

## **CENSUS 2011**

A profile of education enrolment, attainment and progression in  
South Africa

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## List of acronyms and abbreviations

Acronym/abbreviation	Description
ABET	Adult Basic Education and Training
ASER	Age-specific Enrolment Rate
DBE	Department of Basic Education
ICT	Information and Communication Technology
FET	Further Education and Training
GER	Gross Enrolment Rate
GPI	Gender Parity Index
MDG	Millennium Development Goals
NTC	National Technical Certificate
NQF	National Qualifications Framework
NER	Net Enrolment Rate
NSFAS	National Student Financial Aid Scheme
SDG	Sustainable Development Goals
TBVC	Transkei, Bophuthatswana, Venda and Ciskei
TVET	Technical Vocational Education and Training

## Preface

Evidence-based decision-making has become an indispensable practice universally because of its role in ensuring efficient management of population, economic and social affairs. It is in this regard that Statistics South Africa (Stats SA) is mandated to provide the state and other stakeholders with official statistics on the demographic, economic and social situation of the country to support planning, monitoring and evaluation of the implementation of programmes and other initiatives. In fulfilling its mandate prescribed in the Statistics Act (Act No. 6 of 1999), Stats SA has conducted three censuses (1996, 2001, and 2011) and various household-based surveys. Censuses remain one of the key data sources that provide government planners, policymakers and administrators with information on which to base their social and economic development plans and programmes at all levels of geography. Census information is also used in monitoring of national priorities and their achievement, and the universally adopted Millennium Development Goals (MDGs). This demand for evidence-based policymaking continues to create new pressures for the organisation to go beyond statistical releases that profile basic information, and to embark on the production of in-depth analytical reports that reveal unique challenges and opportunities that the citizenry have at all levels of geography. This analytical work also enhances intellectual debates, which are critical for policy review and interventions.

The above process is aimed at enabling the organisation to respond to and support evidence-based policymaking adequately, build analytical capacity and identify emerging population, socio-economic and social issues that require attention in terms of policy formulation and research. The monograph series represents the first phase of detailed analytical reports that are theme-based, addressing topics of education, disability, ageing, nuptiality, population structure, migration, fertility, mortality, income and inequalities as well as labour.

This monograph provides an in-depth analysis of enrolment, educational attainment, progression, and education differentials. Trend analysis is provided firstly through the three democratic census points and secondly through the use of time-plotting events. The latter technique generates historical events by utilising age proportions at one data collection point, which in this case is Census 2011. Efforts are also made to provide the strength of association between educational attainment and employment status, proportions of unemployed persons with some qualification. In addition, the relationship between grouped field of education and labour force outcomes as well as median monthly income is examined.

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## Executive Summary

The rise in educational enrolment and attainment for all and sundry since the onset of democracy in the case of South Africa has been confirmed in this monograph. In addition, preference of private educational institutions over public ones for attendance between 2001 and 2011 was also confirmed, more pronounced for the Gauteng province. The concern about this finding is that affordability seems to be at play against declarations of enhancement of equity by educational policies implemented in the democratic era. Another concern is the association between higher growth of net enrolment rates between 1996 and 2011 being associated with whites relative to other population groups. However, put into context, the finding suggests that white learners are more likely to enrol and attend classes in line with the stipulated official ages than other population groups. In contrast, black Africans are associated with increased enrolment rates for younger and older ages relative to the stipulated official ones as well as repetition of grades. Provincial profiles revealed that Limpopo and Mpumalanga had higher such growth relative to other provinces, confirming strides made by the implementation of programmes such as no-fee schools, feeding schemes and provision of transport for rural schools.

Gender gaps on educational accessibility were found to be nearly closed for both the Foundation and Intermediate phases across population groups and provinces. Male learner dominance was linked to both the Foundation and Intermediate phases, while female learner dominance was linked to both the Senior and FET phases. This finding shines some light on which gender tends to leave school before attaining grade 12. This is worrisome, given the drastic decline of elementary employment opportunities in the country over time.

Gaps on attainment of grade 12 and a bachelor's degree between men and women were closed in the 2000s. However, this is not the case for those among the four population groups. Educational attainment by population group revealed that the gap between whites and Asians was somewhat closed in the 1990s, while that between whites and both coloureds and black Africans is still a long way to go before it can be narrowed. Notwithstanding, continuous curriculum changes may hamper any achievement made in this regard, given the apparent lack of teacher development structures at present.

Progression ratios by institution showed that private schools are doing better than public schools for grade 12 and above. The concern about this finding is that the masses of low socio-economic students attend public, rather than private schools. Evidence of increasing numbers that enrol in private institutes against decreasing ones for public institutes was revealed. However, high tutoring fees are linked to private institutions that only a few can afford, and consequently many are drowning in loans every year.

In addition, progression ratios were found to be higher for persons born outside the country compared to South African born. This finding provides evidence for the higher proportions of persons born outside the country been employed. In addition, persons who were born outside South Africa are more likely to fall under Engineering as well as Natural and mathematical sciences, followed by Business management. In the case of those born in the country, Education, Engineering sciences and Business management are prioritised. While Education as a field of study is the main choice for black Africans and coloureds, Engineering is the main choice for whites, whereas Business management and Health sciences are main choices for Asians.

In contrast to enrolment, education attainment and progression, where gaps between men and women have been closed, the same cannot be said of accessing employment opportunities, where women are still lagging behind. Completion of NTCIII within the newly defined Technical Vocational Education and Training (TVET) stream (formally known as Further Education and Training) may provide a better opportunity for accessing employment earlier than those who completed secondary education (ranked at the same level with NTCIII). However, such jobs are more likely to be related to men than to women. That notwithstanding, the lowly ranked NTCIII level may be pushing capable students away towards the academic stream that was found to be faring more poorly with progression than the TVET stream in the education progression chapter. The under-rating of the TVET may be the reason why it is unpopular for many students in favour of higher-learning institutions and the newly expanding private colleges that are out of reach for many families due to high tuition fees. Although completion of a bachelor's degree is restricted by field of education and other related obstacles, the few persons who persevere to the end are more likely to be employed across sex barriers.



Age proportions of unemployed persons reveal a somewhat compatible pattern between those who completed NTCIII and those who completed a bachelor's degree. In addition, almost similar age patterns of unemployed persons by field of post-school education suggest a dire need for job creation strategies. Youth unemployment is somewhat linked to qualifications lower than a bachelor's degree.

Monthly salary for employed persons aged 25 to 59 increases with age regardless of post-school field of education. Notwithstanding, higher monthly salaries are linked to Business management, Engineering and Health sciences. Persons who fall under the scarce skills of Natural and mathematical sciences were found to receive lower monthly salaries relative to their abundant fields counterparts in the South African context. One reason for this may be the link of Natural and mathematical sciences to education, where a substantial number of mathematicians may have been hired as educators. Interestingly, the field of Education is linked to lowest monthly salaries as well as associated with black Africans, coloureds, and women.

## **CHAPTER 1: INTRODUCTION**

The link between educational attainment and labour force outcomes and salary payoffs makes it important to monitor socio-economic development outcomes in any country. It is these two aforementioned correlates to educational attainment that connect it with both internal and international migration. Several African countries increased their education budgets amidst the soaring level of HIV/AIDS in the 2000s for the purpose of increasing enrolment rates, not solely to report to the Millennium Development Goals (MDGs) but also to improve manpower skills in line with technological innovations. In the case of South Africa, schools are usually allocated much less when the lion's share annual education budget is compiled. However, poor schools have been receiving greater allocations of non-personnel funding in compensation for not charging fees since 2007 (Government Programmes and Policies, 2015). This has been expanded to include the poorest 60% from the initial 40% of schools countrywide.

### **1.1 Background to the South Africa education system**

Historically, education was central to segregation policies, and featured prominently in the struggle efforts for liberation. Non-white education was characterised by a shortage of schools, lack of qualified teachers, high pupil-teacher ratios and an inferior curriculum. While several policies were conceptualised and implemented over time, there are those that improved the education system during apartheid. The Manpower Training Act of 1981, mandated by the Wiehahn Commission was followed by that of 1990, which heralded a new period regarding training and apprentice training. Upon the dawn of democracy, a new direction towards outcomes-based education was taken. Despite such good education policies, institutions of training were still run by population group. It remains to be seen whether there has been a positive impact of such legislations through the application of time plotting events analysis for educational attainment and progression in this monograph.

One important policy followed by government was that of spending nine times more on each white learner than it spent on a black African learner residing in the TBVC states, formerly known as Transkei, Bophuthatswana, Venda and Ciskei. Such policies had a greater negative impact on enrolment rates, attainment and progression for previously disadvantaged population groups.

Since 1994, the Department of Education has introduced three national curriculum reform initiatives focused on schools with a view to purge the apartheid curriculum (Jansen, 1997). Curriculum 2005 was implemented around 1997 and has contributed significantly to the deconstruction of the Apartheid Education Curriculum (Mahomed, 2004).

Challenges faced with the introduction of Curriculum 2005 include teacher development (given the type of educators produced for dominant black African schools during the apartheid years), learner performance (given the non-practicability of mother tongue instruction) and identifying suitable assessment models for the implied outcomes-based education (Mahomed, 2004). One contested issue about Curriculum 2005 was its linkage to the National Qualification Framework (NQF) which introduced a complexity and narrowness of vision that was absent in previous approaches to education (Samson and Vally, 1996; Chisholm and Fuller, 1996). Alongside comprehensive criticism of the aforementioned curriculum, education researchers argued that there was a need for learner-centredness to break down decades of learning habits that had been formed to create uncritical and unthinking persons. In addition, counterviews from teacher unions believed that there was a need to introduce new knowledge and concepts to poorly qualified teachers who found themselves in large under-resourced classes.

## **1.2 Impact of education intervention policies in the education system over time**

The achievement of equity in educational access was probably one of the main goals of transforming it in line with section 29(1) (a) of the South African Constitution, which states that “everyone has the right to a basic education, including adult education”. This was done by dealing with the school infrastructure backlogs and improving educator supply and demand countrywide. The effects of such efforts are visible in the universal achievement of primary education enrolment provided in the 2014 MDG report for South Africa. Beyond this, researchers have anecdotally cited the near universal enrolment of compulsory education (grade 9) in the case of South Africa.

Despite the implementation of policies that enhance equality in accessing education, Dias & Posel (2007) note the persisting gaps in the educational achievement payoffs. The rise in educational attainment for all and sundry since the onset of democracy has been acknowledged. Educational attainment has particularly risen greatly for black Africans relative to other population groups

nationally. These views remain to be corroborated in the analysis of educational attainment over time, which is provided in Chapter 4 in this report.

The South African Qualifications Authority Act of 1995 mandated the development of a National Qualifications Framework (NQF) whose responsibility it is to formulate policies and standards. To date, there are many versions of the NQF levels; however, there are fewer persons who clearly understand the procedure to be followed in deciding a particular level. Some levels are clearly under-rated, especially for those who have international qualifications; such practices are a cause for concern given that South Africa's ranking for mathematics and science education quality was lowest (TIMMS, 2011) compared to other African countries.

The Skills Development Act of 1998 provided the basis for the development of the financial aid scheme for impoverished South Africans. A significant number of persons who completed their tertiary education were provided loans from such funds. Even so, there are still challenges faced by the education system as well as students within the democratic era. Challenges still faced include the exodus of qualified educators from the teaching profession, the mismatch between labour market demand and post-school training, the quality of basic education, and the ever-rising costs of higher learning institutes. It remains to be seen whether the analysis in this report may provide some clues as to whether the education system is managing to deal with the variety of bottlenecks discussed. For the purpose of this monograph, progression ratios, where the proportion of persons completing the next level after having completed the previous one over time, will be used to assess the capability of the education system. Notwithstanding, the quality of assessment instruments are beyond the scope of this monograph.

### **1.3 Objectives of the monograph**

The main objective of the monograph is to provide insights on education enrolments, attainment and progression.

Specific objectives include:

- To provide an analysis of educational institution attendance and enrolment rates
- To examine educational attainment by selected differentials

- To discuss progression ratios by selected education differentials
- To assess the strength of the relationship between educational attainment and both employment and income.

The scope of the monograph covers national and provincial levels, while districts are provided for in the appendices. Municipal profiles will be provided on request by users.

#### **1.4 Data and methods**

The time series data for censuses 1996, 2001 and 2011 are used for the trend analysis of educational institution attendance and enrolment in Chapter 2. Such data were compiled after the release of Census 2011 data in October 2012 for the purpose of aligning the previous censuses' data with the 2011 demarcation. Henceforth, only Census 2011 data are utilised to compute time plots for both educational attainment and progression ratios. The strength of relationship analysis between educational attainment and other selected differentials used Census 2011 data as well.

### 1.4.1 Education questions asked in the Census 2011 questionnaire

<p><b>P-17 SCHOOL ATTENDANCE</b></p> <p><b>Does (name) presently attend an educational institution?</b></p> <p>1 = Yes 2 = No 3 = Do not know</p> <p><i>Mark the appropriate circle with an X.</i></p> <p><i>Attendance includes all part-time and full-time studies, whether in person or as a distance learner.</i></p>	<p><b>P-18 EDUCATIONAL INSTITUTION</b></p> <p><b>Which of the following educational institutions does (name) attend?</b></p> <p>1 = Pre-school (including day care, crèche, Grade R and Pre-Grade R in an ECD centre) 2 = Ordinary school (including Grade R learners who attend a formal school, Grade 1-12 learners &amp; learners in special class) 3 = Special school 4 = Further Education and Training College (FET) 5 = Other College 6 = Higher Educational Institution (University/University of Technology) 7 = Adult Basic Education and Training Centre (ABET Centre) 8 = Literacy classes (e.g. Kha Ri Gude, SANLI) 9 = Home based education/home schooling</p> <p><i>Write the appropriate code in the box.</i></p>	<p><b>P-19 PUBLIC OR PRIVATE</b></p> <p><b>Is the institution that (name) is attending public or private?</b></p> <p>1 = Public (Government) 2 = Private (Independent) 3 = Do not know</p> <p><i>Mark the appropriate circle with an X.</i></p>
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<p><b>P-20 LEVEL OF EDUCATION</b></p> <p><b>What is the highest level of education that (name) has completed?</b></p> <table style="width: 100%;"> <tr> <td style="vertical-align: top;"> 98 = No schooling 00 = Grade 0 01 = Grade 1/Sub A 02 = Grade 2/Sub B 03 = Grade 3/Std 1/ABET 1 (Kha Ri Gude, SANLI) 04 = Grade 4/Std 2 05 = Grade 5/Std 3 / ABET 2 06 = Grade 6/Std 4 07 = Grade 7/Std 5 / ABET 3 <i>If 98 or 00-07, Go to P-22</i> 08 = Grade 8/Std 6 / Form 1 09 = Grade 9/Std 7/Form 2/ ABET 4 10 = Grade 10/Std 8/Form 3 11 = Grade 11/Std 9/Form 4 12 = Grade 12/Std 10 /Form 5 <i>If 08-12, Go to P-23</i> 13 = NTC I/N1/ NIC/(V) Level 2 14 = NTC II/N2/ NIC/(V) Level 3  <i>READ OUT: Diploma or certificate should have been at least six months study duration full-time (or equivalent).</i> </td> <td style="vertical-align: top;"> 15 = NTC III/N3/ NIC/(V) Level 4 16 = N4/NTC 4 17 = N5/NTC 5 18 = N6/NTC 6 19 = Certificate with less than Grade 12 /Std 10 20 = Diploma with less than Grade 12/Std 10 21 = Certificate with Grade 12/Std 10 22 = Diploma with Grade 12/Std 10 23 = Higher Diploma 24 = Post Higher Diploma (Masters, Doctoral Diploma) 25 = Bachelors degree 26 = Bachelors degree and Post graduate diploma 27 = Honours degree 28 = Higher degree (Masters/PhD) 29 = Other  <i>If 13-28, Go to P-21</i> <i>If 29, Go to P-22</i>  <i>Write the appropriate code in the boxes.</i> </td> </tr> </table>	98 = No schooling 00 = Grade 0 01 = Grade 1/Sub A 02 = Grade 2/Sub B 03 = Grade 3/Std 1/ABET 1 (Kha Ri Gude, SANLI) 04 = Grade 4/Std 2 05 = Grade 5/Std 3 / ABET 2 06 = Grade 6/Std 4 07 = Grade 7/Std 5 / ABET 3 <i>If 98 or 00-07, Go to P-22</i> 08 = Grade 8/Std 6 / Form 1 09 = Grade 9/Std 7/Form 2/ ABET 4 10 = Grade 10/Std 8/Form 3 11 = Grade 11/Std 9/Form 4 12 = Grade 12/Std 10 /Form 5 <i>If 08-12, Go to P-23</i> 13 = NTC I/N1/ NIC/(V) Level 2 14 = NTC II/N2/ NIC/(V) Level 3  <i>READ OUT: Diploma or certificate should have been at least six months study duration full-time (or equivalent).</i>	15 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or Development 08 = Engineering or Engineering Technology 09 = Health Care or Health Sciences 10 = Home Economics 11 = Industrial Arts, Traders or Technology 12 = Languages, Linguistics or Literature 13 = Law 14 = Libraries or Museums 15 = Life Sciences or Physical Sciences 16 = Mathematical Sciences 17 = Military Sciences 18 = Philosophy, Religion or Theology 19 = Physical Education or Leisure 20 = Psychology 21 = Public Administration or Social Services 22 = Social Sciences or Social Studies 23 = Other </td> <td style="vertical-align: top;"> <b>FURTHER EDUCATION AND TRAINING (FET)</b> 24 = Management 25 = Marketing 26 = Information Technology and Computer Science 27 = Finance, Economics and Accounting 28 = Office Administration 29 = Electrical Infrastructure Construction 30 = Civil Engineering and Building Construction 31 = Engineering 32 = Primary Agriculture 33 = Hospitality 34 = Tourism 35 = Safety in society 36 = Mechatronics 37 = Education and Development 38 = Other  <i>Write the appropriate code in the boxes.</i> </td> </tr> </table>	<b>UNIVERSITY/TECHNIKON/COLLEGE</b> 01 = Agriculture or Renewable Natural Resources 02 = Architecture or Environmental Design 03 = Arts, Visual or Performing 04 = Business, Commerce or Management Sciences 05 = Communication 06 = Computer Sciences 07 = Education, Training or Development 08 = Engineering or Engineering Technology 09 = Health Care or Health Sciences 10 = Home Economics 11 = Industrial Arts, Traders or Technology 12 = Languages, Linguistics or Literature 13 = Law 14 = Libraries or Museums 15 = Life Sciences or Physical Sciences 16 = Mathematical Sciences 17 = Military Sciences 18 = Philosophy, Religion or Theology 19 = Physical Education or Leisure 20 = Psychology 21 = Public Administration or Social Services 22 = Social Sciences or Social Studies 23 = Other	<b>FURTHER EDUCATION AND TRAINING (FET)</b> 24 = Management 25 = Marketing 26 = Information Technology and Computer Science 27 = Finance, Economics and Accounting 28 = Office Administration 29 = Electrical Infrastructure Construction 30 = Civil Engineering and Building Construction 31 = Engineering 32 = Primary Agriculture 33 = Hospitality 34 = Tourism 35 = Safety in society 36 = Mechatronics 37 = Education and Development 38 = Other  <i>Write the appropriate code in the boxes.</i>
98 = No schooling 00 = Grade 0 01 = Grade 1/Sub A 02 = Grade 2/Sub B 03 = Grade 3/Std 1/ABET 1 (Kha Ri Gude, SANLI) 04 = Grade 4/Std 2 05 = Grade 5/Std 3 / ABET 2 06 = Grade 6/Std 4 07 = Grade 7/Std 5 / ABET 3 <i>If 98 or 00-07, Go to P-22</i> 08 = Grade 8/Std 6 / Form 1 09 = Grade 9/Std 7/Form 2/ ABET 4 10 = Grade 10/Std 8/Form 3 11 = Grade 11/Std 9/Form 4 12 = Grade 12/Std 10 /Form 5 <i>If 08-12, Go to P-23</i> 13 = NTC I/N1/ NIC/(V) Level 2 14 = NTC II/N2/ NIC/(V) Level 3  <i>READ OUT: Diploma or certificate should have been at least six months study duration full-time (or equivalent).</i>	15 = NTC III/N3/ NIC/(V) Level 4 16 = N4/NTC 4 17 = N5/NTC 5 18 = N6/NTC 6 19 = Certificate with less than Grade 12 /Std 10 20 = Diploma with less than Grade 12/Std 10 21 = Certificate with Grade 12/Std 10 22 = Diploma with Grade 12/Std 10 23 = Higher Diploma 24 = Post Higher Diploma (Masters, Doctoral Diploma) 25 = Bachelors degree 26 = Bachelors degree and Post graduate diploma 27 = Honours degree 28 = Higher degree (Masters/PhD) 29 = Other  <i>If 13-28, Go to P-21</i> <i>If 29, Go to P-22</i>  <i>Write the appropriate code in the boxes.</i>				
<b>UNIVERSITY/TECHNIKON/COLLEGE</b> 01 = Agriculture or Renewable Natural Resources 02 = Architecture or Environmental Design 03 = Arts, Visual or Performing 04 = Business, Commerce or Management Sciences 05 = Communication 06 = Computer Sciences 07 = Education, Training or Development 08 = Engineering or Engineering Technology 09 = Health Care or Health Sciences 10 = Home Economics 11 = Industrial Arts, Traders or Technology 12 = Languages, Linguistics or Literature 13 = Law 14 = Libraries or Museums 15 = Life Sciences or Physical Sciences 16 = Mathematical Sciences 17 = Military Sciences 18 = Philosophy, Religion or Theology 19 = Physical Education or Leisure 20 = Psychology 21 = Public Administration or Social Services 22 = Social Sciences or Social Studies 23 = Other	<b>FURTHER EDUCATION AND TRAINING (FET)</b> 24 = Management 25 = Marketing 26 = Information Technology and Computer Science 27 = Finance, Economics and Accounting 28 = Office Administration 29 = Electrical Infrastructure Construction 30 = Civil Engineering and Building Construction 31 = Engineering 32 = Primary Agriculture 33 = Hospitality 34 = Tourism 35 = Safety in society 36 = Mechatronics 37 = Education and Development 38 = Other  <i>Write the appropriate code in the boxes.</i>				

The household questionnaire comprised three questionnaires, of which Questionnaire A was the only questionnaire that covered information on education at person and household levels. The section covering education had six questions; however, for the purpose of this report, the question on literacy has been excluded. These questions were asked only of persons aged 5 years and older, enquiring whether the person was currently attending an educational institution or not. Persons engaged in part-time and full-time studies as well as distance learners were included. Institutional population and transients were not asked. The question on type of institution was meant to be asked of those who reported as still attending an institution; however, data reveal that even those who were not attending anymore did provide responses. Similarly, with regard to the question concerning the institution of attendance, the “type of institution” question was asked of those who reported that they were still attending school. However, data show that even those who were no longer attending any institution did respond to this question.

In contrast to the aforementioned questions, “highest level of education completed” was asked of all persons aged five years and above. Notwithstanding, institutionalised populations and transients were excluded. South Africa has twelve years of formal schooling, starting at grade 1. In some schools, there is also a prior Grade 0 or Grade R (reception) level, which is the last year of pre-school. Before the introduction of the new grades, there were various systems for referring to the different school years. One system referred to the current grades 1 and 2 as sub-standards A and B, and grades 3–12 as standards 1 to 10. Another system referred to the last five years as Forms 1–5. In all systems, the twelfth year was usually referred to as the matriculation year. In most systems, the seventh year indicated the end of primary schooling. NTC stands for National Technical Certificate, and the three levels are roughly equivalent to Grades 10, 11 and 12. Enumerators were instructed that only diplomas and certificates that has at least six months’ duration of full-time study should be accepted.

Diplomas and post-school certificates are sometimes available to those who have not completed Grade 12 (matric). Post-school education thus does not necessarily imply completion of all twelve years of formal schooling. In many publications, “post-school without Grade 12” is usually grouped together with “post-school with matric”. Lastly, “field of education” was asked of those persons who had indicated that their level of education was post-school (codes 13–28). For persons with

more than one field of study, respondents were asked to indicate the field in which the person had the highest level of education. If there were several fields at the same level, the respondent was asked to choose the field that was most related to the person's current or previous work.

#### **1.4.2 Data deficiencies and methodological issues**

The Census 2011 education data quality was evaluated using data imputation rates during data editing and comparing the consistency with the General Household Survey (GHS) 2011 data. The results yielded by the aforementioned two processes showed that there were no significant differences between the two data sources as far as key indicators in the education sector were concerned. In addition, the trend analysis of enrolment and attainment for the three censuses was found to be consistent with expectations.

Data were edited in accordance with pre-defined edit specifications. The purpose of editing was to make processed data complete and internally consistent, while making a minimum number of changes. Two types of edits were used: logical edits and hot-deck imputation. Logical edits were used to check for internal consistency, and hot-deck imputation was used to generate values for cases whereby the former could not resolve the inconsistency problem, and for those cases that supplied no response. School attendance, public or private institution, field of education, and literacy variables were not hot-decked. Hot-deck imputation was used for educational institution and level of education. The imputation rates, particularly those pertaining to hot-deck imputation, provide an indication of the data quality. Data collected in the General Household Survey (GHS) conducted in 2011 were used to validate some of the indicators.

Beyond direct and indirect assessment, an extra 71 people responded on educational institution, whereas they responded negatively to whether a person was attending any institution, signifying a lack of adherence to skip rules. Also, there may have been persons who reported their presently grade of attendance as already completed, which may bias proportions of persons who have attained educational levels as well as those who completed the next level after having completed the previous one.



#### **1.4.2.1 Attendance in an educational institution**

The question enquired whether the person was currently attending an educational institution or not. About 92% of the data were not imputed, while about 8% were logically imputed for consistency. Overall, of the 45 293 424 participants interviewed, approximately 15 356 737 reported that they were attending some educational institution, while about 5% did not provide any response. It should be noted though, that the larger part of respondents responded negatively.

#### **1.4.2.2 Educational institution**

About 94% of the data on educational institution were not imputed. Only 4% of the data were hot-decked. Notwithstanding, the majority of respondents reported that they were attending an ordinary school (83%), while higher educational institutions had fewer numbers of learners (7%). Attendance for ABET combined with Literacy Classes and TVET was found to be at about 3% each. Notwithstanding, a comparison of proportions of persons attending TVET colleges between Census 2011 and the 2011 General Household Survey (GHS) shows a higher proportion for Census 2011. It should be remembered though that sample and non-sampling errors pertain in the case of GHS data. Even so, the extensive interviewing on most of the themes is acknowledged.

#### **1.4.2.3 Highest level**

Most of the data (about 92%) were not imputed, while about 6% were hot-decked. A comparison between Census 2011 and GHS 2011 regarding the proportion of persons who completed certain levels of education shows compatibility.

#### **1.4.2.4 Post-school field of education**

About 97% of the data on field of education were not imputed, while about 3% were logically edited for improving consistencies in the data. About 16% of respondents did not provide an answer.

## **1.5 An overview of the chapters**

This chapter sets the scene by providing background information, objectives, data and an overview of chapters. Enrolment, attendance and other related education indicators are provided in Chapter 2. Educational attainment by selected differentials is discussed in Chapter 3. Following educational attainment, Chapter 4 examines progression ratios by selected differentials. The relationship analysis between educational attainment, post-school field of education and employment as well as age proportions of unemployed persons by educational attainment and field of post-school education is elaborated on in Chapter 5. Lastly, a synthesis of findings, conclusions and recommendations are discussed in Chapter 6.

## **CHAPTER 2: ENROLMENT RATES AND OTHER EDUCATION INDICATORS**

### **2.1 Introduction**

The importance of measuring enrolment rates and other related education indicators lies in their connection with the envisaged goal of universal primary education in 2015, as depicted in the 2014 South African Millennium Development Goals (MDGs) report (Statistics South Africa, 2014). Variations by population group and province are expected, as is the case with all phenomena in the case of South Africa. Beyond this, the usual cycle of apartheid and post-apartheid social restructuring involves education, as it does with other socio-economic agenda in the country. It is the same variations that influenced the development of several legislations and intervention programmes for the purpose of enhancing equity in educational access upon the dawn of democracy.

This chapter seeks to provide school attendance, net and gross enrolment rate measures as well as gender parity indices for persons aged 5–24 years. This section provides an introductory note while the next section provides an analysis of attendance by selected differentials. Section 3 examines net enrolment rates by selected differentials. Gross enrolment rates are discussed in Section 4. Lastly, gender parity indices are elaborated on in Section 5. All these analyses attempt to provide evidence of achievements and challenges still faced in attendance and enrolment.

### **2.2 Attendance at an educational institution**

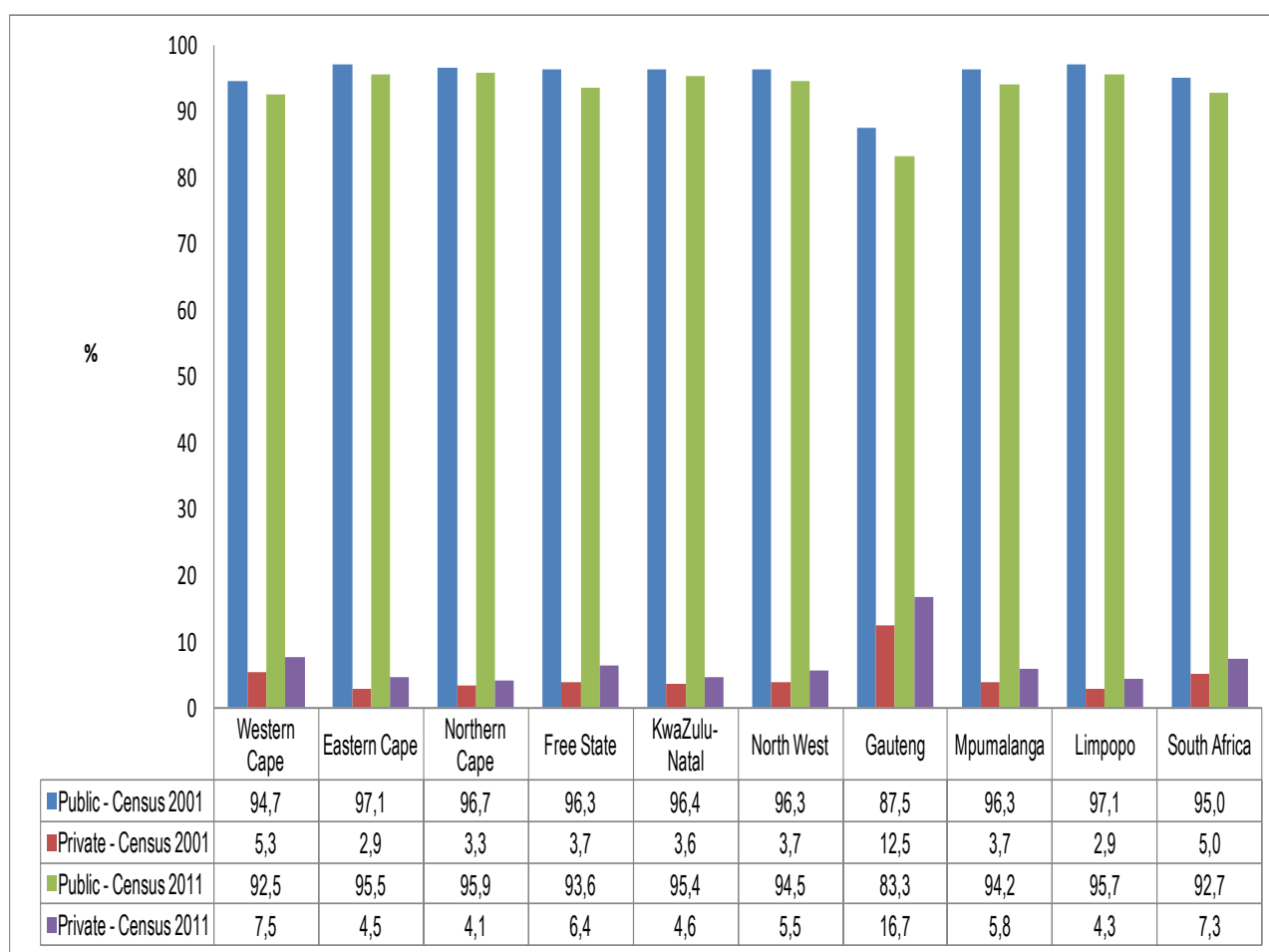
All three census questionnaires contained a question on whether persons aged five and above were attending some educational institution. Following that question, the type of institution of attendance was asked. For the purpose of this monograph, attendance and enrolments focus on learners aged 5–24 years. Unfortunately, response categories for the follow-up question provided broad levels of education such as “ordinary school” for grades R to 12 or “higher learning institution” for tertiary education. In contrast, all levels or grades were provided for in the attainment question, which was asked of all learners aged five and above. As a result, the highest level of education completed asked of all persons aged five and above was used, considering the

next level as the one presently being attended. In addition, because the question on type of institution was not asked during Census 1996, data from censuses 2001 and 2011 are provided.

### 2.2.1 Attendance at an educational institution by province for persons aged 5–24 years

It remains to be seen whether the preference of private institutions over public ones does matter in educational attainment and progression in the next two chapters, namely Chapter 3 and 4 respectively. Figure 2.1 presents a comparison of Percentages of persons who reported that they were attending some educational institution, by type of institution (private or public) in 2001 and 2011.

Figure 2.1: Percentage of learners aged 5–24 years still attending an educational institution



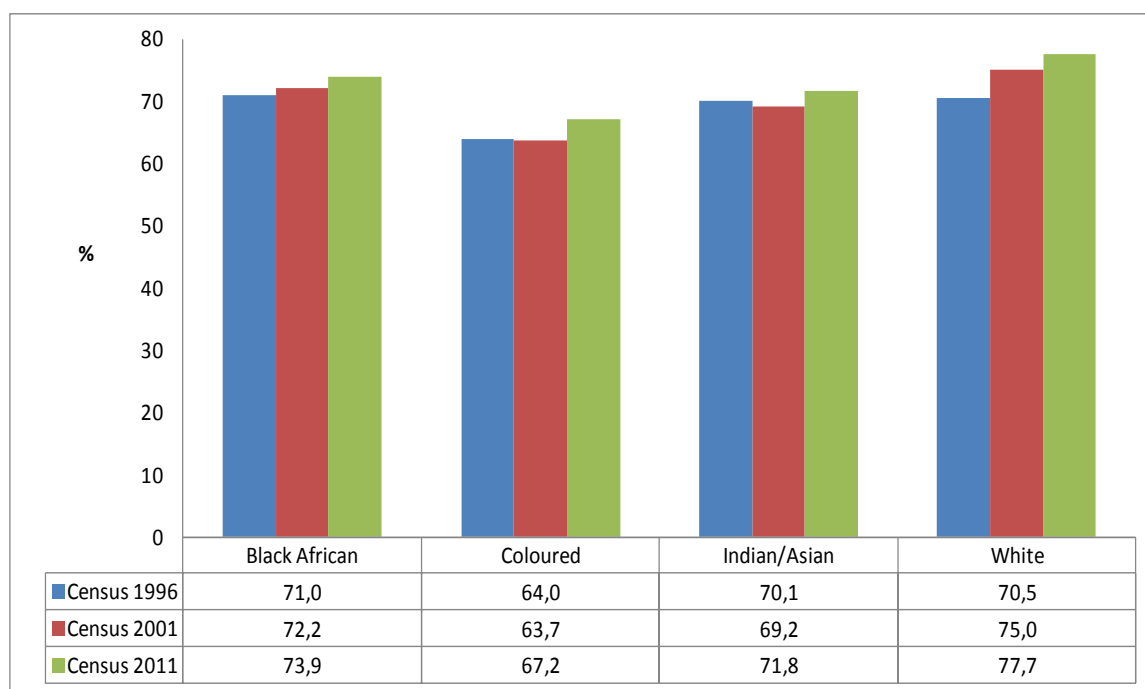
Source: Statistics South Africa

Evidence of increased preference of private over public institutions is apparent for all provinces, although more pronounced for Gauteng. This finding suggests increased concerns over the quality

of basic education provided by public institutions of learning. This is so because a majority of learners whose ages are above the official 18 years for being in grade 12 are still attending their lower secondary education levels due to repetition. There are many reasons for Gauteng's noticeable prominence regarding the percentage of persons who reported that they were attending private institutions. These include abundant provision of and accessibility to such institutions, and being the economic hub of the country as well as being a preferred destination for immigrants. In addition, due to the aforementioned reasons, all population groups are represented in the total population of Gauteng.

The use of population group as a means of stratifying the population given the country's history has been accepted as the best measure of previous socio-economic deprivation (Dorrington, 2004). Besides, this classification is also used in censuses and death registration, though not in the registration of births. The four distinct population groups in the case of South Africa are black Africans, coloureds, Indians/Asians and whites. This study will retain the classification by population group where applicable. Figure 2.2 shows the percentage of persons who reported that they were attending some educational institution by census year and population group.

Figure 2.2: Proportions of persons aged 5–24 years attending an educational institution



Source: Statistics South Africa

### 2.2.2 Attendance at an educational institution by population group for learners aged 5–24

Proportions of persons attending some educational institution reflect an upward increase from 1996 to 2011 across all population groups, as shown in Figure 2.2. This finding is to be expected, and in line with several education policies implemented in the democratic era to enhance equal access for all, discussed in the introductory chapter. However, what is unexpected is the growth of about seven percentage points among the white population, which is viewed as the previously advantaged group relative to all other population groups. Nonetheless, an analysis of enrolment rates may shed some light on this issue.

### 2.3 Enrolment rates for the age group 5-24 years

Trend analysis of net enrolment rate (NER), gross enrolment rate (GER) as well as age-specific enrolment rate (ASER) is provided in this section for the purpose of providing insights into the extent of achieving the goal of universal access to education, as has been set during the early years of democratic South Africa. The net enrolment rate links the official age with a specific educational

level, for example, attending grade 0 or RR or R is associated with learners aged 5–6 years. In contrast to NER, GER takes into account the number of learners enrolled for a particular grade regardless of age. A GER of above 90% suggests being closer to achieving universal access for the official age group. In contrast to a GER of above 90%, that of above 100% reflects enrolment of under- and over-aged persons as per the official ages' yardstick. In the case of South Africa, GERs are expected to be over 100% due to the introduction of Adult Basic Education and Training (ABET) with the upon the dawn of democracy, and the propensity to repeat classes, although variation by province and population group is expected.

### 2.3.1 Net enrolment rates

The importance of computing net enrolment rates lies in their comparability with other countries when provided for the outgoing MDGs as well as the newly developed Sustainable Development Goals (SDGs). Analysis of NER is provided by census year and phase of education as stipulated by the Department of Basic Education (DBE). Selected differentials are used to enhance understanding of shortfalls. Table 2.1 presents the four phases of education in line with educational levels and official age of learner.

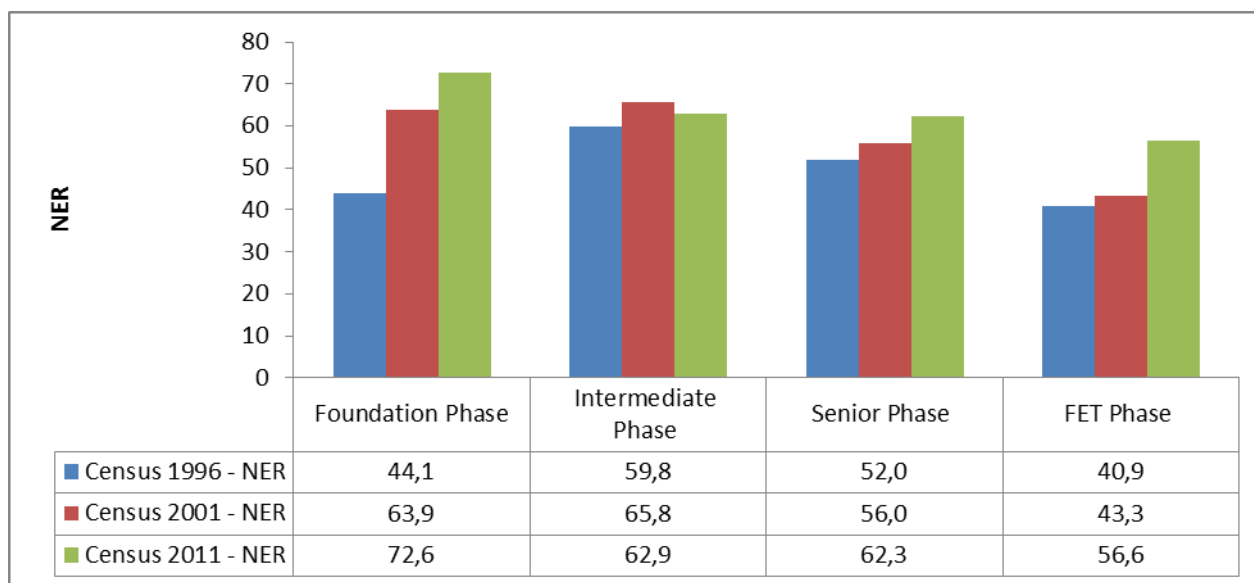
Table 2.1: Basic educational phases by level and age of learner

<b>Educational phase</b>	<b>Grade</b>	<b>Age of learner</b>
Foundation Phase	From grade R to grade 3	5–9 years
Intermediate Phase	From grade 4 to grade 6	10–12 years
Senior Phase	From grade 7 to grade 9	13–15 years
Further Education and Training (FET) Phase	From grade 10 to grade 12	16–18 years

Source: Department of Basic Education

Enrolment rates were derived from the assumption that the present grade is the next level of the completed one as reported during the three censuses undertaken in the democratic era. The reader should therefore examine the resulting enrolment rates with caution, because in instances where the reported completed grade was actually the present grade, the net enrolment rate may be slightly on the higher side, although such responses are expected to be few. Figure 2.3 shows national net enrolment rates by census year and educational phase.

Figure 2.3: NERs by census year and educational phase for learners aged 5–24 years



Source: Statistics South Africa

Overall, national net enrolment rates increased considerably between 1996 and 2011, as expected. In addition, a much higher percentage growth of about 29 percentage points is linked to the Foundation Phase, followed by the FET Phase with a growth rate of about 16 percentage points, as presented in Figure 2.3. This finding is welcome as it depicts an increase in persons enrolling for the FET Phase, although when unpacked, one may find that the increase is linked more to grade 10 than grades 11 and 12. This is so because higher drop-out rates are linked to both grades 10 and 11, but are more pronounced for grade 11, where struggling learners may be held back so they do not write the external grade 12 examination on which schools are ranked.

Figure 2.4.1 to Figure 2.4.4 present a comparison of net enrolment rates by census year and population group. The highest growth rate in percentage points between 1996 and 2011 is linked to the Foundation Phase, as can be expected. Research has shown that a solid foundation education boosts better educational outcomes at later phases. Adherence to the call for allowing younger children to participate in early learning is apparent for almost all population groups, although it is slightly lower for the coloured population. Whites are leading in this endeavour, followed by black Africans.



The FET is another important educational phase, as it is viewed as a passage from school to tertiary education. The highest percentage point growth (18,7) is associated with black Africans, followed by coloureds at 7,6 as shown in Figure 2.4.1 to Figure 2.4.4. This finding is welcome as it signifies the importance of intervention policies implemented in the democratic era. A significantly smaller proportion of Asians has enrolled for the FET Phase over the 15-year period. Reasons for this scenario are unclear, while data problems may not be ruled out either.

Figure 2.4.1: Net enrolment rates for black Africans aged 5–18 years

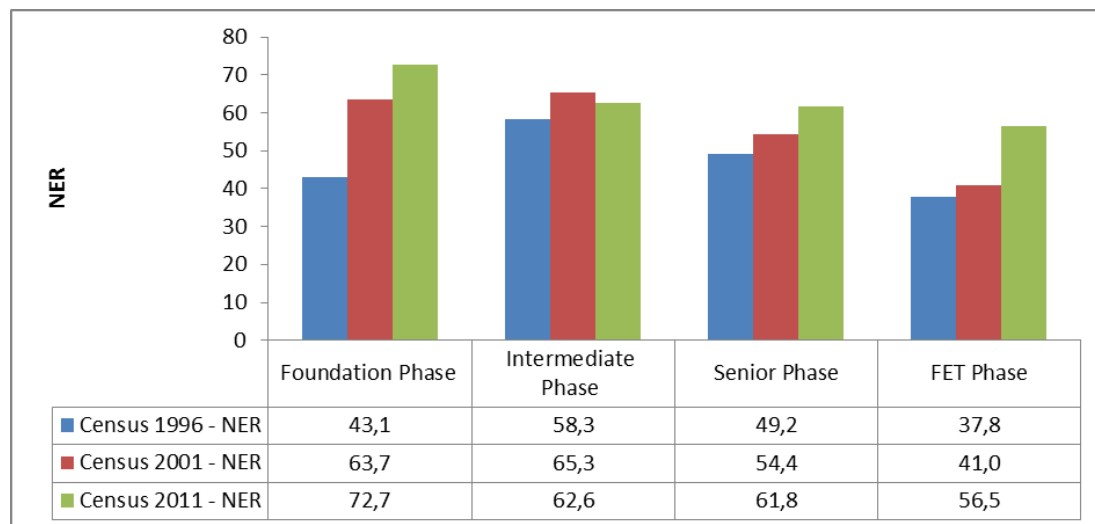
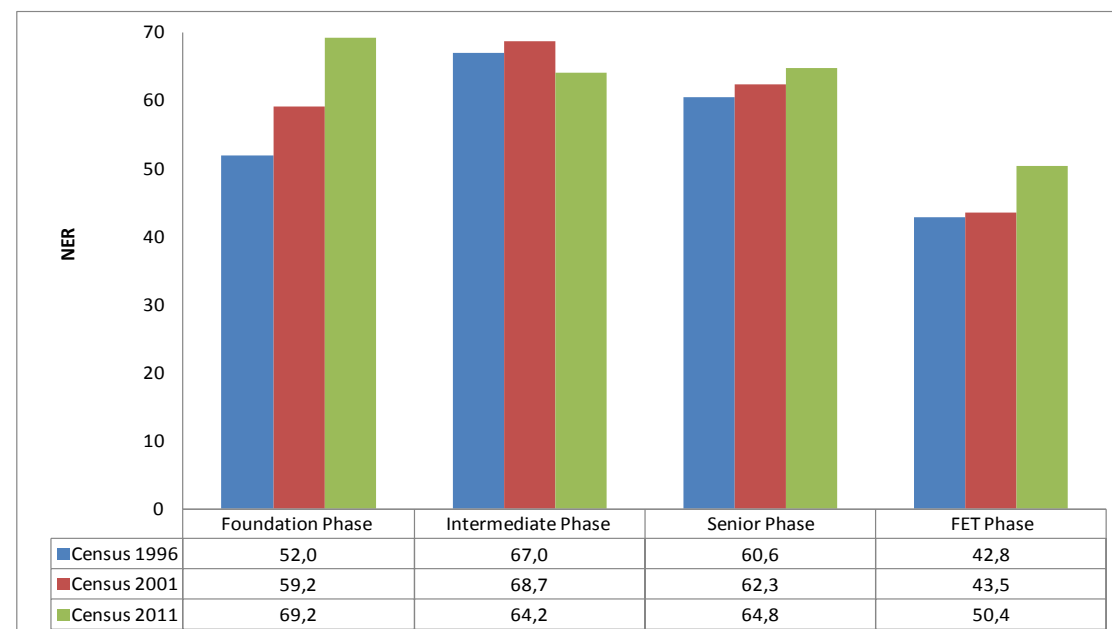
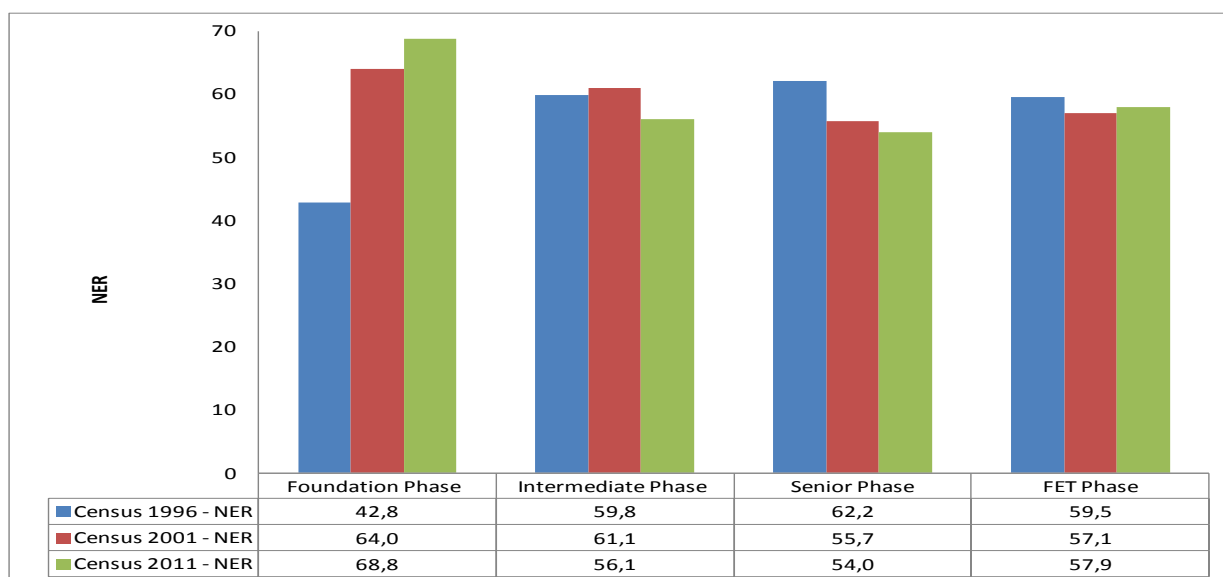


Figure 2.4.2: Net enrolment rates for coloureds aged 5–18 years



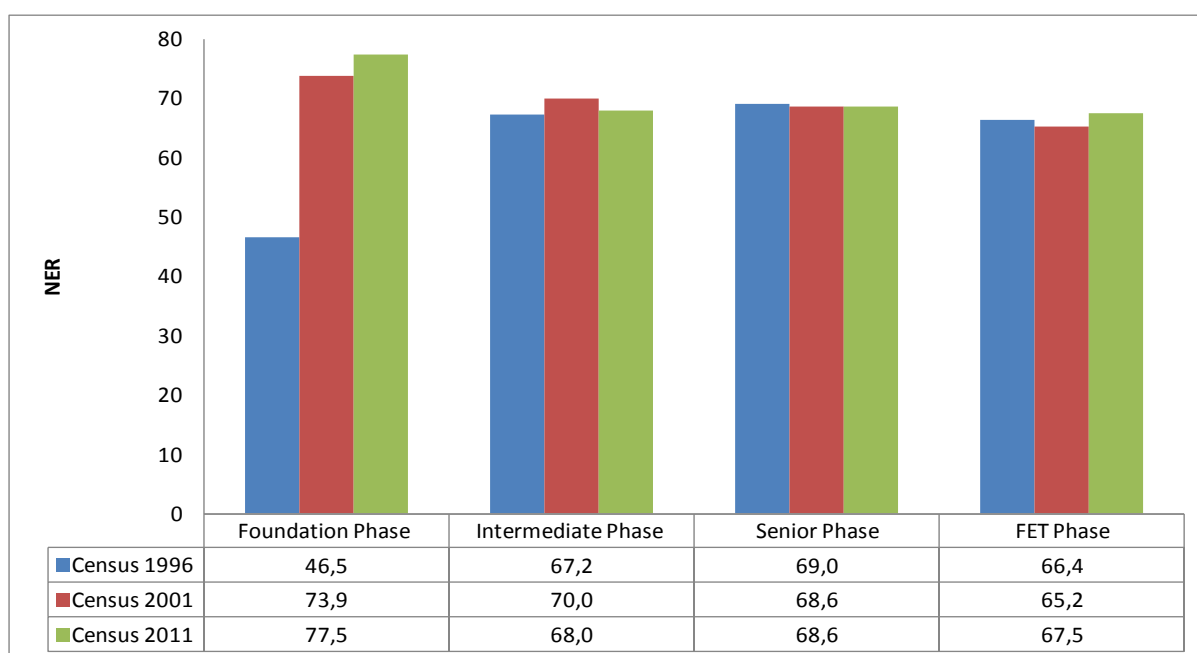
Source: Statistics South Africa

Figure 2.4.3: Net enrolment rates for Indians/Asians aged 5–18 years



Source: Statistics South Africa

Figure 2.4.4: Net enrolment rates for whites aged 5–18 years



Source: Statistics South Africa

A comparison of net enrolment rates by province is important, given the variation regarding economic development and other human network phenomena that may influence socio-economic development in the case of South Africa. Table 2.2 presents net enrolment rates by census year

and province. Higher growth of NERs in the 15-year period for the Foundation Phase is reflected for Limpopo and Mpumalanga. This finding is welcome, as both these provinces are linked to low socio-economic development as well as lack of job creation strategies. Put into context, both these aforementioned provinces increased enrolment of more children in line with the official ages for early childhood development (ECD). Lower growth of NERs is associated with both Western Cape and Free State. One reason for this finding is that both the aforementioned provinces show higher net enrolment rates for children in line with the official ages' yardstick back in 1996 relative to others. All in all, more children aged 5–9 years are attending some early learning classes over time across all provinces.

Similar to net enrolment rates by population group, fewer learners enrolling for the FET Phase across all provinces, as shown in Table 2.2. This finding is worrying since employment opportunities are scarce for persons who have achieved less than grade 12 in the case of South Africa. Even so, recent employment statistics reflect a decline in the percentage of employed persons who have completed some tertiary education. In addition, researches have anecdotally revealed that an increasing number of educated people are joining informal trade as a means for survival.

Nonetheless, percentage point growths between 1996 and 2011 are apparent across all provinces, with Free State recording the highest growth (in percentage points), followed by Limpopo, while Western Cape reflects the lowest growth. In essence, this finding translates into more learners being enrolled as per the official ages' yardstick than before in provinces that are not doing that well economically. Similarly to the growth of net enrolment rates for the Foundation Phase that for the FET Phase for Western Cape shows even lower growth. Reasons for the observation are unclear since Gauteng reflects an even higher net enrolment for the same phase back in 1996 than Western Cape. It would be interesting to analyse GERs against these findings, as this would shine some light on the extent of enrolling younger or older learners for certain educational phases.

Table 2.2: NERs for learners aged 5–18 years by province and census year

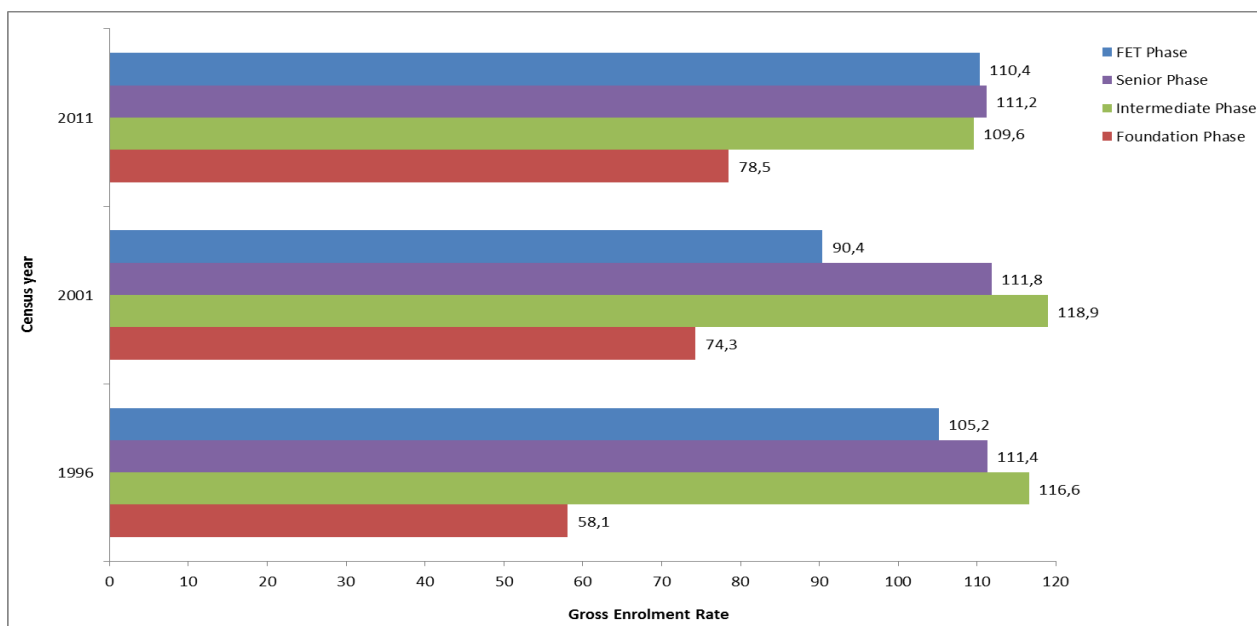
Province	Foundation Phase			Intermediate Phase			Senior Phase			FET Phase		
	1996	2001	2011	1996	2001	2011	1996	2001	2011	1996	2001	2011
Western Cape	51,2	62,4	71,7	67,8	69,5	65,2	62,4	63,0	65,2	47,3	46,9	53,1
Eastern Cape	48,0	69,3	77,3	54,4	61,2	64,9	43,7	47,7	58,3	31,8	35,7	49,4
Northern Cape	47,2	60,3	69,6	62,6	70,5	66,4	51,7	57,2	63,9	34,6	39,1	52,1
Free State	51,7	63,2	73,3	63,7	68,0	65,7	52,8	55,3	65,6	37,2	42,4	60,1
KwaZulu-Natal	42,5	59,2	68,7	57,5	63,3	58,2	50,0	55,2	57,6	39,4	42,9	54,4
North West	42,4	58,7	71,9	60,4	66,4	66,0	50,3	54,5	61,6	38,2	42,9	53,9
Gauteng	43,8	63,9	71,2	61,9	67,1	61,3	57,0	61,2	64,2	50,3	50,6	61,9
Mpumalanga	41,1	64,3	73,6	60,7	66,9	64,2	52,2	55,8	64,6	41,4	42,3	58,2
Limpopo	36,7	69,2	76,4	60,3	69,1	65,3	55,4	59,0	68,1	45,1	43,5	63,6
<b>South Africa</b>	<b>44,1</b>	<b>63,9</b>	<b>72,5</b>	<b>59,7</b>	<b>65,8</b>	<b>62,9</b>	<b>52,0</b>	<b>56,0</b>	<b>62,3</b>	<b>40,9</b>	<b>43,3</b>	<b>56,6</b>

Source: Statistics South Africa

### 2.3.2 Gross Enrolment Rate (GER)

This section provides an analysis of gross enrolment rates from 1996 to 2011 in relation to educational phases by selected differentials. The ideal situation should be GER outcomes, which are closer to NERs. The expectation in the case of South Africa would be narrowed variation among the four population groups owing to several intervention programmes implemented to remedy the past gaps. The interpretation of above 100% GER is that younger and older learners are enrolled in inappropriate classes as per the official age's yardstick. Repetition of grades is also implied. Figure 2.5 shows gross enrolment rates for learners aged 5–24 years.

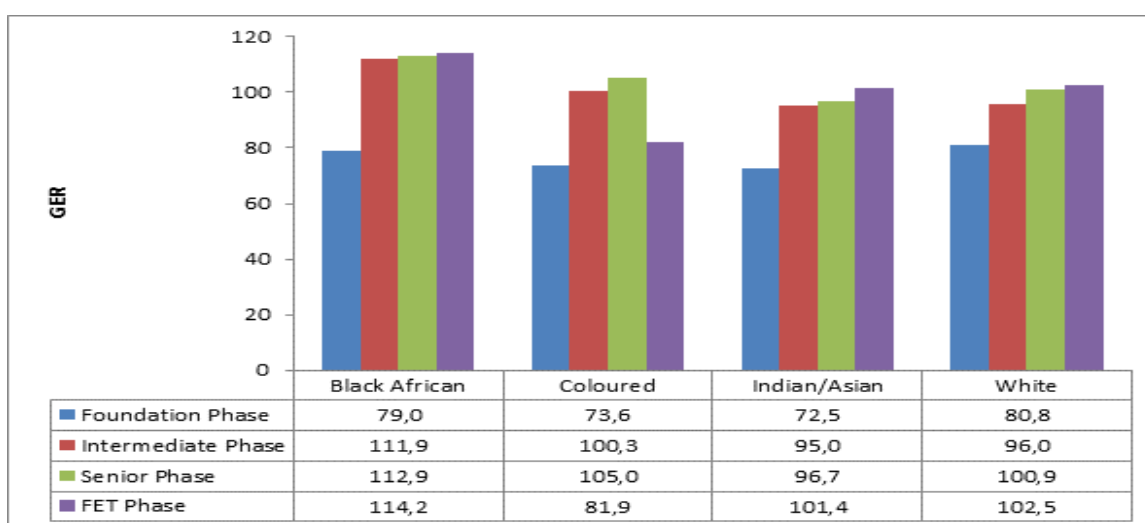
Figure 2.5: National GERs by census year and educational phase



Source: Statistics South Africa

Younger and older learners as per the official school ages are linked to all three phases, except the Foundation Phase across all population groups as shown in Figure 2.5. This scenario has implications for the 12-year period of basic education, where it is either increased or decreased. Fluctuating gross enrolment rates are linked to the FET Phase, with the plausible ones linked to Census 2001, data issues or reality? Gross enrolment rates by population group according to Census 2011 data are presented in Figure 2.6.

Figure 2.6: GERs by population group and educational phase, Census 2011



For all educational phases (except the Foundation Phase), gross enrolment rates for black Africans tend to be higher than those for other population groups. The scenario for coloureds is almost similar to that for black Africans, although to a lesser extent. Interestingly, all population groups (except the coloured population group) reflect GERs above 100% for the FET Phase, as presented in Figure 2.6. These findings suggest that younger and older ages as well as repetitions of grades are associated with black Africans, as can be expected. Table 2.3 presents GERs by census year and province.

Table 2.3: GERs by province and census year

Province	Foundation Phase			Intermediate Phase			Senior Phase			FET Phase		
	1996	2001	2011	1996	2001	2011	1996	2001	2011	1996	2001	2011
Western Cape	59,6	67,3	76,0	106,3	113,2	100,7	103,3	107,9	105,6	88,0	79,9	89,6
Eastern Cape	68,9	87,7	86,3	118,1	122,8	121,6	104,9	102,8	109,0	92,1	80,7	101,8
Northern Cape	61,8	68,3	74,5	114,4	118,7	110,8	99,5	107,7	106,6	72,4	73,5	91,8
Free State	67,6	74,0	78,2	126,8	122,2	111,4	123,3	117,1	112,5	106,1	93,6	111,0
KwaZulu-Natal	57,6	69,2	76,1	117,2	119,2	107,2	108,9	112,8	109,1	99,7	90,9	111,9
North West	56,5	68,4	78,0	121,8	117,9	112,7	108,9	107,8	108,2	101,6	90,2	102,3
Gauteng	53,3	70,6	74,7	111,9	114,1	102,6	109,9	114,7	109,9	118,3	100,3	113,4
Mpumalanga	54,3	75,2	79,5	122,5	119,3	111,5	119,3	114,8	116,2	116,5	94,0	114,7
Limpopo	47,7	78,2	81,3	114,2	121,3	113,1	123,2	119,0	121,8	126,9	95,2	132,7
<b>South Africa</b>	<b>58,5</b>	<b>74,3</b>	<b>78,5</b>	<b>116,6</b>	<b>118,9</b>	<b>109,6</b>	<b>111,4</b>	<b>111,8</b>	<b>111,2</b>	<b>105,2</b>	<b>90,4</b>	<b>110,4</b>

Source: Statistics South Africa

The GERs in Table 2.3 depicts an upward trend for the Foundation Phase between 1996 and 2011. Notwithstanding, such an increase is more pronounced for the 1996 to 2001 period relative to the 2001 to 2011 period. Provinces that reflect a much higher growth include Limpopo and Mpumalanga. This finding is welcome, given the confirmation of successful government intervention policies within the democratic era. One province that shows meagre growth is Free State. Reasons for this observation are unclear, although the population growth for age group 5–9 may be at play, since the percentage of repetitions are negligible at that phase. Scrutiny of the intercensal population growth rates for children aged 5–9 years between 1996 and 2011 reveals no growth at all for Free State, and even slight declines for both Eastern Cape and Limpopo. A rational explanation to this finding may be to link it with low survival rates due to the HIV/AIDS excess deaths that are associated with this province within that period.

Fewer learners enrolled for the FET Phase across all provinces, which warrant a cause for concern when given the decline of elementary job opportunities and an increased need for electronic, engineering and technical skills that are associated with post-school qualifications. Western Cape and Northern Cape reflect ideal GERs at around 90% as presented in Table 2.3. Interestingly, Gauteng reflects an unexpected substantial number of younger or older learners as well as repetitions for the FET Phase even when it was found to be leading in the proportion of learners attending private educational institutions, as discussed in the previous sub-section. Table 2.4 presents GERs for metropolitan cities by educational phase and census year.

Table 2.4: GERs by metropolitan status and educational phase

Metropolitan status	Foundation Phase			Intermediate Phase			Senior Phase			FET Phase		
	1996	2001	2011	1996	2001	2011	1996	2001	2011	1996	2001	2011
City of Cape Town	58,3	68,1	75,5	104,8	111,7	100,2	106,3	110,4	106,4	96,4	85,8	96,0
Buffalo City	66,7	85,2	82,7	113,8	113,0	105,9	124,5	118,3	111,7	118,4	104,8	117,4
Nelson Mandela Bay	64,8	75,0	78,4	112,0	111,5	105,6	114,4	113,2	105,1	111,5	92,3	101,2
Mangaung	67,5	75,7	77,3	129,2	125,3	110,6	117,9	120,1	112,1	107,7	96,1	109,9
eThekweni	54,9	68,0	71,4	112,7	110,6	97,9	109,8	110,1	102,6	108,3	93,0	107,3
Ekurhuleni City	52,0	70,5	75,2	111,5	114,5	102,8	111,5	115,1	110,1	119,5	100,8	113,9
City of Johannesburg	53,3	70,1	72,9	109,7	111,9	101,7	108,8	115,6	109,4	120,9	101,5	115,1
City of Tshwane	55,7	71,4	75,8	113,2	114,5	103,0	110,1	111,9	110,2	119,1	99,5	112,0
Non-metropolitan	58,5	75,6	77,3	118,5	121,3	113,1	111,5	111,3	112,7	102,5	88,1	111,3
<b>South Africa</b>	<b>58,1</b>	<b>74,3</b>	<b>78,5</b>	<b>116,6</b>	<b>118,9</b>	<b>109,6</b>	<b>111,4</b>	<b>111,8</b>	<b>111,2</b>	<b>105,2</b>	<b>90,4</b>	<b>110,4</b>

Source: Statistics South Africa

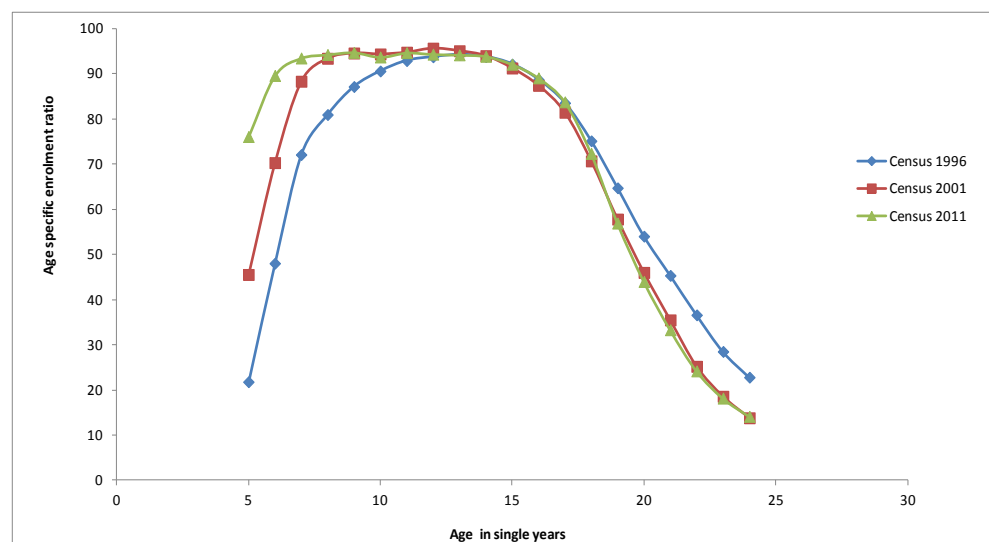
There is not much difference in the growth of GERs for the Foundation Phase between the present eight metros and non-metros from 1996 to 2011. This finding is welcome as it signifies achievement of equal access to education, regardless of affordability. A sense of an increase in the number of older children enrolled for early childhood learning across the country is being communicated. Overall, some slight declines from 1996 to 2011 are observable for educational phases beyond the Foundation Phase across all South African district municipalities. Such declines are welcome as they suggest that the number of learners who are too young or too old in a specific grade has been decreasing over time. On the part of the FET Phase, an ideal scenario is linked to Cape Town, where the GER has been slightly below 100% over time. Again, there are not

many differences between metros and non-metros. Fluctuations are also apparent in the GERs provided by census data.

### 2.3.3 Age-specific enrolment rates (ASERs)

As discussed in the introductory section, ASERs depict the official age proportions still attending some educational institution. In the case of South Africa, the official age group for basic education is between 5 and 18 years. Even so, gross enrolment rates above 100% revealed that there are both younger and older learners enrolled for individual classes, which rates become more pronounced from the Intermediate Phase to the FET Phase. It should be remembered also that there are actually no age restrictions for post-school enrolment. As a result, selecting the age group 5–24 years appears to be more useful. Figure 2.7 presents national ASERs by census year.

Figure 2.7: National ASERs by census year



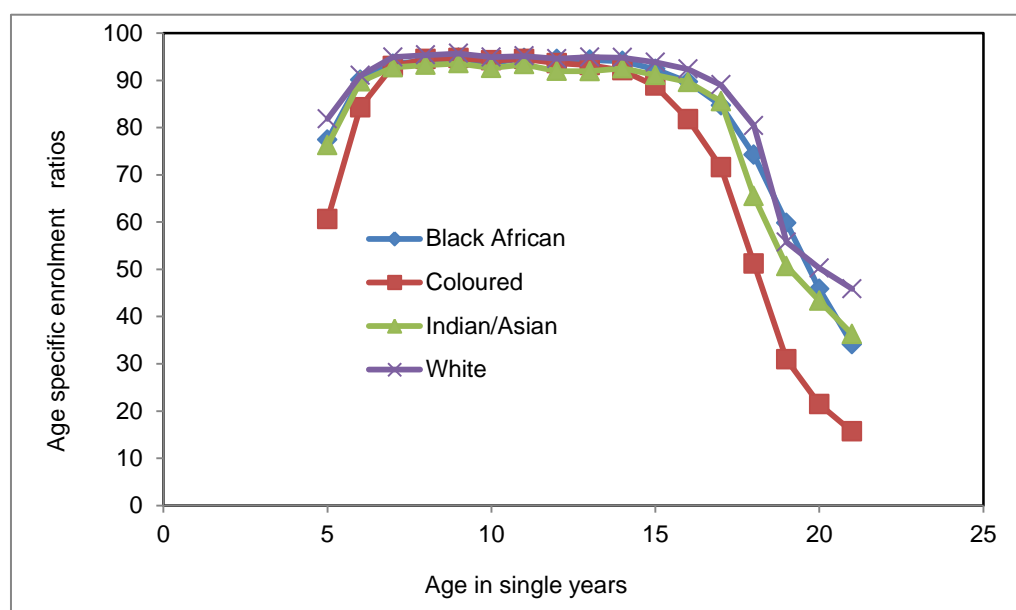
Source: Statistics South Africa

Net enrolment rates for learners aged five years old and enrolled in some educational institution for early childhood development (ECD) increased from one-fifth in 1996 to about three-quarters in 2011. This finding is welcome, as it serves to further confirm successful educational policies associated with the democratic era. The figures for learners aged 10–18 years, linked with both the Intermediate Phase and Senior Phase, reflect some meagre growth over time, in line with the net enrolment rates discussed in sub-section 2.2.2. While this is expected, gross enrolment rates



above 100% in the previous sub-section revealed that there are younger and older learners enrolled in these phases as per the official age yardstick. The proportion of learners who are older than 18 years and enrolled, reflect a declining trend from 1996 to 2011, as shown in Figure 2.7. This finding is welcome, as it provides some hope for the envisaged achievement of higher net enrolment rates for the FET Phase. Age-specific enrolment rates by population group are provided in Figure 2.8.

Figure 2.8: National ASERs by population group, Census 2011



\*Excludes 'Other' population group  
Source: Statistics South Africa

Fewer coloured children are enrolled for early childhood development (ECD) relative to other population groups, as shown in Figure 2.8. In contrast to children linked to the Foundation Phase, slightly fewer Asian children are enrolled for both the Intermediate Phase and Senior Phase compared to other population groups. Again, fewer learners aged 15–24 years and who are enrolled for both the Senior and FET phases are associated with the coloured population group. Interestingly, slightly higher enrolment rates across the educational phases are linked to the white population group relative to other population groups.

### 2.3.4 Gender Parity Index (GPI)

Narrowing gender gaps in the case of South Africa has been one of the priorities of the democratic government. Several legislations and intervention programmes focusing on women empowerment have been conceptualised and enacted. The Promotion of Equality and Prevention of Unfair Discrimination Act (Act No. 4 of 2000) is one example of such legislation. In addition, intervention programmes such as “taking the girl child to work annually” and providing sanitation pads to impoverished schoolgirls have come a long way in motivating girl children to attend school. The Gender Parity Index (GPI) measures gender differences between males and females in terms of their enrolment rates. It is the female gross enrolment rate divided by that of male counterparts, contrary to the demographic sex ratio that measures the number of males divided by that of females. Table 2.5 shows the Gender Parity Index (GPI) by population group for the three censuses undertaken within the democratic era.

Table 2.5: Gender parity index by population group and educational phase

Population group	Foundation Phase	Intermediate Phase	Senior Phase	FET Phase
<b>Black African</b>				
1996	0,92	0,95	1,06	1,18
2001	0,93	0,94	1,01	1,10
2011	0,96	0,96	0,98	1,05
<b>Coloured</b>				
1996	0,95	0,97	1,02	1,07
2001	0,98	0,97	1,01	1,09
2011	0,97	0,97	1,02	1,08
<b>Indian/Asian</b>				
1996	0,98	0,99	1,00	0,98
2001	0,98	1,01	0,96	1,02
2011	0,98	1,03	0,99	0,99
<b>White</b>				
1996	0,99	0,99	0,99	1,02
2001	0,98	0,99	0,99	1,00
2011	0,98	1,00	0,98	0,98
<b>Total</b>				
<b>1996</b>	<b>0,92</b>	<b>0,96</b>	<b>1,05</b>	<b>1,16</b>
<b>2001</b>	<b>0,93</b>	<b>0,94</b>	<b>1,00</b>	<b>1,09</b>
<b>2011</b>	<b>0,96</b>	<b>0,97</b>	<b>0,98</b>	<b>1,04</b>

Source: Statistics South Africa

The GPI in the Foundation and Intermediate phases favours males relative to that of the Senior and FET phases, which favours females across all population groups. The slightly higher sex ratio at birth (102 males per 100 females) may be at play here where there are naturally more boy

children than girl children at younger ages. Notwithstanding, the slight difference indicates that gender parity for enrolment has almost been achieved. In the Senior and the FET phases, more females than males are enrolled. This finding suggests that there are more male drop-outs than there are female drop-outs in these phases. This finding is not in line with anecdotally reported increases in proportions of teenage pregnancy, which implies more female learners dropping out of school as a result of being pregnant. What is disturbing about this finding is the drastic decline in the demand for elementary jobs, and an increasing demand for technical jobs that require some tertiary academic background. It remains to be seen whether educational attainment gaps between males and females would reveal the same results in the next chapter. Table 2.6 presents the national GPI by population group for Census 2011.

**Table 2.6: Proportions of females to males attending educational institutions, Census 2011**

Population group	Pre-school	Ordinary school	Special school	Home-based education/ home schooling	South Africa
Black African	98,2	96,0	88,9	101,0	<b>96,0</b>
Coloured	93,9	98,6	65,1	100,7	<b>98,2</b>
Indian/ Asian	95,4	95,7	76,5	112,6	<b>95,6</b>
White	92,3	94,1	60,7	94,3	<b>93,4</b>
<b>Total</b>	<b>96,6</b>	<b>96,1</b>	<b>81,1</b>	<b>99,8</b>	<b>96,1</b>

Source: Statistics South Africa

According to Table 2.6, there are more male learners than female learners attending the various educational institutions depicted in the table, except for home schooling. This finding is in line with the higher prevalence disability rate of 8,5% for females compared to that of 6,5% for their male counterparts published in the Census 2011 Profile of Disabled Persons report (Statistics South Africa, 2014). Notwithstanding, home schooling is not only linked to disability status, but general home schooling is not that common in the case of South Africa. Interestingly, the home-schooling profile is not linked to the white population, where there are more males receiving home schooling than females.

According to Table 2.7, the ratio of girls to boys attending an educational institution in the age group 5–17 years is more than 90 across all provinces. However, from the age of 18 years, ratios of less than 90 can be observed in some provinces, except in Eastern Cape, Gauteng and Western

Cape. This provides evidence that South Africa has made some strides in the achievement of universal education for all.

Table 2.7: Proportions of females to males attending educational institutions, Census 2011

Age	Western Cape	Eastern Cape	Northern Cape	Free State	KwaZulu-Natal	North West	Gauteng	Mpumalanga	Limpopo	South Africa
5	98,3	100,1	97,4	99,6	100,2	99,4	99,3	99,6	99,2	<b>99,5</b>
6	99,1	98,1	99,4	99,3	98,5	98,3	99,0	100,6	100,0	<b>99,0</b>
7	97,9	97,3	96,1	98,8	97,7	98,0	98,6	98,5	99,9	<b>98,2</b>
8	99,4	99,0	96,4	98,6	98,9	97,0	99,8	100,7	99,3	<b>99,1</b>
9	99,6	98,0	98,9	101,5	99,7	99,4	100,2	99,7	99,7	<b>99,6</b>
10	99,0	98,4	98,4	100,2	99,6	97,4	100,0	101,2	98,9	<b>99,3</b>
11	98,2	96,0	97,4	98,3	97,1	97,7	98,1	99,3	98,3	<b>97,7</b>
12	99,0	92,1	94,0	94,9	93,3	92,3	96,3	94,6	91,4	<b>94,0</b>
13	96,3	91,8	94,6	95,2	93,8	92,6	96,6	95,6	92,4	<b>94,2</b>
14	97,8	92,6	93,4	94,3	94,9	92,6	97,5	95,0	92,0	<b>94,7</b>
15	103,7	97,4	97,3	99,6	99,4	95,7	102,1	100,2	98,8	<b>99,6</b>
16	107,1	95,6	99,4	98,7	98,2	93,8	102,5	99,6	96,1	<b>98,9</b>
17	110,0	95,0	96,5	98,7	95,3	90,6	102,6	97,8	95,3	<b>97,8</b>
18	109,9	94,6	95,9	94,1	91,1	88,4	100,3	92,6	89,8	<b>94,7</b>
19	107,3	93,2	84,8	92,4	89,6	86,5	99,9	87,3	86,3	<b>92,3</b>
20	106,9	92,3	85,7	88,2	89,1	86,6	101,0	83,6	82,0	<b>91,4</b>
21	111,3	94,0	83,9	88,2	95,9	90,2	105,0	84,6	84,5	<b>95,3</b>
22	109,2	101,0	101,1	102,6	106,8	99,9	104,5	95,5	90,3	<b>101,8</b>
23	104,5	109,2	116,7	100,0	115,6	95,6	103,0	100,3	94,8	<b>105,1</b>
24	104,6	114,3	129,9	106,1	125,4	108,9	104,6	110,1	105,1	<b>111,3</b>
<b>Total</b>	<b>101,5</b>	<b>96,1</b>	<b>96,2</b>	<b>97,3</b>	<b>97,1</b>	<b>94,8</b>	<b>100,0</b>	<b>97,0</b>	<b>95,0</b>	<b>97,4</b>

Source: Statistics South Africa

## 2.4 Conclusion

This chapter confirmed preference of private educational institutions over public ones for attendance between 2001 and 2011. The concern about this finding is that affordability seems to be at play against declarations of equity by educational policies implemented in the democratic era. The findings of higher proportions of learners still attending some educational institution and higher growth of net enrolment rates between 1996 and 2001 being associated with whites relative to other population groups give cause for concern as it undermines well-meaning efforts to enhance equal access to all. In essence, these findings suggest that white learners are more

likely to enrol and attend classes as per the stipulated official ages than other population groups. By default, gross enrolment rates were found to have increased immensely for the Foundation and FET phases between 1996 and 2011 and for black Africans, given that such rates relate to numbers of learners enrolled regardless of whether they met the standard of official ages and whether the classes enrolled for are being repeated. Provincial profiles revealed that Limpopo and Mpumalanga had a higher growth relative to other provinces, confirming strides made by programmes such as no-fee schools, which were discussed in the introductory chapter.

Gender gaps on educational accessibility were found to be nearly closed for both the Foundation and Intermediate phases across population groups and provinces. In contrast, the percentage of female learners was found to be slightly higher than that for male learners in both the Senior and FET phases. This finding shines some light on which gender tends to leave school before attaining grade 12. This is worrisome, given the drastic decline of elementary employment opportunities. There is a need therefore, to examine whether the envisaged rise in educational attainment is as noticeable as it was observed with enrolment. The next chapter discusses educational attainment.

## **CHAPTER 3: EDUCATIONAL ATTAINMENT**

### **3.1 Introduction**

Evidence of rising educational attainment is apparent in the increase in the proportion of the middle class associated with the previously disadvantaged groups. This phenomenon signifies successful implementation of policies such as compulsory education for all up to grade 9, introduction of Adult Basic Education and Training programmes (ABET) for illiterate persons as well as no-fee schools. In addition, the National Student Financial Aid Scheme (NSFAS) was created following the Skills Development Act of 1998 in an endeavour to address inequitable access to higher education. Census 2011 educational attainment data confirm an increase in proportions of persons completing primary, secondary and tertiary education. Notwithstanding, variation by sex, province and population is noticeable in the sections outlined below. Census 2011 data also revealed that there was a decrease in the proportion of persons with no formal education (from 16% in 2001 to 7% in 2011).

The objective of this chapter is to highlight achievements made in closing the gaps for proportions of persons completing educational levels over time. To achieve this, the time-plotting events technique was utilised. The rationale of the technique is that it manages to generate the historical profile using the average age at which such an event occurs. However, such events are assumed to occur once in a lifetime such as death, first marriage, educational attainment and many others.

### **3.2 The rationale of the time-plotting events technique**

Given a population, a class of events that may occur to members of a population, and a cohort of persons born to this population at some time  $T$ .  $Q$  denotes the average number of events per person in the cohort, such as attainment of some educational level and the average age at which these events occur to members of the cohort. The latter are defined by a point in time

such as Census 2011; such a point is used as the reference time. The horizontal axis represents the time at which members of the cohort reach age M (Feeney, 2009).

The computation procedure began with the selection of persons who reported that they had completed their primary education (grade 7) by single age. The numbers of persons completing primary education are those that reported having completed grade 7 and higher, since those that have completed grade 12 or a bachelor's degree for example, have already completed grade 7 due to the progressiveness of educational levels. Scrutiny of the attainment question and the expected response attest to this consideration in that the highest level of education completed yields that particular one asked, regardless of the many lower levels implied to have been completed. As a result, excluding persons who reported higher levels of education having been completed from the lower levels already implied to have been completed could introduce some bias in proportions that completed lower levels.

Age proportions were computed by dividing the total number of persons completing primary education by the total number of persons at that age group. The reader is, however, cautioned about the total number of persons at that age, since about 0,3% of the total number of persons reported that they completed an educational level by means of attending other education system, and since such systems are not so clear, they were excluded in the both the numerator and the denominator for computation of proportions completing educational levels by single ages. In addition, about 6% of the total number of persons enumerated during Census 2011 had no schooling at all, constituting a decline from about 16% in 2001; these were included in the total number of persons by age.

Thereafter, the time at which a particular educational level was completed was calculated using the form:

$$TIME = Censustime(2011.775) - (age_x + 0.5) + averageage$$

Where *Census time* represents the calendar time at which Census 2011 data collection begun collecting data;

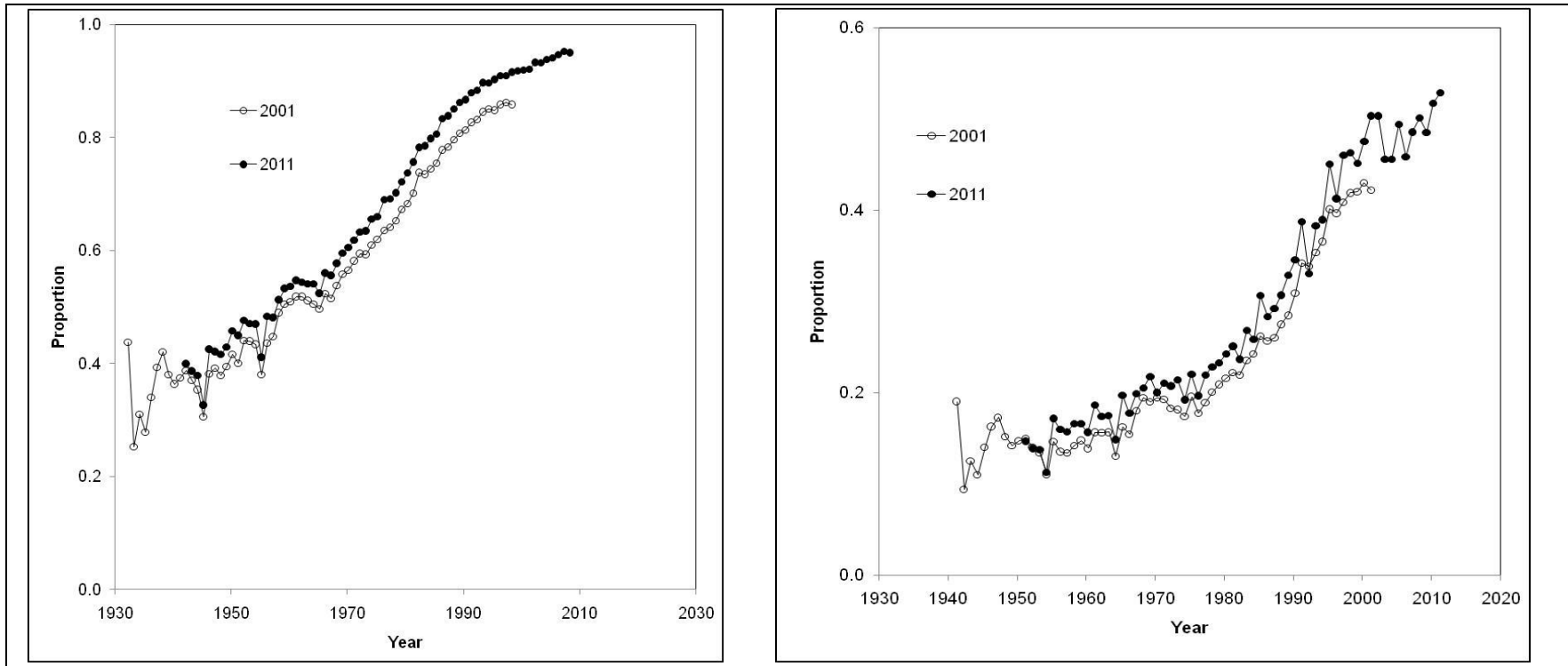
*Age<sub>x</sub>* represents the age of persons completing a particular education level; and

*Average age* represents the age at which most of the persons complete that particular level.

It should, however, be noted that the time plot includes the calculated time and proportions completing that particular educational level where age is excluded, since it is already incorporated in the time column. Time-plotting events may also be used to assess consistency between two or more censuses. In the case of South Africa, Census 2001 may be useful in undertaking such an exercise. In the event that such censuses are consistent, the trends in proportions of persons completing some educational level reflect convergence over time. Figure 3.1 presents such trends for primary and secondary educational attainment.



Figure 3.1: A comparison of proportions of persons completing primary and secondary education between 2001 and 2011



Source: Statistics South Africa

The sought-after convergence is noticeable for both primary and secondary education in Figure 3.1, signifying consistency in educational data between the two censuses. That notwithstanding, some slight divergence is also observable for the proportion of persons completing primary education from the late 1990s onwards. Slightly higher proportions of persons completing primary for 2011 may highlight some positive gains on the part of intervention programmes implemented by the democratic national government. Such programmes include the introduction of Adult Basic Education and Training (ABET), which allows older persons to register for whatever level of education to be taught in evening classes. These were also at the conceptualisation phase in 2001, only to yield results ten years later. Lastly, minor census data defects should not be ruled out. Henceforth, Census 2011 data will be utilised for further analysis of educational attainment.

### **3.3 Attainment of primary education**

Table 3.1 presents the overall percentages of persons who reported that they had completed a particular educational level by sex. As was seen in net enrolment rates, gaps between men and women are nearly closed in the 2010s, as per the Census 2011 data. One reason for this is that the promotion of equitable representation of black Africans, women and persons with disabilities in the workforce is mandated by the Promotion of Equality and Prevention of Unfair Discrimination Act (Act No. 4 of 2000). Table 3.1 presents the overall numbers and proportions of persons who reported to have completed educational levels by sex. It should be noted that all persons aged five years and above were included in the tabulation as per the 10% sample data, even when they may seem implausible such as 10-year-olds having completed their primary education.

Table 3.1: Number and proportion of persons completing primary education by sex

Sex	Number					Percentage				
	No schooling	Primary	Secondary	Bachelor's degree	*Total	No schooling	Primary	Secondary	Bachelor's degree	Total
Male	1 305 142	14 557 877	6 362 982	652 551	22 878 552	5,7	63,6	27,8	2,9	100,0
Female	1 851 471	15 686 381	6 913 982	651 346	25 103 180	7,4	62,5	27,5	2,6	100,0

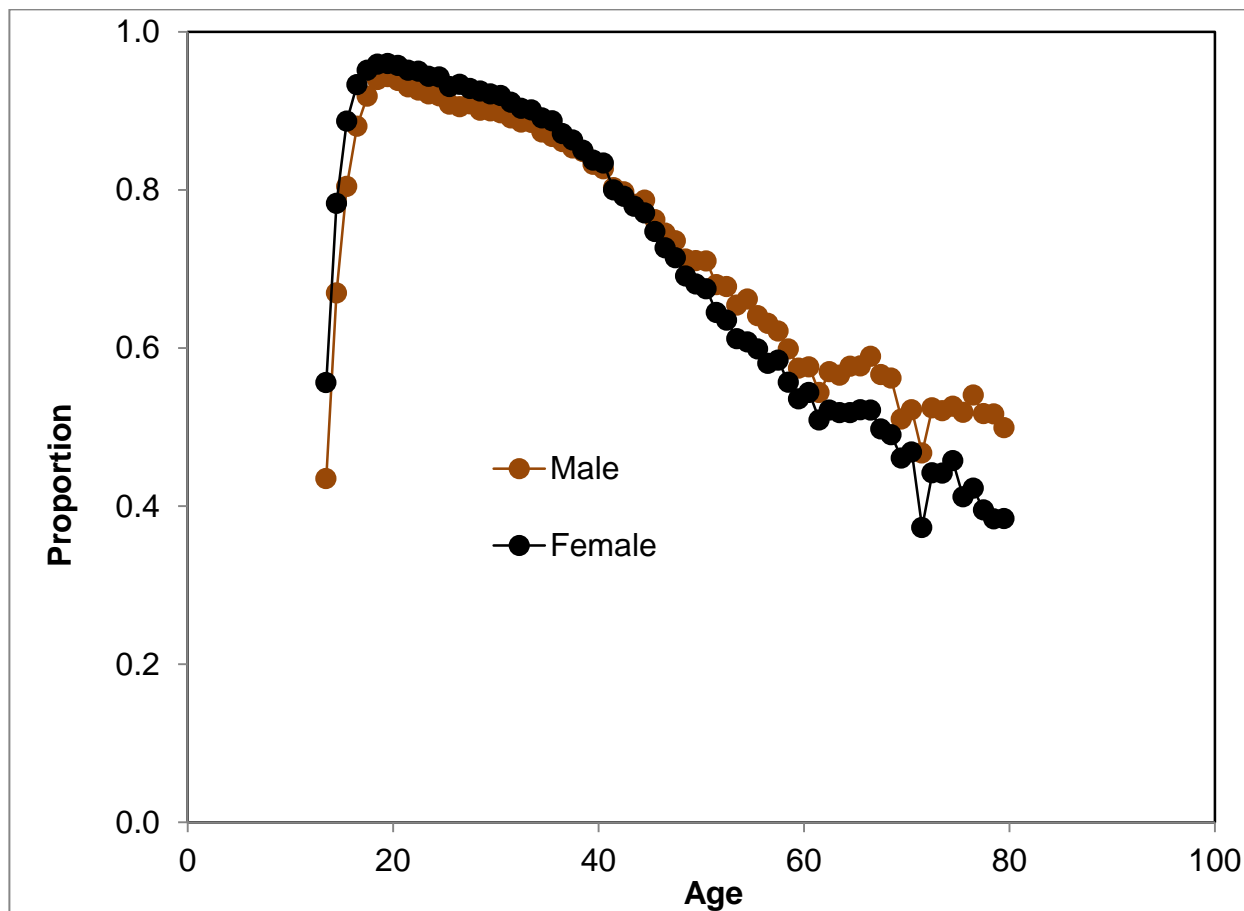
It should be noted that the number of persons completing primary education are those who reported having completed grade 7 and higher, since those who reported to have completed grade 12 or a bachelor's degree or a higher degree had already completed that grade due to the progressive nature of education levels. The total number of persons completing grade 12 are those who reported that they had completed grade 12 and higher, although excluding those that had certificates and diplomas less than grade 12. Also, the total number of persons completing a bachelor's degree include those who reported to have completed a bachelor's degree and higher. The rationale for including those who reported that they had completed higher levels than the one sought after emanates from the highest level completed asked for that provide such information and not all previously completed ones. As a result, excluding that group introduces bias in the proportion that completed the sought after grade, e.g. primary education.

\*Excludes persons who reported that they had completed levels lower than grade 7 and those who reported to have completed their educational levels by means of other education systems.

Source: Statistics South Africa

Age percentages of persons completing primary education are plotted to view such pattern as well as to ascertain the average age at which the event occurred. The relationship between primary educational attainment and age is apparent in Figure 3.1. Percentages of persons completing primary education between age 10 and 15 are quite low, as there are fewer points reflected. The average age at which primary education is completed is at 17 years. This finding confirms a significant number of persons repeating the same grade as shown by more than 100% gross enrolment rates signifying repetition (see Chapter 2).

Figure 3.2: Proportions of persons completing primary education by age and sex

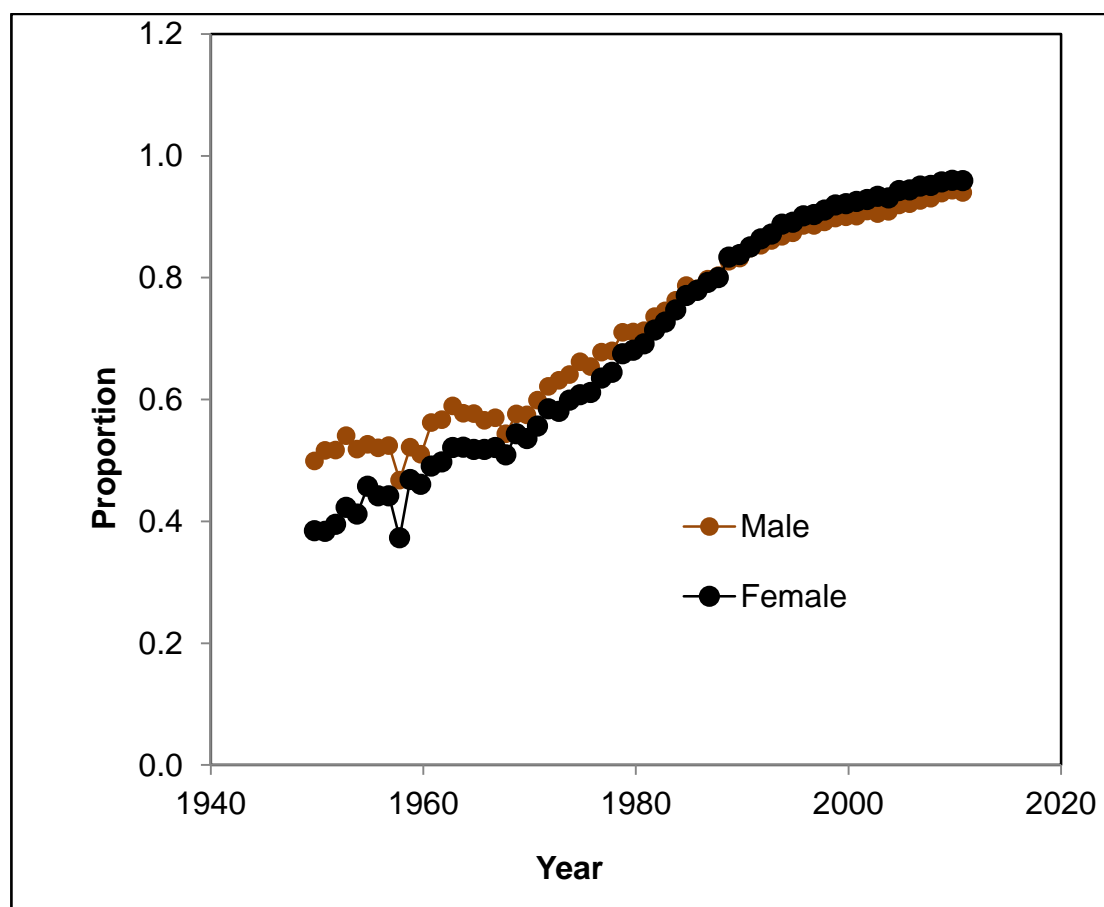


Source: Statistics South Africa

Interestingly, sex disparities appear to have been completely closed for younger persons in recent years, as expected. The opposite applies to older persons, where primary educational attainment reflects higher proportions for males than for females, as can be expected as well. This is so because the majority of older persons are expected to have completed their primary education some years ago. That notwithstanding, a few may have completed their primary education recently through the ABET system, as discussed in Chapter 1. Following this, a time plot of these proportions may be useful in showing the percentage of persons and the year in which they completed their primary

education. Figure 3.2 shows a time plot for persons who had completed their primary education by sex as per Census 2011 data.

Figure 3.3: Time plot for proportions of persons completing primary education by sex

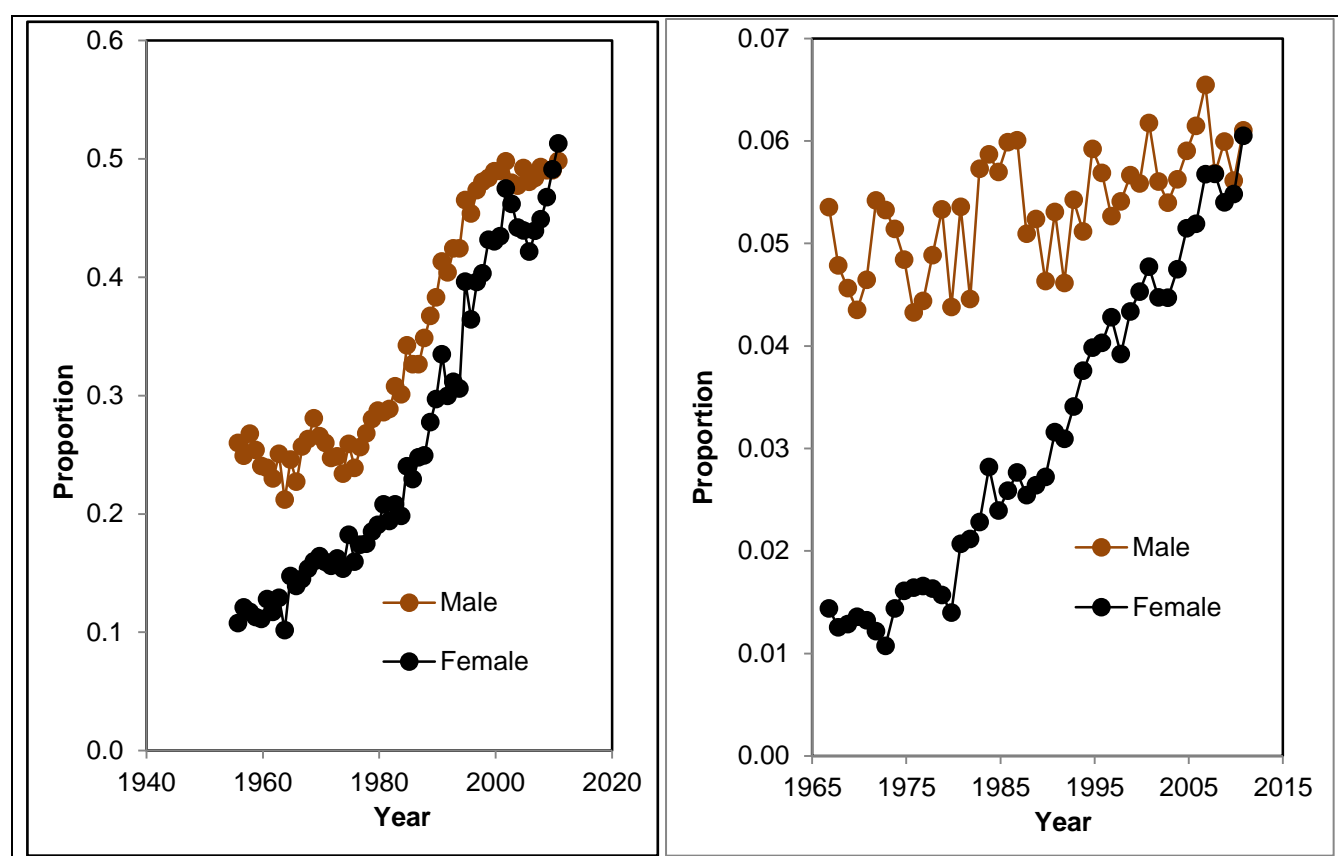


Source: Statistics South Africa

Sex disparities in primary educational attainment were closed back in the 1980s. Females surpassed males in the 1990s. This scenario depicts the importance of the education legislation passed back in the 1970s. That notwithstanding, variations by level of education still exist in the case of South Africa. Figure 3.4 presents the time plots for the percentage of persons who had completed both secondary education and at least a bachelor's degree at tertiary level.

Observable in Figure 3.4 is that disparities for both secondary education and a bachelor's degree were closed late in the 2000s, relative to primary education, as expected. Although there are still fewer persons completing a bachelor's degree in the country, as shown by the fluctuations in the chart, the trends are steeper for females than for males. The reader should, however, note that the average ages for the completion of a secondary education and at least a bachelor's degree are 24 years and 40 years respectively.

Figure 3.4: Time plot for proportions of persons completing secondary education and those completing a bachelor's degree



Source: Statistics South Africa

### 3.4 Educational attainment by population group

Classification by population group in analysing data is still important in the case of this country. Although there has recently been contestation from some social groups on the need to put an end to collecting data by population group, analyses of all data in the country show huge persistence in variations among the four distinct population groups. As a result, the counterview is that the use should continue until some new definition can be acceptable, given the population diversity within the country at present. Table 3.2 shows numbers and percentages of persons who had completed educational levels by population group.

Interestingly, the percentage of persons who had completed their primary education was higher for both coloureds and black Africans, whilst lower for the other two population groups. This is expected, since these are proportions of persons who did not advance to a higher level of education than primary level. In contrast, the Asian and white populations reflect much higher proportions of persons who had completed a higher level of education than primary education, as presented in Table 3.2. The gap in educational attainment between Asians and whites seems to have been narrowed. Notwithstanding, the gap between the black African and coloured populations and the white and Asian populations is still far from narrowed. Proportions of persons who had completed primary education by population group are shown in the time plot in Figure 3.5.

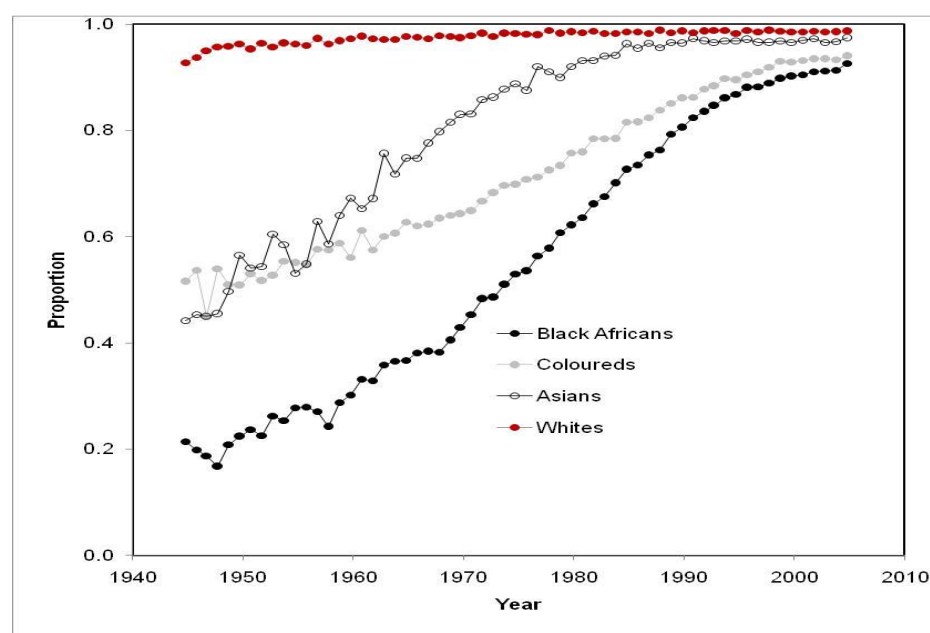
Table 3.2: Number of persons who completed educational levels by population group

Population group	Number					Percentage				
	No schooling	Primary	Secondary	Bachelor's degree	*Total	No schooling	Primary	Secondary	Bachelor's degree	Total
Black African	2 870 299	22 623 836	8 837 398	567 456	34 898 989	8,2	64,8	25,3	1,6	100,0
Coloured	175 305	2 819 075	984 702	61 798	4 040 880	4,3	69,8	24,4	1,5	100,0
Indian/Asian	35 198	950 582	595 446	101 168	1 682 394	2,1	56,5	35,4	6,0	100,0
White	56 400	3 668 053	2 688 559	556 991	6 970 003	0,8	52,6	38,6	8,0	100,0

It should be noted that the number of persons completing primary education are those who reported having completed grade 7 and higher, since those who reported to have completed grade 12 or a bachelor's degree or a higher degree had already completed that grade due to the progressive nature of education levels. The total number of persons completing grade 12 are those who reported that they had completed grade 12 and higher, although excluding those that had certificates and diplomas less than grade 12. Also, the total number of persons completing a bachelor's degree include those who reported to have completed a bachelor's degree and higher. The rationale for including those who reported that they had completed higher levels than the one sought after emanates from the highest level completed asked for that provide such information and not all previously completed ones. As a result, excluding that group introduces bias in the proportion that completed the sought after grade, e.g. primary education.

\*Excludes persons who reported that they had completed levels lower than grade 7 and those who reported to have completed their educational levels by means of other education systems.

Figure 3.5: Time plot for proportions of persons completing primary education



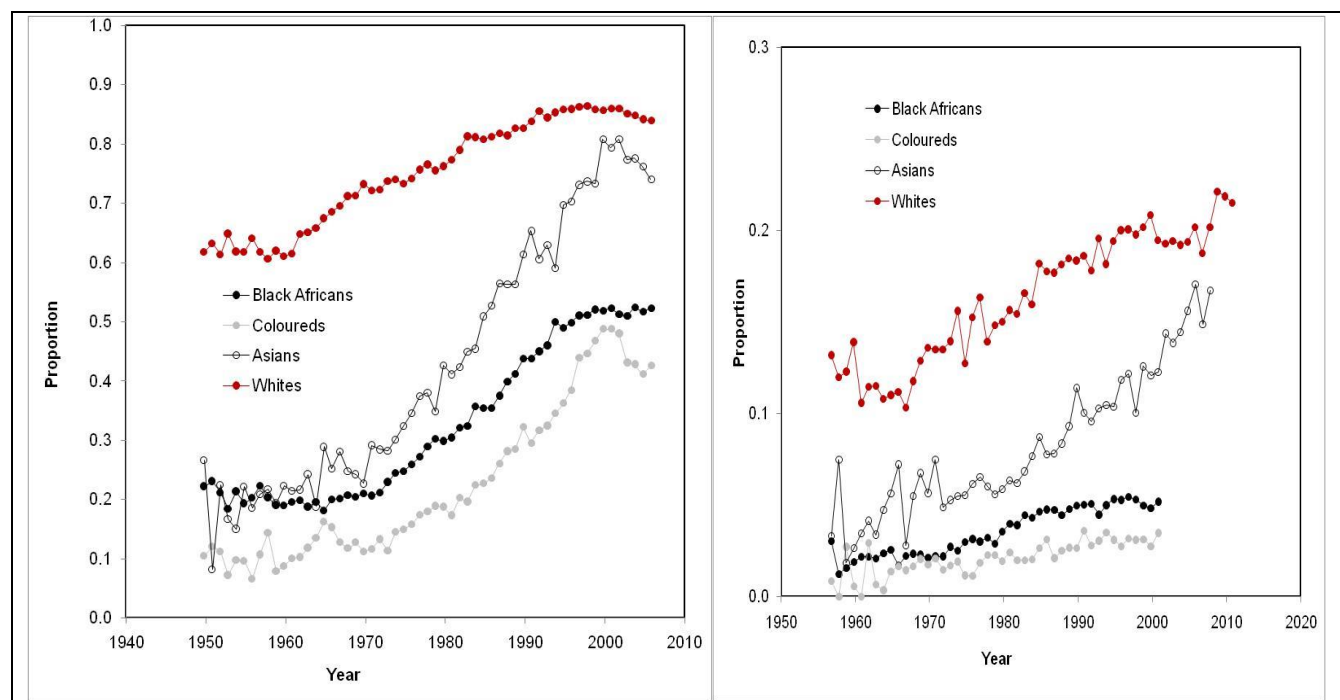
Source: Statistics South Africa



Variations are apparent in Proportions of persons who had completed educational levels over time. The trend shown for whites are above 90% even before the 1960s, relative to those for all other population groups that reflect less than half of their populations completing primary education at the same time. Notwithstanding, the gap between the Asian and white populations in Proportions of persons who had completed primary education has narrowed down completely around the 1980s to the present day. The gap between whites and both the coloured and black African populations also narrowed, although at a lower scale. The upward trends for all population groups provide some relief. This finding is in line with the universal enrolment for primary education discussed in the previous chapter.

The same cannot be expected of Proportions of persons who had completed secondary education and above by population group. Figure 3.6 presents Proportions of persons who had completed secondary education and a bachelor's degree over time. In contrast to Proportions of persons who had completed a primary education (where there was a convergence of all population groups around the 2000s), those for persons who had completed a secondary education and a bachelor's degree do not reflect such convergence. Convergence is apparent among the white and Asian population groups. However, for the black African and coloured population groups, convergence is still a long way off. Interestingly, black Africans had swapped positions with coloureds starting from secondary school education onwards.

Figure 3.6: Time plot for proportions of persons completing secondary education and those completing a bachelor's degree



Source: Statistics South Africa

### 3.5 Educational attainment by province

The variation showed for net enrolment rates by province is expected for Proportions of persons who had completed educational levels over time. Also, above 100% gross enrolment rates discussed in the previous chapter confirmed late or early entry to different levels of education supporting the fact that a substantial number of learners tend to complete specific levels later than expected relative to the yardstick of official ages. Proportions of persons by completed educational level are presented in Table 3.3.

Table 3.3: Number of persons completing educational levels by province

Province	Number					Percentage				
	No schooling	Primary	Secondary	Bachelor's degree	Total	No schooling	Primary	Secondary	Bachelor's degree	Total
Western Cape	160 282	3 796 612	1 665 240	214 322	5 836 456	2,7	65,0	28,5	3,7	100,0
Eastern Cape	428 586	3 305 993	1 074 485	101 017	4 910 081	8,7	67,3	21,9	2,1	100,0
Northern Cape	89 106	609 714	216 890	12 691	928 401	9,6	65,7	23,4	1,4	100,0
Free State	147 328	1 545 771	623 237	51 284	2 367 620	6,2	65,3	26,3	2,2	100,0
KwaZulu-Natal	720 359	5 682 882	2 482 618	168 718	9 054 577	8,0	62,8	27,4	1,9	100,0
North West	294 867	1 849 945	725 678	52 012	2 922 502	10,1	63,3	24,8	1,8	100,0
Gauteng	412 148	8 457 243	4 511 568	570 059	13 951 018	3,0	60,6	32,3	4,1	100,0
Mpumalanga	363 038	2 209 340	940 102	53 938	3 566 418	10,2	61,9	26,4	1,5	100,0
Limpopo	540 899	2 786 755	964 347	79 855	4 371 856	12,4	63,7	22,1	1,8	100,0
<b>South Africa</b>	<b>3 156 613</b>	<b>30 244 255</b>	<b>13 204 165</b>	<b>1 303 896</b>	<b>47 908 929</b>	<b>6,6</b>	<b>63,1</b>	<b>27,6</b>	<b>2,7</b>	<b>100,0</b>

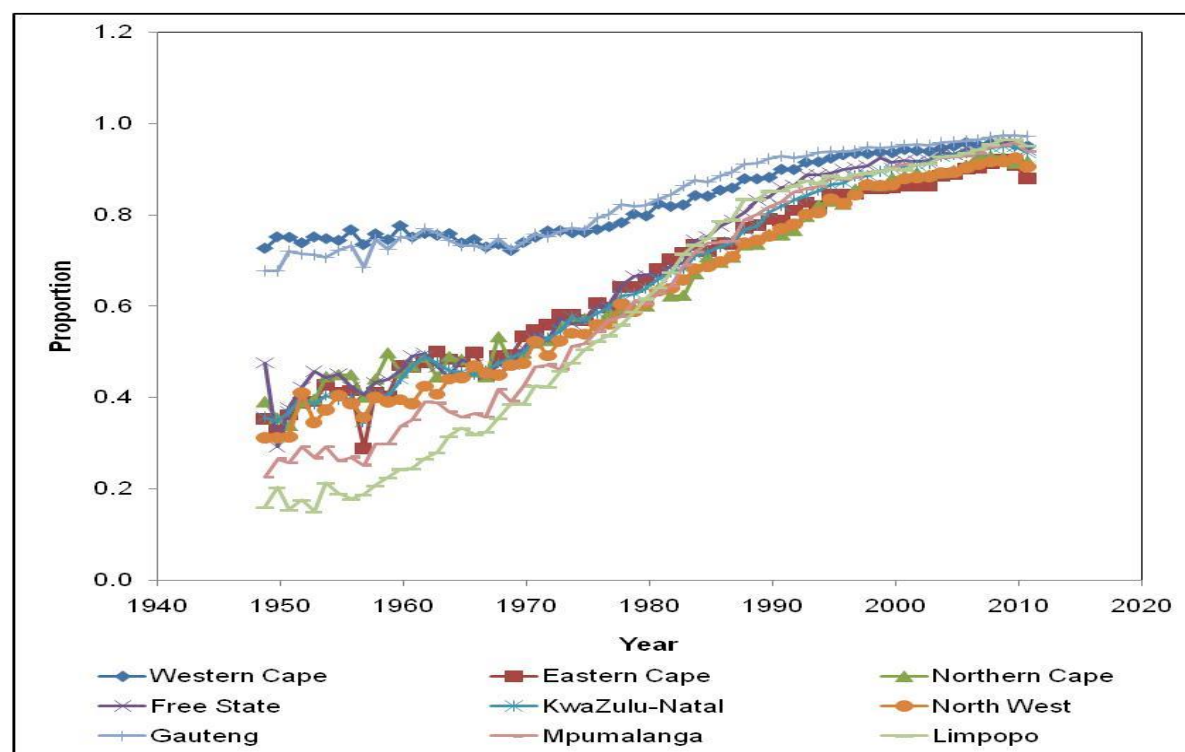
It should be noted that the number of persons completing primary education are those who reported having completed grade 7 and higher, since those who reported to have completed grade 12 or a bachelor's degree or a higher degree had already completed that grade due to the progressive nature of education levels. The total number of persons completing grade 12 are those who reported that they had completed grade 12 and higher, although excluding those that had certificates and diplomas less than grade 12. Also, the total number of persons completing a bachelor's degree include those who reported to have completed a bachelor's degree and higher. The rationale for including those who reported that they had completed higher levels than the one sought after emanates from the highest level completed asked for that provide such information and not all previously completed ones. As a result, excluding that group introduces bias in the proportion that completed the sought after grade, e.g. primary education.

\*Excludes persons who reported that they had completed levels lower than grade 7 and those who reported to have completed their educational levels by means of other education systems.

Figure 3.7 shows variations for Proportions of persons who had completed primary education. Higher proportions of persons who had completed primary education are linked to Gauteng and Western Cape, followed by KwaZulu-Natal from the 1950s up to the 1990s. Henceforth, the gap

between the two leading provinces and other provinces narrows. On the one hand, Limpopo and Mpumalanga reflect lower levels of about 20% in the 1960s, and then surpass other provinces to rank higher in the 2010s. On the other hand, KwaZulu-Natal, North West and Northern Cape remained largely at the same level over time. These findings depict the link between educational attainment and economic development in the case of South Africa.

Figure 3.7: Time plot for proportions of persons completing primary education by province

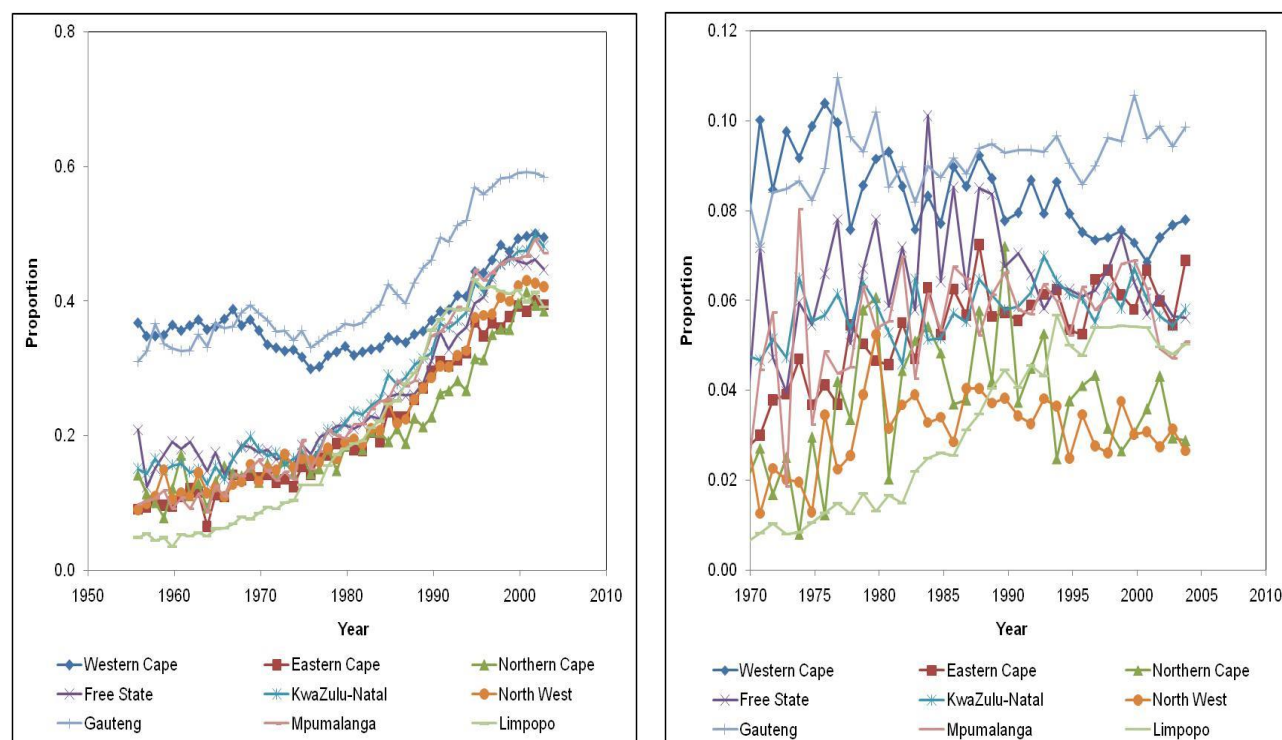


Source: Statistics South Africa

Figure 3.8 presents Proportions of persons who had completed secondary education as well as those who had completed a bachelor's degree over time. Similar to Proportions of persons who had completed primary education, Proportions of persons who had completed secondary education are higher for Gauteng and Western Cape, followed by Free State and KwaZulu-Natal from the 1950s to the 1990s. In addition, Limpopo and Mpumalanga reflect lower levels of less than 10% in the 1960s,

and then surpass other provinces to rank higher in the 2010s. Other provinces remained more or less the same in their ranks over time.

Figure 3.8: Time plot for proportions of persons completing secondary education and those completing a bachelor's degree



Source: Statistics South Africa

Although it is expected that Proportions of persons who had completed a bachelor's degree would be fewer than those who had completed secondary school as shown in Figure 3.8, such proportions reveal some stagnation over time for most of the provinces except Mpumalanga and Limpopo, which provinces show a gentle upward trend over time. Notwithstanding, Gauteng and Western Cape are still leading in proportions of persons who had completed a bachelor's degree, as was the case for primary and secondary education. Overall, Proportions of persons who had completed a bachelor's degree are lower for all provinces, following lower enrolment rates for the FET Phase (ages 16–18) as discussed in the previous chapter. It is also highly probable that the low proportion

of persons who had completed a bachelor's degree is indicative of high university drop-out due to a combination of reasons, such as failure to cope academically and/or escalating costs relating to higher education fees, and the cost of accommodation and text books.

### 3.6 Educational attainment by settlement type

Settlement types in the case of South Africa refer to human settlement types that are categorised as urban, traditional/tribal and farm areas. Although data were collected using nine categories, this report utilised the 10% data where these were classified into three major groups. The importance of settlement types lies in the ever-increasing rural-urban migration. Persons who are residing in traditional or farm areas are not expected to complete the same educational levels as urban residents. This is attributed to socio-economic development challenges relating to piped water, electricity for cooking, and improved sanitation. The impact of inadequate household services on educational attainment has been anecdotally reported. Overall percentages of educational attainment by settlement type are presented in Table 3.4.

Table 3.4: Number of persons completing educational levels by settlement type

Settlement type	Number					Percentage				
	No schooling	Primary	Secondary	Bachelor's degree	Total	No schooling	Primary	Secondary	Bachelor's degree	Total
Urban	1 220 994	21 268 646	10 447 785	1 176 728	34 114 153	3,6	62,3	30,6	3,4	100,0
Traditional	1 643 389	7 660 591	2 325 578	88 499	11 718 057	14,0	65,4	19,8	0,8	100,0
Farm	292 230	1 315 016	430 802	38 670	2 076 718	14,1	63,3	20,7	1,9	100,0
<b>Total</b>	<b>3 156 613</b>	<b>30 244 253</b>	<b>13 204 165</b>	<b>1 303 897</b>	<b>47 908 928</b>	<b>6,6</b>	<b>63,1</b>	<b>27,6</b>	<b>2,7</b>	<b>100,0</b>

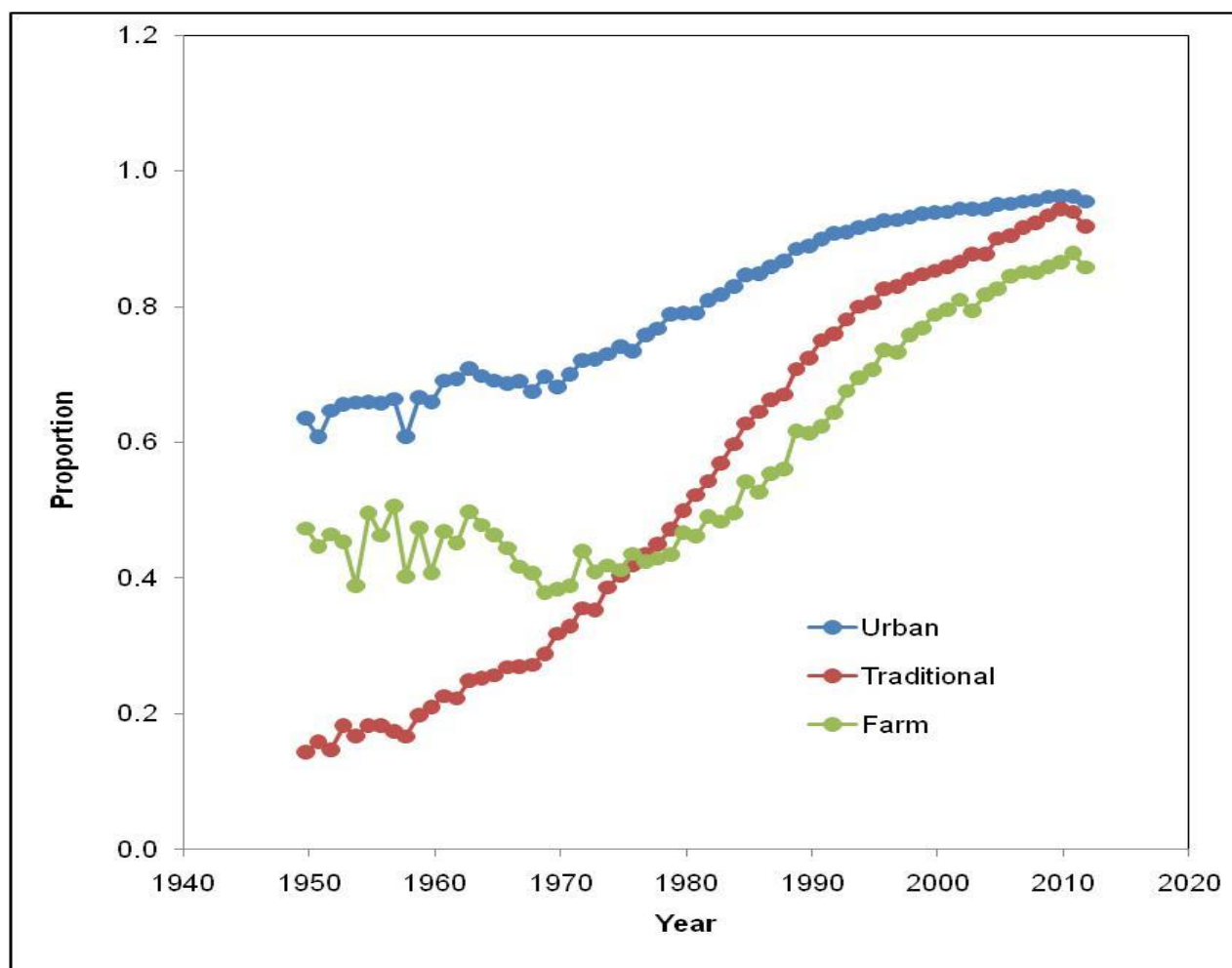
It should be noted that the number of persons completing primary education are those who reported having completed grade 7 and higher, since those who reported to have completed grade 12 or a bachelor's degree or a higher degree had already completed that grade due to the progressive nature of education levels. The total number of persons completing grade 12 are those who reported that they had completed grade 12 and higher, although excluding those that had certificates and diplomas less than grade 12. Also, the total number of persons completing a bachelor's degree include those who reported to have completed a bachelor's degree and higher. The rationale for including those who reported that they had completed higher levels than the one sought after emanates from the highest level completed asked for that provide such information and not all previously completed ones. As a result, excluding that group introduces bias in the proportion that completed the sought after grade, e.g. primary education.

\*Excludes persons who reported that they had completed levels lower than grade 7 and those who reported to have completed their educational levels by means of other education systems.

Source: Statistics South Africa

The percentage of no schooling is higher for both traditional and farm areas relative to urban areas, as expected. However, the gaps between Percentages of persons who had completed primary education were completely closed in 2011. Notwithstanding, gaps pertaining to settlement type and secondary and higher educational attainment are still quite significant. Rural development initiatives are yet to show some achievements. Figure 3.9 shows the age proportions of persons who had completed primary education by settlement type.

Figure 3.9: Time plot for proportions of persons completing primary education by settlement type



Source: Statistics South Africa

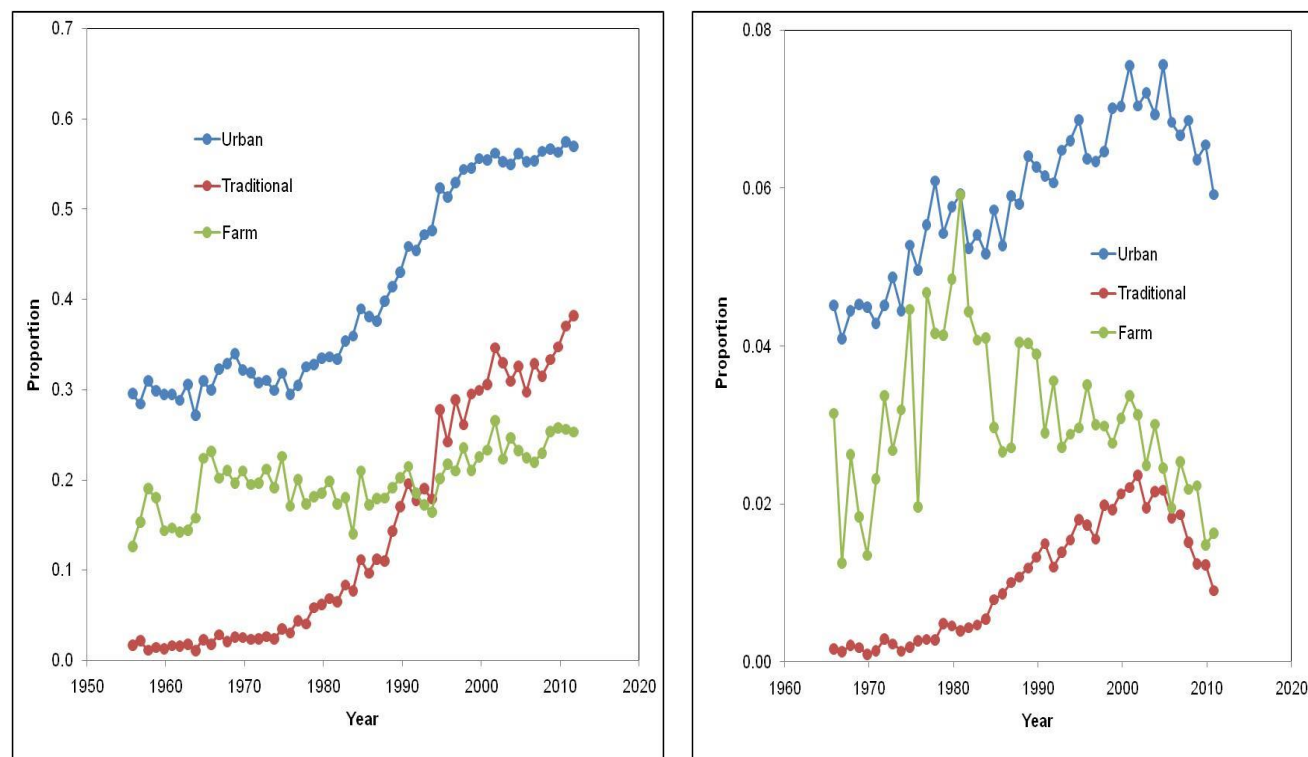
The rise in Proportions of persons who had completed primary education reflects upward trends for all settlement types, as expected. This scenario depicts successful government intervention programmes for rural areas. Convergence of trends around the 2000s provides some relief. Interestingly, whereas farm areas were doing well in this regard from back in the 1950s to the 1980s, traditional areas surpassed them and reached almost the same levels as the urban areas.

Similar to Proportions of persons who had completed primary education, Proportions of persons who had completed secondary education show an upward trend for all settlement types, although some tapering off is noticeable for all settlement types, as presented in Figure 3.10. Residing in urban areas remains a more favourable option than residing either on a farm or in a traditional area when it comes to the attainment of a secondary education. Although the trend for Proportions of persons residing in traditional areas who had completed primary education begins an upward trend from the 1980s onwards, the gap between traditional and urban areas remains large throughout the years. Interestingly, Proportions of persons residing in farm areas who had completed a primary education stagnated over time, showing a slight growth from the 2000s to the present day. This scenario echoes the shortage of teachers in farm areas and the unacceptably long distances that need to be travelled to school.

Figure 3.10 shows that Proportions of persons who had completed a bachelor's degree are negligible for farm areas, while wider fluctuations are also observed between urban and traditional areas. Such a scenario may be attributable to rural-urban migration, since persons who moved from rural areas to urban areas are likely to have completed a secondary education in search of employment opportunities. While urban and traditional areas show upward trends from the 1970s to the 2000s, farm areas show some stagnation. Overall, all settlement types reflect a gentle downward trend from the 2000s onwards. Reasons for these downward trends include high drop-out rates and increasingly high university fees. Next is a comparison of educational attainment between public and private institutions for those who were still attending an educational institution in 2011.



Figure 3.10: Time plot for proportions of persons completing secondary education and those completing a bachelor's degree



Source: Statistics South Africa

### 3.7 Educational attainment for persons attending public or private institutions

Private institutions of learning have been favoured over public ones in recent years for various reasons, among others, large pupil-teacher ratios, poor school infrastructure and inadequate learning aids. Overall, the main concern has been the quality of basic education in the case of South Africa. The need for providing a comparison of educational attainment between learners attending public institutions and those attending private institutions by using official statistics cannot be over-emphasised. Table 3.5 presents total numbers and percentages of persons who had completed some type of educational level by type of institution.

Table 3.5: Number of persons who completed educational level by type of institution

Type of institution	Number					Percentage				
	No schooling	Primary	Secondary	Bachelor's degree	Total	No schooling	Primary	Secondary	Bachelor's degree	Total
<b>Public (government)</b>	111 900	6 202 319	1 496 845	180 697	7 991 761	1,4	77,6	18,7	2,3	100,0
<b>Private</b>	36 904	692 004	411 646	57 877	1 198 431	3,1	57,7	34,3	4,8	100,0
<b>Total</b>	<b>148 804</b>	<b>6 894 323</b>	<b>1 908 491</b>	<b>238 574</b>	<b>9 190 192</b>	<b>1,6</b>	<b>75,0</b>	<b>20,8</b>	<b>2,6</b>	<b>100,0</b>

It should be noted that the number of persons completing primary education are those who reported having completed grade 7 and higher, since those who reported to have completed grade 12 or a bachelor's degree or a higher degree had already completed that grade due to the progressive nature of education levels. The total number of persons completing grade 12 are those who reported that they had completed grade 12 and higher, although excluding those that had certificates and diplomas less than grade 12. Also, the total number of persons completing a bachelor's degree include those who reported to have completed a bachelor's degree and higher. The rationale for including those who reported that they had completed higher levels than the one sought after emanates from the highest level completed asked for that provide such information and not all previously completed ones. As a result, excluding that group introduces bias in the proportion that completed the sought after grade, e.g. primary education.

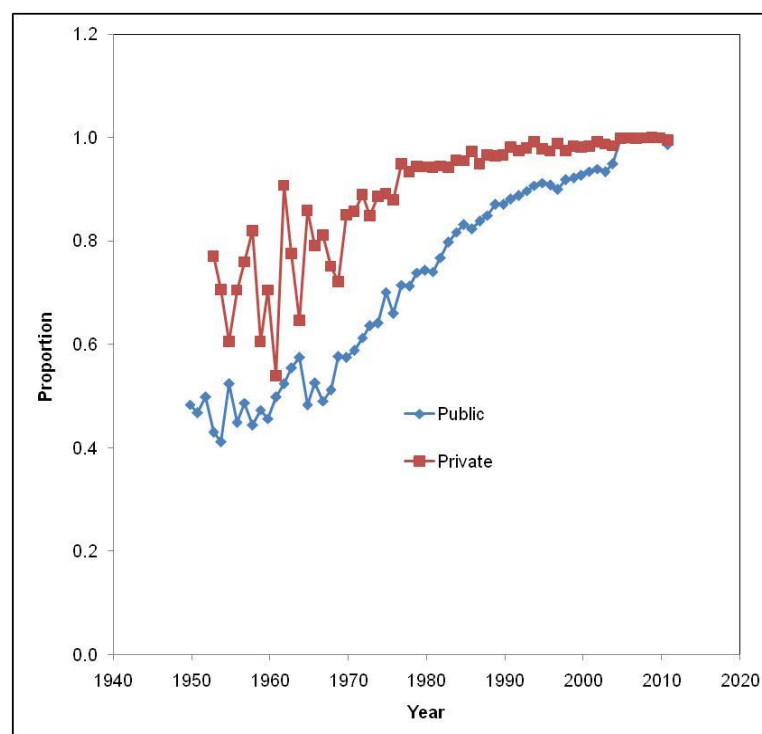
\*Excludes persons who reported that they had completed levels lower than grade 7 and those who reported to have completed their educational levels by means of other education systems.

Source: Statistics South Africa

The percentage of persons who attended a public educational institution is higher only for primary education. The percentage of persons who attended a private institution is almost double that of public institutions when higher education and tertiary education are considered. This finding is indeed expected in view of the continuous flight from public to private institutions, despite the ever-increasing annual tuition fees.

Figure 3.11 shows such a comparison for attainment of primary-level education. Overtime, the gaps between private and public institutions in terms of educational attainment have closed. A smaller number of persons attended private institutions back in the 1950s to the 1970s. Interestingly, gaps in Proportions of persons who had completed primary education in a public institution and those who had completed their primary education in a private institution have been completely closed in the 2000s. This lauded achievement seems to be attributable to good educational intervention programmes. Even so, attainment may not necessarily suggest better quality of education; instead, it may even reflect exclusion of important but tougher sections of learning materials, in which case attainment is actually meaningless.

Figure 3.11: Time plot for proportions of persons completing primary education by type of institution



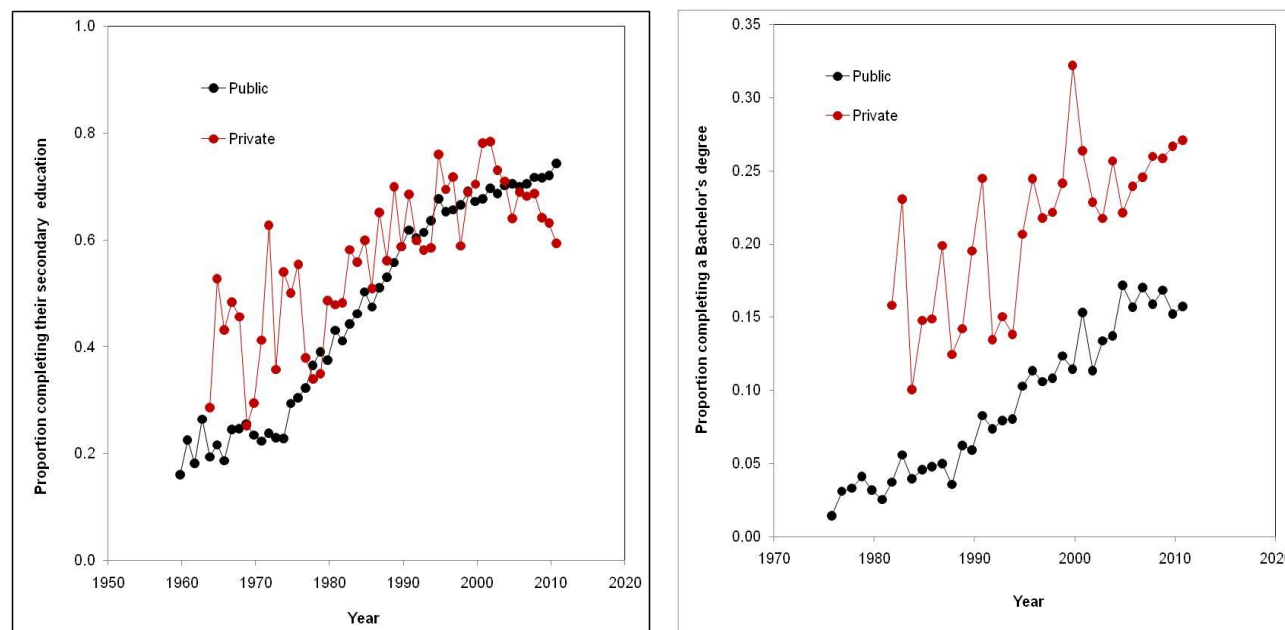
Source: Statistics South Africa

Figure 3.12 presents proportions of persons who had completed their secondary education and those who had completed a bachelor's degree. Broadly, Proportions of persons who had completed their secondary education reflect comparability between public and private institutions over time. Notwithstanding, those associated with private institutions are much fewer than those associated with public schools, as shown in Figure 3.12. Interestingly, the trend associated with private institutions shows a slight decline towards the 2010s, signifying preference for public institutions probably due to affordability.

In contrast to Proportions of persons who had completed their secondary education, Proportions of persons who had completed a bachelor's degree reflect some divergence from the 1970s to the

2010s between public and private institutions. The number of persons who attend private institutions is even smaller at tertiary level compared to secondary education, as expected. Both trends show a slight upward trend from the 1970s to 2010. Next is a comparison of educational attainment between persons born in and outside South Africa.

Figure 3.12: Time plot for proportions of persons completing secondary education and those completing a bachelor's degree



Source: Statistics South Africa

### 3.8 Educational attainment by place of birth: born in or outside South Africa

Immigration has been an issue for the South African government in recent years. A number of people from neighbouring African countries are continuously entering the country; the majority in search of economic opportunities while others come due to political conflicts and wars in home countries. Municipalities are unable to put into place plans for service delivery, since there are actually more newly built shacks that do not have water supply and other basic services.

The notion maintained on educational attainment is that due to the better quality of education offered in other African countries relative to South Africa, such people are more likely to be employed than South Africans. The authenticity of this view will be seen in Proportions employed by whether born in South Africa or outside South Africa in Chapter 5. For now, numbers and percentages of persons who had completed some type of educational level are shown in Table 3.6.

Interestingly, the gap between the percentage of persons with no schooling who were born in South Africa, and that of persons born outside the country appears to be narrowing. One reason for this may be the changing patterns of immigrants from neighbouring African countries, where Proportions of persons with no schooling are increasing over time, probably exacerbated by political and economic hardships. A comparison of primary educational attainment between persons born in South Africa and those born outside South Africa is presented in Figure 3.13.

Table 3.6: Number of persons who completed educational levels by place of birth

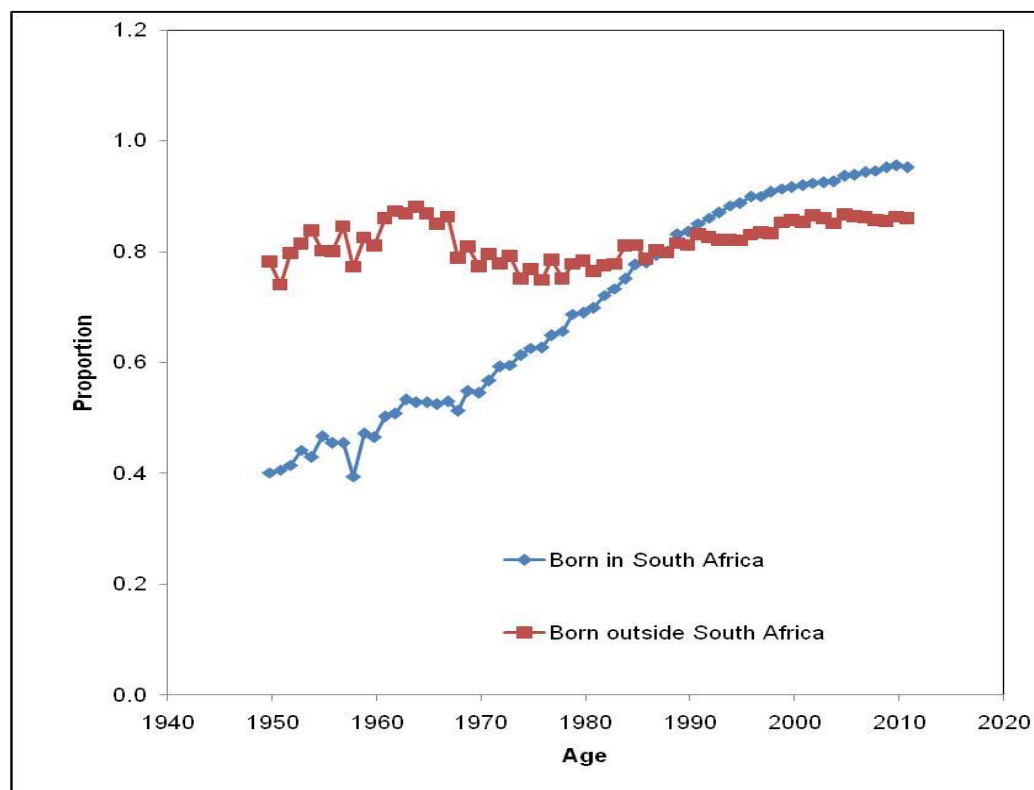
Place of birth	Number					Percentage				
	No schooling	Primary	Secondary	Bachelor's degree	Total	No schooling	Primary	Secondary	Bachelor's degree	Total
Born in South Africa	2 946 916	28 165 862	12 204 189	1 132 909	44 449 876	6,6	63,4	27,5	2,5	100,0
Born outside South Africa	155 969	1 639 140	805 069	152 882	2 753 060	5,7	59,5	29,2	5,6	100,0
<b>Total</b>	<b>3 102 885</b>	<b>2 9805002</b>	<b>13 009 258</b>	<b>1 285 791</b>	<b>47 202 936</b>	<b>6,6</b>	<b>63,1</b>	<b>27,6</b>	<b>2,7</b>	<b>100,0</b>

It should be noted that the number of persons completing primary education are those who reported having completed grade 7 and higher, since those who reported to have completed grade 12 or a bachelor's degree or a higher degree had already completed that grade due to the progressive nature of education levels. The total number of persons completing grade 12 are those who reported that they had completed grade 12 and higher, although excluding those that had certificates and diplomas less than grade 12. Also, the total number of persons completing a bachelor's degree include those who reported to have completed a bachelor's degree and higher. The rationale for including those who reported that they had completed higher levels than the one sought after emanates from the highest level completed asked for that provide such information and not all previously completed ones. As a result, excluding that group introduces bias in the proportion that completed the sought after grade, e.g. primary education.

\*Excludes persons who reported that they had completed levels lower than grade 7 and those who reported to have completed their educational levels by means of other education systems.

Source: Statistics South Africa

Figure 3.13: Time plot for proportions of persons completing primary education by place of birth



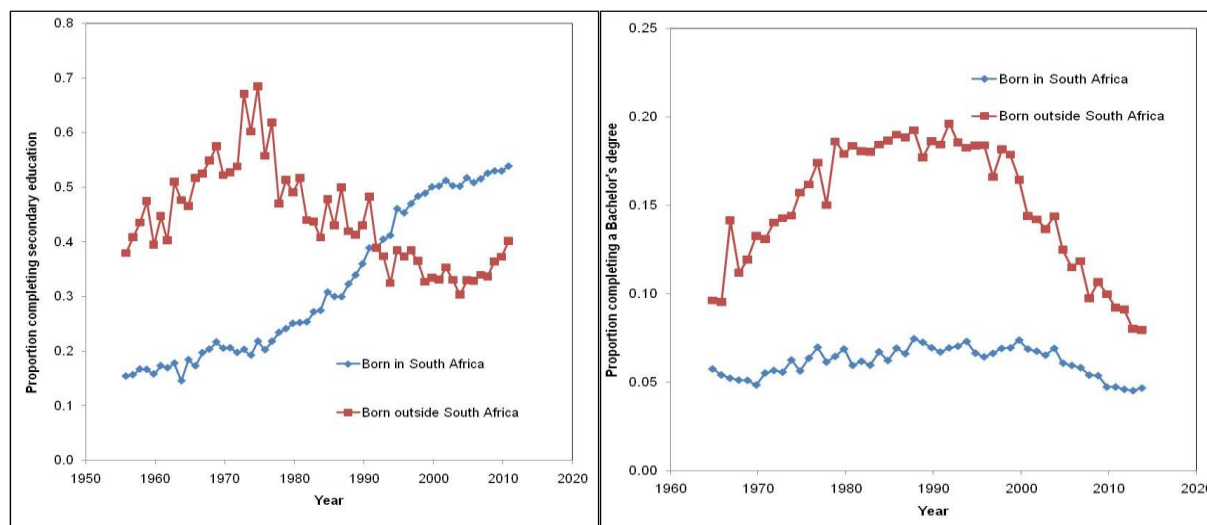
Source: Statistics South Africa

According to Figure 3.13, Proportions of persons who had completed primary education reflect a steeper upward trend for those born in South Africa relative to those born outside South Africa. This finding provides evidence of successful education policies implemented over time. The crossover of the trend associated with persons born in South Africa links to the 1980s. Proportions of persons born outside South Africa who had completed primary education remain at about 80%, signifying educational qualifications as an important incentive for foreigners. Figure 3.14 presents Proportions of persons who had completed their secondary education followed by those who had completed a bachelor's degree by whether born in or outside South Africa.

Similar to Proportions of persons who had completed their primary education; proportions of persons who had completed their secondary education for both those born in and outside South

Africa reflect similar trends, although at a lower scale, as expected. In addition, the crossover of the trend for persons born in South Africa occurs around the 1990s. Further, a steeper trend is noticeable for those born in South Africa relative to those born elsewhere. Interestingly, the trend for Proportions of persons born outside South Africa and who had completed their secondary education increased from about 40% in the 1960s to about 70% in the 1970s; thereafter, a moderate decline to about 30% occurred in the 2000s. Reasons for this decline include emigration to better-equipped countries after staying in the country for some years.

Figure 3.14: Time plot for proportions of persons completing secondary education and those completing a bachelor's degree



Source: Statistics South Africa

### 3.9 Conclusion

Consistency of basic educational attainment between censuses 2001 and 2011 was confirmed. Also, Proportions of educational attainment revealed that gaps in educational attainment between males and females were completely closed around the 2000s. However, scrutinising educational attainment by population group revealed that the gap between the white and Asian population groups had somewhat closed in the 1990s, while closing the gap between white population and both the coloured and black African populations still has a long way to go. This finding is in line with persisting wide gaps in net and gross enrolment rates that favour Asians and whites. It remains to be seen whether such gaps would be noticeable regarding education progression in the next chapter.

The gap between primary education in urban areas and primary education in both farm and traditional areas has been closed to a certain extent in the 2010s. For secondary educational



attainment, both urban and traditional areas have made some strides in increasing Proportions of persons who had completed grade 12. In contrast, farm areas showed some stagnation over time. One reason for this may be the massive rural-urban migration in the case of South Africa. This finding signifies the exodus of educated persons in search of employment in cities. Although some achievements were made in increasing Proportions of persons who had completed a bachelor's degree for all three settlement types, a moderate decline was observed from the 2000s onwards. One reason for such a decline may point to preference of technical training either in TVET's and other private colleges.

Interestingly, the gap between public and private institutions as far as basic educational attainment was concerned, has closed in the 2000s. However, that of attainment of a bachelor's degree still has a long way to go for both public and private institutions. Notwithstanding, private institutions kept leading from the 1980s to the 2010s.

A comparison of basic educational attainment between persons born in South Africa and those born elsewhere indicates that Proportions were higher for those born outside South Africa back in the 1950s, probably due to educational qualifications being an incentive for immigration. In contrast, Proportions for persons born in South Africa were lower in the 1950s due to past political policies. Notwithstanding, Proportions of persons who had completed basic educational attainment increased at a faster rate and surpassed persons born outside South Africa prior to the 2000s. The scenario for persons who had completed a bachelor's degree provides a different picture. While Proportions of persons who had completed a bachelor's degree are much higher and show an increase from the 1960s to 2000s, a steep decline can be observed in Proportions of persons born outside the country. Proportions of those persons born in South Africa show some stagnation during the same period.

Overall, educational intervention programmes implemented in the decades before liberation seem to have succeeded in advancing educational attainment over time. Challenges faced at the present moment are linked to teaching capabilities, the quality of basic education and the mismatch

between labour market demand and educational qualifications. The measure of Proportions of persons who had completed the next level of education after having completed the previous one may shine some light on education progression. Such analysis is provided in the next chapter.

## CHAPTER 4: EDUCATION PROGRESSION IN SOUTH AFRICA

### 4.1 Introduction

Evaluation policies implemented at the basic education level affect smooth progression from one grade to another in the case of South Africa. In the 12-year process from grade 1 to grade 12, learners were externally examined three times (in grades 7, 10 and 12) prior to the onset of democracy. Upon the implementation of a new curriculum (Curriculum 2005), external examinations were limited to grade 12. This means that examinations written in all other grades vary among schools. As a result, learners are not familiar with the external evaluation style they encounter at the end of the 12-year period of learning.

The recent policy of allowing learners who failed their grade 11 to proceed to grade 12 classes is a case in point. On the one hand, the grade 12 results showed that a substantial number of such students obtained acceptable grades, which allowed them to continue with tertiary studies. On the other hand, those who failed to obtain good results in grade 12 provided evidence that they truly failed their grade 11 class. This scenario is a cause for concern, undermining the evaluation systems used in the grades before grade 12. The ranking of schools by the percentage that passed grade 12 may be attributable to the practice of retaining numbers of learners at grade 11 solely for fear of higher fail rates in grade 12.

This chapter seeks to provide an analysis of Proportions of persons who had completed grade 12 after having completed grade 9. The importance of grade 9 lies in its being the last grade for compulsory education in the case of South Africa. Also, it is after the completion of grade 9 where the TVET stream and the academic stream (grade 10 onwards) divert. Some peculiar progression patterns have been noticed where learners who followed the academic stream up to grade 12 and passed with poor marks deviate back to the TVET stream, beginning at NTC1.

An analysis of Proportions of persons who went on to complete a bachelor's degree after having completed grade 12 is also provided. In addition, progression for all levels pertaining to the TVET stream is provided. Sections 4.2 up to 4.7 discuss progression ratios by sex, population group, province, settlement type, public or private institution and whether born in or outside South Africa respectively. Proportions of persons who had completed the next level after having completed the previous one are computed using a time-plotting technique.

The procedure followed included:

- i) tabulation of highest level of education completed from grade 0 to higher degree (Masters/PhD.) by single age, excluding persons who had no schooling and those who reported 'other' (0,3%) in the Census 2011 10% data;
- ii) computing the cumulative table for those who completed grade 9, grade 12 and a bachelor's degree individually;
- iii) computing the scroll sum (5 single ages);
- iv) computing progression ratios; and
- v) computing the time using the average age at which progression occurred.

Such tables include persons who were not attending at the time of enumeration in line with the question on highest level of education completed asked of all persons aged five and above.

## **4.2 Education progression ratios by sex**

Enrolment ratios and educational attainment revealed that the gap between younger males and females has been completely closed. However, a gap is observable among older ages for all educational levels, signifying past socio-economic imbalances. An analysis of economic variables such as income and labour force participation shows that the gaps are still significantly wide, where fewer proportions of women seem to be comparable with men. Table 4.1 presents the total numbers and proportions of persons who had completed one level and progressed to the next level by sex.

Table 4.1: Number and proportion of persons who completed one level and progressed to the next level by sex

Sex	Completing grade 9	Completing grade 12	Completing a bachelor's degree after completing grade 12	Total	Proportion completing grade 12 after completing grade 9	Proportion completing a bachelor's degree after completing grade 12
Male	11 703 755	6 313 057	652 551	18 669 363	53,9	10,3
Female	12 696 641	6 891 107	651 346	20 239 094	54,3	9,5
<b>Total</b>	<b>24 400 396</b>	<b>13 204 164</b>	<b>1 303 897</b>	<b>38 908 457</b>	<b>54,1</b>	<b>9,9</b>

It should be noted that the number of persons completing compulsory education are those who reported having completed grade 9 and higher, since those who reported to have completed grade 12 or a bachelor's degree or a higher degree had already completed that grade due to the progressive nature of education levels. The total number of persons completing grade 12 are those who reported that they had completed grade 12 and higher, although excluding those that had certificates and diplomas ranked less than grade 12. Also, the total number of persons completing a bachelor's degree include those who reported to have completed a bachelor's degree and higher. The rationale for including those who reported that they had completed higher levels than the one sought after grade/level emanates from the highest level completed asked for that provide such information and not all previously completed ones. As a result, excluding that group introduces bias in the proportion that completed the sought after level, e.g. primary education.

\*Excludes persons who reported that they had completed levels lower than grade 9 and those who reported to have completed their educational levels by means of other education systems.

Source: Statistics South Africa

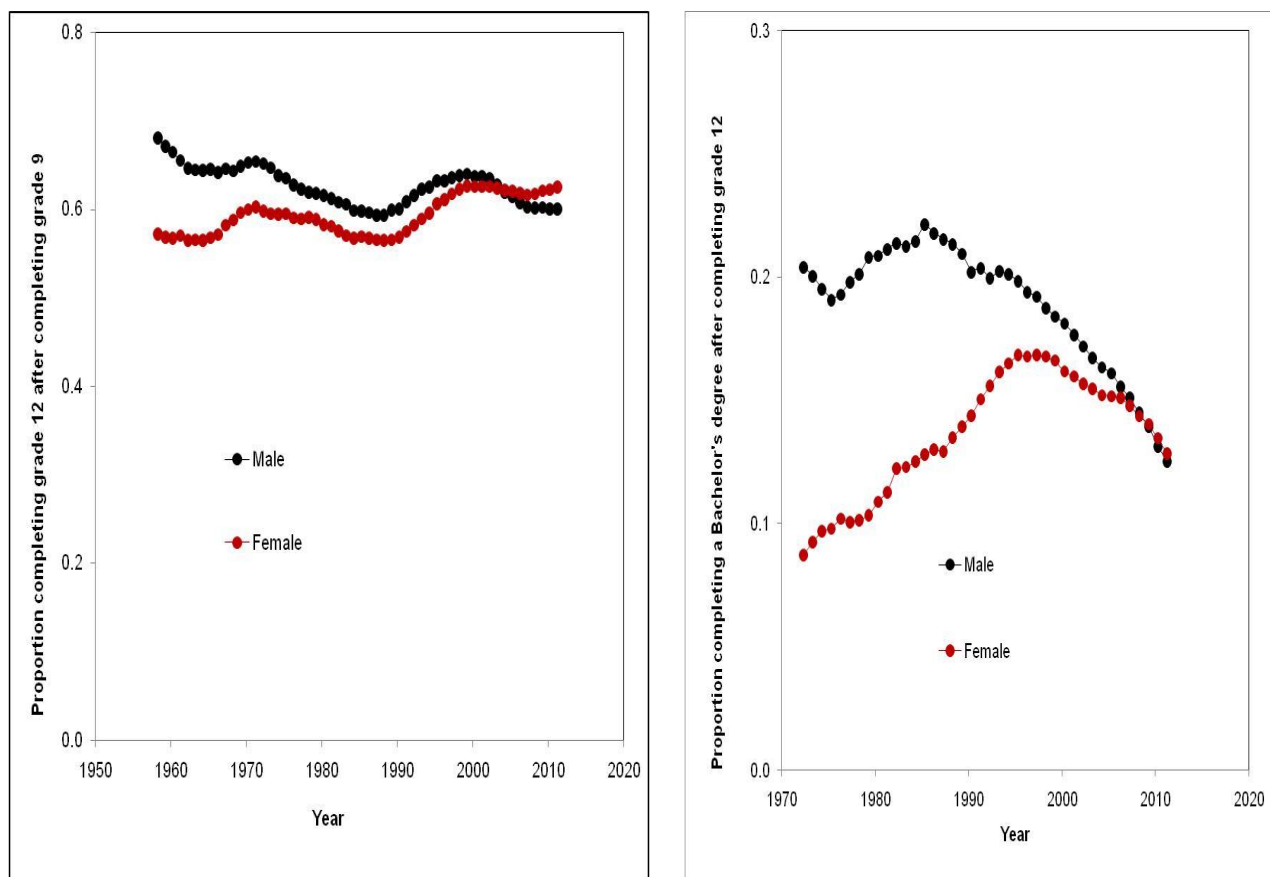
The closure of the gaps in proportions of males and females who had completed grade 12 after having completed grade 9 as well as those who had completed a bachelor's degree after having completed grade 12 is apparent in Table 4.1. Following this finding, there is a need to investigate the employability of women since they are progressing equally with men in terms of educational progression. Also, a comparative analysis of monthly income earned by employed men and women may be necessary. Figure 4.1 presents Proportions of persons who completed grade 12 after having completed grade 9 as well as those who completed a bachelor's degree after having completed grade 12 by sex.

While Proportions of males who completed grade 12 after having completed grade 9 reflect a moderately fluctuating downward trend, Proportions of women who completed grade 12 after having completed grade 9 show an upward trend over time. Around the 2000s, women had surpassed men as far as education progression is concerned, as was also the case for attainment of grade 12 as expounded in the previous chapter. Passing grade 12 has various implications regarding further studies as the matric certificates are classified by acceptance to study for a certificate,

diploma or bachelor's degree. These classifications indicate acceptance for different types of tertiary education.

The proportion of women who completed a bachelor's degree after having completed grade 12 was about half that of men back in the 1970s, as can be expected. However, Proportions of women completing a bachelor's degree after having completed grade 12 show a steep upward trend up to the 2000s, and thereafter a gradual decline at par with that for men up to the 2010s. A similar downward trend was observed in educational attainment for both sexes, as expounded in the previous chapter. Progression stagnation may suggest high drop-out rates at tertiary level that are driven mainly by the high fees demanded by higher education institutions, against poor quality basic education.

Figure 4.1: Time plot for proportions of persons completing the next level by sex



Source: Statistics South Africa

### 4.3 Education progression ratios by population group

Proportions of persons completing grade 12 after having completed grade 9 are higher for whites and Asians relative to coloureds and black Africans, as shown in Table 4.2.

Table 4.2: Number and proportion of persons who completed one level and progressed to the next level by population group

Population group	Completing grade 9	Completing grade 12	Completing a bachelor's degree after completing grade 12	Total	Proportion completing grade 12 after completing grade 9	Proportion completing a bachelor's degree after completing grade 12
Black African	17 922 674	8 837 398	567 456	27 327 528	49,3	6,4
Coloured	2 091 877	984 702	61 798	3 138 377	47,1	6,3
Indian/Asian	824 592	595 446	101 168	1 521 206	72,2	17,0
White	3 406 063	2 688 559	556 991	6 651 613	78,9	20,7
<b>Total</b>	<b>24 245 206</b>	<b>13 106 105</b>	<b>1 287 413</b>	<b>38 638 724</b>	<b>54,1</b>	<b>9,8</b>

It should be noted that the number of persons completing compulsory education are those who reported having completed grade 9 and higher, since those who reported to have completed grade 12 or a bachelor's degree or a higher degree had already completed that grade due to the progressive nature of education levels. The total number of persons completing grade 12 are those who reported that they had completed grade 12 and higher, although excluding those that had certificates and diplomas ranked less than grade 12. Also, the total number of persons completing a bachelor's degree include those who reported to have completed a bachelor's degree and higher. The rationale for including those who reported that they had completed higher levels than the one sought after grade/level emanates from the highest level completed asked for that provide such information and not all previously completed ones. As a result, excluding that group introduces bias in the proportion that completed the sought after level, e.g. primary education.

\*Excludes persons who reported that they had completed levels lower than grade 9 and those who reported to have completed their educational levels by means of other education systems.

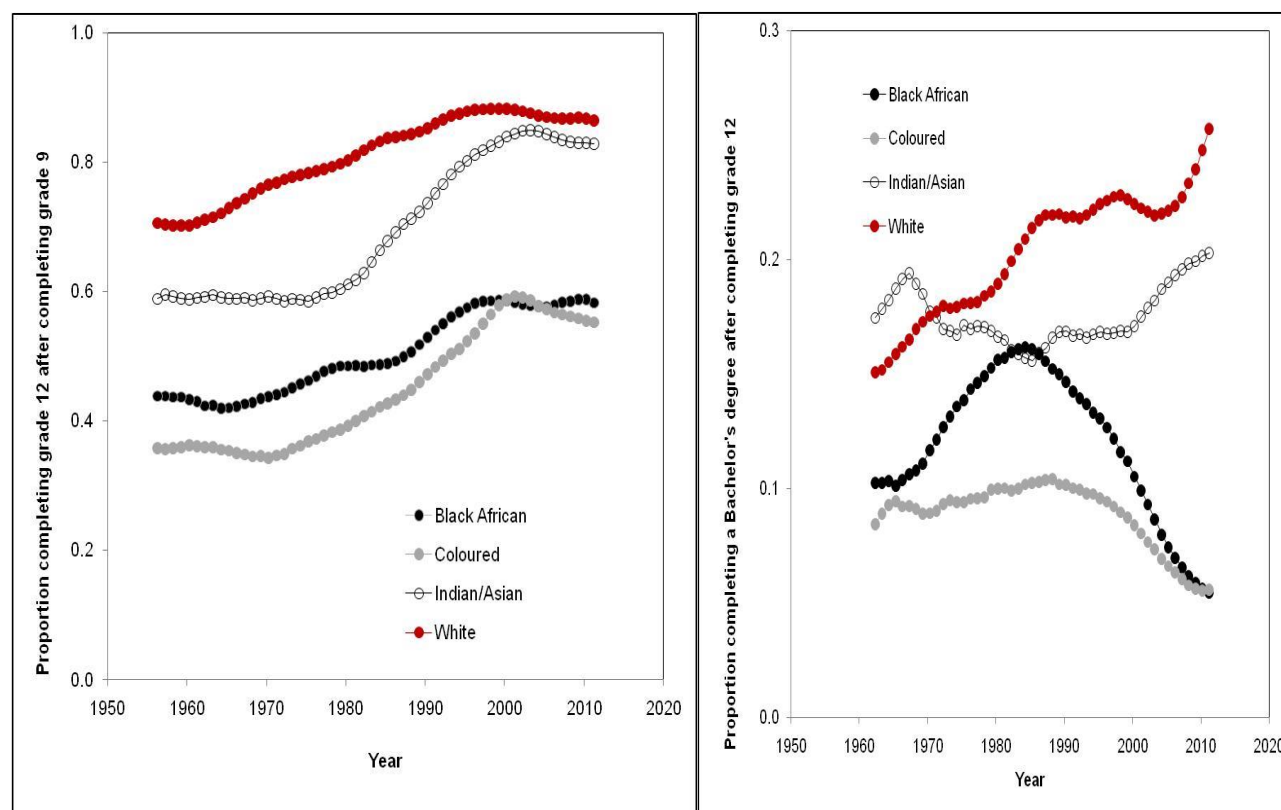
Source: Statistics South Africa

Figure 4.2 shows Proportions of persons completing grade 12 after having completed grade 9 as well as those completing a bachelor's degree after having completed grade 12 by population group. Although net enrolment rates for black Africans for the FET Phase were found to have increased greatly between 1996 and 2011 in percentage points relative to the other population groups, and have shown steeper upward trends for proportions of persons completing their secondary education, Proportions of persons completing grade 12 after having completed grade 9 show a more moderate upward trend over time, signifying minimal growth relative to other population groups as presented in Figure 4.2. The gap between whites and Asians has been closed from the 2000s onwards, as was also the case with educational attainment. Notwithstanding, the gap



between both the aforementioned population groups and both coloureds and black Africans remain significantly widened throughout to the 2010s. The link between educational attainment, progression and socio-economic development is a case in point, where the majority of black Africans are not accessing ICT facilities at present.

Figure 4.2: Time plot for proportions of persons completing the next level by population group



Source: Statistics South Africa

Proportions of persons completing a bachelor's degree reflect upward trends for whites and Asians over time, as shown in Figure 4.2. Those for black Africans reflect some minimal growth between the 1980s and the 1990s, and thereafter a downward trend up to the 2010s. In contrast, the trend for coloureds shows some stagnation over time. Even though the progression between grade 12 and tertiary education for both coloureds and black Africans is a cause for concern, the introduction of TVET colleges in the 2000s may have provided solace for economically challenged students in need

of technical skills that can be provided in a shorter space of time relative to those provided at higher educational institutions. Progression ratios for TVET's are provided in Section 4.8. In addition, the recent growth of private colleges (whether registered at the Department of Education or not) are getting support from both middle class and poor communities. One reason for this is the provision of shorter courses and greater flexibility for the time offered for attending classes.

#### **4.4 Education progression ratios by province**

Analysis of net enrolment rates for the FET Phase linked to persons aged 16–18 years showed variation by province in Census 2011 data. On the one hand, the highest net enrolment rates (60%–64%) were observed for Limpopo, Gauteng and Free State, while the lowest (49%–53%) were linked to Eastern Cape, Northern Cape and Western Cape. On the other hand, educational attainment favoured Gauteng, Western Cape and KwaZulu-Natal for all educational levels, as analysed in Chapter 3. The expectation is that progression ratios by province would be higher for the aforementioned provinces relative to others. Table 4.3 presents total numbers and proportions of persons completing the next level by province.

Table 4.3: Number and proportion of persons who completed one level and progressed to the next level by province

Province	Completing grade 9	Completing grade 12	Completing a bachelor's degree after completing grade 12	Total	Proportion completing grade 12 after completing grade 9	Proportion completing a bachelor's degree after completing grade 12
Western Cape	3 037 867	1 665 240	214 322	4 917 429	54,8	12,9
Eastern Cape	2 435 289	1 074 485	101 017	3 610 791	44,1	9,4
Northern Cape	453 806	216 890	12 691	683 387	47,8	5,9
Free State	1 209 867	623 237	51 284	1 884 388	51,5	8,2
KwaZulu-Natal	4 591 552	2 482 618	168 718	7 242 888	54,1	6,8
North West	1 435 189	725 678	52 012	2 212 879	50,6	7,2
Gauteng	7 283 450	4 511 568	570 059	12 365 077	61,9	12,6
Mpumalanga	1 770 906	940 102	53 938	276 4946	53,1	5,7
Limpopo	2 182 469	964 347	798 55	3 226 671	44,2	8,3
<b>South Africa</b>	<b>24 400 395</b>	<b>13 204 165</b>	<b>1 303 896</b>	<b>38 908 456</b>	<b>54,1</b>	<b>9,9</b>

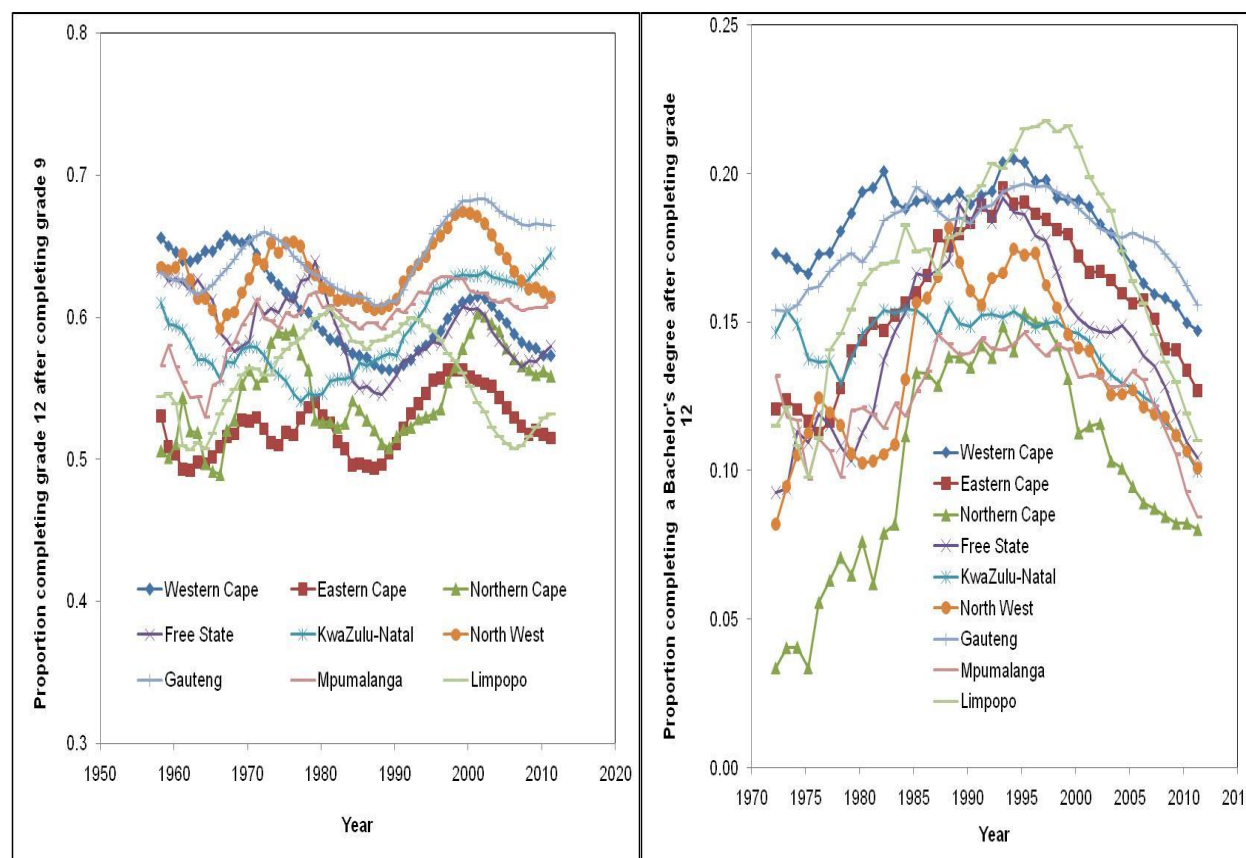
It should be noted that the number of persons completing compulsory education are those who reported having completed grade 9 and higher, since those who reported to have completed grade 12 or a bachelor's degree or a higher degree had already completed that grade due to the progressive nature of education levels. The total number of persons completing grade 12 are those who reported that they had completed grade 12 and higher, although excluding those that had certificates and diplomas ranked less than grade 12. Also, the total number of persons completing a bachelor's degree include those who reported to have completed a bachelor's degree and higher. The rationale for including those who reported that they had completed higher levels than the one sought after grade/level emanates from the highest level completed asked for that provide such information and not all previously completed ones. As a result, excluding that group introduces bias in the proportion that completed the sought after level, e.g. primary education.

\*Excludes persons who reported that they had completed levels lower than grade 9 and those who reported to have completed their educational levels by means of other education systems.

Source: Statistics South Africa

Figure 4.3 presents proportions of persons completing grade 12 after having completed grade 9 as well as those completing a bachelor's degree after having completed grade 12 over time.

Figure 4.3: Time plot for proportions of persons completing the next level by province



Source: Statistics South Africa

Proportions of persons completing grade 12 after having completed grade 9 reflect some minor improvement over time for most of the provinces, as shown in Figure 4.4. There are three distinct groups demonstrated. Firstly, the provinces that improved over time are Gauteng, KwaZulu-Natal, Northern Cape and Mpumalanga. Secondly, the provinces of which Proportions of persons completing grade 12 after having completed grade 9 stagnated over time, namely Limpopo, North West, Eastern Cape and Free State. Lastly, Western Cape is the only province showing some decline in Proportions of persons completing grade 12 after having completed grade 9. As a result, the findings show unexpected patterns.

Proportions of persons completing a bachelor's degree after having completed grade 12 can also be categorised into three groups, as illustrated in Figure 4.3. Firstly, those provinces of which Proportions of persons completing a bachelor's degree after having completed grade 12 had increased, namely, Northern Cape and North West. Secondly, those provinces of which Proportions of persons completing a bachelor's degree after having completed grade 12 had declined over time, namely Mpumalanga, Western Cape and KwaZulu-Natal. Lastly, those provinces of which Proportions of persons completing a bachelor's degree after having completed grade 12 are at the same level as they were in the 1950s, although there are some improvements in the years in between the 1950s and the 2010s, namely Limpopo, Eastern Cape, Gauteng and Free State.

In contrast to educational attainment, progression from one level to the next one proves to be harder to improve. Whereas educational attainment was somewhat linked to economic development, progression is not. There is a need for further research on the underlying factors regarding observed scenario. Possible attributors may include household socio economic status, parental education, lack of teacher training and a myriad of other factors in the case of this country.

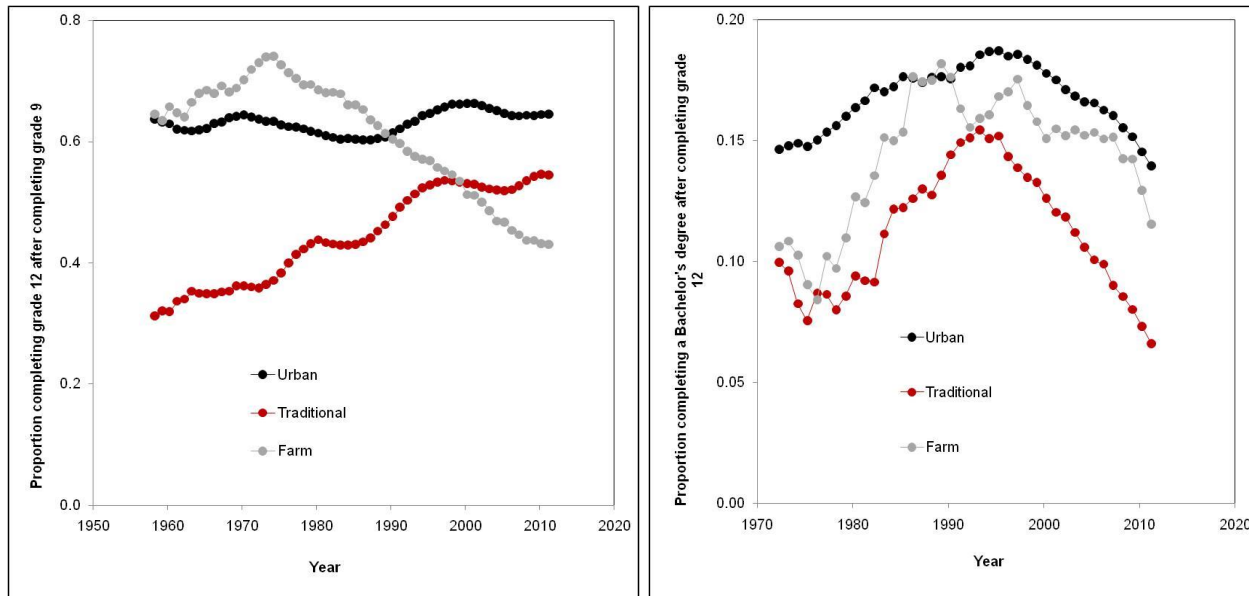
#### **4.5 Education progression ratios by settlement type**

Settlement types in the case of South Africa denote geography types of human settlements. For the purpose of this report, settlement types are classified as urban, traditional and farm areas. Urban areas are expected to show better progression from one level to the next one relative to farm and traditional areas. This is so because the latter may still be experiencing shortage of schools and transportation to schools, and a lack of basic food and shelter at home. Figure 4.4 shows Proportions of persons completing one level and progressing to the next level by settlement type.

Proportions of persons completing grade 12 after having completed grade 9 provide varying trends over time. While those for traditional areas reflect an upward trend from the 1950s to the 2010s, those for urban areas show some stagnation at the same period, whereas those for farm areas reflect a decline from the 1970s to the 2010s. Traditional areas include portions of areas that are

linked to the former Thohoyandou, Bophuthatswana, Venda and Ciskei (TBVC) states and national states. Such areas are still in need of socio-economic development. Successes of the recent policies to enhance socio-economic development in rural areas seem to be clear. However, farm areas show less improvement.

Figure 4.4: Time plot for proportions of persons completing the next level by settlement type



Source: Statistics South Africa

In contrast to Proportions of persons completing grade 12 after having completed grade 9, Proportions of persons completing a bachelor's degree after having completed grade 12 reflect similarities among the three settlement types, as shown in Figure 4.4. Similarly, with many of other differentials analysed such as sex and province, Proportions of persons completing a bachelor's degree after completing grade 12 reflect an upward trend from 1970s up to 2000s and thereafter, a downward trend up to 2010s.

#### 4.6 Education progression ratios by institution

Yet another important differential in education progression is the type of educational institution (public or private) that is being attended. The question was asked of persons who indicated that they were attending some educational institution at the time of data collection.

Figure 4.5 shows proportions of persons completing grade 12 after having completed grade 9 as well as those of persons completing a bachelor's degree after having completed grade 12 by type of

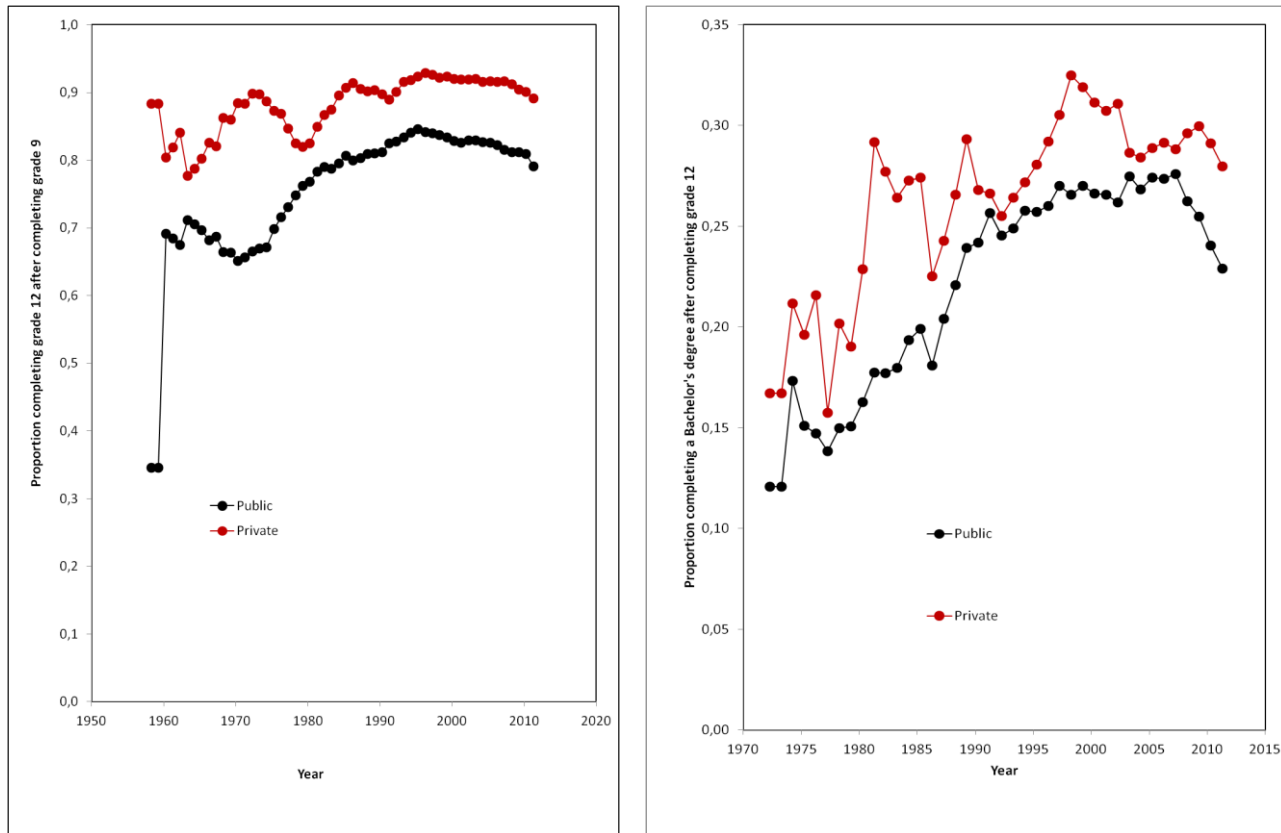
educational institution. Proportions of persons completing grade 12 after having completed grade 9 reflect different trends for public and private institutions. Overall, progression to the next level was higher among those who attended private institutions compared to those who attended public institutions. Trends on progression for public institutions show a somewhat fluctuating slight decline from the 1950s to the 2010s, while those for private institutions reflect a fluctuating slight increase, as shown in Figure 4.5. While this finding may confirm the expectations, concerns are raised about the quality of education provided by the recent boom of private colleges, and also about the quality of education provided by public institutions.

Proportions of persons progressing to a bachelor's degree after having completed grade 12 reflect a clear convergence of trends for public and private institutions back in the 1970s to the 1980s. Henceforth, the trend for public institutions shows some decline, while that for private institutions shows a fluctuating upward trend. Evidence of fewer persons completing their bachelor's degree after having completed grade 12 in private institutions is observable though the fluctuating points.

The results show that gaps exist between persons completing their education at public institutions and those completing their education at private educational institutions. However, the existing gaps seem to be narrowing, which may be attributable to the government's improved service delivery in public institutions.



Figure 4.5: Time plot for proportions of persons completing the next level by institution



Source: Statistics South Africa

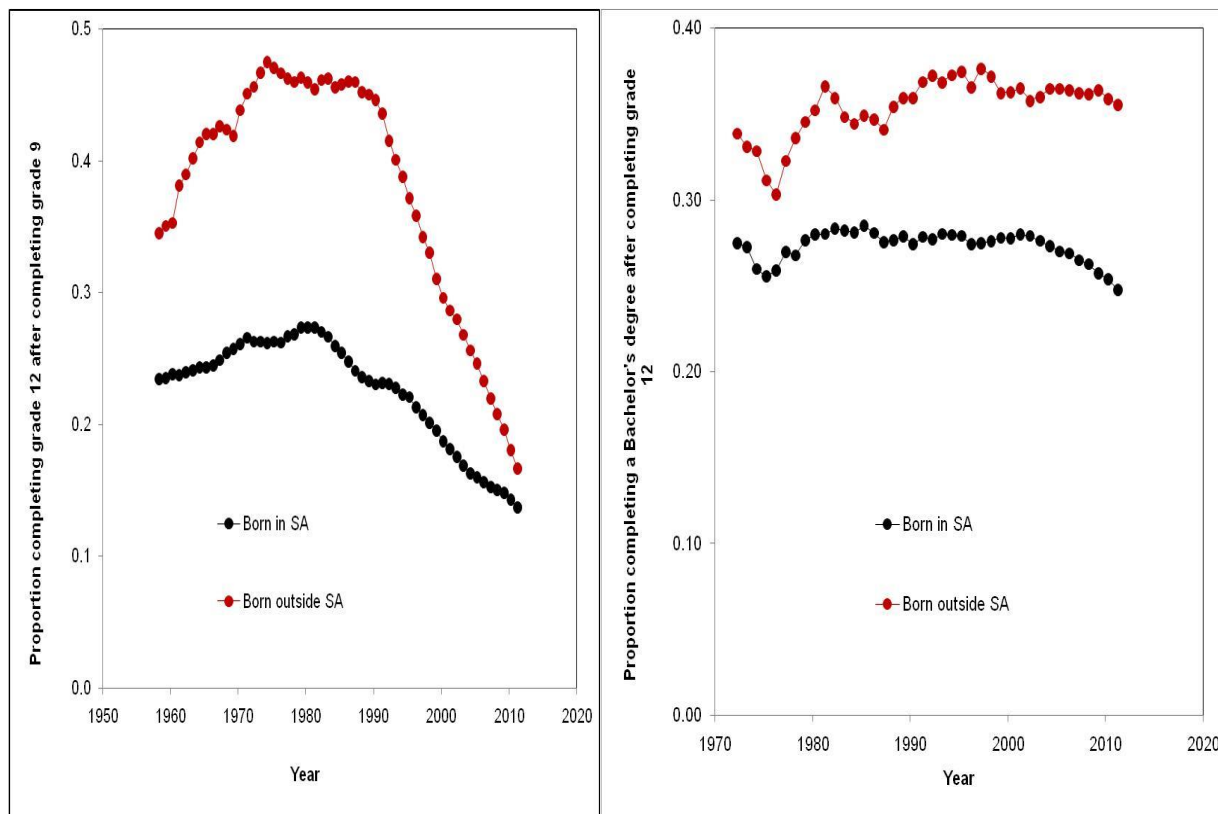
#### 4.7 Education progression ratios by whether born in or outside South Africa

The importance of such an analysis lies in the persisting numbers of immigrants entering the country for different reasons. It is expected that immigrants would fare better in Proportions of persons completing the next level as per the perceived better quality of education provided in many countries. Figure 4.6 presents Proportions of persons completing grade 12 after having completed grade 9 as well as those completing a bachelor's degree after having completed grade 12.

Proportions of persons completing grade 12 after having completed grade 9 reflect similar patterns by year of completion between those born in and outside South Africa. Both proportions show an

upward trend from the 1960s to the 2000s and thereafter, a downward one as shown in Figure 4.6. Proportions for foreign-born persons are much higher than those of born in South African, although some convergence is noticeable around the 2010s. One reason for this observation may be the fact that most of the persons born outside Africa who came into the country without having completed grade 12 may prefer to hunt for elementary jobs rather than advancing their educational attainment. This particular trend coincides with the 1990s, where the influx of younger adults from neighbouring African countries increased up to present. It is believed that such influx has a substantial number of unskilled labourers.

Figure 4.6: Time plot for proportions of persons completing the next level by whether born in or outside South Africa



Source: Statistics South Africa

According to Figure 4.6, a comparison between persons born in South Africa and those born outside South Africa shows similar trends over time between Proportions of persons completing grade 12 after having completed grade 9, and Proportions of persons completing a bachelor's degree after having completed grade 12. An increased number of lower education levels from neighbouring African countries have been recently noticeable.

As can be expected, Proportions of persons completing a bachelor's degree are higher for persons born outside South Africa than those for persons born in South Africa as presented in Figure 4.6. One reason for this is that foreign-born students are increasing in South African higher learning institutions, although they may not necessarily have been naturalised. Some of the aforementioned

students prefer private institutes of higher learning due to affordability while some are scholarships recipients. Overall, Proportions of persons completing a bachelor's degree show a worrying downward trend from the 1990s onwards. Perhaps this finding is shining some light on the latest preference of private and TVET colleges over universities. Of concern may be that some of the skilled persons born outside the country (whether having been naturalised or still residing on permanent resident permit) are leaving the country for other better equipped western ones.

#### **4.8 Education progression ratios for TVET colleges**

The Skills Development Act of 1998 mandated the provision of a framework to devise and implement strategies to improve the skills of the South African workforce. Following the aforementioned Act, the National Student Financial Aid Scheme (NSFAS) was created, which attempts to address inequitable access to higher education. Later on, TVET colleges were initiated to resolve the skills shortage problem that appeared to be an obstacle in endeavours to participate in the globalised market by South African companies. Previously, skills training were done in a few apprentice schools, focusing on a small proportion of South Africans as per the political system of that time. Notwithstanding, a number of skills training institutions were developed in the independent homelands assigned for black Africans, namely Transkei, Bophuthatswana, Venda and Ciskei (known as the TBVC States) as well as in national states (e.g. Kwanagane, Kwandebele, etc.) within the broader country. Although the quality and adequacy of resources for such institutions are not known, data reflect some results on skills training.

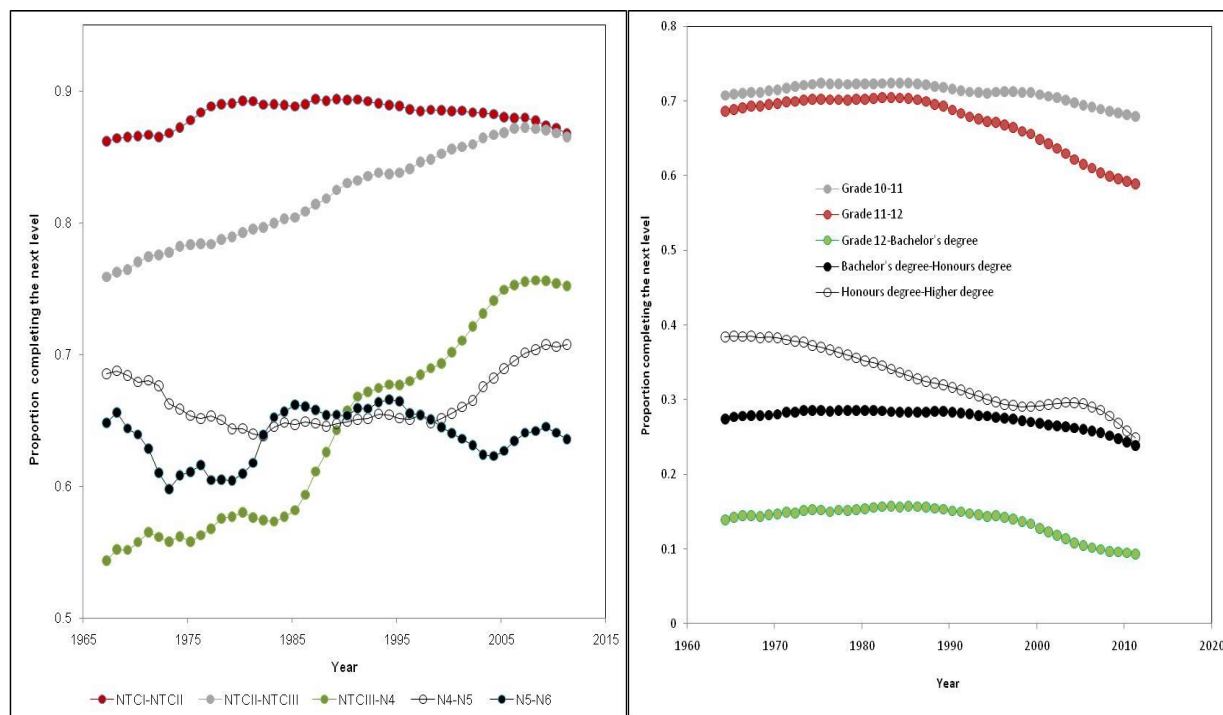
At present, there are about 50 Technical Vocational Education and Training (TVET) colleges nationally, formerly known as FET colleges, where the present government has invested financial resources. A need arose to redefine the term “college” in the South African educational system. The Further Education and Training Amendment Bill (B24, 2012) came with a ratifying clause clarifying the “college” as a public or private further education training institution that is established as a

technical vocational training college, or a community education and training institute or a private college that is established under the Act.

Progression ratios of learners who attend such colleges need to be examined, with a view to update the government on the performance of the policy intervention programmes mentioned earlier. Progression ratio refers to the proportion of persons, among those who completed the lower level, who continues to complete the next level. The numerator of the progression ratio represents all persons who completed the next level, while the denominator represents all persons who completed the lower level. As it was done with proportions that completed certain broad levels such as primary education, the number that completes, say grade 12 (which would serve as a numerator when calculating the proportion who completed grade 12 after completing grade 9) includes those that reported having completed grade 12 and higher, although excluding those that completed some certificate or diploma without having completed grade 12. Also, the number that completed grade 9 (which would serve as a denominator when calculating the proportion who completed grade 12 after completing grade 9) includes those that reported having completed grade 9 and higher.

Census 2011 data can be used to calculate progression ratios of persons who were tabulated as have completed NTCI, NTCII, NTCIII, N4, N5, and N6. However, the age at which educational attainment is tabulated refers to that reported at census time and not necessarily to the age at which the particular level was completed. That notwithstanding, time-plotting of educational attainment can be employed on these census data. This method generates time plots from data collected at a point in time, with birth cohorts specified by age group. In a time plot, the horizontal axis represents time while the vertical one represents the average age at which the event of completing a particular level of education occurred (Feeney, 2009). The average age at completing NTCI to N6 ranges from 25 years to 30 years respectively (Census 2011 data). Figure 4.7 presents progression ratios from one level to the next one on a time plot.

Figure 4.7: Time plot for proportions of persons completing the next level: TVETs and higher learning institutions



Source: Statistics South Africa

Broadly, the progression ratios for TVET's reflect expected patterns. Firstly, those representing lower levels appear to be higher than those representing higher levels. Secondly, the upward trends for most of the levels seem to be associated with the period after the year 2000. The progression from NTCI to NTCII is around 85% from the late 1960s to 2010, although with some fluctuations at certain periods, as shown in Figure 4.7. The progression from NTCII to NTCIII reflects a gentle upward trend from the late 1960s to the 2000s, where it coincides with the progression ratio from NTCI to NTCII. Interestingly, the progression from NTCIII to N4 shows a fluctuating upward trend from the late 1960s to around the 2000s, where it stagnates. While the upward trend may suggest success of the NSFAS programme in motivating students to progress to higher levels, the stagnation between 2000 and 2011 may imply expanded employment placements or possible constraints with the funding system. It would be useful therefore, to look into Proportions employed as well as the industry of employment for these

levels. At the time of analysis for this report, industry and occupation data from Census 2011 were still undergoing assessment. The progression from N5 to N6 reflects a fluctuating trend from the 1960s to around the 2010s. This may suggest the same scenario explained above, given the employability of persons that have completed N5.

According to Figure 4.7, proportions of persons completing the next level in the academic stream are lower than those shown for TVET's. Almost all proportions of progression from one level to the next reflect some downward trends from the 1990s onwards. Academic progression from grade 11 to grade 12 and from grade 12 to a bachelor's degree gives cause for concern, while the findings link to what was found in Proportions of persons who had completed both grade 12 and a bachelor's degree in the previous chapter. In addition, these findings are in line with the findings discussed in the progression by population group in section 4.3, where declining trends in Proportions of persons completing a bachelor's degree after having completed grade 12 were linked to coloureds and black Africans. As a result, the reason that there are lower proportions of black Africans completing a bachelor's degree after having completed grade 12 lies in the impressive proportions of persons completing the next level in TVET's.

#### **4.9 Education progression to the next level by post-school field of education**

Field of education in the case of South Africa pertains to broad streams of education after completion of compulsory education at grade 9 level. One may choose then to follow the academic stream by proceeding to grade 10, or follow the TVET stream to acquire technical skills, or undertake courses provided by private colleges. Notwithstanding, learners who have passed their grade 12 with subjects pertaining to Natural & mathematical sciences with certain unacceptable grades are advised to pursue other fields such as Humanities.

The outcome of such practices is apparent in educational attainment data where Proportions of persons completing junior or higher degrees for Social sciences and Humanities are higher compared to those for Natural and Engineering sciences. In contrast, the labour market

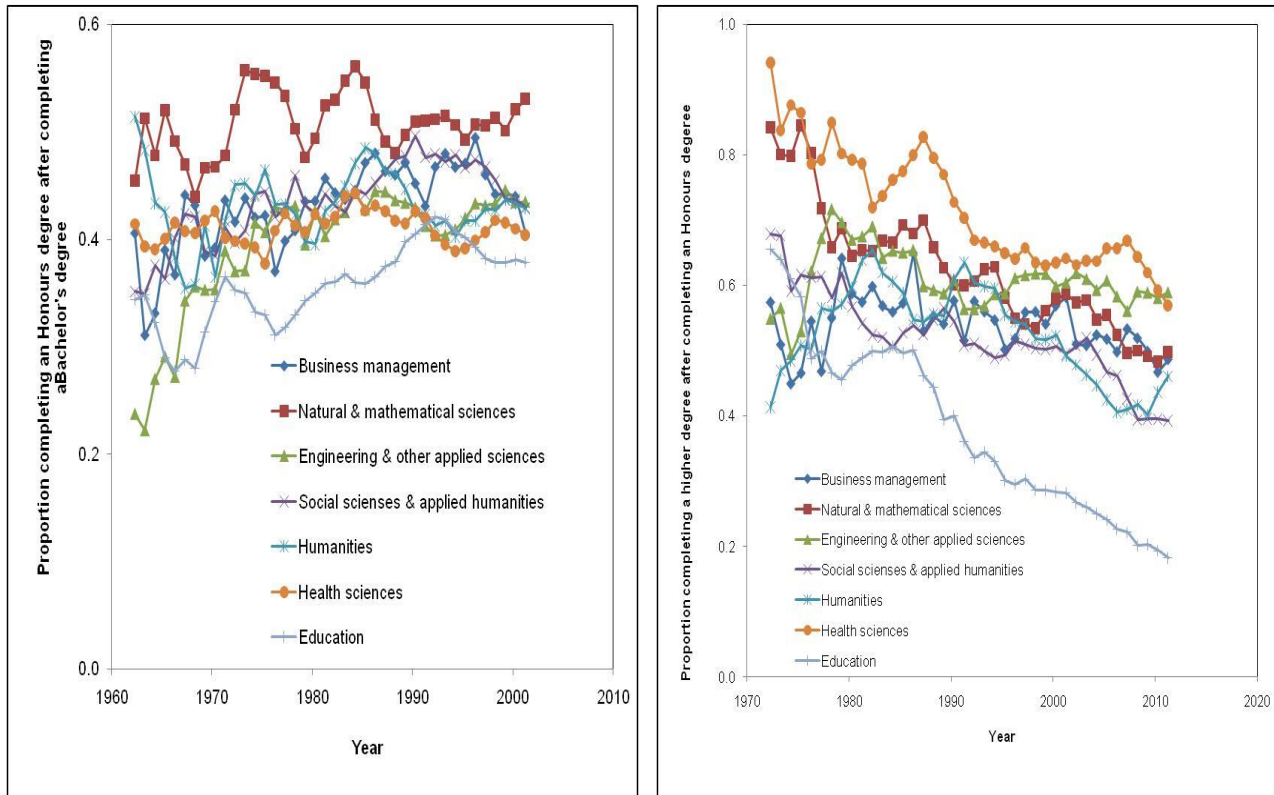
demand may be pointing at Engineering sciences. For the purpose of this report, about 22 fields of education categorised in the Census 2011 questionnaire were grouped into seven broad groups informed by the Draft National Plan for Higher Education (CESMs) published in 2001. The first figure demonstrates a comparison of proportions of persons completing an honours degree after completing a bachelor's degree by grouped field of education. The second one presents a comparison of proportions of persons completing a higher degree (Masters or PhD) after completing an honours degree. Both these charts are within Figure 4.8.

Overall, proportions of persons completing an honours degree after having completed a bachelor's degree reflect some stagnation over time. As can be expected, such persons are fewer for all grouped fields of education in the case of this country. Further scrutiny of the trends reveals that fields of education that show an upward trend between the 1960s and the 2000s include Business management, Natural & mathematical sciences, Social sciences, Engineering and other applied sciences, and Education. While Humanities reflects some slight decline, Health sciences shows some stagnation throughout the period, although with some fluctuations, as shown in Figure 4.8. One reason for this stagnation may be the exodus of health personnel to better-equipped countries.

In contrast to proportions of persons completing an honours degree after having completed a bachelor's degree, proportions of persons completing a higher degree after having completed an honours degree reflect a downward trend from the 1970s to the 2010s, as shown in Figure 4.8. Fields of education that show a decline include Health and Social sciences, Education, Natural and mathematical sciences, and Business management. Fields of education that shows some slight upward movement include Engineering and other applied sciences and Humanities, as illustrated in Figure 4.8.



Figure 4.8: Time plot for proportions of persons completing the next level by field of education



Source: Statistics South Africa

## 4.10 Conclusion

Following the findings of narrowed gaps between men and women in enrolment and attainment, this chapter concludes that such gaps have also been narrowed in education progression over time. This achievement may be attributed to successful equity policies. However, gaps between the four distinct population groups seem to be narrowed only between whites and Asians, and remain wider between the aforementioned two population groups and the remaining coloured and black African population groups. This scenario echoes the one observed in educational attainment. The question is; how long will it take to achieve equality in educational attainment and progression for all?

While attainment favoured provinces that are economically developed, progression revealed a contrary scenario, where Western Cape is linked to declines and KwaZulu-Natal to stagnation over time. Progression from one level to the next proves harder to improve. Urban areas revealed

stagnation or downward trends, while traditional areas did well only for grade 9 to grade 12 progressions, and farms were not promising at all, probably due to persisting rural-urban migration.

As had been the case with educational attainment, progression favours private institutions over public ones, as can be expected due to increasing net enrolment rates linked to private schools in Chapter 2. Public institutions show stagnation over time as well as declining proportions completing the next level. This finding transfers to more preference of private institutions that many South Africans may not be able to afford.

Progression was higher for persons born outside South Africa compared to those born in South Africa, as can be expected, since educational qualifications form part of the incentives at the time of immigration. Unexpectedly, the proportion of persons born in South Africa and those born outside both reflected some decline in grade 9 to grade 12 progressions in the 2000s. On the part of progression from grade 12 to a bachelor's degree, a slight improvement was observed for those born outside South Africa relative to those born in South Africa.

The TVET progression ratios among the different levels seem to highlight the increasing interest to continue up to the last level (N6). However, the proportion of persons following this educational system remains low over time. In the midst of raising youth unemployment, this particular labour related training may be the answer. Therefore, prospective learners need to be motivated to utilise the benefits of undergoing such training. The attitude towards TVET colleges may be turned around if some review of the NQF levels attached to such education can be done.

In contrast to impressive progression to the next level for the TVETs, that for higher learning institutions gives cause for concern. Progression to the next academic level revealed stagnation or decline over time. The poor progression from grade 11 to grade 12 is a case in point, signifying that fewer learners expected to write and pass grade 12. This was echoed in the proportion of approximately 50% black Africans and coloureds attaining grade 12 around the 2000s. The declining trends that were revealed for the progression from grade 12 to a bachelor's degree may easily be thought of as a result of preference of other streams of education over higher learning institutions.

Lastly, progression from a bachelor's to an honours degree improved for Business management, Natural and mathematical sciences, Social sciences, Engineering and other applied sciences, and Education. However, progression to an honours degree did not improve for Health sciences and Humanities. In contrast, progression from honours to a higher degree improved slightly for Engineering and other applied sciences and Humanities. The dire need for scarce engineering skills seems to be accounted for. However, the demand for skilled health personnel still has a long way to go before it can be regarded as having been met.

## **CHAPTER 5: EDUCATION DIFFERENTIALS**

### **5.1 Introduction**

The known relationship between educational attainment and economic status as well as parental education is not questioned. However, the recent rise in tertiary educational attainment has been linked to migration status in the case of South Africa, where more than 50% of students attending classes enjoy immigration status. This is so because higher educational attainment in the case of the African continent as a whole is mostly associated with donor funding.

Employment status regarding tertiary educational attainment is another differential. Due to continuous soaring levels of unemployment among the youth in South Africa, there is a need to enhance intervention programmes for skills development. Even so, highly competitive immigrants from other African countries who are either trained within the country or elsewhere may pose a problem. In addition, monthly income of those who are employed is an important indicator of benefits for persons with tertiary qualifications.

The objective of this chapter is to shine some light into the relationship between educational attainment and both employment status and income. Such relationships are highlighted by educational level, field of education, and sex. Firstly, the association between both level of education and field of education and employment status is discussed. Secondly, age proportions of unemployed persons by educational level and field of post-school education are elaborated on. Lastly, an analysis of income for persons who reported that they were employed during Census 2011 enumeration is provided.

### **5.2 Educational attainment and employment status by education level**

Closure of both educational attainment and progression gaps between men and women has been discussed in Chapter 3 and Chapter 4 respectively. The need to evaluate whether the same applies to employment status cannot be over-emphasised, given the continuous high unemployment rates, which are also more pronounced for the youth in the case of South Africa. This scenario is shared by

other fellow African countries. The chi square test of association is used to evaluate the association between employment status and education level or field of education by selected differentials.

It should be noted that all tables for selected variables for the test of association exclude “other” or “unspecified” or missing values. Age was restricted to those aged 25 to 64 years. Tables were run cumulatively for a particular education level as it was done in Chapter 3. For example, persons who reported that they had completed secondary education (grade 12) include those who completed higher levels such since they are considered to have completed that level as well as others. Persons who had completed NTCIII include those who had completed N4 to N6 since they are considered to have completed that level as well. Persons who had completed a bachelor’s degree include those who had completed post-graduate diplomas and higher degrees.

### **5.2.1 Educational attainment and official employment status**

At the time of compiling this report, employment statistics were not yet revised by taking into consideration the extended coding of Census 2011 industry and occupation results. Readers should therefore, approach the employment statistics provided in this report with caution. Table 5.1 presents a frequency distribution of official employment status by educational level and sex for persons aged 25 to 60 years.

Table 5.1: Distribution of employment status by educational level and sex

Sex	Official employment status	Completed secondary education	Completed NTCIII	Completed a bachelor's degree	Total
<b>Male</b>					
	Employed	1 965 304	143 812	472 829	2 581 945
	Unemployed	718 929	14 584	17 294	750 807
	Not economically active	203 516	2 832	3 105	209 453
	<b>Total</b>	<b>*2 887 749</b>	<b>*161 228</b>	<b>*493 228</b>	<b>*3 542 205</b>
<b>Female</b>					
	Employed	1 391 503	51 835	464 299	1 907 637
	Unemployed	909 031	16 614	21 697	947 342
	Not economically active	312 226	3 703	4 149	320 078
	<b>Total</b>	<b>*2 612 760</b>	<b>*72 152</b>	<b>*490 145</b>	<b>*3 175 057</b>

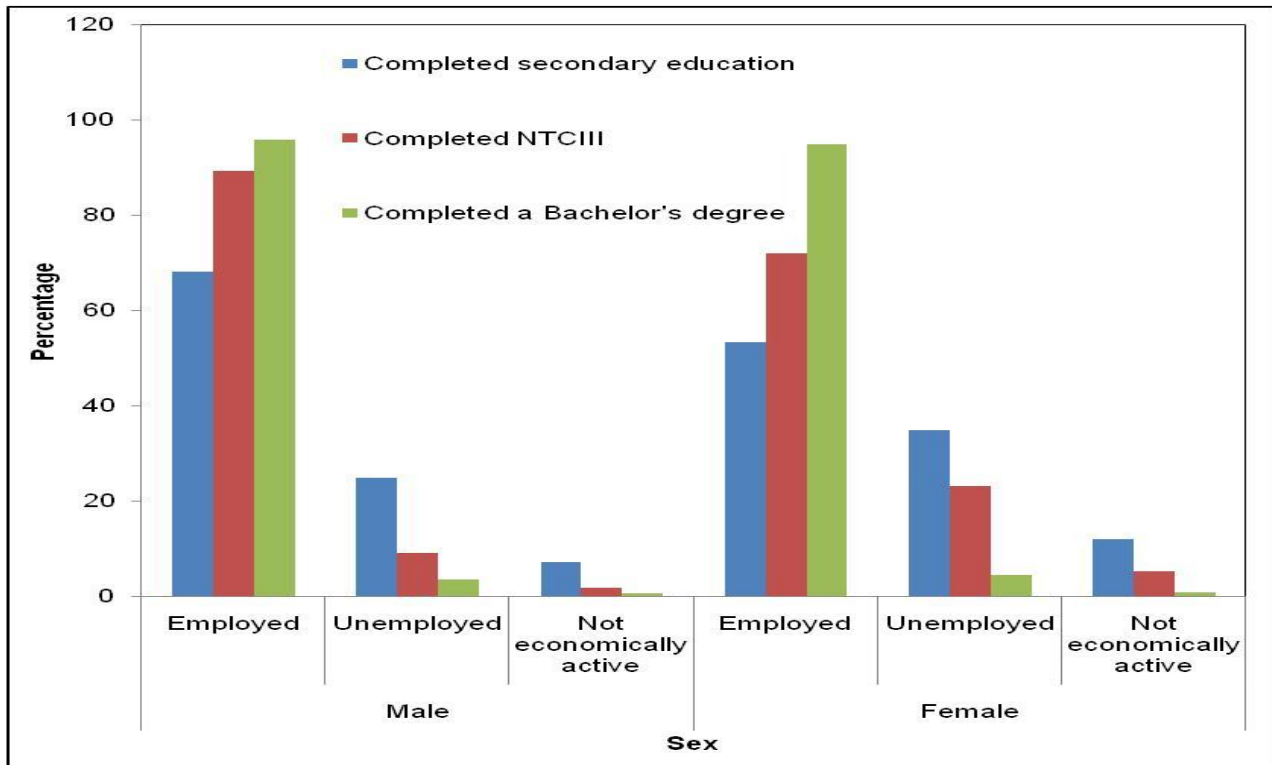
\*Totals completing secondary education include persons who have completed grade 12 and higher education levels as those are considered to have completed the particular level as well due to education progression, although those that had completed certificates or diplomas less than grade 12 are excluded. Totals for those completing NTCIII include those who reported that they had completed NTCIII up to N6 for the same aforementioned reason. Totals for those completing a bachelor's degree include those that reported that they had completed a bachelor's degree and higher.

Totals by employment status exclude those who reported their status as "other not economically active".

Source: Statistics South Africa

Evidence of fewer employed persons pursuing the TVET stream is provided in Table 5.1, probably emanating from fewer enrolments for such education as shown in all three previous chapters. The number of employed persons who have completed both secondary and a bachelor's degree are also not convincing, as discussed in Chapter 4. Figure 5.1 shows column percentages of the same information provided in Table 5.1 by sex.

Figure 5.1: Percentage distribution of completed educational level by employment status



The proportion that completed NTCIII includes those that reported that they have completed NTCIII up to N6 due to the progressive nature of these educational levels. It should be noted also that the total for employment status excludes the minor group of persons categorised as “other not economically active”.

Source: Statistics South Africa

Percentages of employed persons are in line with the educational level, where increment is linked to higher education, as expected. Interestingly, higher percentages are shown for employed persons who had completed NTCIII, relative to secondary education for both men and women, even though both levels are ranked at level 4 as per the National Qualifications Framework (NQF). Overall, proportions of employed persons are higher for men than for women for all educational levels except for those who have completed a bachelor's degree, as presented in Figure 5.1. As a result, gaps in employment access are still wide for education levels lower than a bachelor's degree. In conclusion, the Pearson chi-square statistics,  $\chi^2 = 72\,368,5$  and  $109\,523,5$  for males and females

respectively as well as  $p < 0.001$  for each leads to a conclusion that there is a strong association between educational attainment and employment by sex.

### 5.2.2 Educational attainment and employment status by population group

Gaps relating to educational attainment and progression among the population groups were found to be widening in Chapter 3 and Chapter 4. Equal access to employment is therefore not expected. It remains to be seen whether that same population groups that were found to be struggling in educational attainment and progression would still be lagging behind in accessing job opportunities. Table 5.2 shows the distribution of persons aged 25 to 64 years by official employment status, educational level and population group.

Table 5.2: Distribution of persons by official employment status, educational level and population group

Population group	Official employment status	Completed NTCIII	Completed a bachelor's degree	Total
Black African	Employed	88 126	411 154	499 280
	Unemployed	26 202	26 442	52 644
	Not economically active	5 668	5 087	10 755
	<b>Total</b>	<b>119 996</b>	<b>442 683</b>	<b>562 679</b>
Coloured	Employed	13 395	45 496	58 891
	Unemployed	1 306	1 572	2 878
	Not economically active	335	307	642
	<b>Total</b>	<b>15 036</b>	<b>47 375</b>	<b>62 411</b>
Indian/Asian	Employed	6 110	72 509	78 619
	Unemployed	388	2 739	3 127
	Not economically active	39	263	302
	<b>Total</b>	<b>6 537</b>	<b>75 511</b>	<b>82 048</b>
White	Employed	86 553	396 973	483 526
	Unemployed	3 262	7 673	10 935
	Not economically active	493	1 460	1 953
	<b>Total</b>	<b>90 308</b>	<b>406 106</b>	<b>496 414</b>

\* Totals completing secondary education include persons who have completed grade 12 and higher education levels as those are considered to have completed the particular level as well due to education progression although those that had completed certificates or diplomas less than grade 12 are



excluded. Totals for those completing NTCIII include those who reported that they had completed NTCIII up to N6. Totals for those completing a bachelor's degree include those that reported that they had completed a bachelor's degree and higher.

Totals by employment status exclude those who reported their status as "other not economically active".

At face value, numbers of persons employed by population group show that higher numbers are linked to black Africans solely due to population size as can be expected. However, the comparison of row percentages for employed persons between those that had completed NTCIII and those that had completed a bachelor's degree shows a different picture. Coloureds who reported that they had completed NTCIII and were employed reflected the highest percentage of about 23% followed by both black Africans and whites at around 18% for each population group. There are fewer Asians who reported that they had completed NTCIII and were employed. Overall, percentages of persons who reported that they had completed a bachelor's degree and were employed are more than thrice those for persons who reported that they had completed NTCIII. The finding of closed gaps for accessing employment opportunities after completing NTCIII between black Africans and whites is welcome as it depicts employment equity in the democratic era. One reason for this achievement may be the association of the TVET stream with hands on training relative to the academic stream. However, the proportion of learners choosing such a stream were found to be lowest, as discussed in Chapter 3.

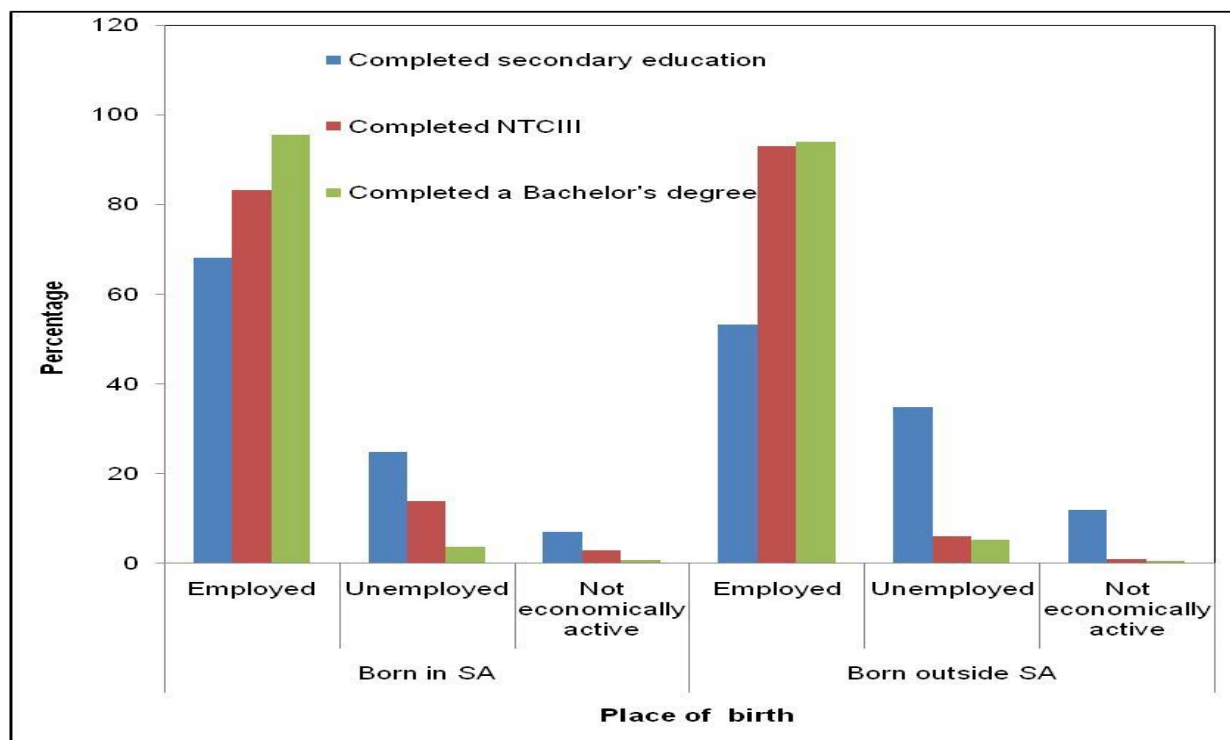
The Pearson chi-square statistics,  $\chi^2 = 16333, 423, 324$  and  $419$  for black Africans, coloureds, Asians and whites respectively as well as  $p < 0.001$  for each population group lead to the conclusion that there is a strong association between educational attainment and employment by population group. Also, the recent call on students to rather register more at TVETs than at higher learning institutions given the huge unemployment rates for the youth seems to be misdirected. The question is, is there any hope for jobs for TVET graduates in the near future?

### **5.2.3 Educational attainment and employment status by place of birth**

Findings on educational attainment and progression in the last two chapters revealed the importance of analysing education by whether the person achieving higher levels of education was born in or outside South Africa. Evidence of contested employment status of persons born outside

the country is observed in the number of attacks on businesses owned by foreign nationals by nationals. Needless to say, incentives for a foreign person to obtain approval to reside in the country include tertiary qualification. Of the total population of 51 770 560 persons enumerated in the country during Census2011, 48 106 458 were reportedly born in the country, constituting about 93%, 2 179 175 were born outside South Africa, constituting about 4%, and about 3% had supplied no response to the place of birth. Figure 5.2 shows the percentage distribution of employment status by educational level and place of birth.

Figure 5.2: Percentage distribution of employment status by educational level and place of birth



The proportion that completed NTCIII includes those that reported that they have completed NTCIII up to N6 due to the progressive nature of these educational levels. It should be noted also that the total for employment status excludes the minor group of persons categorised as “other not economically active”.

Source: Statistics South Africa

Percentages of employed persons who had completed a secondary education were higher for South African-born persons relative to those born outside the country, as can be expected. However,

Percentages of persons who had completed NTCIII are slightly higher for those born outside the country. Although this finding is not expected, the issue may lie in the choice of field of education. Persons born outside the country may have scarce skills that proved to be difficult to acquire within the country due to several shortcomings of the education system, and as a result, these persons provide a supply in the demand of such labour. Another interesting finding is the almost equal percentages of persons who had completed a bachelor's degree for persons born in and those born outside South Africa. The concerning issue is the varying denominators. In conclusion, the Pearson chi-square statistics,  $\chi^2 = 40290,8$  and  $38,6$  for those born in and outside the country respectively as well as a  $p < 0.001$  for each place of birth lead to the conclusion that there is a strong association between educational attainment and employment by place of birth.

#### **5.2.4 Employment status by field of education**

The impact of the post-school field of education on labour force outcomes has been the focus for stakeholders of education and policymakers recently. This is so because due to a lack of vocational guidance, many tertiary students tended to choose fields that are not in demand in the labour market, or their low grade 12 results did not allow them to choose market-related courses that are in demand in the job market. As a result, such students find themselves in fields of education that are not suitable for today's job markets. Higher learning institutions are also disgruntled with the quality of basic education, as revealed in the grade 12 products entering universities. Short-lived policies such as bridging classes for students who are viewed as not being ready for tertiary education come at a high cost to the students' parents, and may not yield as much as is being expected.

The field of education question was asked of persons whose educational attainment included TVET classes and post-school levels of education. Data for Census 2011 attest to a high non-response rate for this variable. As a result, provision of such information at lower levels may be difficult, given the small number of responses. Nonetheless, this report focuses on national and provincial levels. About 1,4 million responded to the question on post-school field of education, as presented in Table 5.3.

Table 5.3: Distribution of persons by official employment status, field of education and sex

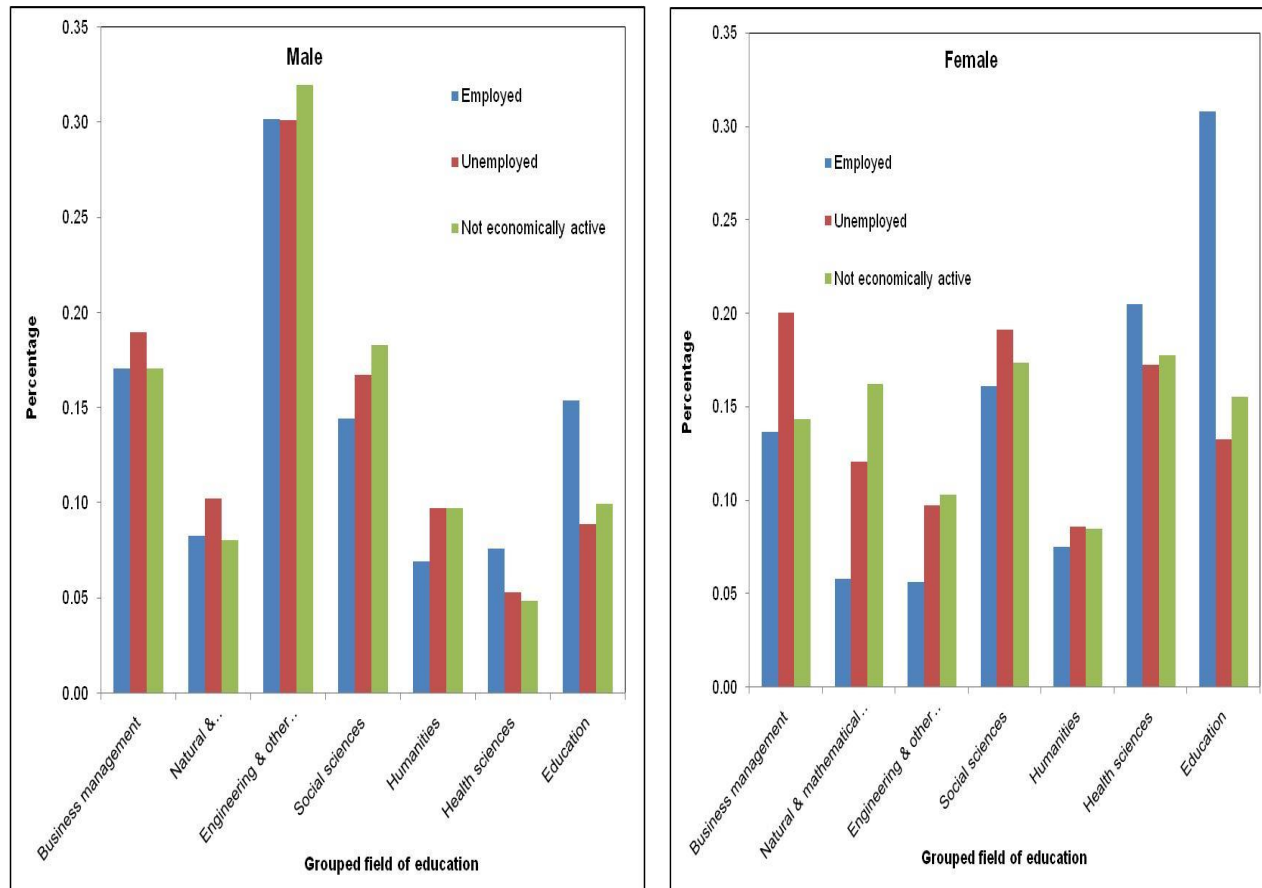
Sex	Official employment status	Business management	Natural & mathematical sciences	Engineering & other applied sciences	Social sciences	Humanities	Health sciences	Education	Total
Male	Employed	108 749	52 918	192 401	91 980	44 290	48 507	98 075	636 920
	Unemployed	5 664	3 059	8 997	4 998	2 911	1 594	2 652	29 875
	Not economically active	912	430	1 705	977	521	260	531	5 336
	<b>Total</b>	<b>115 325</b>	<b>56 407</b>	<b>203 103</b>	<b>97 955</b>	<b>47 722</b>	<b>50 361</b>	<b>101 258</b>	<b>672 131</b>
Female	Employed	95 520	40 484	39 524	112 519	52 375	143 469	215 467	699 358
	Unemployed	9 388	5 652	4 575	8 984	4 026	8 084	6 221	46 930
	Not economically active	1 330	1 507	955	1 612	789	1 647	1 444	9 284
	<b>Total</b>	<b>106 238</b>	<b>47 643</b>	<b>45 054</b>	<b>123 115</b>	<b>57 190</b>	<b>153 200</b>	<b>223 132</b>	<b>755 572</b>

\*The question for field of education was posed to those that had post-school qualifications and those that had completed each level of the TVET stream. The total for employment status excludes the "other not economically active minor group".

Source: Statistics South Africa

For men, larger numbers of persons are linked to Engineering and other applied sciences, followed by Business management and then Education. In contrast to men, fields of education chosen by women have Education ranked first, followed by Health sciences and then Social sciences, as shown in Table 5.3. More distinct information on the relationship between field of education and employment status by sex is presented in Figure 5.3.

Figure 5.3: Percentage distribution of employment status by field of education and sex



Source: Statistics South Africa

Higher percentages of employed women are linked to the Education and Health sciences, as expected. One reason for this is the previous political policies that tended to gear massive numbers of black African women to be educators and nurses. Additional fields of education where such women have been accepted include Social sciences and Business management, as presented in Figure 5.3.

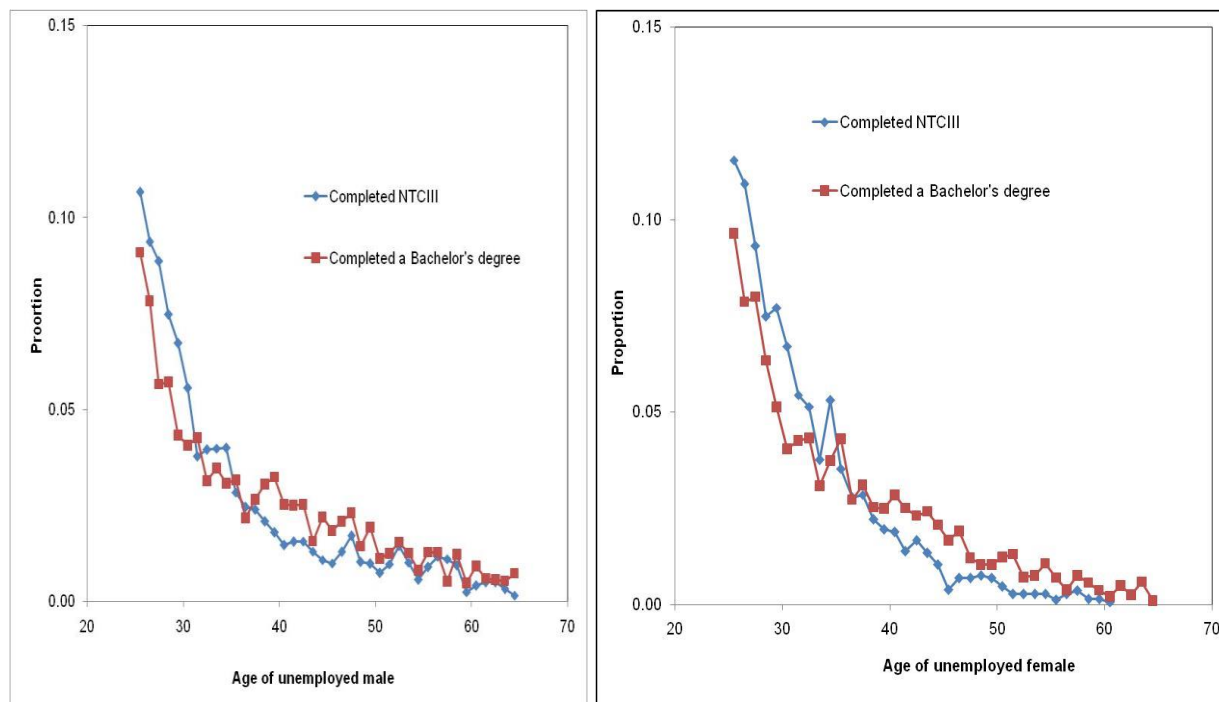
In contrast to women, higher percentages of employed men are associated with Engineering and other applied sciences as well as Business management. Proportions of unemployed persons are equally high for all fields of education for both men and women, although more pronounced for

women. There is a need to recommend scarce fields of education being linked to technological innovations as it is clear that the present ones are no longer aligned with labour markets. The Pearson chi-square statistics,  $\chi^2 = 1859$  and  $12803$  for men and women respectively as well as a  $p < 0.001$  for sex leads to a conclusion that there is a strong association between employment status and field of education by sex.

### **5.3 Unemployment and educational attainment by age**

This report would not be viewed as complete without some discussion on the stagnation of unemployment rates countrywide. Job creation strategies prove not to be sustainable in the short term. Age proportions of unemployed persons by educational level and sex for persons aged 25 to 64 years are provided in Figure 5.4.

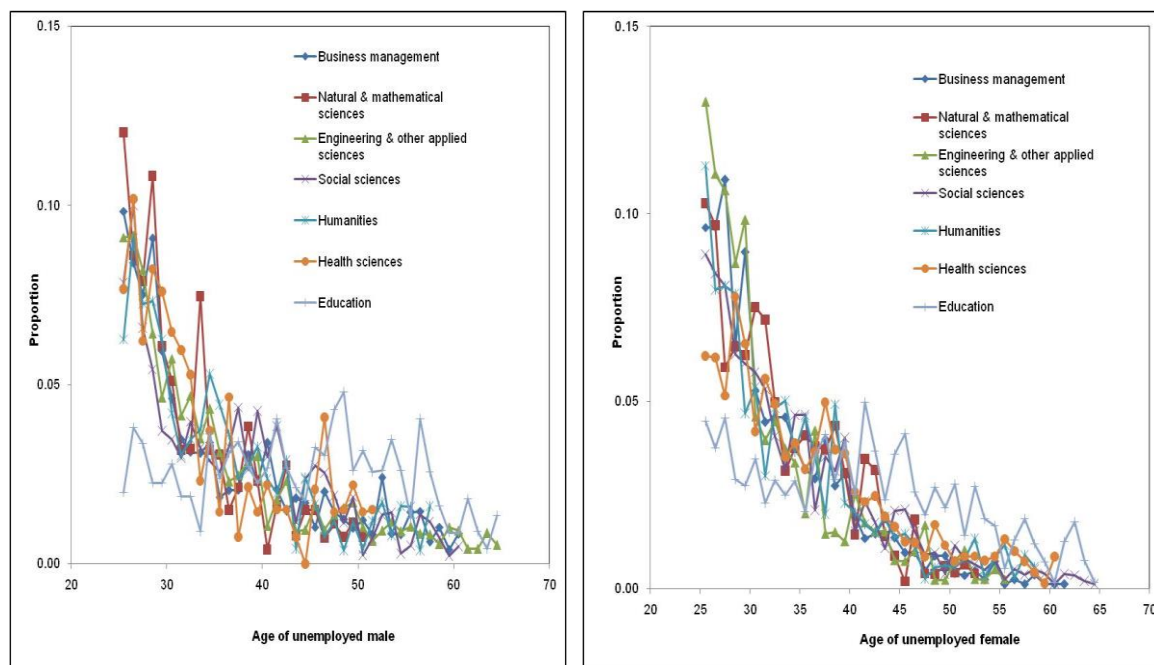
Figure 5.4: Age proportions of unemployed persons by educational level and sex



Source: Statistics South Africa

The worrying youth unemployment figures are depicted for both men and women who had completed both an NTCIII and a bachelor's degree. Interestingly, there is a swop in the proportion of unemployed men and women who had completed a bachelor's degree to being slightly higher than the NTCIII ones for both men and women. Next are the age proportions of unemployed persons by field of education and sex. Figure 5.5 shows the age proportions of unemployed persons by education field and sex.

Figure 5.5: Age proportions of unemployed persons by field of education and sex



Source: Statistics South Africa

Age proportions of unemployed persons are lower for the Education field for both men and women, while for Health sciences, Proportions are slightly lower for women than for men. It is indeed disappointing to observe that almost all other education fields are showing high age proportions of unemployment, specifically for the youth. Such proportions begin to decline at around 40 years of age. Also, reduced elementary employment emanating from continuous technological change may have exacerbated increasing unemployment rates (Edwards, 2001, p. 2).

#### 5.4 Educational attainment and income

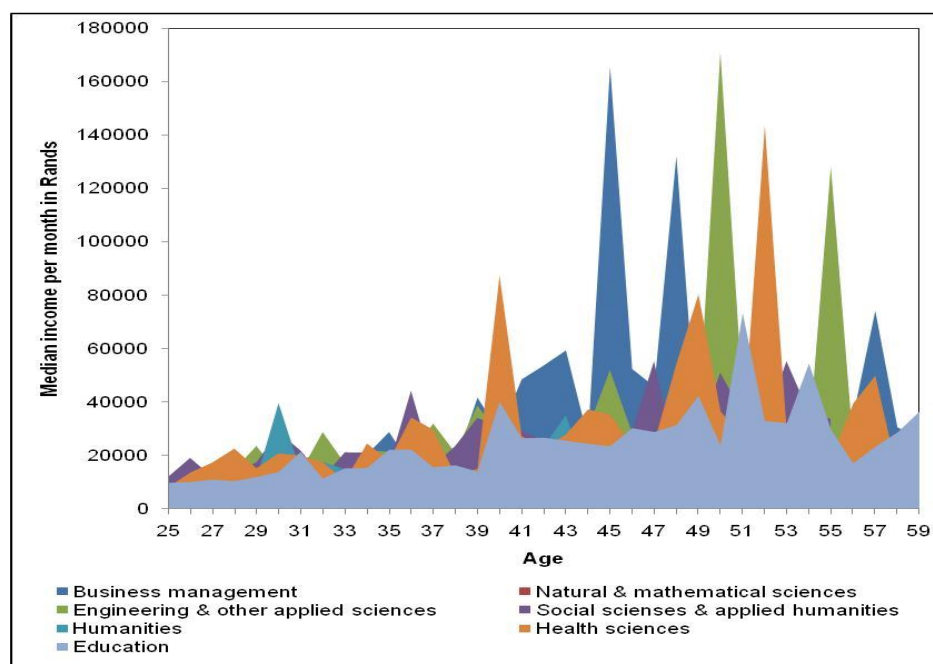
In contrast to the rising proportions of persons completing various educational levels seen in the previous section, proportions of persons by age and income show little variation over the 10-year period. However, the decline in the number of persons with no income from age five and above from about 65% in 2001 to about 42% in 2011 is welcome. This decline may well



have been brought about by the increased access to government security grants rather than remunerated employment.

For the purpose of comparing monthly income, only persons who were employed were tabulated from age 25 to 59 years. One reason for this is the reduced retirement age of about 60 years. Also, median incomes by age were computed for selected differentials. Figure 5.6 presents the findings on the association between age, field of education and monthly salary.

Figure 5.6: Age distribution of persons by field of education and monthly salary



Source: Statistics South Africa

The relationship between age and income is apparent in Figure 5.6, where older persons receive a higher income compared to younger ones, for almost all fields of education. Fields that tended to pay more than others include Business management, Health sciences, and Engineering sciences. Education pays smaller monthly salaries even for older persons. The concern is that there are a substantial number of black Africans and coloureds employed as educators relative to the other two population groups. Interestingly, when scrutinising the monthly salaries, one gets to realise that the median income for persons who fall under the Natural & mathematical science field is much lower than other related scarce fields such as Engineering sciences. One reason for this may be the fact that a substantial number of persons linked to that field are hired as educators in the case of South Africa. Therefore, the monthly salary scales are comparable to other educators, even though they are on the list of scarce skills. Notwithstanding, age proportions of unemployed mathematicians were as high as those of other fields as observed in the previous section.

## 5.5 Conclusion

In contrast to enrolment, educational attainment and progression, where gaps between men and women have been closed, the case is not the same with accessing employment, where women are still lagging behind. Completion of NTCIII may provide a better opportunity for accessing employment earlier than those who had completed secondary education; however, such jobs are more likely to be related to men than women. That notwithstanding, the lowly ranked NTCIII level may be pushing capable students away towards the academic stream that was found to be faring more poorly with progression than the TVET stream in the previous chapter. The under-rating of the TVET stream may be the reason why it is refuted by many students in favour of higher learning institutions and the newly expanding private colleges that are out of reach for many families due to high tuition fees. Although completion of a bachelor's degree is restricted by field of education and other related obstacles, the few persons who persevere to the end are more likely to be employed across sex barriers.

Age proportions of unemployed persons reveal a somewhat compatible pattern between those who completed NTCIII and those who completed a bachelor's degree. In addition, almost similar age patterns of unemployed persons by field of post-school education suggest a dire need for job creation strategies. To a certain extent, youth unemployment is linked to qualifications lower than the bachelor's degree relative to adult unemployment.

The monthly salary for persons aged 25 to 59 for employed person increases with age, as expected. Higher monthly salaries are linked to Business management, Engineering sciences, and Health sciences. Persons who fall under Natural and mathematical sciences were found to receive lower monthly incomes relative to their important sciences counterparts. One reason for this is the link to Education, where a substantial number of mathematicians are hired as teachers. Education is associated with lower-level salaries, and is a field in which large numbers of black Africans and coloureds as well as women are employed.

## **CHAPTER 6: CONCLUSION AND RECOMMENDATIONS**

The analysis of educational enrolment, attainment, progression and differentials provided some insights into achievements made in the democratic era and challenges still faced by the education system. The increase in net enrolment rates is lauded, even though repetition rates are high in ordinary school attendance. Notwithstanding, attainment of secondary education and higher is still a challenge for black Africans and coloureds, suggesting that gaps between the four population groups are still wide. The same scenario was observed for progression ratios, giving a cause for concern. Yet, the same scenario was noticeable for Percentages of employed persons by field of education, where black Africans and coloureds are associated with Education, while whites are linked to Engineering sciences and Asians to Business management.

### **6.1 A synthesis of the findings**

#### **6.1.1 Enrolment rates and school attendance**

Preference for private educational institutions over public ones for attendance between 2001 and 2011 was confirmed, and proved to be more pronounced for Gauteng province. The concern about this finding is that affordability seems to be at play against declarations of equity by educational policies implemented in the democratic era. The findings of higher proportions of learners still attending some educational institution and higher growth of net enrolment rates between 1996 and 2001 being associated with whites relative to other population groups give cause for concern as it undermines well-intended efforts to enhance equal access for all. In essence, these findings suggest that white learners are more likely to enrol and attend classes as per the stipulated official ages than other population groups. By default, gross enrolment rates were found to have increased immensely for the Foundation and FET phases between 1996 and 2011, and for black Africans, given that such rates relate to the number of learners enrolled regardless of whether they met the standard of official ages and whether the classes enrolled for are being repeated. Provincial profiles revealed that Limpopo and Mpumalanga

had higher growth rates relative to other provinces, confirming strides made by programmes such as no-fee schools, as discussed in the introductory chapter.

Gender gaps on educational accessibility were found to be nearly closed for both the Foundation and Intermediate phases across population groups and provinces. In contrast, the number of female learners was found to be slightly higher than that of male learners in both the Senior and FET phases. This finding shines some light on which gender tends to leave school before attaining grade 12. This is worrisome, given the drastic decline of elementary employment opportunities in the country over time.

### **6.1.2 Educational attainment**

Educational attainment by population group revealed that the gap between whites and Asians had somewhat closed in the 1990s, while that between whites and both coloureds and black Africans still has a long way to go. This finding is a cause for concern, given the huge budget used for improving the quality of education provided to black Africans in the democratic era. The latest revelation where a sample of educators teaching mathematics to grade 12 classes could not pass with impressive grades when they were subjected to writing the matriculation examination is a clear indicator of poor training. In-service training programmes for present educators may be a long-term goal. Notwithstanding, the continuous curriculum changes may hamper any achievement made in this regard.

The gaps on attainment of grade 12 and a bachelor's degree between men and women were closed in the 2000s. However, this is not the case for the four population groups.

The largest number of persons with no schooling is linked to black Africans, as can be expected due to the past political policies. Interestingly, the lowest percentages of persons who completed both secondary education and a bachelor's degree are linked to coloureds, although the number of black Africans is higher by a small margin. It should be remembered though, that attainment is sometimes achieved as a result of decisions taken at evaluation centres even

though structures like Umalusi in the case of South Africa are mandated to monitor the education system.

### 6.1.3 Education progression

The origin of the negative attitude towards skills related training in the case of South Africa needs to be researched. This is so because of the scarce technical skills identified as well as the lack of employment opportunities for many academic graduates. Looking back in the 1960s and 1970s, persons who attended technical schools were looked down upon as incapacitated for coping with academic streams. Unfortunately, Census 2011 data proved this notion wrong, as proportions of persons completing the next level in the academic stream are lower than those shown for TVETs. The low academic progression from grade 11 to grade 12 and from grade 12 to a bachelor's degree gives cause for concern. The reason why there are lower proportions of black Africans completing a bachelor's degree after having completed grade 12 lies in the impressive proportions of persons completing the next level in TVETs.

Of concern is that proportions of persons completing grade 12 after completing grade 9 and those completing a bachelor's degree after completing grade 12 for whites and Asians are threefold those of coloureds and black Africans. The link of education progression to socio-economic development is a case in point, where the majority of black Africans are not accessing ICT facilities at present. In addition, many are also excluded from classes, because parents struggle to pay fees as requested – specifically those attending private institutions. Even so, the monthly arrears are expected to be paid prior to getting results at the end of the year, where only a few classes may have been attended by the student.

Unexpected is half the proportion of persons born in South Africa completing a bachelor's after completing grade 12 relative to those born outside the country. One reason for this involves the incentive of higher qualifications and scarce skills for immigration. Notwithstanding, according to the report on Documented Immigrants in South Africa for 2011, the student category from neighbouring African countries has been increasing over time (Statistics South Africa, 2012).

Proportions of persons completing an honours degree after completing a bachelor's degree reflect some stagnation over time. As expected, such persons are fewer for all grouped fields of

education. Further scrutiny of the trends reveals that fields of education that show an upward trend between the 1960s and the 2000s include Business management, Natural and mathematical sciences, Social sciences, Engineering & other applied sciences, and Education. While Humanities reflect some slight decline, Health sciences show some stagnation throughout the period, although with some fluctuations. One reason for this stagnation may be the exodus of health personnel to better equipped countries.

In contrast to Proportions of persons completing an honours degree after completing a bachelor's degree, Proportions of persons completing a higher degree after completing an honours degree reflect a downward trend from the 1970s to the 2010s as shown in Figure 4.8. The fields of education that show a decline include Health and Social sciences, Education, Natural and mathematical sciences, and Business management. Fields of education that show some slight upward movement include Engineering and other applied sciences as well as Humanities.

#### **6.1.4 Education differentials**

##### **6.1.4.1 Educational attainment and employment status**

In contrast to enrolment, educational attainment and progression, where gaps between men and women have been closed, the case is not the same with accessing employment, where women are still lagging behind. Completion of NTCIII may provide a better opportunity for accessing employment earlier than those who completed secondary education; however, such jobs are more likely to be related to men than women. That notwithstanding, the lowly ranked NTCIII level may be pushing capable students away towards the academic stream that was found to be faring more poorly with progression than the TVET stream in the previous chapter. The under-rating of the TVET may be the reason why it is refuted by many students in favour of higher learning institutions and the newly expanding private colleges that are out of reach for many families due to high tuition fees. Although completion of a bachelor's degree is restricted



by field of education and other related obstacles, the few persons who persevere to the end are more likely to be employed across sex barriers.

Age proportions of unemployed persons reveal a somewhat compatible pattern between those who completed NTCIII and those who completed a bachelor's degree. In addition, almost similar age patterns of unemployed persons by field of post-school education suggest a dire need for job creation strategies. To a certain extent, youth unemployment is linked to qualifications lower than the bachelor's degree.

#### **6.1.4.2 Educational attainment and monthly income**

The monthly salary for employed persons aged 25 to 59 increases with age, as can be expected. Higher monthly salaries are linked to Business management, Engineering, and Health sciences. Persons who fall under Natural and mathematical sciences were found to receive lower monthly incomes relative to their important sciences counterparts. One reason for this is the link to Education, where a substantial number of mathematicians are hired as teachers. Education is associated with lower salary levels, and a field in which a large number of black Africans and coloureds as well as women are employed.

### **6.2 Conclusion**

National government education policies have made some strides in accessibility for all. Intervention programmes that had bigger impacts include the South African Schools Act of 1996, which provided the most comprehensive education policy document of the democratic era. Following that was the Skills Development Act of 1998, which enhanced the creation of further education and training in an endeavour to develop technical skills for the manpower shortage. Government spending on education was also prioritised henceforth. Categorisation of schools into fee and no-fee schools was enhanced by the Education Law Amendment Act of 2006. Facilitation of access to funding for career paths and skills training was enhanced by the National Student Financial Scheme (NSFAS).

Educational attainment from grade 12 and above is still not satisfactory due to the already mentioned lack of quality of basic education and assessment instruments that are not benchmarked with international standards. Poor educational outcomes lead to high unemployment rates, which are more pronounced among the youth. As also confirmed in this report, foreign-born nationals may be preferred over those born in the country due to their possession of scarce skills. The recent uprising against foreign-born nationals from neighbouring African countries is a case in point that has brought much embarrassment internationally. There is a need therefore, to immediately double the number of TVET colleges countrywide while managing the distribution. This need is in line with the 2014 DHET White Paper that places great emphasis on the growth of TVET colleges. In addition, newer technical skills should be provided in line with technological innovation. Encouragement of students to undertake higher levels of education should be one of the cornerstones in TVETs. This is so because such training certificates have the propensity of being underrated in the near future by the very same NQF system.

Some of the newest proposals, such as shifting the enrolment of older children (as per the country's school official ages) to TVETs, may prove to be detrimental in the near future, where a substantial number of such students may have no option but to drop out, having achieved nothing tangible. Those numbers are expected to increase the present number of job seekers.

Progression ratios by institution showed that private schools are doing better than public schools for grade 12 and above. The concern about this finding is that masses of low socio-economic students attend such schools. Evidence of increasing numbers that enrol in private institutes against decreasing ones for the public institutes was revealed. There are also the high tutoring fees linked to private institutions that only a few can afford, and consequently many are drowning in loans each year.

In addition, progression ratios were found to be higher for persons born outside the country compared to South African-born persons. This finding provides evidence for the high percentages of persons born outside the country, who are employed. In addition, persons who were born outside South Africa are more likely to fall under Engineering sciences, Natural and

mathematical sciences, and Business management. In the case of those born in the country, Education, Engineering sciences and Business management are prioritised. While Education is the main choice for black Africans and coloureds, Engineering is the choice for whites, whereas Business management and Health sciences are choices for Asians. On the side of monthly income, monthly salaries are lower for Education and much higher for Engineering science, Business management and Health sciences. This translates to higher monthly salaries for whites and Asians and foreign-born nationals as opposed to lower ones for black Africans, coloureds and persons born in the country.

### **6.3 Recommendations**

Efforts and resources should be increased in order to double the number of TVETs colleges in the country. This is a matter of urgency that cannot be over-emphasised. In line with that, some revamping of the present curriculum for benchmarking with technological innovations is essential. Lastly, management of the distribution of such colleges is needed since there are provinces that have a short supply of such colleges at present.

### **6.4 Recommendations and further research agenda**

In light of the aforementioned findings communicated in the Census 2011 education monograph, there is a need to increase accessibility to the administrative records data possessed by the Department of Education. One reason for this is to promote transparency in data sharing for informed decision-making. Such data may also enable verification of the Census 2011 communicated results. Further, school life expectancy needs to be calculated to denote the total number of years of schooling that a child of a certain age can expect to receive in the future, assuming that the probability of his/her being enrolled in school at any particular age is equal to the current enrolment ratio for that age. Such life tables may be useful for understanding underlying factors of retention rates as well as the impact of evaluation systems within basic education.

Again, there is a need to undertake researches of the factors determining lack of commitment in the teaching profession over time. It is believed that incentives for academic improvement linked to the 1980s to the 1990s that were discontinued may have had a negative impact on qualitative teacher development. Trade unions are also believed to have had a contributory factor in undermining lesson planning. In addition, the recent culture of educators embarking on an industrial action has compromised learner support.

Further, there is a need to undertake researches on the impact of the continuous change of education curricula over time. The general notion is that the majority of educators perpetually struggle to comprehend new didactics in a short space of time. The latest scenario where a sample of educators was subjected to write a mathematical matriculation examination paper in

KwaZulu-Natal province that surprised all and sundry with low grades achieved is a case in point. Such an action has resulted in an increased exodus of learners from public to formerly model C schools. Unfortunately, this flight is determined by affordability, accessibility and parental education. Masses of marginalised populations do not fit the aforementioned criteria.

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## Appendix A: Time plots for educational attainment by district

### 1. Western Cape

Figure 1: Attainment ratios for persons who completed primary education by sex and district

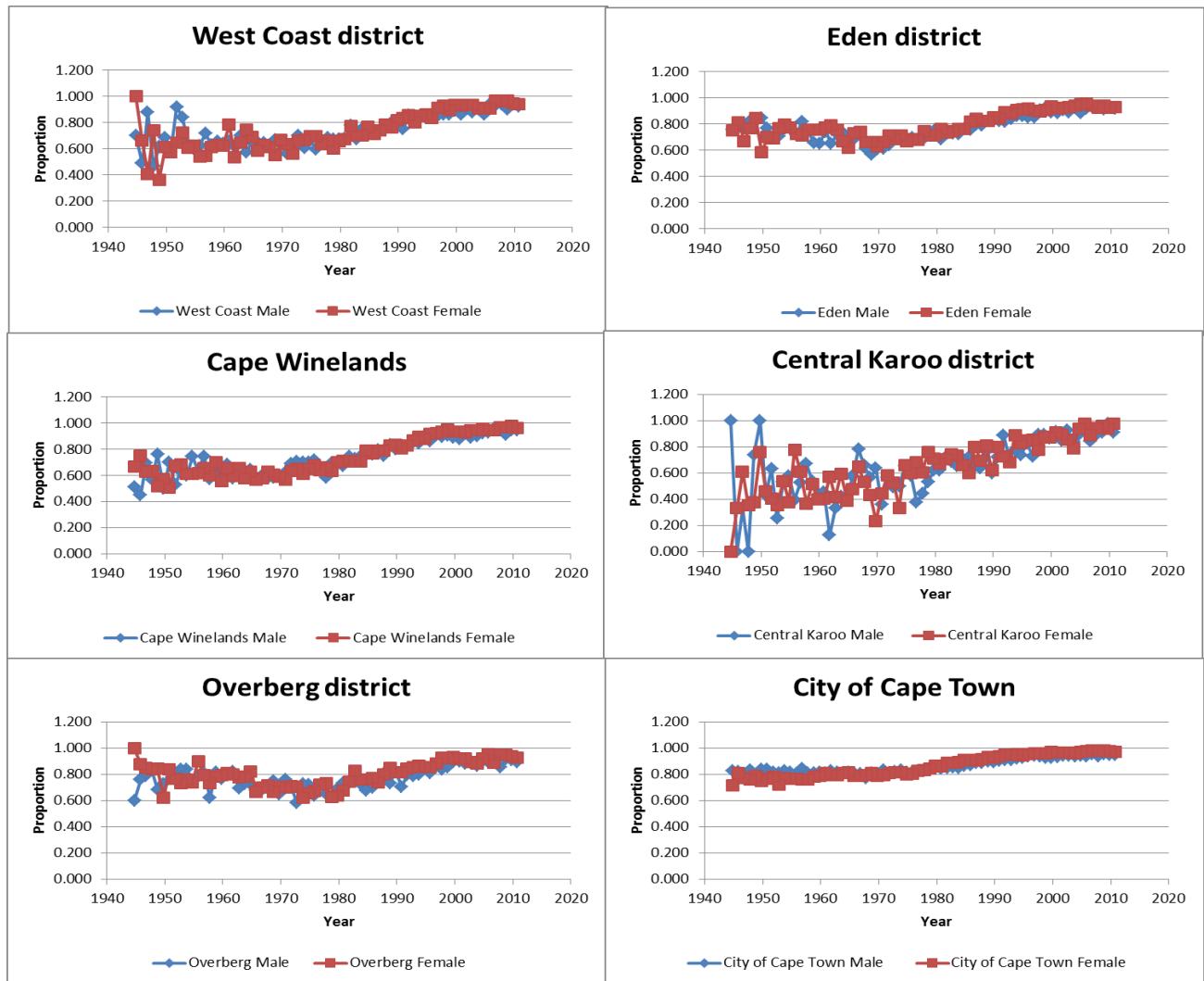


Figure 1 shows the attainment ratios for males and females who completed their primary education by district in Western Cape. The graphs indicate no gaps in the attainment ratios for both males and females who completed their primary education in almost all the districts (except for Central Karoo in the 1940s and 1950s). Attainment ratios for both sexes increased over time. Over the years, the City of Cape Town has had ratios above 0,70.



Figure 2: Attainment ratios for persons who completed secondary education by sex and district

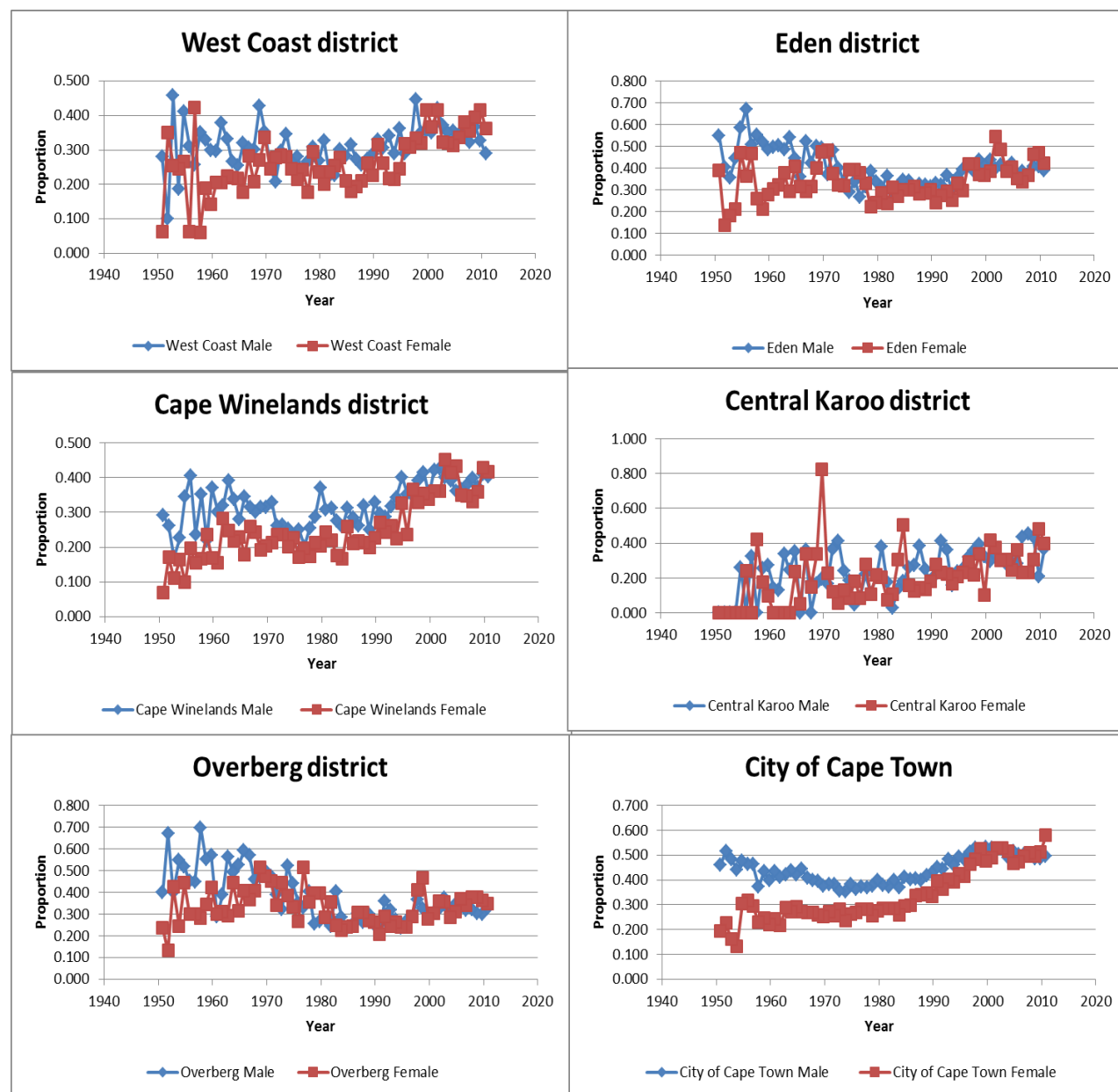


Figure 2 shows the attainment ratios for males and females who completed their secondary education by district in Western Cape. The graphs show that the proportion of males who completed their secondary education was higher than that of females in the City of Cape Town. The proportion of females who completed their secondary education increased in the 1950s and equalled that of males in the year 2000 and onwards. Central Karoo had the lowest

proportions of both sexes who had completed their secondary education as compared to the other districts in the province.

Figure 3: Attainment ratios for persons who completed a bachelor's degree by sex and district

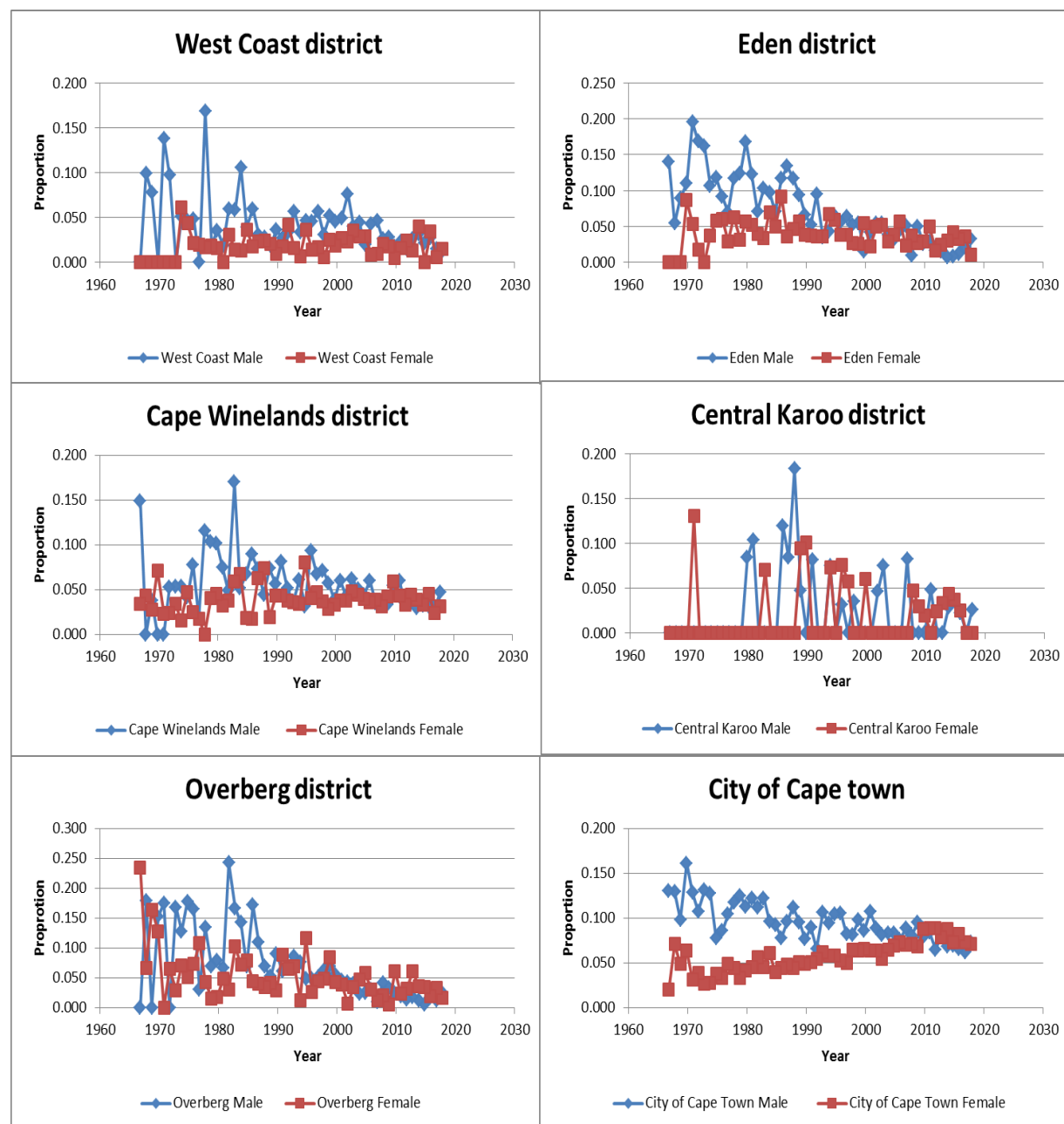


Figure 3 shows the attainment ratios for males and females who completed a bachelor's degree by district in Western Cape. Central Karoo had the lowest proportion of both males and females who completed a bachelor's degree, while Overberg had the highest proportions since the year 1970. The City of Cape Town showed the largest gap in the ratios between male and female;

however, a higher proportion of females compared to males had completed a bachelor's degree after the year 2010.

## 2. Eastern Cape

Figure 4: Attainment ratios for persons who completed primary education by sex and district

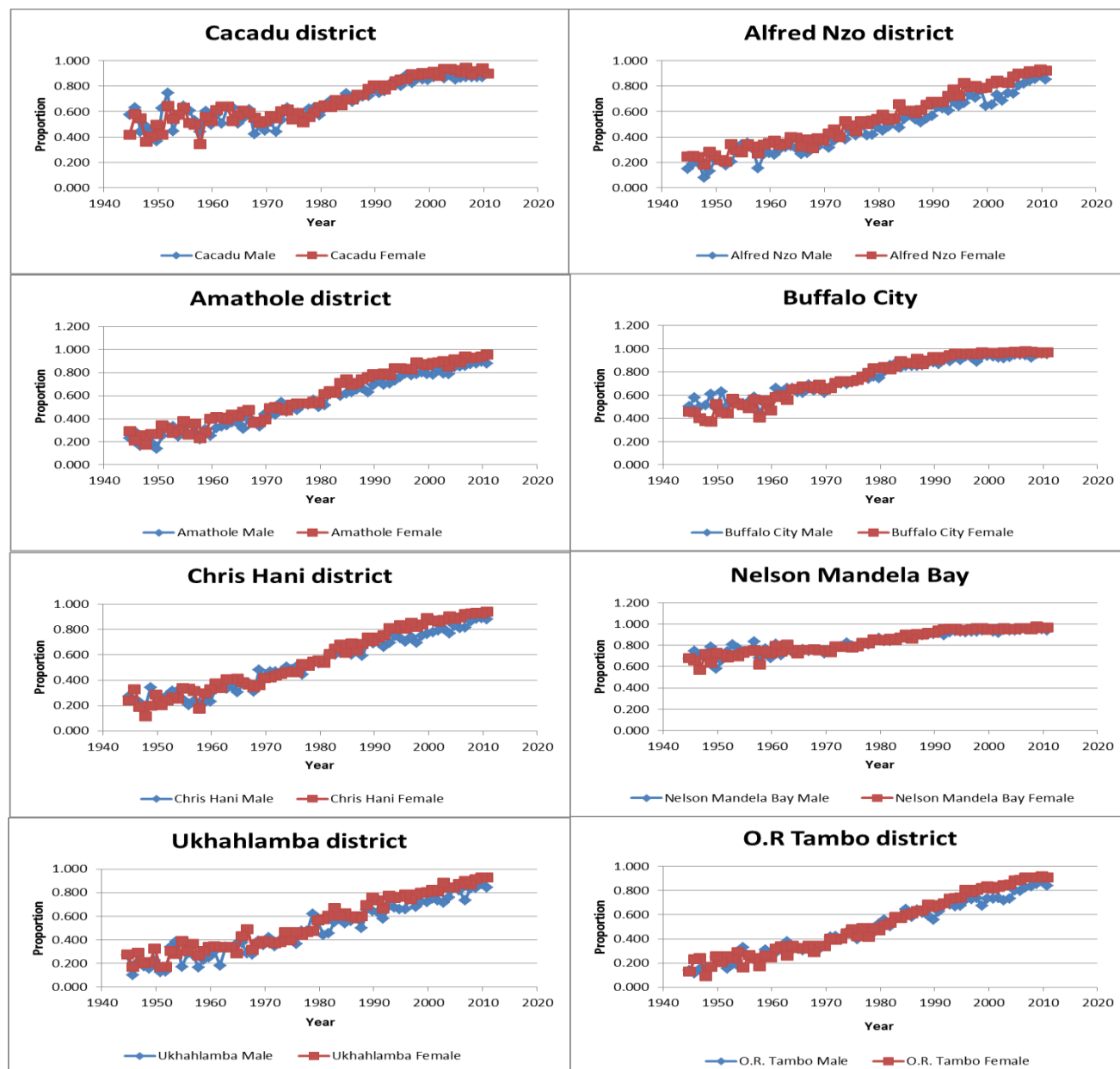


Figure 4 shows the attainment ratios for males and females who completed their primary education by district in Eastern Cape. The same upward trend can be seen in all the districts.

There were no gaps between males and females who completed their primary education over the years since 1940. This indicates that more and more people have access to education and have managed to complete their primary education.

Figure 5: Attainment ratios for persons who completed secondary education by sex and district

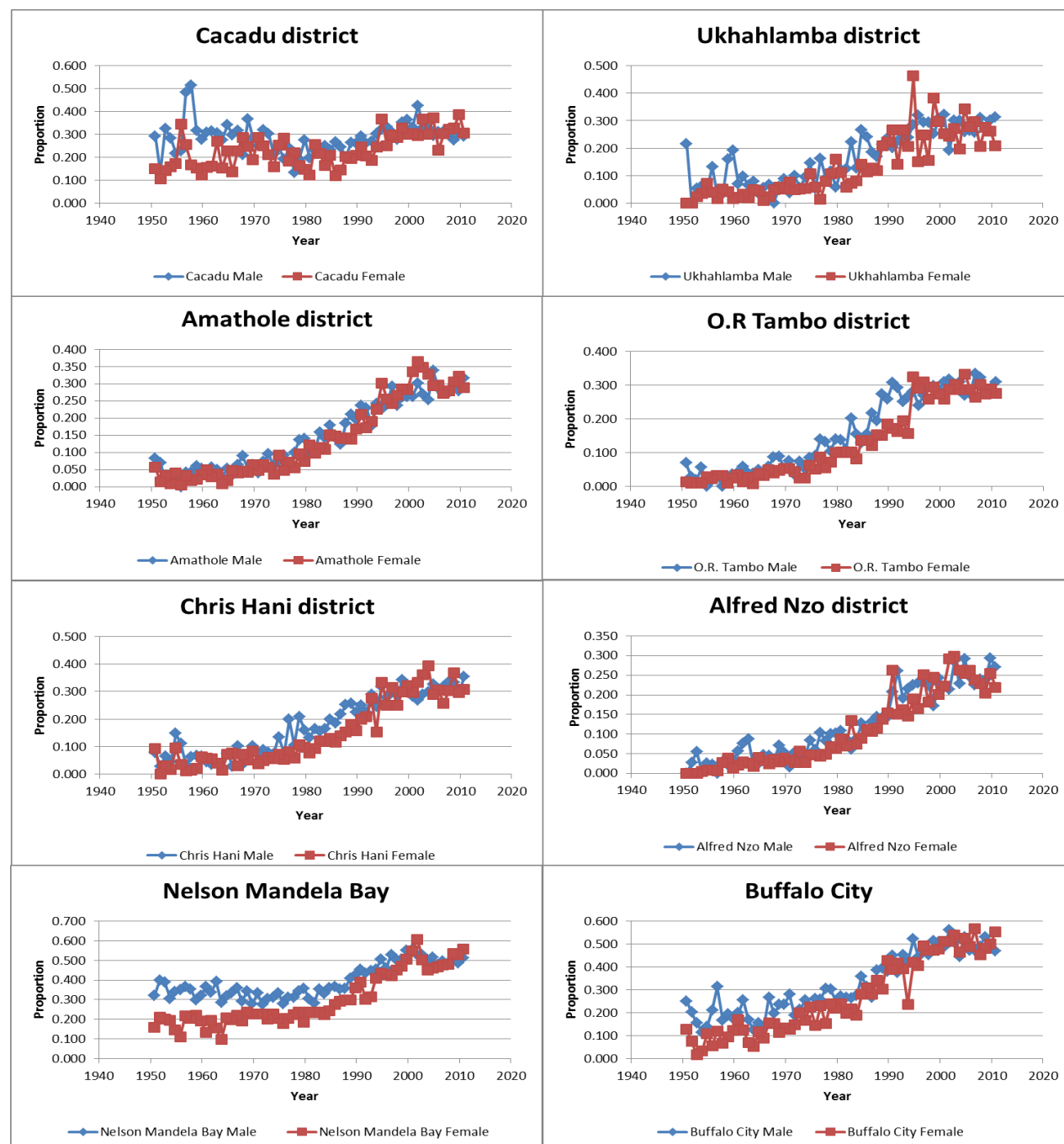


Figure 5 shows the ratios for males and females who completed their secondary education by district in Eastern Cape. In Cacadu and Nelson Mandela Bay there were differences in the ratio of males and females who completed their secondary education in the 1960s, indicating that

more males completed their secondary education as compared to females. The ratios increased for both sexes over the years in all the districts in the province.

Figure 6: Attainment ratios for persons who completed a bachelor's degree by sex and district

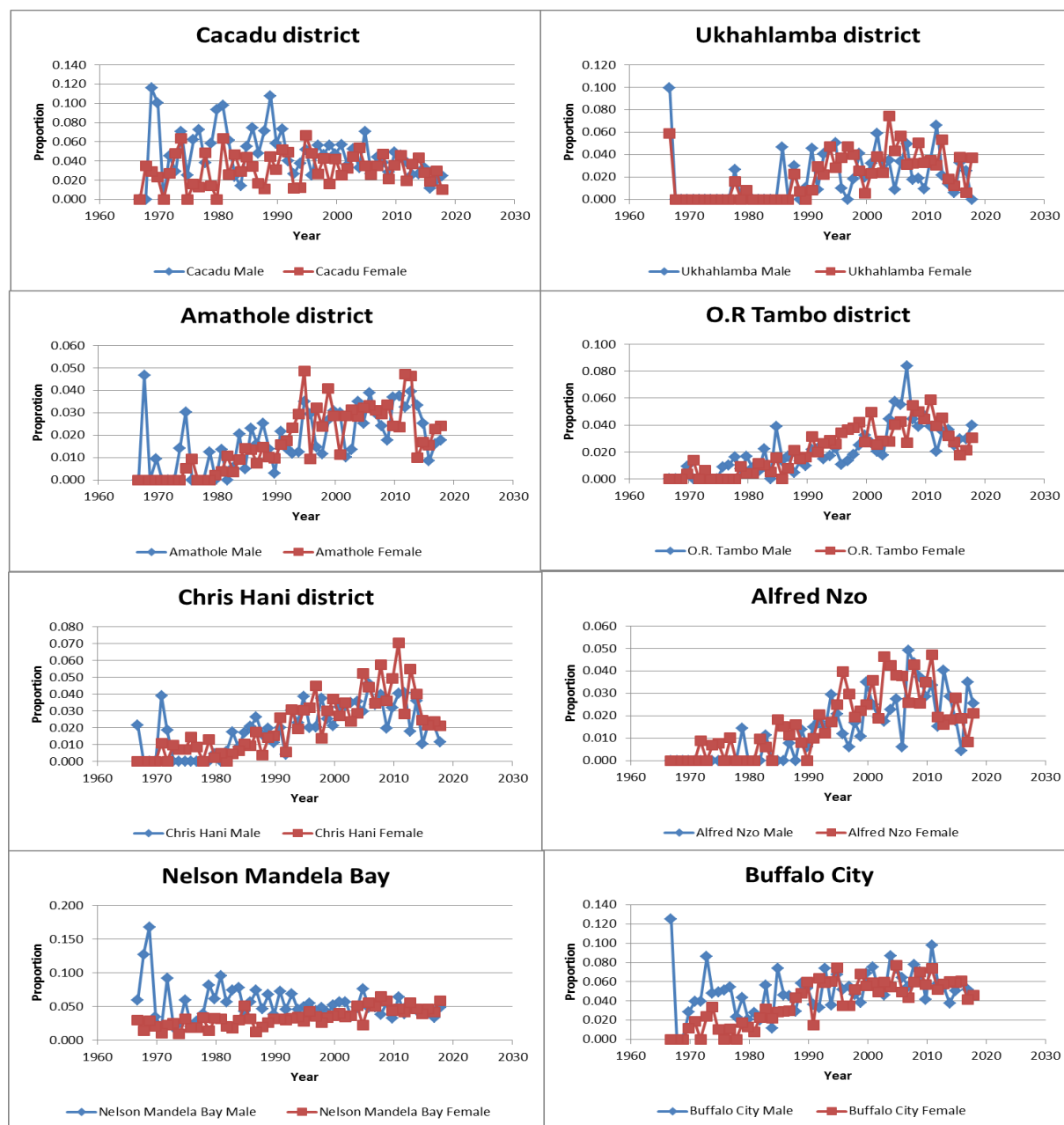


Figure 6 shows the attainment ratios for males and females who completed a bachelor's degree by district in Eastern Cape. There were fluctuations in the ratios for males and females who have completed a bachelor's degree in all the districts. Nelson Mandela Bay shows differences in male and female ratios. The ratios in all the districts decreased over the years. The ratios



were very low in all the districts, below 0.1, which indicates that very few people in the province were able to further their studies after completing grade 12.

### 3. Northern Cape

Figure 7: Attainment ratios for persons who completed primary education by sex and district

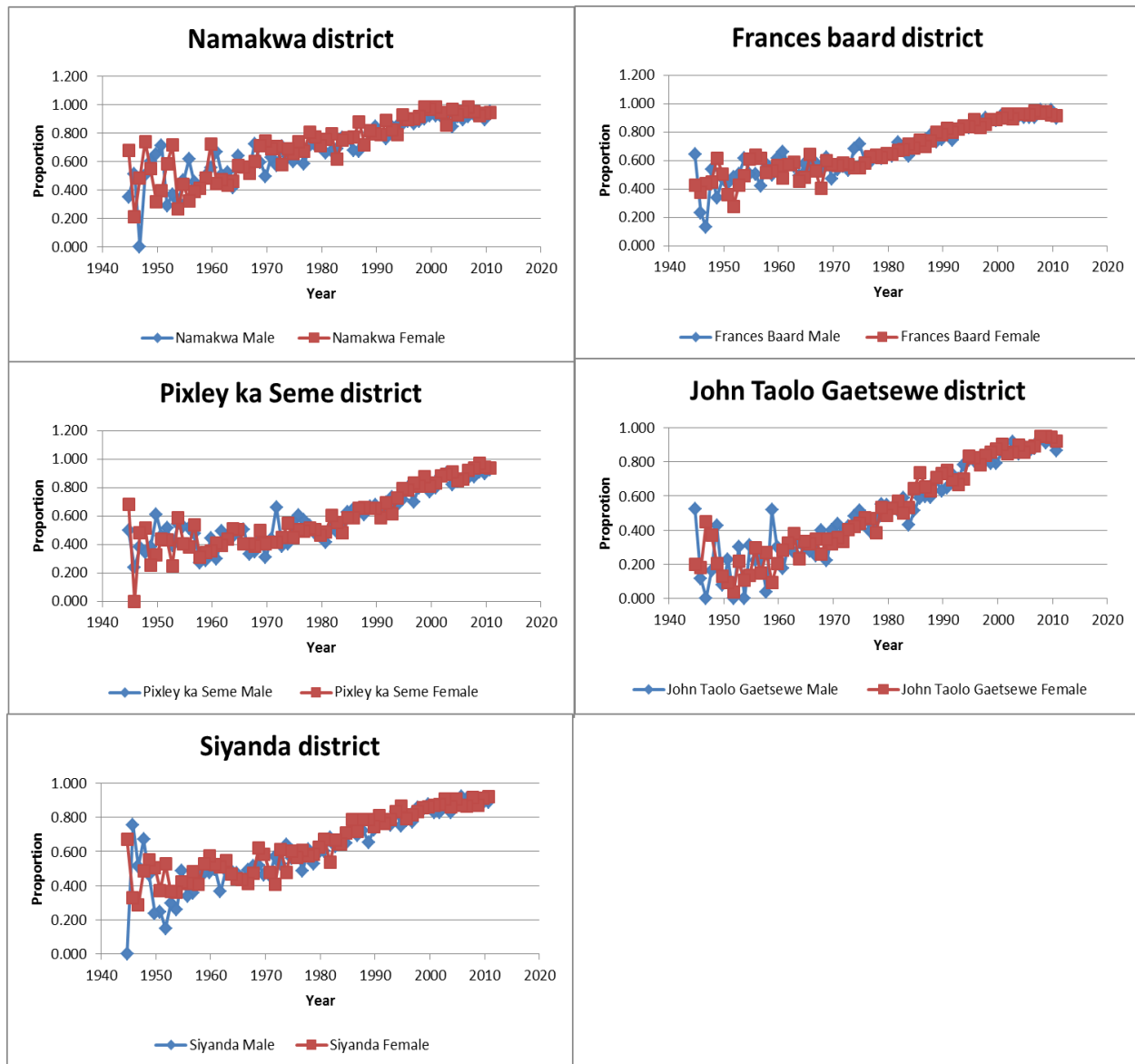


Figure 7 above shows the attainment ratios for males and females who completed their primary education by district in Northern Cape. In Namakwa and Siyanda, the proportion of females who completed their primary education was higher than that of males before 1960. The female ratios improved for all the districts after 1960. There were little differences in the ratios for both sexes in all the districts, which indicate an improvement in the primary educational

attainment levels in the province, as people are able to complete their primary education. The ratios are increasing in all the districts.

Figure 8: Attainment ratios for persons who completed secondary education by sex and district

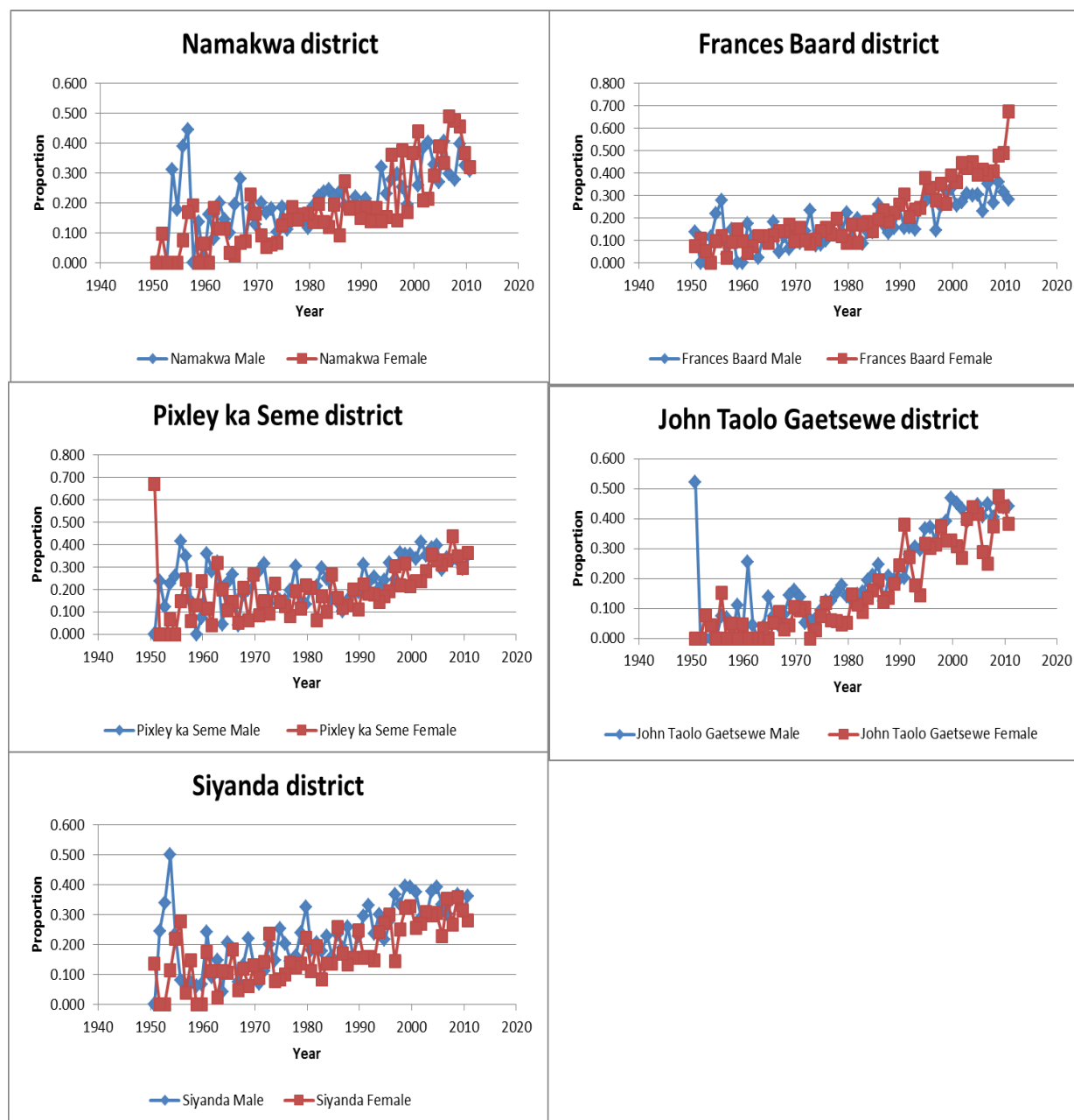


Figure 8 above shows the attainment ratios for males and females who completed their secondary education by district in Northern Cape. Proportions of persons who completed their secondary education were very low for both sexes before 1960 in all the districts. There were few differences between the male and female ratios in all the districts, which indicate an

improvement in the secondary education system, as people are able to complete their secondary education in the province. The ratios have been increasing in all the districts.

Figure 9: Attainment ratios for persons who completed a bachelor's degree by sex and district

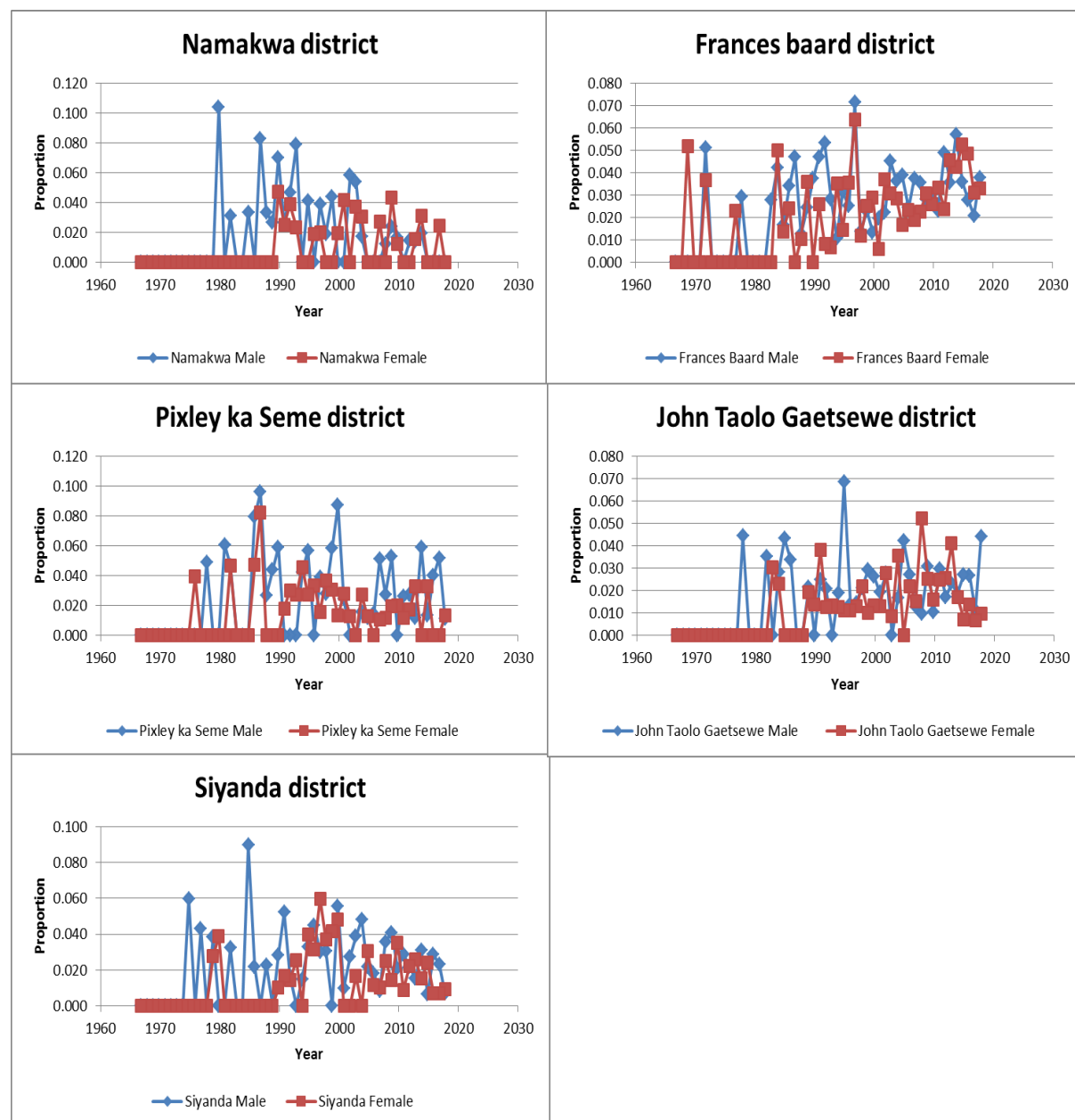


Figure 9 above shows the attainment ratios for males and females who completed a bachelor's degree by district in Northern Cape. The ratios have been fluctuating for both sexes in all the districts. There were few differences in the ratios between males and females in all the districts, except for Namakwa, where a higher proportion of males than females had completed bachelor's degree. The attainment ratios for a bachelor's degree were very low in all the

districts for both sexes, which indicates that a lower proportion of both males and females complete their bachelor's degree in the province.

#### 4. Free State

Figure 10: Attainment ratios for persons who completed primary education by sex and district

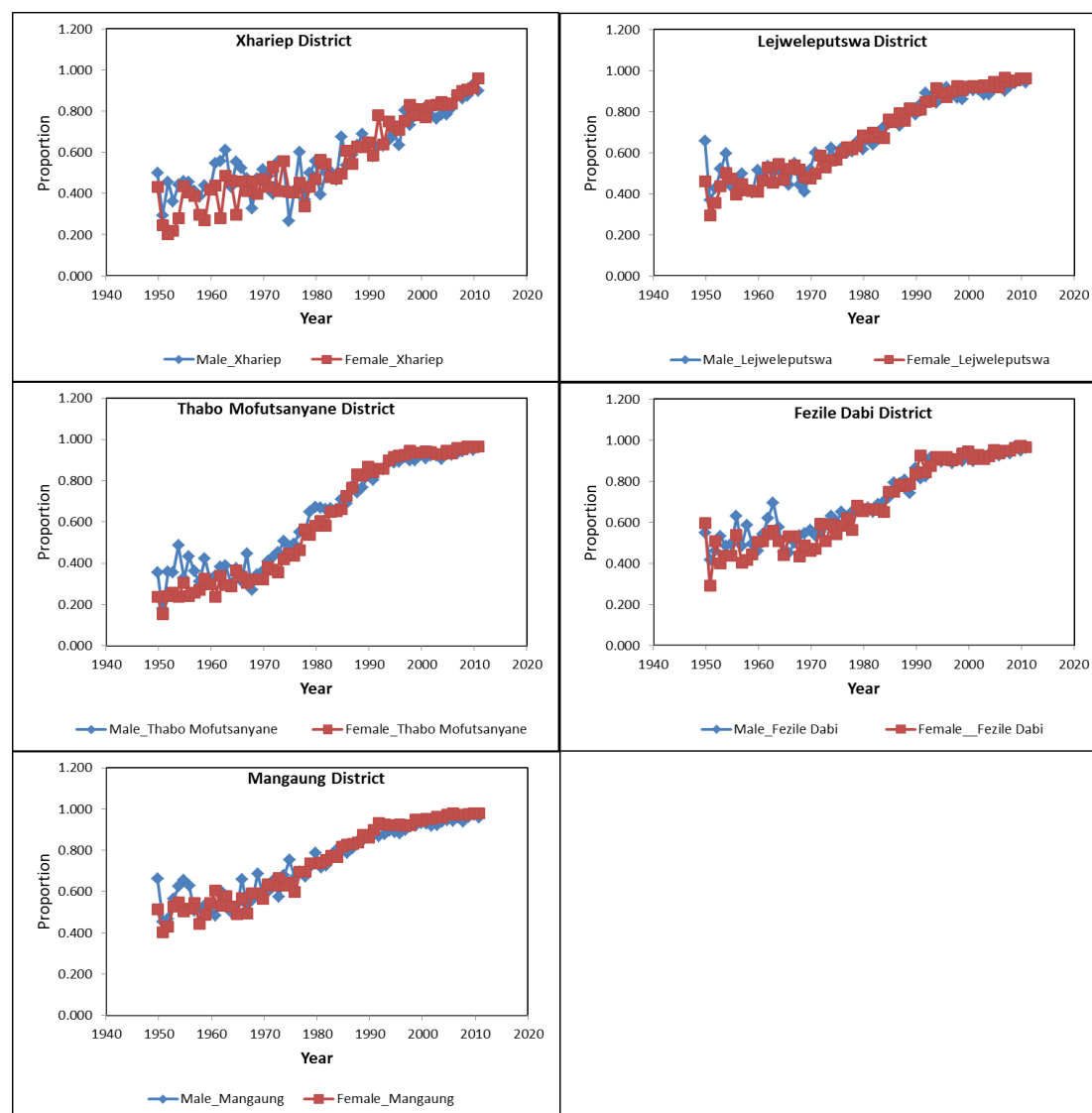


Figure 10 shows the attainment ratios for males and females who completed their primary education by district in Free State. Across all districts, there has been an increasing trend in the proportion of persons who attained a primary education. The results further show higher proportions for Mangaung as compared to other districts in the province. Over time, there have

not been huge differences between males and females in terms of attaining primary education, particularly towards the new millennium.



Figure 11: Attainment ratios for persons who completed secondary education by sex and district

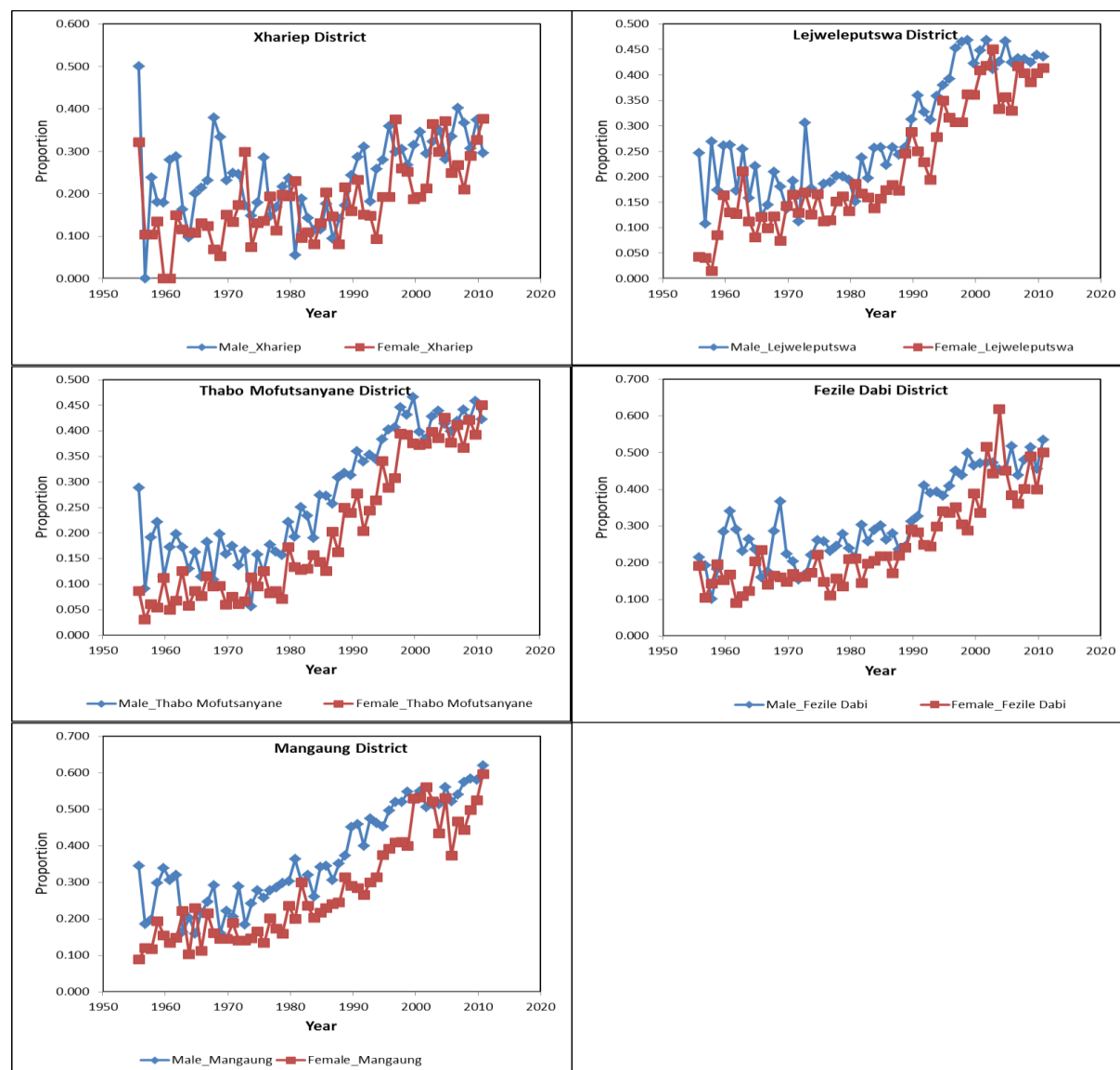


Figure 11 shows the attainment ratios for males and females who completed their secondary education by district in Free State. Gender disparity among those who attained a secondary education is significant for both males and females. These results are observed across all districts more or less up to the new millennium. Lejweleputswa, Fezile Dabi and Mangaung districts currently have higher proportions of males with a secondary education while Xhariep and Thabo Mofutsanyane are showing higher proportions among females. The results show that, in those districts where the female proportions have overtaken those of the males, there has actually been a decrease in Proportions of males attaining this level of education.

Figure 12: Attainment ratios for persons who completed a bachelor's degree by sex and district

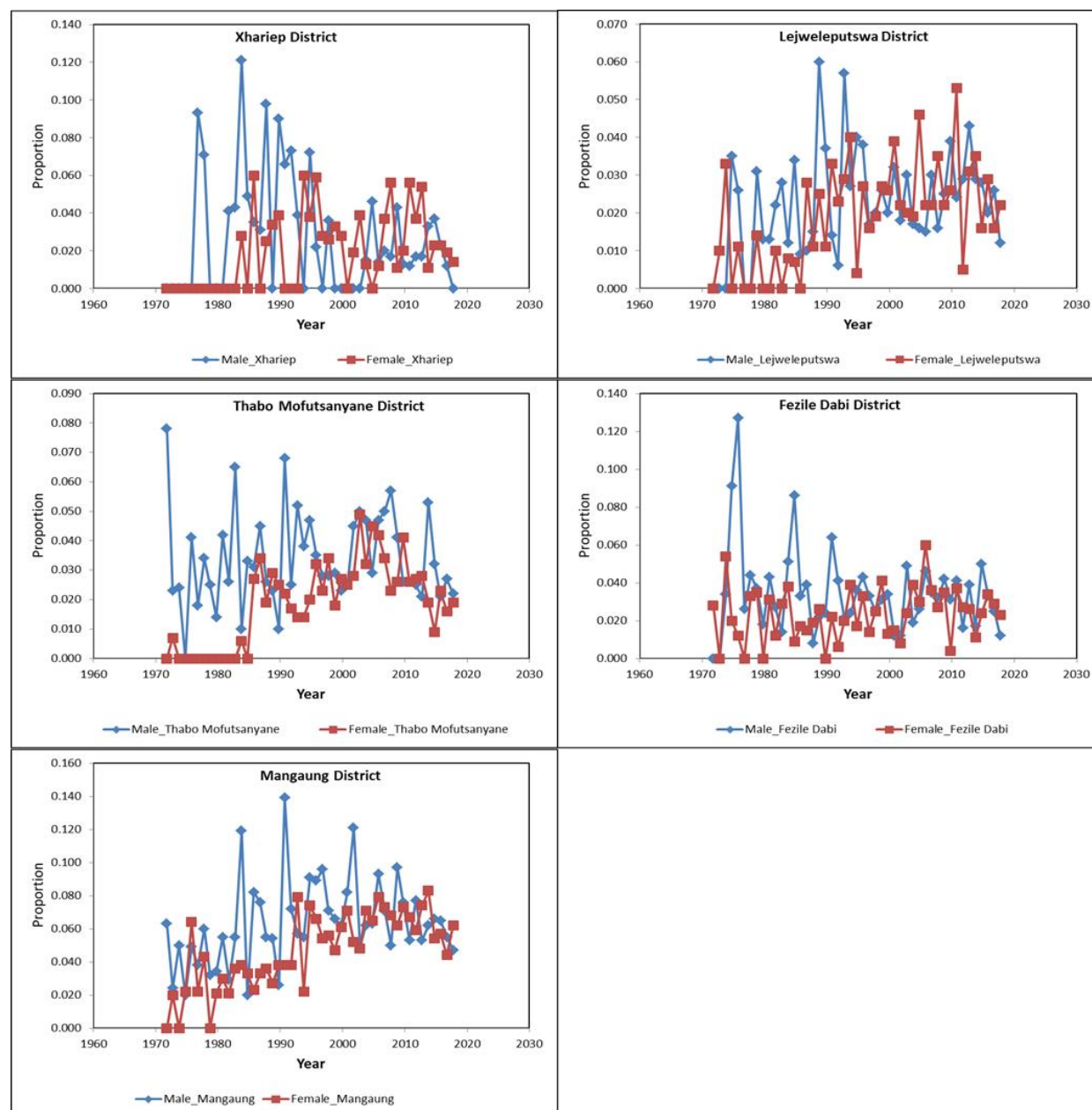


Figure 12 shows the attainment ratios for males and females who completed a bachelor's degree by district in Free State. In some districts, there were small proportions of persons who attained a bachelor's degree. However, Thabo Mofutsanyane and Mangaung districts had higher proportions of males who had completed a bachelor's degree around the 1970s. The attainment of a bachelor's degree in Xhariep and Fezile Dabi is currently showing a decreasing

trend. Finally, the districts with smaller proportions of males show an increase in Proportions of females who completed a bachelor's degree.

## 5. KwaZulu-Natal

Figure 13: Attainment ratios for persons who completed primary education by sex and district

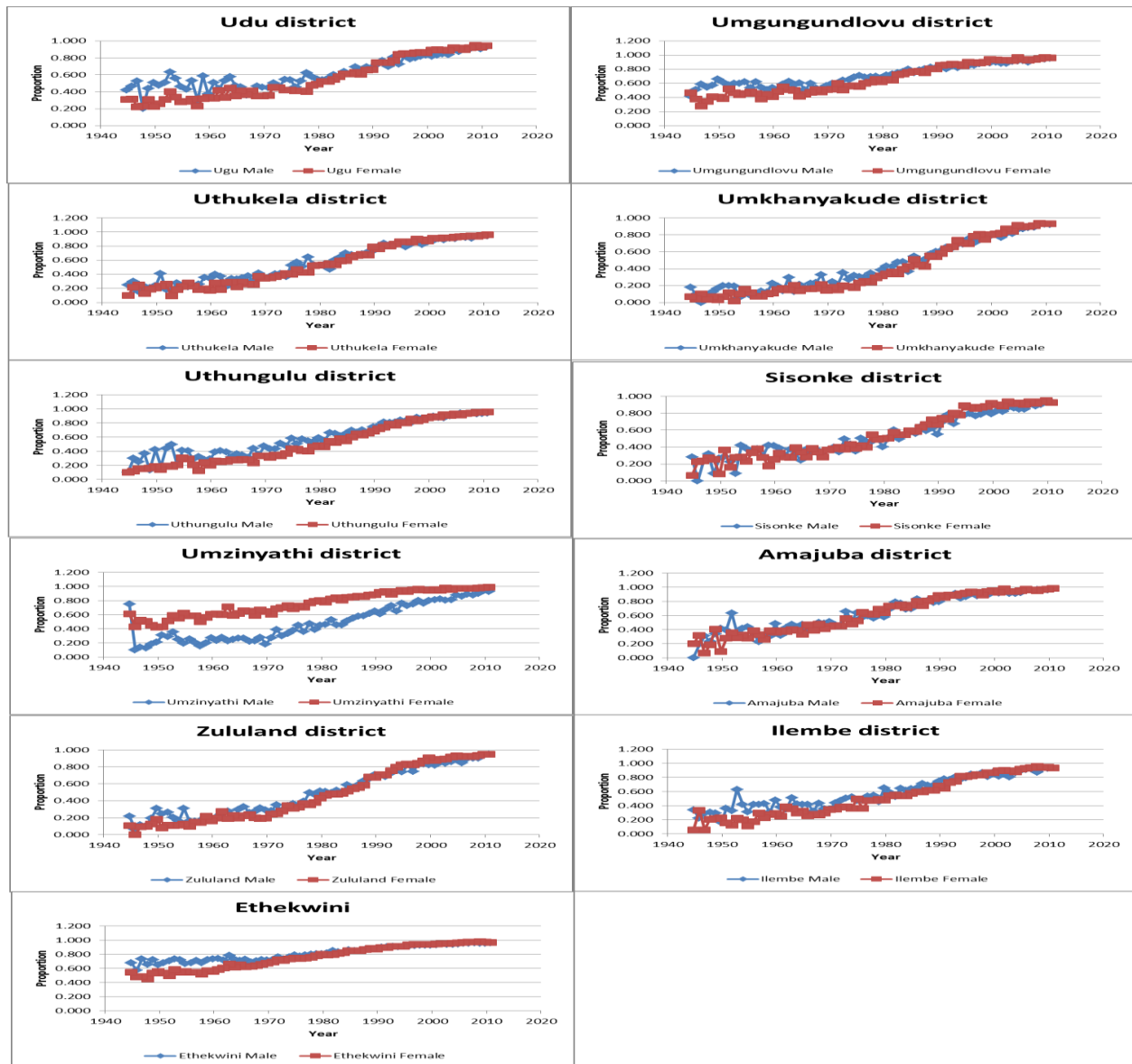


Figure 13 shows the attainment ratios for males and females who completed their primary education by district in KwaZulu-Natal. An upward trend is observed for Proportions of both males and females in all the districts in KwaZulu-Natal. The Umzinyathi district depicts rather a strange trend as compared to the rest of the districts; a higher proportion of females completed primary school as compared to males in the past, whereas the opposite is true for

the other areas. Currently, more or less the same proportions of both sexes complete primary school.

Figure 14: Attainment ratios for persons who completed secondary education by sex and district

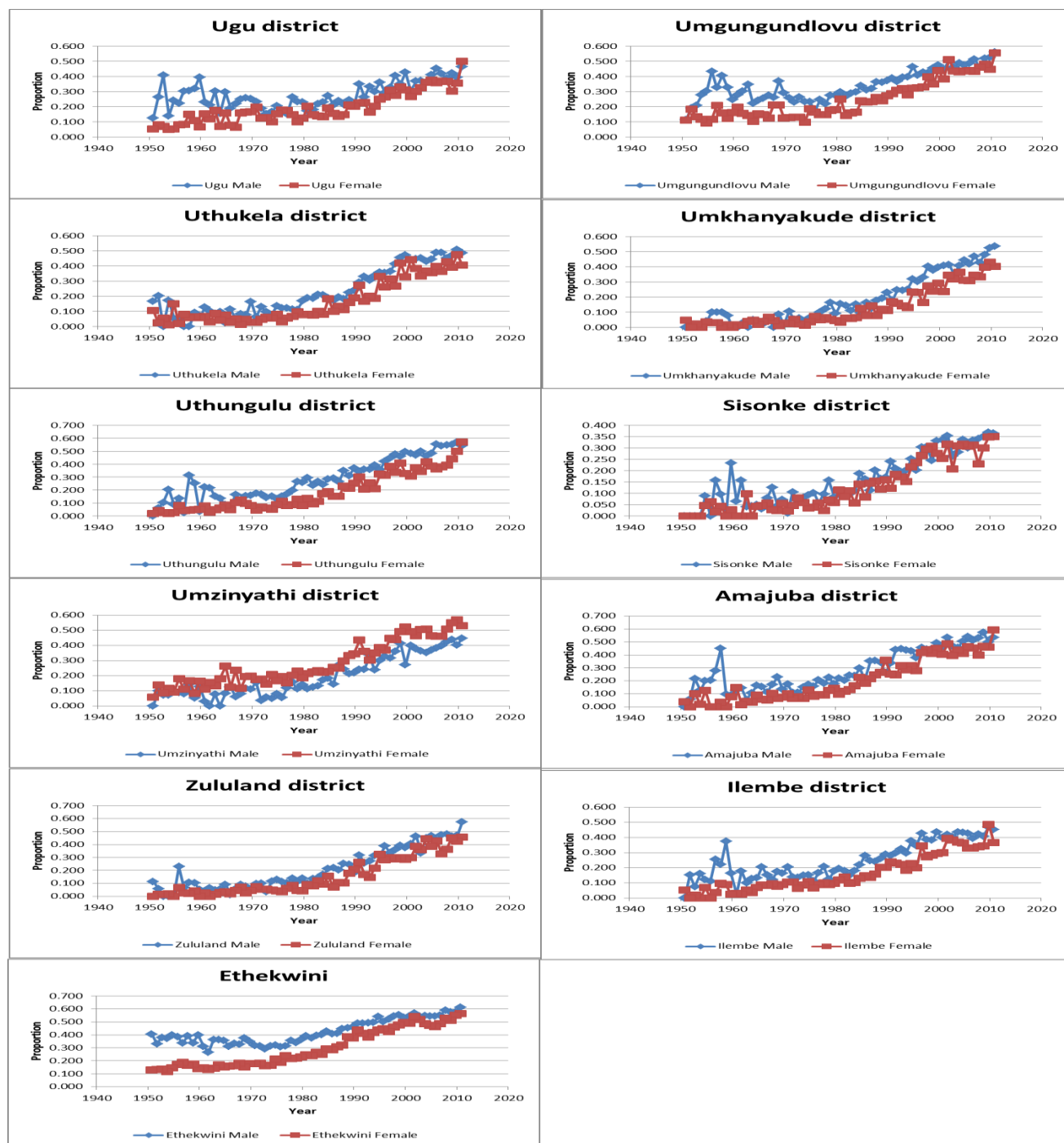


Figure 14 shows the attainment ratios for males and females who completed their secondary education by district in KwaZulu-Natal. An upward trend is observed for both males and

females who completed their secondary education, with a higher proportion of males than females attaining this education in all the districts over the years.

Figure 15: Attainment ratios for persons who completed a bachelor's degree by sex and district

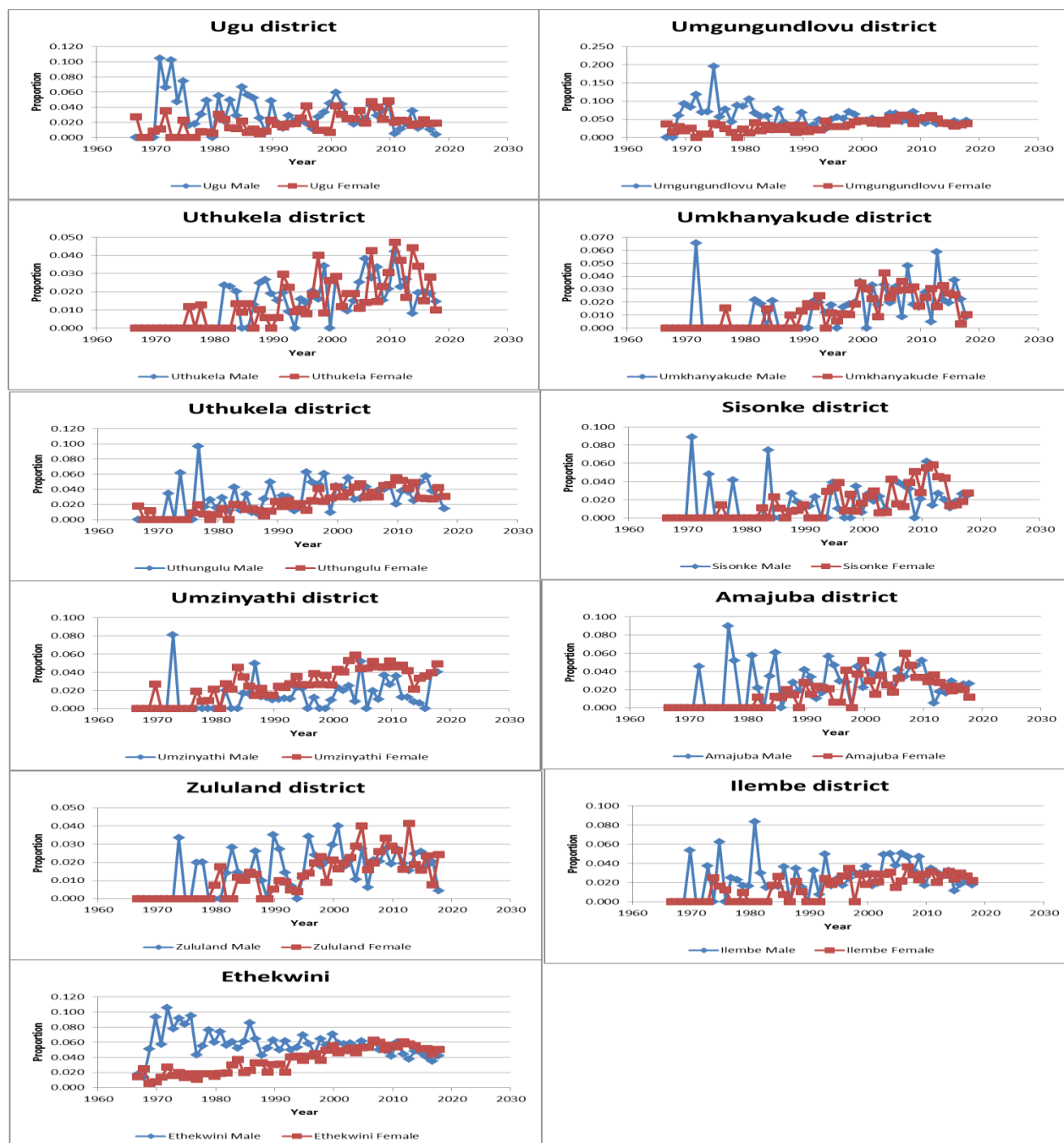


Figure 15 shows the attainment ratios for males and females who completed a bachelor's degree by district in KwaZulu-Natal. The proportion of those who completed a bachelor's degree has been fluctuating for both sexes over the years. Generally, in the past, more males



completed a bachelor's degree than females. However, the trend shows that more and more females are now completing a bachelor's degree than ever before.

## 6. North West

Figure 16: Attainment ratios for person who completed primary education by sex and district

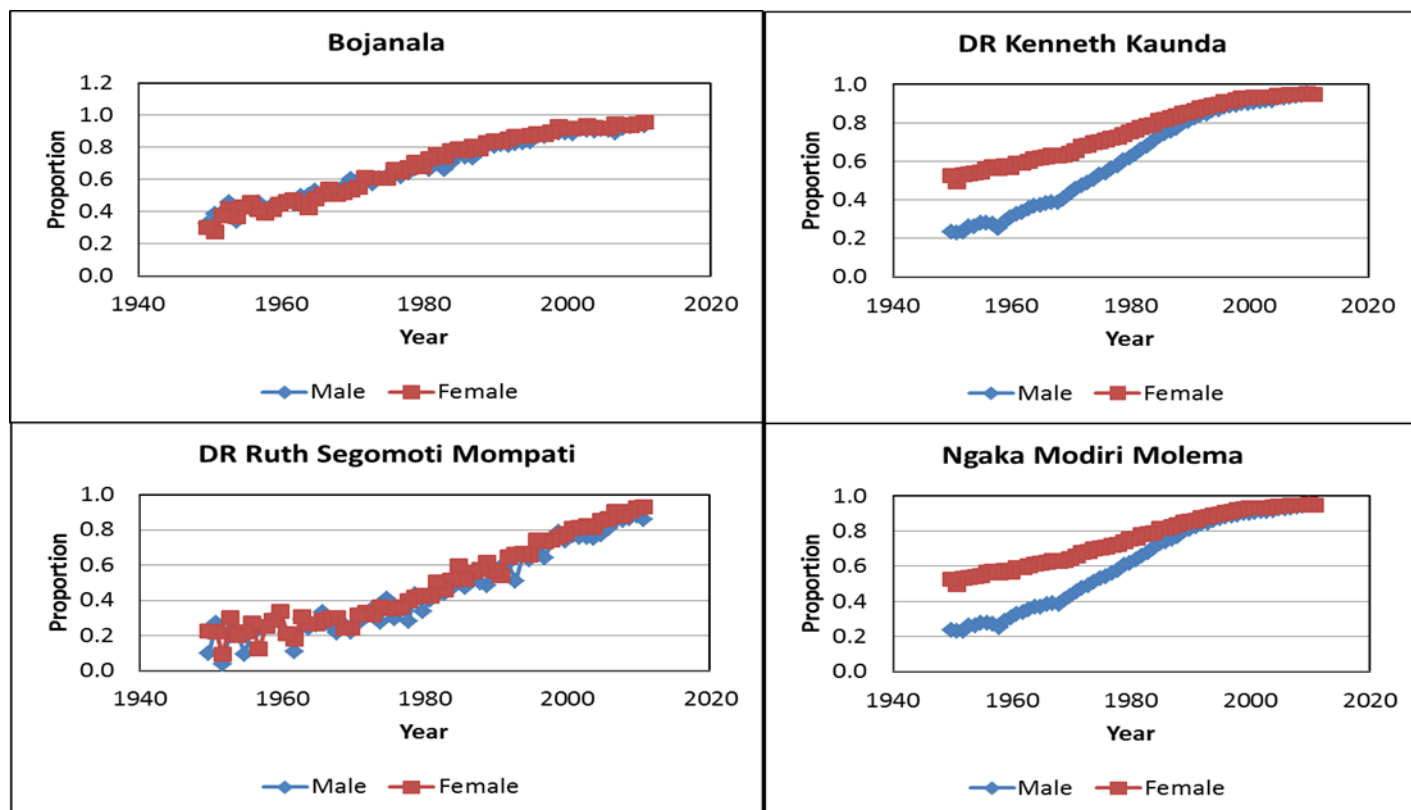


Figure 16 shows the attainment ratios for males and females who completed their primary education by district in North West. Between 1940 and 1980, a larger proportion of females than males in Dr Kenneth Kaunda and Ngaka Modiri Molema completed their primary education. The gap was closed after 1980, and thereafter the ratios are increasing at a similar rate. Bojanala and Dr Ruth Segomoti Mompoti show variations over time, although ratios are still increasing. Overall, all the districts show increasing trends as far as the attainment of a primary education is concerned.

Figure 17: Attainment ratios for persons who completed secondary education by sex and district

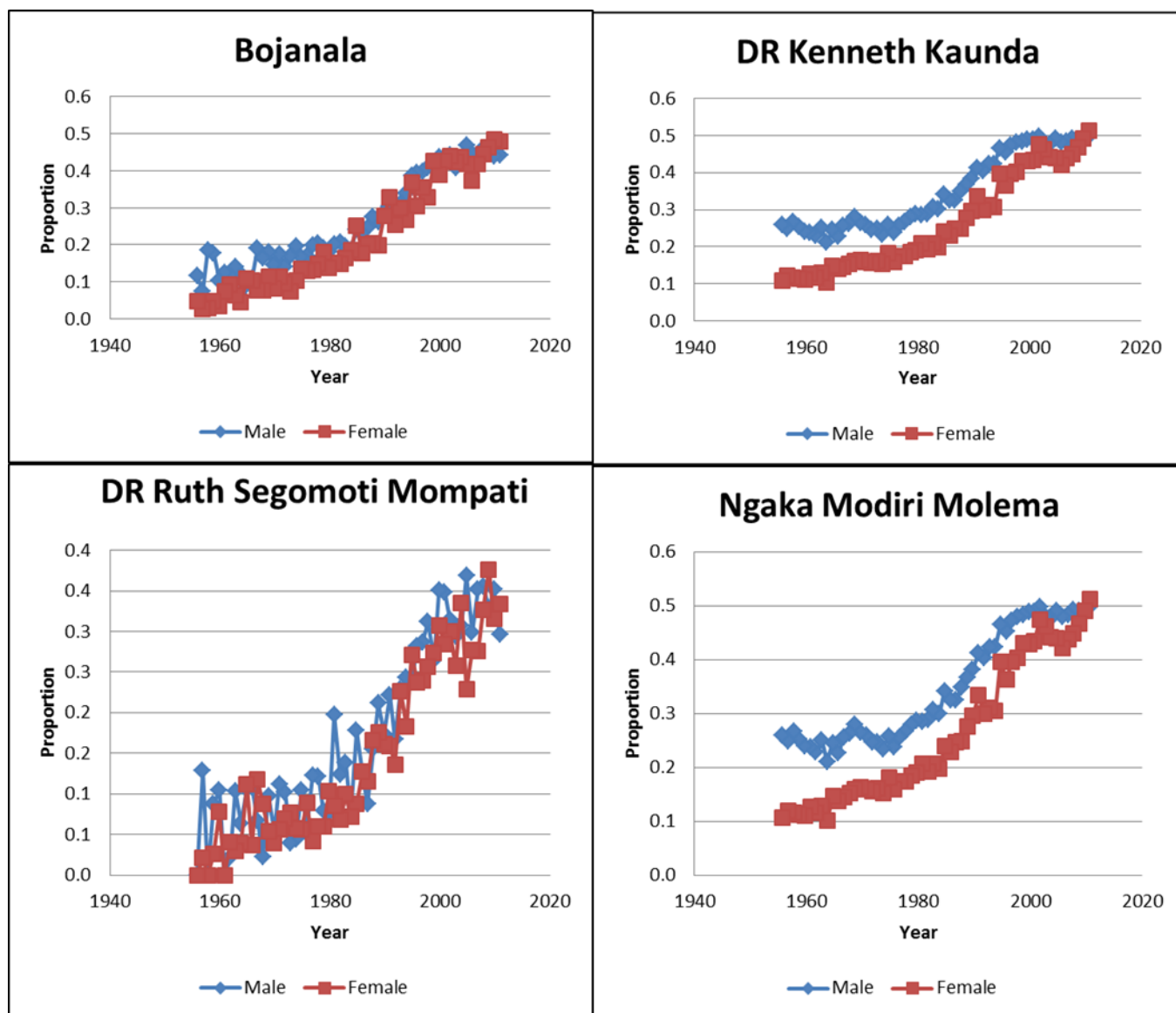


Figure 17 shows the attainment ratios for males and females by district in North West. Bojanala and Dr Ruth Segomoti Mompoti districts show variations in trends over time. Dr Kenneth Kaunda and Ngaka Modiri Molema districts show similar trends over time, and these trends show a steady increase.

Figure 18: Attainment ratios for persons who completed a bachelor's degree by sex and district

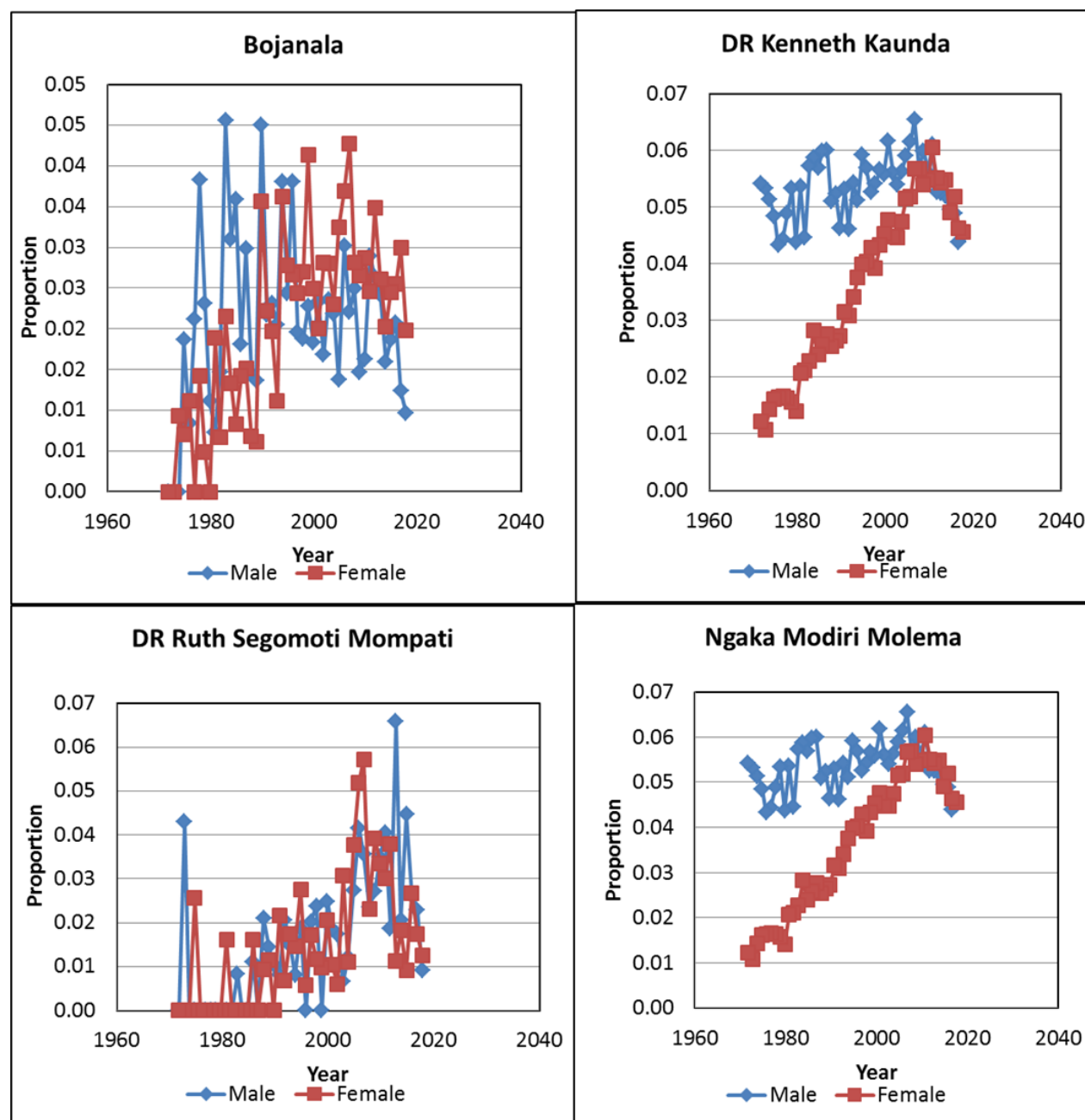


Figure 18 shows the attainment ratios for males and females who completed a bachelor's degree by district in North West. Bojanala and Dr Ruth Segomoti Mompoti districts show a significant number of variations in their trends over time. Dr Kenneth Kaunda and Ngaka Modiri Molema show that male proportions are higher than those of females; however, over time the

female proportion started to catch up with the male proportions. The trends as far as completing a bachelor's degree are concerned, are showing a downward movement.

## 7. Gauteng

Figure 19: Attainment ratios for persons who completed primary education by sex and district

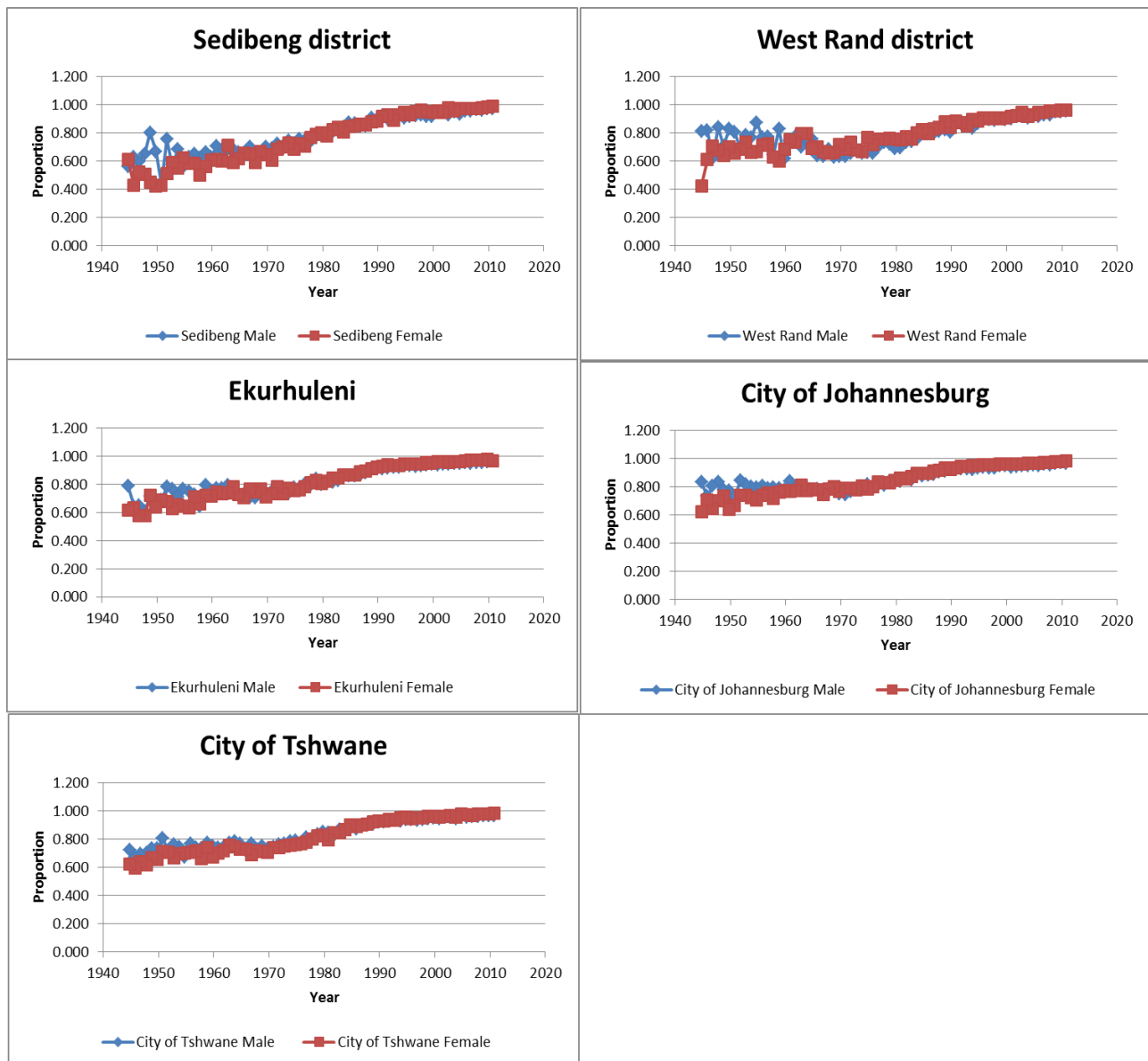


Figure 19 shows the attainment ratios for males and females who completed their primary education by district in Gauteng. The graphs for all five districts depict a similar trend, where a higher proportion of males than females completed their primary education in the 1940-60s. However, in the 70s, the female proportions started to catch up with the male proportions, and currently these proportions are more or less on par.

Figure 20: Attainment ratios for persons who completed secondary education by sex and district

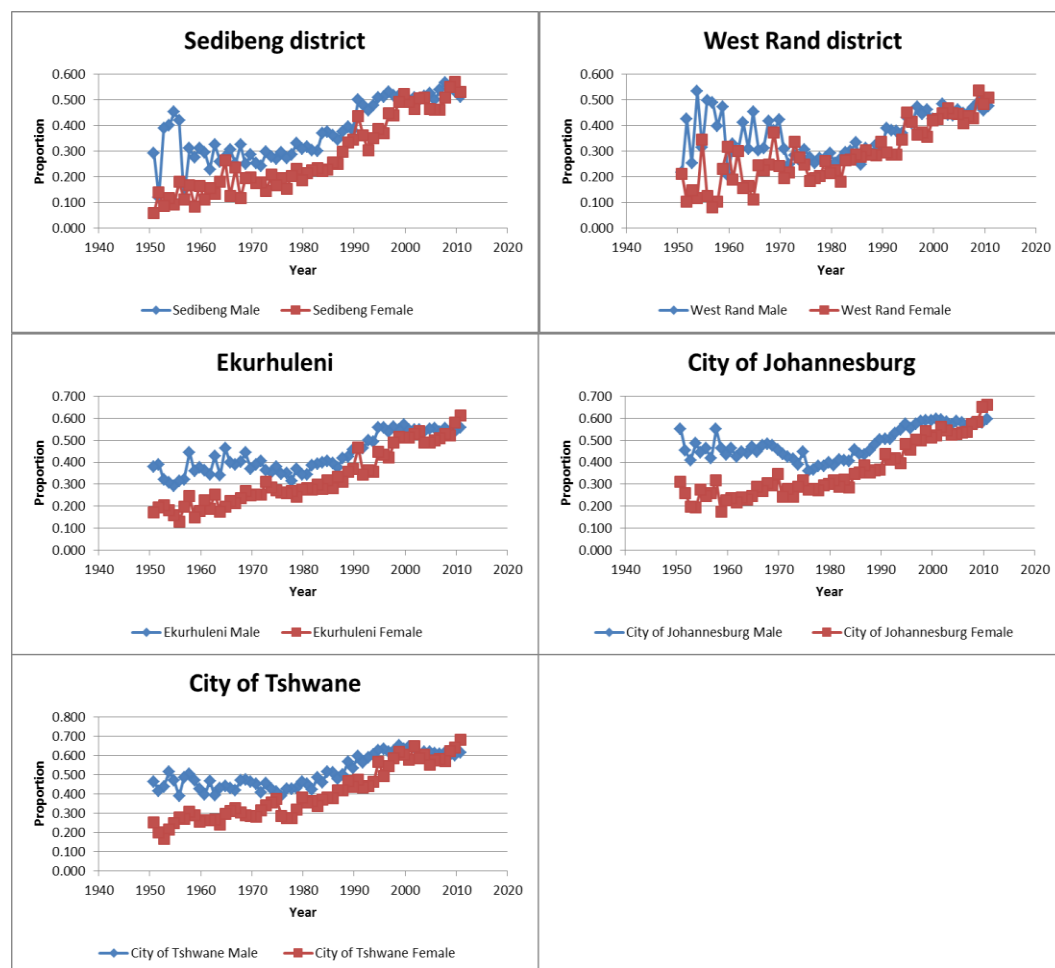


Figure 20 shows the attainment ratios for males and females who completed their secondary education by district in Gauteng. Since 1950, and in all five district municipalities, a much higher proportion of males completed their secondary education when compared to females. In the 1990s, there was an upsurge in the number of females who completed their secondary education, and by 2010, the proportion of females who had completed their secondary education surpassed that of males.

Figure 21: Attainment ratios for persons who completed a bachelor's degree by sex and district

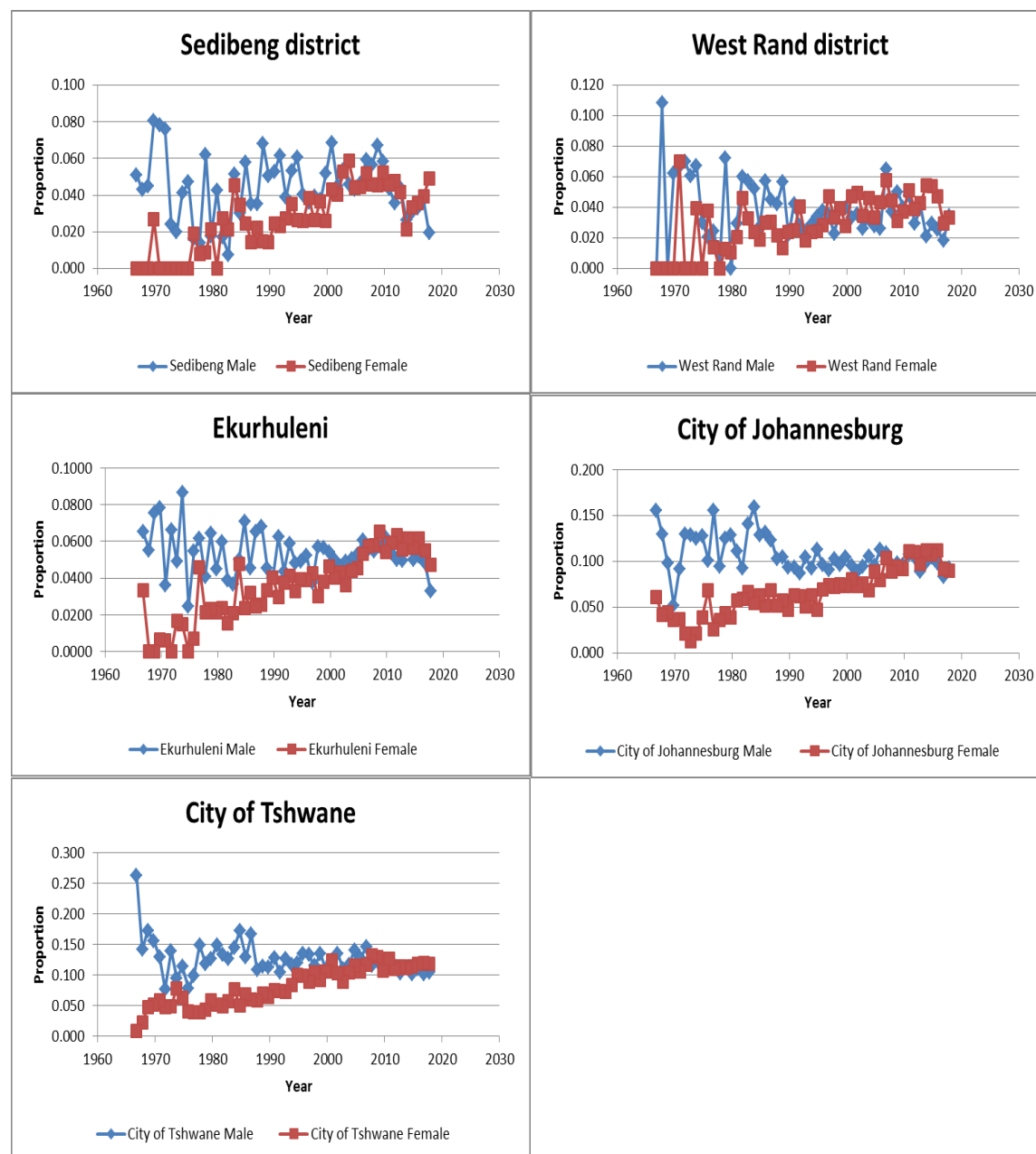


Figure 21 shows the attainment ratios for males and females who completed a bachelor's degree by district in Gauteng. The gap between males and females who completed a bachelor's degree has drastically decreased from 2000 in all the districts in Gauteng. The graphs indicate that currently, more females have completed a bachelor's degree than ever before. However, Proportions are decreasing in West rand, Ekurhuleni and City of Johannesburg.



## 8. Mpumalanga

Figure 22: Attainment ratios for persons who completed primary education by sex and district

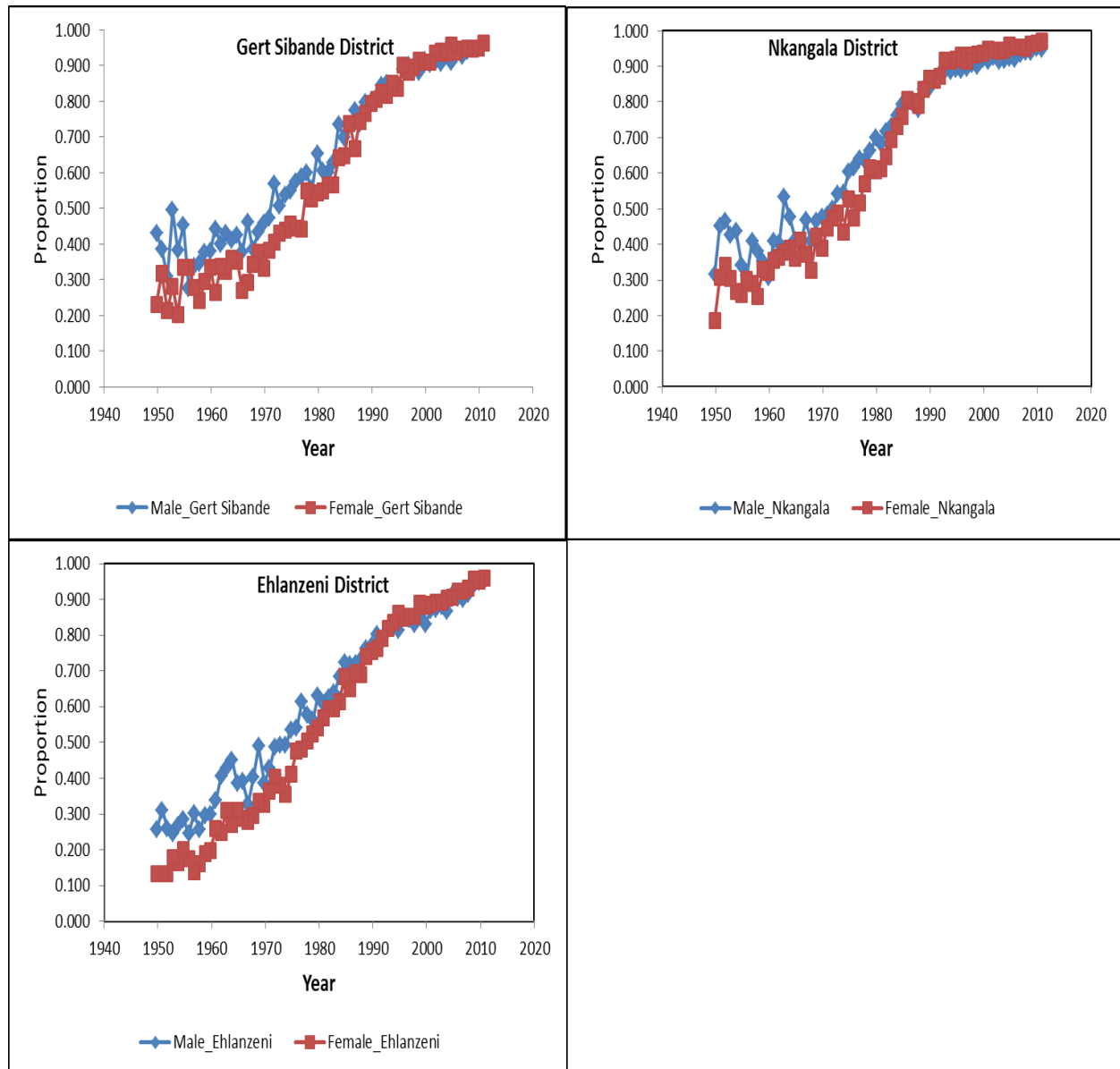


Figure 22 shows the attainment ratios of males and females who completed their primary education by district in Mpumalanga. Generally, across all time periods, females have been completing their primary education at lower rates compared to those of males. However, females started closing the gap during the late 1980s. Currently, more females than males have completed their primary education across all the districts in Mpumalanga, even though there has been a noticeable increase in Proportions for both sexes.

Figure 23: Attainment ratios for persons who completed secondary education by sex and district

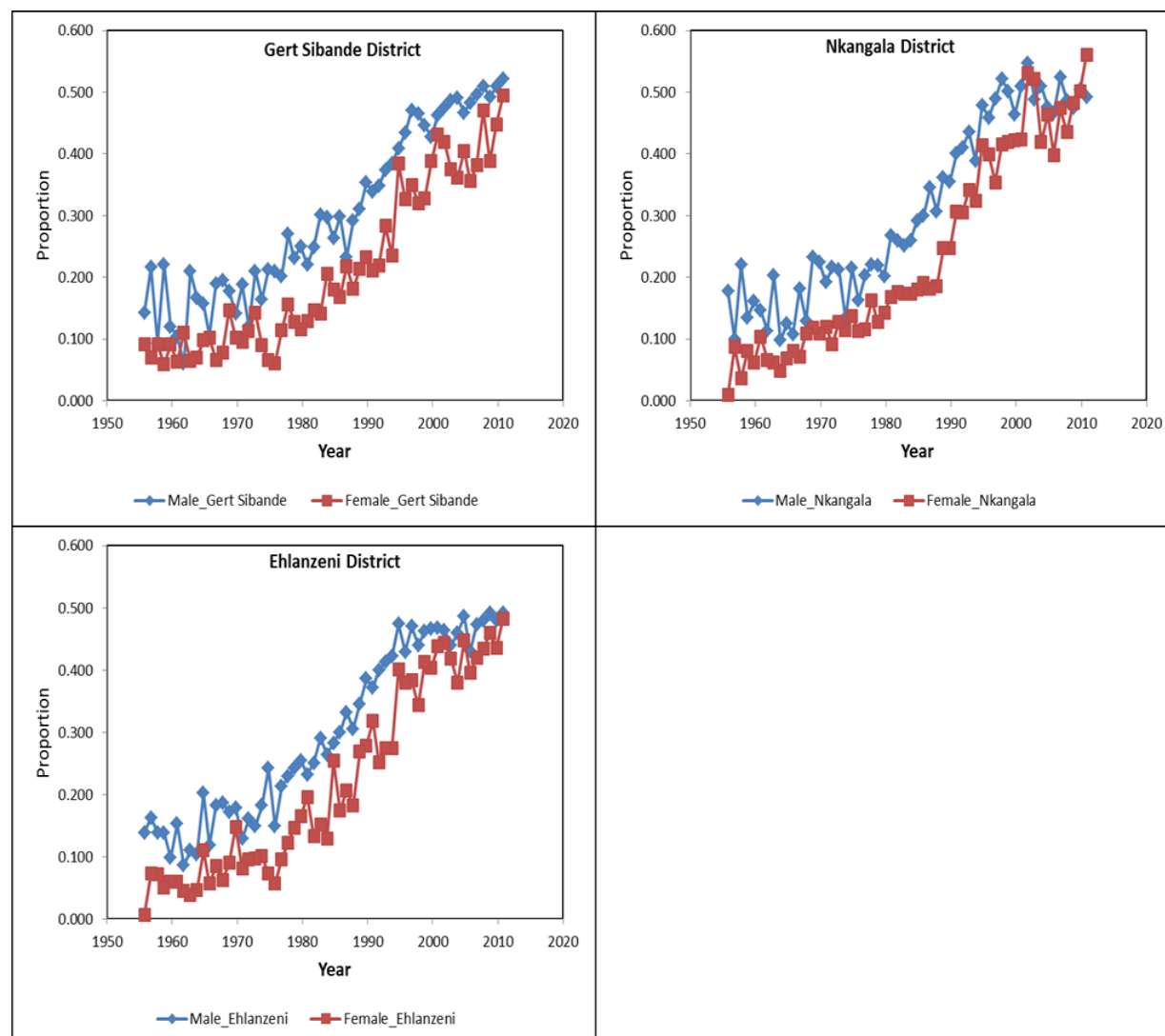


Figure 23 shows the attainment ratios for males and females who completed their secondary education by district in Mpumalanga. Across all districts, the results indicate clear sex differences in Proportions of persons who completed their secondary education. For instance, in Gert Sibande and Ehlanzeni districts, the proportion of males who completed their secondary education increased over time – while the proportion of females remained consistently lower than that of the males. In Nkangala district, more females than males have completed their secondary education in more recent years. Generally, the results show increasing trends for both sexes who complete their secondary education.

Figure 24: Attainment ratios for persons who completed a bachelor's degree by sex and district

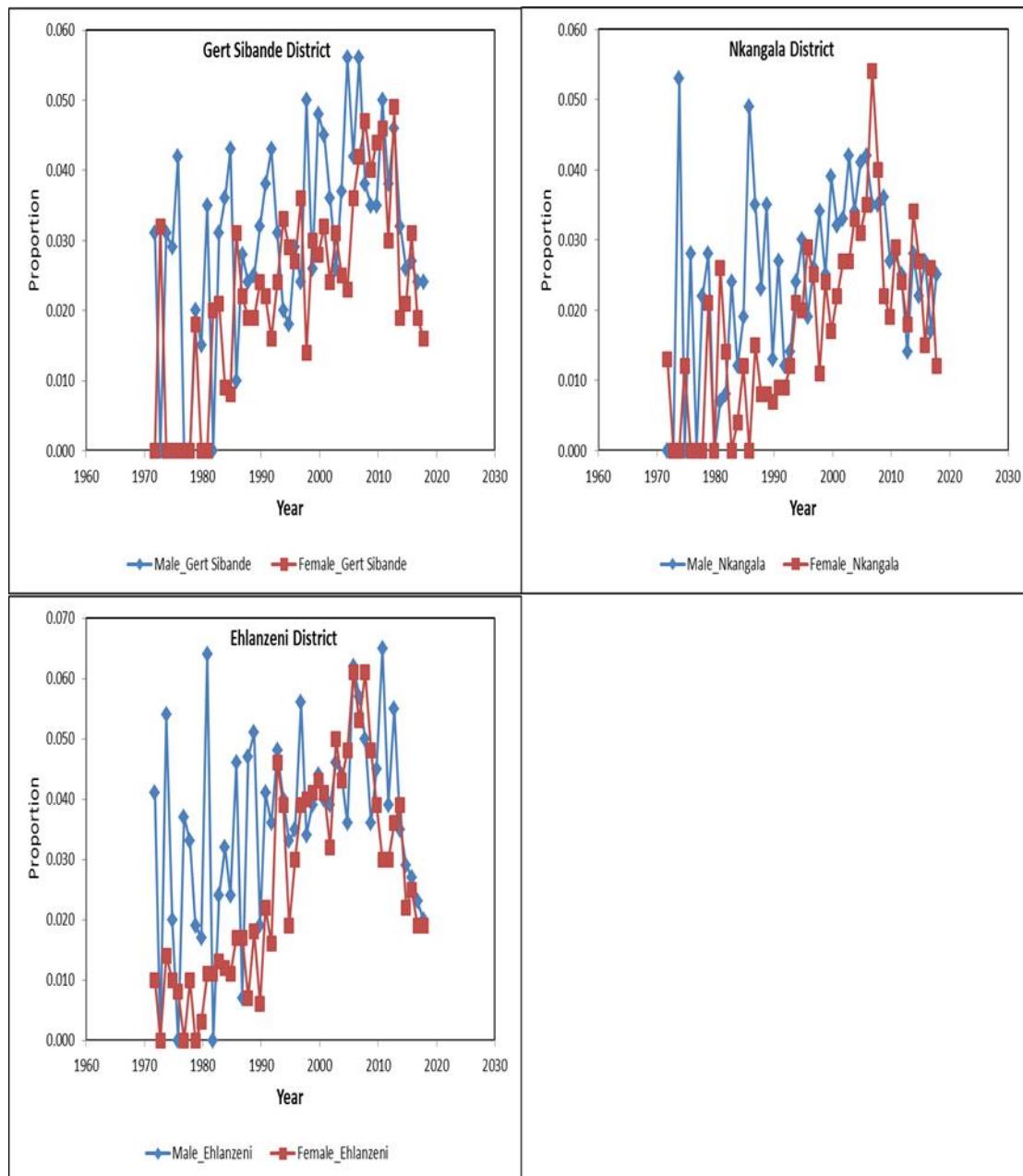


Figure 24 shows the attainment ratios for males and females who completed a bachelor's degree by district in Mpumalanga. Generally, over the years there have been fluctuations in Proportions of persons who completed a bachelor's degree. However, for the most part, males have been leading as compared to their female counterparts. It is also evident from the graphs

that there is currently a decrease in Proportions of persons who have attained a bachelor's degree.

## 9. Limpopo

Figure 25: Attainment ratios for persons who completed primary education by sex and district

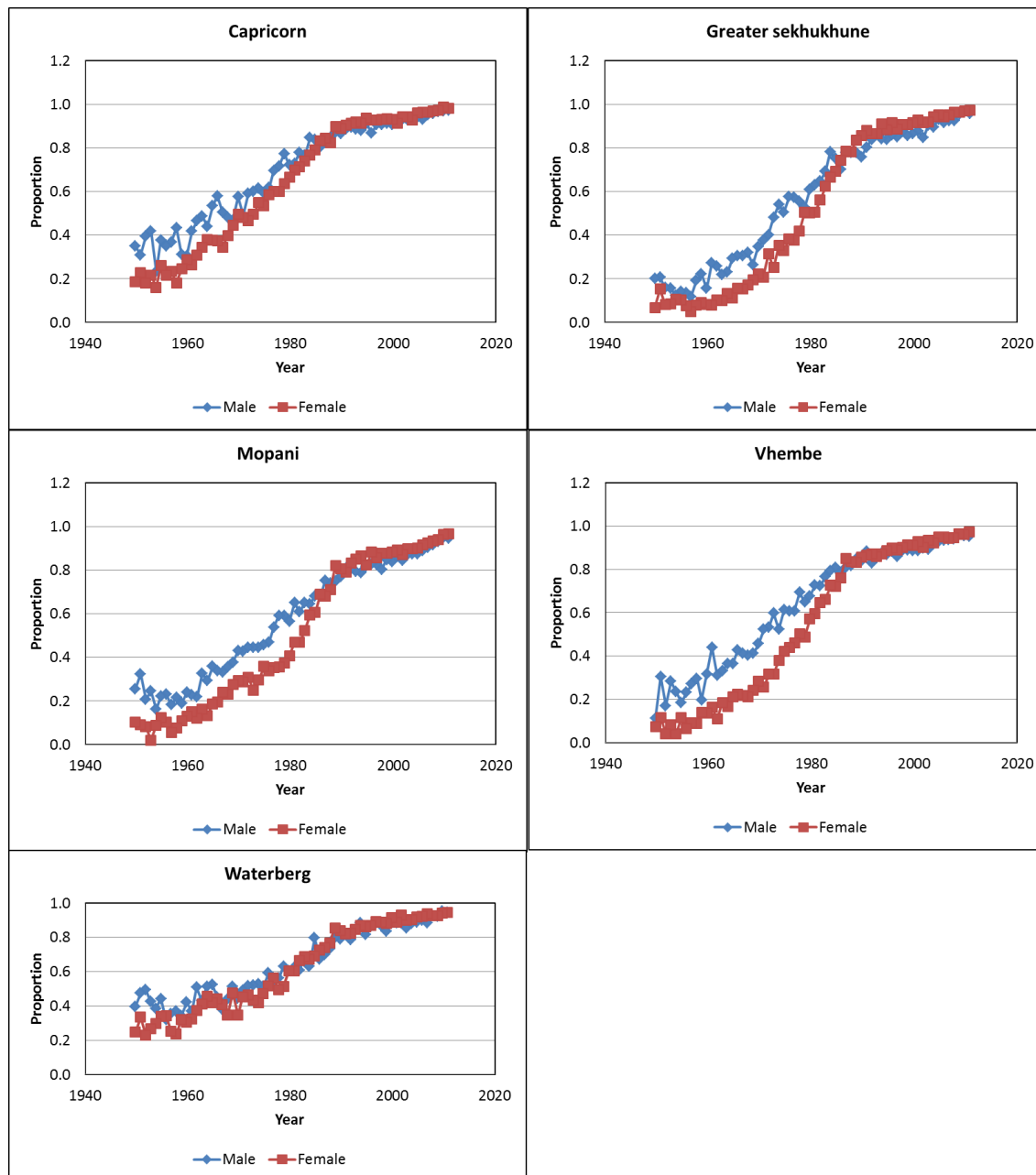


Figure 25 shows the attainment ratios for males and females who completed their primary education by district in Limpopo. Overall, all districts show upward trends over time, with males dominating in the earlier years, and the females catching up to them in the late 1990s, after which Proportions increase at a more or less similar rate.

Figure 26: Attainment ratios for persons who completed secondary education by sex and district

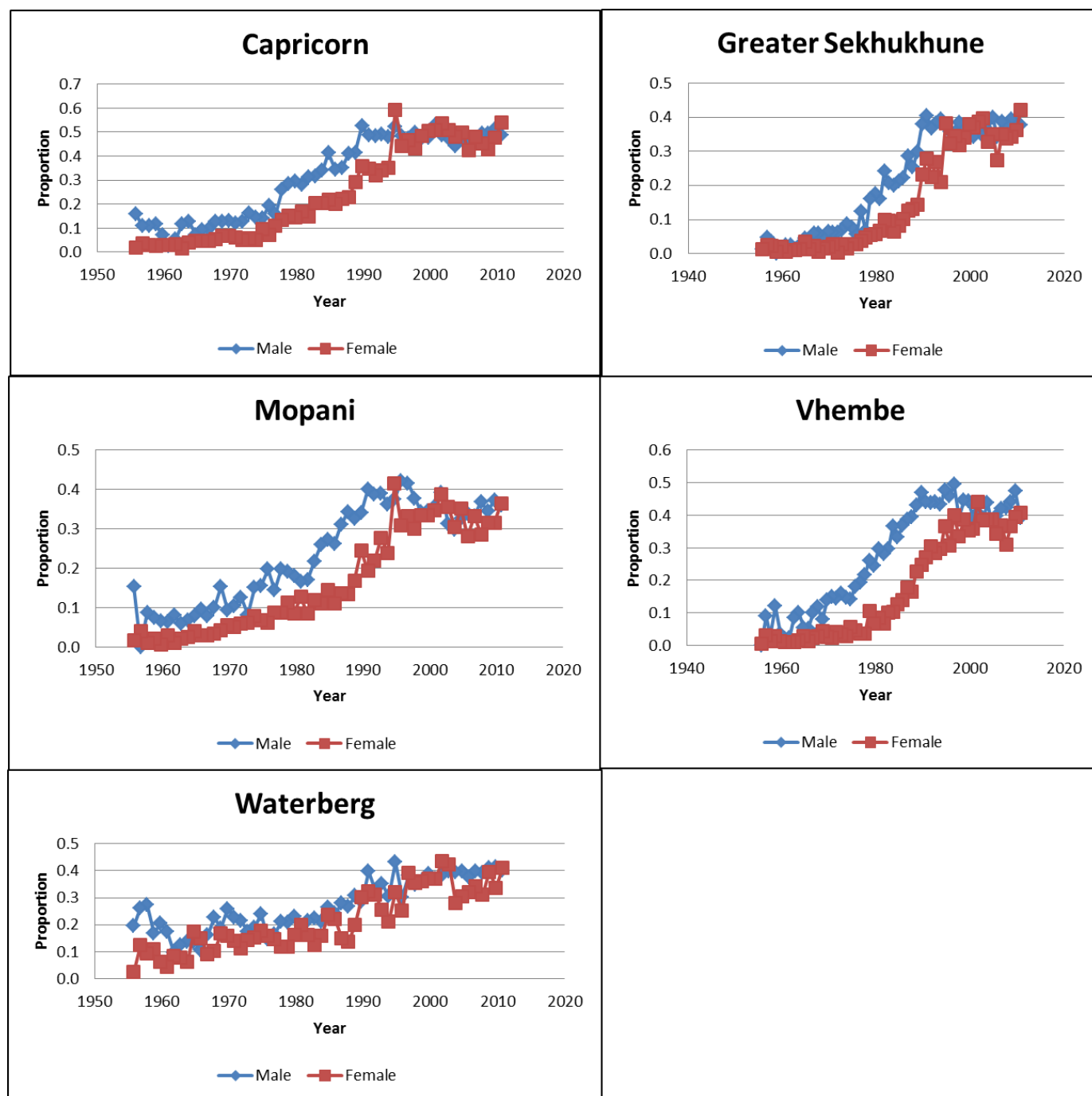


Figure 26 shows the attainment ratios for males and females who completed their secondary education by district in Limpopo. Overall, all districts show upward trends over time, with males dominating in the earlier years, and the females catching up to them in the 1990s, after which Proportions increase at a more or less similar rate.

Figure 27: Attainment ratios for persons who completed a bachelor's degree by sex and district

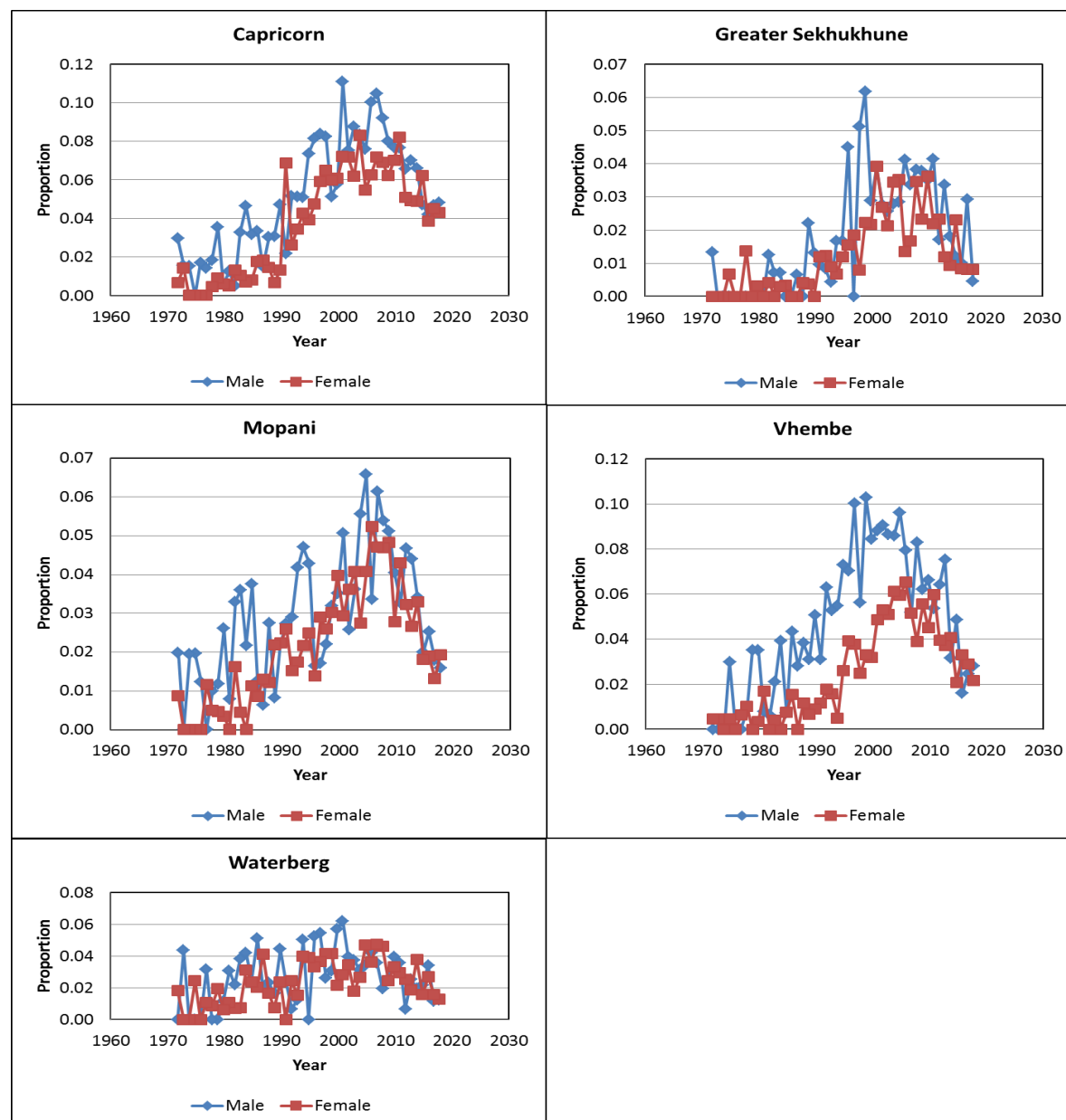


Figure 27 shows the attainment ratios for males and females who completed a bachelor's degree by district in Limpopo. Overall, all districts show upward trends until approximately the 2000s, after which a downward slope can be observed in all districts. The male proportions are higher than the female proportions in the earlier years, with the females catching up to them in the late 1990s to early 2000s, after which Proportions are more or less the same.

## Appendix B: Time plots for progression ratios

### 1. Western Cape

Figure 28: Progression ratios of persons completing grade 12 after completing grade 9 by sex and district

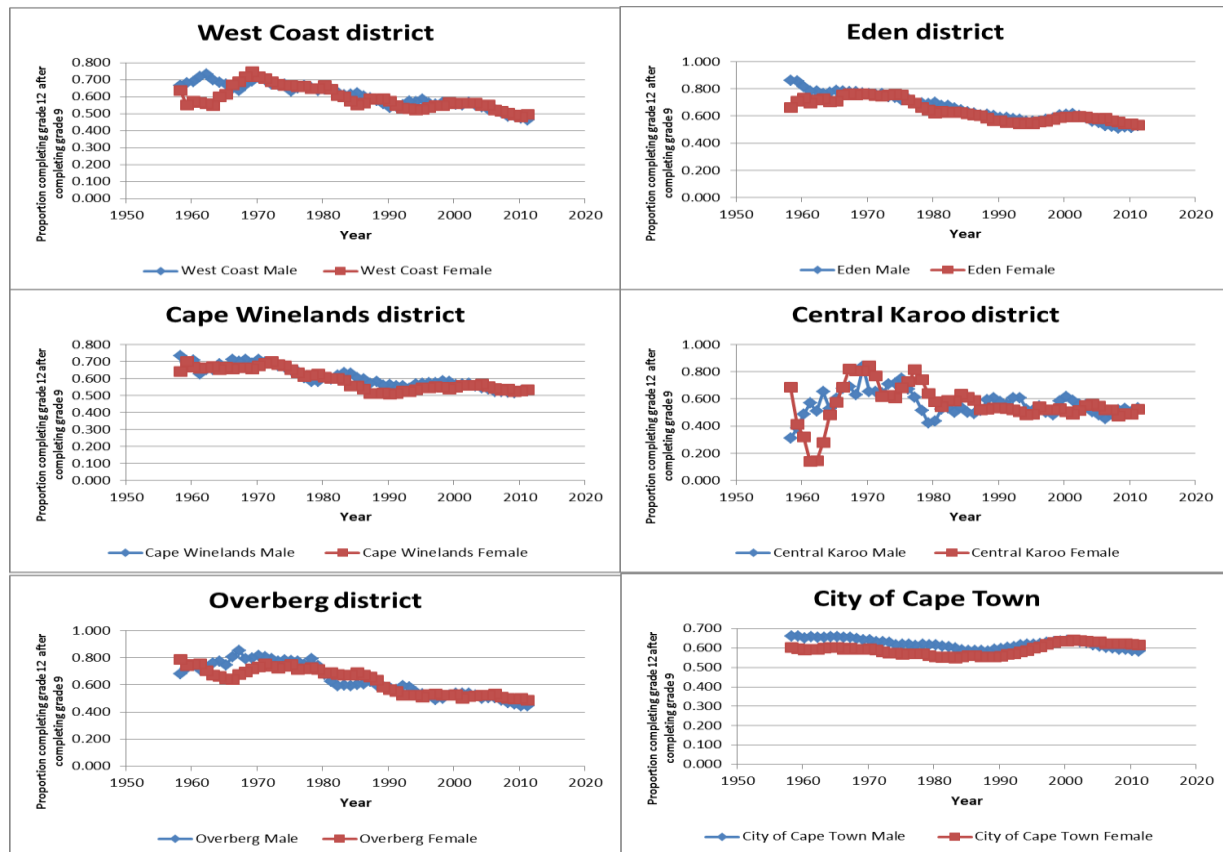


Figure 28 shows the progression ratios of males and females that progress to complete grade 12 after completing grade 9. The graphs indicate that in the West Coast, female ratios were lower than those of the males during the 70s. Furthermore, during the 1960s, the female ratios increased from 0.55 to 0.85 to equal those of males in the same period. However, the ratios for both sexes decreased in all the districts from 1970. In the City of Cape Town, more males progressed from grade 9 to grade 12 than females until 2000, with progression ratios above 0.55. After 2010, the proportion of females in the City of Cape Town was larger than that of the males. The Central Karoo district shows a different pattern from the other districts. It has the lowest ratios compared to the other districts. Before 1960, the female ratio was 0.700, but dropped to 0.110 in the 60s before it started an upwards trend again.



Figure 29: Progression ratios of persons completing a bachelor's degree after completing grade 12 by sex and district

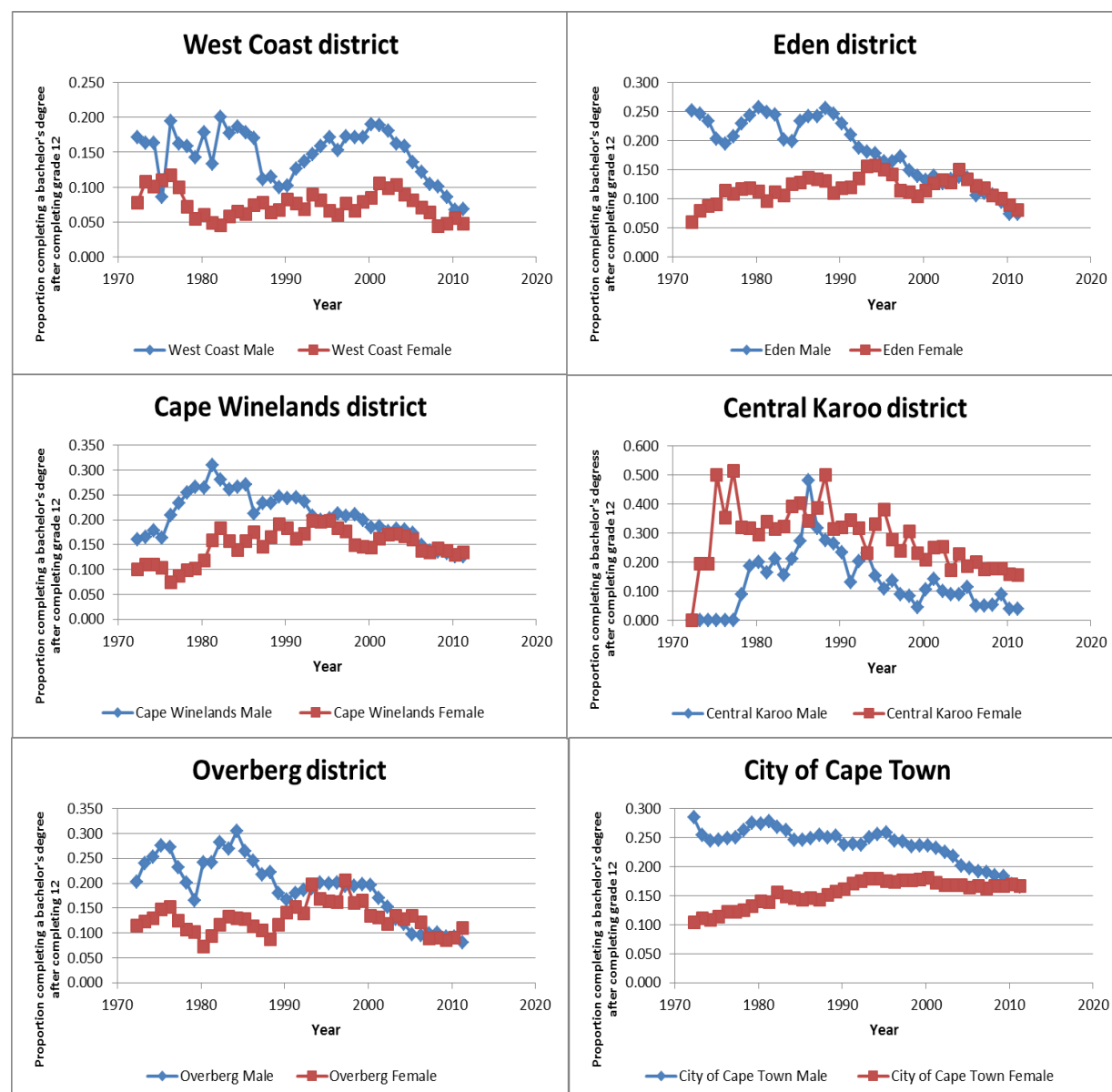


Figure 29 shows the progression ratios of persons who complete a bachelor's degree after completing matric. In the 70s, the ratios for females in the City of Cape Town started to increase. In 2010, the female ratio increased to the point that it matched that of males. The City of Cape Town ratios were below 0.300 for both sexes and the ratio for males has continued to decrease over the years. In Eden, West Coast and Cape Wine lands, the gap that existed from 1970 to 2000 between the female ratios and those of the males has closed when it comes to progressing to a bachelor's degree after completing matric. However, the ratios for males and females have decreased to below 0.10.

## 2. Eastern Cape

Figure 30: Progression ratios of persons completing grade 12 after completing grade 9 by sex and district

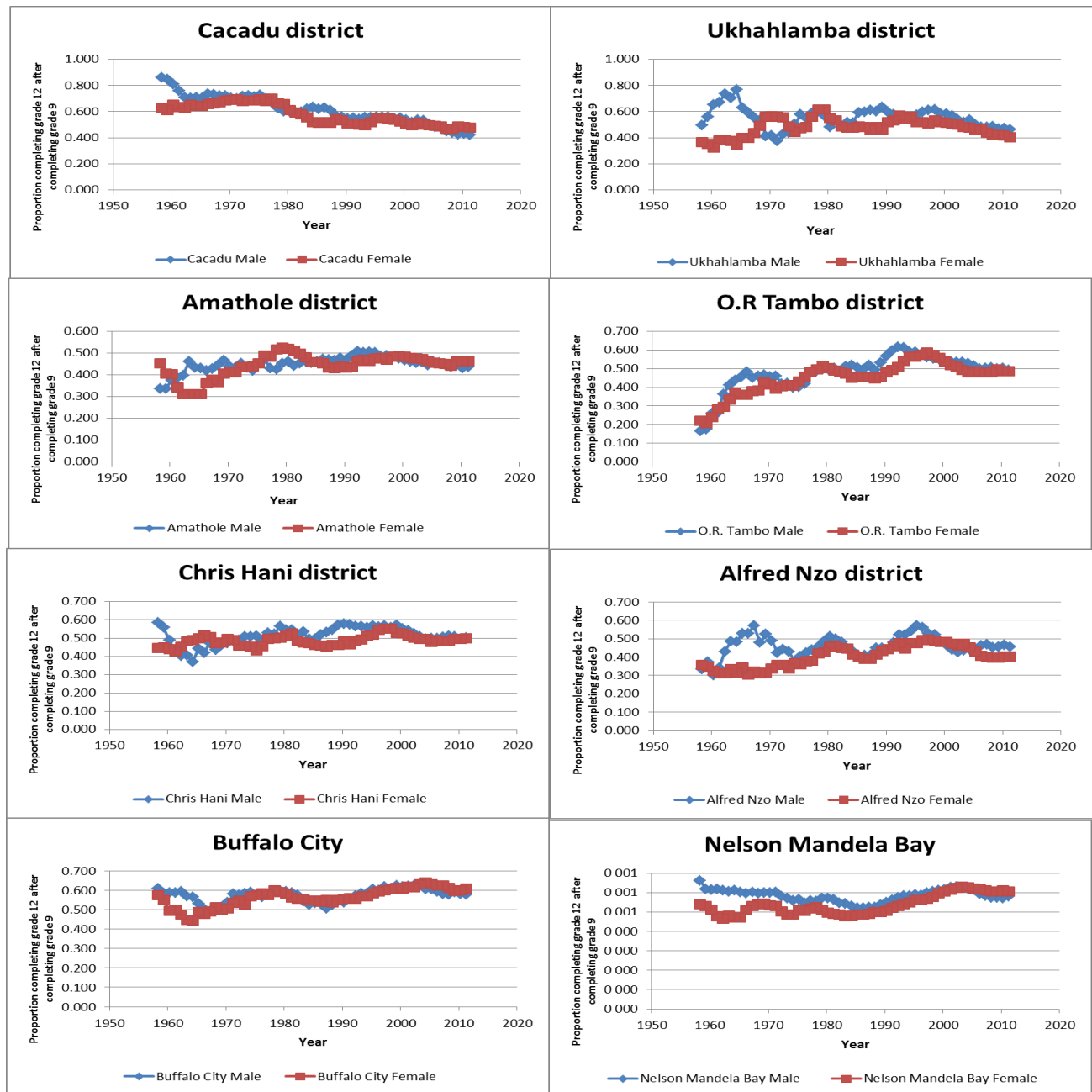


Figure 30 shows the progression ratios of persons completing grade 12 after completing grade 9 by sex and district in Eastern Cape. The progression ratios for all the districts except O.R

Tambo show that more males than females progressed to grade 12 in between 1960 and 1980. After 2000, the ratios decreased for both males and females in all the districts.

Figure 31: Progression ratios of persons completing a bachelor's degree after completing grade 12 by sex and district

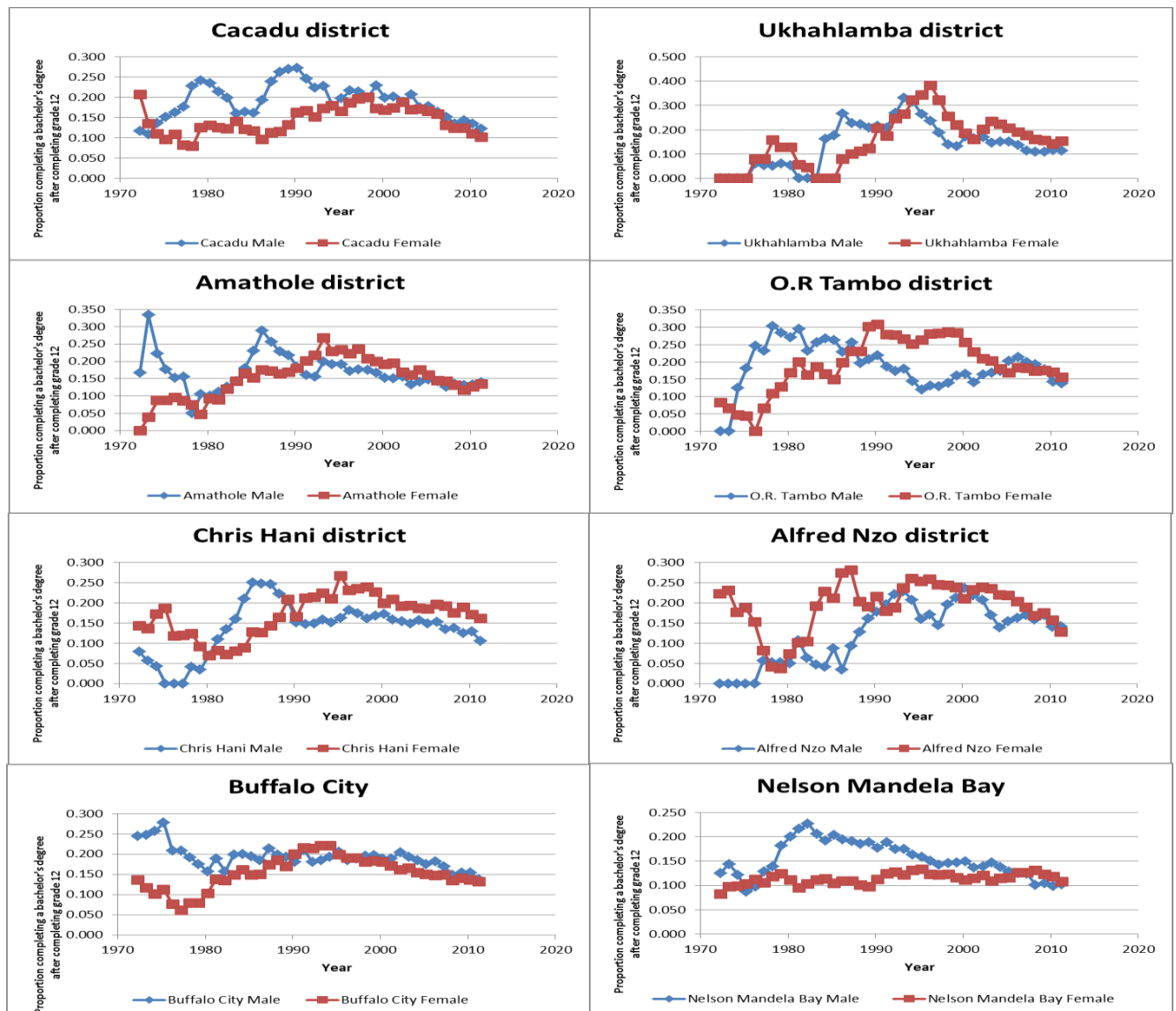


Figure 31 shows that the progression ratios of persons who completed a bachelor's degree after completing grade 12 are fluctuating in all the districts. Nelson Mandela Bay and Cacadu districts had higher ratio differences between males and females who completed a bachelor's degree as compared to the other districts. Alfred Nzo shows that more females than males completed a bachelor's degree. The ratios decreased after the year 2000 for both sexes, indicating that fewer males and females were completing a bachelor's degree in Eastern Cape.

### 3. Northern Cape

Figure 32: Progression ratios of persons completing grade 12 after completing grade 9 by sex and district

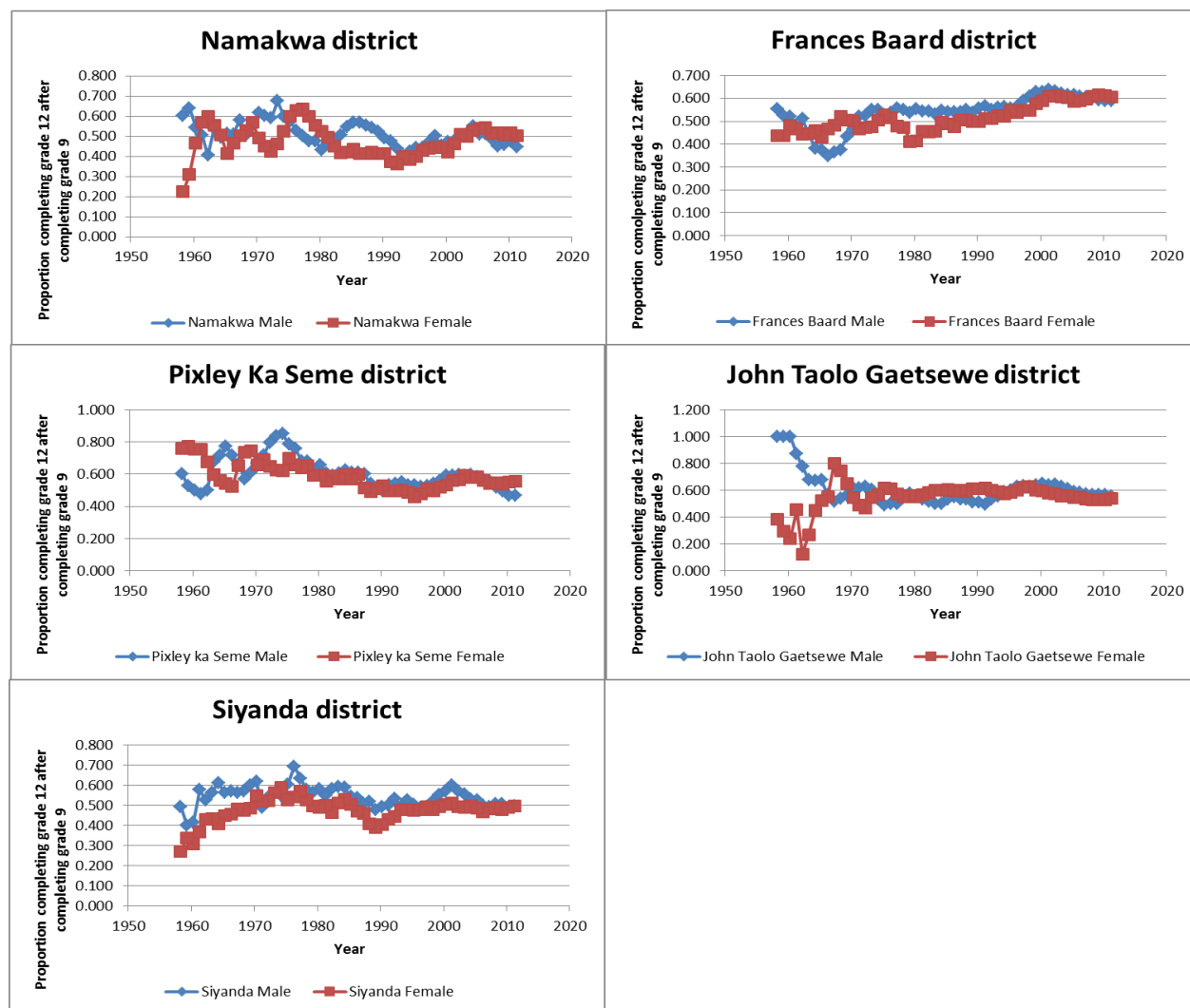


Figure 32 shows the progression ratios for males and females who completed grade 12 after completing grade 9 by district in Northern Cape. In Namakwa, John Taolo Gaetsewe and Siyanda, the proportion of females who progressed to complete grade 12 after completing grade 9 was lower than that of males before 1960. However, the female ratios improved in the John Taolo Gaetsewe and Siyanda districts from 1980 as compared to Namakwa, where the females closed the gap only after 2000. Even though female ratios improved from 1990, the ratios declined for both sexes. Between 1960 and 1980, John Taolo Gaetsewe had the lowest proportion of females completing grade 12 as compared to the other districts in the province.

Figure 33: Progression ratios of persons completing a bachelor's degree after completing grade 12 by sex and district

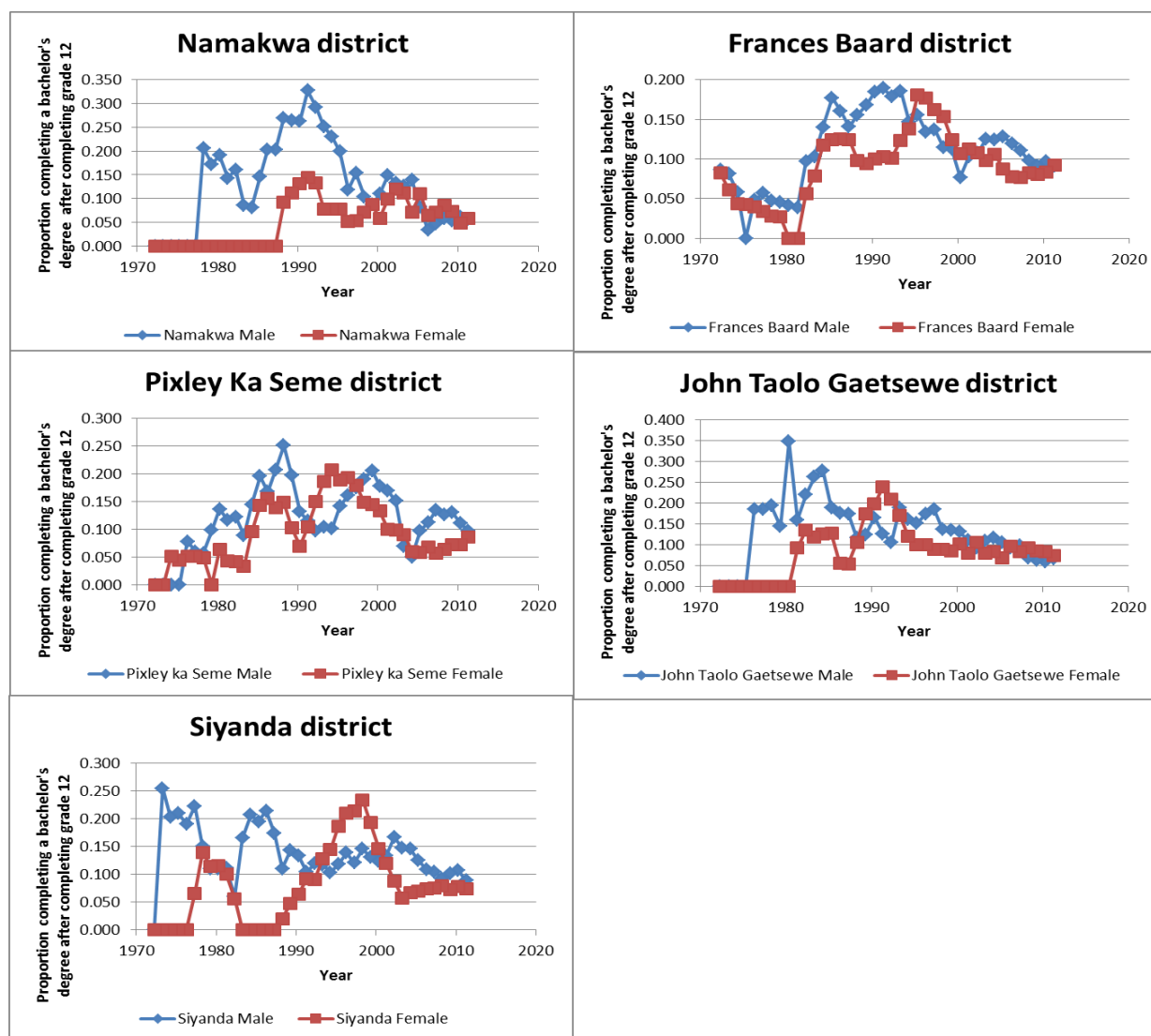


Figure 33 shows the ratio of males and females who completed a bachelor's degree after completing grade 12. The graphs indicate that the ratios were fluctuating for both sexes in all the districts over the years, starting from 1970. A higher proportion of males than females went on to complete a bachelor's degree after completing grade 12 in all the districts in Northern Cape. In Namakwa, John Taolo Gaetsewe and Siyanda, a smaller proportion of females than males completed a bachelor's degree before the year 2000. The proportion of females completing degrees has gradually increased over the years in all the districts in the province.

## 4. Free State

Figure 34: Progression ratios of persons completing grade 12 after completing grade 9 by sex and district

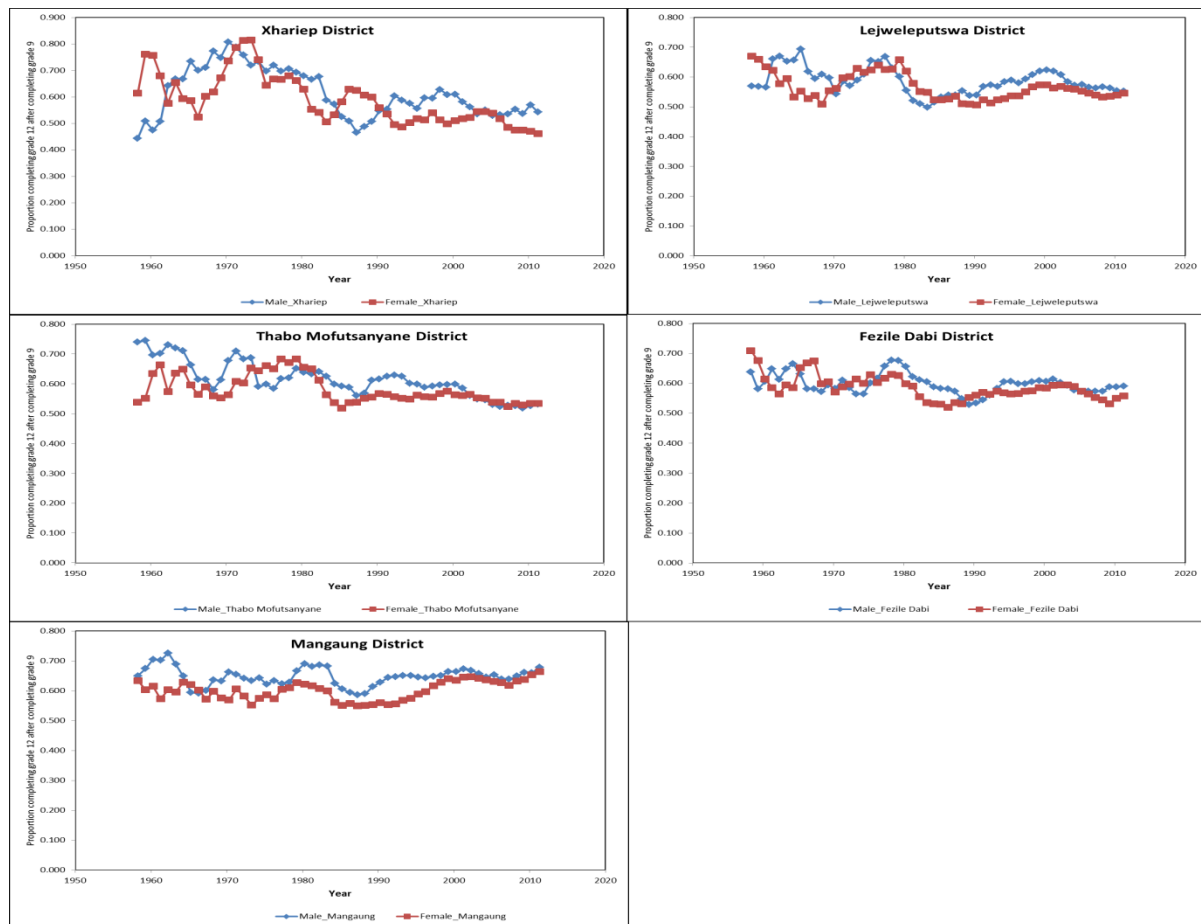


Figure 34 shows that persons from all the districts of Free State have been progressing well from grade 9 to grade 12, with ratios of more than 40%. Lejweleputswa, Thabo Mofutsanyane, Fezile Dabi, and Mangaung districts maintained Proportions of more than 50% over time. In some districts, there were larger proportions of males who progressed to grade 12 after completing grade 9 (i.e. Xhariep, Fezile Dabi, and Mangaung) as compared to females. In Xhariep district, Proportions of males and females who progressed to grade 12 after completing grade 9 were decreasing. In Thabo Mofutsanyane, Proportions of females who progressed to grade 12 after completing grade 9 have slightly overtaken those of males. However, in Lejweleputswa, females are catching up to males in terms of persons who progress to grade 12 after completing grade 9.

Figure 35: Progression ratios of persons completing a bachelor's degree after completing grade 12 by sex and district

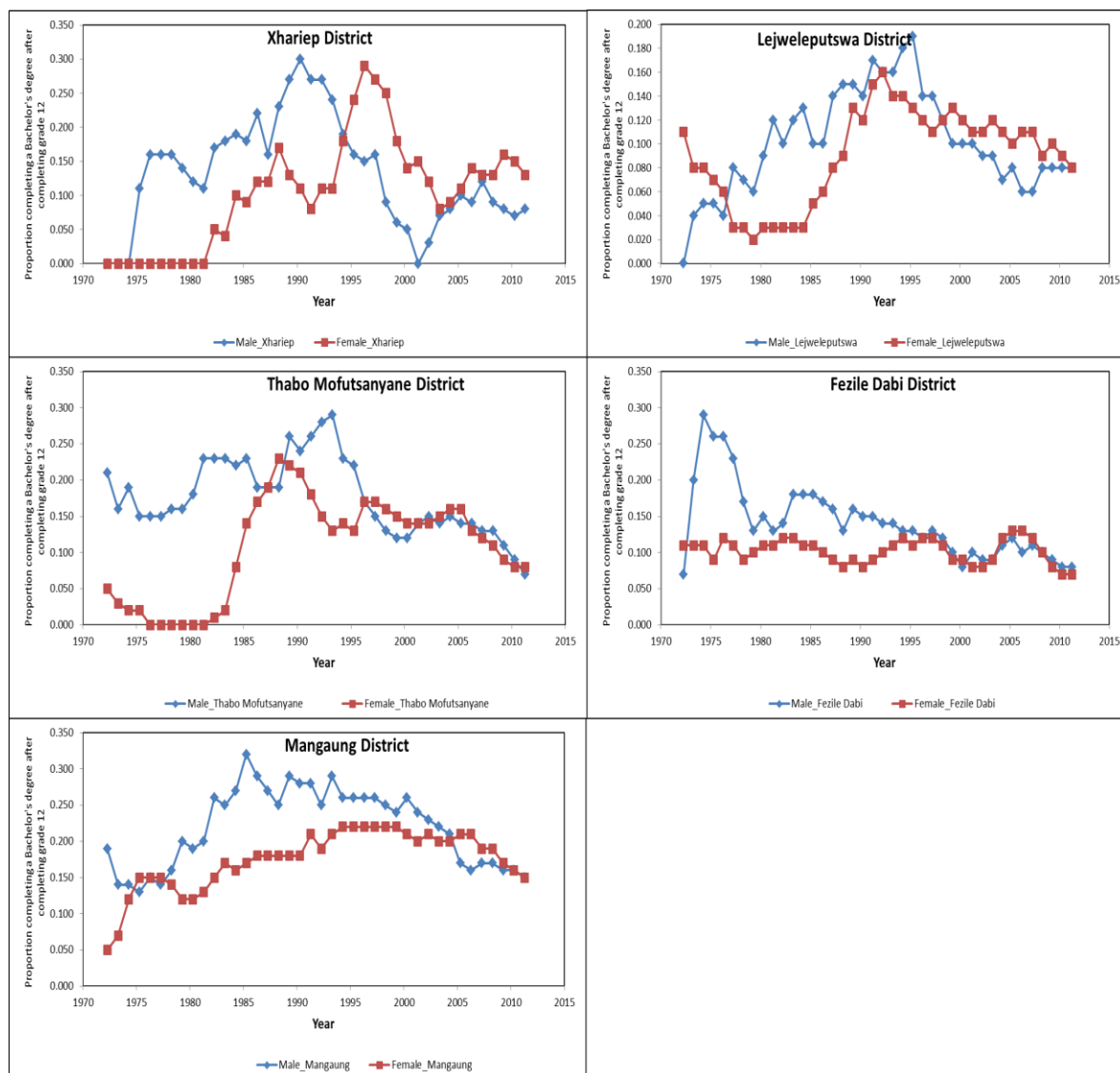


Figure 35 shows the ratio of persons who have completed a bachelor's degree after completing grade 12. The results show fluctuations between the sexes in terms of completing a bachelor's degree after completing grade 12, which is indicative that there are only a few persons who go on to complete a bachelor's degree after completing grade 12. In Thabo Mofutsanyane and Mangaung, males have started at higher proportions, whereas in Lejweleputswa and Fezile Dabi, females were in the majority. Generally, males dominated the 1970s and 1980s in terms of persons who progressed to a bachelor's degree after completing grade 12. Currently, there is a decreasing trend for some of the districts, indicating a drop in persons who are studying towards a bachelor's degree.



## 5. KwaZulu-Natal

Figure 36: Progression ratios of persons completing grade 12 after completing grade 9 by sex and district

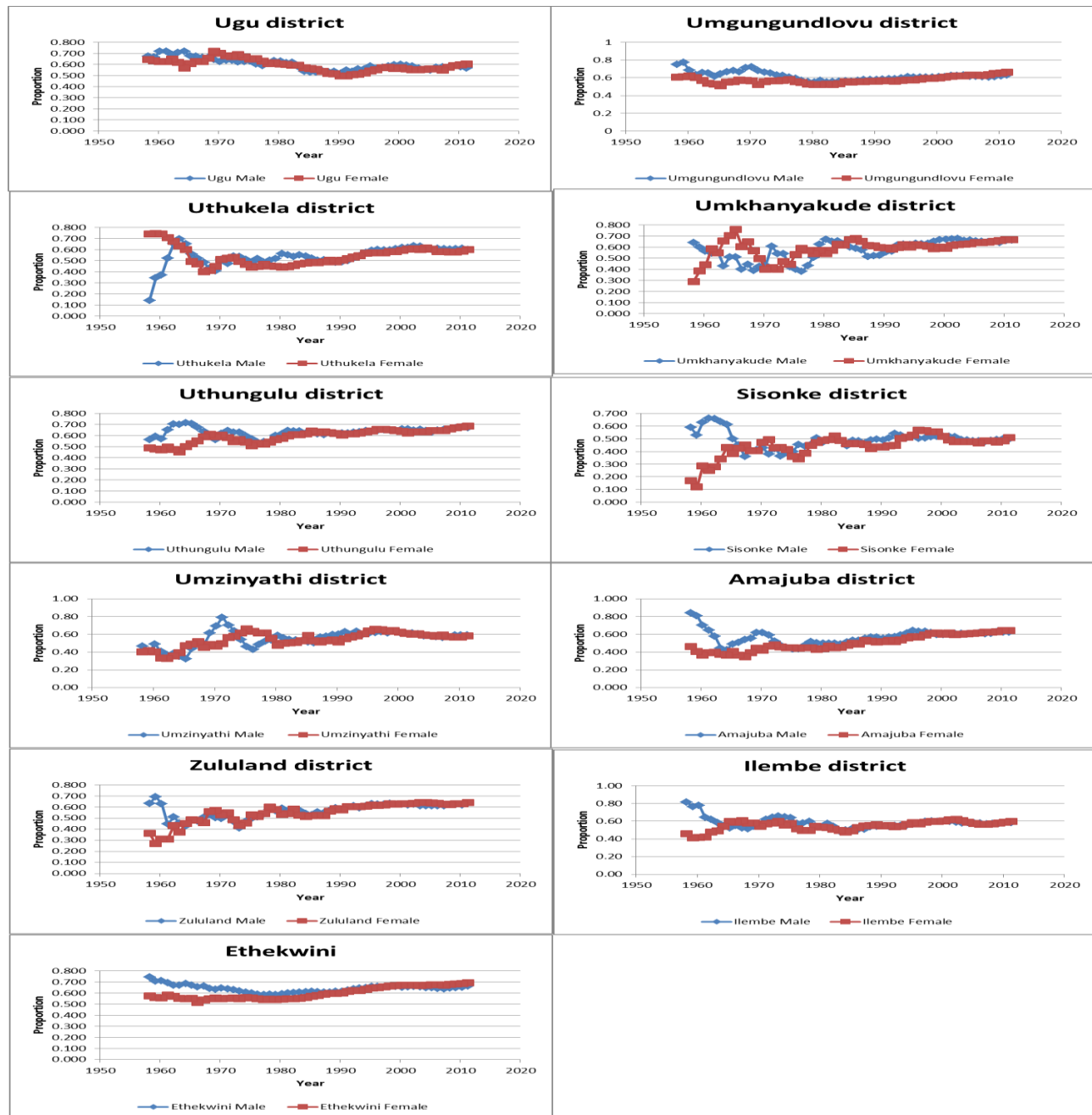


Figure 36 shows the proportion of those who went on to complete grade 12 after completing grade 9 in the different districts in KwaZulu-Natal. After increasing between the 1970s and

1990s, the proportion of those who went on to complete grade 12 after completing grade 9 has significantly decreased across all the districts in the province for both sexes.

Figure 37: Progression ratios of persons completing a bachelor's degree after completing grade 12 by sex and district

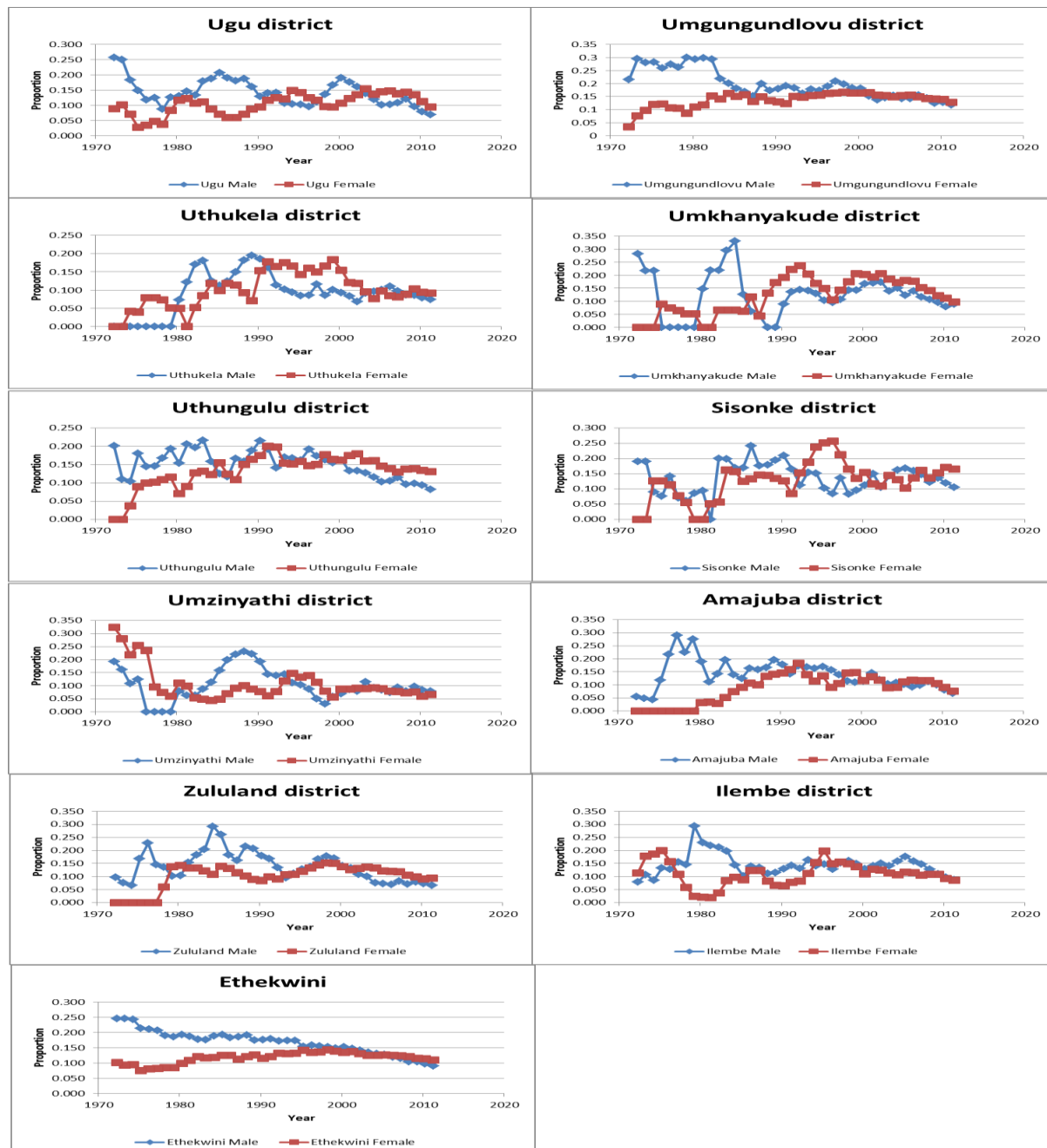


Figure 37 shows the ratio of persons who have completed a bachelor's degree after completing grade 12. In the past, more males than females went on to complete a bachelor's degree after completing grade 12. However, the figure shows a declining trend for males while that of females increased until the 2000s, when both started a downward slope again. This clearly

shows that currently, fewer people – irrespective of their sex – go on to complete a bachelor's degree after completing matric in KwaZulu-Natal.

## 6. North West

Figure 38: Progression ratios of persons completing grade 12 after completing grade 9 by sex and district

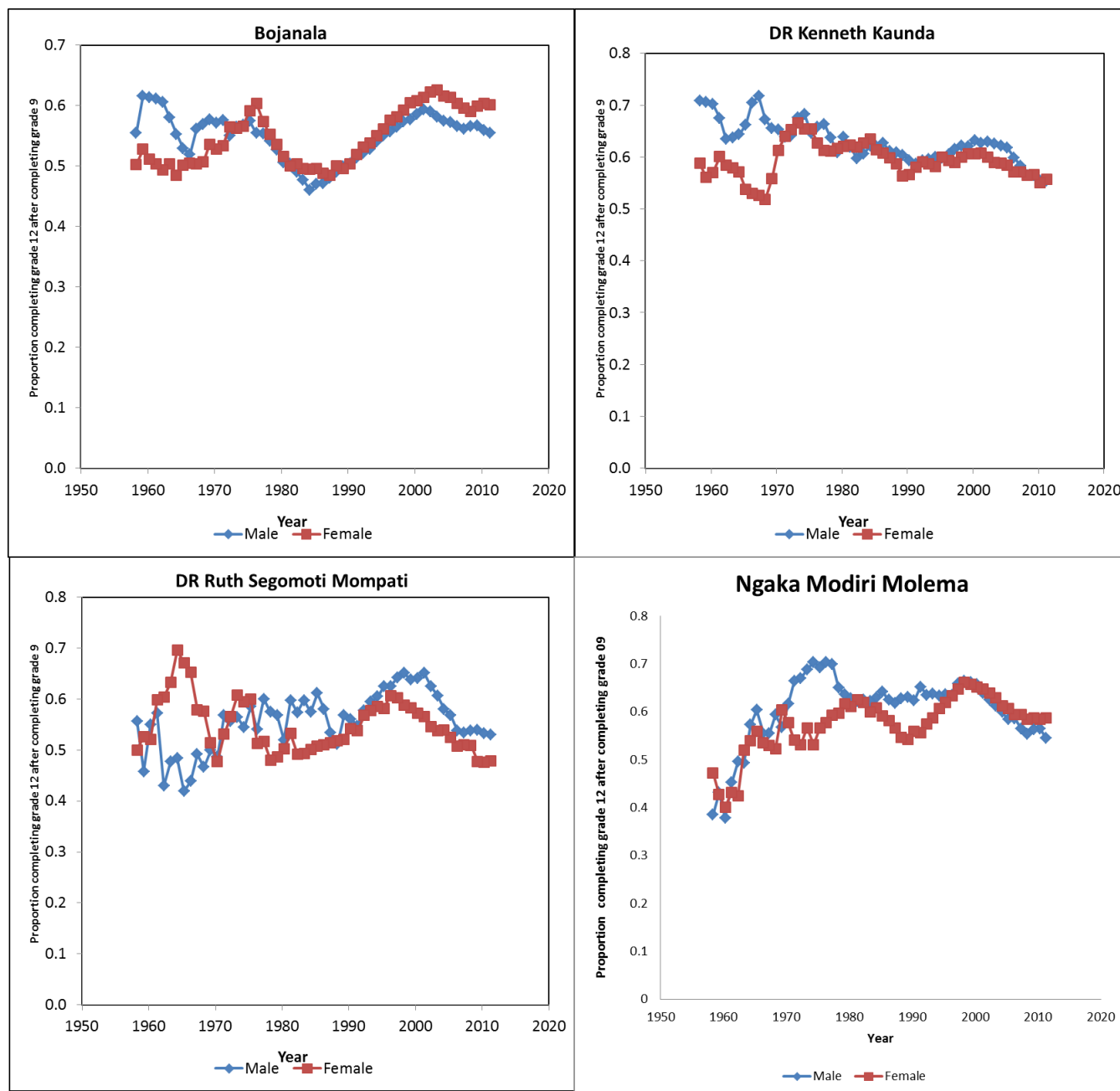


Figure 38 shows Proportions of persons who have completed grade 9 and went on to complete grade 12 by district in North West. All the districts show females starting at a lower ratio than males, except for Ngaka Modiri Molema.

Figure 39: Progression ratios of persons completing a bachelor's degree after completing grade 12 by sex and district

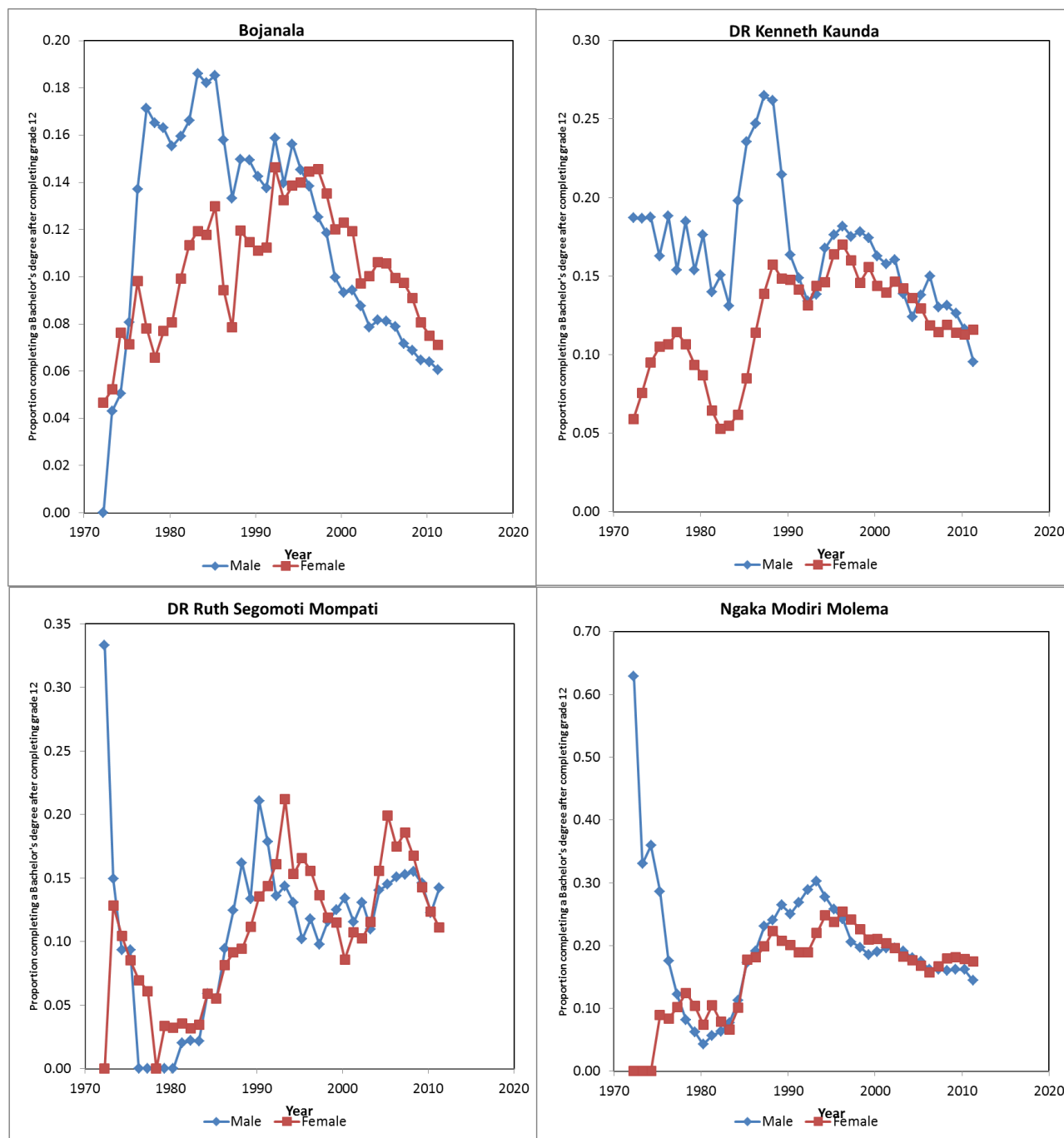


Figure 39 shows Proportions of persons who completed grade 12 and went on to complete a bachelor's degree by district in North West. All the districts except Bojanala had males starting with higher proportions than their female counterparts, and the females catching up over time. All the districts show a downward trend starting approximately in the late 1990s.

## 7. Gauteng

Figure 40: Progression ratios of persons completing grade 12 after completing grade 9 by sex and district

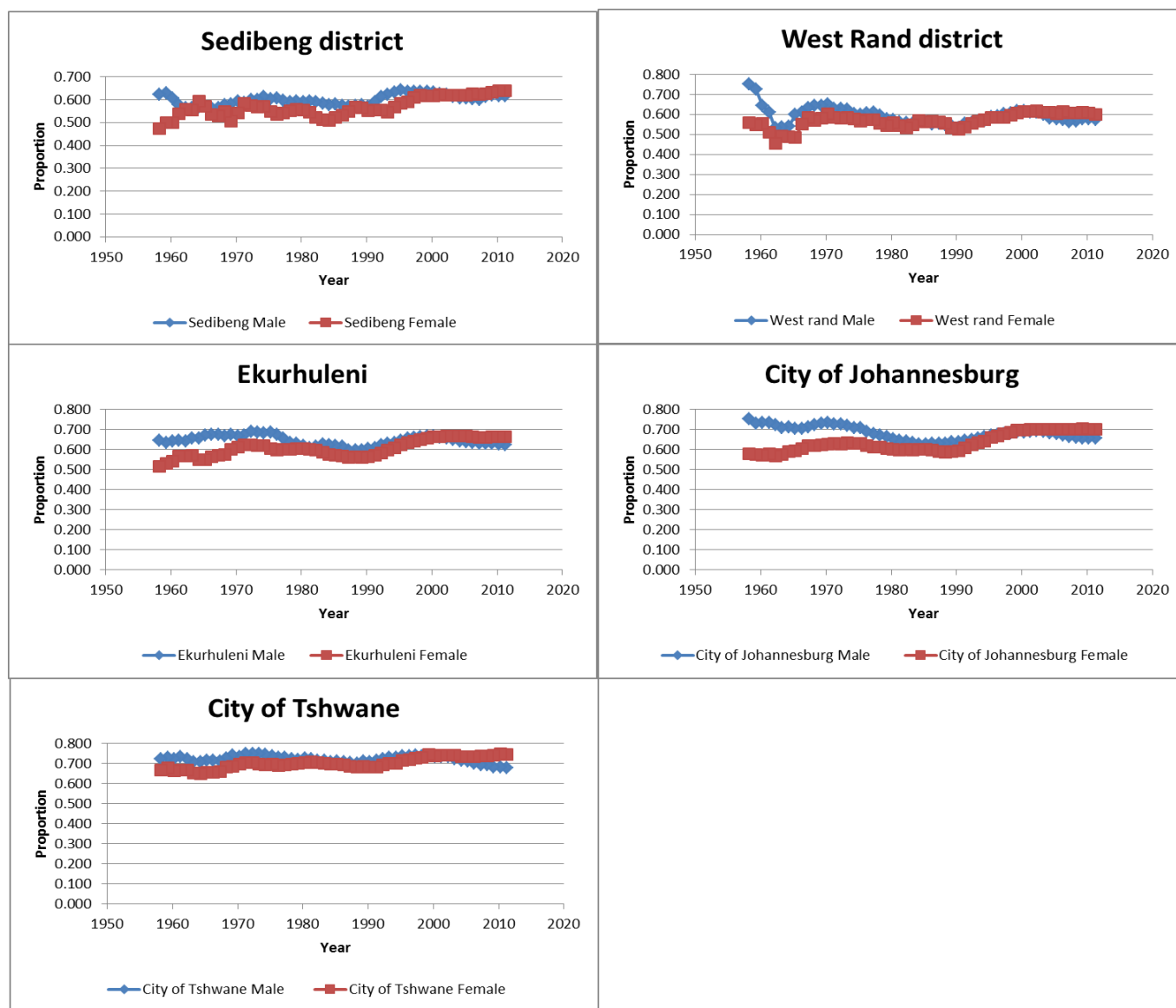


Figure 40 shows that the proportion of those who went on to complete grade 12 after they completed grade 9 has remained relatively constant over the years in Gauteng. However, since the year 2000, more females than males have progressed to complete their secondary education after completing grade 9, meaning the drop-out rate for females is now much lower than that of males in the Gauteng province.

Figure 41: Progression ratios of persons completing a bachelor's degree after completing grade 12 by sex and district

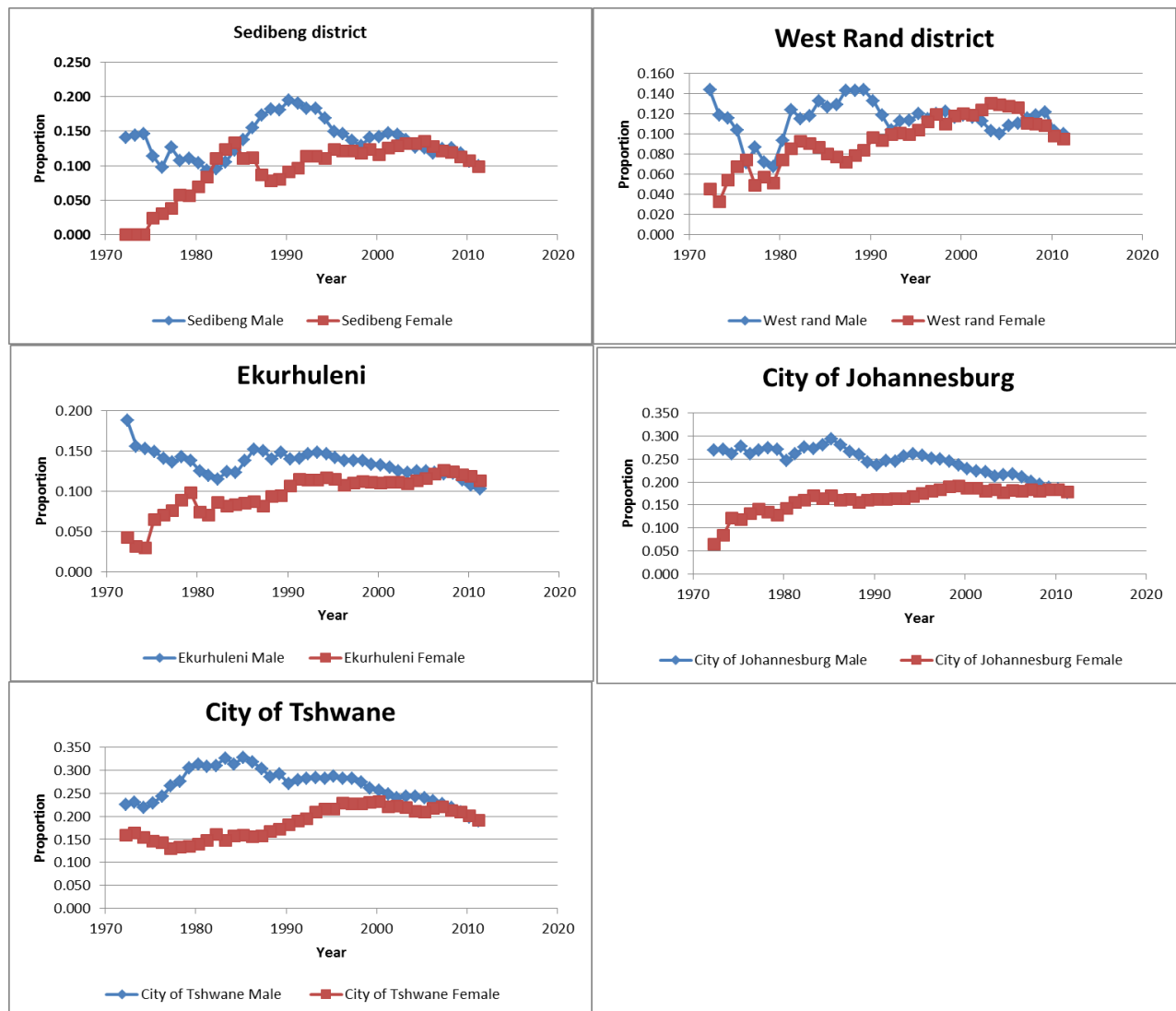


Figure 41 shows the proportion of males who went on to complete a bachelor's degree after completing grade 12. This ratio was the highest in the 80s and 90s. On the other hand, however, the proportion of females who went on to obtain a bachelor's degree has drastically increased over the same period, and is now equal to that of the males.



## 8. Mpumalanga

Figure 42: Progression ratios of persons completing grade 12 after completing grade 9 by sex and district

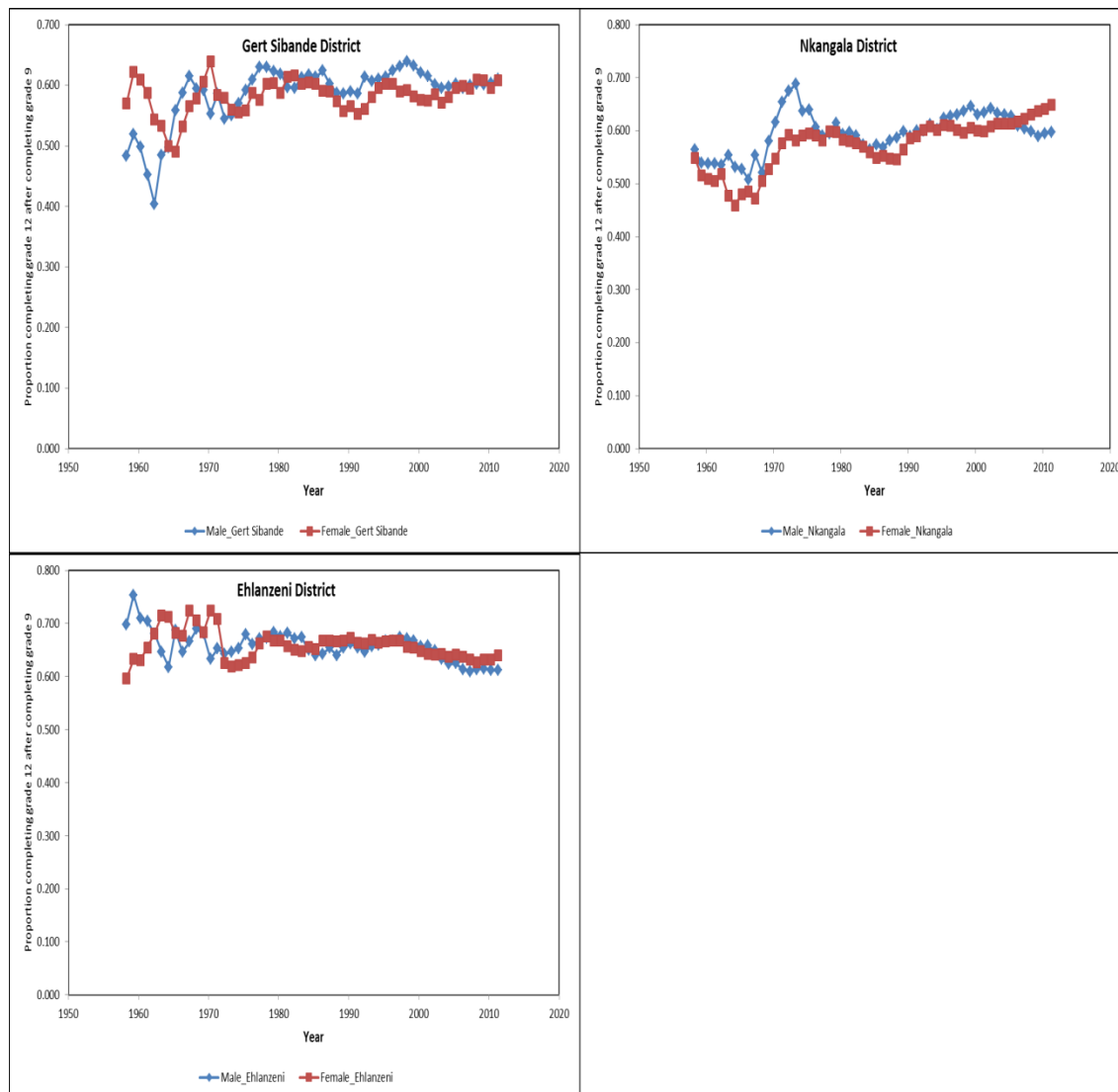


Figure 42 shows that persons from all three districts in Mpumalanga have been progressing well from grade 9 to grade 12, with ratios of more than 40% across all districts. The analysis indicates some sex differences in terms of progression over time. In Gert Sibande district, females are currently on the same level with males as far as progression from grade 9 to grade 12 is concerned. However, in Nkangala and Ehlanzeni districts, females have higher ratios than males who have completed grade 12 after completing grade 9. Noticeably, the ratios of persons who completed grade 12 after completing grade 9 have always been high (above 50%) in Ehlanzeni district.

Figure 43: Progression ratios of persons completing a bachelor's degree after completing grade 12 by sex and district

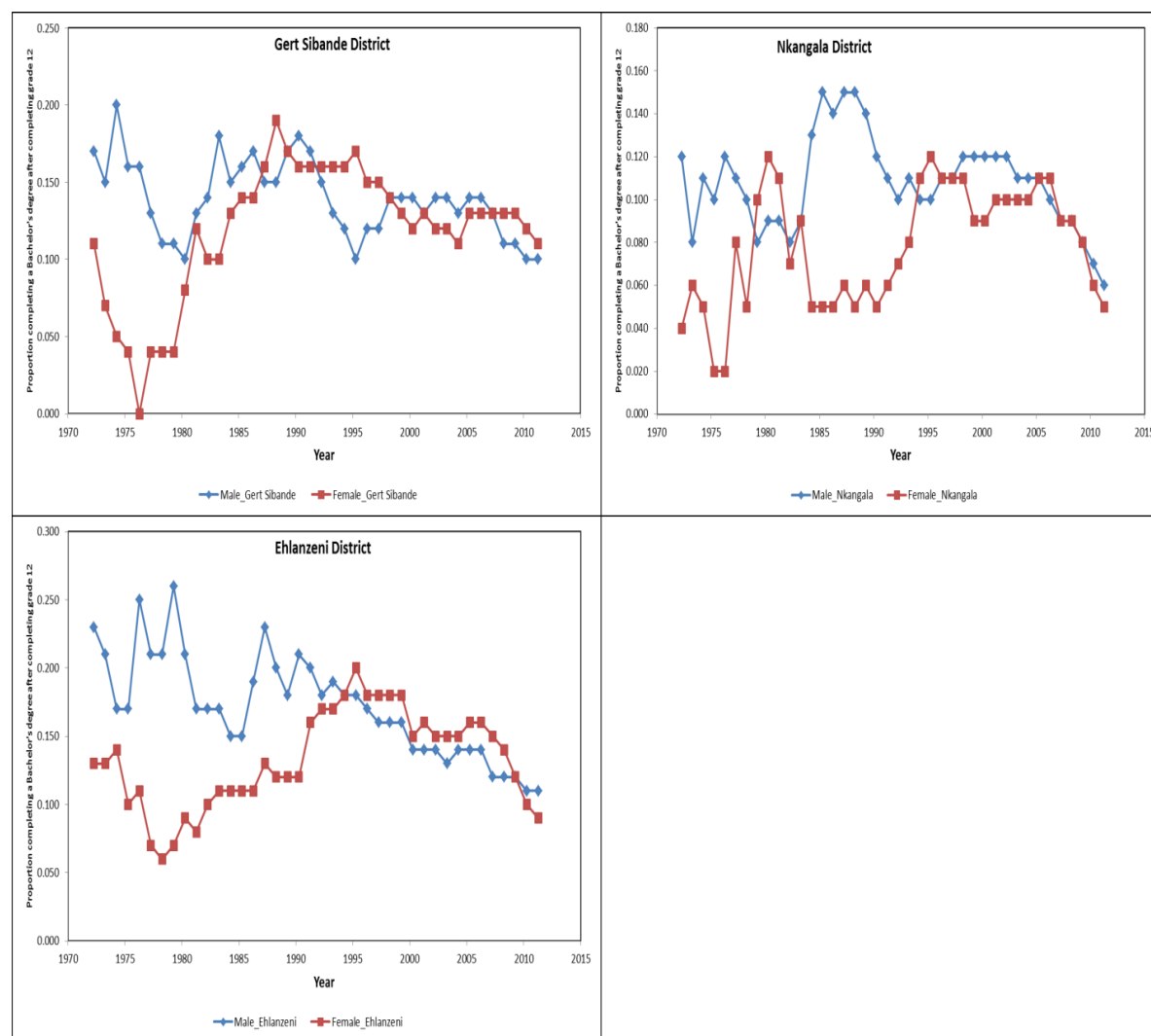


Figure 43 shows the ratio of persons who completed a bachelor's degree after completing grade 12. The results indicate that over all the years analysed, higher proportions of males have been completing a bachelor's degree as compared to females, with some fluctuations around the 1980s and 1990s. Despite the current decline, females in Gert Sibande district have overtaken males in terms of Proportions of those who completed a bachelor's degree after completing grade 12. However, in Nkangala and Ehlanzeni districts, Proportions of males are currently higher than those of females in terms of completing a bachelor's degree after completion of grade 12, although there is a decline in the total number of persons who completed a bachelor's degree in both districts.

## 9. Limpopo

Figure 44: Progression ratios of persons completing grade 12 after completing grade 9 by sex and district

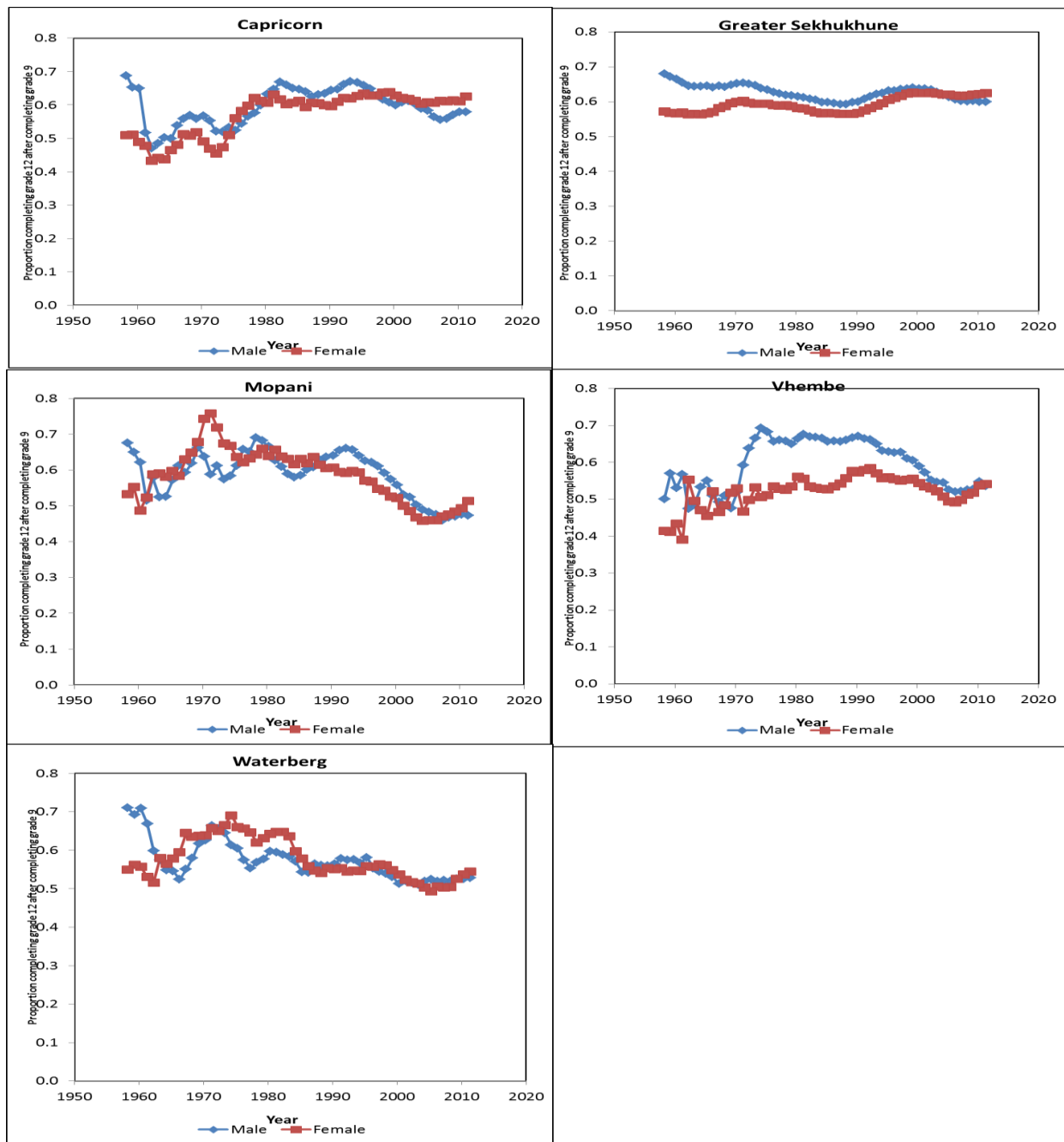


Figure 44 shows Proportions of persons who have completed grade 9 and went on to complete grade 12 by district in Limpopo. All the districts show females starting at lower ratios than males, and the female ratios starting to overtake the male ratios over time.

Figure 45: Progression ratios of persons completing a bachelor's degree after completing grade 12 by sex and district

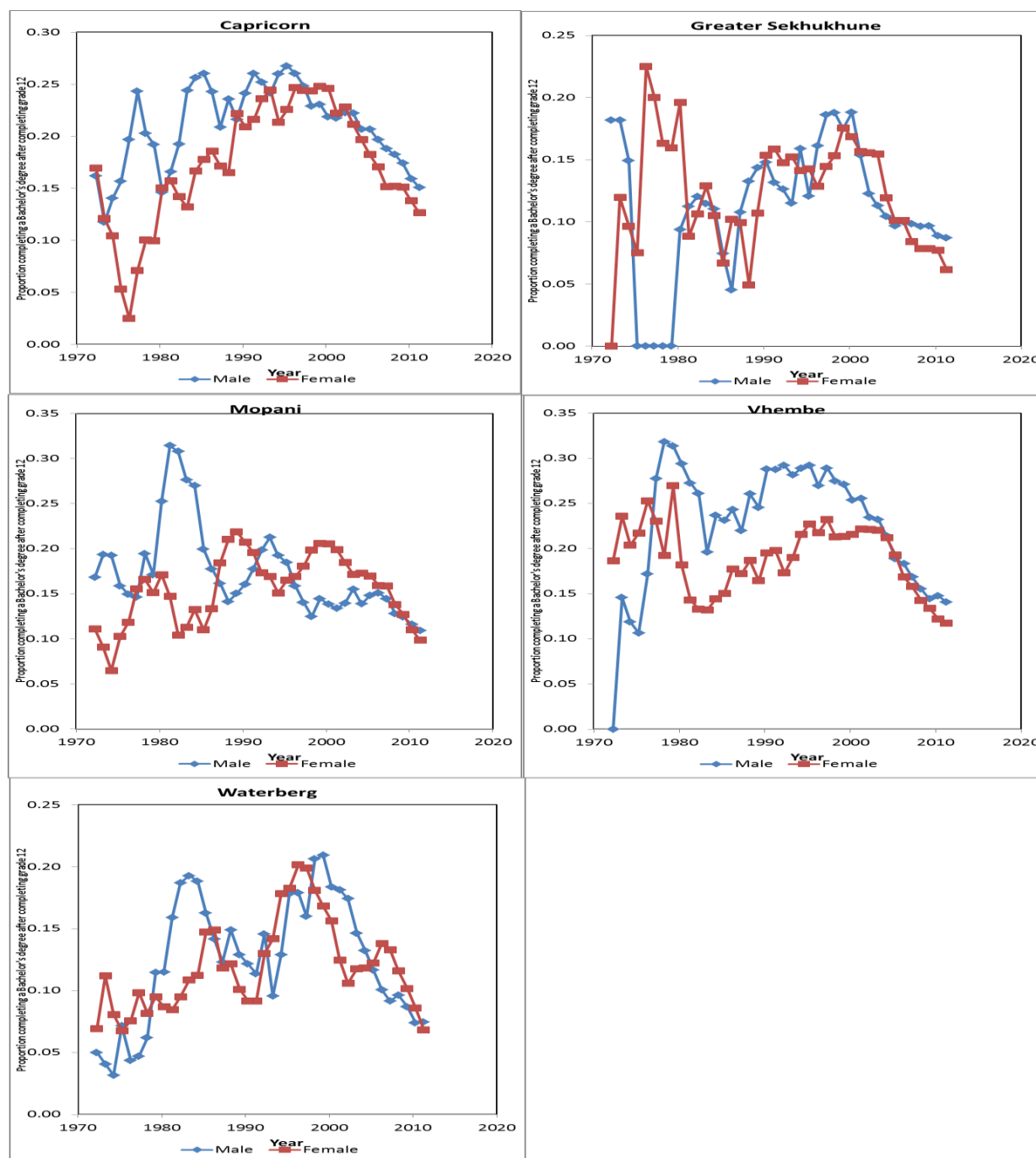


Figure 45 shows Proportions of persons who have completed grade 12 and went on to complete a bachelor's degree by district in Limpopo. Greater Sekhukhune and Mopani districts show that male ratios were continually high, although with variations over time. Overall, all the districts showed upward trends until the year 2000, after which they started to decline.