UNIVERSITY OF THE WESTERN CAPE
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<u>TITTLE</u>: **SUPPORTIVE SOCIO-ECONOMIC CONDITIONS TO ACHIEVE A SUCCESSFUL DEMOGRAPHIC DIVIDEND IN SOUTH AFRICA**

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CHAPTER 1: INTRODUCTION

Background of the study

One of the population structures associated with demographic dividend is "demographic transition", which is a shift from high fertility and mortality to low fertility and mortality. It is understood that low dependency ratio (shows that there are relatively more adults of working age who can support the young and the old of the populace) is one major factor in achieving a successful demographic dividend (DD) (Esther, 2013). DD refers to the fast-economic growth that is achieved by a country when there are dependency ratios. This definition means that the proportion of people of working age group (15-64) is higher, compared to those of ages lower than 15 and above 64 years (Statistics SA, 2017).

In addition, having a large proportion of working age people does not necessarily guarantee a successful demographic dividend. There are certain conditions to support a successful DD. According to Dewald Van Rensburg, 2017, South Africa is almost done with the achievement of demographic transition. These does not guarantee a successful demographic dividend. This study will therefore look at socio-economic conditions in support of a demographic dividend, because most of the working age people are still not employed, therefore are not productive enough to contribute to the economic growth. Socio economic conditions include (favorable labor market, economic growth, good governance, education and training, health care, family planning and gender equity) (StatsSA, 2017). These conditions if well-established will lead to a reduction of unemployment and therefore result in more labor resources becoming available to devote to production.

Since many people entering working age find it difficult to get employment. Statistics South Africa shows that 38.2% of youth were unemployed in the first quarter of 2018 (StatisticSouthAfrica, 2018), this study will have a close look at South African youth unemployment in relation to the demographic characteristics such as gender, population group, marital status, geography type and province of residence.

Research questions
- Is there a relationship between ever given birth and demographic characteristics (marital status, province of residence, education status, population group and geographic type)?
- Is there a relationship between demographic characteristics (gender, population group, marital status, education level, geographic type and province of residence) and unemployed youths and adults?
- Does gender have an impact on employment opportunities?

Hypothesis
- There is a relationship between ever given birth and demographic characteristics (marital status, province of residence, education status, population group and geographic type).

- There is a relationship between demographic characteristics (gender, population group, marital status, education level, geographic type and province of residence) and unemployed youths and adults.
- gender has an impact on employment opportunities.

Problem statement

Achieving Demographic transition is the first step when achieving demographic dividend. Without socio-economic conditions such as healthcare, employment, good governance, education and training etc., the working age group would not be productive for the growth of the economy (James0, 2012).

Objectives of the study

Main objective

The main objective is to examine the socio-economic conditions that can help to achieve a successful Demographic Dividend.

Specific objective

To look at the importance of economic activities such as employment and find out if they are distributed in terms of demographic characteristics such as age, gender, population group, marital status, education level, geographical type and province of residence.

Overview of the research methods

This study was conducted in South Africa using quarterly labour force survey 2019 and community household 2016; using secondary data which was publicly available in South African statistics website and it incorporates all the nine provinces of the country. The focus is on South African working age group (15-65 years) against the dependents, which are individuals under the ages of 15 years and above the ages of 65 years (dependency ratio). The study also focusses on South African youth and unemployment as well as the trends of fertility and mortality, which are fundamental in achieving demographic dividend. The research perspective of this study is quantitative. Quantitative research allows us to measure and inspect the data.

This study used a cross-sectional design because the data was collected one point in time. This kind of design is recognised with survey research. It comprises of randomly selecting a sample of individuals, collecting responses about their attitudes, past experiences and backgrounds. Additionally, it is the best approach to establish causality between the dependent and independent variables. This study used secondary data. Secondary data is the data that was gathered by some individual other than the user. When reliable and accurate, secondary data gives chances to replication. The data used in the study has been accessed through the Datafirst web and was collected by Statistics South Africa; it is collected through the Quarterly Labour Force survey 2019 and census 2011.

Data analysis

Data on fertility, population and unemployment are accessed from Datafirst website from community survey 2016 and Labour Force Survey 2019. These are collected by Statistics South Africa. Analysis will be done using statistical tool SPSS, and MS Excel.

Descriptive statistics

Descriptive statistics gives outcomes of frequencies, measures of central tendency and measures of variability. Frequencies count the number of times variables occur. This study used descriptive analysis to look at the variation in youth unemployment in terms of gender, population group, marital status, their education status, geographic type and the province of residence based on frequencies and percentages.

Bivariate analysis

The bivariate analysis is a cross-tabulation of two variables in a two ways table, to determine the empirical relationship between them.

Importance of the study

This study will show the importance of demographic trends such as mortality and fertility on South African demographic dividend. It will show how supportive socio-economic conditions can help to achieve a successful demographic divided. Lastly, the study will also focus specifically on the importance of youth unemployment on demographic divided in South Africa.

Definitions of the major terms

- **Demographic dividend-** refers to the fast-economic growth that is achieved by a country when there are dependency ratios. This definition means that the proportion of people of working age group (15-64) is higher compared to those of age lower that 15 and above 64 years (StatisticsSA, 2017).
- **Demographic transition-** is a shift from high fertility and mortality to low fertility and mortality (StatisticsSA, 2017).
- **Dependency ratio-** shows that there are relatively more adults of working age who can support the young and the old of the populace (StatisticsSA, 2017).
- **Youth bulge-** it is referred to a demographic pattern where the population consist of large proportion of young children and young adults (Inayatullah, 2016).
- **Unemployment-** is a situation whereby a working age (15-64) individual is willing and able to work but cannot find a job (Quarterly Labour Force Survey, 2017).
- **Human capital-** is an accumulation of skills, knowledge and abilities that can be acquired through education training and experience (Bilas, 2010).
- **Mortality rate-** is defined as the number of deaths in a given area or period (StatisticsSA, 2017).
- **Fertility rate-** is a number of children a woman would give birth to if she survived her reproductive period (StatisticsSA, 2017).

Chapter summary

This chapter started with the background of demographic dividend, focusing on the history of the study and what is known about the topic. Research questions were conducted, helping to create the hypotheses of the study. Hypotheses are mainly based on the research questions that are presented by the study. There are two types of objectives that are presented in the study: main objective and specific objective. The methods that were used are also explained. This study used secondary data, there was no ethical consideration. The chapter also mentioned the importance or the significance of the study, and lastly presented the definitions of the major terms.

CHAPTER 2: LITERATURE REVIEW

This chapter is divided into four main topics/headings namely general overview, theoretical literature, empirical literature and conceptual framework. The first part of this chapter talks about three theories of achieving demographic dividend, namely demographic transition, dependency ratio and youth bulge. The second part of this chapter talks about the main socio-economic conditions to achieve demographic dividend, and lastly conceptual framework, which talks about the importance of fertility and unemployment in achieving demographic dividend. On conceptual framework, relationship between fertility, youth unemployment and demographic dividend. These relationships are also part of hypothesis.

General Overview

Demographic dividend is that fast-tracked economic growth which a country can attain with a small dependence ratio. Or, when a ratio of its working age populace is greater than its unemployed population proportion (UNFPA, 2016). In other words, when the proportion of its populace who are of working age (15-64) is greater than the ratio of its population who are reliant on others (14 and younger, and 65 and older).

This concept focuses on that relationship between a nation's demographic profile and its likelihood for a rise in economic growth (STATS SA, 2017). Therefore, a country with a low dependency ratio helps to free up resources for both organizations and households, which can be devoted towards fortifying the economic growth. The demographic bonus is distributed via several mechanisms. The utmost significant are labour supply, savings, and human capital.

Labour Supply:

Demographic evolution impacts labour materials in twofold. First, the consistent and inescapable maturity of the baby-boom generation has an essential mechanical outcome (Bloom, Canning, and Sevilla, 2000). It is very possible for those in this age band (between 15 and 64years) to be working, consequently reducing the ratio of dependent relatives to non-dependent relatives. Labour force participation rates by age group in several sections of the world have enormous influence. Such an influence is particularly durable throughout the zenith working years (20 to 54). Consequently, the number of persons willing to work (labour allocation) grows bigger if the labour marketplace can attract greater numbers of labourers as well as an expansion in per capita production (Bloom, Canning, and Sevilla, 2000).

Following from the first impact, demographic transition additionally influences smaller family sizes – as more females are expected to get into the workforce; such an impact is overstated with fully-grown females (Teitelbaum, 1985). Likewise, a decreasing population as Japan is able to support that advantage of reduced stress on natural resources. Assuming natural resource capital dilapidation was appropriately accounted for, and then national income trajectory would quickly increase (or drop more slowly) in relation to that of an immobile or emerging population.

Additionally, population degeneration does not really transform into a parallel debility in labour force size. This is because of a prospective (a) improved labour force participation amongst females, (b) an improved retirement age, and (c) net immigration increases, which have a tendency to be choosy of working-age people. Nonetheless, the dissimilarities amid the female and male labour force contribution percentage in Japan (21%) and Italy (23%) are more advanced compared to most high-level income nations like France and the United Kingdom with 12% vs 14%, correspondingly (World Bank [2001] World Development Indicators; data for 1999). Additionally, in divergence to life expectancy, retirement ages have been objectively sluggish. Italy's life expectancy moved from 71 to 79 and Japan's from 71 to 81, between 1965 and 2000. By contrast, Italy's retirement age for both males and females is 62 (up from 61 for males and 56 for females throughout the same period) and 65 in Japan. An ascending alteration of retirement age might alleviate the labour force effects of an aging population (McCarthy, 2004).

Savings:

Growth savings improves a country's hopes for growth and investment, which is supported by demographic transition. Yet again, there is an accounting impact and a behavioural outcome in place as both youth and the elderly spend more than they generate or produce, while working-age persons have a tendency of having a higher economic output level coupled with a higher level of savings (Canning, 2002).

Additionally, between the ages of 40 to 65 years' people have the tendency of saving more, while they are more likely not to be financing in their children's education including that the need to plan for their retirement is turning out to be more demanding. National savings has the tendency to increase, as soon as huge sums of baby boomers begin reaching their 40s. Amid new young baby boomers, motivations to take certain preferences might strengthen this propensity to accumulate. Durability and better-quality health, all make saving much more attractive and stress-free (Canning, 206). In order to uphold its living standard during retirement, a healthy population must prepare ahead of time (Lee, Mason, and Miller, 2000).

Alongside that mobility which urbanization generates, pensions are more important for much smaller families. An extended family will likely take care of its own ageing relations not as much compared to a nuclear-powered family in which the two parents are working, even though the dual-employee family's improved possessions do make it very easy to make available monetary-care. Likewise, as established in East Asia, the needed capital required to promote development can be sourced from personal domestic savings (Krugman, 1994; Young,

1994,1995; Asian Development Bank, 1997, pp. 141–197; Higgins, 1998; Kelley and Schmidt, 1995, 1996). Thus, in evaluating the significance of the demographic evolution towards the determination of nationwide savings, additional work is required. This must take into cognizance the institutional features of pension systems.

Human Capital:
Demographic transition imposes huge effects on human capital investments. These effects are the most important and broad despite being the minimum tangible. This shift in demographic dynamics begins with disparities in mortality that end in a population that lives longer and stays healthier. A long-life expectancy causes essential discrepancies in the way that people live. For example, approaches concerning learning, giving up work, and the role of females, family and work all tend to shift. A society particularly re-generate if it is taking full benefit of the demographic dividend. These extrapolations are based on data from household surveys (Deaton, 1994).

Numerous scholars suggest that the fall in savings ratio for persons in their early 30s is related to the consumption needs of people with young families, Coale and Hoover (1958). In addition, there are several studies scrutinizing the relationship amongst age structure and savings Leff (1969); Mason (1981, 1987); Webb and Zia (1990); Kelley and Schmidt (1996); Higgins and Williamson (1997); and Bloom, Canning, and Graham (2002).

Demographic Dividend pushes the people to become valued assets. The affirmative association amongst incomes and schooling is well known. It is postulated that in Latin America, a worker with six years of schooling collects on the average 50% more than one who has no formal schooling. The earnings increase to 120% for those with additional 10 years of schooling (i.e., those finishing secondary school), and exceeds 200% for those with 17 years of education (i.e., those completing tertiary education) (Inter-American Development Bank, 1999).

As life expectancy increases, parents are more likely to elect to train their children to a more advanced level. Healthier children, in turn, tend to experience superior intellectual development per year of schooling than their less healthy counterparts (Jamison et al., 1996). Parents also know that there is a good chance that each child will profit from schooling investments over a long working life and, with less children, can dedicate more time and money to each child.

The importance of this investment in educational is that the labour force, develops into a more dynamic structure, motivating higher earnings and an enhanced standard of living. Males and females are thus inclined to enter the workforce later, partly because they are being educated for longer, but they are likely to be more creative once they start at work (International Labour Office, 1996; Bloom, Canning, and Sevilla, 2001).

The above mechanisms are deeply reliant on the policy environment. A growing number of adults will only be productive if there is adequate flexibility in the labour market to allow its

development, and if there are macroeconomic strategies that permit and support investment. Equally, people will only save if they have access to acceptable saving mechanisms and have confidence in domestic financial markets. Lastly, the demographic transition generates situations where individuals will likely invest in their own and their children's health and education, offering great economic benefits, particularly in the contemporary world's progressively sophisticated economies.

Governments must steadily play important roles in environment building, where excellent health and education delivery is possible. This is evidently required to make the most of the prevailing demographic opportunities (David E. Bloom, David Canning and Jaypee Sevilla, 2003).

Issues in Context

1)Outside a population's global scope, there is a cumulative acknowledgement that age structure has great economic implication (Williamson and Higgins, 2001), while proposing that poor value of the participation rate data can contribute to irrational outcomes (Bloom, Canning, and Sevilla, 2003). Malthus theory boosted the view that nations with a growing population cannot manage pressures on limited resources, however this was contradicted; nations with a growing population are more able to grow and utilize knowledge thus shunning poverty block (Kuznets 1960 and Simon 1987).

A good number of papers on demographic dividend do convey life cycle features in one way or the other: a rise in the working age population would increase the prospective supply and growth of labour, thus promoting demographic dividend (Bloom et al., 2003; Bloom et al., 2007; Bloom et al., 2009; Drummond et al., 2004; Gribble and Bremner, 2012a; Gribble and Bremner, 2012b). A rise in the working age population can be regarded as an outcome of a motorized procedure motivated by decreasing fertility and mortality rates. This rise in working age population can result in a weakening dependency ratio thus resulting in an increased investment, savings an output (Lee, 2003; Galor, 2005). This demographic transition is yet to happen in Africa – thus one of the reasons for poor growth in the region (Bloom and Sachs, 1998; Bloom et al., 2003).

Demographic transition can be portrayed as working through various stages (Galor and Weil, 2000); prior to this change, population growth has an adverse impact on economic growth, followed by advanced life expectancy which speeds-up growth thus supporting human capital accretion with cumulative total factor productivity (Brooks, 2003). Demographic transitions can also have universal spillovers; open economy models that progressively highlight the role of worldwide capital flows as a balance to changes in savings performance and capital build-up. In addition, ageing countries with excess capital are able to transfer resources to countries facing demographic transition because of discrepancies in capital returns (Brooks, 2003).

Age structure shift does supports excessive feminine work force contribution, savings, and reduced fertility rates (Bloom et al., 2009; Soares and Falcao, 2008). Furthermore, as a result of reductions in child mortality, children are regarded more as "consumption" rather than "investment", while parents desire less children, nevertheless placing more emphasis on education quality and health; thus, improving productivity (Rosenzweig, 1990; Soares, 2005).

An alternative aspect of literature typifies demographic evolutions as an opportunity to secure a demographic dividend (Carvalho and Wong, 1999; Pool, 2007) by putting in place safe policies (Bloom and Canning, 2000). The rise in working age share may lead to increasing fuel economic, social and unemployment hazards (Bloom et al., 2003, 2007; Lorentzen et al., 2008). 2)As a real chance and a suitable plan demographic dividend rules out other possibly unwelcomed circumstances, like widespread youth unemployment, rising religious fundamentalism, the perseverance of unwanted pregnancies and illegitimate migration all scourges of which Africa pays a demanding price.

Consequently, youth as an indispensable asset does benefit from demographic dividend and makes it a central and significant initiative. In order for demographic dividend to work in South Africa, there is a great need for investing deliberately in youth developmental areas like, governance, wealth creation, health, education and training.

The relationship between monetary or economic literature and development has made the nature and significance of population dynamics from a "young" to an "aging" arrangement very imperative. This rises from the probable effects which changes in a populations age structure, as opposed to population growth and size, have on the economic progress of both developed and developing countries. Thomas Malthus explains that a sound demographic change deliberates heavily on the supply of food, which can probably diminish a population's living standard. The adverse effects of population growth on economic well-being lead to the notion of monitoring fertility; this view is called the "Malthusian trap".

Conversely, other researchers think there is a positive association between economic growth and demographic change (Bloom and al., 2003). This positive effect of changes in the age structure of the population on economic growth is referred to as the *demographic dividend* (United Nations, 2013). The demo-economic literature identifies two types of demographic dividend: the *first demographic dividend* evaluates the increase in per capita income resulting from an increase in the share of the working-age population in a demographic boom. At the beginning of this process of the first *demographic dividend is* the demographic transition. During the process of demographic transition, there is a decrease in child mortality followed by a drop-in fertility rates in proportion to younger persons as well as an increase in the proportion of people of working age.

Many energetic people give economic growth enhances especially when there are enough respectable job prospects for the workforce, which causes increased savings and promising variations in both physical and human capital expenditures. Consequently, predominantly through the drop-in fertility, the demographic transition results in immediate expansions in income per capita, because of a decrease in the dependence rates of the youngest, which motivates a more rapid economic growth.

On the other hand, the aging procedure that is succeeding demographic transition can also give rise to a *second demographic dividend; it can* create a permanent capital growth (Mason, 2005,

Lee and Mason, 2007, Mason and Lee, 2007). The *second dividend* stipulates that an increase in per capita income resulting from the first demographic dividend, permit a rise in longevity to improve savings that can be used to endorse a growth in productivity (Mason, 2005). Compared to the *second demographic divide*nd the first demographic dividend is not that straight especially as it is highly dependent on how inter-generational transferals are sponsored (Dramani, 2017).

Achieving demographic dividend does not merely relate to the demographic transition, nevertheless it also considers other factors, such as the productivity of labour, human resources gotten through an improved education. The conceptual analysis of resource restructuring between ages and intergenerational transfers especially, has been performed in various studies stated within the economic literature. A common framework often used is the 'nested generation models'; which does overlap however booms and examines economic activities for which, during their course, different generations of people coexist and maintain relations with each other. All these are a result of Samuelson (1958) and Diamond (1965).

Most often demographic dividend has been the focus point for many empirical studies that are repeatedly applied to developing countries. Bloom, Canning, Fink, and Finlay (2010) are a great locus for the connection between economic progress and population dynamics. These writers state that the fertility rate has a harmful consequence on female labour supply, which is higher for the age group of 20-39, while it still applies to all ages.

Outside the African context, specifically in South Korea, a fall or drop in fertility would consequently have a positive impact on income per capita growth; three major significant features were identified in South Korea – 1) lower fertility indicates lower population growth and consequently a rise in the capital or labour ratio in Solow's standard model; followed by 2) a drop which could lead to a decline in the demographic dependency ratio; 3) and finally, a decline in fertility which has a positive impact on ladies' contribution or input in the labour market.

Again, if within a time frame, the South Korean per capita income is multiplied by 11, then a combination of the three above referenced effects would lead to a rise in this income of 3 times. A drop-in fertility consequently appears to have meaningfully complemented to the South Korean economic growth of by releasing the demographic plus. Additional studies have revealed that East and Southeast Asian countries have so far profited from the demographic dividend of their financial take-off.

Certainly, Bloom and Williamson (1998) used econometric modelling to estimate this influence of the demographic dividend to roughly a third of the Asian economic growth. On the comparison of Asian and African countries between 1965 and 1990, Bloom, Canning and Malaney (1999) demonstrate that falling fertility and deteriorating dependency ratio do positively sponsor economic growth.

However, it should be designated, that this effect is not automatic; indeed, the economic take-off of the countries of South-East Asia is not done alone; it is usually complemented by the ability of the economy to gather physical and human capital and to grasp the potentially active population into creative employment. With reference to African nations, these writers perceive that these issues are absent and cause low demographic profits in these countries, dissimilar in Asian countries.

Bloom et al. (2010) used a growth model to investigate the association amongst health effect and demographic changes on the economic growth of China and India. The main factors underlying the economic take-off of these two countries are better-quality health, superior trade openness, nonetheless also an increase in the ratio of workforce to skilled population. A study in West and Central Africa with a sample of 17 countries displayed that all except one of these nations are in a possible capture stage of the demographic bonus (Dramani, 2017). Such a window of demographic prospect was exposed in the 2000s in West Africa and around 2010 in Central Africa, since the workforce populace is increasing quicker than the population of consumers since these periods.

Benefitting from a Demographic bonus, countries must, in the first instance, lower fertility rates in order to decrease the number of wards that the working age population are supporting. Providing family planning services to all persons who need them as well as increasing girls' access to education is paramount. After the rates have decreased, governments must use effective socioeconomic strategies to increase health and education programs, so as to ease female labour force participation access and thus produce a positive investment climate.

Even though, Williamson and Higgins, 2001 agreed that age structure has great economic implication, yet other like Bloom, Canning and Sevilla, 2003, disagreed with an opinion that age structure accompanied with a weak rate of work participation can lead to illogical outcomes. Furthermore, the Malthusian theory - supporting the view that nations with a growing population cannot manage pressures on limited resources vis a vis the Kuznets (1960) and Simons (1987) theories is a contrast to our context.

South Africa has a growing population; however, it is not clear if this growth will be able to use existing knowledge to reduce poverty; particularly as the management structures are weak. There is a need to examine carefully demographic dividend in South Africa, following a smooth functioning of these theories in other nations with improved and well-established governmental structures. This would help them to move away from poverty; especially agrarian economies, developed, affluent and industrialized economies.

In addition, although many writers support that a rise in the working age population would increase the eventual supply and growth of labour, thus promoting demographic dividend (Bloom et al., 2003; Bloom et al., 2007; Bloom et al., 2009; Drummond et al., 2004; Gribble and Bremner, 2012a; Gribble and Bremner, 2012b), yet others differ (Bloom et al., 2009; Soares and Falcao, 2008). They argue that a change in age structure rather supports female labour and participation, savings with reduced fertility rates.

Within the South African context, such a theory can work especially because the existing youthful workforce are not employed; however, with most of those working being females. Supporting the above mentioned, other theories on age structure shift exist; demographic transitions is a widow-opportunity to secure demographic dividend (Carvalho and Wong, 1999; Pool, 2007). In addition, age structure shift has also been categorized as contributing towards increased fuel prices, social and unemployment ills. This is in line with South Africa whose unemployed population are supposed to be working – thus leading to increased crime rates and societal ills.

Furthermore, looking at economic change; researchers believe that there is a strong relationship between economic growth and demographic change (Bloom et al. 2003). The United Nations supports Bloom's theory – that a positive effect of changes in the age structure of the population on economic growth is defined as *demographic dividend* (United Nations, 2013). This differs with the association between ageing procedure and demographic transition defined as demographic dividend; where a rise in income per capital causes a rise in demographic dividend longevity, which thus improves investments, growth expansion, and productivity (Mason, 2005, Lee and Mason, 2007, Mason and Lee, 2007).

Contrariwise, Canning, Fink and Finlay, 2010, argue that even though age structure shift positively affects female labour supply, it indeed negatively affects fertility rate. This theory only works perfectly outside the African context; where most of the youthful workforce is employed. Ultimately, effectually undertaking population growth is energetic for the economic prospects of nations facing huge population growth but is also vital to refining female's health and empowerment, reducing environmental degradation and mitigating potential for conflict. Some countries in SSA have already managed to significantly reduce fertility rates, most of them still need massive investment in family planning services, sexual health and girls' education if they are to create the population structure needed to achieve a Demographic Dividend.

In all, arising from a position of a high fertility rate and a relatively large young population, if a decline in the country's fertility rate occurs over time, consequently, there would be an increase in its working-age ratio, which is the population of working age (15–64 years) as a percentage of the total population. In addition, there is a corresponding reduction in the dependency ratio (those below 15 and over 64 as a percentage of the total population), following the assumption that there is positive growth in the total population, a higher working-age ratio results in more labour resources becoming available to devote to production. In addition, a lower dependency ratio means that, at least in comparative terms, a reduced amount of time and energy are unfocussed away from productive workplace activities to caring for the young and the elderly; all resulting towards boosting economic growth, when it occurs – known as the demographic dividend.

In addition, an increase in the working-age ratio does not mechanically lead to a demographic dividend; however, it does represent a chance for higher economic growth, which might be

achieved in full, in part, or not at all. For demographic dividend to attain its full potential, encouraging socio-economic circumstances are required. When socio-economic conditions are not favourable, a demographic dividend could remain indefinable. In addition, there is also the risk of a high working-age ratio becoming strictly problematic especially when there is inadequate job creation, increased unemployment, exacerbated poverty and inequality and rise in the risk of social unrest.

The National Planning Commission (NPC) in South Africa recognizes both the prospect and the danger posed by the country's demographics (2012: 99): 'The population has a proportionately high number of working-age people and a proportionately low number of young and old. This means that the dependency ratio is at a level where there are enough people of working age to support the non-working population. The caveat in South Africa's case is that unemployment and HIV/AIDS have produced many more dependents than would normally be the case.

Although, statistically, South Africa can cash in on a demographic dividend, the challenges of joblessness and HIV/AIDS are a burden on those who are working. If not managed, the perfect window could become the perfect storm.' Such an organized population frees up household and state resources that would then be used to support dependent groups. These resources can then be capitalized to recover productivity and to create economic growth. With careful observation, these arguments create a need examine the demographic dividend in South Africa: such as the productivity of labour, human resources gotten through an improved education.

Theoretical literature

Demographic Transition

Demographic transition is defined as a shift from high fertility and mortality rate to low fertility and mortality rate (Gribble, 2012). According to Abringo, 2016, the decrease in fertility can lead to the ascent in the number of workers in respect to the number of consumers. With the results of expanded capital and human capital, this decrease of fertility can also lead to an expansion in the productivity of workers. Shifting from high fertility and mortality to low fertility and mortality is very important in achieving demographic dividend. It leads to a good and low dependency ratio because there will be less dependent group and more working age group entering the labor market

A study by (Nargund, 2009), shows that a radical policy is required to reduce fertility rate. The policy includes easy access to contraceptive, and a good level of female education (investment in female education). Furthermore, this study found out that social structures, religious beliefs within each country are likely to affect birth rate. For example, age at first marriage is lower in Muslims and marriage is one of a characteristics of Islam religion (Heaton, 2010). When age at first marriage is lower it increases the number of children a female give birth to, which automatically lead to high fertility. Therefore, marriage policies become important and should be implemented to all religious and cultural structures. For young females, family planning can

help to delay their first birth until they become physically, socially and psychologically prepared. This will also reduce child mortality since mothers will be matured enough to take care of their babies (Nargund, 2009).

According to WHO, 2018, 6.3 million people below the age of 15 year died in 2017. 5.4 million of which is under the age of 5 years, and 2.5 million in their first month of life. More than half of these deaths occurred due to conditions that could be prevented. Furthermore, in Sub-Saharan Africa, they are 15 times more likely to die before the age of 5 compared to high income countries. This means that a lot more need to be done to prevent child and infant mortality because children are the future adults, and if they increase the number of working age group therefore a dependency ratio will be low which is one of the important aspects of achieving demographic dividend.

According to StatisticSouthAfrica, 2018, infant and child mortality was high compared to those who survived age 5 in 2016. Mortality was low after survival of infancy (children above 5 and teenagers below fifteen) (StatisticSouthAfrica, 2018). Infant and child mortality deaths occurred due to conditions that could be prevented (WHO, 2018). Since mortality becomes lower after surviving age five due to conditions that could be prevented, there is a need for basic health care to prevent this occurrence of child mortality because children are in fact the future working group that is important for the economic growth. Investment in child health becomes important to prevent conditions that causes child mortality

Phipps, 2015 found that fertility becomes lower when mortality is low. Reason being females are confident that their babies will survive therefore limit the number of children to give birth. Another study shows that child mortality decreases faster when GDP is high, fertility rate decreases faster when child mortality rate is low, and lastly GDP increases faster when fertility rate is low (Ranganathan, 2015). This means that if deaths are always prevented, fertility will become lower and at the same time live born babies will become working age group in future, which lowers dependency ratio and good for the growth of the economy. Therefore, this means that it is very important for the country to invest in health that improves survival because it can cause desire for smaller families.

Generally, the fundamental stage of demographic transition is a fall in child mortality which occurs as a result of healthcare developments, overall living standards and nutrition. Decreased child mortality also causes population expansion especially since many more youths do survive early years, finally causing a substantial working age population. On the other hand, another point in which demographic dividend can be attained is a decrease in birth rates. Here, before the large working age population has reached retirement age, fewer children are born – only at this point can a demographic dividend be realized. The amount of the working age population in relation to dependents further than this point, will reduce, as life expectancy improvements does allow people to live longer after retirement.

Both fertility and mortality have an impact in the achievement of demographic dividend which refers to an accelerated economic growth of a country. Investment in child health, education and gender equality contribute towards family planning and economic growth (Joshi, 2011)

Dependency ratio

According to Amadeo, 2018 the absolute dependency ratio definition discloses to us the extent of the population not in the work-force who are 'dependent' on those of working-age, it's a computation which bunches those ages under 15 with those more than 65 years as the 'dependents' and classifying those ages 15-64 years as the working-age population.

In achieving demographic dividend, an effective dependency ratio must be considered. According to Pettinger, 2016, it looks at the ratio of economically active workers and inactive. Inactive which includes students, early retirement and disabled people. Those who are active will contribute more to economic growth through payments of income tax, corporation tax, and, to a lesser extent, more sales and VAT taxes. Economically inactive in working age also become bigger recipients of government spending. I.e. education, pension, health care etc.

Dependency ratios are key impacts on economic growth. Countries with high dependency ratios spend large shares of their assets dealing with dependents, while those with lower ratios can give more assets to investment in technological advancement, physical capital, and education. Countries with fertility rates diminish the child part of the dependency ratio, which lightens the financial weight on wage earners and opens more females to enter the work force. Countries with high fertility and mortality rate rarely enjoy an economic benefit known as the demographic dividend (Kenton, 2017).

A high dependency ratio can cause significant issues for a nation if an enormous proportion of a government's spending is on health, social security and education, which are most used by the youngest and the oldest in a populace (Anderson, 2012). The less individuals of working age, the less the general population who can support schools, retirement pensions, disability pensions and different helps to the youngest and oldest individuals from a populace, often considered the most powerless individuals from society (Anderson, 2012).

A study in Senegal by Broek, 2015 showed that employing females could reduce fertility rate. One of the reasons behind is that employed females tend to have higher age at marriage, at first childbirth and fewer children. Female employment reduces number of children per females by 25%. Employment of females therefore accelerate the demographic transition (Broek, 2015). Reducing fertility rate is one of the important aspects of demographic dividend since it leads to low dependency ratio

Another study by Fitzgerald, 2011 shows that in countries in which more children, despite gender, are enrolled in school, females have lower fertility rates. Furthermore, it is more important especially in females. The study found that females who are empowered through education tend to have fewer children (Fitzgerald, 2011). These females also tend to have children later than those who are not educated (Fitzgerald, 2011).

Youth Bulge

In the first quarter of 2019 in South Africa, youth aged between 15-25 were the most vulnerable in the country's labour market where 55.2% were unemployed in this age group (statssa, 2019). The most frustrating and shocking about these results is that 31.0% of these unemployed youth were graduates (statssa, 2019). Worst part is that during the last quarter of 2018 unemployed

graduates were only 19.5% (STATSSA, 2019) . Does this mean being a graduate does not increase chances of youth being employed but rather does the opposite?

According to Schomaker, 2013, the term "youth bulge" is used to characterize a circumstance in which the populace share of the 15-24 year-olds surpasses 20 percent and the share of the 0-14 year-olds (often referred to as the "children bulge" and a good indicator of future youth bulges) is higher than 30 percent. In simple definition, it refers to a demographic pattern where the population consist of large proportion of young children and young adults (Inayatullah, 2016). In a nation with a youth bulge, as the young adults enter the working age, the nation's dependency ratio, that is, the ratio of the non-working age populace to the working age populace will decrease (Inayatullah, 2016).

On the off chance that the increase in the quantity of working age people can be completely employed in productive activities, different things being equivalent, the dimension of average income per capita should increase therefore, the youth bulge will turn into a demographic dividend (Lin, 2012).

Be that as it may, if a large cohort of young individuals can't discover work and procure attractive income, the youth bulge will turn into a demographic bomb (Lin, 2012), in light of the fact that a large mass of frustrated youth is probably going to turn into a potential wellspring of social and political instability. Therefore, one essential proportion of a nation's accomplishment in transforming the youth bulge into a demographic dividend is the youth (un)employment rate (Lin, 2012)

South African youth contribute 36.2% of the population (STATSSA, 2018). Within this proportion of youth bulge, 55.2% of them are still unemployed (STATSSA, 2018). This means that this kind of a youth bulge is characterized by the presence of spending time doing nothing and unemployment of young adults (Lin, 2012). Since youth are part of the working age according to Statistics South Africa, it means that dependency ratio is affected, but it can only affect in a positive way only if this group is entering labor market. When there is an increase in working age group entering labour market, it will lead to more production of goods and services; and if they are earning wage there will be more purchase of goods and services. This will lead to an increase in the level of average income per capita and youth bulge becoming a demographic dividend (Lin, 2012). However, if the opposite occurs it will lead to demographic failure (Lin, 2012)

United States is ranked number 5th of the most developed countries in the world (WPR, 2019). Youth productivity is one of the core characteristics of economic growth in America because of their focus on investment that is directed to its youth. America focuses on investments in youth internships and work-study programs that prepares them to the world of work (Stewart, 2015). It can be argued that if these investments in youth can be taken into consideration, demographic dividend can be achieved. The reason being that the same-trained youth will stay productive for a period; this will also affect the future generation since the knowledge would be easily transferred to their kids. A recent study shows that youth are more confident about the future compared to older people, with all the resources and experiences gained through

education; they are aware of how their future and their kids' future should be like. These include educating their future kids about the importance of human capital (UN, 2019)

Empirical literature

Demographic Dividend in the world

Almost every country in the world is trying to achieve a successful accelerated economic growth. Within these countries, there are common conditions that countries share to help achieve demographic dividend. Some of the countries have reached the demographic transition (meaning they have low mortality rate and low fertility rate as well as high life expectancy. Unfortunately, African countries are still suffering high fertility rates as well as mortality rate. Niger, for example, has the highest fertility rate in the world with a rate of seven children per woman. At the same time, European and Asian countries have the lowest fertility rate of only 1-2 children per woman. Asia has put in place their broad policy actions in order to achieve demographic dividend. They have assured productive health, which is based on reducing maternal mortality and improving child health. This will then directly reduce fertility and mortality of a country and at the same time induce dependency ratio.

Many countries in Europe and Asia have increased the use of modern family planning methods and empowered females and girls to stay in school to avoid early marriage and childbearing (Driouchi, 2017). While girls are encouraged to stay in school, there is a rise in improving the quality of education, which helps job growth and opportunities (Driouchi, 2017). At the same time, these countries are expanding access to decent employment and favorable income for workers. One of the most important part of these goals is to reduce incidence of corruption and impunity and seek good governance (Harkat, 2017).

In Africa as a whole, the average rates of economic growth are too slow and population growth rates are too high, which makes it hard for the continent to reduce poverty and improve average levels of income (Cilliers, 2018). In order to improve average income levels, the economy needs to grow faster than its population. Africa is rated the most unequal region in the world when it comes to income and wealth compared to European countries. The World Bank Gini table shows a range from a low of about 25 (reflected in some European countries) to a high of that accorded to South Africa, which has a score of 63 (Simkins, 2019). Therefore, there is high level of discouraged job seekers; these people are either paid less or discriminated during job search. This bring back the issue of corruption in African countries, for example, South African youth are growing up in an era where almost every leader or politician is corrupt (McKenzie, 2017). If leaders do not set a good example, then where do they go to be at the top? Corrupt leaders always get away with it in Africa (this is poor governance). In 2012, China sentenced a corrupt leader for life (Peters, 2019). It is better to protect the economy of the country than to protect corrupt leaders, hence china is one of the fastest growing countries in the world.

South Africa's change to an inclusive and a democratic society in 1994 moved the economy to grow progressively after negative and slow growth in the late 1980s and early 1990s. This transformed progress was strengthened by stout macroeconomic organization and effective

institutional structures. Ever since, the economy has developed at an annual real average of over 3% (Bhorat, 2018). The growth performance was accompanied with significant welfare improvements, such as the in
crease of access to social services, housing, and basic infrastructure, as well as a moderate reduction in extreme poverty (Bhorat, 2018).

South African average poverty line has increased. Statistics indicate that the poverty headcount ratio increased from about 31% in 1995 to a current level of 60% (STATSSA, 2018). This ratio is calculated using the upper bound level of a newly rebased national poverty line. Nevertheless, the national lower bound headcount poverty ratio, which is estimated at 38% (STATSSA, 2018), remains undoubtedly on the high side.

Although extreme poverty has plummeted, the trajectory on the average national poverty line is still very disturbing. Furthermore, the inability to translate growth into poverty reduction is because of the unequal nature of the society. With a Gini coefficient value of 0.63, the remarkably high level of income inequality is probably the most significant cause encumbering the poverty plummeting power of economic growth.

The distinctiveness of South Africa's economic growth path is additional emphasized by a joblessness rate of over 35% (STATSSA, 2019), and one that has averaged to more than 28% (STATSSA, 2019) over the last two decades, with its lowest level at 17 per cent in 1995. South Africa is in a labour market predicament, which in a low growth environment, serves only to increase the unsustainably level of income inequalities.

In July of 2019, South African president Cyril Ramaphosa told South Africans to prepare themselves for a mass job-loss despite the fact that the country lost about 185,000 jobs between the year 2015 and 2016 (eNCA, 2019). Incoming working age group are finding it hard to find employment (eNCA, 2019). This includes graduates who form part of unemployed youth after completing their studies. According to Statistics South Africa, 2019, working age population increased by 150,000 in the second quarter of 2019, at the same time 71.5% of unemployed people in South Africa have been searching for jobs for a period of more than a year. This is one of the reason South Africa has quite high number of discouraged job seekers.

Employment rate measures number of people who are currently employed or have a job using percentage of the working age group (15-64 years) (STATSSA, 2018). From year 2000 to 2019, South African's average employment rate stood at 43.19%. This means that South African has never employed half the population of the working age group since 2000 until 2019. South Africa reached its highest employment rate of 46.17% in the 4th quarter of 2008. In the 1st quarter of 2004, South Africa reached its first lowest employment rate of 41%. In the 2nd quarter of 2019, South African employment rate dropped to 42.44% compared to 42.56% in the first quarter. South African employment rate might look good compared to other African countries but to the rest of the world it is not true (STATSSA, 2019). In 2016, Iceland had the highest employment rate in Europe at 86.3% measuring same working age group as South Africa (Eurostat, 2016). Employment is seen as a condition to achieve economic growth, however if

there is a country that doubles its employment rate, therefore, there is still more to be done. Demographic dividend relies on labour force.

Demographic evolution impacts labour materials in twofold ways. First of all, the consistent and inescapable maturity of the baby-boom generation has an essential mechanical outcome (Bloom, Canning, and Sevilla, 2000). It is very possible for those in this age band (between 15 and 64years) to be working, consequently reducing the ratio of dependent relatives to non-dependents relatives. Labour force participation rates by age group in several sections of the world have enormous influence. Such an influence is particularly durable throughout the zenith working years (20 to 54). Consequently, the number of persons willing to work (labour allocation) grows bigger as long as the labour marketplace can attract greater numbers of labourers as well as an expansion in per capita production.

Health situation and Demographic Dividend

Health is one of the most important factors that human body needs in order to function. Healthy people tend to be happy and available to produce goods and services if need be. This contribute to the economic growth since healthy people live longer and are more productive (WHO, 2017). For the purpose of this study, we will examine the health status of South African youth and the rest of the working age group.

In South Africa, over half of the population are under the age of 25 (HSRC, 2015). This means that over half of South African population falls under 'youth bulge'. This youth bulge contributes to the achievement of demographic dividend through their contribution in economic productivity. Therefore, youth health is important in South Africa. This means that demographic dividend achievement will depend on youth's wellbeing.

In a country where there are Weak health conditions as well as education, sustainability of growth becomes harder (OECD, 2019). This is because ill health affect life expectancy and productivity. Economic evidence shows that 10% improvement in life expectancy can increase/improve economic growth by percentage points between 0.3-04 a year (Carl, 2018). Indeed, HIV is one of the diseases that decreases life expectancy in every country. In south Africa, out 7.7 million people living with HIV; 20.4% of these people are age between 15-49 (UNAIDS, 2019). This is a working age group that is already affected by this deadly disease, which also affect the productivity and the sustainability of economic growth.

HIV needs a proper prevention, nutrition, health care and medicine. Without all these, there would be a reduction of human capital because large number of people would become victims of AIDS (a deadly syndrome). That is why there is a link between AIDS and mortality, especially in smaller skilled population. In these communities, people are less informed about HIV, therefore many people live and practice unprotected sex without knowing their partner's statuses first. This influences mortality which is very important in achieving demographic dividend.

Another effect of HIV on economic growth is that it causes an increase in worker's time off to look after family members which then lead to slow productivity. It can also cause

unemployment when workers decide that they should look after patients. Therefore, because of HIV/AIDS, taxable population weakens. When taxable population weakens, it affects the public/government expenditure. When public expenditure is affected it might give the state's finance pressure. At the end this will slow down the growth of the economy.

HIV/AIDS also influence household level due to loss of income, unemployment etc. families with HIV/AIDS patients tend to spend too much of their income on health instead of other basic needs such as education. It does not end only on health care, but these families tend to spend more of their savings on funerals. A study on health care spending shows that household with an HIV/AIDS patient spend twice as much on medical expenses as other households.

South Africa: Economic Trajectory and Demographic Dividend
The African continent is moving more sluggishly through the early demographic transition phases compared to other regions (Madsen, 2013). Typically, regions that have been unable to progress rapidly through the transition have struggled to address stark poverty as well large disease weights. This is all because the demographic dynamics describe the early phases of the demographic transition, which operationally limit the capacity to decrease poverty and expand livelihoods (Cilliers, 2018).

There are entirely diverse explanations and considerations of the demographic dividend, such as a first, second and even a third wave dividend; nonetheless, this paper is a review of the first dividend, specifically the dominant impact that the size and quality of the labour force makes to wages (Canning, 206). The demographic dividend hence denotes to a window of opening that unlocks when the working-age population (between 15 and 64 years of age) of a country is higher than the dependent population (below 15 and above 64 years of age) (Ritchie, 2019).

Researchers have argued that, a favourable 'demographic window' happens when 0- to 14-year-olds make up less than 35% of the population and those 60 or older make up less than 15%. Otherwise, the window unwraps when the average age is between 25 and 40 years (Ritchie, 2019). In addition, a nation should have a high percentage of grown-ups in the prime working ages of 25 to 55 years and labour force growth rates that have reduced to levels corresponding with the accessibility of jobs (Abringo, 2016).

Normally, the fertility rate required a country to realize a demographic opening of opportunity is about 2.8 children per woman, or lower (Roser, 2020). When population change is absent as a result of immigration or an epidemic which tilts the age structure; as recognized by Cincotta, the rate of fertility converts into a median age of 25.5 years. Usually, replacement fertility rates are well–thought-out to be 2.1 children per females; beneath these rates, populations begin to narrow (Cilliers, 2018).

Youth situation in South Africa (unemployment, health and education situation)
Unemployment
In 2010, youth constituted 37% of the population totalling 19.1 million individuals (youth *in south Africa; Stats SA, Youth and well-being, World bank 2007, social profiles of vulnerable groups).* South Africa's National Youth Commission Act, 1996, defines youth as those aged

14-35 years (*disability, youth*). South Africa's population is quite young compared to many other developing countries (youth is South Africa). A greater proportion of South Africa's working-age population presents the time era opportunity for economic development and human capital expressly as the higher level of youth population is anticipated to exist within the next 20–30 years (*youth and well-being, World Bank, 2007*). In the early-1990s, even though, South Africa transitioned from apartheid to an interracial democracy, the apartheid era policies have left a continuous legacy of substantial disparities.

Available statistics indicate that South African youths bear a great burden of the dissimilarities in terms of poverty, education, employment, and healthiness outcomes. For twenty-first century South African youths, preceding governmental policies have been weakening their ability to vividly participate in political and socio-economic undertakings in the society (STATSSA, 2018).

Youth policy, which is directed by the National Youth Policy, was developed based on a run of legislative frameworks from 1994 onwards. These statutory and strategy frameworks include: National Youth Commission Act, 1996; White Paper for Social Welfare, 1997; National Youth Development Policy Framework, 2000-2007; and the Draft National Youth Policy, 2008-2013 (StatsSA, 2017).

Between 2013 and 2019, Youth Unemployment have averaged 52%, attaining an all-time high of 60% within the second quarter of 2017 and a record low of 48.8% in the fourth quarter of 2014. However, youth Joblessness ratio has increased from 54.7% percent in the fourth quarter of 2018 to 55.2% in the first quarter of 2019 (Statssa, 2020).

The youth aged 15–24 years are the most vulnerable in the South African labour market as the unemployment rate among this age group was 55,2% in the 1st quarter of 2019 (Statssa, 2020). Among graduates in this age group, the unemployment rate was 31% during this period compared to 19.5% in the 4th quarter of 2018 – an increase of 11.4 percentage points quarter-on-quarter. However, the graduate unemployment rate is still lower than the rate among those with other educational levels, meaning that education is still the key to these young people's prospects improving in the South African labour market (Statssa, 2020).

In the first part of 2019, results from the latest Quarterly Labour Force Survey (QLFS), as established by Statistics South Africa (Stats SA), a drop in employment by 237,000 as well as a rise in unemployment of up to 62 000, in relation to the fourth quarter of 2018, all led to a decline in the labour force participation ratio (currently at 59.3%). In the first quarter of 2019, unemployment rose by 0.5%, thus bringing the rate to 27.6% (Statssa, 2020).

Historical data illustrations that in relation to the fourth part of each year, youth unemployment rises in the first part of each year; mostly due to new participants in the labour marketplace. Majority (85.7%) of the unemployed youth-graduates (aged 15–24 years) were first-hand candidates in the labour marketplace in the first part of 2019. Although, the others have lost

their preceding occupations, either left their former jobs or were re-contesting into the labour marketplace (STATSSA, 2019).

Education

Youth in the twenty-first century are more greatly educated than in earlier decades due to the increase of youth educational openings since the end of apartheid (SALDRU, 2017). Older generations have lesser levels of average education accomplishment than younger ones, because of apartheid government policies regarding education. According to the National Census of 2011, 40.5% of those aged 20–24 years completed grade 12; only 10% of those above 80 years completed grade 12 (SALDRU, 2017).

However, access to laboratories, libraries and Internet connections is still very problematic in most areas in South Africa. Thus, the quality of education in South Africa remains very poor especially in the historically deprived areas (Murtin, 2013). Consequently, students experience learning deficiency, higher-grade repetition and failure rates (Statistics South Africa, 2015 and 2016). A committee was appointed in 2007 to probe the magnitude of learner retention and dropout in the schooling system following reports of high dropout rates by the media (Murtin, 2013).

Their analysis, based on the Education Management Information System (EMIS) data, showed that there was a significant increase in dropout rates from Grade 9 onwards, reaching 24% in Grade 11 for the 1980–1984 birth groups (Wegner, 2017). In addition, the report specified that major dropout complications did not happen before the age of 16 for the majority of the learners; however, problems of repetition and sluggish progress through the school arrangement were major occurrences (Wegner, 2017).

Nonetheless, secondary school enrolment has increased for deprived groups. Notwithstanding this, few advances have been made in reducing the number of young people with little or no education. Race and gender differences influence who continues to higher levels of education; black South Africans claim that finances are the biggest factor in leaving school. Furthermore, disabled youth tend to be underrepresented in the education system, which leads to high proportions of unemployment. Only 12 percent of South African black youths and 7 percent of Coloured youths within the 18-24-year age bracket are in University, compared to more than 60 percent of White South African youth as of 2014. Meagre quality primary and secondary schooling are basic reasons for the low rates of black and Coloured South Africans attending tertiary education (Wegner, 2017).

Health

Although young people generally encompass the healthiest section of society, they face a multiplicity of healthiness risks in South Africa (STATISTICSSA, 2019). Consumption of Liquor is on the rise among youth, and there are strong links between liquor consumption and unsafe sexual behaviour among adolescents (Kaysen, 2019). In-addition, suicide is considered a major public health concern for youth in South Africa; although, there is no comprehensive reliable data on suicide attempts and deaths in South Africa. However, it is

projected that young men and females of black extraction in South Africa have a greater suicide rate than the older age groups (STATSSA, 2019).

In 2003, South Africa recorded more than 20 deaths per 100,000 adolescents due to suicide; this is higher than the estimated international average of 24 per 100,000. Non-fatal suicidal behaviour tends to increase in the second decade of life for all South Africans. Also, it is estimated that about one third of all non-fatal suicidal behaviours encompass children and adolescents (SALDRU, 2017).

HIV/AIDS is a remarkably a bulging danger to the well-being of South African youth. South Africa is estimated to have the highest burden of HIV-infected persons in the world. Statistics show the province of KwaZulu-Natal as the epicentre of the epidemic in South Africa, with an estimated 1.2 million infected individuals. Amongst the youth, the burden of HIV inclines heavily on the females. In 2013, young females in the 15-19 age bracket have a HIV prevalence rate of 5%; for men within this age group, the prevalence rate is 1.4%. In the 20-24 age bracket, females have an 18% HIV prevalence rate; men in this age range have a prevalence rate of 6% (STATSSA, 2018).

Municipal development policy in South Africa shows the need for 'the involvement of young people in nation building and the vital importance 'for their participation in development programmes.' Furthermore, their involvement in the contest against the prevalence of HIV/AIDS is a key foundation for a successful HIV/AIDS management in South African policy and beyond (UNAIDS, 2019).

The youth struggle with HIV/AIDS is closely related with youth social development. In response, the South African government has created several development interventions to curb the epidemic spread and increase youth involvement in such programs. Notwithstanding this, a significant decrease in HIV prevalence amongst the youth has not been realized (UNAIDS, 2019).

Socio-economic conditions to achieve a successful Demographic Dividend.

Before we bring it into South African context, let us look at some of the countries that have achieved demographic dividend. A thinker by the name of Darren LaCroix said, "To be the best, learn from the best".

Development of the potential work force. For a precedent, declining fertility and mortality in Japan, South Korea, Singapore, Thailand and Indonesia brought about changes in the age structure of their populace. Specific significance to economic growth was changes in the size of the working age populace in respect to the two ward populaces, children and the older. Between 1960 and 1990, the work force in these six Asian countries developed more quickly than the all-out populace by an average of 25 percent. The aftereffect of this "demographic bonus" was an expansion in per capita income of about 0.8 percent per year

When we compare with Sri Lanka, the demographic change in India is behind than Sri Lanka. Nevertheless, India has achieved a high economic growth than Sri Lanka. India as considered

a developing country, in spite of the fact that it is a standout amongst the most well to do developing countries on the planet because of later economic growth (Menike, 2010) . Government changes over the previous years achieved an uncommon solid economic performance. In India all in all, GDP developed at a rate of more than 5 percent in 1992-93 and 6 percent in 1993-94 and 7 percent in 1997. Likewise, Indian economy experienced a GDP growth of 9.0 percent during 2005-06 and 9.4 percent during 2006-07. Because of the rising populace an enormous work force is made. Through Indian monetary strategies, India can burn through cash on training to educate the youth and adults, to enable them to assume a beneficial role in India's economy. Because of the ascent in the training among residents, India had the option to generate a high employment opportunity (Menike, 2010).

Labour market

Declining fertility and mortality rates have changed the age structure of South Africa and Africa as a whole. This has led to the bulge in working age population. It had also improved the dependency ratio that can lead to accelerated economic growth. South Africa decreased fertility from 2.4 children per woman in 2015 to 2.4 children per woman in 2018 (STATSSA, 2018). However, African youth contribute 37% of working age and more than 60% of African unemployment. This means that this figure consists of more people who are not doing anything for the economy.

Employment rate is linked to economic growth. This means that high employment rate contributes to the growth of the economy. When more people are employed, it means they are able to produce goods and services and in turn, they earn wages and therefore buy more goods and services (Lister, 2019). According to Stats SA, 2019 unemployment rate increased from 27.1% in 2018 to 27.6% in the first quarter of 2019. The analysis shows 55.2% of youth are unemployed in South Africa (StatisticSouthAfrica, 2018). This means that there is more to be done in the labor market for the sake of South Africa's economic growth.

Youth labor force participation needs to be increased to decrease the number of discouraged job seekers in future. Government should implement policies that promote flexible labor market. There should be Investment in entrepreneur skills for youth so that when they enter working age can create their own enterprises. Having more entrepreneurs will open more door for job opportunities and therefore more goods and services can be produced for the benefit of the economic growth. Agriculture employ 60% of the labor force in Africa and contribute 25% of Africa's GPD. But without capital it is hard for youth to start their own farm or enterprise therefore the government must expand young people's access to business capital. If there are more people who create their own enterprise, it opens more job opportunities for job seekers.

Drawing from the successes of Mauritius Employment and entrepreneurship projects focused at decreasing youth unemployment through extension of investment in divisions with job-multiplier impacts and development of internships, expanded access to credit leveraging on national and local youth assets and government procurement for youth business people was one of the important focus (UNOSSA, 2017).

One of the reasons of unemployment among youth is lack of skills and experiences. That is why there are graduates who are unemployed. In the last quarter of 2018 statistics South Africa

shows that 1.7% of youth were graduates and 6.3% of unemployed were have a form of tertiary qualification as their level of education (STATSSA, 2018). Therefore, government should encourage enterprises to expand internship and graduate programs. This will increase the chances of young adults to get fully employed. If the government invest in technology that increases employment and create youth development funds to support youth employment.

This brings us to the importance of human capital which is an accumulation of skills, knowledge and abilities that can be acquired through education training and experience (Bilas, 2010). It refers to the investment made on individuals for future economic pickup. It incorporates education, higher education for children, preparing, better wellbeing, work understanding, business encounter and different kinds of encounters that might help an individual to maintain a business or work adequately inside an enterprise. These components do not just have an effect on a person's prosperity, yet in addition on the future income of every individual and the economy all in all (Beattie, 2010). This will take us to the next socio-economic condition to achieve a successful demographic dividend; which is education.

Education

A shift in a population structure when several working age populations is larger than non-working age population determines the accelerated economic growth which is fundamental in achieving demographic dividend. With, a population with low fertility and mortality (meaning dependency ratio is positive), it is worse off than the case if education level of the population is low. However, if the education level is high, a strong demographic dividend can be achieved because of more working age people with better level of education (Lutz, 2019)

Essential education and training are a standout amongst the most imperative factors that affect a youth and young adults' capacity to partake in the economy. Educating youth would give them a chance to increase some knowledge, skills and self-assurance that they look for with a specific end goal to take an interest and create in the work market. Policy producers need to create plans that can urge the youthful females to take an interest in the education projects and training Organization for Economic Corporation and Development (OECD, 2012).

Educational skills are very important while searching for a job because skilled workers produces high rate of productivity. Education also becomes very important for future generation because most educated parents will be able to inspire their children to do the same while growing up. This will lead to more educated future generation and more participation in the labor market, which will boost the economy.

In achieving low fertility rate, it is very important to include females in higher education. Females in education could affect fertility through their knowledge and ability to control birth and knowledge of different birth control methods. This will therefore reduce the number of dependent and at the same time increase number of females entering labor market. A study in Stellenbosch University shows that fertility is higher for females with no education compared to those with tertiary education. It shows that having a higher level of education close the gap between desired and unwanted fertility because it increases females' awareness of family planning and contraceptives (Rossouw, 2012)

Stats SA (2010:69) affirms that education and training among females is a crucial device to engage them and to accomplish gender equality. The South African government has contributed huge sums on the education budget plan. It has made going to essential education necessary for all youth, which thusly enhances the level of proficiency among the nationals. This additionally incorporates young females and females of South Africa. This is just the establishment period of education; nevertheless, females still should be inspired and helped to advance their education levels with a specific end goal to prosper in the labour market.

The importance of this investment in educational is that the labour develops into a more dynamic structure, motivating higher earnings and an enhanced standard of living. Males and females thus incline to enter the workforce later, partly because they are being educated for longer, but they are likely to be more creative once they start at work

Health care and family planning
Health and wellbeing programs focused at expanding access to health administrations for the youth, expanded child survival; widespread access to family planning and information benefits on sexual and regenerative health. Besides, females and girls' health and prosperity is a significant part of the strategy as the guide expresses that the capability of the demographic dividend cannot be completely come to in the midst of steady gender separation and inequality (UNOSSA, 2017).

Good health remains a vital aspect for diminishing youth defenselessness, improving workforce productivity and making an environment for youth to understand their maximum capacity. Smart investments in key regions like sexual and reproductive health (SRHR) including family planning will outsizedly affect quickening the demographic change and driving economic growth. Studies have demonstrated that if simply 10% more girls go to school, average GDP increases by 3% and when barriers to work are decreased for female's productivity increments by 25%.

However, crosswise over Africa, barriers constraining young individuals' entrance to SRHR information and administrations endure especially for young girls. The private and public working together sector can play a significant role in accelerating progress and evacuating barriers for females and girls to get to SRHR services by producing demand; strengthening commodity accessibility and streamlining supply chains; training health laborers; pushing for local and national policy; and developing and co-funding creative financial mechanisms to pull in new donors. These mediations at last advantage business as they engender an increasingly powerful economic environment, give opportunities to investment in future employees and customers, and lessen deliberate risk and volatility.

Good governance
Good governance and accountability are fundamental for the impartial allocation also, conveyance of public resources and efficient delivery of public services, and to excite investor confidence, which can touch off the socio-economic change of the country. To strengthen measures went for improving good governance and accountability in the country, just like Asian countries and other European countries, South Africa should: Strengthen the economic and corporate governance structures to ingrain confidence and trust among domestic and

foreign investors. They should reinforce public sector management for efficient delivery of public goods and services. Lastly but not least they should Empower citizens, civil society, the media, and the private sector to battle and report corruption and strengthen hostility of corrupt organizations and systems (Blickenstorfer, 2017).

In achieving demographic dividend, good governance is viewed as the most important socio-economic condition. This means that each socio-economic condition (i.e. health, education, economic growth, employment and gender equality) has the governance component, as the government needs to be responsible for each of these sectors. The government is responsible in making sure that the resources that are meant for public service delivery are put into good use, corrupt officials are dealt with, and the accountability of public funds are fully protected. Therefore, beyond family planning to reduce fertility and mortality, the government must provide good governance (Warira, 2018).

Gender equity
When achieving demographic dividend, gender equity becomes very important more especially when it comes to females because fertility rate can only be counted through females. Policy makers that do not recognize the need for gender equity will find it hard to achieve demographic dividend. In most African countries, young females tend to move out of youth bracket faster than their male counterpart of the same age and marital status. Patriarchal norms are main characteristics to the exclusion of females labour force participation. These norms keep young girls out of school and keep them in roles that seek to prepare them for their reproductive roles, which delays or denies them labor participation (FEMNET, 2018).

Traditionally, females were never allowed to be involved in any activities such as being in the job market. Females were known to be good for marriage, childbearing, taking care of their husbands and household chores. For that reason, it was only apparent that they would not have time to even think of providing for their families in any other ways including looking for a paying job.

Combination of Demographic Transition and socio-economic conditions
From the year 1959, South African fertility rate has never increased. This is a good sign of demographic transition (a shift from high fertility and mortality rate to low fertility and mortality rate). In 2020, South African fertility rate is 2.372 birth per woman; this is a 0.88% decline from 2019 (Statssa, 2020). If the socio-economic conditions are taken into considerations, for example, education for females and gender equity, fertility rate may remain low. Simultaneously with the decrease in mortality rate (Mukamaambo, 2018). Proper health care together with other conditions such as education and good governance can help achieve demographic transition, otherwise known as decline in fertility and mortality rates. With these results, a country can shift from one with more child and old age dependents to one with significantly more people in the economically productive age (Nkwe, 2018).

Accompanying demographic transition of fertility and mortality with investments in health, education, job creation and good governance is one of the best ways of achieving a successful demographic dividend. For example, Botswana managed to have about two-thirds of their

population be the working-age population (15-64 years). This means that more than half of the population in Botswana is currently employable or rather in the economically productive age.

Demographic transition and socio-economic conditions work simultaneously to achieve a successful demographic dividend. An economic growth can be accelerated through investments that controls fertility rate (Mukamaambo, 2018). Investments in education and female's empowerment are important in control of fertility rate. It does not end at fertility, but survival must also account. This will help decrease mortality rate. How do we control mortality? Improvement in health care service is one of the best conditions to control mortality, for example, it can strengthen child survival. It is very important to strengthen child survival because children are the future working age group (Nkwe, 2018).

Conceptual framework

Fertility rate and demographic characteristics (marital status, education level, marital status, geographic type and population group)

Although fertility and marital status are not biological related (Rindfuss, 2015), many researchers found out that marriage is considered to be a necessary precondition of childbearing. This means that marriage is still considered as a licence of reproduction. Researchers also found out that fertility difference between married and unmarried females are extremely high (Rindfuss, 2015). Most countries have put in place policies to increase age at marriage to reduce fertility. This reduction occurs because it delays childbearing since married couples are not obligated to giving birth (Rachidi, 2019). A practical example is that unmarried females would fear the effect of being a single parent; therefore, they would rather give birth to more kids when they are married. A study of American fertility shows that fertility for married females is twice higher compared to unmarried females (Rachidi, 2019).

Even though marriage is considered one of the important characteristics for childbearing, the relationship's strength differs considerably according to mother's population group, age at first birth and education (Parnel, 2015). There is a standard race and education differentials in fertility for unmarried females in South Africa. Black unmarried females have higher fertility compared to Whites, also unmarried black females with low level of education tend to have higher fertility (Parnel, 2015).

A report of African fertility shows that there is a relationship between fertility and females' level of education (Pradhan, 2015). Females with high level of education tend to have lower rate of fertility. One of the reasons being their awareness to family planning and contraception. For instance, the increment in length of primary education in Kenya led to increase in female educational attainment, which led to, delayed marriages and deceased fertility. Additionally, reduction of cost of education (cost of school uniform) in Kenya reduced the number of dropouts (Kim, 20116) which led to reduction of teenage marriage and pregnancy. This means that affordability of education can have an effect on fertility because educated females will have access to, and awareness of family planning (Kim, 20116). A similar study by Pradhan, 2015, shows that a one-year increment of female education in Nigeria led to a reduction of early fertility by 0.26 births. At the same time in Ethiopia, 61% of females with no schooling

had their first child before the age of 20 in comparison to 16% of females with more than 8 years of schooling.

Youth unemployment and demographic characteristics (gender, education level, marital status, geographic type and population group)

The most recent unemployment statistics from StatisticsSA demonstrate that South Africa's unemployment rate declined to 26.7% in the final quarter a year ago from 27.7% in the past quarter. "This shows we are 12.7% rate behind from the National Development Plan (NDP) focus for 2020", said analyst general Risenga Maluleke talking at the quarterly labour force results for the final quarter of 2017, on Tuesday in Pretoria. The NDP focus for 2020 is 14%. The report uncovers that there are 16.2-million individuals who were employed in the final quarter and 5.9-million jobless. More than 66% of jobless individuals have been unemployed for a year or longer, as indicated by StatisticsSA. The report further says that in spite of the fact that there are 37.5-million individuals of working age somewhere in the range of 15 and 64 in South Africa; 15.5 million individuals are not economically active (Mhlanga, 2018)

The most affected people were females and youth. More men (51.4%) than females were jobless in 2018 contrasted with 2008. In any case, the level of females who were in long-term unemployment was higher than that of men in both 2008 and 2018. Long-term unemployment influences the youth more than it influences the adults. In spite of the fact that the level of youth in long-term unemployment declined by 7.4 rate indicates from 2008 to 2018, around 66% of those in long-term unemployment were youth (15–34 years) in 2018 (STATSSA, 2018).

Regardless of age, according to Stats SA (2015) for the periods 2008 and 2015, the employment shares for men with the education of less than matric were higher than that for females in a similar category. The shares of both men and females with the education of less than matric had decreased by 5.1 and 6.4 rate respectively in the vicinity of 2008 and 2015. Among utilized, the extent of those with less than a matric education for men was 49.1% and 43.6% for females in 2015. The employment shares for females with matric, other tertiary and tertiary were higher than those of men in the same educational categories for both 2008 and 2015. This show the impact that education has on youth employment and unemployment. This also shows the availability of gender inequality which is also a socio-economic condition to achieve successful demographic dividend in south Africa. If females are not given equal job opportunity as males with the same education level, therefore demographic dividend will not be achieved.

Females get affected even beyond education status. As indicated by Statistics South Africa's (Stats SA) midyear population estimate (2015), the South African population included 8,057 ,561 black females between the ages of 15 and 34. Taken with the unemployment data, this implies very nearly one of every two of the females in this gathering (46%) does not work or is not considering. This is the highest proportion of all the race gatherings and genders.

Stats SA discovered that there were 603,917 white men in that age assemble in South Africa. This implies just a single in seven (14%) was not working or an understudy, the least of all

race gatherings and genders. Second least are White females and Indian men – both at 22% – with Coloured females positioning second highest at 39% (Statistics South Africa, 2015)

The unemployment rate among the youth is higher regardless of educational level, yet those with not as much as matric were bound to encounter genuine difficulties when looking for employment. Of the 10.3-million youngsters aged somewhere in the range of 15 and 24 years, 3.1-million were not in employment, education or training (NEET) (Mhlanga, 2018).

Summary of the chapter

This chapter gave details on three theories of demographic dividend. The first theory was demographic transition which is the shift from high fertility and mortality to low fertility and mortality, followed by dependency ratio which is a computation which bunches those ages under 15 with those more than 65 years as the 'dependents' and classifying those ages 15-64 years as the working-age population. The last theory was the one called youth bulge; this theory is referred to demographic pattern where the population consists of large proportion of young children and young adults. The second part of this chapter gave a clear view on demographic dividend by looking at some characteristics that are linked to it. Firstly, it gave the overview of demographic dividend in the world in general, followed by demographic dividend in Africa as a continent as well as South Africa as a country. It gave details on the effect of unemployment and health situation in achieving demographic dividend. The last part of this chapter showed the most important aspect of this paper, which is also the tittle of this research (socio-economic conditions to achieve a successful demographic dividend). The conditions to achieve a successful demographic dividend are labour market, gender equality, good governance, education; health care and family planning. lastly, this chapter focus on unemployment and fertility rate as the important factors that contribute to the achievement of demographic dividend. In this case, the section looks closer at the relationships between fertility rate and youth unemployment and demographic characteristics. The demographic characteristics are   marital status, education level, geographic type and population group.

CHAPTER 3: METHODOLOGY

Research perspective
Quantitative point of view

In quantitative approach, you test a relationship by determining how many/ how much of one variable is related to another, often ending in the ability to "support" or "disprove" the relationship (DeFranzo, 2011). The viewpoint of this study is quantitative. Quantitative research enables us to measure and inspect the data. In this sort of research, we will comprehend the relationship between the dependent variables (how long they have been trying to find work and their reasons for not working) and independent variables (gender, population group, marital status, their education status and the province of residence). This is frequently used to test hypothesis which is called 'correlational research design', used for statistical analysis and for outsized scale surveys like census. Quantitative data also offers help to make general determinations from your research or conclusion (DeFranzo, 2011).

The main benefits of quantitative research:

- **Objectivity**: This sort of research is numerical. In this way, they can't be easily misinterpreted. This enables the researcher to examine a similar circumstance to know the investigation with the same quantitative method. You can also compare its results (McClain, 2012).
- **Statistical Method**: In quantitative research, you are allowing the use of statistics. The types of statistical data analysis allow you to comprehend an enormous measure of fundamental characteristics of the data (McClain, 2012)
- **Fast Data Collection**: The data in quantitative research can be broken down in a fast and easy way. With the utilization of statistically valid random models, a survey can instantly be summed up to the entire occupants (McClain, 2012).

Secondary data

This study will make use of secondary data for collection. The data used is the Quarterly Labour Force Survey and census. Secondary data is the data that was collected by somebody other than the user. Common sources of secondary data for sociology incorporate censuses, data collected by government departments, authoritative records and data that were initially collected for other research purposes (Church, 2009).

Reasons for secondary data

There are several methodological focal points to secondary data analysis. To start with, secondary data, if reliable and accurate, gives chances to replication. A research finding acquires credibility if it shows up in various studies. Instead of leading a few studies personally, a researcher can utilize data collected by others in his or her own (Church, 2009). Second, the availability of data after some time empowers the researcher to employ longitudinal research designs. One can discover a baseline measurement in studies directed decades back and find comparable data collected even more recently. Third, secondary data analysis may enhance measurement by extending the extent of free variables employed in the operationalization of ideas (Church, 2009).

Type and sub-type of the research

Cross-sectional research

This type of design is identified with survey research. It consists of taking a random sample of individuals, collecting responses about their backgrounds, past experiences, and attitudes. It provides the best approach for establishing the causality between the dependent and the independent variables (Hemed, 2015).

The context of the study

The context of this study is South Africa. The focus is South African demographic dividend with regard to youth unemployment as well as trends of fertility and mortality. This includes the nine South African provinces. It looks at provinces and how they differ when it comes to youth unemployment. The reason for this is that we are aware that females are mostly disadvantaged in term of employment compared to males. Lastly, South Africa is divided into nine provinces, therefore it will look at demographic characteristics that are connected to

unequal employment status in each province. The study looked at the variation of youth unemployment across these provinces.

Participants of the study

This study was conducted in South Africa, comprising of all the nine provinces. The participants in the study are South Africans selected by Statistics South Africa. The data used in this study was collected by Statistic South Africa. The Quarterly Labour Force Survey (QLFS) is a household-based sample survey that collects data on the labour market activity on persons who are aged between 15 and 64 years and who live in South Africa. This survey is conducted by Statistics South Africa (Stats SA) with the aim of collecting information about individuals in the labour market quarterly. Thus, it collects information about "those who are employed; those who are unemployed and those who are not economically active" (Quarterly Labour Force Survey, 2017). On fertility and mortality trends, the study will use South African population census.

The methods and instrument used to collect data

The data that was used is secondary data from the Population census and Quarterly Labour Force Survey 2017 (fourth quarter). It was required from the use of Meta data from the Statistics South Africa. QLFS uses the master sample method of collecting data. The master sample as a method is designed to be representative at provincial level and within provinces at metro/non-metro levels. Within the metros, there are three Geographical areas, namely urban, tribal and farms. These Geographical areas are all part of the survey used by statistics South Africa.

The instrument used to collect data by QLFS was questionnaire. These questionnaires focus on different contents like biographical information. It includes questions about marital status, language, population group, education etc. these questionnaires are used throughout the provinces in the country. For example, the question of unemployment might come as how many members of the households are working or economically active? This is to make a division between dependent and independent variables.

Data analysis

In data analysis, the study used two computer software to generate the results in response to the hypotheses that were formulated in chapter one. These software(s) are SPSS and Microsoft Excel. On the analysis of unemployment, adults (35-64) youth (15-34) are analyzed but includes both males and females. On fertility and mortality trends, all ages and genders will be analyzed for comparison. Education level for both male and females are analyzed across all the province for comparison.

Univariate and bivariate were used in the process of analyzing the data. In univariate analysis, SPSS was used to analyze the data and Microsoft Excel was used to present them in tables and graphs. In bivariate analysis, cross-tabulation was used to explore the patterns of percentages in two-way tables.

Chapter summary

This chapter brings out the research design, research methods and methodology of the study. The first part of this chapter is the research perspective of the study. It is shown that the study's perspective is quantitative point of view. This point of view was explained in detail, including its objectives. Under the perspective, the use of secondary data was explained and the reasons for using them. The type and the subtype of the study were explained as cross sectional. The context of the study is focused on South African nine provinces based on youth unemployment' as well as trends of fertility and mortality. This chapter also includes the participants of the study and data analysis. In analyzing the data, SPSS and Microsoft excel were used to make tables and graphs.

CHAPTER 4: RESULTS

This chapter will show the trends on fertility and mortality as well as youth unemployment in South Africa; this will include education levels amongst South African youth. In terms of fertility and mortality, it will show how far South Africa have gone with lowering dependency ratio. In terms of youth unemployment, it will show how many youths are participating in the labour force.

Fertility measures and demographic characteristics

The following tables show the number of females under reproductive age 15-49 years and the average of female who have given birth to at least one child. The average for the following is presented in percentage. The average is also presented according to demographic characteristics such as province, Geographical area, marital status, and population group.

Table 1: Average female (15-49 years) ever given birth to at least one child

Age group	Ever given birth	Total females (15-49 years)	Average female ever given birth (%)
15-19	18,218	152,118	11,98
20-24	72,260	153,085	47,20
25-29	101,562	150,868	67,32
30-34	104,057	136,219	76,39
35-39	90,862	114,167	79,59
40-44	85,619	104,408	82,00
45-49	78,460	95,218	82,40
total	55,1038	90,6083	60,82

Source: author's own calculations

Out of 906083 females aged 15-49 years, approximately 60% of them gave birth to at least one child. Those from age group 15-19 year, approximately 11% of them had at least one child. 82% of females from Age groups 40-44 and 45-49 years had at least one child followed by those from age groups 35-39, 30-34, 25-29 and 20-24 with 79%, 76%, 67% and 47% respectively.

Table 2: Average female (15-49 years) ever given birth to at least one child by population group

Average (%) female ever given birth by population group				
age group	Black/African	Coloured	Indian/Asian	White
15-19	12,43	11,13	2,56	1,86
20-24	48,60	45,41	15,92	15,99
25-29	68,92	65,92	34,10	38,66
30-34	77,62	76,05	54,92	58,36
35-39	80,71	79,40	62,89	67,04
40-44	83,07	82,49	69,48	70,91
45-49	83,49	82,50	72,91	71,90
total females (15-49)	788241	68102	14406	35334

Source: author's own calculations

According to population groups, Black/African had total females of 788,241 within reproductive age followed by Coloured, Indian/Asian and White with 68,102, 14,406, and 35,334 respectively. Black/African of age group 15-19 years had the highest average number of females ever given birth (12.43%) followed by Coloured (11.13%), 2.26% for Indian/Asian and Whites the lowest with 1.86%. In age group 20-24 years Black/African and Coloured both had the highest average of 48.60% and 45.41% respectively followed by Indian/Asian and Whites with average of 2.56% and 1,86% respectively. On age group 20-29 years black and Coloured had the highest average of 68.92% and 65.92% respectively followed by White and Indian/Asian with 38.66% and 34.10% respectively. Coloured and Black/African had the highest average in age group 30-34 years with 77.62% and 76.05% respectively, followed by White (58.36%) and Indian/Asian lowest with 54.92%. In age group 35-39, black and Coloured had the highest average with 80.71% and 79.40% respectively, Whites and Indian/Asian lowest with 67.04% and 62.89% respectively. Black and Coloured also had highest average in age group 40-44 years with 83.07% and 82.49% respectively followed by White and Indian/Asian lowest with 70.91% and 69.48% respectively. Under the last reproductive age 45-49 years, black and Coloured still had the highest average with 83.49% and 82.50% respectively followed by White (71.90%) and Indian/Asian (72.91%).

Table 3: Average female (15-49 years) ever given birth to at least one child by Geographical area

Average (%) female ever given birth by Geographical area			
age group	urban area	tribal/traditional area	farm area
15-19	10,16	13,91	16,33
20-24	43,24	53,04	55,19
25-29	64,67	71,98	71,58
30-34	74,93	79,20	77,62
35-39	78,74	81,26	80,37
40-44	81,68	82,65	82,12
45-49	81,94	83,33	81,79
total females (15-49)	559543	318592	27948

Source: author's own calculations

Across Geographical area, urban area had the total females (559,543) under reproduction age 15-49 years, followed by tribal/traditional area (318,592) and farm area lowest with 27,948. In age group 15-19 years, farm area had the highest average number of females who have ever given birth with 16.33% followed by tribal area (13.91%) and urban lowest with 10.16%. In age group 20-24 years farm area had the highest 55.19% followed by tribal (53.04%) and urban area (43.24%). Under group age 25-29 years tribal and farm area both had the highest average of approximately 71% followed by urban with 64.67%. Tribal area had the highest average (79.20%) In age group 30-34 years followed by farm area (77.62%) and urban area (74.93%). Tribal area also had the highest average 81.26% In age group 35-39 years, followed by farm area (80.37%) and urban area (78.74%). Both tribal and farm areas had the highest average of approximately 82% In age group 40-44 followed by urban area with 81.68%. Tribal area had the highest average 83.33% In age group 45-49 years followed by both farm and tribal area with approximately 81%.

Table 4: Average female (15-49 years) ever given birth to at least one child by marital

Average (%) female ever given birth by marital status					
age group	legally married	divorced	widowed	single	separated
15-19	46,80	25,93	10,27	10,92	14,89
20-24	68,92	66,36	40,29	43,43	54,67
25-29	77,40	67,43	63,18	63,07	67,99
30-34	82,17	76,23	77,68	72,04	78,08
35-39	83,99	78,60	84,55	74,65	78,60
40-44	84,91	82,23	86,67	77,23	81,74
45-49	84,42	82,19	87,54	77,63	83,29
total females (15-49)	281500	10370	14644	544953	4704

Source: author's own calculations

Across marital status, total single females of reproductive age 15-49 year were 544,953 followed by legally married (281,500), widowed (14,644), divorced (10,370) and separated (4,704). In age group 15-19 years legally married who have ever given birth to at least one child had an average of 46.80% followed by divorced females (25.93), separated (14.89%) and both single and widowed had approximately 10%. In age group 20-24 legally married, divorced and separated had the highest averages of 68.92%, 66.36% and 54.67% respectively, widowed and single with lowest of 40.29% and 43.43% respectively. Females aged between 25-29 years and are legally married had the highest average of 77.40% followed by both separated and divorced with approximately 67%, widowed and single both had the lowest of approximately 63%. Under those females aged between 30-34 years, legally married had the highest with 82.17%, followed by separated (78.08%), widowed (77.68%), divorced (76.23%) and single (72.04%). On females aged 35-39 years, legally married females had an average of 83.99%, followed by widowed (84.55%), both divorced and separated (78.60%), single having the lowest of 74.65%. In age group 40-44 years widowed females had the highest average of 86.67% followed by legally married (84.91%), divorced (82.23%), separated (81.74%) and single (77.23%). In age group 45-49 years, widowed had the highest of 87.54% followed by legally married (84.42%), separated (83.42%), divorce3d (82.19%) and single (77.63%).

Table 5: Average female (15-49 years) ever given birth to at least one child by provinces

Average (%) female ever given birth by provinces									
age group	WC	EC	NC	FS	KZN	NW	GP	MP	LIM
15-19	10,34	14,34	14,30	10,59	12,93	12,13	8,95	12,98	12,46
20-24	42,59	49,92	59,06	48,77	46,92	52,92	41,04	49,66	52,15
25-29	64,89	68,80	79,46	76,61	63,30	75,15	62,98	68,05	73,92
30-34	75,04	77,55	86,40	82,49	70,83	83,10	73,95	76,45	82,40
35-39	79,36	80,51	88,11	86,54	73,83	83,66	78,15	78,88	84,47
40-44	82,24	83,03	89,97	87,60	77,29	85,10	80,83	81,04	85,19
45-49	82,97	83,23	88,43	88,23	78,01	85,69	80,80	81,62	85,25
Total females (15-49)	81446	112113	21150	52687	184286	63879	211213	75016	103993

Source: author's own calculations

Across provinces GP had the highest number of females under reproductive age 15-49 years with 211213 followed by KZN (184286), EC (112113), LIM (103993), WC(81446), MP (75016), NW(63879), FS (52687) and NC (21150).According to provinces, average of females who ever given birth to at least one child In age group 15-19 years both NC and EC had the highest of approximately 14%% followed by (MP, NW, MP, LIM and KZN) all with approximately 12%, (WC, FS) all with approximately 10% and WC lowest with approximately 8%. In age group 20-24 years, NC had the highest of 59.06% followed by both (NW and LIM) all with approximately 52%, (MP and EC) all with approximately 49%, FS (48.77%), KZN (46.92%), WC (42.59%), GP (41.04%). In age group 25-29 years NC had the highest with 79.46% followed by FS (76.61%), NW (75.15%), LIM(73.92%), under 30-34 years NC had the highest with 86.40% followed by NW(83.10%), both LIM and FS(82%), EC(77.55%), MP (76.45%), WC(75.04%), GP(73.95%) and KZN (70.83%). In age group 35-39 years NC had the highest with 88.11% followed by FS (86.54%), LIM (84.47%), NW (83.66%), EC(80.51%), WC(79.36%), both GP and MP (78%), and KZN(73.83%). In age group 40-44 NC had the highest of 89.97% followed by FS (87.60%), both NW and LIM (85%), EC (83.23%), WC (82.24%), MP (81.04%), GP (80.80%), and KZN (77.29%). In age group 45-49 NC had the highest of 88.43% followed by both NW and LIM (85%), EC (83.23%), WC (82.97%), MP (81.62%), GP (80.80%) and KZN (78.01%).

Education level

Table 6: Education levels across provinces by age and gender amongst youth

Provinces	Gender	Education			
		Matric Equivalent	16-17 Comp Grade 9	Aged 24 Educ (Completed)	Any Tertiary
EC	Females	15.7	36.8	1.2	2.8
	Males	13.6	30.2	0.6	1.7
FS	Females	23.3	38.9	1.4	3.7
	Males	21.6	33.8	0.6	2.7
GA	Females	29.3	46.5	1.9	5
	Males	26.5	41.3	0.9	4
KZN	Females	27.7	41.9	1.8	2.7
	Males	22.9	37.7	0.8	1.9
LIM	Females	17.6	40.9	1.7	3.2
	Males	15.4	37.5	0.8	2.5
MP	Females	24.6	40.3	1.2	2.3
	Males	21.3	34.7	0.6	1.8
NW	Females	21.3	37.5	1	2.9
	Males	20.3	32.5	0.5	2
NC	Females	19.3	35.5	0.7	2.1
	Males	19.2	31.8	0.2	1.5
WC	Females	25	42.6	1	4
	Males	23.4	37.8	0.5	3

Source: Author from various STATS SA Reports

Generally, across all provinces in South Africa, there are more educated females than males. Gauteng province has the highest number of female Matric holders (29.3%) followed by KwaZulu Natal with approximately 28%, 25% for both the Western Cape and Mpumalanga, 23.3% in the Free state, 21.3% in the North West, 19.3% in the Northern cape, 18% in Limpopo and the Eastern Cape the lowest with 16%. Although there are more educated Matric female holders compared to males; yet across these provinces there are discrepancies.

Gauteng province has the highest number of male Matric holders (26.5%) across South Africa followed by both KwaZulu Natal (22.9%) and the Western Cape (23.4%), 23.3% in Free State, 21.3% for Mpumalanga, 20.3% in the North West, 19.2% in the Northern cape, 15.4% in Limpopo and the lowest with 13.6% in the Eastern Cape.

Grade 9

Females who have completed grade 9 are between the ages of 16 to 17 years. Compared to other provinces in the country, Gauteng has more female (47%) grade 9 holders than males

(41.3%). Gauteng has approximately 47% grade 9 female holders, followed by the Western Cape with 43%, KZN with 42%, 41% in Limpopo, 40.3% for Mpumalanga provinces, 39% in the Free State, approximately 38% in the North West,37% in the Eastern Cape and the least 36% in the Northern Cape. Compared to other provinces in the country, Gauteng has the highest number of males who have completed grade 9 (41.3%), followed by the Western Cape (37.8%), KZN (37.7%), Limpopo at 37.5%, Mpumalanga at 34.7%, Free State at 33.8%, 32.5% in North West, 32 in Northern Cape (31.8%) and the least (30.2%).

Completed Education: Aged 24 years

Female adolescents who completed their education at the age of 24 years are more than males across all provinces in South Africa. Gauteng, KwaZulu Natal, and Limpopo provinces all have the highest percentage of approximately 2%, the Free State (1.4%), the Eastern Cape (1.2%), Mpumalanga (1.2%), North West and the Western Cape 1% and Northern Cape with the least (0.7%). Male adolescents who completed their education at the age of 24 years are less than females across all provinces in South Africa. Gauteng (0.9%) has the highest number of males who have completed their education, followed by KwaZulu Natal (0.8%), and Limpopo (0.8%), Free State (0.6%), the eastern Cape (0.6%) and Mpumalanga 0.6%, North West at 0.5%, the Western Cape (0.6%) and the least Northern Cape at 0.2%.

Any Tertiary

Across all provinces in South Africa, there are more educated females than males in tertiary institutions. Gauteng province has the highest number of females in tertiary institutions (5%), followed by the Western Cape at 4%, then by Free State at 3.7%, Limpopo (3.2%), North West province 2.9%, Eastern Cape (2.8%), KwaZulu Natal (2.7%), Mpumalanga (2.3%) and the least Northern Cape province at 2.1%. There are few males than females at tertiary institutions across South Africa. Gauteng province has the highest number of males at tertiary institutions (4%), followed by the Western Cape (3%), Free State (2.7%), Limpopo (2.5%) North West (2%), KwaZulu Natal (1.9%), Mpumalanga (1.8%), Eastern Cape (1.7%) and the Northern Cape with the least at 1.5%.

Provinces

In the Eastern Cape, there are more females (37%) than males (30%) within the age of 16 – 17 years who have completed grade 9, followed by matriculants - females (16%) vs. males (14%), those in tertiary institutions – females (3%) vs. males (2%) and finally those aged 24 years who have completed their education (more females (1.2%) than males (0.6%). In the Free State province, there are more females (39%) than males (34%) within the age of 16 – 17 years who have finished grade 9, followed by matric equivalent holders - females (23%) vs. males (22%), tertiary institutions – females (3.7%) vs. males (2.7%), and finally those aged 24 years who have completed their education - females (1.4%) and males (0.6%).

Gauteng province generally has more educated females than males; with the highest in grade 9 – roughly 47% females and 41.3% males , followed by matriculants - females (29.3%) vs. males (26.5%), tertiary institutions – females (5%) vs. males (4%) and finally those aged 24 years who have completed their education - more females (1.9%) than males (0.9%). In KwaZulu Natal, there are more educated females than males; with the highest amongst grade

9 (16 -17 years) –41.9% females and 37.7% males, followed by matriculants - females (27.7%) vs. males (22.9%), tertiary institutions – females (2.7%) vs. males (1.9%) and finally those aged 24 years who have completed their education; females (1.8%) vs. males (0.8%).

Limpopo province has more educated females than males; with the highest amongst grade 9 (16 -17 years) –40.9% females and 37.5% males, followed by matriculants - females (17.6%) vs. males (15.4%), tertiary institutions – females (3.2%) vs. males (2.5%) and finally those aged 24 years who have completed their education; females (1.7%) vs. males (0.8%). Mpumalanga province has more educated females than males; with the highest amongst grade 9 (16 -17 years) – roughly 40.3% females and 34.7% males, followed by matriculants - females (24.6%) vs. males (21.3%), tertiary institutions – females (2.3%) vs. males (1.8%) and finally those aged 24 years who have completed their education; females (1.2%) vs. males (0.6%).

The North West province has more educated females than males; with the highest amongst grade 9 (16 -17 years) – roughly 37.5% females and 32.5% males, followed by matriculants - females (21.3%) vs. males (20.3%), tertiary institutions – females (2.9%) vs. males (2%) and finally those aged 24 years who have completed their education; females (1%) vs. males (0.5%). In the Northern Cape there are more educated females than males; with the highest amongst grade 9 (16 -17 years) –35.5% females and 31.8% males, followed by matriculants - females (19.3%) vs. males (19.2%), tertiary institutions – females (2.1%) vs. males (1.5%) and finally those aged 24 years who have completed their education; females (0.7%) vs. males (0.2%).

Mpumalanga province has more educated females than males; with the highest amongst grade 9 (16 -17 years) –40.3% females and 34.7% males, followed by matriculants - females (24.6%) vs. males (21.3%), tertiary institutions – females (2.3%) vs. males (1.8%) and finally those aged 24 years who have completed their education; females (1.2%) vs. males (0.6%).

Employment status and demographic characteristics

Table 7: proportions of employment status across age groups according to population group

age group						
Youth (15-34 years)		**Population group**				
	employment status	**Black/African**	**couloured**	**indian/asian**	**White**	**all population**
	Employed	26,53	41,23	45,94	50,18	29,48
	Unemployed	20,63	18,80	6,63	5,74	19,35
	Discouraged job seeker	10,56	4,99	2,84	1,83	9,45
	Other not economically active	42,27	34,98	44,59	42,25	41,72
	total	100	100	100	100	100
adults (35-64 years)		**Population group**				
	employment status	**Black/African**	**Coloured**	**Indian/Asian**	**White**	**all population**
	Employed	55,72	56,94	56,61	70,34	57,36
	Unemployed	14,46	9,71	6,73	3,59	12,63
	Discouraged job seeker	7,18	3,02	1,83	1,30	5,99
	Other not economically active	22,65	30,32	34,83	24,76	24,01
	total	100	100	100	100	100

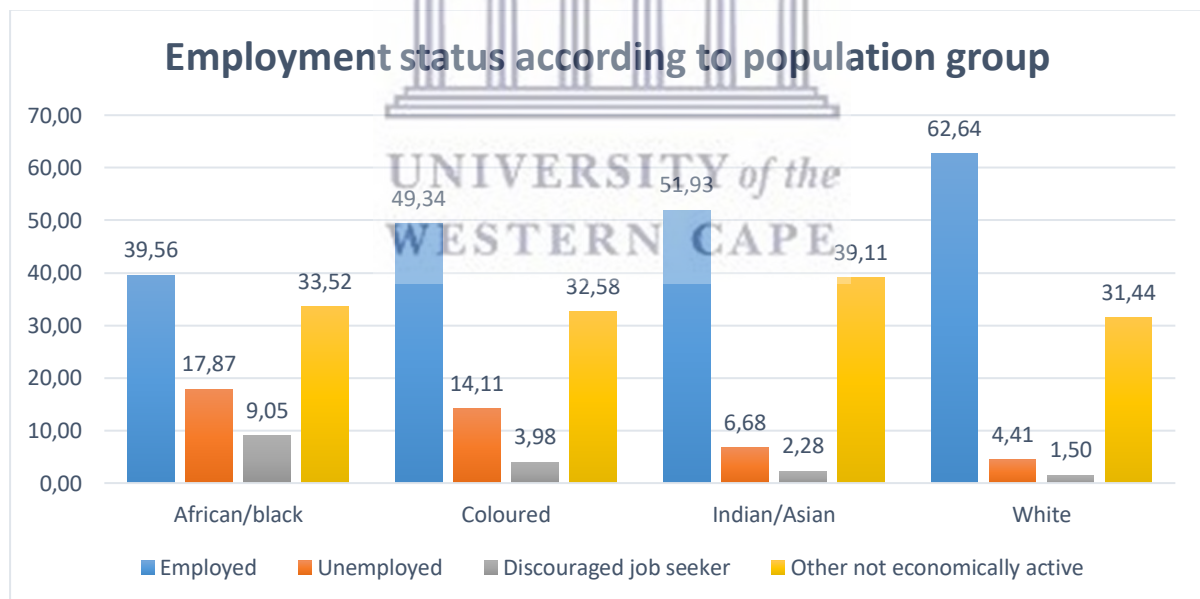*Source: author's own calculations*

Youth (15-34 years)

Under youth (15-34 years) across all population groups, 41.72% were not economically active, 29.48% were employed, 19.35% were unemployed, and 9.45% were discouraged job seekers. White contributed 50.18% of employed youth, followed by Indian/Asian (45.94%), Coloured

(41.23) and black/African (26.53%). On unemployed youth, black/African had the highest percentage of 20.63% followed by Coloured (18.80%), Indian/Asian (6.63%) and White (5.74%). Black/African/African had 10.56% of discouraged job seekers followed by Coloured (4.99%), Indian/Asian (1.83%) and White 9.45%). Indian/Asian youth had 44.59% of other not economically active followed by black/African (42.27%), White (42.25%) and Coloured (34.98%).

Adults (35-64 years)

Adults (35-64 years) across all population groups 57.36% were employed, 24.01% were other not economically active, 12.63% were unemployed and 5.99% were discouraged job seekers. White contributed 70.34%% of employed youth, followed by both Indian/Asian and Coloured with 56% and black/African (55.72%). %). On unemployed youth, black/African had the highest percentage of 14.46% followed by Coloured (9.71%), Indian/Asian (6.73%) and White (3.59%). Black/African/African had 7.18%% of discouraged job seekers followed by Coloured (3.02%), Indian/Asian (1.83%) and White 1.30%. Indian/Asian adults had 34.83% of other not economically active followed by White (24.76%), Coloured (30.32%) and black/African (22.65%).

Figure 1: employment status of people age 15-64 years according to population group per 100 active people


Source: author's own calculations

For black People aged 15-64 years, 39.56% were employed, 33.52% were other not economically active, 17.87% were unemployed and 9.05% were discouraged job seekers. For Coloured people, 49.34% were employed, 32.58% were other not economically active, 14.11% were unemployed and 3.98% were discouraged job seekers. For Indian/Asian people, 51.93% were employed, 39.11% were other not economically active, 6.68% were unemployed and 2.28% were discouraged job seekers. For White people, 62.64% were employed, 31.44% were

other not economically active, 4.41% were unemployed and 1.50% were discouraged job seekers.

Figure 2: employment status of people age 15-64 years according to marital status per 100 active people
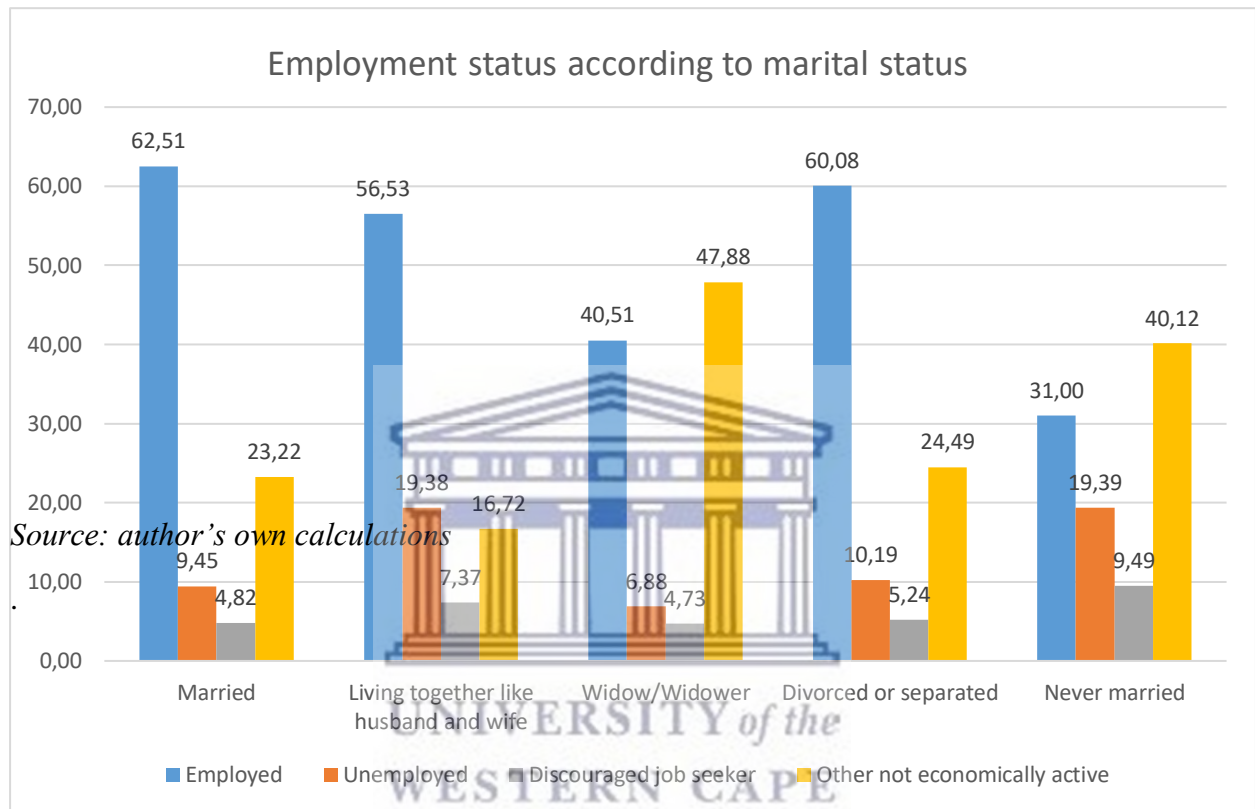
People aged 15-64 years and married, 62.51% were employed, 23.22% were other not economically active, 9.45% were unemployed and 4.82% were discouraged job seekers. For those who are living together like husband and wife, 56.53% were employed, 19.38% were unemployed, 16.72% were other not economically active and 7.37% were discouraged job seekers. For those who are widow/widower, 47.88% were other not economically active, 40.51% were employed, 6.88% were unemployed and 4.73% were discouraged job seekers. For those who divorced/separated 60.08% were employed, 24.49% were other not economically active, 10.19% were unemployed and 5.24% were discouraged job seekers. For those who never married, 40.12% were other not economically active, 31% were employed, 19.39% were unemployed and 9.49% were discouraged job seekers.

Table 8: Employment status of people age 15-64 years according to province per 100 active people

Employment status	Province (15-64 years)									All provinces
	WC	EC	NC	FS	KZN	NW	GP	MP	LIM	
Employed	54,55	30,57	40,13	42,17	36,68	37,48	50,07	41,20	37,19	42,56
Unemployed	13,21	18,27	14,08	22,62	12,31	13,45	20,38	21,38	8,43	16,20
Discouraged job seeker	1,57	8,90	10,54	4,02	11,64	13,09	4,01	6,31	16,51	7,83
Other not economically active	30,68	42,26	35,25	31,19	39,37	35,99	25,54	31,12	37,87	33,42
Total	100	100	100	100	100	100	100	100	100	100

Source: author's own calculations

Across all the provinces, employment status with the highest percentage was employed (42.56%) followed by other not economically active (33.42%), unemployed (16.20%) and discouraged job seekers (7.83%). For those who are employed, WC had the highest percentage of 54.55% followed by GP (50.07%), FS (42.17%), MP (41.20%), NC (40.13%), NW (37.48%), LIM (37.19%), KZN (36.68%) and EC (30.57%). For unemployed, FS had the highest of 22.62% followed by MP (21.38%), GP (20.83%), EC (18.27%), NC (14.08%), NW (13.45%), WC (13.21%), KZN (12.31%), and LIM (8.43%). For discouraged job seekers, LIM had the highest of 16.51% followed by NW (13.09%), KZN (11.64%), NC (10.54%), EC (8.90%), MP (6.31%) and GP (4.01). For other not economically active, EC had the highest of 42.26%, followed by KZN (39.37), LIM (37.87%), NW (35.99%), NC (35.25%), FS (31.19), MP (31.12%), WC (30.68%) and GP (25.54%).

Figure 3: Employment status of people age 15-64 years according to Geographical area per 100 active people

Employment status according to Geographical area
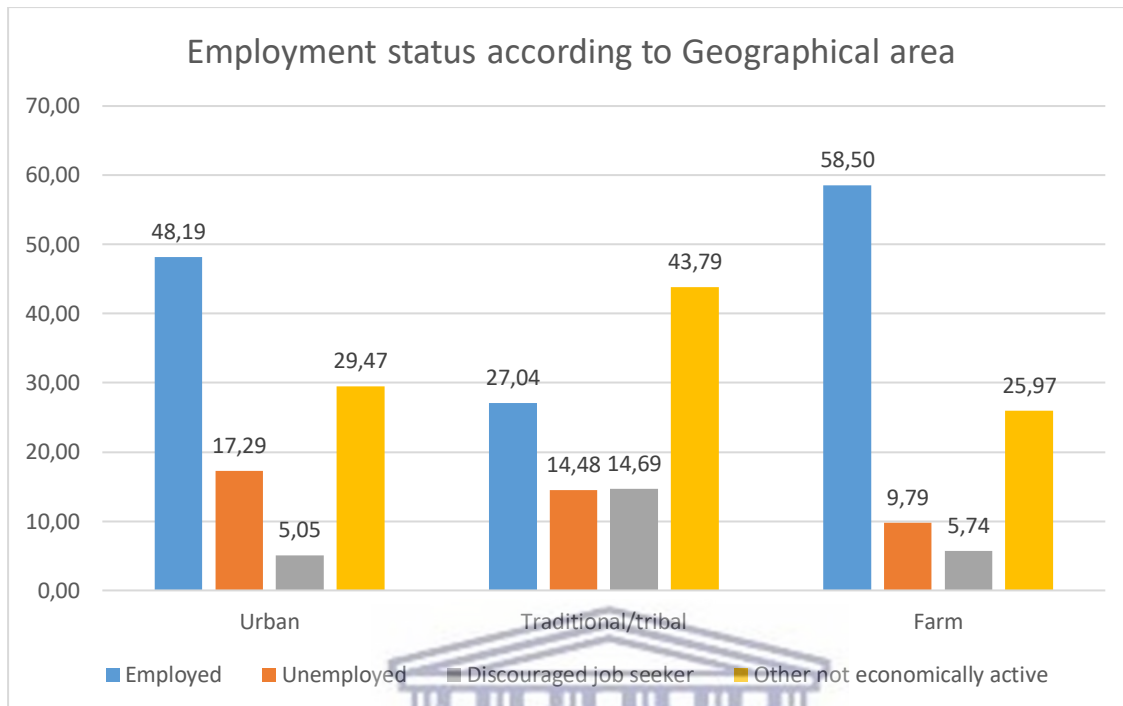
Source: author's own calculations

In urban areas, 48.19% were employed, 29.47% were other economically active, 17.29% were unemployed and 5.05% were discouraged job seekers. In traditional/tribal areas, 43.79% were other not economically active, 27.04% were employed, 14.69% were discouraged job seekers and 14.48% were unemployed. In farm areas, 85.50% were employed, 25.97% were other not economically active, 9.79% were unemployed and 5.74% were discouraged job seekers.

Table 9: Employment status of people age 15-64 years according to education level per 1000 people

Employment status		Education status					
	No schooling	Less than primary completed	Primary completed	Secondary not completed	Secondary completed	Tertiary	Other
Employed	30,51	34,63	36,46	32,57	47,3	74,5	51,19
Unemployed	8,16	12,79	13,28	17,15	19,03	11,53	9,36
Discouraged job seeker	7,52	9,72	8,66	9,13	7,37	3,03	6,58
Other not economically active	53,8	42,86	41,6	41,15	26,3	10,9	32,87
Total	100	100	100	100	100	100	100

Source: author's own calculations

Under people aged 15-64 years with no schooling, 53.80% were other economically active, 30.51% were employed, 8.16% were discouraged job seekers and 7.52% were unemployed people. For those with less than primary education, 42.86% were other not economically active, 34.63 were employed, 12.79% were unemployed and 9.72% were discouraged job seekers. For those who completed primary school, 41.60% were other not economically active, 36.46% were employed, 13.28% were unemployed and 8.66% were discouraged job seekers. For those who did not complete secondary school, 41.15% were other not economically active, 32.57% were employed, 17.15% were unemployed and 9.13% were discouraged job seekers. For those who completed secondary school 47.30% were employed, 26.30% were other not economically active, 19.03% were unemployed and 7.37% were discoursed job seekers. For those with tertiary education level, 74.50% were employed, 11.53% were unemployed, 10.90% were other not economically active, and 3.03% were discouraged job seekers. For other, 51.19% were employed, 32.87% were other not economically active, 9.36% were unemployed and 6.58% discouraged job seekers.

Gender and Economic Opportunities

Table 10: Cross-Tabulation of Gender and Economic Opportunities amongst SA Youths

| Provinces	Gender	Economic Opportunities			
		Unemployment	Not in Employment/Education	Formal Employment	Informal Employment
EC	Females	7.3	17.4	32.6	6.1
	Males	7.1	15.5	38.4	9.8
FS	Females	10.3	19.9	27	5
	Males	8.9	14.5	41.1	11.4
GA	Females	12.4	17.4	33.8	3.4
	Males	10.9	14.1	43.8	6.4
KZN	Females	8.5	18	35.5	4.9
	Males	7.6	14.2	41.4	7.7
LIM	Females	8	16	25.6	5.9
	Males	6.7	11.5	38.5	14.2
MP	Females	9.8	18.5	27.7	5.1
	Males	8.2	13.5	42.1	12.2
NW	Females	9.9	21.4	24.2	4.4
	Males	8.9	15.9	42.7	12.9
NC	Females	8.9	20.7	29	5.2
	Males	8.1	16	42.2	11.7
WC	Females	9.9	17.5	37.2	4.8
	Males	9.1	15.1	42.7	7.2

Source: Author Computations from Stats SA Reports

Unemployment

Across South Africa, females are more unemployed than males. Gauteng province has the highest number of unemployed females (12.4%), followed by Free State (10.3%), North West (9.9%), Western Cape (9.9%), Mpumalanga (9.8%), KwaZulu Natal (8.5%), 8% in Limpopo and the lowest with 7.3% in the Eastern Cape. Although males are less employed compared to females; yet across these provinces there are discrepancies. Gauteng province has the highest

number of unemployed males (10.9%) across South Africa followed by the Western Cape (9.1%), 8.9% in both Free State and North West provinces, 8.2% in Mpumalanga, 8.1% in the North Cape, 7.6 KwaZulu Natal, 7,1% in the Eastern Cape, 6.7% in Limpopo.

Figure 4: Gender and Unemployment
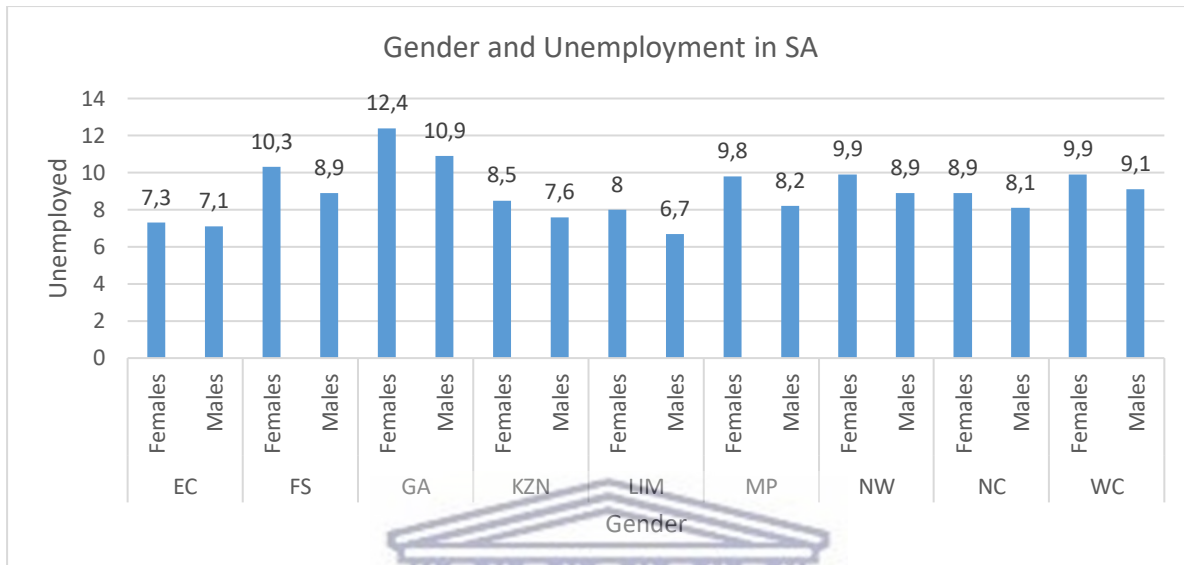
Source: Author

Not Employed/ Schooling

In South Africa, there are more unemployed but educated females compared to males. The North West province has the highest number of unemployed females who are at school (21.4%), followed by Northern Cape (20.7%), Free State (19.9%), Mpumalanga (18.5%), KwaZulu Natal (18%), Western Cape (17.5%), Eastern Cape and Gauteng both at 17.4% and finally Limpopo (16%). In South Africa, there are males compared to females are schooling and not employed. The Northern Cape province has the highest number of unemployed males who are at school (16%), followed by North West (15.9%), Eastern Cape (15.5%), Western Cape (15. 1%), Free State (14.5%), KwaZulu Natal (14.2%), Mpumalanga (13.5%) and finally Limpopo (11.5%).

Figure 5: Not in Employment of Schooling

Not in Employed or Schooling in SA
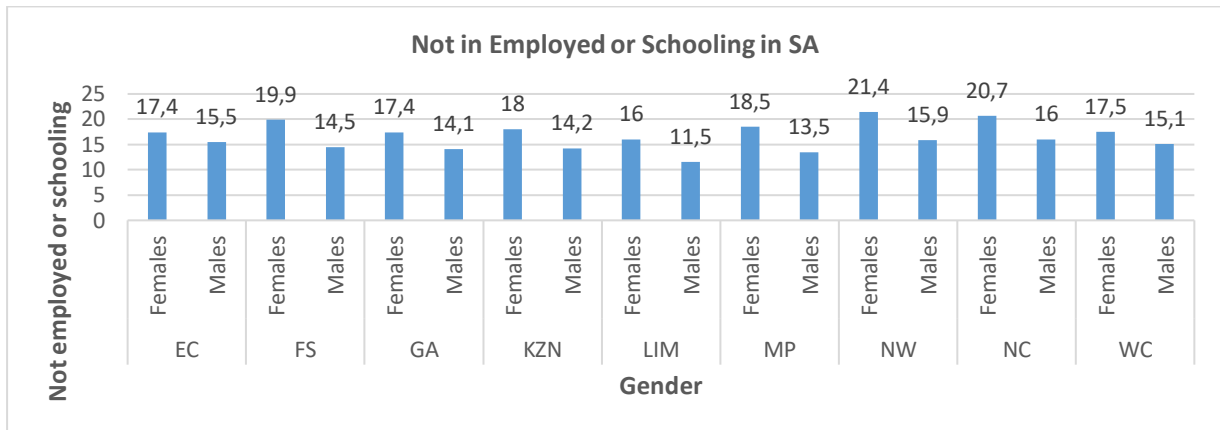
Source: Author

Formal Employment

Across provinces, there are less formerly employed females compared to males. The Western Cape has the highest number of formally employed females (37.2%), KwaZulu Natal (35.8%), Gauteng (33.8%), Eastern cape (32.6%), Northern Cape (29%), Mpumalanga (27.7%), Free State (27%), Limpopo (25.6%) and North West province (24.2%). Males are more formerly employed than females across South Africa. Gauteng (43.8%) has the highest number of formally employed females, while both the Western Cape and the North West province comprise 42.7%, Northern Cape (42.2%), Mpumalanga (42.1%), KwaZulu Natal (41.4%), Free State (41.1%), Limpopo (38.5%) and Eastern cape (38.4%).

Figure 6: Gender and Formal Employment

Gender and Formal Employment in SA
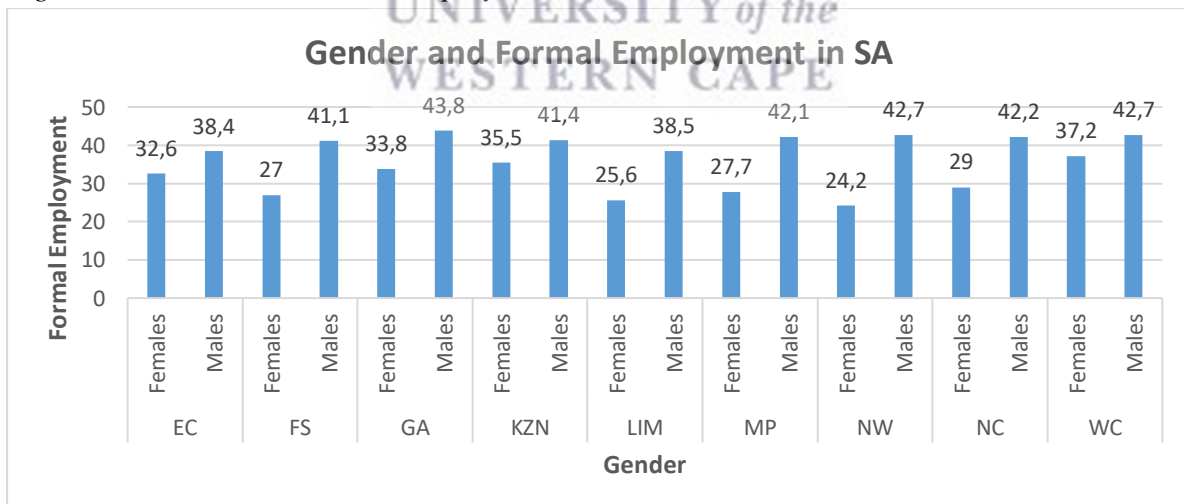
Source: Author

Informal Employment

In South Africa, there are less females employed within the informal sector compared to males. Eastern cape, has the highest number of informally employed females (6.1%), followed by Limpopo (5.9%), Northern Cape (5.2%), Mpumalanga (5.1%), Free State (5%), KwaZulu

Natal (4.9%), Western Cape (4.2%), North West province (4.4%) and Gauteng (3.4%). More males compared to females are employed within the informal sector. Limpopo (14.2%), has the highest number of informally employed males, followed by North West province (12.9%), Mpumalanga (12.2%), Northern Cape (11.7%), Free State (11.4%), Eastern Cape (9.8%), KwaZulu Natal (7.7%), Western Cape (7.2%), and Gauteng (6.4%).

Figure 7: Gender and Informal Employment
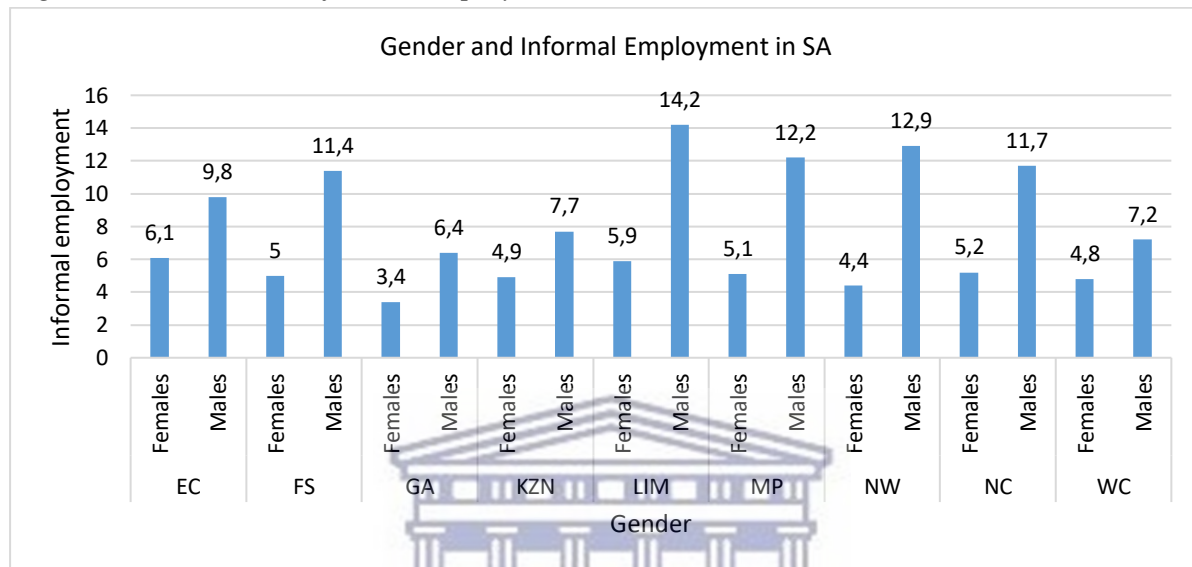
Source: Author

Provinces

In the Eastern Cape, more females (7.3%) than males (7.1%) are unemployed. Additionally, there are more females (17.4%) than males (15.5%) who are not employed but going to school. On the other hand, there are more males (38.4%) than females (32.6%) who are formally employed vs. males (9.8%) and females (6.1%) in the informally sector. In the Free State, females dominate the unemployment sector; more females (10.3%) than males (8.9%) are unemployed, more females (19.9%) than males (14.5%) who are unemployed and schooling. Contrariwise, there are more males than females employed in both the informal and formal sector; 41.1% males vs. 27% females in the informal sector and 11.4% males vs. 0.5% females in the informal sector.

Gauteng province has more unemployed females (12.4%) than males (10.9%); where more females (17.4%) than males (14.1%) who are unemployed and schooling. In addition, more males than females are employed in both the formal (males 33.8% vs. females 43.8%) and informal sector (males - 6.4% vs. females. In Kwazulu Natal, females dominate the unemployment sector; more females (8.5%) than males (7.6%) are unemployed, more females (18%) than males (14.2%) who are unemployed and schooling. Contrarywise, there are more males than females employed in both the informal and formal sector; 41.4% males vs. 35.5% females in the informal sector and 7,7% males vs. 4.9% females in the informal sector.

Limpopo province has more unemployed females (8%) than males (6.7%); where more females (16%) than males (11%) who unemployed and schooling. In addition, more males than females are employed in both the formal (males 38.5% vs. females 25.6%) and informal sector (males 14.2% vs. 5.9% females). Mpumalanga province has more unemployed females (9.8%) than males (8.2%); where more females (18.5%) than males (13.5%) who unemployed and schooling. In addition, more males than females are employed in both the formal (males 42.1% vs. females 27.7%) and informal sector (males 12.2% vs. 5.1% females).

The North West province has more unemployed females (9.9%) than males (8.9%); where more females (21.4%) than males (15.9%) who unemployed and schooling. In addition, more males than females are employed in both the formal (males 42.7% vs. females 24.2%) and informal sector (males 12.9% vs. 4.4% females). The Northern Cape province has more unemployed females (8.9%) than males (8.1%); where more females (20.7%) than males (16%) who unemployed and schooling. In addition, more males than females are employed in both the formal (males 42.2.8% vs. females 29%) and informal sector (males 11.7% vs. 5.2%females).

Mpumalanga has more unemployed females (12.4%) than males (10.9%); where more females (17.5%) than males (15.1%) who unemployed and schooling. In addition, more males than females are employed in both the formal (males 42,7% vs. females 37.2%) and informal sector (males 7.2% vs. 4.8% females).

While more females go to school compared to males, still, males are more employed than females across all provinces in South Africa. In addition, mostly females are still either in school or unemployed compared to males. Among the employed females, there are generally more males than females employed in both the formal and informal sectors in South Africa. This means that most females after education focus on other responsibilities than utilizing their skills to look for employment.

Population Groups and Poverty

Table 11: Cross-Tabulation of Population Group and Poverty amongst SA Youths

Provinces	Population Group	Poverty	
		Income Poor	Multi-Dimensional Poverty
EC	Black	71.5	47
	Coloured	46	2.3
	Indian/Asian	*0.1*	0.1
	White	0.2	0.2
FS	Black	64.7	29.4
	Coloured	1.6	0.8
	Indian/Asian	*0.1*	0.
	White	0.4	0.4
GA	Black	40	19.9
	Coloured	1.1	0.5
	Indian/Asian	*0.2*	0.2
	White	0.4	0.5
KZN	Black	67.6	67.6
	Coloured	0.4	0.4
	Indian/Asian	1.3	1.3
	White	0.1	0.1
LIM	Black	76.7	36.9
	Coloured	0.1	0
	Indian/Asian	0.1	0
	White	0.1	0.1
MP	Black	65.7	30
	Coloured	0.3	0.2
	Indian/Asian	0.1	0.1
	White	0.3	0.3
NW	Black	34	18.4
	Coloured	25.4	12.8
	Indian/Asian	0.2	0.1
	White	0.2	0.3
NC	Black	34	18.4
	Coloured	25.4	12.8
	Indian/Asian	0.2	0.1
	White	0.2	0.3
WC	Black	20.5	11.6
	Coloured	23	10.5
	Indian/Asian	0.2	0.1
	White	0.4	0.4

Source: Author's Computations from Stats SA Reports
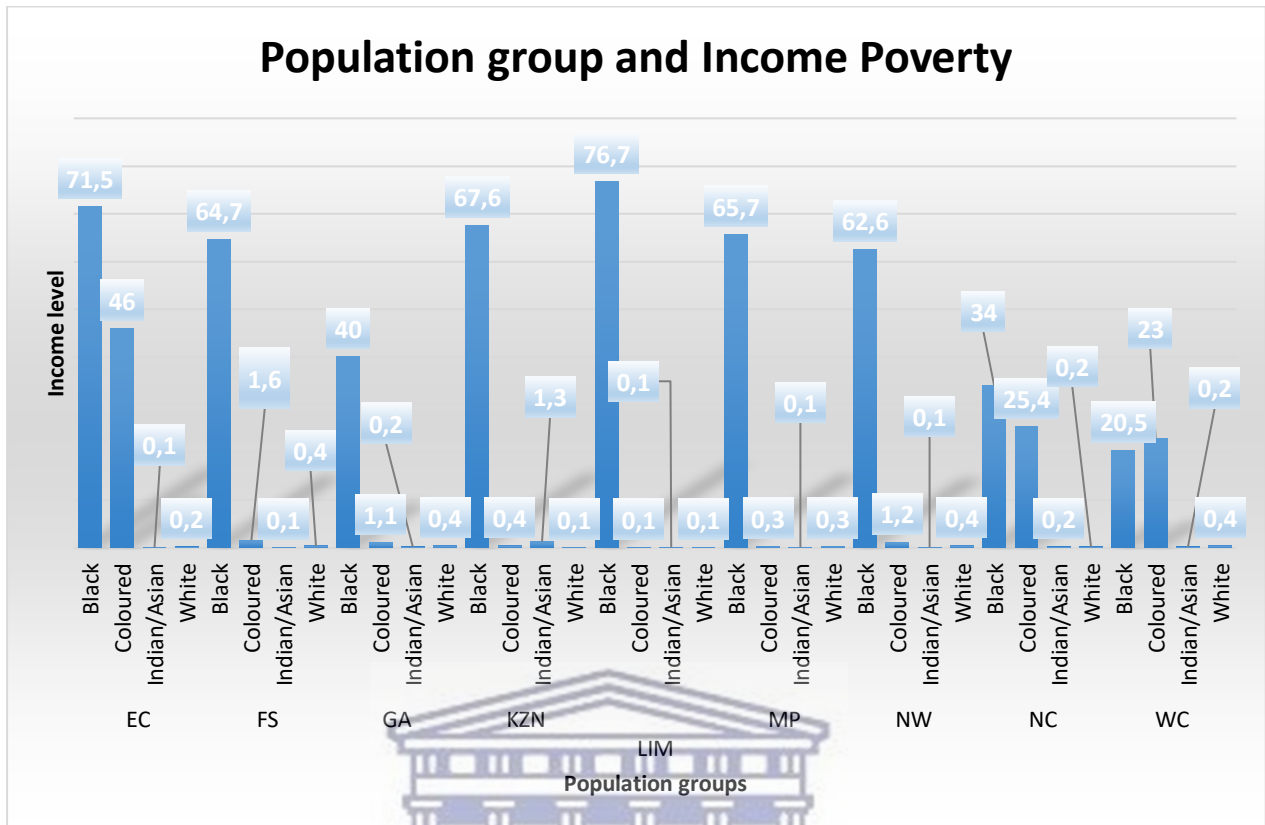
Population group

Generally, across South Africa, Black/African are ranked poorest (income poor), followed by the Coloureds, Indians and Whites. Black/African are considered the poorest across all population groups in South Africa; except for the Western Cape which has the highest number of Coloreds (23%) compared to the Black/African (20%). Limpopo province has the highest number of Black/African (76.7%) with high income poverty levels, followed by the Eastern Cape (71.5%), KwaZulu Natal (67.6%), Mpumalanga (65.7%), Free State (64.7%), North West (62.6%), Gauteng (40%), Northern Cape (34%) and finally Western Cape (20.5%).

The Eastern Cape (46%) province has the highest number of income poor people, followed by the Northern Cape (25.4%), Western Cape (23%), Free State (1.6%), North West (1.2%), Gauteng (1.1%), KwaZulu Natal (0.4%) Mpumalanga (0.3) and Limpopo (0.1%). Among Indian South Africans, KwaZulu Natal (1.3%), has the highest number of income-poor persons, followed by 0.2% in Gauteng, Northern Cape and the Western Cape, 0.1% in the Northern Cape, Free State, Limpopo, Mpumalanga, Free State and the Eastern Cape.

White South Africans are ranked least in this category (income poor). The Western Cape, Gauteng, North West and the Free State are the ranked highest by 0.4%, followed by Mpumalanga (0.3%), 0.2% in both the Northern Cape and the Eastern Cape. KwaZulu Natal ranks the least at 0.1%. This therefore means that across the country Whites are considered richest.

Figure 8: Population Group and Income Poverty

Population group and Income Poverty

Source: Author

At the provincial levels

Across all population groups in South Africa, Black/African (71.5%) are the poorest, Coloured (46%), Whites (0.2%) and lastly Indians (0.1%). In the Free State, Black South Africans (64.7%) are still ranked first, followed by the Coloureds (1.6%), Whites (0.4%) and the Indians (0.1%). In Gauteng, Black South Africans (40%) have high income poverty, 1.1% Coloured, Whites (0.4%) and 0.2% for the Indians.

In KwaZulu Natal, the order changes completely; black South Africans (67%) Indians (1.3%), the Coloured (0.4% and the Whites (0.1%). In Limpopo, Black South Africans (76.7%) are at the top, while Coloureds, Whites and Indians follow at 0.1%. In Mpumalanga, the trend continues; with Black South Africans (65.7%) dominating. However, Coloureds and Whites are both at 0.3% and then the Indians (0.1%).

In the North West, the Black South Africans (62.6%) are considered the poorest, followed by the Coloured (1.2%), Whites (0.4%) and Indians (0.1%). In the Northern Cape, Black South Africans (34%) remain at the top, followed by the Coloureds (25.4%), while both the Whites and Indians come last (0.2%). Obviously, for a Coloured dominated province - Coloureds (23%) are ranked first, followed by the Black/African (20.5%), Whites (0.4%) and then Indians (0.2%).

Black South Africans are ranked highest across all other population groups. KwaZulu Natal province is the highest (67.6%), the Eastern Cape (47%), Limpopo (36.9%), North West (35.7%) Mpumalanga (30%), Free State (29.4%), Gauteng (19.9%), Northern Cape (18.4%), and the least Western Cape (11.6%).   Coloured South Africans are ranked second highest across all other population groups. Northern Cape (12.8%), Western Cape (10.5%), the Eastern Cape (2.3%), Free State (0.8%), North West (0.7%), Gauteng (0.5%), KwaZulu Natal (0.4%) and lastly Mpumalanga (0.2%).

Indian South Africans are ranked third across all other population groups. KwaZulu Natal (1.3%) the is highest, followed by Gauteng (0.2%) while all others Eastern Cape, North West, Mpumalanga, Northern Cape, and Western Cape are at 0.1%.   White South Africans are least in this category across all other population groups. Gauteng (0.5%), province is the highest, Free State and the North West and the Western Cape have 0.4%, Mpumalanga and Northern Cape at 0.3%, Eastern Cape (0.2%), while KwaZulu Natal and Limpopo are at 0.1%.

Multi-Dimensional Poverty

Figure 9: Multi-Dimensional Poverty and Population Group
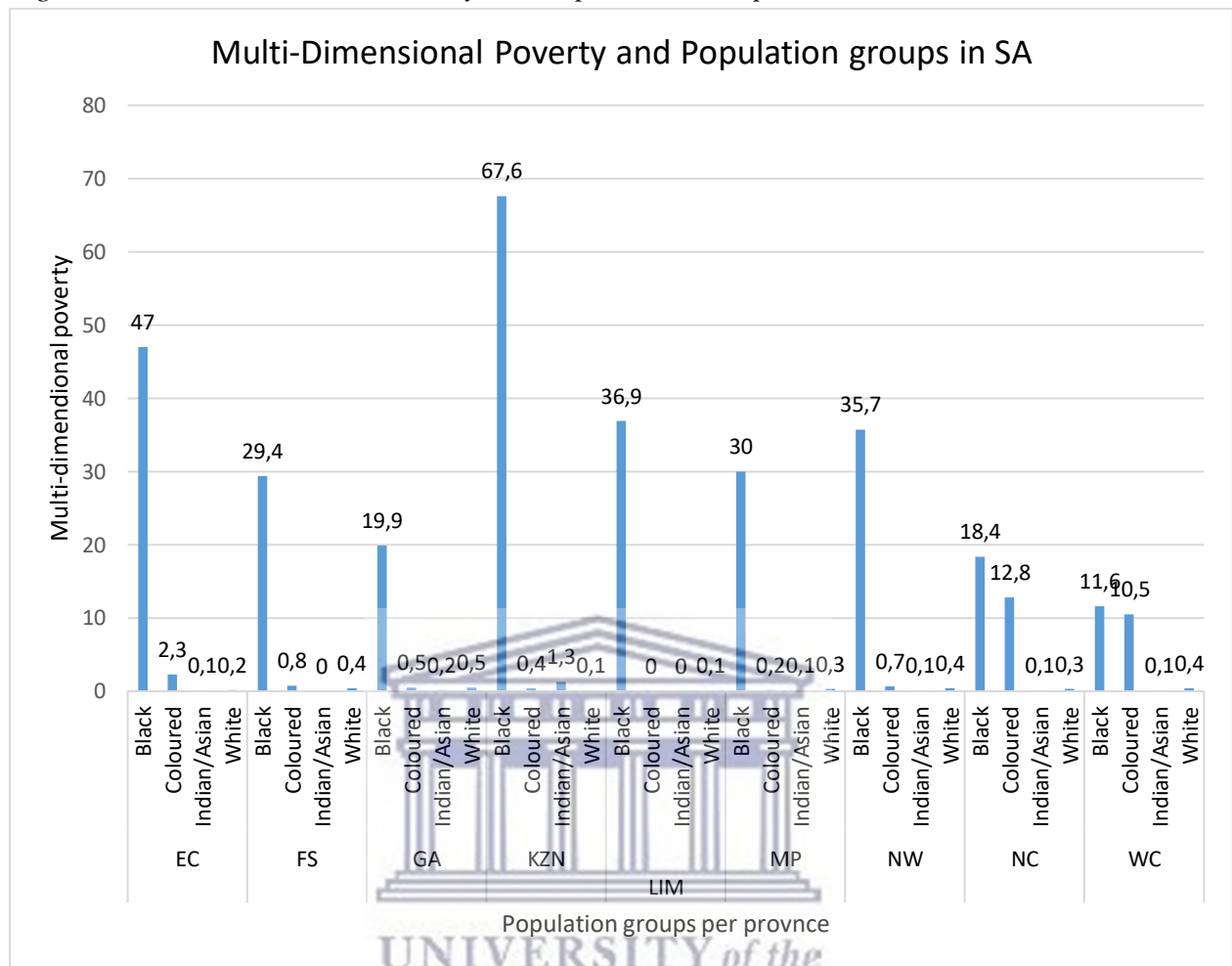
Source: Author

At the provincial levels

In the Eastern Cape, multi-dimensional poverty is highest amongst Black South Africans (47%) in relation to Coloured (2.3%), Whites (0.1%) and the least the Indians (0.2%). In the Free State province, black South Africans have the highest percentage (29.4%) for multi-dimensional poverty in relation to others; Coloured (0.8%) and Whites (0.2%). Multi-dimensional poverty in Gauteng province remains highest amongst black South Africans (19.9%). Other population groups include Coloured (0.5%), Whites (0.5%) and the least the Indians (0.2%).

In KwaZulu Natal, multi-dimensional poverty is highest amongst black South Africans (67.6%) compared to Coloured (0.4%), Indians (1.3%) and the least the Whites (0.1%).
*Limpopo*
In the Limpopo, black South Africans have the highest percentage (36.9%) for multi-dimensional poverty followed by the Whites (0.1%). Multi-dimensional poverty in Mpumalanga is highest amongst black South Africans (30%), followed by Indians (0.3%), Coloured (0.2%) and the least the Whites (0.1%).

In the North West province, multi-dimensional poverty is highest amongst black South Africans (35.7%), followed by Coloureds (0.7%), Whites (0.4%) and the least the Indians (0.1%). In Mpumalanga multi-dimensional poverty in is highest amongst black South Africans (18.4%), followed by Indians (12.8 %), Whites (0.3%) and the least the Coloureds (0.1%). In the Western Cape, multi-dimensional poverty remains highest amongst black South Africans (11.6%) compared to Coloureds (10.5%), Whites (0.4%) and the least the Indians (0.1%).

Constantly, throughout all the provinces in South Africa, both income and multi-dimensional poverty remain highest amongst Black Africans except in the Western Cape where Coloureds are highest. In the Eastern Cape, FS, Mpumalanga, North West, Western Cape and Gauteng province, the whites are placed third with regards to both income and multi-dimensional poverty compared to the Indians.

On the other hand, Colored are ranked highest (23%) for income poverty, in the Western Cape followed by Black/African (20.5%), Whites (0.4%) and Indians (0.2%). In addition, compared to the whites, Indians are ranked third place in KwaZulu Natal.

However, in Limpopo and the Northern Cape, neither the whites nor Indians come in third position. In Limpopo, both Whites and Indians have the same percentages for income poverty (0.1%), while only the whites dominate the Indians for multi-dimensional poverty by 0.1%. Similarly, in the Northern Cape, both whites and Indians have the same percentage for income poverty (0.2%), but for multi-dimensional poverty, the whites dominate the Indians by 0.1%.
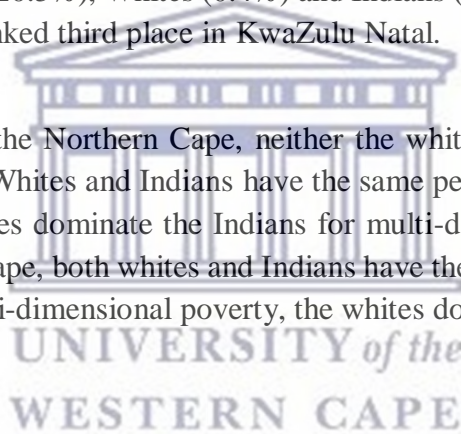
CHAPTER 5: DISCUSSION AND CONCLUSION

Discussion

Fertility

Many factors influence the rate of birth in South Africa. These include structural fluctuations to the economy, age, population group, marital status, education status, province of residence to mention a few. In this study, the relationship between fertility rate and demographic characteristics (population group, education level, geographical area, marital status and provinces) were compared using cross tabulation.

Age is one of the characteristics that determines birth rate. According to table 1, percentage of females who have ever given birth is lower for the first age group (15-19)**;** it then increased up until the last age group 45-49 without any decrease in between. The results show that more females get older and that there are more chances for them giving birth to at least one child. A literature review supports that a woman's best reproductive years **is** in her 20s. Fertility gradually declines in the 30s, particularly after age 35. Each month that she tries, a healthy and fertile 30-year-old woman has a 20% chance of getting pregnant. That means that for every 100 fertile 30-year-old females trying to get pregnant in 1 cycle, 20 will be successful and the other 80 will have to try again. By the age of 40, a woman's chance is less than 5% per cycle; so, fewer than 5 out of every 100 females are expected to be successful each month ASRM (2019).

Looking at the population group across all age groups, black females contribute the highest percentage of ever given birth compared to other population groups. Age group 15-19 had the lowest births across all population groups, but Black/African still had the highest of females who have ever given birth to at least one child followed by Coloured, Indian/Asian and Whites. The last Age group 45-49 had the highest percentage across all the population groups but Black/African still contributed the highest percentage and Whites had the lowest of females who have ever given birth to at least one child. According to John C. Caldwell, the fertility of black South Africans began to decline in the early 1960s, but they are still numerically by far the largest of the four groups.

Looking at geographical areas across of all age groups, the average number of females who had at least one child had a significant difference. In age group 15-19 years, farm areas had highest average of females who have ever given birth followed by tribal/traditional and urban areas. The last age group of fertility 45-49 years had different results from the first age group 15-19 years; the highest was tribal/traditional area followed by urban area and farm area. Across all other age groups, the averages are almost the same between geographical areas. Nevertheless, the average number of females with at least one child increases with age without decrease in between which concludes that there is a relationship between age and fertility regardless of the geographical area. For the purpose of this research, the conclusion is that geographical area does not affect fertility; therefore, there is no relationship between fertility and geographical area.

According to marital status, married females had the highest average of females ever given birth to at least one child compared to other marital statuses. In age groups 15-19 years, legally

married females had an average followed by divorced, separated, single and widowed. In age groups 45-49 years, widowed had the highest average of females who have ever given birth followed by legally married, separated and single lowest. These results showed that marriage contributes more to fertility than any other marital status. The widowed also contributed more than single and separated because most of the widows were once married. This concludes that there is a significant relationship between marital status and fertility rate. As supported by **the** literature review, although marriage is considered one of the important characteristics for childbearing, the relationship's strength differs considerably according to mother's population group, age at first birth and education (Parnel, 2015). There is a standard race and education differentials in fertility for unmarried females in South Africa. Black unmarried females have higher fertility compared to Whites, also unmarried black females with low level of education tend to have higher fertility (Parnel, 2015).

According to provinces, Northern Cape had the highest average of females who have ever given birth to at least one child. Gauteng, across all ages had the lowest average of females with at least one child. Females of age groups 15-19 years in Northern Cape had the highest average and Gauteng had the lowest. In age groups 45-49 years, Northern Cape also had the highest average and Gauteng with the lowest.

According to education level, the number of females with at least one child decreases with the level of education. Those who completed secondary level have lower average compared to those who did not complete secondary level. A report of African fertility shows that there is a relationship between fertility and females' level of education (Pradhan, 2015). Females with high level of education tend to have lower rate of fertility. One of the reasons being their awareness of family planning and contraception.

Unemployment and demographic analysis

The results on youth unemployment showed that being young and a black South African contributes more to unemployment rate compared to being white. Approximately 50% of white youth were employed and only 29% of Black/African were employed. Black youth also held the highest percentage of economically inactive – unemployed and discouraged job seekers – compared to all other population groups such as Coloureds, Indians/Asians and Whites.

The aforementioned results do not only affect youth, black adults also had the highest percentage of unemployment compared to other population groups. They also contributed more on those who are discouraged job seekers and economically disengaged. Looking at those who are employed, 55% of black adults were employed and simultaneously 70% of white adults were employed. These results show that despite age similarities, Black South African are the most vulnerable when it comes to unemployment compared to other population groups. One of the reasons why Black/African people have the highest percentage of unemployed is that they are most of the population compared to other population groups. Furthermore, African/Black and Coloured, more specifically, the adults, were purposefully subjected to a second-class education for almost 50 years during the apartheid era and are therefore less skilled for the current labour market (Levinsohn, 2007; Viljoen, 2013).

Marital status shows that married people, those who live together like husband and wife were mostly employed than single people. Single people include those who are still studying and are below marital age but above 15 years of age. This means that marital status does not significantly cause unemployment hence more people in marriages are employed. Logically, this is because most married people are already out of school and have started job hunting compared to most young single people who are still schooling. Although the results seem to not show the effect of unemployment generally, Literature review shows that marital status affect females because traditionally, females were never allowed to be involved in any activities such as being in the job market. Females were known to be good for marriage, child bearing, taking care of their husbands and household chores; therefore, there is relationship between marital status and looking for a job (UNIFEM, 2005; Jungman, 2005; Eboiyeh et al., 2006; Ortiz-Ospina & Tzetkova, 2017).

When looking at the relationship between unemployment and educational status, studies have shown that a person's level of education plays an important role in their ability to find work (Van der Westhuizen et al., 2007; Mhlanga, 2018). Previously, people with lower level of education were more prone to unemployment than those with higher levels of education. However, the current economy of South Africa demands highly skilled labour and long experience, hence we can now find individuals with high levels of education being unemployed (Van der Westhuizen et al., 2007; Leibbrandt et al., 2010). StatisticsSA (2010) supports that education and training among females is a crucial device to engage them and to accomplish gender equality. Our results show that most currently unemployed females are those who have not completed secondary schooling, followed by those who have completed it. The rates of unemployment, then, tend to decrease with an increase in the level of education.

Regarding geographic area, urban areas have the highest percentages of currently unemployed people, followed by traditional areas, then farms. Urban areas have the highest percentages because of the high population size of people within working age as many people move to urban areas for better job opportunities (Mid-year Population Estimates, 2018). Available literature shows that urban area dwellers also face the issue of taking longer to find work. This is because their population size is large compared to traditional areas and farm areas, because more people migrate to urban areas. Farm dwellers have the lowest percentage, reason being that most of them are living in the farm for employment reason (Statistics South Africa, 2015; Mid-year Population Estimates, 2018).

On provinces of residence and unemployment, Eastern Cape, Gauteng and Mpumalanga have the highest percentages of females who are unemployed compared to other provinces. From the literature review, it is shown that previously, the provinces that had the highest rates of unemployment in South Africa were Limpopo, KwaZulu-Natal and Eastern Cape (Van der Westheizun et al., 2007). However, nowadays, more people migrate to urban areas such as Gauteng for better job opportunities. Hence, it is not surprising that people in Gauteng suffer unemployment because they move to the province for better job opportunities, competition for

the limited number of jobs also increases (Van der Westheizun et al., 2007; Mid-year Population Estimates, 2018).

Gender and economic activities

Results from table 10 shows that across South Africa, females are more unemployed than males, Gauteng province having highest number of unemployed females. South Africa has more unemployed but educated females compared to males. Across provinces, there are less formerly employed females compared to males and there are less females employed within the formal sector compared to males, the same applies to informal sector. Discrimination theorists contend that female employment conditions are, in a negative way, influenced by specific generalizations or stereotypes with respect to their responsibility regarding their expert career. Consequently, hiring males is regarded as a more secure decision than hiring females while males in general get better treatment in the labour market (Stamarski & Son Hing, 2015).

Population groups and poverty

Generally, across South Africa, Black/African are ranked poorest (income poor), followed by Coloureds, Indians and Whites. Black/African are considered the poorest across all population groups in South Africa; except for the Western Cape which has the highest number of Coloureds (23%) compared to the black/African (20%). White South Africans are ranked least in this category (income poor). According to Statistics SA 2015, one of the most enduring legacies of apartheid is the grinding poverty suffered by the country's majority black population. Black South Africans continue to be worst affected by rising poverty, with nearly half considered below Statistics South Africa's lower bound line of poverty, defined as individuals who must sacrifice buying food for other essentials. Less than 1% of white South Africans are below dire line Statistics SA (2015).

Implications for future policies

Considering the results and discussions of this study, more still needs to be done to make the labour market of the country fair for everyone. Till now, there are still discriminations and segregations in the labour market, such as gender discrimination and discrimination based on age and population group. Furthermore, more people across population groups are unemployed because they lack skills or are uneducated. Therefore, it is important for the government to implement strict law against these discriminations so that everyone can have a fair chance of being a labour force participant. Additionally, it is essential for the government to build centers that will provide skills and training to South Africans, more especially the females and youth. This will help in improving the economy of the country and Demographic Dividend can be achieved successfully.

Limitation of the study
- The study is only focusing on South African males and females.
- It does not take into consideration people younger than 15 years.
- The study only focuses on every south African person aged between 15-64 years.
- The age group was grouped into youth (15-34 years) and adults (35-64 years).
- Fertility measure is limited to females who have ever given birth

Conclusion

Unemployment is still an issue, not only in South Africa, but worldwide. Although many factors influence the rate of unemployment, this study focused on establishing the relationship between the dependent variables (unemployment) and the independent variables (age group, population group, marital status, education status, geographic type and province of residence). The accelerated economic growth (demographic dividend) cannot be achieved successfully if unemployment rate does not drop. South Africa is almost at its success of demographic transition, which is a shift from high fertility and mortality rate to low fertility and mortality rate. Socio economic conditions need to be taken into consideration for the successful achievement of demographic dividend in South Africa. Educational skills are very important while searching for a job because skilled workers produce high rate of productivity. When productive people are employed, they can produce goods and services, earn wages and buy more goods and services. Fertility measures are important. Females in education could affect fertility through their knowledge and ability to control birth, and knowledge of different birth control methods. Good governance is essential; therefore, the government should strengthen the economic and corporate governance structures to ingrain confidence and trust among domestic and foreign investors. When all these socio-economic conditions are achieved positively, demographic dividend can be achieved successfully in South Africa.

Recommendations

Although, there are more females who have completed both primary and secondary education, yet there are more males than females at tertiary institutions. We acknowledge that government is focused on quickening delivery and refining school infrastructure, boosting teaching and learning through guaranteeing entry for rich quality learner and teacher support resources, refining grade 12 completion rates, offering scholastic opportunities to learners with extreme intellectual disabilities, intensifying the supply of quality teachers, scrutinizing academic performance and delivering nutritious meals to learners in schools. Yet, there is great need for the government to focus these needs more for females and build support systems that can encourage them to further their education into Universities, thereby improving gender-inequality in education

The South African government should invest more in small businesses in order to assist educated females towards having a stronger financial voice, which can enable them to take care of their families. Government needs to make focus on providing more jobs for black youths since they are the poorest across other population groups. In addition, there is a need to encourage black education, which would improve their skill sets for more white-collar jobs, since most of them are employed in the informal sectors, which pay very little.

A conducive policy environment is required for the materialization of the demographic dividend across the provinces. This would require some sort of flexibility in the employment market that would allow expansionary incentives. This must be supported with macroeconomic structures and policies that enhance investments and savings mechanisms in the domestic financial sector. In-addition, access must be provided for reproductive health services because of its positive externalities for households.

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