, a sample of 15 respondents pretested the questionnaire. Adjustments to the questionnaire were made based on the feedback received. As argued by Teijlingen and Hundley (2001:289) the importance of pretesting a questionnaire ensures that the right questions are asked in terms of correctly answering empirical objectives and also there is a logical flow to the sequence of the questionnaire. In the study, a statistician also reviewed the overall revised questionnaire against the study's empirical objectives to ensure cohesion and that there are no issues with the design of the questions and after receiving the thumbs up, the next step was to have the questionnaire on the online platform. This was done via Google Forms. Given that the survey in the study was online, it was also important to thoroughly test the technology to make sure that there are no navigational issues and delayed download. A link to the questionnaire was provided on the cover letter that was sent to the alumni database of the university in question. The questionnaire was accessible online as from June 1 2018 – 30 September

2018. The collected quantitative data was analysed by means of SPSS and the findings are discussed in Chapter 6.

5.6.5 Ethical considerations

Ethics play a crucial role in academic research and consequently every study must uphold the best research standards. This implies that honesty and integrity are important and that respondents are always taken into consideration at all times. Following the successful design of the study's data collection instrument, the final questionnaire was presented before the university's research ethics committee and was approved with ethics reference number ECONIT-2017-061. The study complied with ethical standards of academic research where participation in the study was voluntary, anonymous and confidential. Informed consent was indicated on the web home page of the questionnaire. Respondents were informed on the details of the study, its goals and that the responses would only be used for statistical purposes. The next step following approval of the data collection instrument by the Research Ethics Committee (REC) of the faculty in question was to request access into the alumni database through Research Data Gatekeeper Committee (RDGC). This process was long and the researcher needed to motivate why the target population was appropriate and had to ensure privacy of the personal information of the desired respondents. After successfully meeting all the requirements by the committee, access was granted with reference number ***-GK-2018 (*the ethical clearance certificate can be given upon request*). For ethical reasons, the study will not disclose the name of the university where graduates were sourced. The section to follow delves on various techniques employed in the study.

5.7 TECHNIQUE OF ANALYSIS

The core objective of the current study was to analyse underemployment among young university graduates in South Africa. The achievement of the core objective was supported through the formulation of several empirical objectives which were provided in section 5.6.4. Both descriptive statistics and econometric techniques of data analysis were employed to attain the study's empirical objectives. This was done through the use of the Statistical Package for Social Sciences (SPSS version 26:2020) software tool. The first section of the results describes the general demographic overview of the sample, detailing the age distribution (younger young aged 24 and below, mature young belonging in the 25 – 29 age category and the adult young who are between the ages of 30 and 34), race, marital status, campus attended (historically white or historically black), high school attended; the second part of the first section presents the relationship between underemployment and the various selected socio-economic status factors; the third and last part delineated on underemployment and key factors in the higher education status of the respondents. The results were presented in the form of tables and charts. In

particular, this was done through frequencies and cross-tabulations with relevant significance tests. In essence the first section answered empirical objectives one, four and five.

The second section presented the findings on the SUS (perceptions of underemployment), primarily assisting in answering empirical objective four, and in some way, the results in this section linked to all empirical objectives. The SUS is subject to various tests such as the Keyser-Meyer-Olkin (KMO) to determine the factorability of the data, and also others tests to confirm reliability and validity of the constructs to determine how the instruments performs in this specific set of data. This then allows the use of a principal axis factor analysis with oblique rotation (direct oblimin) method. The overall aim was to investigate respondents' perceptions of their underemployment status which is categorised into six types.

The third section of the results employed econometric techniques through the use of the binary logistic regression to ultimately answer empirical objective five. The model for the regression used is discussed in detail in the next section. In addition, an Ordinary Least Squares (OLS) regression model, which is the second regression model that is used to answer empirical objective four and five of the study, discussed in the next section. In the last section of the results, a theoretical model summarising or rather explaining underemployment within the context of South Africa is provided. The model pertains is described in the next Chapter.

5.7.1 Exploratory Factor Analysis (EFA)

EFA is a type of factor analysis and a data reduction method used to explore the probable fundamental factor structure of a set of estimated variables without forcing any biased structure on the result, therefore, used to uncover basic factor structure of a set of variables (Child, 1990). This technique according to Field (2018:779) has three key uses *“to understand the structure of a set of variables, to measure an underlying variable and to reduce a data set to a more manageable size while retaining as much of the original information as possible”*. The small or reduced factors from the large number of variables are capable of explaining the observed variance in the large number of variables.

In this study, an EFA was used on a data set collected in Section F of the questionnaire. The use of EFA necessitates certain considerations that need to be taken by researchers prior to use which entail the quantity of factors to be extracted from the data, the adequacy of the data and the reliability of the data of the extracted components. Even though the SUS is an existing scale which has been validated, as argued by Hyman, Lamb and Bulmer (2006) it is important to report how well an existing instrument performs in a new study and whether the structure of the constructs is what it was when it was originally conceptualised.

Prior to the carrying out of the EFA, the Keyser-Meyer-Olkin (KMO) test and Bartlett's test of sphericity were used to analyse the factorability of the data. The KMO (which measures the adequacy of the sample) statistic ranges between 0 and 1, where a value close to 0 is indicative of large partial correlations relative to the sum of correlation which shows the use of factor analysis as inappropriate, hence more data should be collected, while values closer to 1 imply the opposite, showing distinct and reliable factors (Field, 2018:798). The Bartlett's test on the other hand, tests if a sample has equal variance, and it is significant where the null hypothesis (i.e. correlation matrix has an identity matrix) can be rejected ($p < 0.05$) (Pallant, 2010; de Jongh, 2017:124). The Keyser's criterion which suggests reducing factors with eigenvalues less than 1.00 and retaining those greater than 1.00 (Braekene, Marcel & van Assen, 2017) was used in the study as a method to extract factors. The EFA was done using the oblique rotation method (direct oblimin) on the scale items. Component reliability was tested through the use of Cronbach's alpha.

5.7.2 Model specification (Binary logistic model)

The fifth empirical objective of the study was to determine factors which influence underemployed individuals according to the time-related, skills-related and income-related definition of underemployment. Before having the three regressions on the three underemployment types, a logistic regression, in particular, a binary logistic regression was used to analyse the effect of socio-economic demographic factors on the underemployment status of young graduates in the sample. Underemployment status in this case was a categorical variable defined as 0 for not underemployed and 1 for underemployment.

According to Sarkar and Midi (2010:479) a logistic regression *"is a sophisticated technique for predicting the probability of an even, given a set of predictor variables"*. The binary logistic regression is a model for dichotomous data when the response variable takes one of only two possible values representing success and failure (Pampel, 2000). The explanatory variable may be continuous or discrete (Sarkar & Midi, 2010). In general, logistic regression, regardless of which specific logit model has been chosen, is highly effective and accurate in estimating the probability that an event will occur (Kiang, 2003), and its usage has become very important in social sciences.

Initially, one considers the case where the response P_i is binary, in other words, taking on only two values that for convenience are coded as zero or one (Gujarati, 2004:595-596), defined as:

$$P_i = \frac{1}{1 + e^{-(\beta_1 + \beta_2)}} \dots\dots\dots (5.1)$$

Equation 5.1 can also be expressed as:

$$P_i = \frac{1}{1+e^{-Z_i}} = \frac{e^Z}{1+e^Z} \dots\dots\dots (5.2)$$

Where $Z_i = \beta_1 + \beta_2 X_i$.

Equation 5.2 is known as the logistic distribution function. Thus, as Z ranges from $-\infty$ to $+\infty$ P_i ranges between 0 and 1 (Gujarati, 2004:596). This equation is basically linearized by stating the ratio of the probability of the success event to that of the complement in the case of a binary variable, which is also known as the odds ratio which is given as follows;

$$L_i = \ln\left(\frac{P_i}{1-P_i}\right) = \beta_0 + \beta_1 X_i \dots\dots\dots (5.3)$$

Where P_i stands for probabilities of either being underemployed or not and X_i are the various explanatory variables that predict the probability of whether the individual is underemployed or not. For estimation purposes, equation (5.3) has the error term and all the other explanatory variables included as follows:

$$L_i = \ln\left(\frac{P_i}{1-P_i}\right) = \beta_0 + \beta_1 X_1 + \dots \beta_n X_n + u_i \dots\dots\dots (5.4)$$

The dependent variable is therefore the probability of being underemployed, where yes response is coded as 1 and a no response is coded as 0. Therefore, if individual is underemployed $L_i = \ln\left(\frac{1}{0}\right)$ and if not underemployed $L_i = \ln\left(\frac{0}{1}\right)$. β_n Constant term associated with X_n which are the categorical values that will be entered as dummies where the number of dummies will be $n - 1$; where n is the number of categories. This means that the number of variables required is one less than the number of groups that are recorded (Field, 2018). Henceforth, where there are five categories, four dummies were created and the fifth dummy served as the baseline or reference point against which all other groups were compared.

Applying the discussed model as shown in equation (5.4), the regression for the aforementioned empirical objective will have all the variables of interest formulated as follows:

$$L_i = \ln\left(\frac{P_i}{1-P_i}\right) = \beta_0 + \beta_1 X_{MS} + \beta_2 X_{Loc} + \beta_3 X_{car\_guid} + \beta_4 X_{age} + \beta_5 X_{race} + u_i \dots\dots\dots (5.5)$$

β_0 represents the intercept term of the regression

The other parameters are defined as follows:

Where $\beta_{1,2,\dots,n}$ are the coefficients for the corresponding independent variables $X_{1,2,\dots,n}$

u_i is the error term of the regression

The explanatory variables included in the model are marital status, geographical location, career guidance, age and race and are assumed to influence underemployment status. Table 5.5 elucidates the coding of the explanatory variables including a description of the dummy variables that were used.

Table 5.5: Explanation of the explanatory variables in the ANOVA model

Variable	Description	Coding / dummy
MS	Marital status	Categorically defined as 1 = not married (single or widowed); 0 = married (married and living together)
Loc	Geographical location	Categorically coded as 1 = urban; 0 = rural
Car_guid	Career guidance	Categorically defined as 1 = received and 0 = not received
Age	Age	3 dummy variables created as follows: $\mathcal{D}_1$ defined as 1 = 20-24 and 0 = otherwise; $\mathcal{D}_2$ is defined as 1 = 25-29 and 0 = otherwise; $\mathcal{D}_3$ is defined as 1 = 30-34 and 0 = otherwise
Race	Population group	3 dummy variables created as follows: $\mathcal{D}_1$ defined 1=Black and 0 = otherwise; $\mathcal{D}_2$ defined as 1=Asian/Indian and 0=otherwise; $\mathcal{D}_3$ defined 1=Coloured and 0 = otherwise; White = reference group

Source: Compiled by author

To determine the usefulness of the model, the Cox and Snell R squared and the Nagelkerke R squared were estimated (Pallant, 2010:176). Both tests describe the proportion of variance in the outcome that the model successfully explains. The model's adequacy including its fitness and the extent to which it describes the data was assessed through various tests such as Hosmer-Lemeshow goodness of fit test. In addition, it was important to determine whether there was multicollinearity⁴⁵ with the data used. This was through the use of different collinearity diagnostics which entailed use of variance inflation factors (VIF) (Hair, Black, Babin & Anderson, 2010:201). If the VIF values are less than 10 (or the tolerance values are greater than 0.1, then this is an indication that there is no cause for concern (Field, 2018:418). Before the regression analysis is performed, it is important to determine whether the chosen model fits with the data. This was performed through conducting the Omnibus test of model coefficients.

5.7.3 Model specification (Ordinary Least Squares)

To supplement the first binary logistic model, an OLS regression model was employed, in essence, assisting in answering empirical objective four and five. Here, three regression models were

⁴⁵ Multicollinearity exists when there is a strong correlation between two or more explanatory variables in a regression (Myers, 1990)

individually employed to analyse the determinants of the three types of underemployment which were measured by the three perceptions of underemployment in the SUS scale (see Table 5.6). Three indices were calculated based on the responses of the participants on the three perceptions. The indices were measured as a continuous variable, where a lower score indicated agreement with the corresponding underemployment type and a higher score disagreement or absence of a corresponding underemployment type.

Table 5.6: Perceptions of underemployment

Main type of underemployment	Index	Reasons for underemployment
Income underemployment	Underpayment	• My pay is less than other people with my qualification • I am paid less than those with similar credentials • I am underpaid compared to those with my level of knowledge. • I earn less than people with similar skills. • I make less than others with my level of education. • My pay is lower than others with my level of experience. • I earn less than others with my level of ability.
Skills underemployment	Field	• I am forced to work outside my desired field. • I had to take a job outside of my field. • I cannot get a job related to my education. • I am unable to work in a job related to my formal training. • I was compelled to take a job unrelated to my education. • I want to work in a different field, but there are no jobs available.
Time underemployment	Hours' discrepancy	• I need to find a job that allows me to work more hours. • I work fewer hours than I need. • I work too few hours. • I do not work enough hours. • I would work more hours if I could. • The number of hours I work is not enough.

Source: Compilation by Author, adapted from Allan *et al.* (2017:104-105).

A linear regression model was then applied to determine the perceptions of underemployment. The study follows the approach similar to the one adopted in studies by Dunga (2016) in which three regression models were run for each perception of poverty. The linear regression model was formulated as follows:

$$Index_i = \beta_0 + \beta_1 X_{MS} + \beta_2 X_{Loc} + \beta_3 X_{car\_guid} + \beta_4 X_{age} + \beta_5 X_{race} + u_i \dots\dots\dots (5.6)$$

The indices were: Income-underemployment for Regression 1, Skills-underemployment for Regression 2 and Time-underemployment for Regression 3. All three regressions employed the same independent variables defined as follows:

- Marital status is a categorical variable defined as 0 for married and 1 for not married,
- Geographical location was dichotomously coded as 0 for rural/urban locality and 1 for urban/city locality,
- Career guidance was another categorical variable which was defined as 0=not received and 1=received,
- Age was also categorically defined as 0=30-34 years and 1=15-24 years,
- Race is also a categorical variable. White was the benchmark point. Therefore, 1=Black 0=otherwise; 1=Indian/Asian 0=otherwise; 1=Coloured 0=otherwise,
- The parameter β_0 is the intercept or constant,
- β_{1-5} are the coefficients for the independent variables.
- u_i is the error term of the regression.

A number of diagnostic tests were done, including collinearity testing to determine multicollinearity and the model fitting information which compares the model to the baseline. An ANOVA⁴⁶ analysis (considering F-statistics and p-values) was also performed. Parameter estimates for the model which is the most important part of the regression results are also presented. The results of the study and the discussion thereof are presented in Chapter 6.

5.8 SUMMARY AND CONCLUSION

The chapter presents the research methodology employed in the study. The relevant theoretical framework on the research paradigm underlying this study was provided. The use of post-positivism paradigm necessitated the adoption of quantitative research approach, and survey research in particular. This permits a great sample data collection so as to acquire a sample that to a limited degree could be generalised to employed university graduates. The sample was randomly drawn hence the choice of a randomized sampling technique. Whilst the survey attributed the collection of data across all ages of graduates, for the purpose of this study, the sample was restricted to young graduates in the 20-34 age category. The general sample size, ignoring the age of the participants was 1072, where graduates younger than 35 years were 576 altogether, a sample size that was regarded fit as was identified through previous studies on the topic. The required information was gathered through an online survey, where a link was sent to participants which they needed to follow to get to the actual questionnaire. Due

⁴⁶ ANOVA is “a statistical process that tests whether there are significant differences in the means of the studied samples” (De Coster, 2006:15).

consideration was taken in ensuring that the measuring instrument was valid and reliable while additionally ensuring that all ethical considerations were properly followed. The chapter likewise divulged on different estimation methods and the variables used in the study were clearly clarified. The section additionally clarified the strategies that were followed to break down the gathered information. In the next chapter, two main models will be regressed, where the first model; binary logistic model to analyse the determinants of underemployment status where 1 will be coded for underemployed and 0 for not underemployed. The second model is an OLS model, have three sub-models classified into income-related, skills-related and time-related to measure income underemployment, skills underemployment and time underemployment. In addition, the use of the EFA proved vital in testing the SUS, where six main factors that relate to underemployment which are underpayment, status discrepancy, hours discrepancy, involuntary temporary work, field and poverty wage employment were identified. All these factors had 37 items in total. Even though the SUS is an existing scale, as seen in Section 5.7.1, it is crucial to report how an existing instrument performs in a new study, hence the scale was tested on the current study's data (see results in Chapter 6). The analysis made use of specific statistical software, IBM SPSS (26:2020) in which various statistical procedures were utilised. These procedures involved the use of descriptive statistics such as frequency distributions and cross-tabulations. The next chapter discusses the results of the study.

CHAPTER 6

EMPIRICAL RESULTS AND DISCUSSION

6.1 INTRODUCTION

The previous chapter expanded on the research methodology followed in conducting the current study. The main aim of the chapter in question is to report the results and interpret the findings. The primary data used in the analysis were collected during the survey on employed graduates from a South African university. The discussion is divided into nine sections. The first section provides the demographic overview of the sample. Section two delves on the employment overview of the sample. Thereafter, the discussion on the relationship between socio-economic factors and underemployment follows, reporting on for instance, the extent of underemployment among sampled graduates. The fourth section reports the findings regarding underemployment and the participants' higher education status. The fifth section presents the results pertaining to the Subjective Underemployment Scale (SUS) which discusses the findings on perceptions of the participants with regard to their underemployment status. Section six provides the binary logistic regression results that aimed to identify determinants of the underemployment status of young graduates. The section that follows, also provides findings of the OLS regression. The last section summarises and concludes the chapter. Through the use of the statistical techniques that were discussed in Chapter 5.7 this chapter aims to address the following empirical objectives:

- To analyse the extent of underemployment among graduates.
- Examine underemployment variations by historical nature of the campuses of the university in question.
- Determine the relationship between the graduate's demographical variables (biographical differences), social, economic background and underemployment.
- Determine the perceptions of graduate underemployment.
- Determine factors which influence underemployment status and also according to the time-related, skills related and income related definition of underemployment.
- Conceptualise a theoretical model explaining graduate underemployment in the context of South Africa.

6.2 DEMOGRAPHIC CHARACTERISTICS OF THE SAMPLED PARTICIPANTS

This section provides a discussion relating to the demographic profile of the sample, which among other include descriptions on the age, gender, marital status and race compositions of the participants as well as their high school backgrounds. Further explanations are directed towards the economic aspects of

the sample including their employment and underemployment status, and the duration of unemployment. The quantitative data used are expressed using various graphs, tables and figures.

6.2.1 Age

Figure 6-1 shows the age of the participants where in this study, age was captured as a dichotomous variable. The total sample size was 1072 respondents where the majority of the respondents were between the ages of 20 and 34 (57%). In particular, 28.6 per cent of the participants were between the ages of 20 and 24, 44.7 per cent in the 25-29 age category, 26.5 per cent between the ages of 30 to 34 years. As indicated in chapter 1, young people were defined as those between the ages of 15 and 34 years, which follows the definition according to the South African National Youth Policy (2015:10), which reflects South Africa's reality (UNDP, 2014a). However, it should be noted that only respondents aged 20 and above were considered given that those below 20 years are still students and have not yet graduated and therefore are not yet formally employed. All in all, young people in the sample were 576 excluding those 35 years and older.

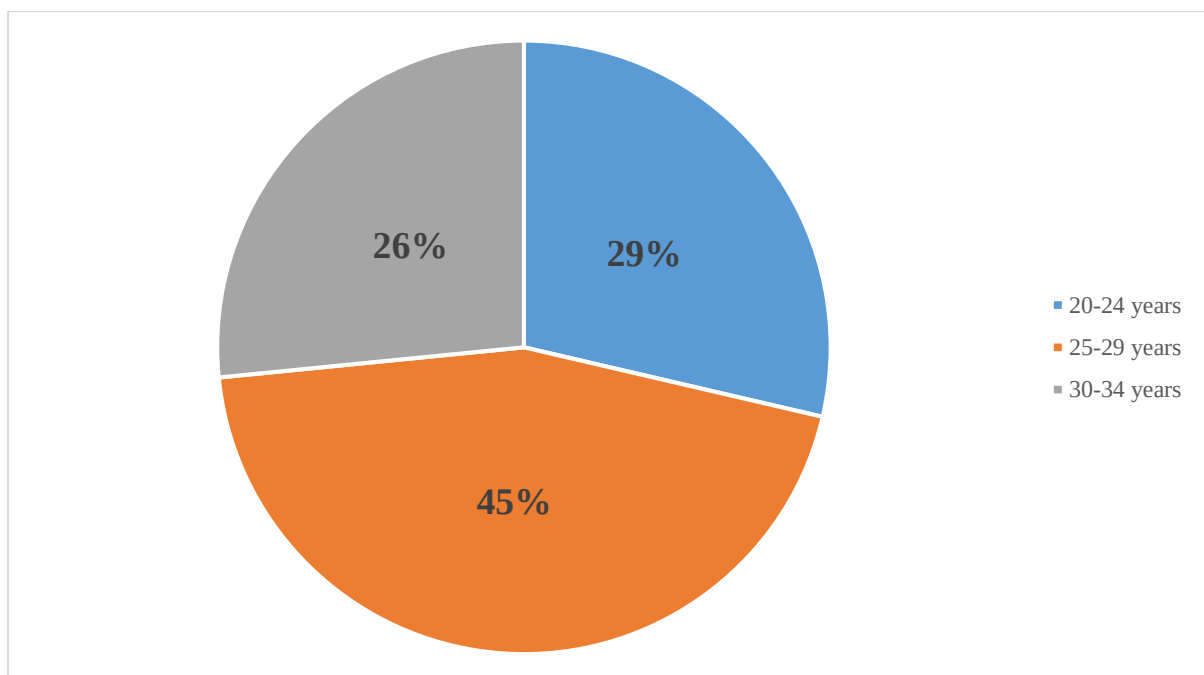


Figure 6.1: Age description of the sample

Source: Survey data (2019)

6.2.2 Gender composition of the sample

The discussion from this section focuses exclusively on young graduates below 35 years, bringing the sample size to 576 respondents. This section describes the composition of female and male respondents

in the study. Figure 6.2 provides an image of how male respondents fared compared to their female counterparts. From the figure, it is clear that there were more female respondents at 62 per cent than there were males at 38 per cent. This large gender distribution gap is reflected in the 2019 '*Post-School Education and Training Monitor*' report, which shows that female enrolment in higher education institutions is significantly higher than for males (Department of Higher Education and Training (DHET), 2019:24). These wide gender patterns are also observed for throughput and graduations. According to Van Broekhuizen and Spaull (2017:1) the 2008 cohort of learners leaving the school system saw more female learners qualify for entry into higher education compared to their male counterparts.

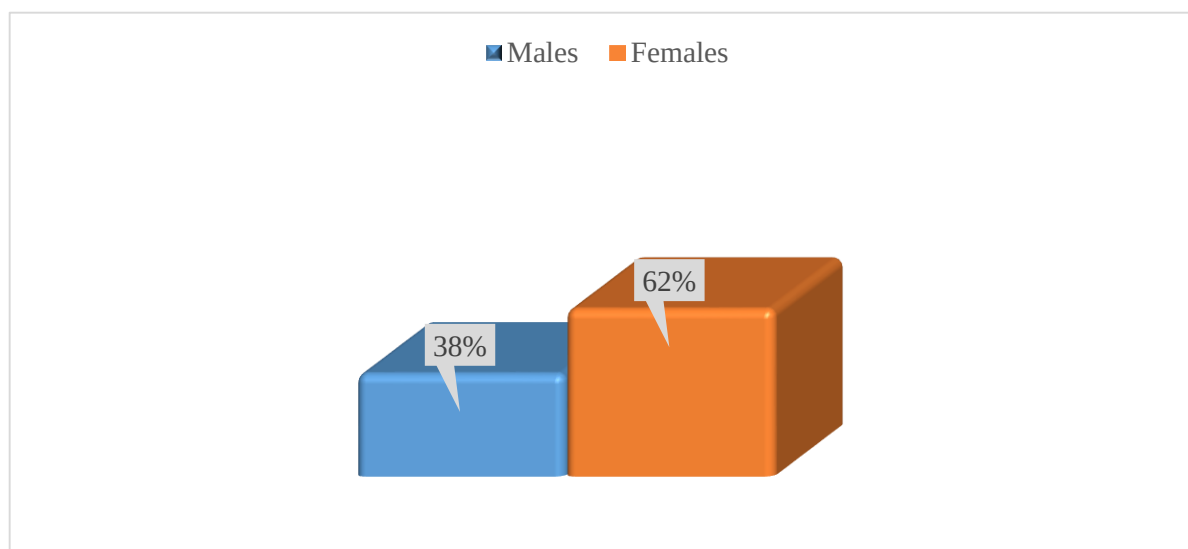


Figure 6.2: Gender distribution

Source: Survey research (2019)

6.2.3 Marital status of the respondents

The previous subsection had a look at the gender composition in the study. This section describes the distribution of marital status and as can be seen in Figure 6.3 a large number of the respondents were single and not married (66.5%) relative to their married counterparts (34%). Given that the age of respondents in the study are still young, that could explain why majority are not married. In their study which was investigating marriage and cohabitation in South Africa, Moore and Govender (2015:636) found that marriage patterns for individuals between 20 and 49 years have significantly declined in South Africa which has been attributed to attitudes towards marriage which differ extensively among races and cultures.

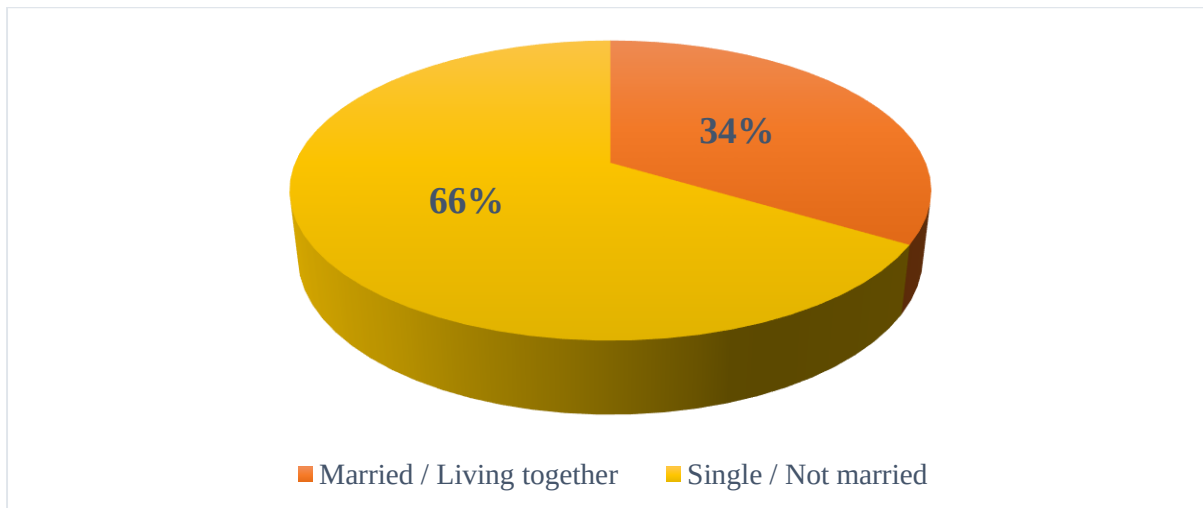


Figure 6.3: Marital status distribution

Source: Survey data (2019)

6.2.4 Race composition

Analysing the sample distribution in terms of race profile, the results in Figure 6.4 indicates that a large proportion of the respondents were White at 62.5 per cent, followed by Blacks at 33.5 per cent and Coloureds at 2.8 per cent. The rest of the respondents were Asian/Indian. The student racial profile of the university for 2018/2019 consisted of 58 per cent blacks, 37 per cent whites, 4 per cent coloured and 1 per cent Indians.

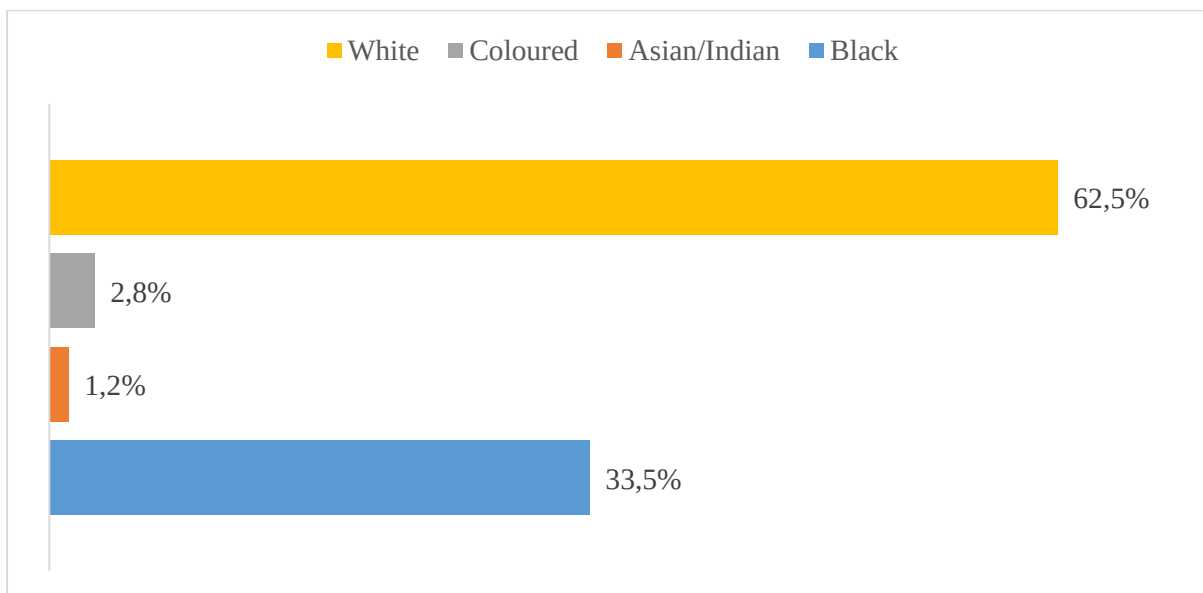


Figure 6.4: Race distribution in the sample

Source: Survey Data

Further on, race was compared to the campus respondents graduated at. These campuses were categorised as either historically black (disadvantaged) or historically white (advantaged)⁴⁷. One campus of the university is historically advantaged, while the remaining two campuses are historically disadvantaged. In The results point out that majority of black graduates were from historically disadvantaged campuses (70.2%) compared to 5.4 per cent whites. Many of the white respondents (94.6%) had graduated from the historically advantaged campus. These findings are mirrored by those of Van Broekhuizen (2016) and Moleke (2006) who found the majority of black graduates to have graduated from historically disadvantaged institutions which presents its own challenges of increased probabilities of negative employment outcomes which can be alluded to by several reasons found by Baldy (2013) which alludes to the negative perceptions employers have regarding the quality of education received from such institutions and Breier (2010:56) who argue the lower admission requirements in such institutions which often become the only option for students who come from relatively poorer schools having attained lower marks. This then has an influence on the choice of study field (generic courses compared to hard courses). Van Der Berg *et al.* (2011) argue that the inequalities in the quality of education play an important role and can likewise contribute and sustain earnings disparities.

Table 6.1: Race and nature of campus

Race		Campus		Total
		Historically advantaged	Historically disadvantaged	
Black	Count	57	134	191
	% within race	29.8%	70.2%	100%
	% within HEI	13.8%	85.4%	33.6%
	% of Total	10%	23.6%	33.6%
Asian/Indian	Count	6	1	7
	% within race	85.7%	14.3%	100%
	% within HEI	1.5%	0.6%	1.2%
	% of Total	1.1%	0.2%	1.2%
Coloured	Count	13	3	16
	% within race	81.3%	18.8%	100%
	% within HEI	3.2%	1.9%	2.8%
	% of Total	2.3%	0.5%	2.8%
White	Count	336	19	355
	% within race	94.6%	5.4%	100%
	% within HEI	81.6%	12.1%	62.4%
	% of Total	59.1%	3.3%	62.4%
Total	Count	412	157	569

Note: **Pearson χ^2 (p – value = 0.00) **Phi & Cramer's V .679

Source: Survey data (2019)

⁴⁷

The differences between these institutions are explained in Chapters 4.4.2 and 4.5.2

Another relationship was analysed between race and type of high school attended. The results as shown in Table 6.2 indicate that within the sample, of those that went to model C (formerly white schools)⁴⁸, 80.8 per cent were whites, 15.7 per cent were blacks, 2.5 per cent were coloured while Indians constituted only 1 per cent. With regards to attendance in townships (formerly black schools), black respondents had the largest share at 91.2 per cent, followed by coloured at 5.3 per cent, while whites and Indians were 1.8 per cent respectively. The Pearson Chi-square was significant indicating that there are no significant differences between race and high school attended. The significance of the chi-square test is also confirmed by Crammer's V which is beyond 0.25, showing a very strong significance. This in support of the arguments mentioned previously by Van Broekhuizen (2016) and Cosser (2011).

Table 6.2: Race and type of high school attended

High school type		Campus				Total
		Black	Indian/Asian	Coloured	White	
Home school	Count	7	0	0	4	11
	% within high school type	63.6%	0%	0%	36.4%	100%
	% within race	3.7%	0%	0%	1.1%	1.9%
	% of Total	1.2%	0%	0%	0.7%	1.9%
Private school	Count	15	1	1	21	37
	% within high school type	40.5%	2.7%	0%	56.8%	100%
	% within race	7.9%	14.3%	0%	5.9%	6.5%
	% of Total	2.6%	0.2%	0%	3.7%	6.5%
Public school (Model C)	Count	64	4	10	329	407
	% within high school type	15.7%	1%	2.5%	80.8%	100%
	% within race	33.7%	57.1%	62.5%	92.4%	71.5%
	% of Total	11.2%	0.7%	1.8%	57.8%	71.5%
Public school (Township)	Count	103	2	6	2	113
	% within high school type	91.2%	1.8%	5.3%	1.8%	100%
	% within race	54.2%	28.6%	37.5%	0.6%	19.9%
	% of Total	18.1%	0.4%	1.1%	0.4%	19.9%
Public school (Rural/village)	Count	1	0	0	0	1
	% within high school type	100%	0%	0%	0%	100%
	% within race	0.5%	0%	0%	0%	0.2%
	% of Total	0.2%	0%	0%	0%	0.2%
Total	Count	190	7	16	356	569

****Pearson $\chi^2(p - value = 0.00)$ **Cramer's $V .384$**

Source: Survey (2018)

⁴⁸

The differences between model C and township schools are discussed in Chapter 4.5.2

6.2.5 Level of education composition

This section describes the highest level of education held by each of the respondents at the time the survey was conducted. Figure 6.5 shows results on the sampled population of 576 graduates.

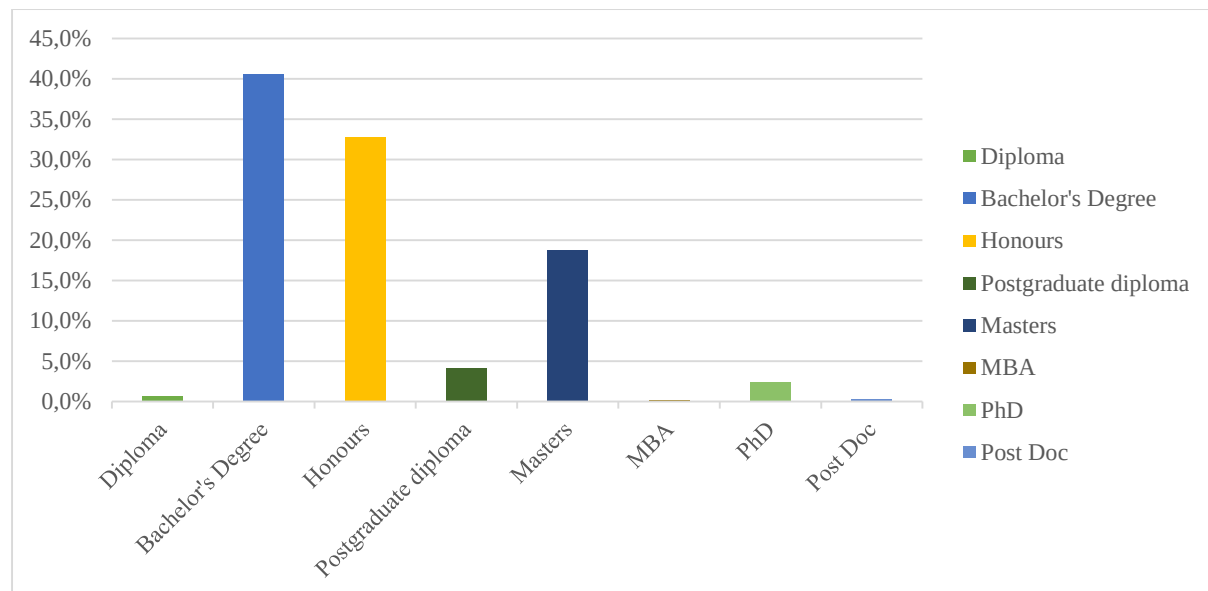


Figure 6.5: Distribution in terms of educational level

Source: Survey data (2019)

On average, the majority of the participants were in possession of a bachelor's degree (40.6%). This was followed by an honours degree (32.8%), master's degree (18.8%), postgraduate diploma (4.2%) and PhD (2.4%). The rest of the qualifications, i.e. diploma, post-doc and MBA had 0.7 per cent, 0.3 per cent and 0.2 per cent respondents respectively. The field of study composition as can be seen in Figure 6-6, shows that a large number of the respondents were in the field of economics and management sciences (EMS) at 34.8 per cent and 17.4 per cent of the study sample were in the humanities field. Agricultural and natural sciences had about 14.3 per cent respondents followed by health sciences at 11.8 per cent. The engineering field was represented by 8.4 per cent participants. About 4.9 per cent of the participants were in the field of law while theology had 0.3 per cent respondents. These findings are echoing the national estimates as indicated by the DHET (2019) were majority of the South African students are in the field of EMS, humanities and science and technology.

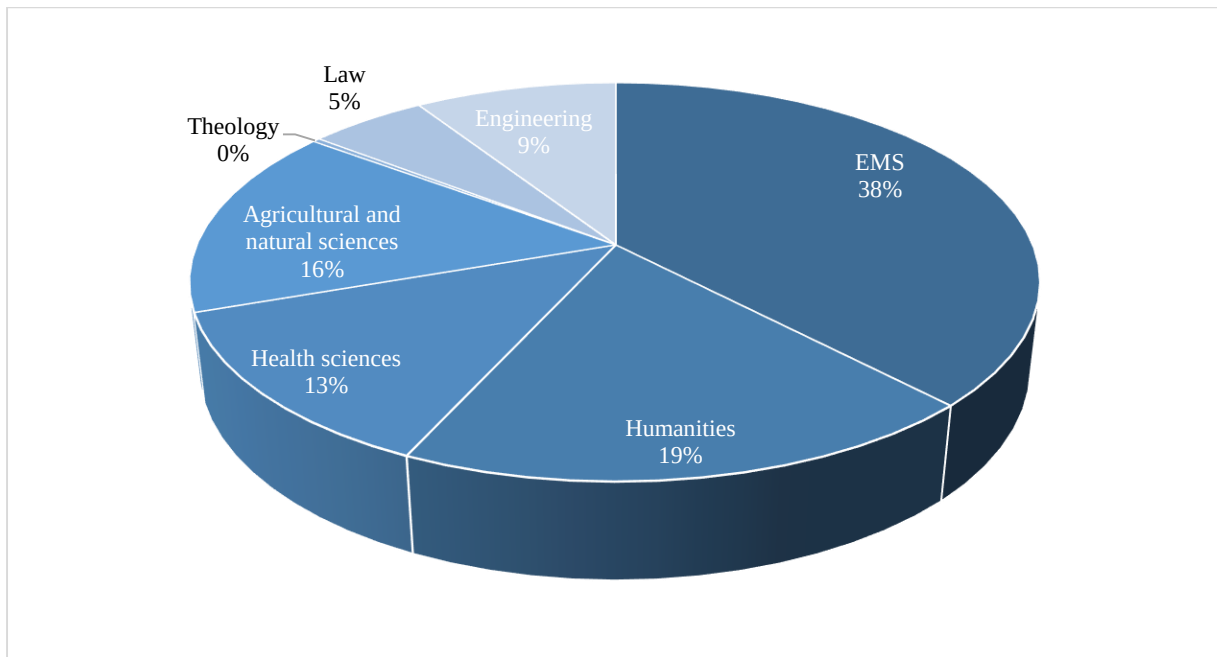


Figure 6.6: Field of study composition

Source: Survey data (2019)

6.2.6 Geographical location

Figure 6.7 presents the geographical location of the participants and shows that 80 per cent of the sampled participants lived in urban areas or rather cities while only 20 per cent of the participants resided in townships and or rural areas. According to Atkinson (2014:5), the rural-urban comparison in South Africa is characterised by a myriad of intricate and changing definitions which have diverse connotations. The implication is that some informal areas could be termed urban even though things such as the standards of living are not reflective of being urban. Therefore, in this study, urban areas were defined as areas that are situated in economic hubs, closer to markets and opportunities and are formal and modernised, often referred to as metropolitan areas. Rural areas on the other hand lack an economic core, have limited opportunities and are far from economic hubs.

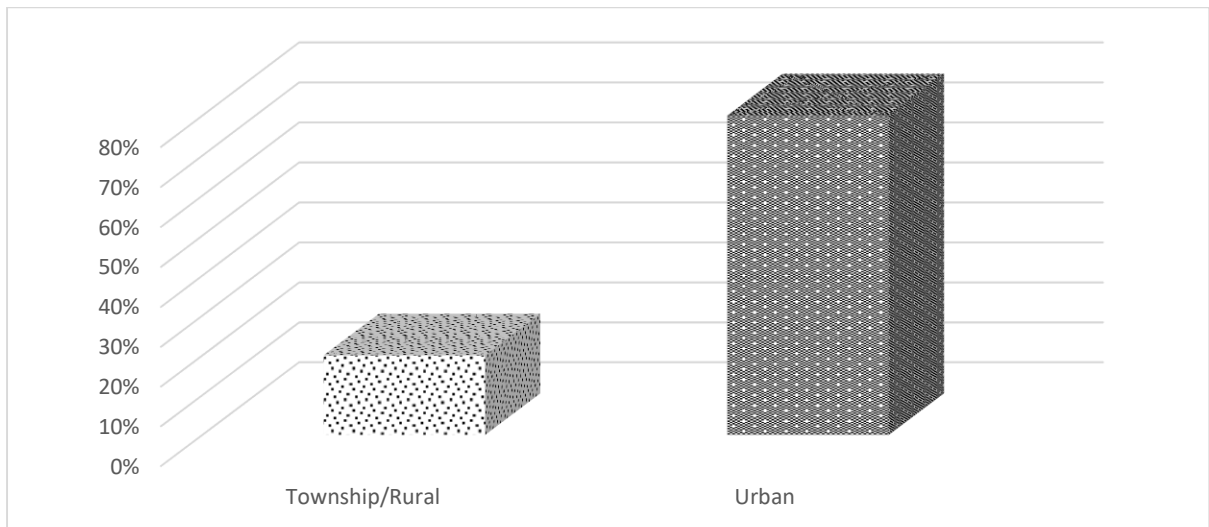


Figure 6.7: Participant's geographical location

Source: Survey (2019)

6.2.7 High school matriculated at

The distribution in terms of high school attended shows that 1.9 per cent of the participants attended home schooling, followed by those who matriculated from private schools (6.8%). Approximately 71 per cent of the participants attended their high schooling in public schools (model C) while 19.7 per cent were from township public high schools. Only 0.2 per cent of the respondent were from a rural/village public school. There were no significant differences between blacks and whites who were schooled in private schools.

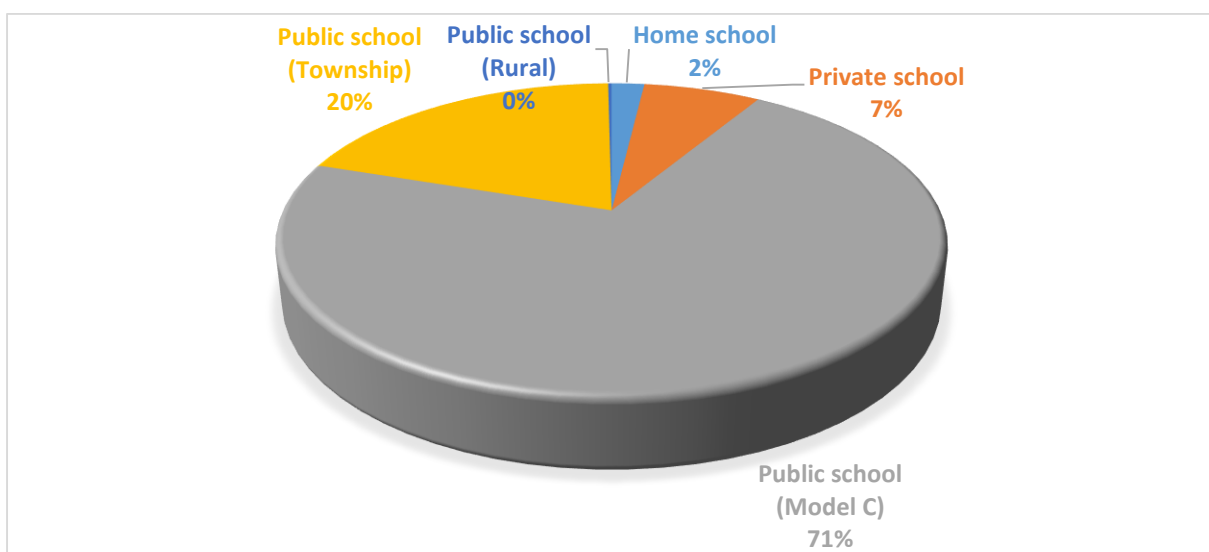


Figure 6.8: Distribution in terms of high school participants matriculated at

Source: Survey (2018)

6.3 EMPLOYMENT OVERVIEW OF THE SAMPLED PARTICIPANTS

This section of the chapter discusses findings on some of the economic physiognomies of the sampled population which mostly entail their employment information. Emphasis is on the employment information, essentially trying to determine the extent of underemployment among the participants.

6.3.1 Employment status distribution

The results presented in figure 6-9 indicate that 82.6 per cent of the sample were employed, either full-time or part-time. Only 17.4 per cent of the participants were unemployed. These findings imply that compared to those with lower educational levels such as just a matric, graduates have better employment prospects and are therefore most likely to find employment relative to those with low qualifications. In the second QLFS, Stats SA (2019b) reported that employment levels seem to rise with the level of education. Even though unemployment levels have increased for all educational levels, they are still low for graduates than they are for the less educated. Moleke (2010:84) argues that as the economy changes and industries grow, there is often a considerable impact on the demand for people with higher levels of education, which often increases relative to those with lower-levels of education. What has been happening in South Africa is that growth has been driven by tertiary sector which often requires high-skilled workers, so this often means that those with low-skills or rather low-levels of education are often left at the brink of unemployment or even vulnerable employment (Reddy *et al.*, 2016:24).

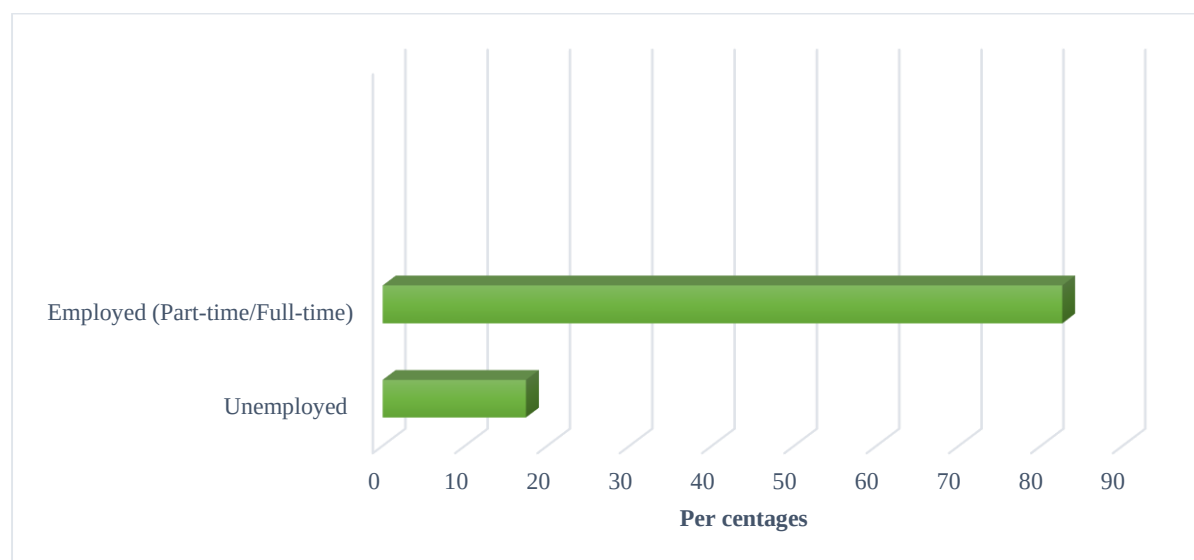


Figure 6.9: Employment status of sampled graduates

Source: Survey Data (2019)

Of those that are unemployed, further analysis shows that approximately 26.5 per cent have been unemployed for more than a year, a sign of long-term unemployment. The dangers of prolonged unemployment spells are that the longer the unemployed remains out of employment, the fewer the chances of finding his/her way back into employment (Stats SA, 2017a). Furthermore, this is worsened by the fact that qualifications become obsolete with time, since what was relevant after graduation may no longer be needed in a few years (Mohr & Associates, 2015:402). In terms of employment search, only 34.7 per cent had given up search and were therefore not actively searching for employment. Figure 6.10 presents the gender distribution of employment status. Unexpectedly, more female graduates (61.6%) compared to their male (38.4%) counterparts were employed at the time of the survey. For those who indicated that they were unemployed, 63.3 per cent were females compared to males (36.7%).

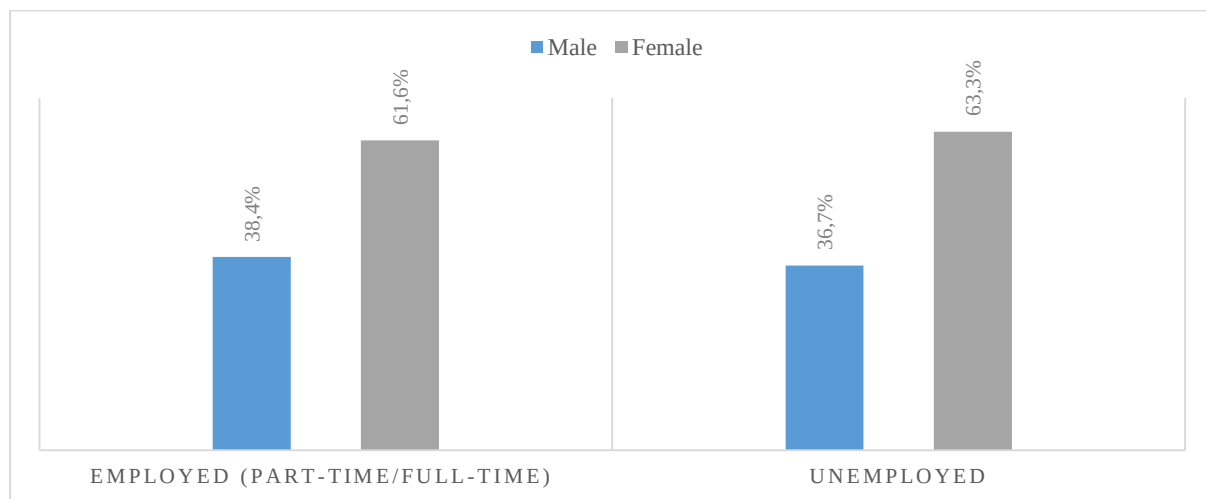


Figure 6.10: Employment status by gender of the participants

Source: Survey Data (2019)

Figure 6.11 presents the nature of employment for those who are employed and as can be seen, 80.4 per cent of the participants were full-time permanent employees, confirming that graduates do find employment. Approximately 12.2 per cent were in temporary short time work. Those employed part-time were 4.6 per cent, followed by those in internships, informally employed and those in contract position at 1 per cent and 0.8 per cent respectively. The rise of non-standard employment as a result of instilling more flexibility in the labour market and reducing costs has in some way forestalled the fate of many young people with a large majority, finding themselves in these kinds of employment; unstable and low paying. A growing number of young people are now being hired for a specific time and on temporary basis, reducing employment stability (Scherer, 2004:369). Such kinds of employment have brought about increased insecurity, low and unstable incomes and ultimately poverty (Schmid, 2010).

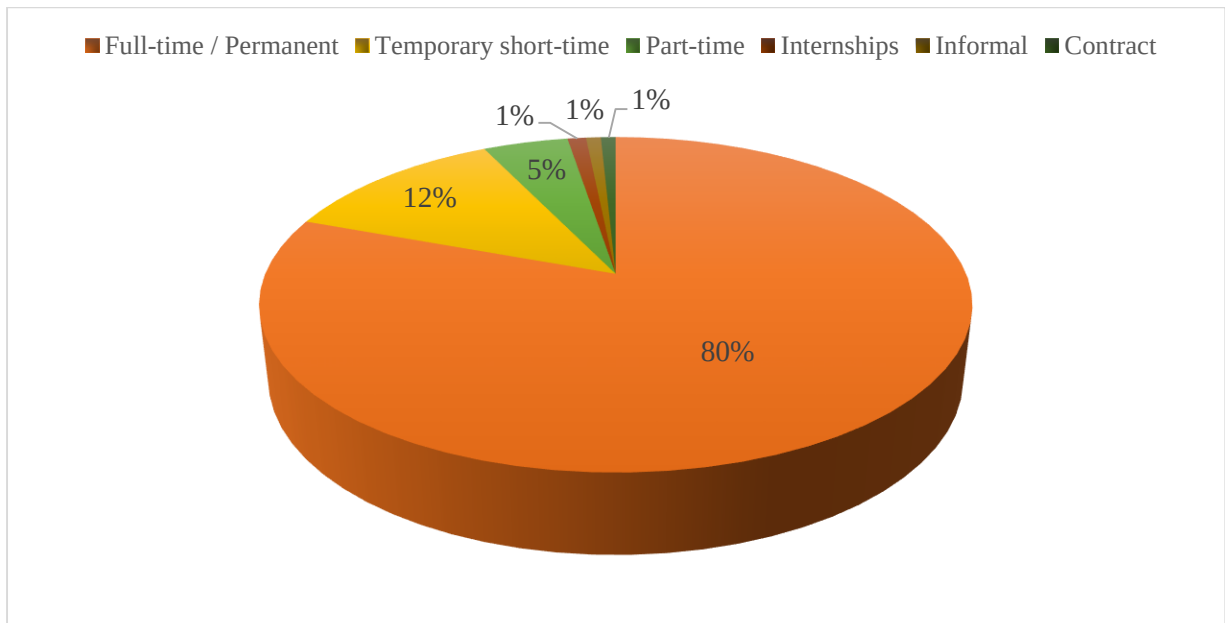


Figure 6.11: Nature of employment of the employed participants

Source: Survey Data (2019)

6.3.2 Extent of underemployment

This sub-section presents the findings on the underemployment status of the sampled graduates. As previously mentioned, the primary objective of this study was to analyse the existence of underemployment among graduates. The first step in trying to understand the situation was to ask graduates whether they would consider themselves to be underemployed (as was defined in the questionnaire – see annexure B) and as can be seen in Figure 6.12 is that almost half (approximately 45%) of the participants considered themselves underemployment as per the broader definition in Chapter 2.2.2 while about 55 per cent were not underemployed.

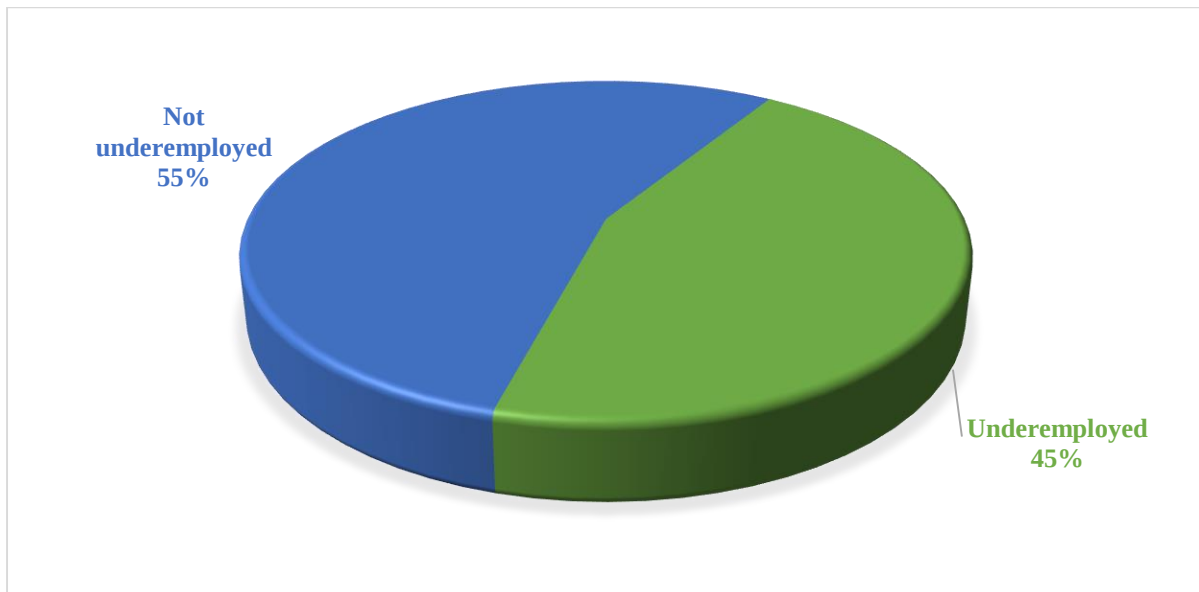


Figure 6.12: Broad underemployment status of the sampled participants

Source: Survey (2018)

The next step was to then examine the type of underemployment that graduates are in which is categorised into time-underemployment, skills-underemployment and income-underemployment. As explained in Chapter 5.7.1, these categories were measured/defined in a specific way. Of the participants that perceived themselves to be under-employed, 36.4 per cent were under-employed by income, which as explained in Chapter 5.7.1 entailed workers whose earnings at the time of study were 20 per cent less than what they earned in their previous job or 20 per cent less than the average occupational income for those in their first jobs. Only 5.1 per cent of the sampled graduates were time-under-employed, *inter alia*, working less than 35 hours a week. About 58.5 per cent associated themselves to be underemployed in terms of skills which was defined as those who at the time of the survey perceived themselves to be in jobs where they were overqualified or had the most skills and experience that their counterparts in the same jobs.

In terms of the reasons why participants were skilled-under-employed, 62 per cent had more qualifications than the minimum needed in their job at the time, while approximately 33 per cent felt they had more work experience than their colleagues and also than the minimum required for their occupations. As mention in Chapter 2 and 3, most of the time, to avoid unemployment, young people are often forced to accept any kind of employment, often becoming prone to inadequate employment situations (World Bank, 2019). In the current study, participants were asked to indicate reasons why they accepted employment for which they were over-skilled for (qualifications or work experience), and over and above the difficulty to find jobs in their studied fields, another main reason related to the

fact that declining the job would imply staying at home, i.e. opting for unemployment which may have posed survival challenges for those with families.

One of the consequences of underemployment on the worker as argued by literature (e.g. see O'Halloran & Skiba 2014:175; Holmes 2000) is dissatisfaction, despondency and feelings of inadequacy. As can be seen in Figure 6-13, about 68 per cent of the under-employed participants wanted to change their jobs or have another in addition to the jobs they had at the time of the study. It could be argued that this would be to supplement their income since as previously outlines that most participants in the study considered themselves to be under-employed in terms of income. Fuelling feelings of wanting to leave their jobs or having an additional job could be career growth prospects at the prevailing occupation.

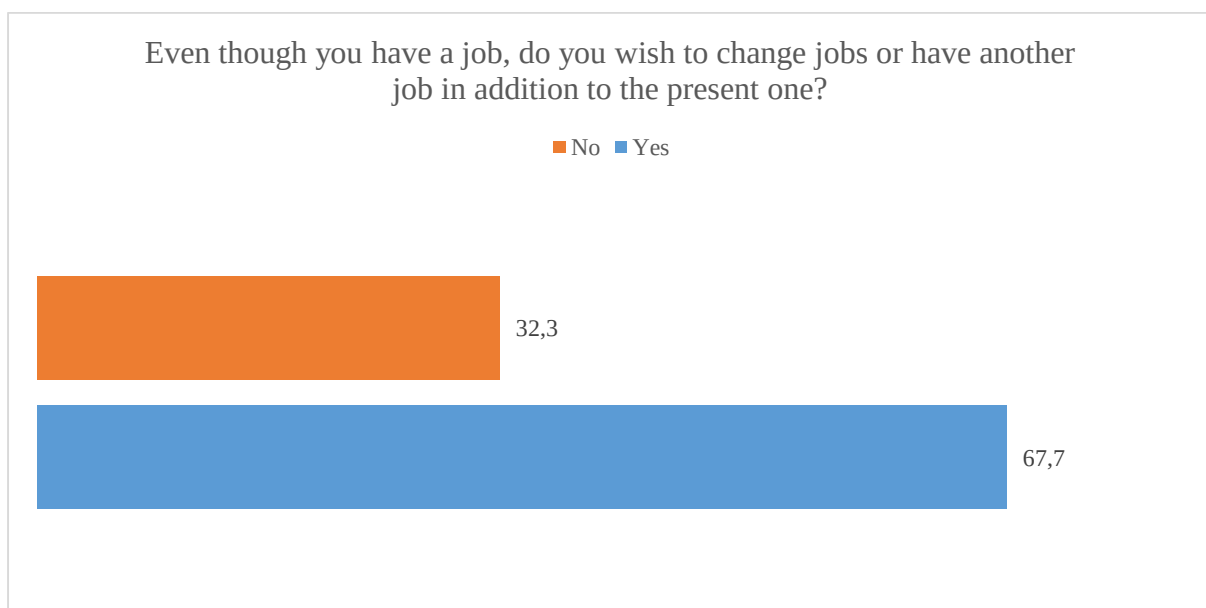


Figure 6.13: Job change distribution

Source: Survey (2018)

Figure 6.14 confirms that many participants (76.7%) were in occupations with poor promotion prospects, hence delayed career progression, limiting earning potential, echoing the findings of Li *et al.* (2015) and Lacmanovic *et al.* (2016). Only 23.3 per cent of the participants were in jobs with relatively high promotion opportunities.

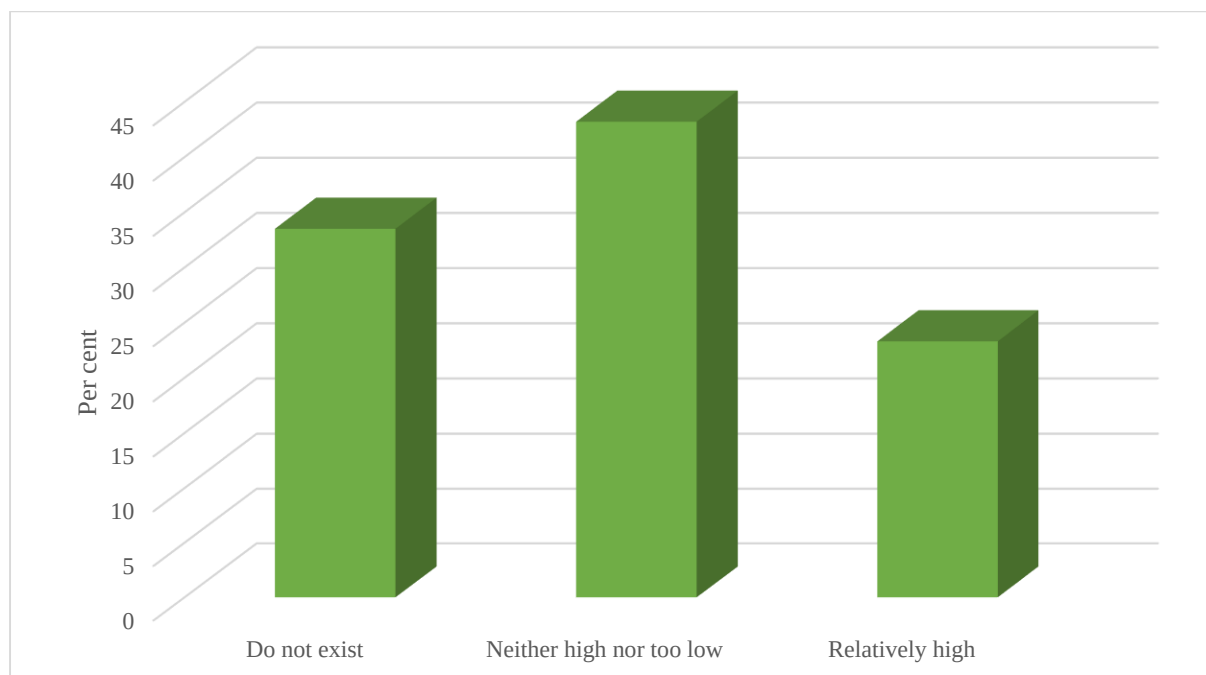


Figure 6.14: The existence of promotion opportunities at jobs of participants

Source: Survey (2018)

6.4 THE RELATIONSHIP BETWEEN UNDEREMPLOYMENT AND SOCIO-ECONOMIC FACTORS

This section of the chapter looks at understanding the relationship between underemployment and a number of socio-economic factors within the sampled participants including age, gender, race, high school, geographical location, sector of employment, industry of employment and category of occupation. Underemployment status was dichotomously coded where those who considered themselves under-employed whether by skills, time or income at the time of the survey were grouped together and those that were not underemployed were also grouped together, defined as not being under-employed. In discussing each socio-economic variable with regards to the participant's underemployment status, cross-tabulations were used which aided in understanding some of the relationships that were present. Furthermore, the Pearson chi-square tests (supplemented with Cramer's V) were also performed.

6.4.1 Age and underemployment

The literature in Chapter 2.2.4.2 (paragraph 1-2) has confirmed that young people face significant barriers in the labour market when contrasted with their adult counterparts. Apart from entering the labour market in the absence of employment opportunities, there seem to be some sort of disconnect between the education and training received and the employment market (Kruger, 2016). A high

proportion of them face negative employment outcomes compared to other age groups (Stats SA, 2020a). This is evident in Table 6.3. Approximately 61 per cent of participants who were underemployed at the time of the survey were young people below the ages of 35, compared to their adult counterparts (39%). Based on the chi-square test results, the p-value of 0.01 indicates that the differences between the age categories were statistically significant at the 0.05 level of significance.

Table 6.3: Age composition and underemployment status

Age		Underemployment status		Total
		Underemployed	Not underemployed	
Young people (2034)	Count	214	258	472
	% within age	45.3%	54.7%	100%
	% within underemployment status	61%	50%	54.4%
	% of Total	24.7%	29.8%	54.4%
Older people (35 and older)	Count	137	258	395
	% within age	34.7%	65.3%	100%
	% within underemployment status	39%	50%	45.6%
	% of Total	15.8%	29.8%	45.6%

****Pearson χ^2 (p value = 0.01)**

Source: Survey Data (2019)

Table 6.4 indicates the distribution in terms of the type of underemployment according to the particular age categories. The results indicate that more (45.6%) participants in the age category 25-29 compared to the younger cohorts (31.6%) and the older age cohort (22.8%). A similar pattern is also observed in terms of skills and time-underemployment. These differences were statistically significant at 5 per cent as specified by the Pearson χ^2 p value of .040. A larger proportion of the participants regardless of the age cohort is under-employed by skills, while none of those in the 20-24 age category is time-underemployed, suggesting that time-related underemployment is not a main issue among young people in this study.

Table 6.4: Underemployment type and different age groupings

Underemployment type		Age			Total
		20 - 24	25 - 29	30 - 34	
Income	Count	25	36	18	79
	% within Underemployment type	31.6%	45.6%	22.8%	100%
	% within Age	44.6%	34%	32.7%	36.4%
	% of Total	11.5%	16.6%	8.3%	36.4%
Skills	Count	31	60	36	127
	% within Underemployment type	24.4%	47.2%	28.3%	100%
	% within Age	55.4%	56.6%	65.5%	58.5%
	% of Total	14.3%	27.6%	16.6%	58.5%
Time	Count	0	10	1	11
	% within Underemployment type	0%	90.9%	9.1%	100%
	% within Age	0%	9.4%	1.8%	5.1%
	% of Total	0%	4.6%	0.5%	5.1%
Total	Count	56	106	55	217

****Pearson χ^2 (p value = .040) **Cramer's V .152**

Source: Survey (2018)

The 2019 National Income Dynamics Study (NIDS) found that a larger number of young people (those between 15 to 35 years) in South Africa are often in temporary employment, receiving lower earnings than other age categories and do not enjoy equal opportunities in the labour market (Branson, De Lannoy & Brynde, 2019:1) compared to their adult counterparts.

6.4.2 Gender and underemployment

Findings in Figure 6.10 revealed more female participants as being employed relative to their male counterparts. However, results of the analysis on gender and underemployment status as can be seen in Table 6.5 shows that in all the underemployment types, young females are over-represented, which raises concerns of the kinds of employment they find themselves in. An estimated 56 per cent of those that were income-under-employed are females compared to 44 per cent males. Also, in terms of skills, 64.6 per cent of those that were underemployed by skills are females relative to only 35 per cent males. These findings are also mirrored in the time-underemployment status suggesting that typical employment indicators do not provide a true picture of employment or rather kinds of jobs that workers are in (Mitchell & Carlson, 2000; Beukes *et al.*, 2017). Female workers often experience negative

employment outcomes and even if they are employed, according to findings of Branson *et al.* (2019:3) they are most likely to face substantial hardships in the form of unstable, irregular and low paid type of employment, depriving them of employment security. These findings also echo those of Ingle and Mlatsheni (2017). A number of factors can explain these results, where, firstly, female youth do not invest in skills which is evidenced by the little course enrolment particularly for those older than 24 years (Branson *et al.*, 2019:2). At the same time those in the older cohorts often have competing life demands and household work which often prevents from studying further and even if they do study, most are in fields that are disconnected from the labour market requirements. However, the Pearson χ^2 p-value of 0.440 suggests that the differences between males and females were not statistically significant.

Table 6.5: Cross-tabulation according to gender and underemployment type

Underemployment type		Gender		Total
		Female	Male	
Income	Count	44	35	79
	% within Underemployment type	55.7%	44.3%	100%
	% within Gender	33.1%	41.7%	36.4%
	% of Total	20.3%	16.1%	36.4%
Skills	Count	82	45	127
	% within Underemployment type	64.6%	35.4%	100%
	% within Gender	61.7%	53.6%	58.5%
	% of Total	37.8%	20.7%	58.5%
Time	Count	7	4	11
	% within Underemployment type	63.6%	36.4%	100%
	% within Gender	5.3%	4.8%	5.1%
	% of Total	3.2%	1.8%	5.1%
Total	Count	133	84	217

****Pearson χ^2 (p value = .440)**

Source: Survey (2018)

6.4.3 Race and underemployment

Table 6.6 presents the cross-tabulation results of underemployment status by race or population group. Surprising results emerge where of those that considered themselves under-employed, white participants constituted the majority at 60 per cent, followed by blacks who constituted 35.8 per cent. The other 3.8 per cent were coloureds while Indians made up only 0.2 per cent. These stark differences

particularly between black and white respondents are not in line with most literature in South Africa which suggests the opposite, where being black is associated with more negative employment outcomes than being white.

However, results within each race still show a greater number of blacks considering themselves under-employed. For instance (although the differences are not significantly large), out of 142 black respondents, more than 50 per cent (53.5%) were under-employed compared to the white counterparts where from a total of 311 respondents, only 40.8 per cent where underemployment which implies that at least 60 per cent are in jobs which they do not consider inferior by some standard. A p-value of 0.016 means that we reject the null hypothesis of no significant difference between the population groups terms of underemployment status and conclude that there is a significant difference in the perceptions between blacks, Indians, coloureds, and white participants in the study.

Table 6.6: Cross-tabulation of underemployment status by race

Underemployment status		Race / Population Group				Total
		Black	Asian/Indian	Coloured	White	
Not Under-employed	Count	66	3	3	184	256
	% within underemployment status	25.8%	1.2%	1.2%	71.9%	100%
	% within race	46.5%	75%	27.3%	59.2%	54.7%
	% of Total	14.1%%	0.6%	0.6%	39.3%	54.7%
Under-employed	Count	76	1	8	127	212
	% within underemployment status	35.8%	0.5%	3.8%	59.9%	100%
	% within race	53.5%	25%	72.7%	40.8%	45.3%
	% of Total	16.2%%	0.2%	1.7%	27.1%	45.3%
Total	Count	142	4	11	311	468

***Pearson χ^2 (p value = .016) **Cramer's V .149*

Source: Survey (2018)

These findings reiterate what comes out of literature that regardless of any indicator, non-white workers/graduates still encounter negative employment outcomes and have the highest prospects of being under-employed as connoted by the findings of Moleke 2010; Bell and Blanchflower 2013:17; Caroleo and Pastore 2013. When it comes to race and the labour market, a number of issues come to play which relates back to not only the study field of the graduate but also their high schooling including whether or not they received career guidance, their grade 12 admission points and in the case of South Africa, the type of higher education institution they graduated from (Mau & Kopischke, 2001; Mosca

& Wright, 2011:5; Zoch, 2015; Ingle & Mlatsheni, 2017). The results in terms of the type of underemployment are interesting, especially looking at the fact that out of those that are underemployed by skills, 62.7 per cent were white (six out of ten whites are skills underemployment) compared to 32.5 per cent blacks, where within the race itself, 5 in 10 blacks are skills under-employed. Similar results are also found in terms of income underemployment where 41 per cent were blacks relative to 55.5 per cent whites. However, within the black race, 42 per cent is skills underemployed, while within the white race, 33 per cent is under-employed by skills. Be that as it may, the Pearson χ^2 p-value of 0.576 was not statistically significant.

6.4.4 High school type and underemployment

In analysing the relationship between underemployment status and high school where participants matriculated at, Table 6.7 indicates that broadly, majority of those that are underemployed did their grade 12 schooling in public schools (model C) which makes sense since participants in this high school category constituted the bulk (152) relative to the number of respondents in the other high school categories. Specifically, within those that were skills underemployed at the time of the survey, 69.3 per cent attended their grade 12 in model C high school, followed by 25.2 per cent who were from townships and 5.5 per cent who attended in private high school. None of the participants in the home-schooling category were skills or time underemployed. Again, as can be seen in Table 6.7, model C graduates still dominate the statistics in terms of income and time underemployment.

Table 6.7: High school type and underemployment type

High school matriculated at		Underemployment type			Total
		Income	Skills	Time	
Home school	Count	5	0	0	5
	% within high school	100%	0%	0%	100%
	% within Underemployment type	6.3%	0%	0%	2.3%
	% of Total	2.3%	0%	0%	2.3%
Private school	Count	2	7	2	11
	% within high school	18.2%	63.6%	18.2%	100%
	% within Underemployment type	2.5%	5.5%	18.2%	100%
	% of Total	0.9%	3.2%	0.9%	5.1%
Public school (Model C)	Count	55	88	9	152
	% within high school	36.2%	57.9%	5.9%	100%

High school matriculated at		Underemployment type			Total
		Income	Skills	Time	
	% within Underemployment type	69.6%	69.3%	81.8%	70%
	% of Total	25.3%	40.6%	4.1%	70%
Public school (Township)	Count	17	32	0	49
	% within high school	34.7%	65.3%	0	100%
	% within Underemployment type	21.5%	25.2%	0%	22.6%
	% of Total	7.8%	14.7%	0%	22.6%
Total	Count	79	127	11	217

**Pearson χ^2 (p value = .011) **Cramer's V .196

Source: Survey (2018)

Looking at the results within each high school category, interesting findings emerge. Of participants from township high school, 65.3 per cent were skills underemployed and the remaining 34.7 per cent were income underemployed. In contrast, only 57.9 per cent within the model C category are skills underemployed while 36 per cent is underemployed by income and 5.9 per cent by time. Of the total participants in the private school category, 63.6 per cent were skills underemployed with the remaining participants equally split between income and time underemployment. All the participants in the home school category were income underemployment.

By and large, these findings raise questions regarding the courses that graduates graduate with and those sought by the labour market, regardless of the high school one matriculated at, as the common underemployment type to emerge is skills underemployment. Findings from the study of Reddy *et al.* (2016:8), Isdale, Reddy, Winnaar and Zuze (2016) and Farooq (2011:531) also finds the rise in qualification mismatches in the labour market which raises questions on the role of HEI in producing adequately skilled graduates. On the other hand, jobs and skills gaps in the South African economy, where there are many vacancies not being filled despite increased number of jobless graduates (CHEC, 2013), and even if many find work, Stats SA in the 2019 third quarterly labour force (QLFS) reports employment creation in South Africa to be largely concentrated in elementary positions (Stats SA, 2019c); occupations that lack career progress and earnings growth.

6.4.5 Geographical location and underemployment

Table 6.8 reports findings in terms of underemployment status and geographical location and shows that regarding participants who considered themselves underemployed (irrespective of type), 76 per cent are from more urbanised localities in comparison to 23.8 per cent that are from relatively rural

localities. These conflicting findings could be attributed to the fact that a large majority of the respondents were situated in urban areas, which is why they would have high underemployment numbers compared to those from rural areas who were only one-third of the urban sample. Nonetheless, Zizzamia (2018) also found precarious employment and labour market frictions as one of the most significant challenges of urban labour markets compared to rural areas, where the challenge is more on high unemployment than insecure employment. However, when we look within each geographical location, interesting findings are that more than 50 per cent (56.7%) within the rural location are underemployed compared to only 42.8 per cent within the urban location. These findings are in line with literature (for instance, Denu *et al.* 2005:24; Tasci 2006; Pratomo 2015).

Table 6.8: Underemployment status by geographical location

Underemployment status		Geographical location		Total
		Township / Rural	City / Urban	
Not Underemployed	Count	39	218	257
	% within underemployment status	15.2%	84.8%	100%
	% within location	43.3%	57.2%	54.6%
	% of Total	8.3%	46.3%	54.6%
Underemployed	Count	51	163	214
	% within underemployment status	23.8%	76.2%	100%
	% within location	56.7%	42.8%	45.4%
	% of Total	10.8%	36.4%	45.4%
Total	Count	90	381	471

****Pearson χ^2 (p value = .017) **Cramer's V .110**

Source: Survey (2018)

6.4.6 Sector of employment and underemployment

In this section, participants were asked to firstly indicate the broad sector in which their job is situated in, which is either informal or formal economy⁴⁹. This was followed by the specific sector in which they were employed in, which is a choice between public sector, private sector and voluntary sector⁵⁰.

⁴⁹ Definitions are provided in the questionnaire (see Appendix)

⁵⁰ Definitions are provided in the questionnaire (see Appendix)

Table 6.9: Broad sector of employment and underemployment status

Underemployment status		Broad sector of employment		Total
		Formal economy	Informal economy	
Not Under-employed	Count	250	8	258
	% within underemployment status	96.9%	3.1%	100%
	% within broad sector	54.9%	47.1%	54.7%
	% of Total	53%	1.7%	54.7%
Under-employed	Count	205	9	214
	% within underemployment status	95.8%	4.2%	100%
	% within broad sector	45.1%	52.9%	45.3%
	% of Total	43.4%	1.9%	45.3%
Total	Count	455	17	472

****Pearson χ^2 (p value = .521)**

Source: Survey (2018)

Table 6.9 shows that of underemployed participants, 95.8 per cent were employed in the formal economy in contrast to the 4.2 per cent that were employed in the informal economy. However, within those that are employed in the informal economy, 52.9 per cent is under-employed, while within those that are employed in the formal sector, only 45 per cent is under-employed, indicating that majority in this sector is not underemployed. The p-value of 0.521 was not statistically significant. With respect to the specific sector of employment as presented in Table 6-10, 61 per cent of those that were under-employed were employed in the private sector, followed by 35.7 per cent from the public sector and lastly the voluntary sector with 3.3 per cent. However, the p-value of 0.597 was not statistically significant. Different from these findings, in their study which was investigating underemployment in Cameroon, Ngniodem and Stephane (2019:20) found underemployment to be higher in the public sector than in the private sector.

Table 6.10: Specific sector employed in and underemployment status

Underemployment status		Sector employed in			Total
		Private	Public	Voluntary (NPO)	
Not Under-employed	Count	163	87	5	255
	% within underemployment status	63.9%	34.1%	2%	100%
	% within sector	55.6%	53.4%	41.7%	54.5%
	% of Total	34.8%	18.6%	1.1%	54.5%
Under-employed	Count	130	76	7	213
	% within underemployment status	61%	35.7%	3.3%	100%
	% within sector	44.4%	46.6%	58.3%	45.5%
	% of Total	27.8%	16.2%	1.5%	45.5%
Total	Count	293	163	12	468

**Pearson χ^2 (p value = .597)

Source: Survey (2018)

6.4.7 Employment industry and underemployment

Table 6.11 displays the industry in which participants are employed in and underemployment status and shows that industries with the highest percentages of underemployed participants, irrespective of the type of underemployment is the finance industry (66.7%), administrative (as represented by other) (66.7%), research and development (50.6%) and agriculture (50%). In the rest of the sectors, majority of the participants are not underemployed. However, the Pearson χ^2 p-value of 0.504 was not statistically significant.

Table 6.11: Industry and underemployment

Industry of employment		Underemployment status		Total
		Not underemployed	Underemployed	
Mining, manufacturing and construction	Count	7	4	11
	% within industry	63.6%	36.4%	100%
	% within Underemployment status	4.2%	3.4%	3.9%
	% of Total	2.5%	1.4%	3.9%
Education and training	Count	11	9	20
	% within industry	55%	45%	100%
	% within Underemployment status	6.6%	7.6%	7%
	% of Total	3.9%	3.2%	7%
	Count	4	3	7
	% within industry	57.1%	42.9%	100%

Industry of employment		Underemployment status		Total
		Not underemployed	Underemployed	
Transport and water and electricity	% within Underemployment status	2.4%	2.5%	2.5%
	% of Total	1.4%	1.1%	2.5%
Agriculture	Count	1	1	2
	% within industry	50%	50%	100%
	% within Underemployment status	0.6%	0.8%	0.7%
	% of Total	0.4%	0.4%	0.7%
Community services	Count	13	10	23
	% within industry	56.5%	43.5%	100%
	% within Underemployment status	7.8%	8.4%	8.1%
	% of Total	4.6%	3.5%	8.1%
Research and development	Count	40	41	81
	% within industry	49.4%	50.6%	100%
	% within Underemployment status	24.1%	34.5%	28.4%
	% of Total	14%	14.4%	28.4%
Public sector	Count	61	28	89
	% within industry	68.5%	31.5%	100%
	% within Underemployment status	36.7%	23.5%	31.2%
	% of Total	21.4%	9.8%	31.2%
Wholesale retail and trade	Count	5	4	9
	% within industry	55.6%	44.4%	100%
	% within Underemployment status	3%	3.4%	3.2%
	% of Total	1.8%	1.4%	3.2%
Finance	Count	1	2	3
	% within industry	33.3%	66.7%	100%
	% within Underemployment status	0.6%	1.7%	1.1%
	% of Total	0.4%	0.7%	1.1%
Health services	Count	21	13	34
	% within industry	61.8%	38.2%	100%
	% within Underemployment status	12.7%	10.9%	11.9%
	% of Total	7.4%	4.6%	11.9%
Other	Count	2	4	6
	% within industry	33.3%	66.7%	100%
	% within Underemployment status	1.2%	3.4%	2.1%
	% of Total	0.7%	1.4%	2.1%
Total	Count	166	119	2

**Pearson χ^2 (p value= .504)

Source: Survey (2018)

6.4.8 Broad classification of occupation and underemployment

A closer look at the occupation categories and underemployment status as can be observed in Table 6.12 shows that out of the total number of under-employed participants, 59 per cent are in the professional occupation category⁵¹, followed by Clerks at 11.4 per cent and those in Elementary occupations at 10.4 per cent. Technicians and associate professionals, and service workers and market sales categories were both 7.6 and 7.1 per cent respectfully. More cross-tabulation analysis according to underemployment type (not shown) reveals more than 50 per cent of participants in each occupation classification to be underemployed by skill, trailed by income.

Table 6.12: Occupation classification and underemployment status

Broad occupation classification		Underemployment status		Total
		Not underemployed	Underemployed	
Legislators, senior officials and managers	Count	22	6	28
	% within occupation class	78.2%	21.4%	100%
	% within Underemployment status	8.6%	2.9%	6%
	% of Total	4.7%	1.3%	6%
Professionals	Count	191	124	315
	% within occupation class	60.6%	39.4%	100%
	% within Underemployment status	74.3%	59%	67.5%
	% of Total	40.9%	26.6%	67.5%
Clerks	Count	18	24	42
	% within occupation class	42.9%	57.1%	100%
	% within Underemployment status	7%	11.4%	9%
	% of Total	3.9%	5.1%	9%
Technicians and associate professionals	Count	13	16	29
	% within occupation class	44.8%	55.2%	100%
	% within Underemployment status	5.1%	7.6%	6.2%
	% of Total	2.8%	3.4%	6.2%
Service workers and shop and market sales workers	Count	4	15	19
	% within occupation class	21.1%	78.9%	100%
	% within Underemployment status	1.6%	7.1%	4.1%
	% of Total	0.9%	3.2%	4.1%
Skilled agricultural and fishery workers	Count	2	1	3
	% within occupation class	66.7%	33.3%	100%

⁵¹ Professional occupation is under the skilled work category, clerks (semi-skilled) and elementary (low-skilled). See chapter 4.

Broad occupation classification		Underemployment status		Total
		Not underemployed	Underemployed	
	% within Underemployment status	0.8%	0.5%	0.6%
	% of Total	0.4%	0.2%	0.6%
Craft and related trades workers	Count	0	1	1
	% within occupation class	0%	100%	100%
	% within Underemployment status	0%	0.5%	0.2%
	% of Total	0%	0.2%	0.2%
Plant and machinery operators and assemblers	Count	1	1	2
	% within occupation class	50%	50%	100%
	% within Underemployment status	0.4%	0.5%	0.4%
	% of Total	0.2%	0.2%	0.4%
Elementary occupations	Count	6	22	28
	% within occupation class	21.4%	78.6%	100%
	% within Underemployment status	2.3%	10.5%	6%
	% of Total	1.3%	4.7%	6%
Total	Count	257	210	467

****Pearson χ^2 (p value = .000) **Cramer's V .282**

Source: Survey (2018)

6.5 THE RELATIONSHIP BETWEEN UNDEREMPLOYMENT AND HIGHER EDUCATION CHARACTERISTICS

In this section of the chapter, the relationship between underemployment and factors relating to the participants' higher education including levels of education, field of study, higher education institution and career guidance are analysed. The discussion of each higher education variable follows contingency tables where the findings are subject to the Pearson chi-square test (supplemented with Cramer's V).

6.5.1 Level of education

Table 6.13 illustrates the results on the relationship between levels of education and underemployment status in terms of types of underemployment. Again, the bulk of the participants are income and skills underemployed. Within the income underemployment type, 39.2 per cent were in possession of a bachelor's degree, which is trailed by those with honours (34.2%) and master's at 15.2 per cent which supports literature that those in lower-levels of education are most likely to be earning less than desired. In terms of skills underemployment, the observation is that the more educated participants are, the larger the number of them that identify with this kind of underemployment which perhaps raises questions of the qualifications they possess, including their skills and work experience. Results on time-

underemployment mirror those observed under income-underemployment. However, the Pearson chi-square p-value of 0.337 shows the differences between the education levels as non-significant.

Table 6.13: Levels of education and underemployment type

Level of education		Underemployment type			Total
		Income	Skills	Time	
Bachelor's Degree	Count	31	44	5	80
	% within level of education	38.8%	55%	6.3%	100%
	% within Underemployment type	39.2%	34.6%	45.5%	36.9%
	% of Total	14.3%	20.3	2.3%	36.9%
Honours	Count	27	44	2	73
	% within level of education	37%	60.3%	2.7%	100%
	% within Underemployment type	34.2%	34.6%	45.5%	33.6%
	% of Total	12.4%	20.3%	0.9%	33.6%
Postgraduate diploma	Count	8	3	0	11
	% within level of education	72.7%	27.3%	0%	100%
	% within Underemployment type	10.1%	2.4%	0%	5.1%
	% of Total	3.7%	1.4%	0%	5.1%
Master's	Count	12	29	4	45
	% within level of education	26.7%	64.4%	8.9%	100%
	% within Underemployment type	15.2%	22.8%	36.4%	20.7%
	% of Total	5.5%	13.4%	1.8%	20.7%
MBA	Count	0	1	0	1
	% within level of education	0%	100%	0%	100%
	% within Underemployment type	0%	0.8%	0%	0.5%
	% of Total	0%	0.5%	0%	0.5%
PhD	Count	1	5	0	6
	% within level of education	16.7%	83.3%	0%	100%
	% within Underemployment type	1.3%	3.9%	0%	2.8%
	% of Total	0.5%	2.3%	0%	2.8%
Other	Count	0	1	0	10%
	% within level of education	0%	100%	0%	100%
	% within Underemployment type	0%	0.8%	0%	0.5%
	% of Total	0%	0.5%	0%	0.5%
Total	Count	79	127	11	217

****Pearson χ^2 (p-value = .337)**

Source: Survey (2018)

6.5.2 Field of study

In terms of field of study and underemployment, results in Table 6.14 demonstrate that majority of the participants were skills and income underemployed at the time of the survey. Specifically, in terms of skills underemployment, the majority of under-employed participants were in the economics and management sciences (EMS) with 38.6 per cent which was followed by those in the humanities field (Human) with 18.9 per cent and engineering (Eng) with 12.6 per cent. Out of ten participants who studied Engineering, seven were skills under-employed, six within the EMS and health sciences (HS) field, followed by five in agriculture and natural sciences (Agri sci) and humanities. Sahoo and Klasen (2018) found that graduates who studied humanities are most likely to experience negative labour market outcomes relative to those in the technical streams. Engineering graduates (STEM), are not immune to underemployment trap however (30% underemployed in the five years of employment after graduating), most of underemployed engineering graduates eventually escape the underemployment trap a few years after graduation as argued by Cooper (2018). Nevertheless, the Pearson p-value of 0.109 was not statistically significant.

Table 6.14: Fields of study and underemployment status

Underemployment type		Field of study								Total
		Ems	Human	Edu	Hs	Agri Sci.	Theo	Law	Eng	
Income	Count	22	17	10	5	13	1	6	5	79
	% within Underemployment type	27.8%	21.5%	12.7%	6.3%	16.5%	1.3%	7.6%	6.3%	100%
	% within field	29.3%	38.6%	55.6%	25%	43.3%	100%	75%	23.8%	36.4%
	% of Total	10.1%	7.8%	4.6%	2.3%	6%	0.5%	2.8%	2.3%	36.4%
Skills	Count	49	24	7	13	17	0	1	16	127
	% within Underemployment type	38.6%	18.9%	5.5%	10.2%	13.4%	0%	0.8%	12.6%	100%
	% within field	65.3%	54.5%	38.9%	65%	56.7%	0%	12.5%	76.2%	58.5%
	% of Total	22.6%	11.1%	3.2%	6%	7.8%	0%	0.5%	7.4%	58.5%
Time	Count	4	3	1	2	0	0	1	0	11
	% within Underemployment type	36.4%	27.3%	9.1%	18.2%	0%	0%	9.1%	0%	100%
	% within field	5.3%	6.8%	5.6%	10%	0%	0%	12.5%	0%	5.1%
	% of Total	1.8%	1.4%	0.5%	0.9%	0%	0%	0.5%	0%	5.1%
Total	Count	75	44	18	20	30	1	8	21	217

****Pearson χ^2 (p-value = .109)**

Source: Survey (2018)

Further analysis on whether participants would change their courses/study fields if they could start over shows that out of the number of participants that answered yes to this question, 56 per cent were under-employed (see Table 6.15) which points to the fact that some of the graduates are in fields of studies that are not relevant to the needs of their job at the time or as required by employers. The p-value of 0.000 showed statistical difference at the 0.01 level of significance.

Table 6.15: Desire to change courses and underemployment status

Underemployment status		Change course if given an opportunity		Total
		No	Yes	
Not Under-employed	Count	180	77	257
	% within underemployment status	70%	30%	100%
	% within HEI	61.2%	44%	54.8%
	% of Total	38.4%	16.4%	54.8%
Under-employed	Count	114	103	217
	% within underemployment status	52.5%	47.5%	100%
	% within HEI	38.8%	56%	45.2%
	% of Total	24.3%	20.9%	45.2%
Total	Count	294	180	474

**Pearson $\chi^2(p - value = .000)$ **Cramer's $V .167$

Source: Survey (2018)

6.5.3 Career guidance and underemployment

To have a better understanding on whether career guidance facilities could play a possible influence on the sampled graduates' underemployment status, the relationship between career guidance and underemployment status was done through the use of cross-tabulation analysis (see Table 6.16). The theme to emerge from the results in the table below show that majority of the sampled graduates did not receive career guidance and only a few did. Of those that considered themselves underemployed, 63.4 per cent had not received career guidance compared to those that did 36.6%. These findings suggest that perhaps career guidance facilities at HEI may not be as effective as thought given that in Table 6.4 majority of the participants were skills underemployed. For instance, Oluwajodu *et al.* (2015) found that there is a perception among employers that certain HEI fail to hold regular career exhibitions and this could point to the reason why many graduates are unemployed. In other studies, such as CHEC (2013:8) more than two-thirds of students had never make use of career guidance facilities. Robertson (2019:2) concludes the importance of career guidance in promoting access to decent work, and education or training opportunities that provide access to a source of income, social contact, purposeful

activity, and some healthy challenges. To understand such low usage of career guidance, sampled graduates were asked to provide reasons and 43.3 per cent did not know such services existed, while 15.6 per cent simply did not have time.

Table 6.16: Career guidance and underemployment status

Underemployment status		Career guidance		Total
		Not Received	Received	
Not Under-employed	Count	195	63	258
	% within underemployment status	75.6%	24.4%	100%
	% within career guidance	59.1%	44.7%	54.8%
	% of Total	41.4%	13.4%	54.8%
Under-employed	Count	135	78	213
	% within underemployment status	63.4%	36.6%	100%
	% within career guidance	40.9%	55.3%	45.2%
	% of Total	28.7%	16.6%	45.2%
Total	Count	330	141	471

****Pearson χ^2 (p – value = .004) **Cramer's V .133**

Source: Survey (2018)

6.5.4 HEI and underemployment

Underemployment status was further compared between the nature of higher education institution that participants graduated from. As mentioned in Chapter 4, South Africa has trails of a dual education system (HEI) which can be categorised into historically advantaged institutions (HAI) (previously white) and historically disadvantaged institutions (HDI) (previously black). Given that resources allocated to each institution was historically not of the same magnitude, with HDI under resourced, this had an impact not only into the education received by students but also the perceptions that employers had on graduates from these institutions (Pauw *et al.*, 2008; Baldry, 2016). Despite government's effort to try and reduce these historical inequalities through mergers, HDI have not fully overcome their challenges as argued by Morrow (2008). These challenges are most likely to have an impact on graduates' ability to secure employment (Baldry 2013; Oluwajodu *et al.* 2015; Van Broekhuizen 2016). As shown in Table 6.17, out of the 124 graduates from HDI, 52.9 per cent were underemployment, regardless of the type of underemployment while of the 351 graduates from HAI, 42.7 per cent were underemployed. These findings echo those of the previously mentioned findings. The p-value of 0.053 was statistically significant at the 0.10 level of significance.

Table 6.17: Historical nature of HEI and underemployment status

Underemployment status		HEI		Total
		HAI	HDI	
Not Under-employed	Count	201	57	258
	% within underemployment status	77.9%	22.1%	100%
	% within HEI	57.3%	47.1%	54.7%
	% of Total	42.6%	12.1%	54.7%
Under-employed	Count	150	67	217
	% within underemployment status	69.1%	30.9%	100%
	% within HEI	42.7%	52.9%	45.3%
	% of Total	31.8%	13.6%	45.3%
Total	Count	351	124	475

**Pearson χ^2 (p-value = .053) **Cramer's V .089

Source: Survey (2018)

6.6 FINDINGS ON THE SUBJECTIVE UNDEREMPLOYMENT SCALE (SUS)

The main objective of this section is to present the findings on the perceptions of the participants relating to underemployment. In other words, it aims to investigate respondents' perceptions of their underemployment status, which is categorised into six types, essentially assisting with answering the fourth empirical objective. The underemployment scale as previously mentioned in Chapter 5.6.2 is divided into six subscales which are i) pay ii) status iii) hours iv) temporary work v) field and vi) poverty-wage employment with a total of 36 items⁵². This scale was in the form of Likert scale ranging from 1= strongly disagree to 6 = strongly agree. This was a slight amendment to the original scale which had an additional Likert scale = neutral. The removal of the uncertain alternative forces participants to use mental strength to consider their accurate feelings on a topic (Garland, 1991:66). The reliability and the validity of the SUS is presented in Chapter 5.6.2 and the results prove the scale to be reliable.

6.6.1 Exploratory Factor Analysis (EFA)

Even though the SUS is an existing scale which has been validated, it is important to report how well the instrument performed in the current study and whether the structure of the constructs is what it was when it was originally conceptualised (Hyman *et al.*, 2006). Therefore, prior to the carrying out of the EFA, the Keyser-Meyer-Olkin (KMO) test and Bartlett's test of sphericity were used to analyse the

⁵² Under status discrepancy, only five items were loaded rather than the original six (see Chapter 5.6.2). This was an error realised after the data collection stage. This however, did not affect the reliability and validity of the scale as this section will show.

factorability of the data. The KMO (which measures the adequacy of the sample) statistic ranges between 0 and 1, and it needs to be closer to 1 to confirm the suitability of factor analysis for the sample. The results of the tests presented in Table 6.18 demonstrates that the sample in the study was adequate enough with a KMO value of 0.896 which falls in the meritorious category as suggested by Kaiser and Rice (1974) guidelines. The Bartlett's test returned a p-value of 0.000 indicating the rejection of the null hypothesis (the original correlation *R* matrix is an identity matrix with zero correlation) at the 1 per cent level of significance which shows satisfactory correlation between the items of the scale.

Table 6.18: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.896
Bartlett's Test of Sphericity	Approx. Chi-Square	9394.094
	df	630
	Sig.	0.000

Source: Own calculation (Survey, 2018)

The reliability of the measuring instrument used was determined through an internal consistency test using Cronbach's alpha coefficient. The reliability of the measuring instrument used was determined through an internal consistency test using Cronbach's alpha coefficient. The test returned a Cronbach's $\alpha = 0.928$ which is seen as good (Field, 2018:829), deeming the scale as reliable. After establishing the adequacy of the data for the analysis, a principal axis factor analysis (FA) was conducted on 36 items with direct oblimin. An initial analysis was run to obtain eigenvalues for each factor in the data. A total of six factors had eigenvalues over Kaiser's criterion of one and in combination explained 72.98 per cent of the variance in the data. Table 6.19 shows the factor loadings after rotation. The table shows the loadings of the 36 variables on the six factors that were extracted. The higher the absolute value of the loading, the more the factor contributes to the variable. It should be noted that all loadings less than 0.5 were suppressed to make it easier to read the table.

Table 6.19: Exploratory Factor Analysis results

Factors	Factor 1⁵³	Factor 2⁵⁴	Factor 3⁵⁵	Factor 4⁵⁶	Factor 5⁵⁷	Factor 6⁵⁸	Communalities
My pay is less than other people with my qualification	0.692						0.557
I am paid less than those with similar credentials	0.749						0.582

- ⁵³ Underpayment
- ⁵⁴ Status discrepancy
- ⁵⁵ Hours discrepancy
- ⁵⁶ Involuntary temporary work
- ⁵⁷ Field
- ⁵⁸ Poverty-wage employment

Factors	Factor 1 ⁵³	Factor 2 ⁵⁴	Factor 3 ⁵⁵	Factor 4 ⁵⁶	Factor 5 ⁵⁷	Factor 6 ⁵⁸	Communalities
I am underpaid compared to those with my level of knowledge.	0.793						0.629
I earn less than people with similar skills.	0.857						0.693
I make less than others with my level of education.	0.791						0.630
My pay is lower than others with my level of experience.	0.784						0.628
I earn less than others with my level of ability.	0.803						0.621
I deserve a higher position in my company.		0.784					0.606
If it were up to me, my position at work would be higher.		0.835					0.655
My rank at work is less than it should be for someone with my ability.		0.745					0.592
I deserve a higher position at work given my level of education.		0.802					0.703
Given my credentials, I should have a higher position at work.		0.802					0.705
I need to find a job that allows me to work more hours.			0.553				0.443
I work fewer hours than I need.			0.785				0.678
I work too few hours.			0.892				0.808
I do not work enough hours.			0.941				0.869
I would work more hours if I could.			0.689				0.504
The number of hours I work is not enough.			0.843				0.711
My job is temporary, but I want a permanent position.				0.821			0.636
I work in temporary positions, but I would prefer not to.				0.882			0.765
I take short-term jobs because I have to.				0.832			0.750
I work in a temporary position, because I cannot find a permanent job.				0.899			0.850
I am forced to take temporary jobs.				0.855			0.812
I cannot find a permanent position.				0.856			0.821
I am forced to work outside my desired field.					0.782		0.631
I had to take a job outside of my field.					0.858		0.748
I cannot get a job related to my education.					0.816		0.690

Factors	Factor 1 ⁵³	Factor 2 ⁵⁴	Factor 3 ⁵⁵	Factor 4 ⁵⁶	Factor 5 ⁵⁷	Factor 6 ⁵⁸	Communalities
I am unable to work in a job related to my formal training.					0.862		0.782
I was compelled to take a job unrelated to my education.					0.868		0.763
I want to work in a different field, but there are no jobs available.					0.796		0.645
My pay is not enough to live on.						0.776	0.622
The income from my job is not enough.						0.749	0.598
I barely earn enough to survive.						0.701	0.544
Despite efforts at work, my income is too small.						0.822	0.679
I do not earn enough, even though I have a job.						0.855	0.729
My job does not allow me to make a decent living.						0.854	0.716
Eigenvalue	10.413	5.331	3.194	2.797	2.454	2.083	
% of variance explained	28.924	14.809	8.872	7.770	6.818	5.787	
Cronbach's α	.918	.890	.921	.952	.935	.915	

Source: Survey Data (2018)

Looking at Table 6.19, it is noted that the first seven items are substantially loaded in factor one which relates to underpayment. The next five scale items were loaded onto factor two which is named status discrepancy. Factor three was subsequently named hours' discrepancy and had the next six scale items loaded. The last three factors pertained to involuntary temporary work (six loaded scale items), field (six loaded scale items) and poverty-wage employment which was loaded with six scale items. With regards to communalities, Hair *et al.* (2010:119) maintains that the closer the value is to 1, the better the factors explain the variable. As shown in Table 6.19, 35 of the 36 scale items had a communality that exceeded 0.5 which is an indication that the extracted factors explained a great share of the variance of the specific variables or scale items. One scale item had a communality of 0.443. According to MacCallum, Widaman, Zhang and Hong (1999, as cited by Field, 2018:797) "*as communalities become lower, the importance of sample size increases*". Specifically, communalities below 0.5 are adequate if the sample size is above 500, therefore based on this, the low communality is accepted since the sample size of this study meets the criteria. The values of the Cronbach α for the extracted factors were all above 0.80 which according to Pieterse and Maree (2012:216) are regarded as acceptable, therefore confirming internal consistency in the loaded variables in the extracted factors.

6.6.2 Participants' perception of their underemployment status – results from the subjective underemployment scale (SUS)

Table 6.20 shows the responses of the participants to their perception of their underemployment status. As mentioned in Chapter 5, participants had to indicate how much each scale item (i.e. statements) apply to them considering their main job where they spend a large portion of their time. The overall intention of the section was to address the participants' perceptions of their underemployment status. Since the six-point Likert scale used ranged from 1=strongly agree to 6=strongly disagree, higher mean values imply disagreement with the indicated factor, therefore a more positive perception regarding underemployment among the sample. On the other hand, a lower mean value implies an agreement with a factor, which is associated with a more negative perception. Table 6.20 shows that a larger share of the graduates 68.7 per cent felt that they were underpaid in their jobs at the time of the study while 31.4 per cent did not perceive their jobs to underpay them. Within this factor, respondents strongly felt that their earnings are less than others with the level of education that is equal to theirs (28.2%), their pay is less than others who hold the same qualification (26.9%) and the same level of abilities (25.3%).

Table 6.20: Subjective Underemployment Scale (SUS) results (%)

Factors	Strongly agree	Agree	Slightly agree	Slightly disagree	Disagree	Strongly disagree	Mean (max = 6)
Underpayment	24.4	24.4	19.9	9.6	14.8	7.00	3.157
My pay is less than other people with my qualification	26.9	23.3	19.9	9	13.9	7.1	
I am paid less than those with similar credentials	23.4	22.8	21.3	8.8	15.9	7.7	
I am underpaid compared to those with my level of knowledge.	24.4	25	20.7	7.8	15.3	6.9	
I earn less than people with similar skills.	23.1	25.3	19.7	9.9	15.3	6.7	
I make less than others with my level of education.	28.2	24.5	16.3	10.1	14	6.9	
My pay is lower than others with my level of experience.	19.8	23.7	21.7	12	14.8	8	
I earn less than others with my level of ability.	25.3	26	19.5	9.5	14.3	5.4	
Status discrepancy	15.3	26.4	20.4	15.1	16.3	6.5	2.960
I deserve a higher position in my company.	13.2	26.5	24.1	14.5	16.1	5.6	
If it were up to me, my position at work would be higher.	16.1	29.9	20.8	12.4	15.6	5.2	

Factors	Strongly agree	Agree	Slightly agree	Slightly disagree	Disagree	Strongly disagree	Mean (max = 6)
My rank at work is less than it should be for someone with my ability.	16.6	25.5	18.4	15.8	16.6	7.1	
I deserve a higher position at work given my level of education.	15.2	26	18.4	16.5	16.7	7.4	
Given my credentials, I should have a higher position at work.	15.4	24.3	20.2	16.1	16.7	7.2	
Hours discrepancy	3.7	6.1	9.2	12.9	33.9	34.9	3.798
I need to find a job that allows me to work more hours.	4.1	6.1	10	16.9	33	29.9	
I work fewer hours than I need.	2.4	7.2	8.9	13.9	34.1	33.5	
I work too few hours.	2.2	4.6	6.3	12.2	34.6	40.1	
I do not work enough hours.	2.4	3.3	5.2	10	38.3	40.7	
I would work more hours if I could.	7.9	11.1	17.2	11.4	24.2	28.2	
The number of hours I work is not enough.	3.3	4.1	7.6	12.7	34.9	37.3	
Involuntary temporary work	11.4	6.2	6.2	3.9	20.2	52.1	4.505
My job is temporary, but I want a permanent position.	17.6	6	4.4	3.3	20.9	47.8	
I work in temporary positions, but I would prefer not to.	14.9	6.5	5.6	3.9	19.9	49.2	
I take short-term jobs because I have to.	8.6	6	7.2	3.2	20.1	55	
I work in a temporary position, because I cannot find a permanent job.	11.1	6.8	5.1	3.7	19.6	53.7	
I am forced to take temporary jobs.	8.3	5.4	7.2	4.6	20.1	54.4	
I cannot find a permanent position.	8	6.3	7.7	4.9	20.6	52.6	
Field	11.8	8.2	10.8	9.9	21.9	36.6	4.002
I am forced to work outside my desired field.	11	11	10.2	9.3	24.5	34	
I had to take a job outside of my field.	11.8	11.5	10.4	9.1	21.3	35.9	
I cannot get a job related to my education.	11.2	8.5	12.5	10.7	21.2	35.9	
I am unable to work in a job related to my formal training.	8.4	7.6	11.1	11.8	22.2	38.9	
I was compelled to take a job unrelated to my education.	10.6	10.3	9.4	7.6	22.2	39.8	
I want to work in a different field, but there are no jobs available.	12.9	10.2	11.1	10.8	19.9	35.2	
Poverty-wage employment	16.9	17.3	14.1	11.8	20.9	18.8	3.466

Factors	Strongly agree	Agree	Slightly agree	Slightly disagree	Disagree	Strongly disagree	Mean (max = 6)
My pay is not enough to live on.	19.3	17.8	13.2	10.8	21.1	17.8	
The income from my job is not enough.	21.1	23.1	12.5	10.3	18.9	14.1	
I barely earn enough to survive.	11.6	10.8	13.4	14.9	24.6	24.6	
Despite efforts at work, my income is too small.	16.7	17.8	15.2	11.9	19.8	18.5	
I do not earn enough, even though I have a job.	17.4	20	13.4	11.5	19.8	17.8	
My job does not allow me to make a decent living.	15.4	14.3	16.9	11.6	21.5	20.2	

Source: Survey data (2018)

Perceptions with regards to status discrepancy similarly to the underpayment factor suggest a high agreement among the graduates. More than 50 per cent (62.1%) perceiving themselves to be in lower positions relative to the level of skills and abilities they possess. Almost 30 per cent of the participants agreed that if it were up to them, they would hold a better employment possession which aligns with the skills and qualifications they have, deservingly so (26.5%). These findings do mirror the aspects of the relative deprivation theory as mentioned in Chapter 2.3.3.6 where most workers feel they are underemployed having compared themselves with ideal work circumstances and their peers who hold identical skills, qualifications and experiences (Luksyte & Spitzmueller, 2011). Only 16.3 per cent did not identify with this kind of underemployment.

Perceptions relating to hours' discrepancy, which can be associated with time-underemployment, shows a high disagreement among the participants. More than a third (34.9%) of the participants strongly disagreed that they think in their job at the time of survey they are underemployed by time. According to the World Bank (2019) inadequate employment situations (i.e. income and skills underemployment) are often the most common forms of underemployment experienced by young people. Even findings of Beukes *et al.* (2017:51) time-based underemployment to be higher (4% to 5%) compared to those underemployment according to the inadequate employment approach (6% to 15%). A smaller share of participants identified with most of the scale items under the hours' discrepancy factor. These findings suggest that time-underemployment is not prevalent among graduates.

Perceptions relating to involuntary temporary employment similarly to the hours' discrepancy factor show that a higher number of the participants not identifying their job at the time of the study to be involuntary and temporal, suggesting that a higher share is in fact in permanent positions of a full-time

nature. More than half (52.1%) strongly disagreed with this factor. In particular, 55 per cent strongly disagreed with the scale item that suggested that they involuntarily take short-term work, with another 54.4 per cent with the perception that were not forced to take temporary work, 53.7 per cent strongly disagreed that they could not find permanent positions, this was followed by 49.2 per cent perceived their employment position as not being temporary. These findings again propose that involuntary temporary work which relates to time-underemployment was not a prevalent underemployment type among the participants in this study.

The next factor was concerned with underemployment in terms of field which can be linked to skills-underemployment. More than two-thirds (68.4%) did not perceive their job at the time of the study to be unrelated to their field of study, formal training or education. Specifically, in each of the scale items under this factor, more than 30 per cent of the participants strongly disagreed. About 39.8 per cent strongly disagreed with the statement that they were forced to take a job outside their education, followed by 38.9 per cent who also strongly disagreed with the statement that they are not able to get employed in the field of their formal training. Only 30.8 per cent perceived their job at the time of the study to be unrelated to their education, formal training and desired field.

Lastly, perceptions relating to poverty-wage employment show slightly differing views with 51.5 per cent disagreeing and 48.3 per cent agreeing that they were at the time of the study in poverty-wage employment which is characterised by too little earnings which are not enough for survival. The differences in the number of respondents under each scale item were in small margins, for instance, 56.7 per cent agreed that their job at the time of the study was characterised by income that is not enough. Also, approximately 51 per cent still confirmed that their earnings are not enough despite having employment. Another 50.3 per cent still felt that their income is not enough to live on. The prevalence of working poverty is growing particularly in developing countries, sub-Saharan Africa having the highest number of young people in employment characterised by low earnings not enough for survival (ILO, 2019).

6.7 REGRESSION RESULTS ON DETERMINANTS OF UNDEREMPLOYMENT

This section presents the binary logistic regression results which answers objective number five. As discussed in Chapter 5.7.2, a binary logistic regression was run using a categorical dependent variable coded as 1 for underemployed and 0 for not underemployed, in order to determine socio-economic factors significantly affecting the probability of graduates being underemployed and not underemployed. As mentioned in Chapter 5.7.2, before the estimation of the model, it was important to determine the presence of multicollinearity among the variables used, and as such, the results of the Variance Inflation Factors (VIF) indicated that there is no cause for concern regarding multicollinearity

between the variables in the model, with the VIF values at less than 2 and the Tolerance values being greater than 0.1 (see annexure A). The results in this section are as follows; first part discusses results obtained from omnibus tests of model fitness, followed by results obtained from Homsmer and Lemeshow test Cox and Snell R squared and Nagelkerke R squared, and lastly, results of the regression model.

6.7.1 Model summary

To determine the usefulness of the model (see Equation 6.1), the Cox and Snell R squared and the Nagelkerke R squared were estimated as shown in Table 6.21. The values obtained indicate the amount of variation in the dependent variable explained by the model which is described as pseudo R squared statistics (Pallant, 2010:176). Values range from 0 (minimum) to 1 (maximum) signifying the percentage variance that is explained. The regression model shows result values of 0.151 and 0.169, suggesting that this set of independent variables explains between 15 per cent and 16 per cent of variability in the underemployment status of the participants.

$$L_i = \ln\left(\frac{P_i}{1-P_i}\right) = \beta_0 + \beta_1 X_{MS} + \beta_2 X_{Loc} + \beta_3 X_{car\_guid} + \beta_4 X_{age} + \beta_5 X_{race} + u_i \dots\dots\dots (6.1)$$

Table 6.21: Model summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	618.418 ^a	0.151	0.169

6.7.2 Model fit

Before the regression analysis is performed, it is important to determine whether the chosen model fits with the data. As such, the model fit was measured through conducting the Omnibus test of model coefficients which shows an overall indication of how well the model performs, also referred to as a goodness of fit (Pallant, 2010:175). The Omnibus test rests of the null hypothesis that the model is a bad fit with the data that was used. The results obtained from the regression model shows a chi-square statistic of 24.638 with 13 degrees of freedom and p-value of 0.026 (shown in Table 6.22), which infers the rejection of the null hypothesis at the 5 per cent level of significance, hence indicative of a good model fit.

Table 6.22: Omnibus test of model coefficients

		Chi-square	df	Sig.
Step 1	Step	24.638	13	0.026

	Block	24.638	13	0.026
	Model	24.638	13	0.026

Another test was conducted to determine the model fit which is the Hosmer and Lemeshow test which is based on the null hypothesis that the model is a good fit with the data, which is opposite to one in the Omnibus test, where the former looks for a significant value of more than the mentioned (Pallant, 2010:176). The results in Table 6.23 shows a chi-square statistic of 3.598 with a significant value of 0.825, implying that we fail to reject the null hypothesis of good fit, and therefore the model is a good fit at the 5 per cent level of significance.

Table 6.23: Hosmer and Lemeshow test results

Step	Chi-square	df.	Sig.
1	3.598	7	0.825

6.7.3 Regression coefficients of variables in the equation

The previous section has shown results which prove the viability of the model. This section presents results of the regression showing the individual parameter estimates on how the independent variables influence the probability of graduates to fall in either the underemployed category or the not underemployed category. Table 6.24 gives information about the contribution or importance of each of the predictor variables, such as coefficients, their standard errors, the Wald test statistic with associated degrees of freedom and p-values, and the exponentiated coefficient (also known as the odds ratio).

The first step in interpreting the results is to look at the p-values; this helps the researcher to check the variables that contribute significantly in predicting the ability of the model. The next step in interpreting the regression is to look at the coefficient values, which are provided in the second column of the table. The B values help to calculate the probability of a case falling into a specific category or the direction of the relationship, which can be realised with either a positive or negative sign. A negative B value indicates that the increase in the independent variable score will result in a decreased probability of falling into the success category (the dependent category coded 1). A positive B value indicates that an increase in the independent variable score results in an increased probability of falling into the success category. In this case being underemployed since '*underemployed*' is coded as 1 and '*not underemployed*' is coded as 0 (Field, 2009:285).

Table 6.24: Regression coefficients of variables in the equation

	B	S.E.	Wald	df	Sig.	Exp(B)
Constant	10.721	0.229	9.896	1	0.002*	0.486
Age (20 to 24)	0.38	0.277	1.882	1	0.17	1.463
Age (25 to 29)	0.412	0.229	3.232	1	0.072*	1.509
marital status (not married)	0.352	0.213	2.719	1	0.099**	1.421
Geographical location (urban/city)	-0.654	0.243	7.229	1	0.007*	1.924
career guidance (received)	-0.518	0.206	6.333	1	0.012*	0.596
Race (Black)	0.425	0.209	4.124	1	0.042*	1.53
Race (Indian/Asian)	-0.737	1.165	0.4	1	0.527	0.479
Race (Coloured)	1.27	0.691	3.376	1	0.066**	3.561

a. Dependent variable: underemployment status

b. Predictors: (Constant), Age, Marital status, Geographical location, Career guidance, Race

c. Age: 30-34 is the reference category

d. Race: White is the reference category

*significant at 5% level of significance

**significant at 10% level of significance

The first independent variable in the regression model was age which in this case was a categorical variable with three categories, and the last age category (30-34) was used at the reference point. The results in Table 6.24 that age (25-29) had a p-value of 0.072 which is statistically significant at 10 per cent level of significance and an odds ratio of 1.509. The positive coefficient implies that graduates in the 25 to 29 age category had a higher probability of being underemployed compared to the reference group (30 to 34) and that the odds of them being underemployed was 1.509 higher as compared to their counterparts (30 to 34). The age group of 20 to 24 was not significant. In their study, Beukes *et al.* (2017:49) found the incidence of underemployment to be the highest among those between the ages of 24 and 44 years. Felstead and Green (2013:12) found higher rates of underemployment among young people aged 20-24 years. Young people in this age category are most likely to be working part-time, which is most likely to be involuntary. The lack of working experience and graduating in courses irrelevant to the needs of the labour market are often one of the main reasons why many people would find themselves working less hours and earning less income than desired. To clarify, Ahmed (2016) argues that an oversupply of over-educated workers often reduces the reservation wages, implying that those who are over-educated or over-qualified would still earn less than those who are not. Graduates who struggle to find employment within their studied education fields are most likely just to accept any employment (whether it is for survival, or with the hope that they will have higher chances of good jobs in future), even the one requiring the level of education that is below the one they attained (Sharma &

Sharma, 2017). Consequently, accepting such a job would imply fewer earnings, *inter alia*, be underemployed by both skills and income.

The second independent variable in the regression model was marital status which was dichotomously coded as 0 for married and 1 for not married. The results in Table 6.24 indicate that the variable had a p-value of 0.099 which is a significant factor at the 10 per cent level of significance. The results further show a B value of 0.352 and an odds ratio of 1.421 which means that those that were not married had a higher probability to fall into the category of the underemployed and that the odds of the occurrence was 1.421 higher than their counterparts (married). These findings echo those of Niyimbanira (2016) who was examining time-related underemployment in South Africa. His findings showed that married individuals had less probabilities of being underemployed relative to those who were single. Never-married individuals also had the highest probability of being over skilled in the findings of Grapsa (2017:13). Wu and Eamon (2011:820) also found substantial employment problems among single females, including underemployment. To clarify, it could be argued that single individuals may probably have more time, hence the desire to use it to work, while their married counterparts, as a result of family responsibilities do not wish to work more (Niyimbanira, 2016:127). These findings are different from the study of Kent, Davidoff, de Moor and McNeel (2018) which was investigating the impact of socio-demographic characteristics on underemployment among those with and without cancer in the US which found underemployment to be frequently prevalent among married cancer survivors, specifically married females. Sackey and Osei (2006:221) also found similar results in Ghana.

Geographical location was another explanatory variable in the regression model, and since it was a categorical variable, it was coded as 0 for rural/township and 1 for urban/city. The results presented in Table 6.24 show that graduates from urban localities had a coefficient of -0.654 meaning that they scored 0.654 less than their rural counterparts on underemployment. The implication is therefore that urban graduates were less vulnerable to underemployment as compared to their counterparts, which in other words imply that rural graduates were more vulnerable to underemployment. The p-value of 0.007 was statistically significant at the 1 per cent level of significance. In determining how well South Africans do in their jobs, Grapsa (2017:13) found respondents to be less matched in rural areas, where they are also more likely to be undereducated. Rural workers were also reported to have a high likelihood of being less satisfied with their jobs than their urban counterparts. Given the nature of economic sectors in rural areas, people, particularly those in the youth category are most likely to find themselves in part-time work which is low-paying and casual. Zizzama and Ranchhod (2019:17) also found more probabilities of being in volatile employment for rural workers compared to their urban counterparts in South Africa. Similar findings are echoed by Ngiodem and Stephane (2019:21) who report accentuated underemployment rates in rural than in urban areas.

Another independent variable in the model was categorical, career guidance, coded as 0 for not received and 1 for received. Results in Table 6.24 show that the estimated coefficient was negative at -0.518 and statistically significant at the 5 per cent level of significant, implying that those who received career guidance were less likely to fall in underemployment and that the odds of this was 0.596 higher than participants who did not receive career guidance. Career guidance helps with the effective functioning of labour and work. The longer young people stay in education and training and the more complex labour markets become, the more important career guidance becomes (Musset & Kurekova, 2018:4). According to Cedefop (2016:138) career guidance can also provide labour market and economic information that can assist students into making better career choices that will contribute to their own development and better employment prospects. It could prevent many students from graduation into courses irrelevant to the needs of the labour market, thereby becoming prone to vulnerable employment.

The fifth variable to be included in the regression model was race which was categorical with four categorical variables and white was used at the reference point. The positive coefficient of 0.425 and the odds ratio of 1.53 mean that being black increases the probability of being underemployed compared to the reference category white and the odds of being underemployed increases by 1.53. Similar results are also reported for coloureds, with p-value of 0.066 which is statistically significant at the 1 per cent level of significance. The positive coefficient of 1.27 and odds ratio of 3.561 implies that the probability of a coloured graduate being underemployed is more than that of a white graduate. The odds of this probability is 3.561, which is far higher than it even is for blacks. These results mirror what is indicated in the literature covered from Chapter 3 to 5 that blacks and coloureds, particularly youth, are more prone to encountering negative labour market experiences. Their transition to work is more difficult relative to that of young white graduates (Mncayi & Dunga, 2016; Reddy *et al.*, 2016; Beukes *et al.*, 2017; Bhorat *et al.*, 2017a; Baidoo, 2018).

6.8 REGRESSION RESULTS ON PERCEPTIONS OF UNDEREMPLOYMENT STATUS

This section presents the results for the Ordinary Least Squares (OLS) regression model, which is the second regression model used to answer empirical objective four and five of the study. As discussed in Chapter 5, the regression model has three different types of regressions employed to analyse the perceptions of underemployment. The regressions were conducted based on the three main perceptions of underemployment status discussed in Chapter 5 (research methodology). The results show three different regression types, which are based on the three main types of underemployment (income, skills and time) employed in the study. An OLS regression was used since the perceptions were constructed into an index measured as a continuous variable, where a lower score indicated agreement with the corresponding underemployment type and a higher score disagreement or absence of a corresponding

underemployment type. As shown in the previous chapter, socio-demographic characteristics (marital status, geographical location, race, career guidance, and age) were selected as the (independent) explanatory variables, and the three underemployment types were used as the dependent variables in all the three regressions. The choice of these independent variables is guided by the results of the cross tabulations in sections 6.3, 6.4 and 6.5, specifically based on the relationships which were statistically significant. None of the other variables such as levels of education were significant. Collinearity diagnostic was also checked where the VIF and the tolerance were observed, and the results confirmed that multicollinearity was not a serious threat (see annexure A).

The results presented in this section will be as follows: firstly, the model fitting information which compares the model to the baseline. The second results are the ANOVA which presents the overall significance values for the variables. The last part presents the parameter estimates for the model which is the most important part of the regression results.

6.8.1 Regression one: Income underemployment

Table 6.25 presents the results of the model, describing the R, R^2 , adjusted R^2 , and the standard error of the estimate. These statistics can be used to determine how well a regression model fits the data. In the first column of the table are the results of R, which is a measure of the quality of the prediction of the dependent variable is given. In this case, R is indicated to be .267 and R^2 of 0.271, meaning that the independent variables explain 27 per cent of the variability of the dependent variable. This percentage is acceptable in social research where the number of variables that may affect a phenomenon is usually very high and it is hardly possible to have them all included in a pragmatic model.

Table 6.25: Model summary for regression 1

R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
				R Square Change	F Change	df1	df2	Sig. F Change	
.267 ^a	0.271	0.260	13.17359	0.271	6.186	7	565	0.000	1.942

Table 6.26 demonstrates the Anova results for the first regression on income, which shows a test of the null hypothesis about the model as a whole. The null hypothesis under the Anova test is that the model as a whole is not a good fit or is not significant. Results indicated shows that the independent variables significantly predict the dependent variable. The F statistic of 6.186 and a p-value of 0.000, which is significant at the 1 per cent level of significance. Statistically, the null hypothesis is rejected and hence this model is a significant model.

Table 6.26: ANOVA test for regression 1

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	7514.805	7	1073.544	6.186	.000 ^b
	Residual	98052.109	565	173.544		
	Total	105566.914	572			

The results of the first OLS regression are illustrated in Table 6.27. The first independent variable for this regression was marital status, which uses income index as the dependent variable where responses that are high indicate the agreement with perception that they were underpaid. Marital status, in this study is a categorical variable coded as 0 for married and 1 not married. Marital status shows a positive coefficient of 3.389 and p-value of 0.005, which expresses that the variable was significant at 1 per cent level of significance. The positive coefficient indicates that respondents who indicated not married agreed that they felt they were underemployed based on the income received. These findings agree with the results indicated in Table 6.24. Single respondents are most likely to feel underemployed since unlike those who are married and have family and household responsibilities, single individuals have more time, therefore they would have a need to want to work more and consequently increase their income.

Table 6.27: Regression results on the perceptions of income underemployment

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
Constant	25.492	1.663		15.332	0.000*
Marital status	3.389	1.205	0.118	2.813	0.005*
Geographical location	-1.497	1.437	-0.044	-1.041	0.298
Career guidance (received)	2.457	1.234	0.084	1.990	0.047*
Age (15-24)	5.232	1.216	0.174	4.303	0.000*
Black	5.480	1.179	0.190	4.647	0.000*
Indian/Asian	2.508	5.035	0.020	0.498	0.619
Coloured	5.169	3.369	0.062	1.535	0.125

*significant at 5% level of significance

**significant at 10% level of significance

Another independent variable for regression 1 was career guidance where a dummy variable was created because it was a categorical variable, which was coded 1 for received career guidance and 0 for not received. The results show a positive coefficient of 2.457 and a p-value of 0.047. The results expressed that the variable was significant at 5 per cent. The positive coefficient indicates that those who received career guidance perceived themselves as being under-employed due to the income they were receiving at the time data was collected. Generally, young peoples' earnings are limited at the beginning of their careers since employment prospects seem to become better as they age. In addition to earning low-income, their earnings prospects are also as limited suggesting a lack of economic mobility (Ranchhod, 2013).

Age and Race of respondents were the fourth and fifth independent variables respectively in this regression model. Both variables were categorical coded as (age) 1 for those below 24 years and 0 for those between 30 to 34, for race coded 1 for those who were black and 0 for white. The results show that both variables had a p-value that was significant at 1 per cent meaning they were both good predictors of the perceptions of income underemployment. Age had a positive coefficient (5.232) meaning that those who were below the age of 24 perceived themselves as underemployed due to the income they were receiving similarly those that were black who had also a positive coefficient (5.480) meaning that black people perceived themselves as being underpaid. Branson *et al.* (2018:3) found that even when young people find employment, their earnings are most likely to be low since because of their lack of experience, employers are unable to determine their productivity levels, which is why they would find themselves in unstable and lowest paid types of employment. Bhorat *et al.* (2016) reiterates the findings, where the find compared to those in the 55-64 age category, young people below 24 have the highest incidence of low pay at almost 58 per cent which is more than double those over 55 years.

Bhorat *et al.* (2016) further found this to be evident among blacks, which is again, a reflection of arguments in the literature (see also Table 6.24). Geographical location, and race (Indian/Asian and coloured) were statistically significant.

6.8.2 Regression two: Skills underemployment

The results in Table 6.28 demonstrate the results on fitness of the model, describing the R , R^2 , adjusted R^2 , and the standard error of the estimate. These statistics can be used to determine how well a regression model fits the data.

Table 6.28: Model summary for regression 2

R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
.250 ^a	0.263	0.251	9.75949	1.965

The first column of Table 6.28 presents the results of R , which is a measure of the quality of the prediction of the dependent variable is given. In this case, R is indicated to be .250 and R^2 as 0.263, meaning that the independent variables explain 26 per cent of the variability of the dependent variable. As previously mentioned, this is an acceptable percentage in social research where a phenomenon may be affected by a variety of factors which may be outside the scope of the study and therefore not make it possible to be included in a typical mode.

Table 6.29: ANOVA test results for regression 2

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3601.151	7	514.450	5.401	.000 ^b
	Residual	53814.957	565	95.248		
	Total	57416.108	572			

The Anova results for regression 2 which is on skills underemployment are presented in Table 6.29 which shows a test of the null hypothesis about the model as a whole. Results indicated show that the independent variables significantly predict the dependent variable with an F statistic of 5.401, and a p -value of 0.000, which is less than 0.01 for the 1 per cent level of significance. Statistically, the null hypothesis is rejected and hence this model is significant.

Table 6.30 presents the results of the second OLS regression which was employed to analyse the perceptions of skills underemployment. The perceptions were again constructed into an index measured

on a Likert scale, with higher scores indicative of a disagreement with the underemployment perception and a lower score as the opposite.

Table 6.30: Regression results on the perceptions of skills underemployment

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
Constant	13.870	1.517		9.145	0.000*
Marital status (not married)	1.924	0.899	0.091	2.141	0.033*
Geographical location (urban/city)	2.331	1.321	0.094	1.764	0.078**
Career guidance (received)	0.94	0.908	0.044	1.035	0.301
Age (15-24)	3.534	0.964	0.159	3.667	0.001*
Black	3.811	1.154	0.179	3.303	0.001*
Indian/Asian	5.938	3.753	0.065	1.582	0.114
Coloured	4.085	2.545	0.067	1.605	0.109

*significant at 5% level of significance

**significant at 10% level of significance

Marital status (categorical variable defined as 1 for not married and 0 for married) was the first independent variable in the second OLS regression model which uses skills index as the dependent variable. Marital status shows a positive coefficient of 1.924 and p-value of 0.033, which is statistically significant at the 0.05 significance level. These results imply that those who were not married agreed with the perceptions that they were underemployed by skills confirming the results in Table 6.24. Because they single individuals are most likely not to spend a large portion of their time facing competing demands relating to household responsibilities, they are most likely to be underemployed, earning low-income as shown in Table 6.29. The feeling of being skills underemployment may fuel the feeling that they are earning low-incomes because their job at the time of the survey is not in line with their qualifications and/or skills or may be greater than their peers.

Geographical location was the second independent variable in regression two, a dichotomous variable, coded 0 for rural/township localities and 1 for more urban/city locality. Table 6.30 show that the urban/city location has a positive coefficient (2.331) and a significant p-value (0.078). These results indicate that urban graduates agreed with the perception that they were skilled under-employed at the time of the survey. Findings of Beukes *et al.* (2017) found that the majority of the under-employed in their study resided in relatively urban provinces, which are industrial and economic hubs (Gauteng, Western Cape and KwaZulu-Natal), and surprisingly have low unemployment rates which could point to the existence of underemployment instead of open unemployment. Again, confirming that even

though having employment is better than the opposite, what also matters is the kinds of jobs that people have. In addition, these findings are also indicative of the presence of skills-job mismatches.

Age which is a categorical variable defined as 1 for 15-24 years and 0 for 30-34 years was another statistically significant variable at the 1 per cent level of significance (p -value = 0.001) as can be seen in Table 6.30. The results show a positive coefficient of 3.534 which suggests that participants in the age category of 15 to 24 agreed with the perception that they were underemployed by skills. This mirrors the findings as provided in Table 6.24. However, Grapsa (2017:6) found occupational mismatches to be higher for young people between 25 and 34 years.

Lastly, regarding race which was categorically coded at 1 for black and 0 for white, the positive coefficient (3.811) and a significant p -value of 0.001 as shown in Table 6.30 implies that black participants were most likely to agree with the perception that they are skills underemployed. For black youth, transitions into the labour market is more challenging and negative compared to graduates of other races. Stats SA in the '*2017 Labour Market Dynamics*' report showed that the prospects of skilled positions of Blacks are lower, followed by coloureds when they are contrasted with their white and Indian/Asian counterparts. Career guidance and race (Indian/Asian and coloured) were not statistically significant at any level of significance.

6.8.3 Regression three: Time underemployment

Table 6.31 presents result on fitness of the model, describing the R , R^2 , adjusted R^2 , and the standard error of the estimate. These statistics can be used to determine how well a regression model fits the data.

Table 6.31: Model summary for regression three

R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
.168 ^a	0.328	0.316	11.21350	2.123

Table 6.31 gives the results of R , which is a measure of the quality of the prediction of the dependent variable. In this case, R is indicated to be 0.168 and R^2 of 0.328, meaning that the independent variables explain 32 per cent of the variability of the dependent variable. This percentage is again an acceptable value in social research where it may not be possible for a pragmatic model to capture of variables that may affect a phenomenon.

Table 6.32: ANOVA test results for regression three

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2069.751	7	295.679	2.351	.023 ^b
	Residual	71044.577	565	125.743		
	Total	73114.328	572			

The ANOVA results for regression three as can be seen in Table 6.32 show a test of the null hypothesis about the model as a whole. The null hypothesis under the ANOVA test is that the model as a whole is not a good fit or is not significant. Results indicated in Table 6.32 demonstrate that the independent variables significantly predict the dependent variable. The F statistic is 2.351, with a p-value of 0.023, which is less than 0.05 for the 5 per cent level of significance. Statistically, the null hypothesis is rejected and hence this model is a significant model.

Table 6.33 presents the OLS regression results for time underemployment. The first explanatory variable for this regression was marital status, which uses hours' index as the dependent variable where responses that are high indicate the agreement with perception that they were working less hours that they would like to at the time of the survey. As can be seen in the table, of all the indicated explanatory variables, only age (15-24) and race (Indian/Asian) were statistically significant, both at the 0.01 and 0.10 level of significance respectively. Age has a positive coefficient (3.540) which implies that young participants were most likely to agree with the perceptions that they are working less hours and would therefore like to work more hours. For race, Indians/Asian graduates were most likely to agree with the time/hours underemployment perceptions with a positive coefficient of 7.886. These findings race reiterate what comes out of literature that regardless of any indicator, non-white workers/graduates still encounter negative employment outcomes and have the highest prospects of being underemployed as confirmed by the findings of Moleke (2010) and Bell and Blanchflower (2013:13). In terms of age, Stats SA confirmed that a high proportion of young workers in South Africa face more negative employment outcomes compared to other age groups (Stats SA, 2020a) and they are most likely to be in short-term work which is temporal in nature (Branson *et al.*, 2019).

Table 6.33: Regression results on the perceptions of time underemployment

Model	Unstandardized Coefficients		Standardised Coefficients	t	Sig.
	B	Std. Error	Beta		
Constant	25.124	1.743		14.416	0.000*
Marital status (not married)	-1.395	1.082	-0.058	-1.289	0.198

Model	Unstandardized Coefficients		Standardised Coefficients	t	Sig.
	B	Std. Error	Beta		
Geographical location (urban/city)	0.568	1.516	0.020	0.375	0.708
Career guidance (received)	0.613	1.043	0.025	0.588	0.557
Race (Black)	1.881	1.325	0.078	1.419	0.156
Age (15-24)	3.540	1.107	0.141	3.197	0.001*
Race (Indian/Asian)	7.886	4.313	0.077	1.829	0.068**
Race (Coloured)	1.956	2.924	0.029	0.669	0.504

*significant at 5% level of significance

**significant at 10% level of significance

6.9 SUMMARY AND CONCLUSION

This chapter discussed results obtained from the findings underemployment among young people with a specific focus on university graduates. The data was obtained through an online survey were access was requested into the alumni database of a university in South Africa. The analysis followed the order of the empirical objectives. The first section of the chapter provides the demographic overview of the sample, reporting on for instance, age, race, gender and many more. This was to get a picture of how fair the sample representation is. The chapter went on to describe the employment information of the sampled participants, particularly so as to see how many participants were underemployed, generally and also according to the three types of underemployment which is income, time and skills underemployment. The next two sections had an aim to understand the relationship between underemployment and socioeconomic factors and higher education factors, respectively. From these findings, significant differences were observed between underemployment and age, race, marital status, high school, geographical location, career guidance, field of study, and nature of higher education institution (whether historically black or historically white).

The chapter went on to present the findings of the subjective underemployment scale (SUS) which was validated. Six factors were extracted with 36 scale items. The scale was deemed reliable and fit through conducting the KMO & Bartlett tests as well as the Cronbach alpha of .89 and above for each of the factors. The six factors accounted for 72.98 per cent of the total variance in the data. The results of these perceptions showed a high agreement among participants on the perception that they were underpaid in their job at the time of the study, with a majority also agreeing to the perception that they deserved a better occupation or position given their skills/work experience and qualifications and that they work hours that are not enough and would therefore like to work more hours. There were small differences when it comes to the perception of being involuntary part-time work and earning wages not enough for

survival with only 52 per cent in disagreement for both factors. More than 60 per cent did not agree with the perceptions relating to field.

The next step was to run the regressions, both the binary logistic regression and the OLS regression. Firstly, the binary logistic regression had two categories where the success category was underemployed and the alternative category which is not underemployed coded as 0. The model was run with several independent variables which included age, marital status, geographical location, race and career guidance. Of these variables, being in the age group 25 to 29, not married, black and coloured were associated with a high probability of being underemployed. These findings were all statistically significant. Being from urban/city localities and having received career guidance was associated with less likelihood of being underemployed. Results were also statistically significant.

The next regression involved the use of an OLS regression which entailed three different regression types based on the SUS perceptions, where three main types of underemployment (income, skills and time) employed in the study were selected. An OLS regression was used since the perceptions were constructed into an index measured as a continuous variable, where a lower score indicated agreement with the corresponding underemployment type and a higher score disagreement or absence of a corresponding underemployment type. Several socio-demographic characteristics (marital status, race, career guidance, and age) were selected as the (independent) explanatory variables, and the three underemployment types were used as the dependent variables in all the three regressions. In the first OLS regression on income underemployment (measured by the underpayment perception), young people in the 15-24 age category, black, not married and received career guidance were most likely to agree with the perception that they were underpaid in their jobs at the time of the survey. In the second OLS regression on skills underemployment (measured by the field perception), only young people in the 15-24 age group, black, not married and from urban areas agreed with the perception that they were experiencing field-job mismatches in their jobs at the time of the survey. Lastly, when it comes to the third OLS regression on time underemployment (measured by the hours' discrepancy perception), only those that were Indians/Asians and 15-24 years old agreed with the perceptions that they worked less hours than they would like to in their job at the time of the survey. The findings of the study show that underemployment is also a problem among young graduates, regardless of race. The next chapter provides a summary and concludes the study. Furthermore, recommendations will be provided on how best to assist in solving the employability problem facing young graduates.

CHAPTER 7

SUMMARY, RECOMMENDATION AND CONCLUSION

7.1 INTRODUCTION

Labour markets have undergone major changes throughout the world and South Africa is not excluded. In particular, the rise of non-standard forms of employment have rendered traditional measures of employability and productivity, which are unemployment and employment as insufficient in trying to understand the mounting intricacies of the labour market. As such, underemployment (which is defined as employment which is inferior by some standards, relating to working hours, skills/qualifications and income) has also been attracting unprecedented attention as stable/secure employment continues to diminish with employers resorting to non-standard employment to ensure flexibility in the labour market. South Africa has also not been spared from employment challenges. Despite the fact that official unemployment rates (national and for young people) remain one of the highest in the world, there has also been a rise in the prevalence of other forms of labour underutilisation, particularly among young people. Higher education has also proven to no longer be a guarantee of employment, let alone secure full-time employment. The importance of productive, decent and quality employment is also reflected by the fact that it forms part of the 2030 sustainable development goals (goal 8), which makes the problem of underemployment an important one worth investigating. Especially since underemployment remains an under researched topic within mainstream economics. Most of the existing literature is based on unemployment while there is a research gap on examining different effects of underemployment. Underemployment is a serious constraint to long term economic progress, and has effects on the motivation of young generation and all issues of social welfare. As such, this study had the primary aim of analysing underemployment among young people. In order to achieve the main objective of this study, several theoretical and empirical objectives were used and assisted in guiding the study.

In particular, the theoretical objectives were to conceptualise, define and analyse underemployment as well as other forms of labour underutilisation. This was done in the first section of Chapter 2. The other theoretical objectives addressed in Chapter 2 entailed reviewing theories and approaches relating to underemployment, and determining the consequences of underemployment. The last two theoretical objectives which are i) review underutilisation, particularly underemployment among young people in South Africa's counterparts which are the BRIC countries and ii) profile underemployment in terms of time, skills, and income among graduates in South Africa, were both covered in Chapter 3 and Chapter 4 respectively. In answering these theoretical objectives, books, journal articles, research papers, government documents and reports, newspaper articles and conference papers also assisted. Some of

the data in both Chapter 3 and 4 were sourced from the World Bank and from each country's respective statistical office/agency.

The empirical objectives that assisted in achieving the primary objective of the study were to:

- To analyse the extent of underemployment among graduates.
- Examine underemployment variations by historical nature of the campuses of the university in question
- Determine the relationship between the graduate's demographical variables (biographical differences), social, economic background and underemployment.
- Determine the perceptions of graduate underemployment.
- Determine factors which influence underemployment status and also according to the time-related, skills related and income related definition of underemployment.
- Conceptualise a theoretical model explaining graduate underemployment in the context of South Africa.
- Formulate guidelines for policy development for government and policy-makers.

The attainment of the above-mentioned empirical objectives was done through a comprehensive survey on employed young graduates. Chapter 7 therefore provides the conclusions and policy recommendations drawn from the findings on the analysis of underemployment among young graduates in South Africa.

7.2 SUMMARY OF THE STUDY

7.2.1 Theoretical background

The study's theoretical background bases itself in accord with the theoretical objectives as indicated in section 1.3.2. As such, these theoretical objectives assisted in achieving the primary objective which was to analyse underemployment among young university graduates in South Africa. The theoretical foundations of the study were rooted in an understanding the conceptualization of labour underutilisation with the aim of trying to understand where underemployment fits within the concept of labour underutilisation. The first conceptualization through Hauser's (1974:4-5) labour underutilisation framework (LUF) was a model which aimed at capturing both visible and invisible underemployment based on the outcome of the 11th ICLS held in October 1966. Indeed, the LUF model has since been developed to have a more elaborated set of subcategories although its primary reason of capturing lost hours of work, income inadequacies and skills-employment mismatches still prevailed, essentially, highlighting what underemployment has come to be understood. These subcategories were thoroughly discussed to acknowledge the fact that labour underutilisation is indeed a multidimensional concept that

really goes beyond the typical labour market measurements which are unemployment and employment. Despite this, a number of measurement issues arise, which were also discussed in Chapter 2. This is understood to be one of the barriers preventing many developing countries from comprehensively measuring underemployment beyond current measures which only entail looking at the number of hours' people work a week and deeming them as underemployed when they fall short of the national benchmark.

The study went on to review economic theories on underemployment, although it was recognized that the concept/phenomenon was hardly acknowledged when compared to unemployment. In fact, most economic theories in the 1960s referred mostly to labour hoarding, which has come to be understood as a firm's response to a fall in demand and sales by adjusting worker's hours of work instead of retrenching them (e.g. Walter Oi, 1962 & Arthur Okun, 1963). This, however, only seem to explain a portion of what underemployment is, disregarding the two other types of underemployment which is related to income and skills-employment mismatches. In other cases, underemployment was only an indirect observation which was referred to as disguised unemployment (e.g. Robinson, 1936). Notably, another phenomenon known as overeducation was also used in trying to understand underemployment. Friedman (1977) challenged the automatic relationship between employment and education as suggested by neoclassical theories such as the human capital theory. Underemployment was therefore explained from the perspective of both economics and psychology.

From an economic theory point of view, firstly, the neoclassical broad perspective is that underemployment was to a large extent an intentional yet temporal occurrence of the free market economy. This suggests that underemployment was not to be of concern as this is normal in most economies. Underemployment accordingly occurred because of insufficient aggregate demand which meant that factors of production would be involuntarily underutilised. On the other hand, the institutional economic perspective argues that underemployment stems from various factors over and above human capital which are said to be discriminative in nature. For instance, race, gender and geographical location, which are outside the labour market (Doeringer & Piore, 1971). Within the field/theories of psychology and management, where extensive work has been done on underemployment, the conclusion is that a worker is underemployed if their current employment is inferior to their previous one or to their peers, whether by income, working hours or skills/qualifications. Therefore, the larger the gap between their desired situation and their employment situation, the more underemployed they may feel (e.g. Sattinger, 1993).

Following the comprehensive overview of what underemployment entailed, the study went on to review the literature on the effects of this understudied phenomenon. A distinction was made between consequences at the microeconomic level (individual and firm) and the macroeconomic level (society

and the overall economy). At the individual level, underemployment has a myriad of negative effects. When a worker feels unfulfilled in their work, or even a graduate is not successful in finding a graduate job and ends up in a non-graduate job, they feel disappointed and dissatisfied, prompting feelings of dejection and vulnerability which eventually flows into their attitudes towards careers and their lives in general (e.g. Newman, 1993). For young workers, the effects on career prospects, particularly progression are far greater as even transitional underemployment may turn to permanent underemployment. The seriousness of underemployment for young graduates in this case is further fuelled by the hindrance of unfulfilled expectations with income, again linking the situations of working-poverty. The effects at the firm level, include lower productivity since workers are not working to their maximum capability while others leave their unfulfilling jobs, ultimately affecting productivity and profit potential. For the economy, the loss lies in potential output that could have been produced but was not.

The subsequent chapter, Chapter 3 reviewed labour underutilisation among young people within the BRICS country grouping as countries with similar economic standings. It also became important to see how the developed countries fair in the measurement of labour underutilisation. The US was chosen as a proxy for developed countries as the US measures underutilisation through its BLS alternative measurement which entails six measures. Chapter 3 really showed how pervasive underemployment and its forms are most especially among young people regardless of the country and its economic standing. An observation in all the BRICS countries is the existence of the misalignment between higher education and the labour market which necessitates the importance of having discussions on these issues. Particularly in the US and South Africa, negative employment outcomes, specifically, underemployment, are rooted in a number of demographic factors such as race (black) and gender (female). However, some countries within the BRICS still fare better in certain instances, particularly those that reformed their higher education such as China and Russia. An issue that has emerged from this study is that the US provides valuable lessons for each of the BRICS countries. Not only will a comprehensive measurement of underemployment assist in understanding existing labour market dynamics, but will also ensure that appropriate policies are implemented. The demand for labour, including improved employment quality, will be enhanced by private sector development which needs an economic environment conducive to the growth of businesses. Following the discussion, a profile on underemployment among young people, in most instances, graduates in South Africa (as the last BRICS country member) was done in Chapter 4. The theme to emerge in this chapter is that South Africa is confronted with serious labour market challenges, and young people bear the brunt if compared to other age groups. Being black, female, in elementary positions and having qualifications below matric is associated with negative employment outcomes. Even though university graduates face lower levels of unemployment, the discussion in Chapter 4 shows that the problem with young graduates in

South Africa is not so much unemployment but underemployment, in other words the kind of employment they find themselves in. Most young people are involved in casual, low-pay and informal employment which raises concerns of working-poverty. Even though the country has implemented several policies to address the challenges surrounding the employability of young people, the solutions are falling short of the set targets while at the same time this could be influenced by policy uncertainty as to how set goals are to be achieved. In other cases, even if policies are implemented, the problem arises with the fact that positive results are temporary, as both unemployment and underemployment seem to have been increasing. The deduction is that for South Africa to create sustainable decent employment, high economic growth rates are required, accompanied by rapid, sustained and inclusive growth. In terms of education, basic education needs to be reformed to ensure well-rounded students are produced and which will consequently have a positive impact on the school-to-work transitions. The next section summarises the methodology adopted in the study.

7.2.2 Methodological and empirical process

The empirical process followed in the study was based on the post-positivism paradigm which necessitated the adoption of a quantitative research approach, including a survey, collecting primary data. This allowed a large sample data collection process that to some extent could be generalised to employed university graduates. Random probability sampling was used to collect survey data through the alumni database of the university in question. Although the survey attributed the collection of data across all ages of graduates, for the purpose of this study, the sample was restricted to young graduates who were in the 15 to 34 age category in order to fit in the young graduate classification. The general sample size, ignoring the age of the participants was 1072, where graduates younger than 35 years were 576 altogether, a sample size that was regarded fit as was identified through previous studies on the topic and also for normal approximation purposes.

After having followed various ethical procedures as required by the university's Research Data Gatekeeper Committee and Ethics Committee, permission to do the study was granted and a cover letter explaining the objectives of the study with the link to the questionnaire, including informed consent was sent to the alumni database. The questionnaire went through a peer review process to not only ensure that questions are linked to the study's empirical objectives but also that they are succinct and clear. The survey was also pilot-tested to ensure that it takes less than 20 minutes to complete as per literature recommendations (*see* McDaniel & Gates, 2013) and also ascertain that there are no navigational or technical issues since the questionnaire was online through Google Forms.

In also trying to understand underemployment from young people's perspective, the study employed a newly-validated scale called the Subjective Underemployment Scale (SUS) (Allan *et al.*, 2017). It is

worth noting that the instrument was validated again to determine how well it performs in a new study and whether the structure of the constructs is what it was when it was originally conceptualised (Hyman, Lamb & Bulmer, 2006). The SUS is really a comprehensive measure of perceptions of underemployment which has six factors namely, underpayment, status discrepancy, hours discrepancy, involuntary temporary work, field and poverty wage employment, and 37 items in total. Essentially, this scale measures all the three main types of underemployment which are income-underemployment, time-underemployment and skills-underemployment.

The survey data was dependent upon a three phase analysis. Firstly, descriptive statistics of the frequency distribution were figured and construed. An illustrative analysis of the data also made use of bar graphs, pie charts, histograms, and line graphs. In addition, cross-tabulations were used to understand the relationships between the variable of interest namely underemployment and several demographic and socio-economic variables. Secondly, a binary logistic regression was employed to determine factors that contribute or influence the underemployment status, which was dichotomously coded as 1 for underemployed and 0 for not underemployed. Lastly, an OLS regression model was employed where three different types of regressions were used to analyse the determinants of the three types of underemployment. The regressions were conducted based on the three main perceptions of underemployment status as indicated in the SUS (i.e. underpayment, hours' discrepancy and field). The perceptions through the Principal Component Analysis were constructed into an index measured as a continuous variable, where a lower score indicated agreement with the corresponding underemployment type and a higher score disagreement or absence of a corresponding underemployment type. Sociodemographic characteristics (marital status, geographical location, race, career guidance, and age) were selected as the (independent) explanatory variables, and the three underemployment types were used as the dependent variables in all the three regressions.

7.3 REALISATION OF THE STUDY OBJECTIVES

This section gives a summary of how the objectives of the study were realised.

7.3.1 Primary objective

The primary objective of this study was to analyse underemployment of young people in South Africa with a focus on university graduates. This objective was achieved through several theoretical and empirical objectives.

7.3.2 Theoretical objectives

The study listed five theoretical objectives as outlined in Chapter 1. All the theoretical objectives are stated below and how they were achieved.

- **To conceptualise, define and analyse underemployment as well as other forms of labour underutilisation**

This objective was achieved in Chapter 2. Specifically, the study began with a thorough conceptualisation of underemployment in Section 2.2.2 which was done through the labour underutilisation framework (LUF) to understand both visible and invisible underemployment and the extent to which labour is adequately utilised in the labour market. A further clarification between underemployment and labour hoarding was provided in Section 2.2.3. Section 2.2.4 further identified factors that detrmine underemployment, categorised into three broad factors; economic-related, demographic and socio-economic and employment-related. Following the concept clarification of underemployment, Section 2.2.5 and 2.2.6 dealt with the various forms of underemployment and measurements thereof. Section 2.2.7 articulated the various issues that arises with measuring underemployment. Other forms of labour underutilisation were also critically examined in Section 2.2.9.

- **To review theories and approaches relating to underemployment such as the neoclassical theories, theories from the institutionalist school of thought and psychological/management theories on underemployment**

The study provided theories of underemployment in Section 2.3. Specifically, economic theories were critically examined in Section 2.3.2. Other theoretical perspectives from psychology/management were provided in Section 2.3.3. Figure 2-1 provides a summary of the various theories.

- **To determine the consequences of underemployment at the macroeconomic, firm and individual level**

This objective was realised in Chapter 2 under Section 2.2.8. The consequences were categorised at the individual level, firm level and macroeconomic level. The discussion on this section showed how distressing the consequences are for young people.

- **Review underutilisation, particularly underemployment among young people in South Africa's counterparts which are the BRIC countries**

The study carried out a review of underemployment, among young people within the BRIC economies in Chapter 3 under Section 3.3. Prior to this, underemployment in developed countries (with the US as a proxy) was examined, as found in Section 3.2. This choice was based on the premise of the US having a comprehensively measuring underutilisation through its BLS alternative measurement. The discussion on each country was based on three broad points/factors: background on the economy, labour market situation, specifically youth labour market, where attention is given to underemployment among young people, and lastly, policies that have been implemented in dealing with the labour underutilisation issue, underemployment in particular. Section 3.4 summed up Chapter 3 by summarising the lessons learnt from each of the reviewed countries with the aim of providing best policy practices regarding the challenge of underemployment of young people.

- **Profile underemployment in terms of time, skills, and income among young people in South Africa**

The review of underemployment in South Africa was carried out in Chapter 4. The realisation of this last theoretical objective was attained through several sections. Section 4.2 provided the economic background of South Africa, with the aim of highlighting its nature. Youth employment trends were assessed in Section 4.3. The section to follow went on to look at the South African youth labour force, primarily providing unemployment and employment according to several demographic variables such as gender, race, spatial distribution, age profile within the youth, education levels, sector and occupation. Section 4.5 reviewed the demand and supply of skills in South Africa as a way of investigating skills-mismatches, consequently analysing skills-related underemployment. Sections 4.6 and 4.7 respectively reviewed working-poverty as a proxy for income-related underemployment, and involuntary part-time employment as a proxy for time-related underemployment. The last section, i.e. Section 4.8 analysed the policy landscape on young graduate labour market challenges. The overall picture that emerged from this section is that developed countries and most of the BRIC countries have in some way comprehensively measured underemployment, and as such, have many policies in place which assist in trying to curb this challenge. This is not the case in South Africa, hence this study.

7.3.3 Empirical objectives

In line with the primary objective of the study, the following empirical objectives were set: to analyse the extent of underemployment among graduates; examine underemployment variations by historical nature of the campuses of the university in campus; determine the relationship between the graduate's demographical variables (biographical differences), social, economic background and underemployment; determine the perceptions of graduate underemployment; determine factors which influence underemployment status and also according to the time-related, skills related and income

related definition of underemployment; conceptualise a theoretical model explaining graduate underemployment in the context of South Africa; and formulate guidelines for policy development for government and policy-makers. The first five empirical objectives were achieved in Chapter 6 through descriptive and regression analysis. Specifically, Sections 6.2 and 6.3 provided an overview of the demographic and employment characteristics of the sampled participants respectively. The relationship between underemployment and selected socio-economic variables was analysed in Section 6.4, followed by the relationship between underemployment and higher education characteristics in Section 6.5. Section 6.6 analysed the findings of the Subjective Underemployment Scale (SUS) which were done through principal component analysis.

Section 6.7 performed a regression analysis on the determinants of underemployment status through the use of a binary logistic regression which used a categorical dependent variable coded as 1 for underemployed and 0 for not underemployed. The results on the perceptions of underemployment status are presented in Section 6.8. As discussed in Chapter 5, the regression model in Section 6.8 had three different types of regressions employed to analyse the perceptions of underemployment. The regressions were conducted based on the three main perceptions of underemployment status discussed in Chapter 5. The results show three different regression types, which are based on the three main types of underemployment (income, skills and time) employed in the study. An OLS regression was used since the perceptions were constructed into an index measured as a continuous variable, where a lower score indicated agreement with the corresponding underemployment type and a higher score disagreement or absence of a corresponding underemployment type.

The last two empirical objectives as mentioned in Section 7.1 were realised in Section 7.4.6 and 7.5 respectively. The discussions on the realisation of the empirical objectives are discussed below in Section 7.4.

7.4 KEY FINDINGS OF THE STUDY

This section gives a synopsis of the findings of the study and how the study's empirical objectives were achieved. The primary aim of the study was to analyse underemployment amongst young people in South Africa with a focus on university graduates. The results of this research study are in numerous ways comparable to studies that were carried out in several countries around the globe. Firstly, employment is indeed still relatively high for graduates compared to young people with lower levels of education, however, what is also concerning at the same time is the large number of young graduates who consider themselves as underemployed, irrespective of the kind of underemployment, i.e. income, time or skills). It is important to note that only statistically significant findings are discussed in this section.

7.4.1 Extent of underemployment

The study confirmed what was found in the literature that 82.6 percent of the sampled graduates were employment (part-time or full time) and that only 17.4 percent were unemployed. Of those that were unemployed, more than 26 percent had been so for more than a year which is indicative of long-term unemployment. The employment findings by gender showed that female graduates constituted a large share of the employed (61.6%) compared to 38.4 percent male graduates that were employed. At the same time and as expected they assumed a large percentage of the unemployed at 63.3 percent compared to males (36.7%).

In terms of underemployment, the first step was to ask graduates whether they would consider themselves to be underemployed and approximately 45 percent of the participants considered themselves underemployed as per the broader definition in Chapter 2.2.2 while about 55 percent were not underemployed. Concerning the various categories of underemployment, the study found that 36.4 percent were underemployed by income, which as explained in Chapter 5.7.1 entailed workers whose earnings at the time of study were 20 percent less than what they earned in their previous job or 20 percent less than the occupational average income for those in their first jobs. Only 5.1 percent of the sampled graduates were time-underemployed, *inter alia*, working less than 35 hours a week. About 58.5 percent considered themselves to be underemployed in terms of skills which was defined as those who at the time of the survey perceived themselves to be in jobs where they were overqualified or had the most skills and experience that their counterparts in the same jobs. It was also interesting to find that an estimated 63 percent of the underemployed graduates desired to change their jobs at the time of the survey or have another job in addition to their main one.

Based on the numbers of participants that were underemployed by income and skills, it could be argued that the participants either want to earn enough income or find a job where they feel fulfilled and their skills/abilities are adequately used. These are concerning findings, particularly given that, despite the majority of young people being employed, almost half indicated that they were in jobs that are inferior by some standard. This therefore justifies governments to not only focus on ensuring that people are employment, but even more so, be concerned about the kinds of employment young people are in. Output and productivity are lost by the economy through underemployment and most importantly poverty is perpetuated through meagre income. Other effects are also felt at both firm and individual level. Governments need to work with higher education institutions (HEI) and the private sector to try and prepare graduates better for work. Figure 7.1 provides this relationship.

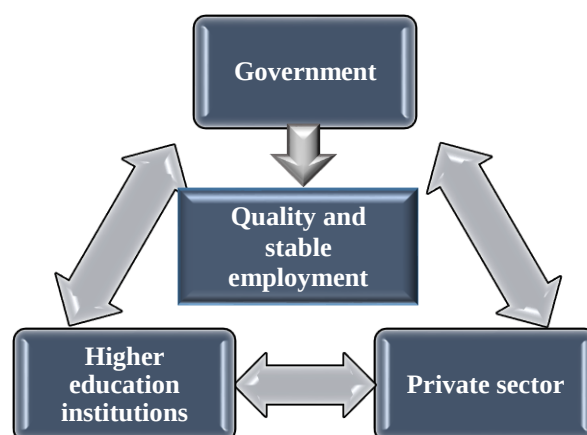


Figure 7.1: Public-Private-Partnerships in better employment creation

Source: Author's own compilation

7.4.2 Underemployment variation by historical nature of campus

A mentioned in Chapter 4, South Africa's higher education institutions have a trail of being dual which can be divided into historically advantaged institutions (HAI - white) and historically disadvantaged institutions (HDI - black). The study found that out of 351 young people who graduated from HAI, 42.7 percent were underemployed while of the 124 that graduated from HDI, 52.9 percent were underemployed. It was important to have this comparative analysis because literature (e.g. Bladry 2013, Van Broekhuizen 2016) mentions how this dual nature seen through historical inequalities in terms of resources may have an impact on graduate's ability to secure employment. Moreover, literature indicates how graduates from HDI are more prone to negative employment outcomes relative to graduates from HAI (e.g. Moleke 2010).

7.4.3 The relationship between the graduate's demographical variables (biographical differences), social, economic background and underemployment

In terms of the third empirical objective, which essentially was aimed at determining the relationship between the socio-economic background and underemployment, the study found that in terms of the specific age categorisation, 45.6 percent of the underemployed participants are between the ages of 25 and 29, 31.6 percent are in the 15-24 age category while 22.8 percent are in the age category of 30-34 years. A similar pattern is also found in terms of skills- and time-underemployment. A larger proportion of the participants irrespective of the age cohort is underemployed by skills. These findings also confirm what is advocated in literature from Chapter 2-4 that young graduates encounter substantial barriers in the labour market when compared to their adult counterparts. This was also confirmed by analysis that was done before restricting the sample size for the purposes of this study to just young people, which

indicated that of the 1072 graduates, 61 percent of participants who were underemployment at the time of the survey were young people below the ages of 35, compared to their adult counterparts who are 35 years and older (39%). Relating these findings to theory (see theory of career mobilitySection 2.3.3.4), it could be argued that there is a natural rate of underemployment, particularly for young workers. This therefore implies that young people become more fully- employable and betterly skilled with age and work experience. This line of argument may agree with theory that underemployment is a standard phenomenon in early career stages (Sicherman & Galor, 1991:101; Buchel & Mertens, 2004:810) and is a standard feature of a well-functioning labour market (Rosen, 1972:328), and suggests that educated individuals are more likely to face greater career opportunities and therefore move to a higher level of occupation (Galor & Sicherman, 1988:6-7) with years of experience.

In addition, despite the findings reporting that more female participants are employed relative to their male counterparts, the study's findings on gender show that in all the underemployment types, young females are overrepresented, which raises concerns of the kinds of employment they find themselves in. About 56 percent of those that were income-underemployed are females compared to 44 percent males. Also, in terms of skills, 64.6 percent of those that were underemployed by skills are females relative to only 35 percent males. These findings are also mirrored in the time-underemployment status suggesting that typical employment indicators do not provide a true picture of employment or rather kinds of jobs that workers are in. Surprisingly, the study found that out of the total number of underemployed participants, 59.9 percent were white, followed by 35.8 percent blacks, 3.8 percent coloured and 0.5 percent Asian/Indians. However, within each race group, the findings still mirror themes to emerge from literature (e.g. Bell & Blanchflower 2013:17; Branson *et al.* 2019) that underemployment is more prevalent among non-white workers. Specifically, within the coloured race, 72.7 percent were underemployed, while within the black race, 53.3 percent participants were underemployed and only 40.8 percent within the white race.

In terms of the type of high school, the findings of the study showed that majority of the participants were underemployed by skills, irrespective of the type of high school they attended (public, private, home and rural). The findings suggest the existence of job-qualification mismatches. The proportion of graduates employed in the first (21.4%) and second (39.4%) broad classification category (which is the skilled work category) that are underemployment, regardless of type, is less than that of participants in low-skilled work (elementary occupations) and semi-skilled work (clerks), at 78.6 and 57.1 percent respectively. The study additionally found that a large share of graduates based in more rural areas are underemployed (56.7%) relative to participants based in more urban areas. Workers in rural areas are disadvantaged from occupations which fit their abilities. These findings confirm the existence of spatial mismatch theory which as discussed in Chapter 2.3.2.6 states that individuals in rural labour markets, have a constrained ability migrate or travel (can arise because of many factors such as high transport

costs to cities, lack of sufficient financial resources) and as such will probably be underemployed since some may be forced to take up any jobs within their local labour markets to avoid being without work (Buchel & van Ham, 2003).

In terms of higher education factors, skills- and income-related underemployment seem to be the most common forms of underemployment among all the fields of studies. The majority of participants that were underemployed were in the economics and management sciences (EMS) with 38.6 percent, which was followed by those in the humanities field (Human) with 18.9 percent and engineering (Eng) with 12.6 percent. Within each study field, 1 in 10 participants that studied Engineering, 7 were skills-underemployed, 6 within the EMS and health sciences (HS) field, followed by 5 in agriculture and natural sciences (Agri sci) and humanities.

It was interesting to note that of all the participants that felt if they would start over, they would change their initial courses; 56 percent were underemployed which could be an indication that some of the graduates are in jobs where their fields of studies are irrelevant to. Another significant finding is related to career guidance and whether it may have a relationship with underemployment status, and the results show that 63.4 percent of the graduates that considered themselves underemployed had not received any career guidance. What to come out of literature is that many graduates do not make use of career guidance facilities during their studies (e.g. CHEC 2013) and in this study, sampled graduates were asked to provide reasons and 43.3 percent did not know about such services, which raises concerns about the visibility of university career centres and whether are they doing enough to attract students. Perhaps another issue could be whether regular recruitment drives are being hosted or not. Be that as it may, it could be argued that perhaps having career guidance only at university level is too late in assisting students to select adequate courses, and that such services through mentorship programmes and psychometric testing must be enformed in the curriculum at basic education level (e.g. at the start of secondary schooling).

With regards to levels of education, although not statistically significant, supports literature that those in lower levels of education are most likely to be earning less than desired, which could be linked to lack of experience. The study found that within income underemployment type, 39.2 percent had bachelor's degrees, which is trailed by those with honours (34.2%) and master's at 15.2 percent. In addition, it is found that the more educated participants were, the larger the number of them that identify with skills underemployment.

7.4.4 Perceptions of graduate underemployment

For the purpose of addressing the fourth empirical objective, the study made use of a validate scale referred to as the Subjective Underemployment Scale (SUS) (Allan *et al.*, 2017). The scale was tested

on the study's data to see how well it performed and whether the structure of the constructs is what it was when it was originally conceptualised (Chapter 6.6.1). This was done through principal components analysis which identified six main factors that relate to underemployment which are underpayment, status discrepancy, hours discrepancy, involuntary temporary work, field and poverty wage employment. All these factors had 36 items in total. The results show that a larger share of the participants seems to be in agreement with the underpayment factor where the perception seems to be that their jobs were not paying them sufficient income, which is less, relative to their counterparts. Similar findings were also observed with regards to the status factor where a substantial number of the participants perceived themselves as being positions that were inferior to their level of skills and abilities they possess. In other words, if it were up to them, they would be in better positions that are more relevant to their skills and qualifications. On the other hand, the main question could be '*who is ever satisfied with their income?*' Young people have in fact been found to have high reservation wages in their initial entry into the labour market (ManPower Group, 2018:7). Many young people have misleading perceptions in their first jobs, expecting unrealistic salaries and career progress (Ngarachu, Schimmelpfennig & Schöer, 2015:3).

The results, however, did indicate a disagreement among the participants when it comes to perceiving themselves as being underemployed in terms of working hours. These findings echoed those in literature which shows low numbers of time underemployment compared to skills or income underemployment (e.g. Beukes *et al.*, 2017). Perceptions relating to involuntary temporary employment similarly to the hours' discrepancy factor show that a higher number of graduates did not perceive themselves to be involuntary and temporary employment, suggesting that a higher share is in fact in permanent positions of a full-time nature. In terms of the fifth factor which relates to skills, more than 30 percent of the participants in each scale item strongly disagreed with this factor (68.4%). Only 30.8 percent regarded their job at the time of the study to be unrelated to their education, formal training and desired field. This shows that even though from an objective point of view participants would not regard themselves as being in jobs unrelated to their fields, in terms of the status factor and subjectively so, they still felt they could be in better jobs. Last but not least, the perception regarding poverty wage employment showed very small differences between those that identified themselves with this factor (48.3%) and those that didn't (51.5%). However, under each specific scale item, the results reveal that 56.7 percent perceived themselves to be earning insufficient incomes despite working. Approximately 50.3 percent of the participants agreed that their income was not enough to survive on. These findings mirrored what the ILO finds particularly in developing countries on the rise of working poverty among young people (ILO, 2019).

7.4.5 Econometric analysis of underemployment status

In trying to address empirical objective five, the study made use of a binary logistic regression to analyse factors that determine underemployment status where 1 was coded for underemployed and 0 for not underemployed. The second part of the regression analyses entailed the use of the ordinary least squares (OLS) model where three regressions were run, representing i) income underemployment ii) skills underemployment and iii) time underemployment. Three factors from the SUS which are underpayment, field and hours discrepancy were constructed into indices measured as continuous variables, where a lower score indicated agreement with the corresponding underemployment type and a higher score disagreement or absence of a corresponding underemployment type.

The results of the binary logistic regression confirmed what is already in the literature that the younger graduates were more likely to be underemployed compared to their more mature counterparts, that is, those in the 30-34 age category (Sharma & Sharma, 2017). With regards to their marital status, those that were unmarried has a higher likelihood of being underemployed when contrasted with their married counterparts. Literature seems to have various findings with some studies arguing that individuals who are single may probably have more time, hence the desire to use it to work, while their married counterparts, as a result of family responsibilities do not wish to work more (e.g. Niyimbanira 2016), while on the other hand, other studies (e.g. Kent, Davidoff, de Moor & McNeel 2018) find that married individuals to be more prone to underemployment. In terms of geographical location, the regression results found that urban graduates were less vulnerable to underemployment as compared to their counterparts, which in other words imply that rural graduates were more vulnerable to underemployment. Career guidance was also statistically significant in the model where the study found that graduates who received career guidance were less likely to fall in underemployment and that the odds of this was 0.596 higher than participants who did not receive career guidance. These findings suggest the importance of career guidance as an incubator of labour market and economic information that can assist students into making better career choices that will contribute to their own development and better employment prospects (e.g. Musset & Kurekova, 2018). Lastly, in regards with race, Africans/Blacks and Coloured youth have an increased probability of being underemployed compared to their White and Asian/Indian counterparts. Being young and Black in South Africa as reiterated in literature, despite government's efforts to improve labour market outcomes of previously disadvantaged groups, is still associated with not just negative labour market outcomes but also difficult school-to-work transitions (e.g. Baidoo, 2018).

The second part of the regression analysis entails the use of the OLS model to measure income underemployment, skills underemployment and time underemployment. This not only links to the fifth empirical objective but also the fourth one. In each of the regressions, the same set of independent

variables were used. Pertaining to the first OLS regression on income underemployment, participants who were not married tended to be underpaid which again corresponds with the findings of the logistic regression. Participants who received career guidance perceived themselves as being underemployed due to the income they were receiving at the time data was collected. Generally, young peoples' earnings are limited at the beginning of their careers since employment prospects seem to become better as they age (e.g. Ranchhod, 2013). More findings in terms of age and race show that respondents who were below the age of 24 perceived themselves as underemployed due to the income they were receiving similarly those who were black who had also a positive coefficient (5.480) meaning that Black youth perceived themselves as being underpaid. Young people's lack of experience means that their earnings are likely to be low since employers are unable to determine their productivity levels compared to say, those in the 55-64 age category, resonating with findings of Branson *et al.* (2016) and Bhorat *et al.* (2019).

The findings of the second OLS regression on skills underemployment showed that again the unmarried graduates were most likely to agree with the perception that they were employed in jobs which were outside their field of studies. In terms of geographical location, the regression analysis found that graduates situated in urban areas tended to agree with the perception that they were underemployed by skills at the time of the survey. Other studies (e.g. Beukes *et al.* 2017) also found that those who resided in urban provinces to be underemployed. However, the fact that urban areas typically have lower unemployment rates relative to more rural areas could point to the possibility of the existence of other forms of labour underutilisation such as underemployment. With regards to age, participants below 24 seem to agree with being skills underemployed, relative to the reference group (30-34 years). However, in some studies, skills-job mismatches were found to be more prevalent among those 25 years and older (e.g. Grapsa, 2017). Lastly, Black graduates relative to white graduates seem to agree with the perception of being underemployed by skills. This is just confirmatory to the challenging transition of black young people into the labour market, and their prospects of being in skilled positions is lower when compared to their white counterparts (Stats SA, 2017b). For black youth, courses with low employment prospects are influenced by a myriad of factors, for instance, majority pass their matric with low APS which often forces into courses requiring low points which are more general in nature such as humanities relative to the sciences. The problem with such courses is that graduates take a while to be absorbed in the labour market and that they have a high chance of facing negative labour market outcomes.

The third OLS regression found that again, young people younger than 25 are most likely to identify with time underemployment compared to their mature counterparts. In terms of race, Asians/Indians relative to graduates of other races were most likely to be in agreement with perception that they are working less hours than they would like to. According to findings of Branson *et al.* (2019) short term

work which is casual and temporary in nature seem to be the most prevailing kinds of jobs for young people in South Africa. Table 7.1 provides a summary of the findings from the regression analysis.

Table 7.1: Summary of the determinants of underemployment from regression analysis

Type of regression	Significant predictors/variables
Binary logistic regression	
Underemployment status (underemployed)	Age (25-29 years) Marital status (single/unmarried) Geographical location (rural) Career guidance (not received) Race (Black and Coloured)
OLS regression (Perceptions)	
Income-related	Marital status (not married) Career guidance (received) Age (15-24 years) Race (Black)
Skills-related	Marital status (not married) Geographical location (urban) Age (15-24 years) Race (Blacks)
Time-related	Age (15-24 years) Race (Indian/Asian)

7.4.6 Theoretical model of underemployment

The findings of the study are in agreement with the *a priori* expectation pertaining to the association between negative employment outcomes, and underemployment in particular and young people. There is a clear interaction between underemployment and the factors that have been identified out of the significant variables. From the binary logistic regression, age (25-29 years), not married, based in rural locations, having not received career guidance and being black and coloured significantly predicted underemployment status. In terms of the OLS regression findings, most of the respondents that were more likely to agree with the perception of being underemployed by income respondents who were not married, between the ages of 15 and 24 years, and black were most likely to identify with income underemployment. Surprisingly, those who received career guidance perceived themselves to be underemployed by income. For the perceptions relating to skills-related underemployment, those not married, situated in urban areas, in the 15-24 age category, and black were most likely to be in agreement. In terms of the last regression on time-related underemployment, those in the 15-24 age category and Indian/Asian were most likely to agree with this perception. From these findings, it can be deduced that the following broad variables are significant predictors of underemployment (including by type): age (15-29 years), marital status (not married/single), geographical location, career guidance and race (black, coloured and Indian/Asian). Therefore, graduates identifying with those factors are

most likely not to be well matched to the right jobs, consequently, to avoid unemployment, they openly accept any form of employment. The outcomes of such kinds of employment include but not limited to feelings of dissatisfaction, discouragement, frustration, poverty, lost potential output and low firm profits, which will delay not only career progression but also hinder earnings prospects. As such, findings of this study suggest that the model presented in Figure 7.2 may explain the predictors of underemployment amongst young graduates.

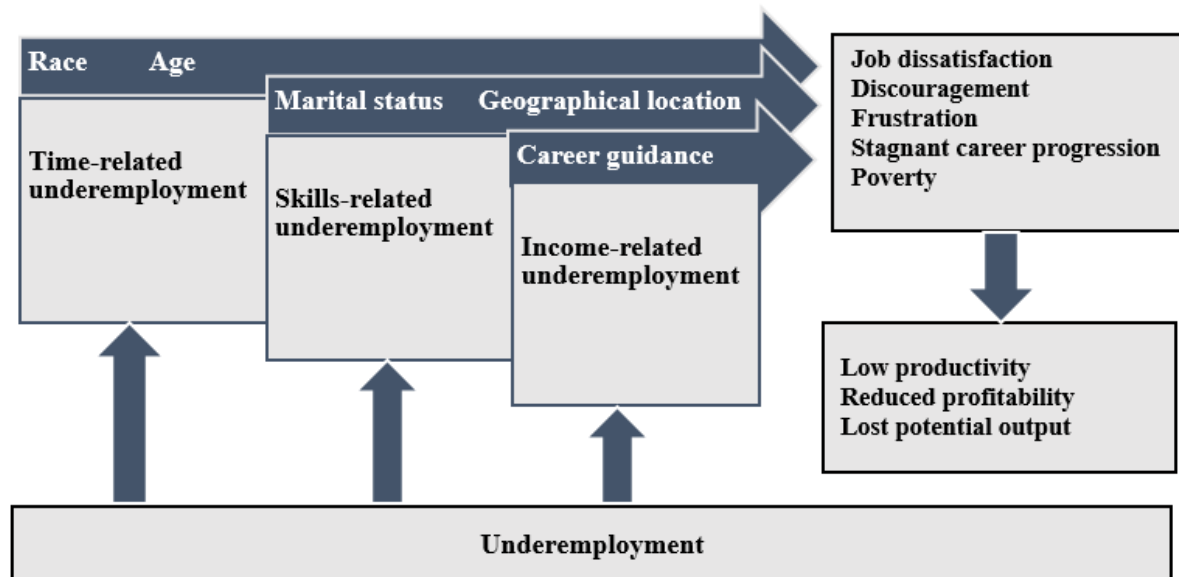


Figure 7.2: Predictors of underemployment amongst young graduates

Source: Author's own compilation

The next section explains the contribution of the study.

7.5 CONTRIBUTIONS OF THE STUDY

The contribution of the study to the body of knowledge is that no other study in South Africa has gone as far as understanding graduate underemployment among young people from primary data collection, as most study at the time had mostly used the QLFS among other secondary data sources which have their own limitations. In addition, the use of primary data collection warranted the study the chance to access data that is otherwise not accessible from secondary sources. The study was further enhanced by the use of a validated and reliable subjective underemployment scale which tried to understand underemployment from the perception of graduates themselves. The fact that this scale has been validated is an advantage given that most subjective measurements of underemployment lack reliability and consistency. As a result, new information is now available on underemployment among young graduates, highlighting crucial issues affecting graduate employability. The comprehensive review of

literature in both Chapter 2 and 3 further provided an in-depth understanding of labour underutilisation. The conceptualisation of the model in Figure 7-2 contributes to a broader understanding of the dynamics present in the South African graduate labour market. The model signifies an imperative instrument for predicting underemployment in the context of South Africa. Furthermore, the recommendations discussed in the next section contribute towards the outlining of appropriate measures that go beyond unemployment and are targeted at the types of employment young people find after graduation.

7.6 POLICY RECOMMENDATIONS

Stemming from the findings and contributions of this study, several recommendations about underemployment among young people are outlined in this section.

7.6.1 General policy recommendations

- **Introduction of comprehensive alternative measures of labour underutilisation**

This study recommends that the South African government starts giving a whole new focus to statistics beyond just employment and unemployment. Given the existence of underemployment as found in this study, there is a need for Statistics South Africa to start adopting measures that will assist in at least giving a comprehensive outlook of employment, including the kinds of jobs that people, particularly young people find themselves in. The *'time-underemployment'* measure must be supplemented by other measures of labour underutilisation while being mindful of the measurement issues in Section 2.2.7. Overall, this study has opened up a gap for other researchers to study graduate underemployment.

- **Focus on supply-side of the youth labour market**

In addition, a focus on the supply side of the youth labour market is crucial, particularly in ensuring that graduates are adequately skilled to meet the needs of the labour market. This will therefore require curriculum reform by institutions of higher learning, together with South African employers in order to ensure more work-ready graduates and go back to a practical higher education curriculum.

- **Constant monitoring of existing youth policies**

The government additionally needs to do constant monitoring of existing policies (as discussed in Chapter 4.8) to determine their effectiveness and whether they are achieving their set objectives. Proposing new policies without monitoring the success or failure of existing policies is in fact a definite way of keeping the country in a vicious cycle of negative labour market outcomes as already evidenced in Chapter 4 and through the findings of this study. On the other hand, given that South Africa is often regarded as having one of the most regulated labour markets (with strict labour laws), there is a need

for the government to relax some of the labour regulations (Yu, 2012:9). It could be argued that employers at times may hire people on a casual/part-time basis (which consequently implies lower earnings) primarily because of the strict regulations surrounding full-time recruitment. These laws affect particularly the unskilled and semi-skilled worker-seekers.

7.6.2 Specific policy recommendations

- **Improve and accelerate the upliftment of previously disadvantaged races**

First of all, in view of the findings in Chapter 6 that non-white young graduates are faced with negative labour market outcomes, there is a need by the government to improve and accelerate the upliftment of previously disadvantaged groups, mainly, blacks and young people. It is clear that the existing policies are not effective. The end goal should not just be about getting these young people in to employment, but to stable and sustainable employment opportunities. With stable employment comes, employment security and consistent earnings.

- **Learnership programmes should focus on multi-level skills**

It is important that in a bit to avoid worsening underemployment trends in certain sectors, programmes such as SETA's learnership enrolments concentrate on multi-level skills as opposed to basic and intermediate skills as is the case (Chapter 4.8.6, paragraph 4). Therefore, these learnerships should be targeted in certain sectors to have a diverse of skills supply in the country. As discussed in Section 4.5.1, employers regard soft-skills as crucial elements in successful employment search of graduates. Therefore, in as much as there should be a focus on hard-skills, there should be an equally important focus on soft-skills

- **Reinforce the labour market attachment of young people**

Efforts should be made to improve the labour market attachment of young people, particularly black youth. The attention on tending to unemployment should not divert from the conceivably similarly crucially important role of reinforcing the labour market attachment of young people who could be underemployed. Focusing exclusively on the unemployment rate or just time-underemployment numbers (as is the case in South Africa's national statistical services) gives an incomplete image of the actual labour environment. There could be more employed young workers who are in '*dead-end*' jobs living in poverty, than there are unemployed ones.

- **Enact labour market tools that will manage non-standard forms of employment among the youth**

As seen in the study, a substantial challenge is in the means by which to encourage a smooth and successful transition for young graduates from entry level employment to more stable and productive jobs. Government and the private sector needs to work on enacting labour market institutional tools that will manage atypical employment contracts so as to promote a process where young people can progressively move from entry level occupations into occupations that will offer career possibilities. These tools of course should be implemented in such a way that the creation of productive employment for young people is not negatively impacted. The main goal should be about preventing the use of young people for low-paying and precarious jobs.

- **Career guidance should be embedded in basic education curriculum**

Career guidance needs to be implemented within the basic education system and as early as in pre-secondary education. This will help young people in making informed decisions about their future careers. The Labour Market Intelligence System (LMIS) through the Labour Market Intelligent Partnership (LMIP) will greatly assist in this regard by providing high quality information on South Africa's labour market. This will also ensure that the country's education system continually produces graduates with skills relevant to the labour market and consequently could reduce chances of being underemployed. In addition, mentorship programmes should also be introduced in early secondary schooling. Also, encourage more young people to pursue entrepreneurship to create more employment. This will therefore require easily accessible information on programmes such as YEDS (see Section 4.8.10). In other words, ensure that young people know about these various government programmes and can easily apply for them without any unnecessary red tape.

- **Continuous development of existing employees**

Furthermore, with skills sets required for many jobs constantly changing, employers need to focus their attention the continuous development of their employees which encompass re-skilling and up-skilling. All the recommendations discussed above can only be effective on social dialogues between the government, employers and higher education institutions.

Other crucial lessons for South Africa are provided in Table 3.8, which highlights important factors South Africa could consider in trying to deal or avoid with graduate underutilisation particularly underemployment among young people. Figure 7.3 provides a framework for reducing graduate underemployment.

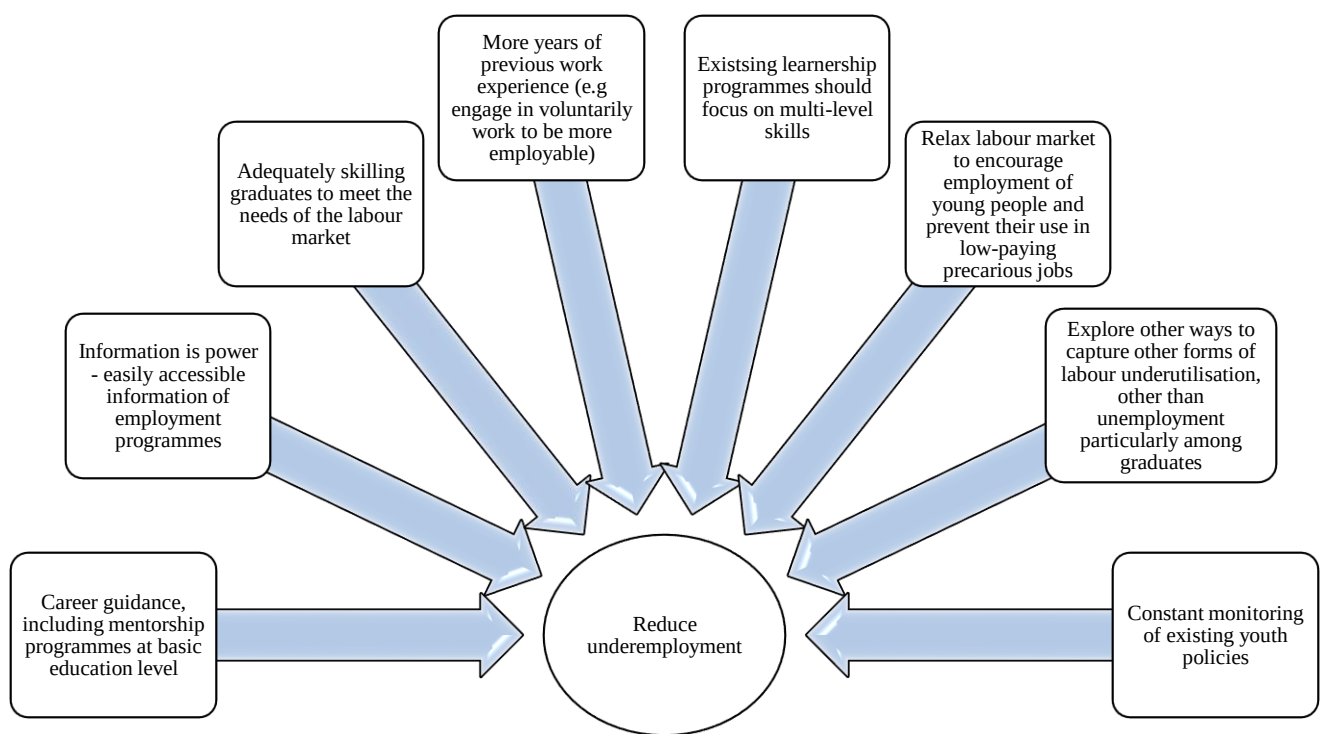


Figure 7.3: Framework for reducing graduate underemployment

Source: Author's own compilation

7.7 LIMITATIONS OF THE STUDY AND FUTURE RESEARCH

This study analysed underemployment amongst young university graduates. Like any studies, the study has some limitations which may open up avenues for future research. Firstly, care should be taken in generalising the results to the South African youth graduate population. Secondly, the gender distribution was more in favour of females, although representative of national statistics, future research could strive for a more balanced distribution. Thirdly, the composition of the study field was concentrated in economics and management sciences (EMS) and Humanities, which may have had an impact in the findings of the study given that previous research (e.g. Sahoo & Klasen 2018, Jonbekova 2015, Bhorat *et al.* 2017a) has found that graduates in generic courses are most likely to encounter more negative employment outcomes relative to graduates in hard sciences. Fourthly, the distribution in terms of marital status was somewhat skew with married graduates comprising only 34 percent of the sample. This may have an influence in how the single and unmarried participants perceive themselves and therefore their underemployment status. Some single and unmarried participants would agree with being underemployed since they have more time relative to their married counterparts who have more family and household responsibilities (Niyimbanira, 2016:130). Future research should go beyond a single cross-sectional data research design and perhaps look into utilising longitudinal data, to have a

more accurate reflection of the extent to which factors identified in this study influence underemployment status. Furthermore, the same study could be tested on employed graduates older than 35 which could contribute to the existing literature on underemployment in South Africa. Lastly, future research could try and understand how factors such as global digitisation, career change and on-the-job training influence underemployment.

7.8 CONCLUSION

Understanding the dynamics surrounding labour markets has become an imperative point of departure in trying to alleviate social ills such as poverty and inequality. This is true, especially given the rise of other forms of labour underutilisation which have disguised themselves as employment. With the prospects of stable and secure employment declining all over the world, young people are the most vulnerable and negatively affected. Even though education is said to bring about benefits in the labour market through increase probability of employment, this study showed that is not always the case. It is important for all relevant stakeholders to go beyond just getting graduates into employment but ensuring that they are in stable and sustainable employment. The main aim should not just be about reducing youth unemployment numbers through any kinds of jobs but good jobs which utilises an individual's time and skills while at the same time earnings decently. There is also a need for graduates to play their part in their career prospects by ensuring that they also are soft-skills ready, and reduce their unrealistic expectations in their initial entry into the labour market.

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ANNEXURE A: MULTICOLLINEARITY TEST

The results in the Table below proves that multicollinearity does not exist between the explanatory variables used in the study.

Test for multicollinearity

	Tolerance	VIF
(Constant)		
Race	.573	1.746
Age	.912	1.097
Geographical location	.577	1.732
Career guidance	.944	1.060
Marital status	.893	1.120

ANNEXURE B: QUESTIONNAIRE

Thank you for agreeing to take part in my study. Your participation is highly appreciated.

Take Note:

- The questionnaire has 6 sections with each section having its own set of instructions.
- However, you will not be answering all sections. Your response will only take you to the relevant section.
- Please be as honest as possible.
- Your information will be treated confidentially and your identity will be kept anonymous throughout the study.
- All information obtained will be used only for statistical purposes.

SECTION A (DEMOGRAPHICAL INFORMATION) Completed by all

1	Campus you graduated from ⁵⁹						
2	Gender	Male		Female			
3	Age	< 20	20 – 24	25 – 29	30 – 34	>= 35	
4	Race	African/Black	White	Coloured	Indian	Asian	Other (please specify)
5	Marital Status	Single (never married)		Married	Divorced	Widowed	
		Separated		Cohabiting	Other (please specify)		
6	The type of high school you attended	Private school	Public school (Township)	Public school (Model C)	Home - School	Other (please specify)	

SECTION B (HIGHER EDUCATION INFORMATION) Completed by all

1	Indicate your highest level of education	Bachelor's Degree	Honours	Postgraduate Diploma	Masters	MBA	PhD	Post Doc
1A	Indicate your field of study for the level of education indicated in 1 above	Economics & Management Sciences	Humanities	Education	Health Sciences	Agricultural & Natural Sciences		
		Theology	Law	Engineering	Other (please specify)			
1B	Indicate your mode of study for the course indicated	Part time			Full time	Distance learning		
2	Please indicate your specialisation/major (Specify, e.g. Economics, Statistics, Marketing, HR, Engineering, Law etc.)							
2A	What made you choose this course? (You may select more than one option)							
	Pressure from friends	Pressure from parents	Personal choice (Passion)	My high school matric marks couldn't afford me the course I had initially chosen,			Other (Please specify)	

⁵⁹ For ethical purposes, the names of the campuses are not disclosed as they may lead to possible identification of the university in question

				so it was either going to varsity or staying at home	
3	During your studies, did you ever make use of career guidance services offered by your University's Career Centre?			Yes	No
3A	If NO in question 3, please specify the reasons. (You may select more than one option)				
	I did not know they exist	I did not have time	They were a waste of time as they were not helping	Other (Please specify)	
4	Would you change your study course if you would start again?			Yes	No
4A	If YES in question 4, please specify reasons. (You may select more than one option)				
	It was a waste of time.	No connection between the course and the work place.	The content of the course was relatively poor/weak compared to those of graduates from other Universities.	Other (Please specify)	
5	What in your opinion is preventing/hindering students from academically performing well during their studies – Select one or more statements				
Poor understanding of English, especially for students who come from relatively poor/weak schools					
Too much social events at varsity					
They do not study adequately					
They do not spend enough time studying					
Lack of time management					
Lack of family support					
Lack of financial support					
Lack of studying material like books and no internet access especially for the needy students					
Other reasons (Please Specify)					

SECTION C (EMPLOYMENT STATUS) Completed by all

(0) Unemployed	(1) Employed (Part time OR Full time)

Take note:

- If you have selected 0, proceed to section D
- If you have selected 1, proceed to section E & F

SECTION D (UNEMPLOYED RESPONDENTS)

1	For how long have you been unemployed? (months or years)		
2	Are you currently actively searching for employment?	Yes	No

3	Did you ever decline a job offer while still looking for employment	Yes	No
3A	If YES in question 3, what were the reasons?		
	Job was situated far from where I lived		
	Job pay was too low		
	I was overqualified for the job		
	Personal reasons		
	I did not like the job despite the fact that I applied for it		
	Another reason(s) (<i>Specify</i>)		
4	Given your current employment status, would you:		
	Decline a job below your qualifications?	Yes	No
	Take a job below the average market salary of your peers?	Yes	No
	Take a part time job?	Yes	No
5	Given your current skills, qualifications and work experience, what is your expected gross minimum wage? State in Rands per month		

SECTION E (EMPLOYED RESPONDENTS)

1	Please indicate the sector in which your job is situated in:							
	Formal economy <i>(Also known as the formal sector – is based on the employment of waged labour within a framework of rules and regulations, usually devised and implemented by the state, on working hours, minimum wages, health and safety at work, or the social security obligations of employers and employees).</i>				Informal economy <i>(Also known as the informal sector – is not taxed, covered or is insufficiently covered by formal arrangements such as the law which makes jobs in this sector less secure e.g. street vendors)</i>			
1A	In which sector are you employed in?		Private Sector <i>(all profit businesses that are not owned or operated by the government).</i>		Public Sector <i>(companies and corporations that are government owned).</i>		Voluntary Sector <i>(All charities and other non-profit organisations).</i>	
1B	In which industry is your job situated in?							
	Mining	Manufacturing	Finance	Construction	Transport	Water & electricity	Wholesale & retail	
	Community services	Private households	Informal sector	Public Sector	Other (Please specify)			
1C	Under which broad category of occupation are you employed in?							
	Legislators, senior officials and managers		Professionals		Clerks	Technicians and associate professionals		

	Service workers and shop and market sales workers	Skilled agricultural and fishery workers	Craft and related trades workers	Plant and machinery operators and assemblers
	Elementary occupations	Domestic workers	Other (Please specify)	
2	Which of the following best describes the nature of your job?	Full time/Permanent	Part time	Temporary/Short time work
		Informal employment	Involuntary part time	Other (<i>please specify</i>)
2A	How many years of work experience do you have?			
3	Are you currently employed in your field of study?		Yes	No
4	What is your opinion about your job?	Happy (e.g. High career growth possibilities, stable and certain, better paying)	Unhappy (e.g. low paying, working short hours, precarious, non-standard, working poverty, no certainty and stability)	Just fine
5	Would you consider yourself underemployed? <i>See definition in foot note⁶⁰</i>		Yes	No
Please continue completing the questionnaire only if you have selected YES in question 5.				
5A	If YES in question 5, is your underemployment status in terms of: (<i>you may select more than one option</i>)	Time (Working hours) ⁶¹	Skills/experience	Income
6	If you consider yourself time (working hours) underemployed, how many hours do you currently work a week?			
6A	Are you willing to work additional hours and are available to do so?		Yes	No
6B	If YES in question 6A, how many additional hours are you willing to work per week?			
7	If you consider yourself to be skills underemployed, are you overqualified/overeducated ⁶² for your current job?		Yes	No
7A	If you are overqualified, are you in a job that requires far lower level/less qualifications than you currently possess?		Yes	No
7B	Why do you think you are overqualified for your job? <i>You may select more than one option</i>			
	I have more work experience than my colleagues			
	I have more work experience that required for my job			
	I have more qualifications than the minimum education requirements of my current job			
	Other reason (s) (<i>Specify</i>)			

⁶⁰ **Underemployment** is a situation where one is in a job that is inferior by some standard (McKee-Ryan and Harvey, 2011). This ranges from having more education than a job requires, being involuntarily employed outside ones' field, having more skills and experience than a job requires, being involuntarily engaged in part time, temporary or intermittent work, or earning less wages than your last job or compared to your peers (Feldman, 1996; Allan *et al.*, 2017)

⁶¹ National average of less than 35 hours a week

⁶² Whether by years of working experience or skills/education

7C	If yes in question 7A, what influenced your decision to take this job?			
	I couldn't get a job in my field			
	I did not want to stay at home (become unemployed)			
	Other reasons (<i>Specify</i>)			
7D	For how long have you been in your current job? (in months/years)			
7E	Promotion opportunities in your current job:	Do not exist	Relatively high	Neither high nor too low
8	If you consider yourself to be income underemployed, how low is your average monthly salary compared to how much you earned in your previous job or relative to your peers if this is your first job?		Much less (< 20%)	Much more (> 20%)
9	Even though you have a job, do you wish to change jobs or to have another job in addition to the present one?	Yes	No	
9A	If YES in question 9, why do you wish to change jobs? <i>Select one or more reasons</i>			
	Present job is casual or temporal / Part time			
	Wishes to find a better paying job			
	Tired of the same job			
	My skills, knowledge and capabilities are underutilized			
	Present job has bad working conditions			
	Present job is too demanding physically			
	My working hours are too little			
	Want a job that is more stable			
	Transport problems, thus wishes to find a job closer to home			
	Wish to work more hours (to increase my income) as the hours of the current job are insufficient			
	No job promotion possibilities in the current job			
	Wish to find a job that corresponds better to my qualifications or training			
	Prolonged non-payment of salaries/wages in the current job			
	Other reasons (<i>Please Specify</i>)			

SECTION F (THE SUBJECTIVE UNDEREMPLOYMENT SCALE)⁶³

Please indicate how much the following statements apply to you. For the following questions, consider your primary job where you spend the majority of your time.						
	Strongly Agree	Agree	Slightly Agree	Slightly Disagree	Disagree	Strongly Disagree
UNDERPAYMENT						
1. My pay is less than other people with my qualifications.						
2. I am paid less than those with similar credentials.						
3. I am underpaid compared to those with my level of knowledge.						
4. I earn less than people with similar skills.						
5. I make less than others with my level of education.						
6. My pay is lower than others with my level of experience.						
7. I earn less than others with my level of ability.						
STATUS DISCREPANCY						
1. I deserve a higher position in my company.						
2. If it were up to me, my position at work would be higher.						
3. My rank at work is less than it should be for someone with my ability.						
4. I deserve a higher position at work given my level of education.						
5. Given my credentials, I should have a higher position at work.						
HOURS DISCREPANCY						
For these questions, consider how many hours you work in your current job. If you have more than one job, consider the hours you work in all your jobs combined. Think of the amount of hours you work per week.						
1. I need to find a job that allows me to work more hours.						
2. I work fewer hours than I need.						
3. I work too few hours.						
4. I do not work enough hours.						
5. I would work more hours if I could.						
6. The number of hours I work is not enough.						
INVOLUNTARY TEMPORARY WORK						
1. My job is temporary, but I want a permanent position.						
2. I work in temporary positions, but I would prefer not to.						
3. I take short-term jobs because I have to.						
4. I work in a temporary position, because I cannot find a permanent job.						

⁶³ The SUS was adapted from Allan *et al.* (2017). Under status discrepancy, only five items were loaded rather than the original six, an error realised after the data collection stage.

5. I am forced to take temporary jobs.						
6. I cannot find a permanent position.						
FIELD						
1. I am forced to work outside my desired field.						
2. I had to take a job outside of my field.						
3. I cannot get a job related to my education.						
4. I am unable to work in a job related to my formal training.						
5. I was compelled to take a job unrelated to my education.						
6. I want to work in a different field, but there are no jobs available.						
POVERTY WAGE EMPLOYMENT						
1. My pay is not enough to live on.						
2. The income from my job is not enough.						
3. I barely earn enough to survive.						
4. Despite efforts at work, my income is too small.						
5. I do not earn enough, even though I have a job.						
6. My job does not allow me to make a decent living.						

Thank you for your participation

Declaration

This is to declare that I, Annette L Gombrink, accredited language editor and translator of the South African Translators' Institute, have language-edited the thesis by

N.P Mncayi

with the title

**An analysis of underemployment amongst
young people in South Africa: The case of
university graduates**



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