Demographic Dynamics of South Africa's Youth: Still Searching for the Demographic Dividend

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Abstract

South Africa is in the latter stages of the first demographic transition (FDT) – yet already depicts aspects of the second transition. The last stage of the FDT is characterised by lower levels of fertility closer to or at replacement level of the average of 2.1 children per woman; and improvements in mortality displayed by declining infant and childhood mortality leading to increasing life expectancy at birth. The second demographic transition (SDT) is driven by life style changes that are determinants of demographic patterns. Such life style changes are declining marriage rates, increasing attention on human development and thus changing family formation patterns. South Africa's youth are at the centre of this transition. The population census of 2011 shows an age structure of South Africa that is characterised by a larger proportion of 15-35 year olds (37.6% of the total population). This resulted from a long period of declining fertility and to some extent improvements in mortality at all ages. This age structure, with adequate investments - is expected to yield a period of economic growth resulting from reduced dependency ratio. However, improved health care, investments in human development and higher employment opportunities are required to harness the benefit. This chapter aim to explore the national and provincial preparedness of South African youth to contribute to economic growth of the country. In particular, the chapter will focus on demographic factors such as sex ratio; youth mortality and morbidity; and youth fertility levels as these factors are highly correlated with human development.

Introduction

Demographic literature has long viewed youth as a transitory period from childhood to adulthood. This body of literature covers factors that influence youth preparedness to positively contribute to the economic growth of the country, which include educational attainment, access to health care, access to family planning services, timing of childbearing and access to relevant social services. These factors are similar to factors that determine the country's ability to harness the demographic dividend, after demographic conditions of the dividend have been met (Makiwane and Chimere-Dan, 2009, Panday et al., 2009, Oosthuizen, 2015).

In a Population reference Bureau policy brief, ((Gribble and Bremmer, 2012):1) described the demographic dividend as "…the accelerated economic growth that may result from a decline in a country's mortality and fertility and the subsequent change in the age structure of the population. With fewer births each year, a country's young dependent population grows smaller in relation to the working-age population. With fewer people to support, a country has a window of opportunity for rapid economic growth if the right social and economic policies developed and investments made". Two aspects of this explanation will be investigated by this research. Firstly, the chapter will explore the age structure of South Africa's population to ascertain the timing of the age-

structure (youth bulge) that is a pre-requisite for the dividend. Secondly, youth demographic characteristics that are knows to affect the achievement of the dividend will be examined.

Several studies have explored the benefits of the demographic dividend in various parts of the world. Mason (2003) discussed East Asia's successes in reaping the demographic dividend through human development; employment growth and high rates of savings and investments. The United Nations (UN) expert group on social and economic implications of changing population age structure, published proceedings from a meeting in Mexico City in 2005. In the report were several studies that outlined age structures of various developing countries and the stages of success in harnessing the demographic dividend (United-Nations, 2007). Furthermore, a comprehensive study that explored age structures of UN world regions, concluded that the first dividend is at its initial stages in sub-Saharan Africa, although individual countries are at different levels (Mason, 2007). A study in Mexico also presented in this report, discusses strategies and programmes that were designed in Mexico to promote human capital – given prevailing age-structure, whose effectiveness is yet to be assessed given that the period of a youth bulge is still underway (Virgilio, 2007).

The 2017 World Population Data Sheet estimated a global youth (defined as 15-24 years) population of 1.2 billion, which is about 16% of total world population (Population-Reference-Bureau, 2017a). Furthermore, the report estimated global youth development challenges. The indicators used to assess these were NEET (percentage of youth Not in Education, Employment and Training); youth HIV/AIDS prevalence and access to family planning. South Africa had NEET of 10.2% for youth between 15-24 years of age, which ranks fifth among upper middle income countries after Brazil (34.1%), Mexico (23.2%), Russia (14.2%) and Turkey (13.3%) – (Population-Reference-Bureau, 2017a).

Several South Africa based studies have explored age structure and the prospects of a demographic dividend. These studies range from those that explore timing of the dividend to those that investigate readiness to harness the dividend (Kaufman, 1998). (Oosthuizen, 2015) explored South Africa's age-structure and assessed the effect of fertility, labour income and consumption on prospects of the dividend in the country. He concluded that "the evidence suggests that the country has already passed through a significant proportion of its first demographic dividend" ((Oosthuizen, 2015):20). Among components of demographic change, the paper emphasized the important role played by fertility in determining the amount of gain that will be accrued from the dividend. On this aspect, Oosthuizen (2015:21) suggests that "lowered fertility is expected to boost the magnitude of the dividend, but will also slightly compress the remaining period of positive dividend". The paper made this conclusion by simulating outcomes of several fertility scenarios. This chapter will take a different approach by observing levels of youth fertility and draw conclusion on the burden of fertility on harnessing the demographic dividend. A collaborative study between Human Sciences Research Council (HSRC) and The Department of Social Development explored the state of youth population in South Africa, looking at demographic and social indicators (Makiwane and Chimere-Dan, 2009). The study is one of few that have explored youth development with a demographic lens, and concluded that the prevailing trends in youth population growth may yield positive social and human capital development, if youth skills have

been developed ahead of the bulge. On the other hand, they argue that - "the large and youth population could create more pressure for the provision of social, educational and health infrastructure and other social services if the youth demography is not properly integrated into development plans and implementation at national, provincial and local levels" (Makiwane and Chimere-Dan, 2009):24.

Data and methods

This chapter utilizes data from the population censuses conducted in South Africa, i.e. 1996; 2001 and 2011. In addition, the most recent Community Survey (CC2916) is used to compute contemporary youth demographic indicator. The age and sex structure analysed are those provided in the Census In Brief reports, which publish census results (StatsSA, 1998, StatsSA, 2003, StatsSA, 2012). The reported census counts as reported census in brief were not altered, except for 1996 census count where unspecified age was extrapolated according to the observed age distribution in 1996. Although the age structure presented is directly that from the census, some caution need to be exercised when reviewing the age structure (particularly the very young age groups) - as there may be inconsistencies (Udjo, 2005). Several reports from Statistics South Africa that shed light on demographic indicators and age-sex structure on the South African population at different periods were also utilized.

Intercensal growth rate

The intercensal growth rate was estimated to assess cohort growth in youth population between census years. Generally, except in cases of high migration, this growth is less likely to be above 3.5%. The cohort growth rate is estimated:

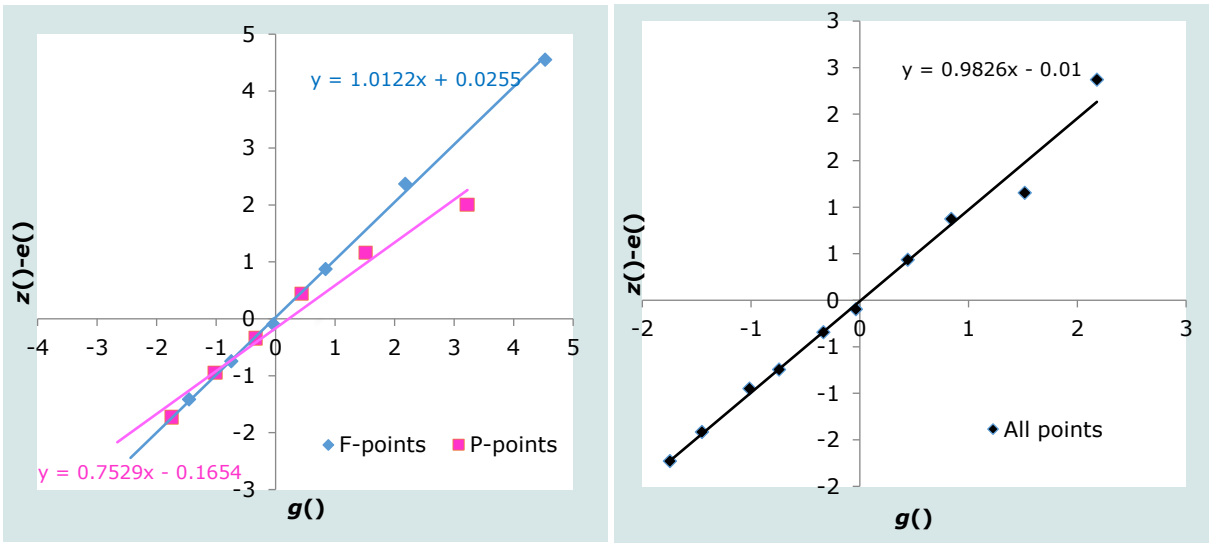
$$r = \frac{ln\left(\frac{N(t_2)}{N(t_1)}\right)}{(t_2 - t_1)} r$$

Where N(t1) is the population at time 1(t1), and N(t2) is the population at time 2 (Moultrie, 2013).

Fertility indicators

Estimation of age-specific fertility rates was conducted using relational Gompertz model. This model was chosen due to relaxed assumption of constant fertility, often required by other models. The model uses information on lifetime fertility (children ever born) and recent fertility (children born in the last 12 months) to determine the shape of the fertility schedule implied by these data. The model relies on the cumulative Gompertz property distribution: $G(x) = \exp(a.\exp(bx))$, which allows the model to be specified as $Y(x) = \alpha + \beta Y^s(x)$. $Y^s(x)$ is the gompit of the standard fertility schedule (Moultrie et al., 2013). α represent the variation in age location of childbearing between the data and the standard (negative values represent an older pattern of childbearing in the data compared to the standard), whilst β is represents the spread of the distribution (values greater than 1 depict narrower distribution). The standard used is Zaba's (Zaba, 1981) modification of the Booth standard (Booth, 1984).

Figure 1: Diagnostic plots from the relational Gompertz model



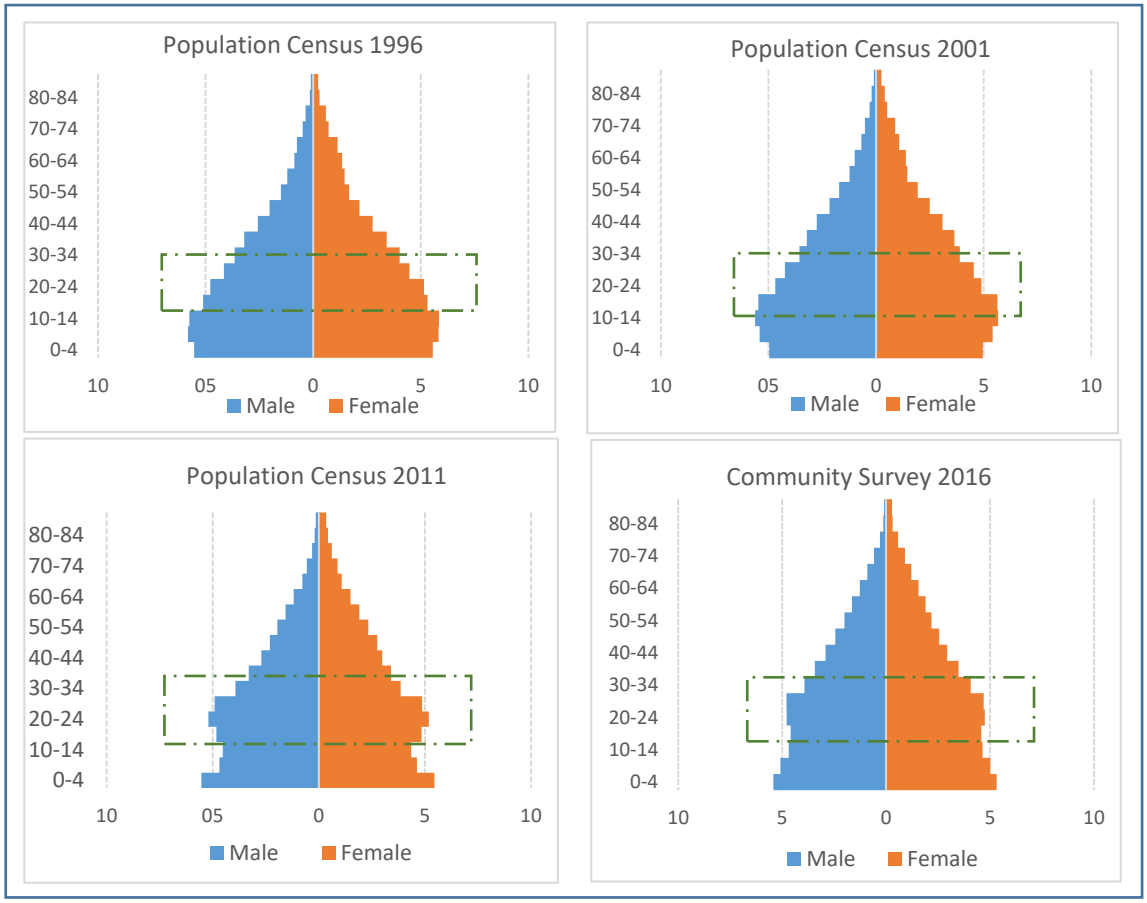
Source: Own estimation from CS 2016

Figure 1 presents diagnostic plots that show the fit of the method to the data. There is evidence of declining fertility depicted by a steeper F-points, and that F-points lie higher than P-points from the peak of the reproductive schedule. Fertility of older women eschewed both distributions in panel 1, removal of these points produce a plausible fit in fertility estimates based on the model. This was observe at provincial level (not shown here), where necessary alterations were made to produce a better fit.

Youth contribution to South Africa population

South Africa has seen growth in the population in age 15-34 (youth age bracket) over the past decade. Makiwane and Chimere-Dan (2009) tracked growth of the youth population from the 1960s, and confirmed a steady increase in size from 3.1 million in 1960 to 10.1 Million in 2006. At the time (in the 1960s), the majority of the population was concentrated in younger ages under 14, and due to high mortality that prevailed, the population over 60 years of age was small. This section will explore the age structure of South Africa from 1996 onwards, and track the changes its sex composition and structure. A closer look at changes in demographic composition of youth population will be explored through observing its composition relative to other age groups; variation in provincial distribution; annual rate of growth and sex ratio at each age-group.

Figure 1: Age structure of South Africa population



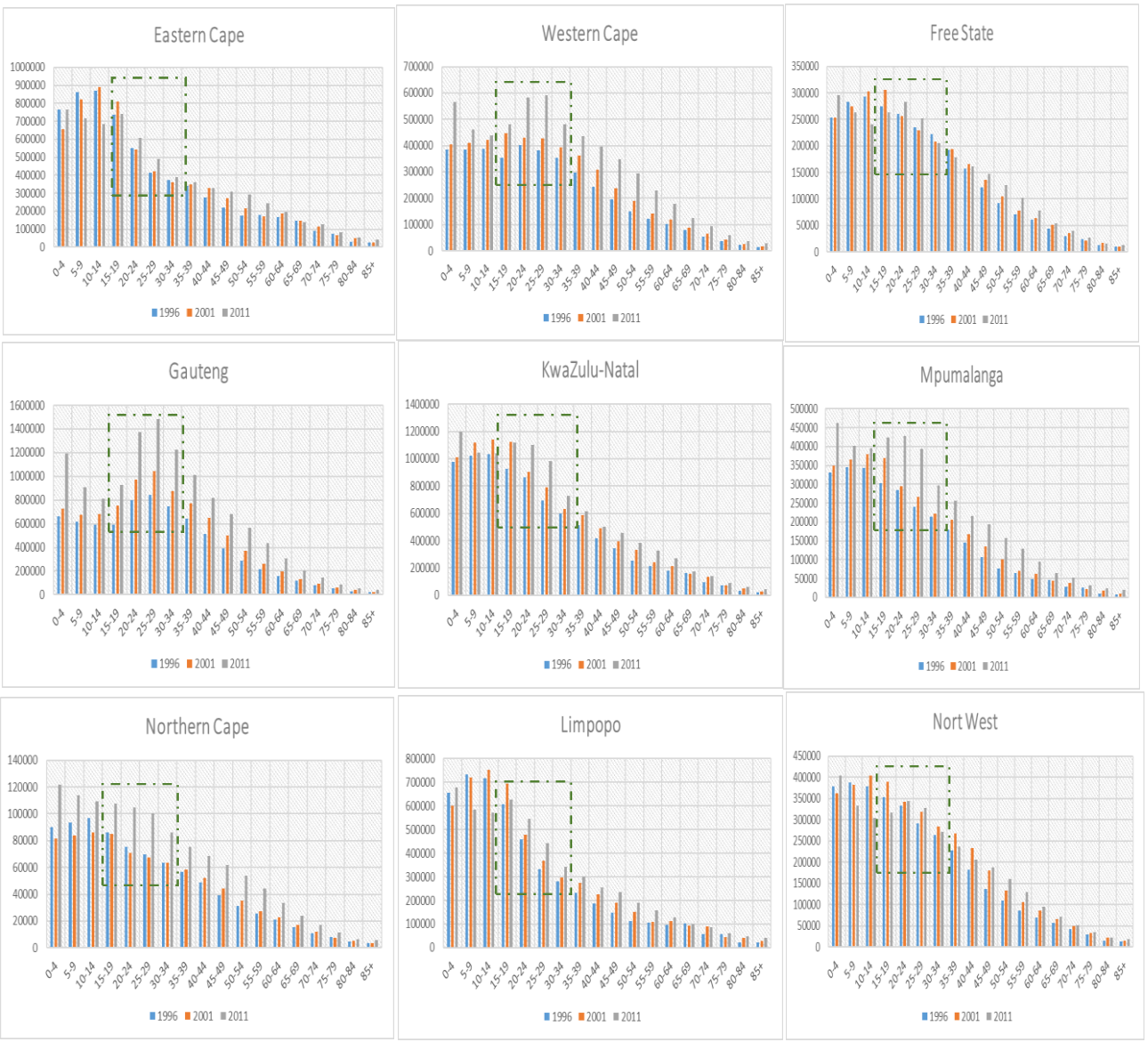
Own computation from respective Statistics South Africa datasets

Figure 1 presents the age structure of South Africa from population censuses and the 2016 Community Survey. It is worth noting recognising concerns with the 2011 age structure, and concerns regarding the plausibility of the estimates from this age-structure. Udjo (2014: 569) suggests that "…there is a bulge in the 15-29 age group possibly due to downward age shifting of older persons. For planning purposes, these anomalies were "corrected" through smoothing". Smoothing the age structure of population corrects for uneven and unusual age distribution that is caused by misreporting of age. The resulting age structure from Udjo, show a reduction in the bulge observed in ages 20 – 34. Udjo concludes that "It would appear from this that the seemingly age errors in the 2011 census age-sex distributions were largely in the age groups 20-34"(Udjo, 2014a). The discussion of the age structure will then consider the unsmoothed and smoothed age structure.

The highlighted components of each pyramid in the Figure show the size of the youth population between ages 15-34. The main observation from the population pyramids is the emergence of a youth bulge, which commenced in 2001 from a cohort of 0-14 in 1996 and births during the intercensal period. The percentage of the youth population as a component of the total South Africa population grew from to 36.6 in 1996; 36.9 in 2001; 37.6 in 2011 and then declined to 36.2% in 2016. The actual intercensal rate of growth of the youthful is further explored in Table 1.

The age-structure of 2016 show a 4% reversal of the increase in the size of the youth population in 2016. The main outcome of demographic transition that result to the demographic dividend is that "larger share of the population becomes concentrated in the highly productive working ages" (United Nations Population Fund, 2002: 40). The South Africa's age structure from the three population censuses (shown in Figure 1) suggests that the window of youth bulge, which is a pre-condition for a dividend, commenced in 2001; reached its peak around 2011; and commenced a decline around 2026, when this age group will be in older ages. The decline in the percentage of youth population as a component of the total South Africa's population does not mark the end of a dividend period. Rather it allows for an estimation of the possible end-date of the youth bulge and therefore in large increase in the older population. This period is likely to between 15 to 20 years from 2017.

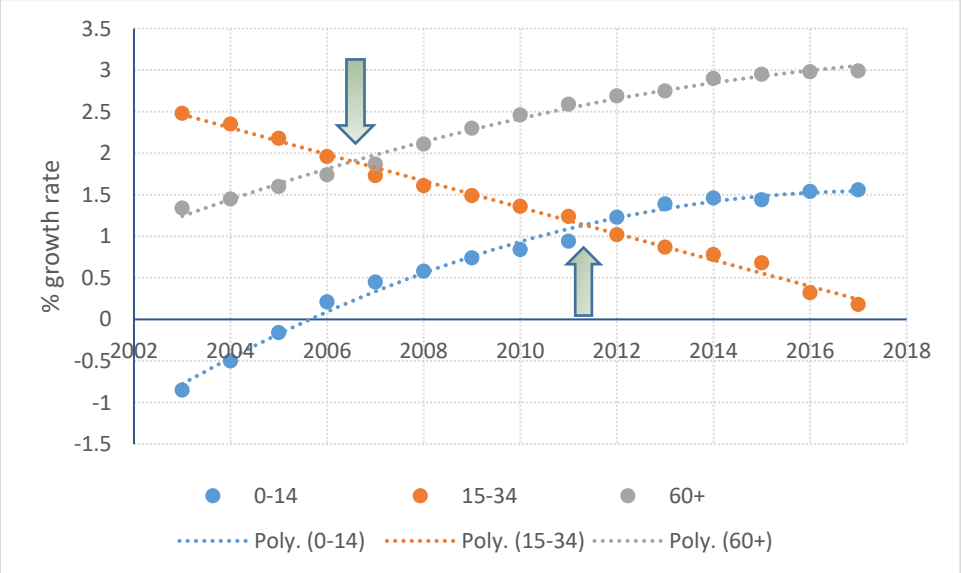
Figure 2: Age structure of South Africa population by province



Source: Own computation from population censuses 1994, 2001 and 2011

Figure 2 presents provincial age structure in 1996, 2001 and 2011 as published by population censuses ((StatsSA, 1998, StatsSA, 2003, StatsSA, 2012). A closer look at the youth population reveals that provinces do not have homogenous age pattern and the growth in youth population is not comparable across provinces. Firstly, as expected, Gauteng (27%) had the largest growth in youth population between 2001 and 2011. The province is followed by Western Cape (21%), Mpumalanga (25%) and Northern Cape (28%) all having over 20% growth in youth populations between 2001 and 2011. The provinces with smallest growth were KwaZulu-Natal (12%), Limpopo (6%) and Eastern Cape (4%). Interestingly, Free State and North West both had 6% declines in youth population between the two censuses. Secondly, the majority of the growth in youth population for Gauteng and Western Cape is concentrated in the ages between 25-34 years. Suggesting that this could be attributable to labour migration, whereas the growth in Mpumalanga and Northern Cape is evenly distributed across all youth ages, suggestion a combination of both migration and natural increase. Provinces with lower and negative growth show a pattern where the majority of growth is concentrated in younger youth ages. This suggests that the majority of the growth can be attributable to past fertility.

Figure 3: Annual growth rate (in percentages) by age-groups in SA



Source: 2017 Mid-year estimates (StatsSA, 2017b)

Figure 3 shows annual growth rate of population in South Africa from 2002 to 2017, including those for youth. The rates were estimated from mid-year population estimates, produced annually by Statistics South Africa. These estimates are based on a demographic modelling that estimate the size of the population based on the previous population census and estimates of annual demographic events., and therefore need to be read with caution. The trend used second order polynomial to fit the points, as it provided the best fit. The different demographic patterns experienced by age-groups in South Africa is evident from the figure. There is an increase in the growth rates for children and elderly South Africans, and an opposite trend for youth population. The points where the growth rates cross over suggests age structure transition that deviates from the structure observed in the period before that. For instance, the cross-over between youth

growth rate and elderly rate suggests that a significant growth in the elderly population relative to youth population is likely to be observed from about 15-20 years, after the effect of population momentum has wears off. In essence, this suggests that from 2006 until 2036, South Africa should expect to have a larger youth population (youth bulge), which will result in a larger 35-64 population after this period.

The Figure suggests that between 2002 and 2006, youth population was growing at an annual rate of over 2%. There has been a constant decline in the growth rate that can directly be linked to mortality and fertility decline. This decline is inversely related to the growth of the youth population in actual sizes, which is observed both in Figures 1 and 2, and associated with previously higher levels of fertility.

Table 1: Intercensal growth rate of youth population

	1996 - 2001		2001 - 2011		2011 - 2016	
	% growth	Cohort Δ	% growth	Cohort Δ	% growth	Cohort Δ
15-19	19.2%	1.4%	0.4%	-0.1%	2.0%	2.1%
20-24	7.8%	0.5%	25.2%	0.8%	-1.3%	1.2%
25-29	13.9%	-0.2%	28.6%	1.6%	4.4%	-0.4%
30-35	8.7%	-0.7%	20.6%	0.2%	10.6%	-2.6%

Source: Own estimation

Table 1 presents intecensal growth rate and percentage growth of the youth population between the three censuses. The last two columns shows the growth rate between the population census of 2011 and CS2016. These rates are estimated to check cohort growth in population between two census counts, which may also be used to check for data inconsistency. Cohort decline in size between two census years can only be a result of mortality and out-migration of the members of the cohort. Inversely an increase would be caused by in-migration of members between censuses. The observation from the table confirms findings from Figure 1 in that both the absolute growth of youth population occurred between 2001 and 2011, which proceeded in 2016.

Table 2: Sex ratio of South Africa youth - 2016

	15-19	20-24	25-29	30-34
Population group				
African	99,9	100,3	101,9	95,8
Coloured	101,1	100,8	100,1	95,0
Indian	101,8	104,4	110,8	115,7
White	103,0	103,1	102,6	99,1
Province				
Western Cape	99,2	102,0	101,8	100,5
Eastern Cape	101,8	98,7	99,4	89,3
Northern Cape	104,3	109,5	107,8	101,6
Free State	100,3	104,9	101,9	946,9
Kwazulu-Natal	100,5	97,1	97,2	90,9

North West	103,8	108,1	111,1	102,3
Gauteng	93,9	98,2	105,5	104,5
Mpumalanga	100,8	102,4	106,1	99,8
Limpopo	104,8	103,7	96,2	84,6
South Africa				

Source: Own estimation from CS 2016

The sex ratios in Table 2 show the number of males per 100 females in each sub-population. In a population not affected by higher mortality and migration in youthful years, sex ratios are expected to show a slightly larger number of females per 100 males at each age group. There is clear indication of a sampling issue for the Indian population in CS2016. The sex ration of 25-34 years old shows a large excess of males compared to females. Equally, this observation was made for the age group 30-34 in Free State province, where the estimated sex ratio clearly show defected data. Despite these two anomalies, the sex ratio for other categories shown in Table 2 are within an expected range. There are more women than men in SA as a whole except among age-groups with high migration. This is shown more clearly when looking at Gauteng and Western Cape, provinces with high migration. In these two provinces, there are more women compared to males in the younger school-going ages of 15-19, which changes from age 20 onwards, where a larger number of males are observed compared to women.

Youth demographic events

Components of population change such as fertility, mortality and migration are crucial in determining readiness of youth to contribute to the economy of the country. As indicated above, early childbearing for youth competes with investments in education, which in turn limits the ability to secure better employment opportunities for youth – particularly women. High levels of morbidity and mortality have a similar effect of inhibiting full youth potential. This section will explore youth fertility, morbidity and mortality. Demographic data on fertility – particularly in developing countries – is often collected from women or reproductive ages between the ages of 15-49, and has provided invaluable information (International-Statistical-Review, 1973). Fertility estimates presented here will therefore focus only on women.

Youth fertility

Fertility indicators are often used to understand the level of childbearing in the country. Demographers have long linked fertility with development indicators (Lesthaeghe, 1985). In fact, level of development is known to precede fertility declines, and hence explains why more developed geographic spaces tend to have lower levels of fertility. Gribble and Bremner (2012: 1) argues that "fertility must decline substantially for countries to attain the demographic dividend". This has been supported by studies that explore conditions for reaping the dividend (Mason, 2003). Factors that support this statement argue that fertility limits the ability to invest in human development and thus hamper economic potential, especially for women.

Table 3: Youth female fertility indicators

	15-19	20-24	25-29	30-34
Percent ever given birth	11.54%	45.49%	65.85%	75.54%
Mean total children ever born	0.13	0.60	1.13	1.62
Percentage who have given birth in the last year	4.80%	10.07%	9.965	8.89%
Fertility indicators for never married youth				
Percent ever given birth	10.52	41.76	61.69	71.03
Mean total children ever born	0.11	0.53	0.99	1.40
Percentage who have given birth in the last year	4.37	8.84	8.02	7.06

Source: Own estimation from CS 2016

As expected, there is an increase in fertility measures by age. The older the youth, the larger the chance that they have ever given birth and the larger the total number of children ever born. The percentages of youth who gave birth in the year preceding the survey (2015) are presented in Table 3 as indicators of recent fertility. As expected based on the general pattern of fertility, youth between ages 20 and 24 had the largest percentage who gave birth in 2015. What is of note is long-term fertility of teenage youth and in the recent past. About 11.54% (an estimated 294,085) of teenage youth (age 15-19) have ever given birth, and close to five percent gave birth to their first or subsequent child in 2015, which is an estimated 122,371 females. The average number of children ever born is 0.13.

The bottom part of Table 3 shows youth female fertility indicators for never married youth. This was estimated to further observed the fertility indicators for never married women. The observation from Table 3 confirms that the majority of youth fertility occurs out of wedlock. Concern for non-marital childbearing in population stems from the effect that it has on the future trajectory of unwedded mother and that of their children. Timing of life events has an impact on the future trajectory of the persons affected by that event. When very young women become pregnant and subsequently have a birth, the consequences are worst. Adolescent mothers are more likely to drop out of school, less likely to be married and tend to depend on their parents for supporting and raising the child. The negative impacts associated with having a non-marital birth are not limited only to adolescent women. Recent demographic research that looks at the impact of decreasing age at marriage and marriage rates have pointed out that "premarital fertility is an inevitable trade-off for all the benefits of delayed marriage" (Cohen, 2004):3). Studies among adolescent mothers and their later lifetime trajectories document that pregnancy increases the likelihood of dropping school due to child-care demands. This persists even in societies that have made attempts to encourage pregnant girls to continue school attendance or return to school after childbirth. However (Kaufman, 1998) found that in South Africa this is hardly practical due to lack of alternative childcare support.

Table 4 shows youth fertility indicators by province of residence. Early childbearing (teenagers) is more prevalent in Northern Cape, Eastern Cape, KwaZulu-Natal and Mpumalanga. As a result, the average number of children born by teenagers in these provinces is higher compare to the other five provinces. Western Cape and Gauteng have the lowest levels of teenage childbearing, compared to other provinces. The variation between the highest and lowest teenage childbearing is wide. There is a 31% and 42% difference between the province with the highest and lowest teenage children ever born and average number of children born by teenagers, respectively. This

shows that provinces with higher teenage childbearing are at higher danger of not realising the gains of larger youth population due to higher burden of fertility.

Table 4: Youth fertility indicators by province

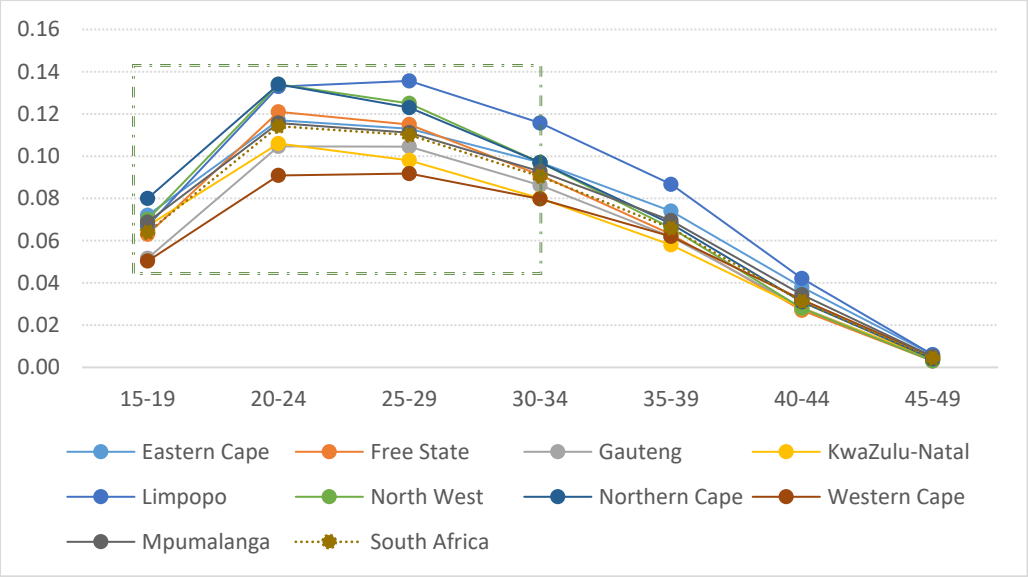
	15-19	20-24	25-29	30-34
Percentage who have ever given birth				
Western Cape	3.70	8.68	9.67	8.94
Eastern Cape	5.80	11.55	10.68	9.42
Northern Cape	6.25	13.64	12.49	10.68
Free State	4.45	10.37	10.13	9.02
Kwazulu-Natal	5.41	9.65	8.62	7.35
North West	5.10	11.36	11.75	10.19
Gauteng	3.41	8.47	9.51	8.57
Mpumalanga	5.15	10.4	9.12	8.38
Limpopo	4.94	11.88	12.11	11.03
Percentage of who gave birth in the last year				
	15-19	**20-24**	**25-29**	**30-34**
Western Cape	9.60	39.74	61.96	73.70
Eastern Cape	14.18	49.26	68.43	77.57
Northern Cape	14.00	57.45	78.35	86.18
Free State	10.26	47.22	72.71	82.12
Kwazulu-Natal	12.62	45.76	62.34	70.14
North West	11.83	51.33	73.78	82.32
Gauteng	8.09	38.28	60.98	72.84
Mpumalanga	12.70	49.05	66.89	75.80
Limpopo	12.23	51.81	73.53	81.89
Mean number of children ever born				
	15-19	**20-24**	**25-29**	**30-34**
Western Cape	0.10	0.50	1.01	1.47
Eastern Cape	0.15	0.66	1.20	1.66
Northern Cape	0.15	0.76	1.37	1.88
Free State	0.11	0.61	1.22	1.69
Kwazulu-Natal	0.14	0.61	1.09	1.47
North West	0.13	0.68	1.29	1.79
Gauteng	0.09	0.49	0.99	1.45
Mpumalanga	0.14	0.66	1.15	1.61
Limpopo	0.13	0.68	1.28	1.84

Source: Own estimation from CS 2016

The overall level of youth fertility by province presented in Table 4 suggests that Northern Cape, Limpopo, North West and Eastern Cape have the highest levels of fertility with 1.04; 0.90; 0.97 and 0.91 average children ever born across all youth ages, respectively. Western Cape had lowest average children born by youth of 0.77. Udjo's summary fertility estimates from the 2011

population census concluded that Limpopo had the highest level of fertility and Western Cape had the lowest (Udjo, 2014b).

Figure 4: Age-specific fertility rates by province

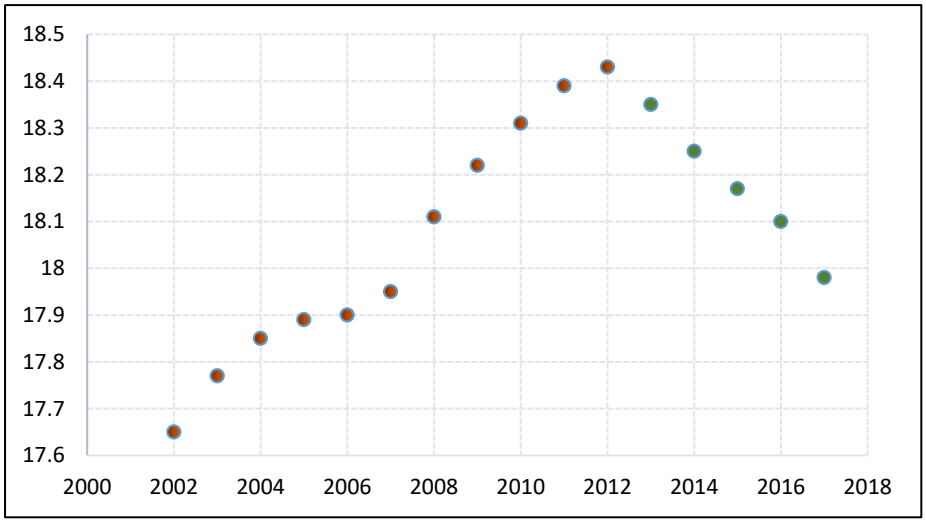


Source: Own estimation from CS 2016

Figure 4 outlines the age distribution of fertility by women of reproductive age groups. The distribution typically shows higher fertility between the ages 20 to 20, which is expected given that these women often at the beginning of their reproduction. There are clear differentials in teenage childbearing by province, with Northern Cape showing the highest teenage childbearing, also confirmed in Table 4. The Western Cape and Gauteng have lowest teenage childbearing.

Youth health and mortality

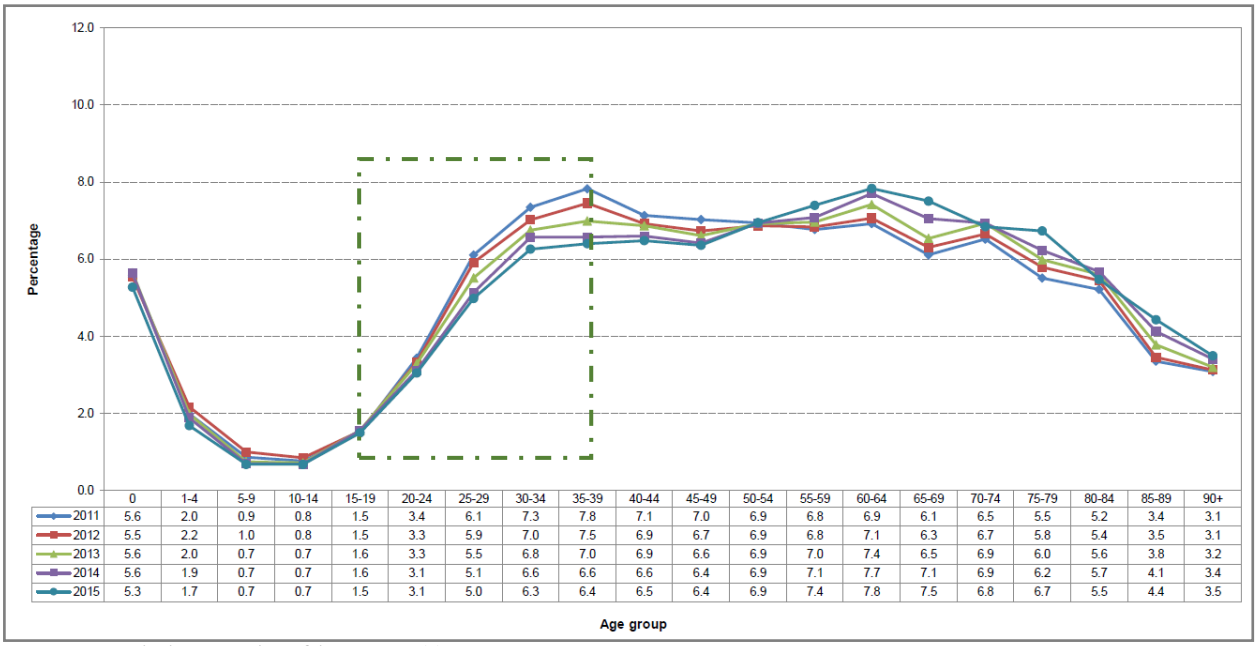
Figure 5: HIV prevalence of youth 15-35 years old



Source: Statistics South Africa, 2017(b)

South Africa had the largest number of new HIV infections of 59,000 for youth (defined as 15-24 years of age) in 2015 according to World Population Data Sheet published by Population Reference Bureau (2017a). The report also estimated that the percentage of youth living with HIV/AIDS was 10% for females and 4% for males. This suggests that the burden of disease reflected in HIV/AIDS morbidity and subsequent mortality (as represented in Figure 5) is very high among South Africa's youth. Figure 5 was created using information extracted from the Statistics South Africa (2017(b) mid-year estimates. The figure shows prevalence of HIV/AIDS among South Africa youth over-time. The Figure indicates a well documented increase in prevalence of HIV/AIDS between during the decade of 2000 and 2010. This decade show a steep increase in prevalence, which was driven by high and increasing incidence of HIV/AIDS and increasing uptake of anti-retroviral treatments, both of which resulted in an increase in the number of HIV/AIDS positive population, especially in reproductive ages. A positive change is observed post 2012, which suggests a continuous reversal of the prevalence pattern in the preceding decade.

Figure 6: Percentage distribution of deaths by age and year of death

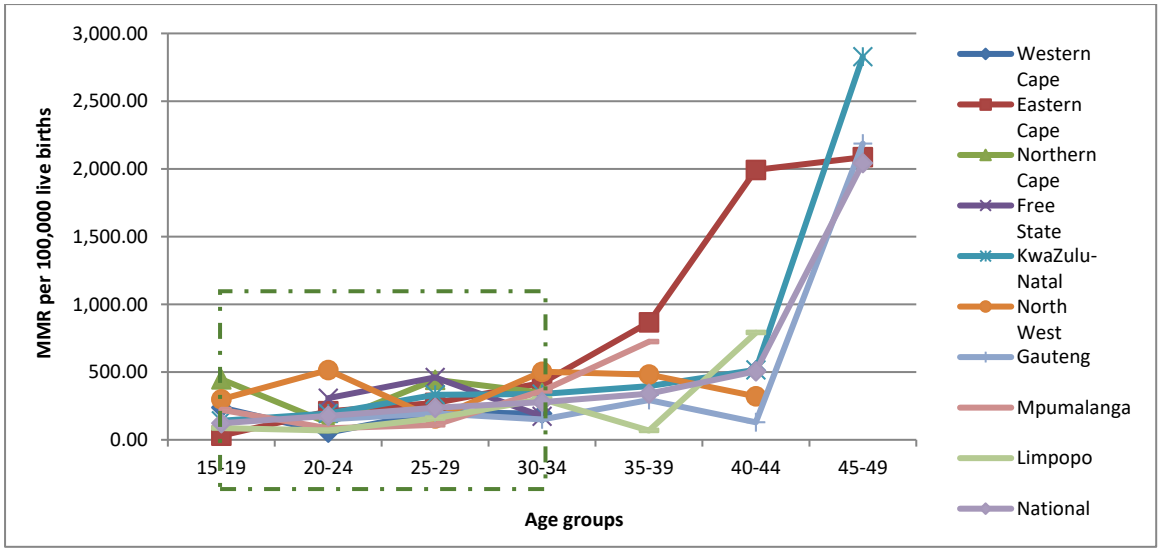


	0	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	85-89	90+
2011	5.6	2.0	0.9	0.8	1.5	3.4	6.1	7.3	7.8	7.1	7.0	6.9	6.8	6.9	6.1	6.5	5.5	5.2	3.4	3.1
2012	5.5	2.2	1.0	0.8	1.5	3.3	5.9	7.0	7.5	6.9	6.7	6.9	6.8	7.1	6.3	6.7	5.8	5.4	3.5	3.1
2013	5.6	2.0	0.7	0.7	1.6	3.3	5.5	6.8	7.0	6.9	6.6	6.9	7.0	7.4	6.5	6.9	6.0	5.6	3.8	3.2
2014	5.6	1.9	0.7	0.7	1.6	3.1	5.1	6.6	6.6	6.6	6.4	6.9	7.1	7.7	7.1	6.9	6.2	5.7	4.1	3.4
2015	5.3	1.7	0.7	0.7	1.5	3.1	5.0	6.3	6.4	6.5	6.4	6.9	7.4	7.8	7.5	6.8	6.7	5.5	4.4	3.5

Source: Statistics South Africa, 2017(a)

Figure 6 shows percentage distribution of deaths by age and year of death in South Africa. These are official figures published by (StatsSA, 2017a),that are estimated from vital registration of deaths. Two key observations can be made from the figure. Firstly, the age pattern of mortality in youthful years show an increase in mortality from age 15 until age 39. The number of deaths occurring to youth in South Africa is higher than observed in any other population. HIV/AIDS epidemic accounts for the majority of the increase in deaths during this age group. Secondly, an annual decline in the level of mortality is observed. The figure shows a decline in percentage of deaths attributable to youth at each year, and this pattern is observed for other ages as well – though not consistent. Thirdly, annual reduction in mortality during youthful years is more prominent during the latter years of the youth bracket. There is very little annual change in mortality between age 15 – 24. There is a slightly visible difference in the decline after age 24, which becomes more pronounced between age 30 – 39. This is in line with prevalence of HIV/AIDS, and HIV/AIDS deaths by age.

Figure 7: Maternal mortality ratio from Community Survey of 2016



Source: Own estimation from CS2016

Highlighted in Figure 7 are maternal deaths for women between ages 15 and 34 by province. There were a total of 2,537 maternal deaths from the CS2016, 71% of which occurred during the ages of 15-34. The capability of South Africa's data to provide reliable estimates of maternal mortality has been questioned These figures are in line with observations in Figure 6, where among youth, higher mortality was observed for older age youth. The figure show a variation in maternal deaths by age. Maternal deaths are higher in Northern Cape for age group 15-19, followed by North West.

Implications of demographic events on demographic dividend

The age structure of South Africa's population as shown in this chapter shed light on the timing of the start of the youth bulge, and its possible duration. If the age structure of South Africa presented by population censuses and the CS2016 are a reliable account of the prevailing population age structure, the youth bulge commenced in 2006 and is likely to beginning a decline around 2036 (Udjo, 2014a). This then marks the period of a possible dividend, based purely on demographic terms. It is not surprising that the Western Cape and Gauteng (migration destinations) show a clear youth bulge in 2011 census, which is expected to last longer due to migration patterns.

A country's ability to harness the demographic dividend lies on the level of preparedness of youth to contribute to the economy of the country. This readiness is measured by health care, family planning, education and supportive economic policies (Bloom et al., 2003). This paper explored demographic components associated with youth development. The level of youth fertility in South Africa is concerning. Early childbearing has been a concern in South Africa for decades (Preson-Whyte et al., 1990). Recent studies have confirmed that levels of teenage childbearing are high, and may result to negative development outcomes emanating from its effect on educational attainment, access to family planning and health care services for young persons (Panday et al., 2009, Willan, 2013). The chapter reiterates this concern based on the level of youth childbearing reported based on CS2016 – especially for teenagers. Policies and programs need to pay special focus on preventing early childbearing (through supporting family planning programs) and providing support to young parents to minimise negative impact of early childbearing.

A policy brief by the Population reference Bureau (2017) indicated that "when SRHR (Sexual and Reproductive Health and Rights) for adolescents and youth are protected, young people can better access the information and services they need to stay healthy, avoid unwanted pregnancy and childbearing, prevent and treat sexually transmitted infections including HIV, complete more years of school, and obtain the skills necessary to be economically productive" (Population-Reference-Bureau, 2017). The level of youth HIV/AIDS is high in South Africa. A positive observation from mid-year population estimates show that estimated prevalence of youth HIV/AIDS has been declining (StatsSA, 2017b). This trajectory of improved health and mortality decline has to be maintained in order to ensure healthy youth population, which is a critical component of the demographic dividend.

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