Some patterns of internal migration in North West Province, South Africa, 1996-2001

ME PALAMULENI[*]

Abstract

Migration is an important component of population change in North West province of South Africa. Unfortunately, reliable data on migration is difficult to collect. The aim of this study is to provide estimates of net internal migration for North West province using indirect estimation procedure based on survival ratios. This method has been under-utilised in demographic research in the country. The results indicate that during the intercensal period 1996-2001 North West province experienced net out-migration. There are migration differentials by region, municipalities and gender. Bojanala and Southern regions experienced net in-migration whereas Central and Bophirima regions experienced net out-migration. The above migration patterns resemble the nature of social and economic development in the province. One policy implication of the study is that efforts should continue being made to make the sending municipalities more attractive so as to reduce the inflow of people to the crowded and more affluent municipalities.

Key words: migration, survival ratio, population growth rate, in-migration, out-migration, South Africa

Disciplines: Geography, Regional studies, Demography.

Introduction

There are two major components of population growth, namely, natural increase and migration. Natural increase is the difference between births and deaths. Migration is defined as the movement of persons that leads to a change in place of usual residence. This definition entails that such movements as shopping and commuting that do not involve change of usual place of residence are not considered as migration. Movements across internal administrative boundaries are called internal migration while movements across national boundaries are referred to as international migration. Both types of migration have been substantial in South Africa and as such they have generated some interesting research discussions (Kok et. al, 2003; Mears, 2004; Kalule-Sabiti and Kahimbaara, 1996; Kalule-Sabiti, Kahimbaara and Chimere-Dan, 2001; Roux, 2001). However,

[*] Dr Martin Enock Palamuleni is attached to the Population Training and Research Unit, North West University, Mmabatho. Email: martin.palamuleni@nwu.ac.za

this paper examines the nature and patterns of internal migration in North West province of South Africa.

The study of internal migration in North West province is important for several reasons. First, migration can either depopulate or overpopulate an area depending upon the level of economic activities. In addition, migration is an important process of urbanization. Second, knowledge of nature and patterns of migration is necessary before one prepares national and sub national population projections. With the requirement that municipalities should prepare an Integrated Development Plan (IDP) there is a growing demand to prepare population projections at municipality levels. Third, migration is a process of cultural evolution and social change. Migrants bring new ideas, skills and a host of cultural practices related to food, dance, music and other life styles as well. Sometimes, migrants are easily absorbed into the host culture. However, on several occasions migrants are thought to be a source of conflict and the cultural differences are exploited to increase the tension between the migrant and host communities (Naicker and Nair, 2000). However, the conflicts between the migrant and host communities are rooted in the competition for jobs by these two groups of people. A good example of the tension between migrant and host communities is the spate of xenophobic attacks that took place in South Africa sometimes in mid 2008 (Sigsworth, Ngwane, and Pino, 2008).

A study published by the Southern African Migration Project (SAMP) noted:

> *The … government – in its attempts to overcome the divides of the past and build new forms of social cohesion… embarked on an aggressive and inclusive nation-building project. One unanticipated by-product of this project has been a growth in intolerance towards outsiders… Violence against foreign citizens and African refugees has become increasingly common and communities are divided by hostility and suspicion.* Crush and Pendleton (2004)

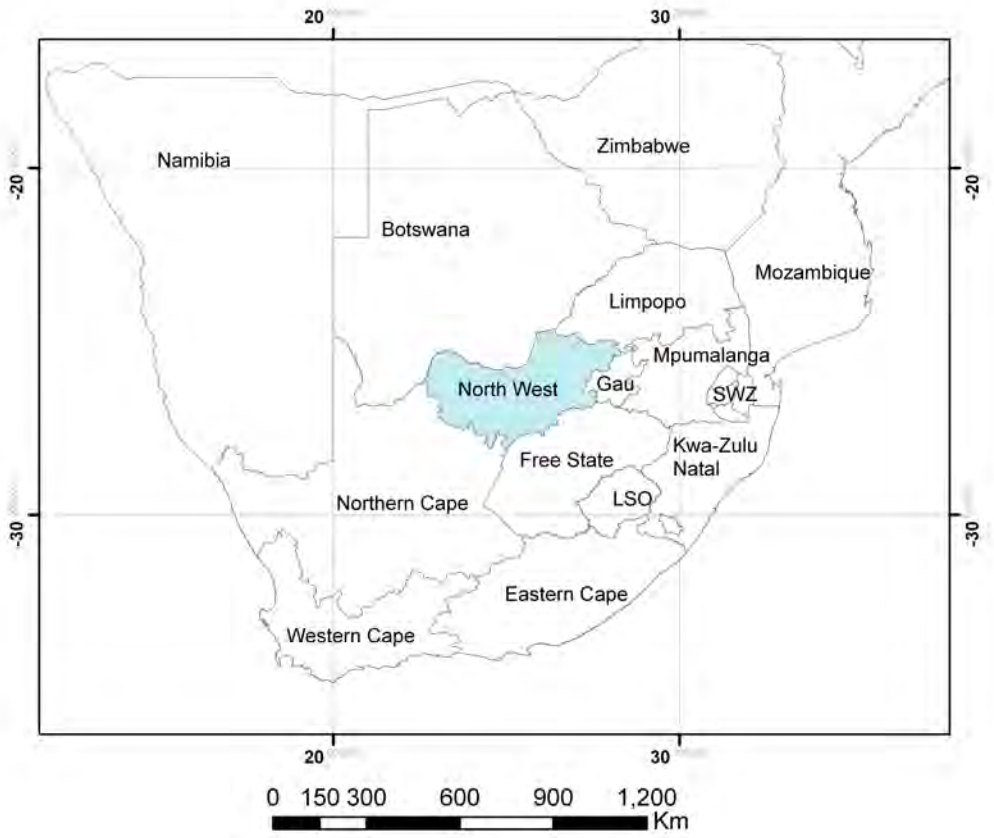
As the importance of migration affecting the socio-economic and political life is pervasive, no government can ignore this phenomenon. A good statistical system on migration would be helpful in socio-economic planning and allocation of resources. Since late 1980s, HIV/AIDS has emerged as a major threat to public health in South Africa. Single migrants living in urban areas, agricultural estates or hostels are exposed to the risk of HIV/AIDS in view of the fact that they are likely to visit sex-workers among whom the HIV infection is found to be very high (UNAIDS and IOM, 2003). As such, migrants constitute a risky group and also have the potential to spread the infection in their place of origin. This dimension of the linkage of migration with public health has created renewed interest in the study of the trend, pattern and various characteristics of internal and international migrants in and outside of a country. As a means of monitoring the emerging social and health issues and problems, the existing statistical system may not be adequate. As such, the need for the migration data at the district and regional levels is well understood for various purposes.

Unfortunately, the numbers of in-migrants and out-migrants during the intercensal period 1996-2001 at the district and regional levels are not readily available from the recent population census in South Africa. Moreover, in the absence of reliable registration of births, deaths and migration in the country, population censuses and surveys remain the only sources that provide data for the study of migration. In this paper, the 1996 and 2001 South African population census data are used to study the magnitude and pattern of net internal migration in North West province of South Africa.

Background information

The North West Province of South Africa is bordered by the provinces of Gauteng, Limpopo, the Northern Cape and the Free State and the Republic of Botswana (Map 1). It is the sixth largest of the nine provinces in South Africa covering a total area of 116,320 square kilometre (approximately 9.5% of South Africa).

Map 1: Location of South Africa and North West Province



The total population in the province increased from 3.3 million in 1996 to 3.6 million in 2001 and it is currently estimated at 3.7 million. The provincial population represents 8% of the national total. About 65% of the population in the province live in rural areas. The province is divided into four district municipalities as follows: Bophirima, Bojanala, Southern and Central; and 21 local municipalities. Both the 1996 and 2001 population censuses indicate that the largest proportion (36%) of the population in NW lived in Bojanala followed by Central (23%), Southern (18%) and Bophirima (13%). The most industrialised and densely populated centres include Rustenburg, Brits and Ga-Rankuwa in the eastern region of the Province. Mafikeng is the provincial capital and was the administrative centre of the Bophuthatswana homeland (from 1978 to 1994). It was also the governing centre of the British Bechuanaland Protectorate prior to 1960. Other major towns in the province include Potchefstroom, Klerksdorp, Lichtenburg, Ventersdorp and Vryburg.

The provincial gross geographic product (GGP) is R 3 964 per person against the national average of R 6 498. Mining forms the backbone of the provincial economy, contributing 42% to the GGP and 39% to the employment. The mining sector is dominated by large platinum mines and smelters in the Rustenburg area, as well as gold mines of the Orkney and Klerksdorp areas.

Agriculture is the second-most important sector, with 13% of the GGP and 18% of employment. Maize and sunflowers are the most important crops grown, while cattle and game farming are also well established. Tourism is widely considered to have a major growth potential as the Province is located adjacent to areas of Gauteng and Botswana.

Data Sources and methods

The study will make use of the 1996 and 2001 South African Population Censuses (Statistics South Africa, 1998, 2003). The 1996 Census was the first census to be conducted in democratic South Africa and for the first time in the country's history enumerated people of all population groups. In all previous censuses the majority Africans who constitute nearly 75% of the national population were only estimated. In addition, the 1996 census provided the benchmark data for future development programmes of the first post apartheid government. The 2001 population census was the second census to be conducted in democratic South Africa. This provided benchmark data to confirm levels, trends and differentials in demographic parameters.

Quality of the data

The methods used in this study are sensitive to age reporting and its results may be biased if there is serious age misreporting in the data. Thus, it is important to assess the quality of age distribution before analysing the results of the estimating procedures. Evaluation of age-sex data done elsewhere showed that the data in five year age groups are fairly acceptable (Palamuleni, 2003; Simelane, 2002). Thus, no attempt has been made in this study to correct the reported ages. It suffices to note that the quality of reported age-sex distributions, though inaccurate, are acceptable and comparable with data from other Sub-Saharan countries.

Evaluation of age and sex distributions has been done elsewhere (Palamuleni, 2003; Simelane, 2002). Thus, no attempt has been made in this study to correct the reported ages. It suffices to mention here that, generally speaking, the South African age-sex data are of good quality as compared to most countries in Sub-Saharan Africa (Palamuleni, 2003).

Method of estimating net migration

The survival ratio method is used to estimate net migration in North West province. A description of the method is given by (Shryock and Siegel, 1976; Hamilton and Henderson 1944). The continued applicability and relevance of the method has been explained by different authors (Sivamurthy, 1969; Sly, 1972, Bhagat, 2005; Bilsborrow, 2005; Bogue, Hinze and White, 1993). Several researchers have used the method to obtain plausible estimates of net migration in different countries (Potgieter and Calitz, 1999). In this study an attempt is made to apply the method at provincial level using data from the 1996 and 2001 South African population censuses. The basic formulae for estimating net-migration is given by

$$M_{x+t} = {}_nP^t_x - {}_nS_x \cdot {}_nP^0_x \qquad \text{(1)}$$

Where x is the age or age group, t is the interval between censuses, P^o_x is the population aged x at the first census and P^t_x is the population aged x+t at the second census and ${}_nS_x$ is the survival ratio.

The indirect measures of migration, derived by comparing the hypothetical survivors in 2001 of the cohorts of people who were enumerated in the 1996 census, gives much more detailed information than the direct method, but poses certain problems of its own. Its detailed portrayal of migrants by sex and five-year age groups is extremely valuable for other demographic analyses including

population projections. However, its assumptions are difficult to satisfy.

First, the method requires that in calculating the census survival ratios for the period 1996-2001, the population of South Africa should be closed, that is not subject to international migration.

Second, the assumption, which stipulates that the age-sex specific survival ratios for each district are the same as those for the whole country is also difficult to satisfy. Obviously, districts which contain major urban areas such as Rustenburg, Klerksdorp and Potchefstroom, have lower mortality rates than the other districts. The effect of the violation of this assumption is to bias upward the net migration estimates of the districts whose mortality is higher than the national average and bias it downward in those districts whose mortality is lower.

Third, the assumption that requires that the relative under- or over- enumeration of population in any age and sex group in each district is the same as that of the country as a whole in both censuses and for each cohort is the most difficult to satisfy and its biases, which could take different forms are most problematic to assess.

Furthermore, apart from the difficulties arising from the assumptions, the census survival ratio method reveals only net migrants who were alive in both 1996 and 2001 censuses. It does not account for those who migrated but subsequently returned to their original place of residence during the intercensal period (also known as Return Migration), those who were born during that period, and those who died during it after migrating. Multiple migrations by the same individual are also not counted. While the exclusion of multiple migrants, returnees or dying migrants can be tolerated; omission of child migrants born during the intercensal period cannot be tolerated, as their numbers could be substantial in a 5-year period.

Estimates of migration among children born during the intercensal period (aged 0-10 years) can be approximated by assuming that young children migrate with their mothers. Using Child Women Ratios and net migrant women Shryock and Siegel (1976) suggested that net migration of children can be estimated as follows:

${}_5M_{i,0} = (1/4) \, . \, CWR_{0\text{-}4} \, . \, {}_{30}M^f_{i,15}$ …………………………………………………..(2)

where ${}_5M_{i,0}$ is the net migration for the population aged between 0 and 5, $CWR_{0\text{-}4}$ is the child woman ratio calculated based on children aged 0-4 and women aged 15-49 and ${}_{30}M^f_{i,15}$ is the net migration for women aged 15-49.

${}_5M_{i,5} = (3/4) \, . \, CWR_{5\text{-}9} \, . \, {}_{30}M^f_{i,20}$ ………………………………………………….. (3)

where ${}_5M_{i,5}$ is the net migration for the population aged between 5 and 10, $CWR_{5\text{-}9}$ is the child woman ratio calculated based on children aged 5-9 and women aged 20-54 and ${}_{30}M^f_{i,20}$ is the net migration for women aged 20-54. ${}_5M_{i,0}$ and ${}_5M_{i,5}$ were split into male and female components as follows:

${}_5M^f_{i,5} = {}_5M_{i,5} \times$ proportion female ………………………………………………………… (4)

${}_5M^m_{i,5} = {}_5M_{i,5} \times$ proportion male ……………………………………………………….. (5)

Another problem encountered in the process of applying the method to South African data includes the changing boundaries of provinces and municipalities especially following the redemarcation of

the cross-boarder municipalities (Republic of South Africa, 2005). During both the 1996 and 2001 censuses, North West Province had five cross-boarder municipalities namely, Kgalagali, Ga-Segonyana, Moshaweng, West Rand District and Merafong City. However following the enactment of Act number 23 of 2005, the cross-boarder municipalities of Kgalagali, Ga-Segonyana and Moswaweng were transferred to Northern Cape and West Rand to Gauteng. Merafong City became part of North West province.

Results

Table 1 presents figures of the 1996 and 2001 population of South Africa by age and sex along with the Census Survival Ratios (CSR) calculated from the two populations. CSR is the ratio of population aged x+n at time t+n divided by population aged x at time t, where n is the intercensal period. For example, population in age group 5-9 in 2001 was in age group 0-4 in 1996. Therefore the survival ratios for age groups 0-4 and 5-9 is calculated as population in age group 5-9 in 2001 divided by population in age group 0-4 in 1996. According to Table 1 survival ratios for age groups 0-4/5-9, 5-9/10-14, 10-14/15-19 and 15-19/20-24 for males and groups 0-4/5-9, 5-9/10-14, 10-14/15-19, 15-19/20-24, 30-34/35-39, 35-39/40-44, 40-44/45-49, 45-49/50-54 and 55-59/60-64 for females are above one.

Table 1: Population of South Africa by Age and Sex and CSR

	1996		2001		CSR	
Age Groups	Male	Female	Male	Female	Male	Female
0-4	2216761	2226657	2223730	2226085		
5-9	2333562	2335160	2425803	2427748	1.0943	1.0903
10-14	2308759	2345341	2518957	2542961	1.0794	1.0890
15-19	2050213	2130502	2453079	2528643	1.0625	1.0782
20-24	1917917	2064434	2099293	2195230	1.0239	1.0304
25-29	1663064	1792663	1899124	2035812	0.9902	0.9861
30-34	1463499	1610702	1594488	1746413	0.9588	0.9742
35-39	1284956	1368801	1441506	1630263	0.9850	1.0121
40-44	1030599	1108028	1233633	1385833	0.9601	1.0124
45-49	813814	863709	967604	1119777	0.9389	1.0106
50-54	600477	668418	769498	868520	0.9455	1.0056
55-59	483676	586258	552323	652943	0.9198	0.9768
60-64	352054	538483	444508	620783	0.9190	1.0589
65-69	304015	454874	304764	483163	0.8657	0.8973
70-74	195119	287046	232547	398922	0.7649	0.8770
75-79	141848	235584	136435	231101	0.6992	0.8051
80-84	62072	116830	90835	180110	0.6404	0.7645
85+	43232	93998	45908	111425	0.4360	0.5285

Tables 2 and 3 show the steps involved in calculating net migration for the province and municipalities using the CSR method. The first column indicates the five-year age group. The second column is the 1996 population as reported in the census. The third column is the national CSR calculated in Table 1. The fourth column is the 2001 expected population by age group obtained by

multiplying the 1996 population by the corresponding survival ratios. The fifth column is the population enumerated in the 2001 census. Comparing the expected population (column 4) with the enumerated population in 2001 (column 5), one gets the net migration by age and sex as given in column 6 of Table 3. The sum of column 6 gives us the estimate of net migration during the intercensal period. Net migration for age groups 0-4 and 5-9 were obtained using equations (4) and (5).

Table 2: Estimating Net Migration for North West Province using Census Survival Ratio Method, Male

Age Groups	1996	CSR	Estimated Population in 2001	2001	Migration Estimates
(1)	(2)	(3)	(4)=(2)x(3)	(5)	(6)=(5)-(4)
0-4	188154	1.0800		180292	-1592
5-9	193574	1.0653	203205	191555	-11650
10-14	187861	1.0486	206221	200303	-5918
15-19	173171	1.0106	196994	192949	-4045
20-24	159702	0.9773	174998	171743	-3255
25-29	141771	0.9462	156070	156640	570
30-34	132484	0.9721	134148	143723	9575
35-39	119345	0.9475	128787	138112	9325
40-44	93473	0.9266	113080	123574	10494
45-49	70448	0.9332	86612	91261	4649
50-54	54192	0.9078	65740	68101	2361
55-59	41423	0.9070	49194	51897	2703
60-64	30327	0.8544	37571	39047	1476
65-69	24984	0.7549	25910	27293	1383
70-74	17205	0.6901	18861	20339	1478
75-79	11889	0.6320	11873	12607	734
80-84	5518	0.4303	7514	7784	270
85+	4313		4230	4328	98
	1649835			1821548	18656

Table 3: Estimating Net Migration for North West Province using Census Survival Ratio Method, Female

Age Groups	1996	CSR	Estimated Population in 2001	2001	Migration Estimates
(1)	(2)	(3)	(4)=(2)x(3)	(5)	(6)=(5)-(4)
0-4	190475.4	1.0781		181392	-1546
5-9	194640.9	1.0768	205361	191157	-14204
10-14	191265.2	1.0661	209597	203504	-6093
15-19	179665	1.0189	203913	196282	-7631
20-24	174033.6	0.9751	183059	170503	-12556
25-29	149863.2	0.9633	169706	161026	-8680
30-34	130614.9	1.0009	144368	139933	-4435
35-39	108893.4	1.0011	130726	128963	-1763
40-44	87714.95	0.9993	109019	108802	-217
45-49	66017.66	0.9944	87656	88447	791
50-54	55670.7	0.9660	65645	65682	37
55-59	44523.87	1.0471	53775	54006	231
60-64	39071.84	0.8873	46620	47082	462
65-69	31688.64	0.8672	34667	37448	2781
70-74	24032.43	0.7961	27481	28901	1420
75-79	18152.26	0.7560	19133	20375	1242
80-84	9822.108	0.5226	13723	14153	430
85+	8845.941		9756	10143	387
	1704992			1847799	-49344

Estimates of net migration obtained in this way allow us to study the nature and patterns of migration in the province. Table 4 below and figures 1, 2 and 3 presents estimates of net migration for the province and all its municipalities. Based on this method, North West Province overall experienced net out migration. The female population in North West experienced net out migration whereas the male population witnessed net in migration. The net out migration of females could in part be attributed to the fact that females are leaving the province in search of better employment opportunities in other provinces especially neighbouring Gauteng which is the economic powerhouse of South Africa. This phenomenon is probably fuelled by the fact that more females than males in the province acquire higher education. According to the 2001 census "there were 66870 women and 57980 men with higher education qualifications in the province"[1].

Regional Differentials

At regional level, Table 4 indicates that Bojanala and Southern regions experienced a net gain of people whereas Central and Bophirima experienced a net loss of people. Bojanala and Southern

[1] See *The Mail* 29 June 2007, "NW Leads in Women Empowerment", page 5.

gained about 34,000 people and 6400 respectively. On the other hand, Bophirima lost about 35,000 people and Central lost 7400 persons.

As expect, internal migration differs greatly between regions and districts in North West province. One way to measure the impact of internal migration at region and district levels is through the net gain or loss of population due to internal migration. However, it should be noted that comparisons of flows between administrative units is sensitive to the size of administrative units being used in defining migration. The net migration figures do not take into account the size of the population in the area of origin or destination, a significant factor that accounts for the net flow observed. The last three columns of the table 4 present the net migration rate per 1000 persons.

There are migration differentials by sex. The number of in migrants is higher for males than females in Bojanala region. In the Southern Region, the number of in migrants is higher for females than males. The number of out migrants is higher for females than males in Bophirima. Central District is losing females and gaining males at the same time.

Figure 1 Net Migration by regions, North West, 1996-2001

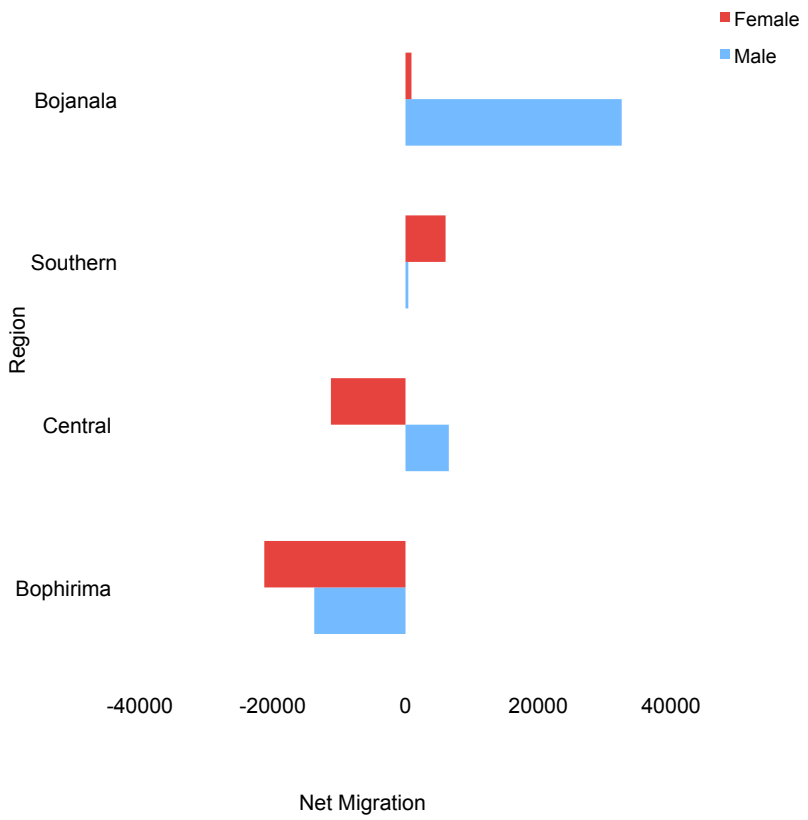
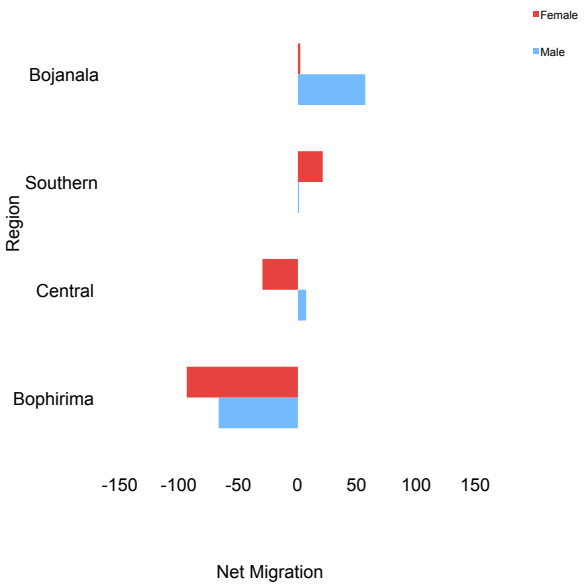


Figure 2 Net Migration Rates by regions, North West, 1996-2001



District Differentials

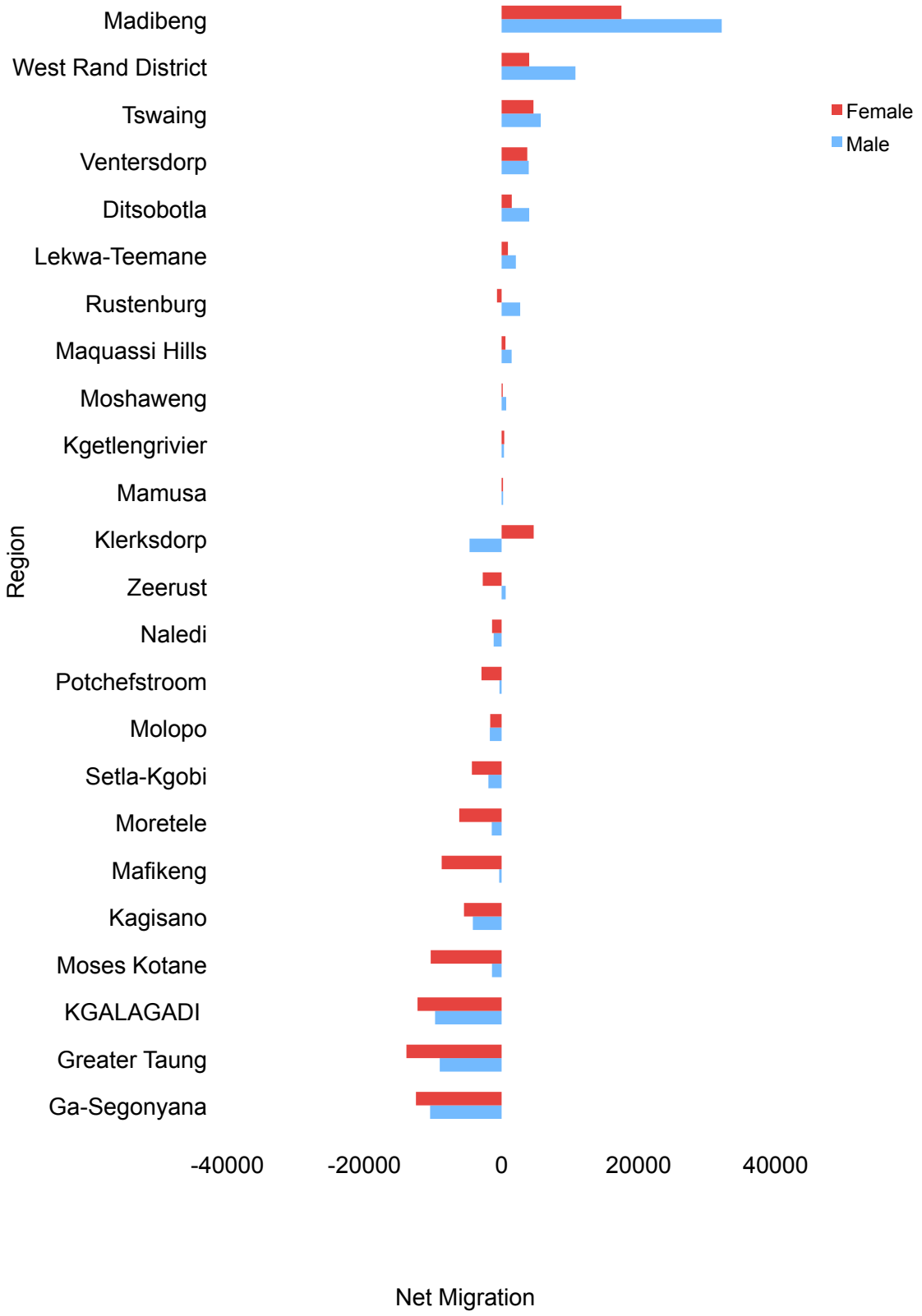
Nature and patterns of internal migration also varies by district. Table 4 and figure 3 presents net migration estimates by sex for all district municipalities in North West province.

All the districts in the Bojanala Region with the exception of Moretele and Moses Kotane experienced net in migration. Both Moretele and Moses Kotane experienced net out migration and it appears that both districts lost more females than males. Rustenburg lost females and gained males.

In the Central District, Setla-kgobi, Mafikeng and Zeerust experienced net out migration whereas Tswaing and Ditsobotla experienced net in migration. The districts that experienced net migration indicate that they lost more females than males. The opposite is true with the districts that experienced net in migration.

All the districts in the Southern Region with the exception of Potchefstroom experienced net in migration. Potchefstroom experienced net out migration. Furthermore, Table 4 indicates that Potchefstroom lost more females than males. Klerksdorp lost males and gained females. Maquassi Hills gained more males than females. All the districts in Bophirima with the exception of Mamusa and Lekwa-Teemane witnessed net out migration. At district municipality level the following districts experienced a net loss Ga-Segonyana, Greater Taung, Kgalagadi, Moses Kotane, Kagisano, Mafikeng, Moretele, Setla-Kgobi, Molopo, Potchefstroom, Naledi and Zeerust. District municipalities that experienced a net gain of people include: Klerksdorp, Mamusa, Kgetlengrivier, Moshaweng, Maquassi Hills, Rustenburg, Lekwa-Teemane, Ditsobotla, Ventersdorp, Tswaing, West Rand District, Madibeng

Figure 3 Net Migration by District Manicipality, North West, 1996-2001



Map 2 Map of North West showing net migration by Local Municipalities, 1996-2001

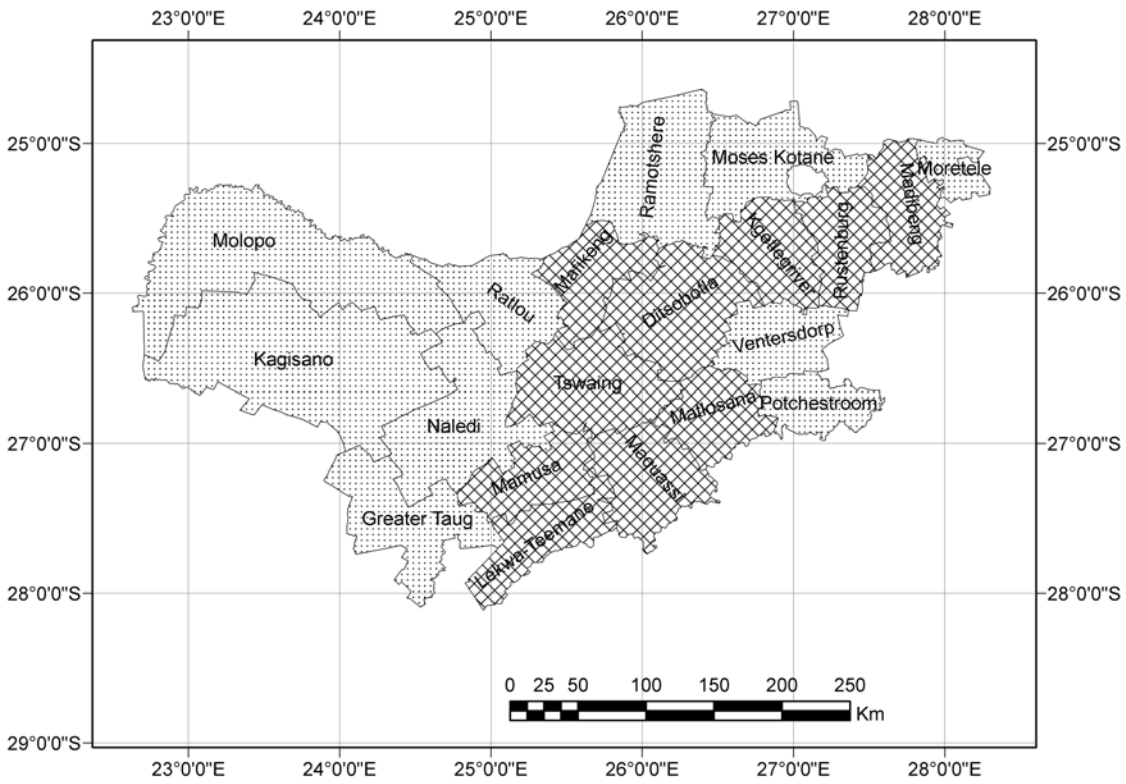


Table 4: Estimates of Net Migration by Regions and District, North West, 1996-2001

	Net Migration (Absolute)			Net Migration Rate (per 1000)		
	Male	Female	Both	Male	Female	Both
North West						
Bojanala	32559	897	33455	57	2	30
Moretele	-1438	-6183	-7621	-17	-69	-44
Madibeng	32123	17487	49610	212	118	165
Rustenburg	2712	-674	2038	13	-4	5
Kgetlengrivier	344	386	730	20	23	21
Moses Kotane	-1403	-10346	-11749	-13	-86	-51
Pilansberg National Park						
Central	6523	-11233	-4711	19	-30	-7
Setla-Kgobi	-1926	-4336	-6262	-41	-81	-62
Tswaing	5715	4649	10364	116	88	102
Mafikeng	-349	-8745	-9094	-3	-67	-36
Ditsobotla	4028	1484	5512	60	21	40
Zeerust	596	-2752	-2156	10	-39	-16
Bophirima	-13741	-21268	-35009	-67	-94	-81
Kagisano	-4197	-5490	-9687	-95	-109	-102
Naledi	-1157	-1393	-2550	-42	-48	-45
Mamusa	221	206	427	10	9	9
Greater Taung	-9025	-13889	-22914	-105	-143	-125
Molopo	-1717	-1663	-3380	-271	-270	-270
Lekwa-Teemane	2081	923	3005	106	46	76
Southern	425	6035	6460	1	21	11
Ventersdorp	3963	3747	7710	216	197	207
Potchefstroom	-309	-2936	-3245	-5	-46	-26
Klerksdorp	-4680	4683	3	-26	28	0
Maquassi Hills	1464	564	2028	46	17	31
KGALAGADI	-9708	-12269	-21977	-149	-161	-155
Ga-Segonyana	-10435	-12499	-22934	-253	-260	-257
Moshaweng	671	165	836	28	6	16
West Rand District	10775	4026	14801	389	171	289

It should also be pointed out that the time location of the intercensal estimates is unknown for it can occur in any year between 1996 and 2001. This limitation is serious for the practical point

of view because it is impossible to calculate annual migration estimates based on this data. The results of the overall migration are useful for comparative purposes, and for examining changes overtime.

Comparison with estimates based on other techniques

The migration estimates based on census survival ratio method (CSRM) for district municipalities in NW province presented in this paper were compared with estimates based on other estimation procedures. Other researchers have used responses to the questions on "place of residence" and "place of previous residence" to study migration patterns in the province (Jansen Van Rensburg, 2004). These questions have been extensively used to study migration patterns in South Africa (Kok et al, 2003). However these questions have not been used to study migration at municipality level, as they often require complex cross tabulations that are not easily available. As such the use of these questions has mostly been limited to migration studies up to provincial level. Given the importance of migration at all levels (national, provincial, region and district, etc) there is need to employ other procedures that can give plausible estimates of migration at all these levels. The desire to study migration levels at levels lower than the province compelled us to explore the applicability of CSRM.

First, it was observed that estimates based on CSRM are higher than those based on residence in the last five years. In part, this could be explained in terms of the incidence of international migration. Second, with the exception of five district municipalities (Kgetlengrivier, Maquassi Hills, Molopo, Potchefstroom and Tswaing), the estimates based on CSRM and POLR give the same direction of net migration. This is encouraging. In the case of Kgetlengrivier CSRM suggests that the municipality experienced a net gain whereas the estimate based on "place of residence" and "place of previous residence" suggests that the municipality lost some people. For Maquassi Hills CSRM indicates that the municipality was a net receiver of people whereas the estimate based on "place of residence" and "place of previous residence" suggest that the municipality is a net sender. The same can be said of Tswaing. As for Molopo and Potchefstroom local municipalities the opposite is true in that the net migration estimate based on CSRM indicates that the municipalities experienced net out migration (net sender) whereas the estimate based on "place of residence" and "place of previous residence" suggest that the municipalities are net receivers.

Conclusion

In this study, the pattern and extent of migration by district municipalities in North West province are studied using the 1996 and 2001 South African population censuses. The numbers of net migrants by district municipalities, during the intercensal periods 1996-2001 are estimated using the Census Survival Ratio method, an indirect method that relies on the reported age-sex population distribution. This method was chosen in this study, purely based on the availability of published data by districts municipalities at both censuses.

It has been found that there were substantial population movements during the 1996-2001 intercensal periods. The results indicate that during the period under review North West province experienced net out-migration. At regional level the overall pattern has been such that Bojanala and Southern Regions have has been gaining people whereas Central District and Bophirima have been losing people. Migration patterns also vary by district municipalities. The district municipalities that experienced a net loss include Ga-Segonyana, Greater Taung, Kgalagadi,

Moses Kotane, Kagisano, Mafikeng, Moretele, Setla-Kgobi, Molopo, Potchefstroom, Naledi and Zeerust whereas the following district municipalities experienced a net gain of people: Klerksdorp, Mamusa, Kgetlengrivier, Moshaweng, Maquassi Hills, Rustenburg, Lekwa-Teemane, Ditsobotla, Ventersdorp, Tswaing, West Rand District and Madibeng. The nature and patterns of internal migration presented in this study compare favourably with those produced by other methods.

Lastly, the findings of this study are beneficial to both researchers and policy makers. First, one task that is usually performed by demographers is to prepare population projections. In order to accomplish these task demographic analysts need to have adequate information on past trends in number of births, deaths and migration. This study provides estimates of migration for regions and districts in North West province.

Second, policy makers need to know whether or not areas under their jurisdiction are gaining or losing people. Such information will assist development planners to determine the nature and type of services (such as housing, recreation, security, transport, communication, safety and security and social development) to make available to the public. For instance anticipating future growth in the inflow of people will help estimate the increasing demand for facilities and services.

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