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A Spatial Perspective of the Patterns and Characteristics of Main- and Substream Migration to the Western Cape, South Africa

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Abstract This article provides a contemporary spatial perspective of patterns and trends in migration to the Western Cape during the period 2001 to 2011 and contributes an important new perspective on one of the dominant migration streams in South Africa. It applies the concepts of mainstream and substream migration from the differential urbanisation model to analyse characteristics and patterns normally hidden by aggregated migration data. The findings confirm the continuation of strong primary migration streams between the Eastern Cape and municipalities in the Western Cape driven mainly by productionism. These migrants are mostly unmarried, young (25–29 years), mostly unemployed or not economically active, with low incomes. A significant proportion (31.3 %) end up living in informal dwellings in backyards or informal settlements largely concentrated in the provincial primary city, Cape Town. A smaller but prominent substream of migrants to the province consists of affluent, highly skilled, mostly married migrants from other metropolitan cities in South Africa, many from Gauteng. These migrants are driven by environmentalism, and favour Cape Town and adjacent municipalities as their destination—particularly those areas along the south coast of the province containing intermediate-size cities. These identified migration patterns and characteristics hold important development implications at both provincial and municipal levels.

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Introduction

South Africa experienced a 15.5 % population increase over the 10-year period of 2001 to 2011, with the highest increases recorded in Gauteng (33.7 %) and the Western Cape (30.0 %) (Statistics South Africa 2012). This is in stark contrast to provinces such as the Eastern Cape (EC) and Limpopo which experienced only limited population increases of 4.5 % and 8.2 %, respectively. These population changes are the result of a combination of factors including natural growth rates and interprovincial migration flows. The extent and characteristics of migration patterns to the Western Cape (WC) in particular have generated considerable interest over the last decade, both within the context of broader national-level migration studies (Todes 2001; Cox et al. 2005; Collinson et al. 2006; Kok and Collinson 2006; Kok et al. 2006; Posel 2010; Geyer et al. 2012), as well as in studies focusing specifically on migration between the EC and WC (Bekker 2001; Bekker 2002; Naidoo et al. 2008). These studies confirmed substantial migration from the EC to the WC and Gauteng, and that people were moving to cities and other centres of growth, even if these centres had weak economies (Todes 2001). De Jong and Steinmetz (2006) found that although Gauteng was the preferred destination for migrant South Africans, the WC was the most likely destination of migration from the EC. Bekker (2001) also identified the existence of a diminishing circulatory migration element between Cape Town and the EC, underpinned by the expectation of EC migrants to return home.

These migration streams hold significant consequences, financial and otherwise, and have a considerable impact on the proportional budgetary allocations from the national fiscus, to both the sending and receiving provinces and municipalities. Authorities in the preferred settlement areas for in-migrants are also faced with the challenge of providing housing, health, education and other social and basic services such as electricity, water supply and sanitation to these migrants. Therefore, it comes as little surprise that interprovincial and municipal migration has also become a topic of public interest commanding prominent coverage in print media, with headings such as 'Eastern Cape mass exodus picks up pace' (Miti 2013), 'Eastern Cape's 30,000 pupil migration is highest in country' (Mbabela 2014), and 'Western Cape feels the cost of growing number of migrants' (Kahn 2014).

Aggregate national and provincial-level migration analysis however often obscures the more subtle underlying regional substream migration patterns (Geyer et al. 2012). In reality, migration patterns consist of both main- and substream flows, which determine the dominant migration flows at different levels of spatial aggregation. Mainstream migration and substream migration may occur at the same time at different scales in a country or region. The migration patterns between the EC and WC thus require a more nuanced interpretation, from this mainstream and substream perspective. This article analyses the characteristics of contemporary migration streams to the WC over the period 2001–2011, using 2011 census data. It aims to make two specific novel contributions to regional and local migration analysis in the study area: firstly, it considers the migration data against the framework of mainstream and substream migration as espoused by the theoretical framework of differential urbanisation (DU); secondly, unlike many of the existing studies, the specific focus is on analysing the spatial patterns of migration to the WC, from the perspective of both the source and destination areas. The article begins with an overview of the relevant theories of

migration and the factors influencing migration decision-making, including the concepts of mainstream and substream migration within the theoretical framework of differential urbanisation. It then provides a disaggregated analysis of the various migration streams according to socio-economic profile and migrant household characteristics, with a view to identifying potential underlying substream migration patterns that may remain hidden by aggregated migration data. Spatial clustering analysis is then applied to identify statistically significant patterns of clustering of high and low concentrations of migrants to the Western Cape. The article concludes with a reflection on the developmental implications for both the source and destination areas.

A Reflection on Migration Decision-Making and the Concepts of Mainstream and Substream Migration

At the most fundamental level, migration entails the permanent or temporary (if retaining residence in the place of origin) relocation of people over time from one place to another, within and across functional or morphological boundaries (Lee 1966; Posel 2010). It involves an origin, destination and set of intervening obstacles or facilitators. The decision to migrate is therefore influenced by a combination of push- and pull-factors at both the source and destination areas (SALGA 2011; Grieger et al. 2013; Pendakur and Young 2013). A number of alternative approaches to migration theory can be identified from the extensive body of literature on this topic. The most widely applied is probably the neoclassical migration theory, which claims essentially that migration is caused by the supply and demand of labour and the differences of income in source and destination areas; migration is therefore considered a process of equalising wages across countries or regions and is thus based on a cost-benefit calculation (Massey et al. 2003). Relative deprivation theory, on the other hand, takes a household's relative level of deprivation based on the income level within its community as its point of reference and argues that the lower the household's position, the more likely the household members will be to migrate to improve their circumstances (Peng et al. 2014). A third line of argument is represented by the Neo-Marxist viewpoint of migration. Embodied in dependency theory, this is based on the notion that migration results from a sequence of historical events caused by political and economic forces, underpinned by the exploitation of labour by capitalism and colonialism. However, dependency theory cannot explain decisions made by the individual as a consequence of the larger systems which drive migration (Meyer 2013). An alternative Neo-Marxist viewpoint (world systems theory) explains migration in the context of global capitalism, driven by higher profits and wealth. This involves the industrial North (rich countries) and the lagging South (poor countries), where individual, personal choices are driven by the economic, political and administrative nature of these global regions (Chirot and Hall 1982; Straussfogel 1997).

It has been argued that both the behavioural type models of migration (as applied in neoclassical and relative deprivation theory) and the Marxist approach take a one-sided view of migration (de Haan 1999). More recent views of migration such as structuration theory (Goss and Lindquist 1995) and the synthetic model of migration (Gelderblom 2006) incorporate both individual and structural factors in understanding migration behaviour. Structuration theory posits that an individual (potential migrant) is

aware of the rules of interaction and uses their access to allocative and authoritative resources within the migrant institution to gain access to employment (Goss and Lindquist 1995). These activities have different levels of impact on both the sending and receiving societies, and the interaction of these components determines the factors that influence the migration decision and change the social and economic composition of the origin and destination area (Massey et al. 2003).

The synthetic model of migration is an attempt to combine elements of these different theoretical approaches to migration into a single conceptual model and specifies their mutual relationships (Gelderblom 2006). The key factors of this conceptual model include a spatial reward structure, individual characteristics and rewards, structural variables of decision-making, information sources, motivations and decision-making, and filters. The spatial reward structure dictates that migration is due to a spatial disequilibrium of socio-economic and political development. This spatial reward structure is determined by both push- and pull-factors at destination and source areas that either attract or repel potential migrants, and provide them with specific rewards, such as employment, services and social connections (Lee 1966; Arango 2000; Pendakur and Young 2013). Factors such as unemployment, crime and legal restrictions placed on migration can repel potential migrants. The second key element of the synthetic model is the role of individual characteristics such as age, gender, education, employment and occupation, and structural variables such as household composition that all interact with the individual reward systems (Findley 1987; Massey and Espinosa 1997). In developing countries, the individual is often not the ultimate decision-maker, but decisions are made to improve the circumstances of the household as an entity. The household usually sends out males for waged work in the rural areas or to nearby towns or urban areas; young, unmarried women are less likely to migrate than males. Female migration is often related to life-circumstance changes such as marriage, divorce and separation (Kok et al. 2006; Camlin et al. 2014). The third key element of the model is information sources, which can facilitate the decision to migrate. These sources include the media and networks of friends and family in the destination area (Boyd 1989). Once the decision to migrate has been taken, intentions are communicated to the decision-making unit, either by the individual or household, and may involve some level of conflict and negotiation (Findley 1987). Finally, filters to decision-making can take the form of both obstacles and facilitators. Obstacles can include factors such as the costs of migration, legal restrictions and immobilising social structures in the source area (Massey and Espinosa 1997). The monetary costs could include elements of transport, accommodation and the costs of information-gathering. Some potential migrants borrow this money from banks or money-lenders, family and friends in order to fulfil the migration decision (Gelderblom 2006). These costs can also be related to distance, hence, the poor often move only to nearby areas. Legal restrictions on migration, such as legislation enforced during the apartheid period in South Africa, severely limited potential migration. However, recruitment agencies can act as facilitators of migration, in that they stimulate migration between sending and receiving regions and can provide job placements and transportation (Goss and Lindquist 1995; Hugo 2006). Social networks created through friends and family can also act as a migration facilitator, pooling resources to assist poorer community members with cash, accommodation and finding employment.

The model of DU (Geyer and Kontuly 1993) introduced a further nuanced view of migration dynamics, based on the notion that urban systems go through particular cycles of population migration and population growth on their way to maturity. The DU theory distinguishes between three broad phases that occur over differing periods: urbanisation, polarisation reversal and counter-urbanisation (Kontuly and Geyer 2003). The model links production-driven and environment-driven migration with the concepts of mainstream and substream migration (Geyer et al. 2012). Productionism is the stage in the lifecycle of a person when an improvement of factors such as employment, income and upward mobility is prioritised. Environmentalism on the other hand refers to the phase when improving the quality of a person's living environment becomes a priority, and the factors associated with productionism are declining in importance (Geyer 2002a). Both factors are driven by the same underlying force of improving the living conditions of an individual or a household. Mainstream migration and substream migration may occur at the same time at different scales in a country or region due to both pull- and push-forces, and the different levels of development prevalent in different components and areas of the urban system. Urbanisation is largely the result of productionism, where migrants are motivated mainly by economic reasons. During this phase, large cities gain proportionally more migrants than small or intermediate-size cities, the predominant pattern characterised by large-scale migration from peripheral regions to primary cities. However, the intermediate-size and small cities in and around the core area of a country or region usually benefit during this urbanisation phase (Geyer et al. 2012).

The second phase, polarisation reversal, was originally aimed at explaining industrial deconcentration (Richardson 1980) but in the DU model, it is interpreted instead in terms of population migration processes. Although the population of the largest urban agglomerations in the system might still be growing overall, the rise in population and economic growth of those cities tapers off (Richardson 1980) and intermediate-size cities, especially those closer to the large urban agglomerations, now start attracting migrants from the latter (Gordon 1979). Metropolitan satellite cities and intermediate-size cities closer to large metropolitan areas tend to gain more migrants during this phase than distant intermediate-size cities in the periphery (Geyer et al. 2012). During this phase, the dominant migration stream is towards the intermediate-size cities in the urban system, although there is also substream migration to the small and large urban centres on a smaller scale. Finally, during the counter-urbanisation phase, a growing proportion of migrants move to intermediate-size regional centres and smaller cities further away from the primary metropolitan areas. During counter-urbanisation, the dominant migration stream flows from large cities and intermediate-size centres to small cities or rural areas beyond the commuting hinterland, due mainly to environmental reasons and the search for an improved quality of life (Geyer 2002b; Heikkilä 2003; Jivraj 2012). Smaller scale substream migration to large primary cities may however still continue during this stage.

National- and regional-level migration in South Africa has historically been influenced by some elements of each of these theories. The following quantitative analysis of migration to the Western Cape Province will specifically attempt to interpret the migration patterns from the perspective of the synthetic model of migration and the concept of DU.

An Analysis of Contemporary Migration Trends to the Western Cape

Data Sources and Methodology

The ten percent sample data from the Census 2011 was used for analysis purposes in this study. This consisted of a 10 % sample of all persons in the sample households and an independent 10 % sample of persons residing in other living quarters, excluding housing units or converted hostels (Statistics South Africa 2014). The sample had been weighted and the variable multiplied by the inverse of the sampling rate to the relevant population, and then calibrated to the census total population counts at provincial level, by population, gender and age group (Statistics South Africa 2014). The primary stratification was based on the local municipality, and the secondary stratification on the demographic characteristics of persons within the households. The dataset contained migration data for the population at provincial and municipal level, which could be applied for both spatial and statistical analysis purposes using a range of demographic variables. For the purpose of this article, a migrant is defined as some-body who moved from outside the Western Cape Province (within the South African boundaries) to a municipality located within the Western Cape between October 2001 (date of 2001 Census) and October 2011 (date of 2011 Census) and excludes individuals born after 2001. Although it is recognised that 100,290 migrants to the Western Cape over this period were of foreign origin (Table 1), the specific focus of this paper is on analysing the spatial patterns of migration to the WC in terms of municipalities of origin and migrants from outside South Africa were thus excluded from this analysis. The only data available was from the time of the census, and it is therefore not possible to analyse changes in the status or characteristics (such as income and employment status) before and after migration.

A combination of statistical and spatial analysis techniques was applied to analyse and interpret these variables. The migration variables were cross-tabulated with socio-economic variables such as gender, age group, education, employment status and

Table 1 Origin of in-migrants to Western Cape (2001 to 2011)

Province of origin	Number	Percent
Eastern Cape	162,380	52.0
Northern Cape	17,669	5.7
Free State	12,150	3.9
KwaZulu-Natal	25,631	8.2
North West	7609	2.4
Gauteng	68,574	22.0
Mpumalanga	7725	2.5
Limpopo	10,275	3.3
Total	312,013[a]	100.0

[a] The focus of this paper is the analysis of spatial patterns of migration to the WC in terms of municipalities and provinces of origin. This total thus excludes the categories outside South Africa (100,290), do not know (531) and unspecified (36,260)

Source: Statistics South Africa (2014)

and

income to identify the potential occurrence of mainstream and substream migration patterns as described in Section 2. However, these descriptive statistics alone cannot reveal the nuanced changes and trends that are possibly hidden by aggregated migration data. The origins (municipal level) of these various categories of in-migrants from outside the WC, as well as their settlement areas within the WC (municipal level), were also spatially analysed and mapped to enable the identification of potential mainstream and substream migration patterns. Pattern analysis tools were used to determine the statistical significance of the observed spatial patterns and either reject or confirm the null hypothesis of complete spatial randomness (CSR). The Anselin Local Moran I technique ('cluster-outlier analysis' function) was applied—where resulting high positive local Moran I values imply that the unit under analysis has similar high or low values as its neighbours, and these can therefore be regarded as spatial clusters. A high negative local Moran I value means that the value of the unit under analysis is different from the values of their surrounding locations and that the location under study is a spatial outlier (Zhang et al. 2008).

Contextual Setting and Spatial Characteristics of Migration Patterns

An interprovincial breakdown of net migration (the difference between total in-migrants and total out-migrants) reveals that only three provinces recorded positive net migration between 2001 and 2011. These were Gauteng (547,260), the Western Cape (192,000) and the North West (30,214). Comparative net interprovincial migration to the WC between 1991 and 1996 was 133,419 and between 1996 and 2001 a total of 69,321 (Naidoo et al. 2008). In contrast, the Eastern Cape (−346,452) recorded the highest negative net migration figures between 2001 and 2011. However, on an annualised basis, this figure is lower than for 1996–2001, when the negative net migration figure for this 5-year period was 254,791 (Naidoo et al. 2008). Mostly, these migrants from the Eastern Cape were headed to the Western Cape (162,380), followed by Gauteng (68,574) and KwaZulu-Natal (25,631). From the perspective of the receiving region, a total of 52 % of in-migrants between 2001 and 2011 originated in the Eastern Cape, followed by 22 % from Gauteng, and the balance of 26 % from the other six provinces. These figures confirm the findings of earlier research (Bekker 2002; De Jong and Steinmetz 2006; Kok and Collinson 2006; Naidoo et al. 2008) that the Western Cape remains the most likely destination of migration from the Eastern Cape.

However, these aggregated provincial-level figures do not reveal the potentially more nuanced spatial trends and characteristics of migration to the province. The data was analysed further, to determine the spatial distribution of the origin of migrants to the WC (Fig. 1) and to determine whether these spatial patterns exhibit statistically significant clustering or dispersion, and would provide evidence of statistically significant underlying spatial processes (Fig. 2). For the purpose of the latter, the Anselin Local Moran I technique (a local indicator of spatial autocorrelation) was applied. Positive values resulted from this analysis, implying the existence of spatial clusters (negative values would indicate spatial outliers) (Anselin 1995).

The interpretation of both these sets of spatial analysis results confirmed a number of important spatial characteristics. Firstly, the existence of a high-high cluster (Fig. 2) in the EC, consisting of the Buffalo City metropolitan municipality and a number of other
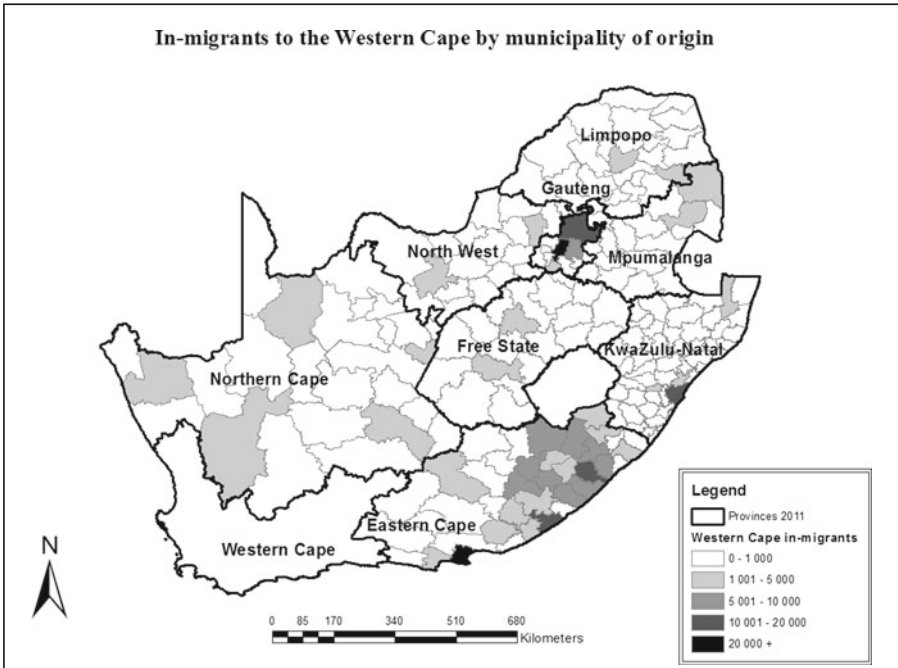
Fig. 1 Origin of in-migrants to Western Cape

municipalities that previously formed part of the former homelands of Transkei and Ciskei (accounting for 33.3 % of migrants to the Western Cape). Secondly, a high-high cluster consisting of the three metropolitan municipalities in
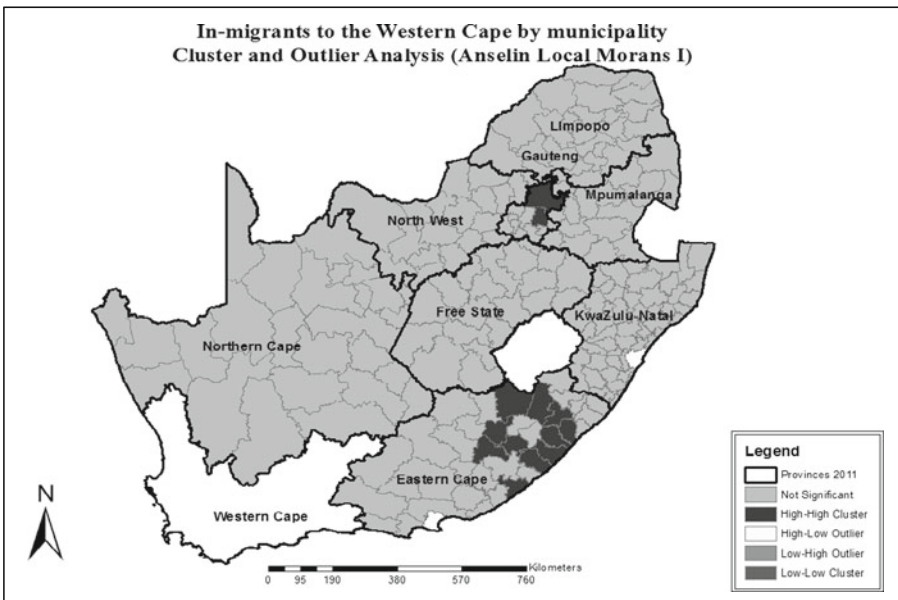

Fig. 2 Cluster and outlier analysis of origin of in-migrants to the Western Cape

Gauteng accounting for 21.2 % of migrants to the WC in 2001–2011. Thirdly, the eThekwini and Nelson Mandela Bay metropolitan municipalities were identified as high-low outliers (accounting for 14.8 % of migrants to the WC). These results provide evidence of statistically significant ($p=0.05$) underlying spatial processes, and from a mainstream and substream migration perspective can be interpreted as follows. The first high-high cluster is located partly within and partly adjacent to the former homeland areas in the EC and represents a significant spatial clustering of areas from which migration takes place directly to the Western Cape. The location of Buffalo City as part of this cluster also suggests that a proportion of migrants from the surrounding areas are also involved in a stepwise process of migration via East London to the Western Cape. The second high-high cluster, consisting of the Gauteng metropolitan municipalities, represents a second but distinct source of migrants to the WC. The population of this cluster is already highly urbanised, and the migration decision-making process for relocation to the WC is most probably motivated by environmentalism, but they also display some evidence of polarisation reversal on a national scale. The two high-low outliers (eThekwini and Nelson Mandela Bay) represent areas of high concentrations of migrants to the WC surrounded by low concentrations. This suggests significant numbers of migrants to the Western Cape from these two metropolitan municipalities, but not from its surrounding areas (as confirmed by Fig. 1), and is indicative of an urban-to-urban migration process. These disaggregated migration streams can also be further classified according to socio-economic characteristics, as outlined in the sections to follow.

Disaggregated Migration Characteristics and Patterns

Gender, Age and Marital Status

In their study on migration in rural South Africa, Camlin et al. (2014) argued that the gender of migrants can be an obstacle to migration because of restrictions on women who need to be protected by the family unit. However, in 2001–2011, there is almost parity in gender, when 51.5 % of in-migrants to the WC were male, and 48.5 % female, with no significant differences between the various source areas. Gender therefore does not appear to be a constraint on migration to the WC.

The age group 15–35 years is clearly the most mobile component of the migration stream to the WC (Fig. 3), peaking at 25–29 years (i.e. 20 % of all migrants to the Western Cape). In-migrants from the Eastern Cape are generally younger than those from Gauteng and the other provinces and are probably production-driven, in search of employment, education and better services (Bekker 2001; Todes 2001; Collinson et al. 2006). They target municipalities with vibrant local economies perceived as areas providing the greatest economic opportunity—areas such as the City of Cape Town, Saldanha Bay, George and the intensive agricultural area of Witzenberg (Fig. 4a).

In contrast, the main source area of migrants over 40 years is Gauteng. This component of the migration stream is motivated by environmental reasons and
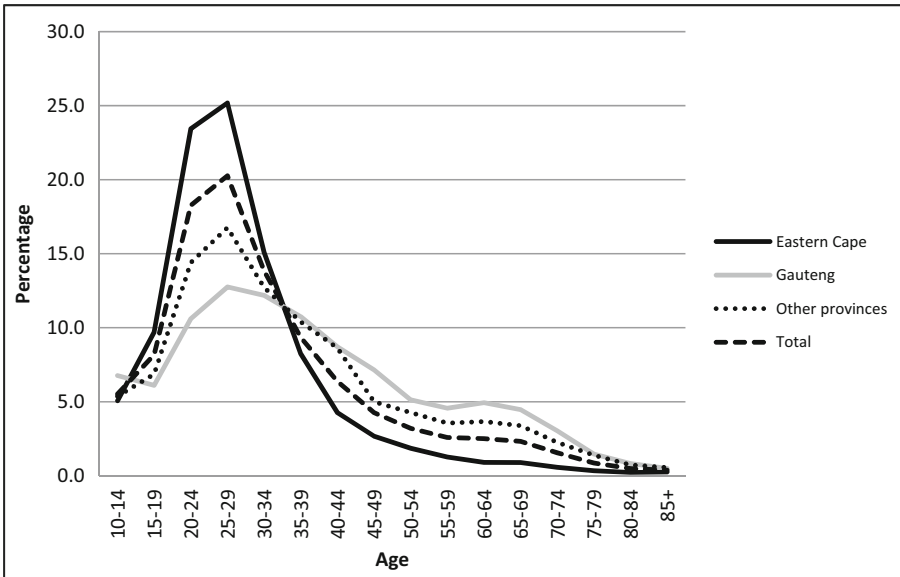
Fig. 3 Age profile of in-migrants to Western Cape

focussed on municipal areas containing intermediate-size cities and smaller towns in search of a higher-quality lifestyle. These migrants originate mainly from the other metropolitan cities in the country, and their preferred settlement areas are the City of Cape Town and coastal municipalities such as Overstrand, George, Mossel Bay, Knysna and Bitou (Fig. 4b).

From a marital status perspective, there are two distinct migration streams, each with very different characteristics. The mainstream (48.7 %) consisted of single persons never married (Fig. 5). This figure is even higher for migrants from the Eastern Cape (58.7 % never married), the motivating factor clearly productionism. These overall aggregate figures confirm the widely held view that single persons can migrate more easily, as they are less attached to family (Kok et al. 2006; Bijker and Haartsen 2012; Camlin et al. 2014). However, in stark contrast, a significant substream of migrants from Gauteng are married (46.6 %) or living together (8.9 %) and from the over-40 age group.

Education

One of the important factors influencing migration decision-making is the desire to improve one's education and that of one's children. The breakdown of the migration stream to the WC shows a very distinct dual character. The majority of the mainstream of in-migrants from the Eastern Cape (48.3 %) completed only some secondary education (grade 8–11); a further 26.0 % completed grade 12, and only 7.8 % have tertiary education. In contrast, as many as 35.4 % of in-migrants from Gauteng had completed some form of tertiary education, while a further 32.4 % had completed grade 12.

A very clear spatial differentiation is also evident when disaggregating the origin of migrants according to their level of education. The low-skilled in-migrants (grade 7 or less) to the Western Cape originate mainly from central and northern parts of the
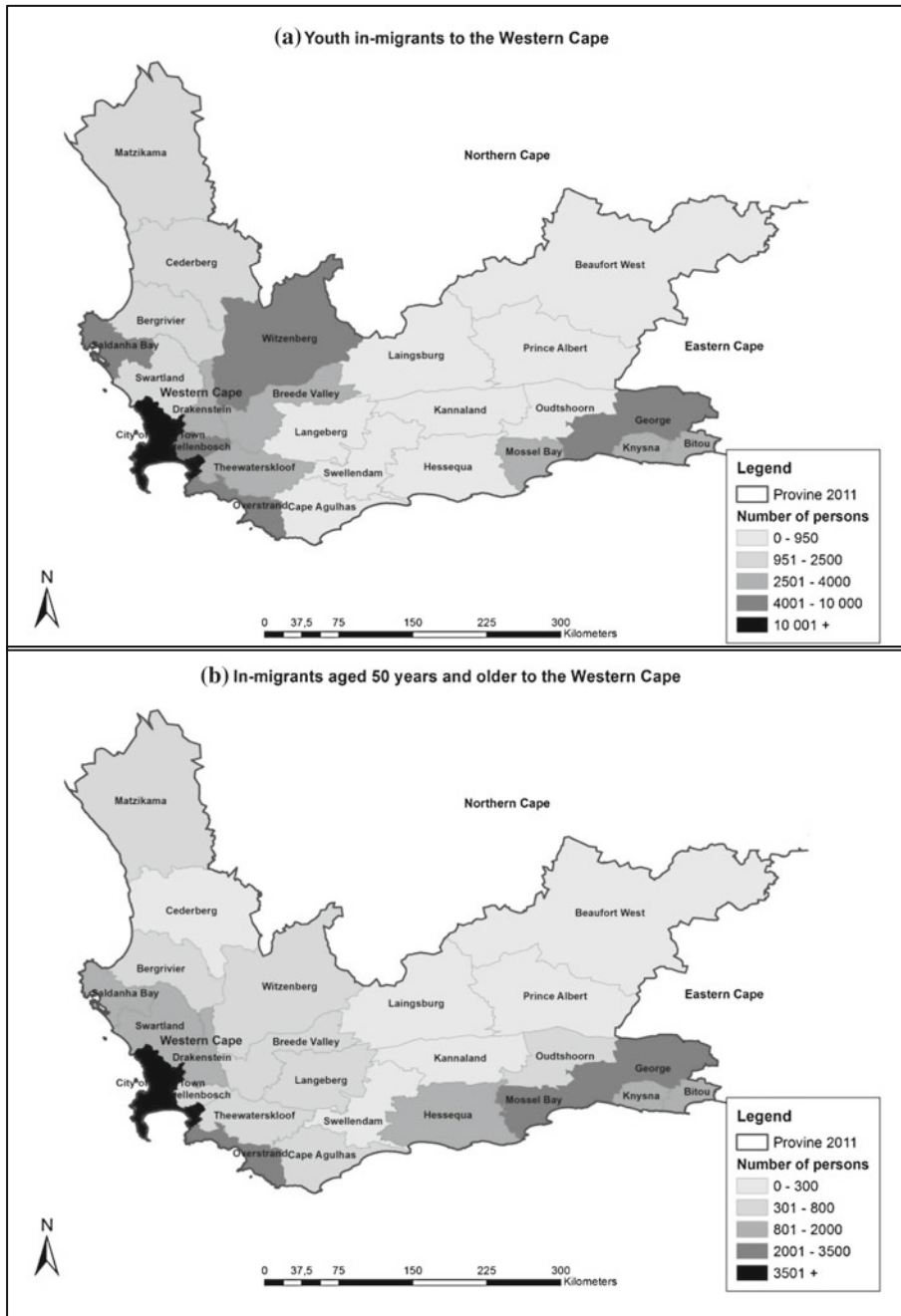
Fig. 4 Spatially disaggregated age profile of in-migrants to Western Cape

Eastern Cape and the metropolitan municipalities of the Gauteng province, eThekwini and Nelson Mandela Bay. The City of Cape Town received the highest proportion of the low-skilled in-migrants (55.9 %). The intensive agricultural areas of Witzenberg
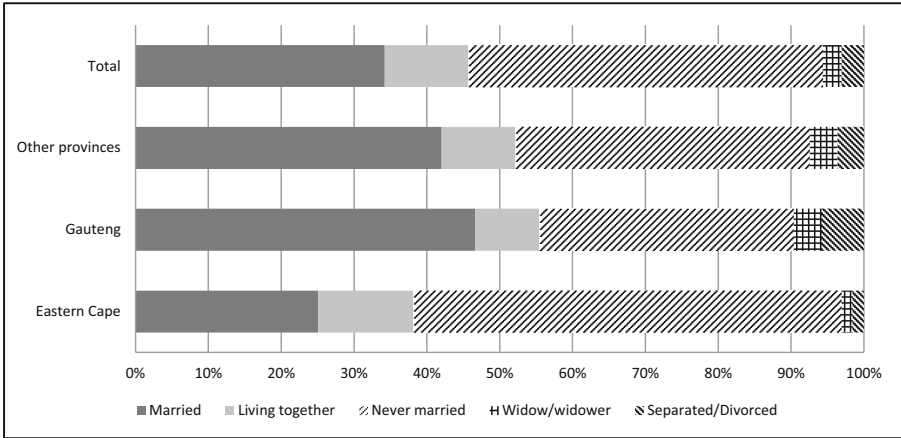
Fig. 5 Marital status of in-migrants to Western Cape

(5.2 %) and Theewaterskloof (3.5 %), which require a significant number of low-skilled and, in many instances, seasonal workers, also attracted a significant proportion of low-skilled migrants. On the other hand, the origin of in-migrants with tertiary education is highly concentrated and originates predominantly from the three metropolitan municipalities in Gauteng, Nelson Mandela Bay and eThekwini. These migrants are clearly attracted to those municipalities with higher levels of economic activity and a need for specialised skills, e.g. the City of Cape Town and the two
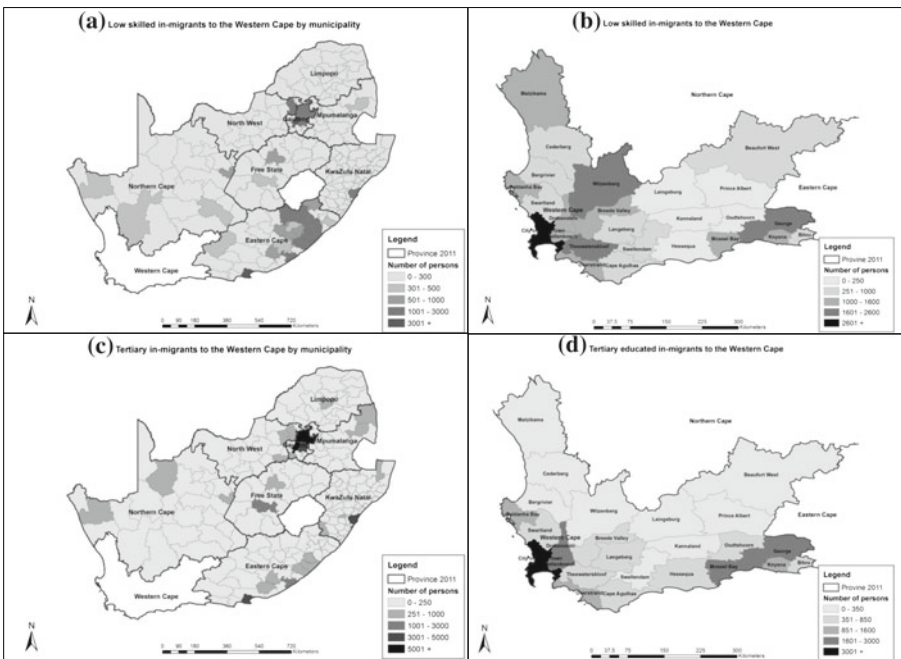

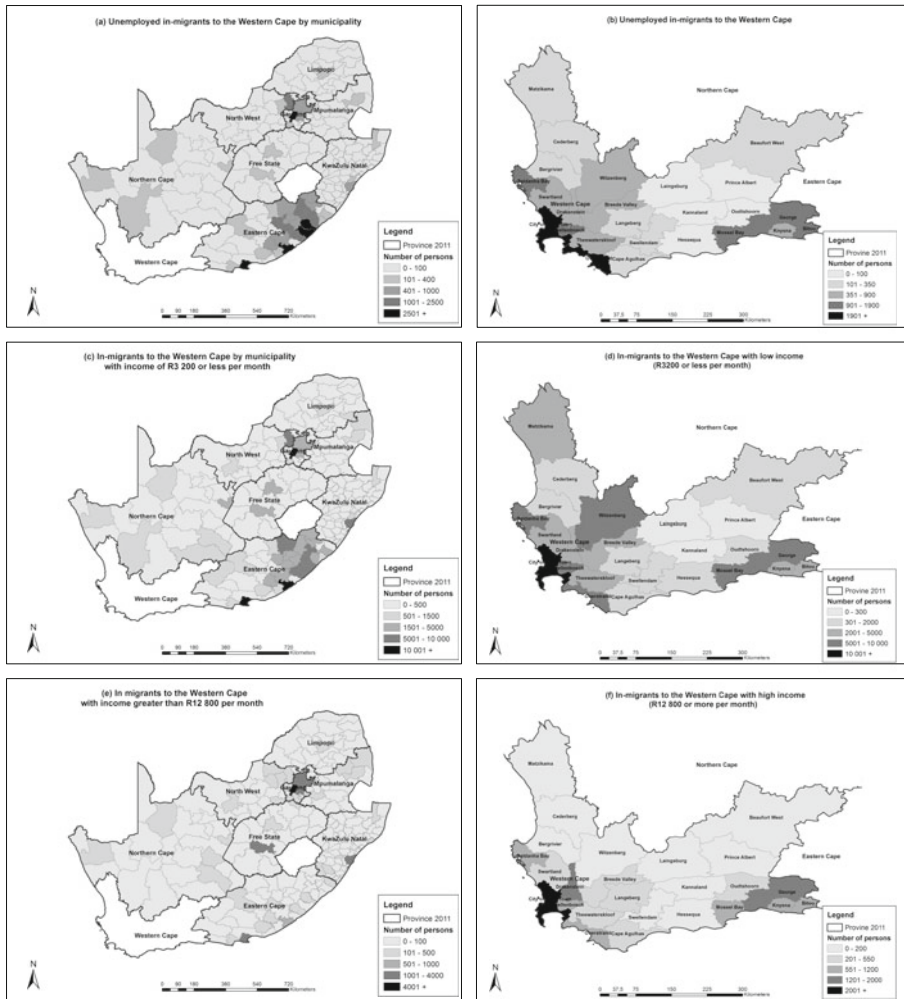Fig. 6 a–d Skills profile of migrants to Western Cape

Fig. 7 a–f Employment status and income of migrants to Western Cape

Table 2 Annual income of migrants (2001 to 2011) to Western Cape

Income category	Eastern Cape (%)	Gauteng (%)	Other provinces (%)	Total (%)
No income	46.3	30.1	28.7	38.2
Low income	41.5	19.0	31.0	33.9
Medium income	8.4	23.8	22.2	15.3
High income	3.8	27.1	18.0	12.6
Total	100.0	100.0	100.0	100.0

Low income=R1–R38 400, medium income=R38 401–R153 600, high income=R153 601 or more

Source: Statistics South Africa (2014)

adjacent municipalities of Stellenbosch and Drakenstein, as well as the intermediate-size cities in the George and Mossel Bay municipalities (Fig. 6d).

Employment Status and Income

Unemployment and poverty are prominent push-factors contributing to migration from source areas, but do not always produce positive outcomes for migrants—they often remain unemployed in the destination area (Kok and Collinson 2006). Between 2001 and 2011, as many as 32.5 % of migrants from the EC were unemployed (according to Naidoo et al. 2008, the comparative figure for the period 1996–2001 was 38 %), with a further 23.3 % not economically active. However, only 8.0 % of migrants from Gauteng and 8.2 % from other provinces were unemployed, and more than two-thirds can be classified as employed. The highest proportion of unemployed in-migrants to the Western Cape originates from the two Eastern Cape metropolitan municipalities of Nelson Mandela Bay (12.4 % of unemployed migrants to Western Cape) and Buffalo City (8.9 %), as well as the King Sabata Dalindyebo (7.2 %) and surrounding municipalities. The only other significant source of unemployed migrants to the WC from outside the EC is Johannesburg (6.8 %) (Fig. 7a). The vast majority of unemployed in-migrants settle in the primary provincial City of Cape Town (70.9 % of unemployed in-migrants to WC), with smaller proportions in municipalities containing intermediate-size cities such as the Overstrand (4.2 %), George (3.3 %), Saldanha Bay (3.2 %) and Mossel Bay (2.5 %) (Fig. 7b). The Cape Town city region is clearly the main settlement area for unemployed in-migrants motivated mostly by productionist reasons.

Individualised rewards such as income are an important factor in migration decision-making, the motivation of many migrants stemming from a desire to improve their living conditions (Kok et al. 2006). Although the use of the income variable contained in the census data for research purposes is notoriously problematic, due to factors such as widespread under-reporting (Naidoo et al. 2008), it does provide at least some indication of the importance of income as an individual reward factor in migration decision-making. As many as 87.8 % of migrants from the Eastern Cape to the Western Cape had either no income or low income (Table 2), while only 12.2 % are classified as medium- or high-income earners. By contrast, as many as 50.9 % of migrants from

Table 3 Type of dwelling of in-migrants in Western Cape

Type of dwelling	Province of origin (%)			
	Eastern Cape	Gauteng	Other provinces	Total in-migrants
Formal dwelling	48.0	91.1	86.6	68.0
Informal dwelling in backyard	14.2	3.5	5.4	9.4
Informal dwelling not in backyard	37.2	4.8	7.2	21.9
Other	0.6	0.5	0.7	0.6
Total	100.0	100.0	100.0	100.0

Source: Statistics South Africa (2014)

Gauteng can be classified as persons with a medium or high income, and only 49.1 % had low income or none at all.

The originating areas of low-income migrants from the Eastern Cape largely correspond with the labour-status patterns. The main source areas include Nelson Mandela Bay (11.2 % of all low-income migrants to Western Cape), Buffalo City (7.5 %) and King Sabata Dalindyebo (4.9 %) and surrounding areas in the Eastern Cape (Map 7c). The majority of low-income migrants to the Western Cape settle in the City of Cape Town (63.0 %) (Map 7d). The alternative stream of high-income migrants to the Western Cape originates predominantly from the seven metropolitan municipalities outside the Western Cape, jointly accounting for 66.7 % of all high-income migrants to the Western Cape (Map 7e). The main destination of these high-income migrants is the City of Cape Town and those municipalities containing intermediate-size cities such as Drakenstein and George (Map 7f).

Living Conditions

The types of dwelling (Table 3) inhabited by migrants in the destination areas also provide a clear indication of the basic services they receive and consequently their living conditions. Although housing alone does not necessarily reflect access to basic services (such as water, sanitation and electricity), there is generally a very strong correlation between the type of dwelling and level of service provided. Migrants often first settle in low rental accommodation in backyard shacks or in informal dwellings where accommodation is cheaper while searching for employment (Kok and Collinson 2006).

Although the largest proportion of in-migrants (68.0 %) to the Western Cape lives in formal housing, a significant proportion, 31.3 %, lives in informal housing (9.4 % in informal dwellings in backyards and 21.9 % in informal settlements). This pattern is however highly differentiated according to the province of origin. A total of 51.4 % of migrants from the EC now live in informal dwellings in the WC, whereas the comparative figure for migrants from Gauteng is as low as 8.3 %. This confirms the continuation of the trend identified in earlier research: that a large number of in-migrants ended up in informal dwellings in the larger cities of the WC such as Cape Town, George and Mossel Bay, of which a significant proportion fell into the indigent category potentially requiring poverty relief from local municipalities (Ndegwa et al. 2007). The City of Cape Town clearly bears the brunt of migrants housed in informal housing units (74.8 % of all migrants in informal dwellings).

Conclusions and Implications

The results outlined in this article confirm the continuation of the strong historical migration link between the Eastern Cape and the Western Cape over the period 2001 to 2011. However, it adds a new dimension by providing a spatially disaggregated analysis of the overall provincial migration figures and distinguishes between various mainstream and substream migration patterns based on socio-economic characteristics.

There is a continued strong mainstream of migrants to Cape Town, the provincial primary city of the Western Cape, which suggests that the dominant motivating factor in migration decision-making is productionism. The mainstream of in-migrants to the Western Cape is fairly evenly split between male and female, mostly unmarried

(48.7 %) and young (25–29 years), with a low income (72.1 % with an annual income of less than R38 200), moderately skilled (37.2 % who completed some secondary education), many of them unemployed (16.5 %) or not economically active (23.6 %) and as many as 31.3 % living in informal dwellings in backyards or informal settlements. There is also a discernible substream of migrants to the WC aged over 35, motivated by environmentalism, favouring Cape Town and the coastal municipalities of Overstrand, Mossel Bay, George, Knysna and Bitou as their preferred settlement areas. This substream of migrants consists of relatively affluent, highly skilled and mostly married individuals originating from metropolitan cities in other provinces, especially Gauteng.

These identified migration streams and characteristics hold important development implications at both a provincial and municipal level. At a provincial level, it clearly affects the proportional budgetary allocations from the national fiscus to both the sending and receiving provinces. The 15–35 age group dominates the migration stream to the Western Cape, peaking at 25–29, migrants from the Eastern Cape being generally younger than those from Gauteng and the other provinces. This young age group does not only imply a need for economic opportunity, but also for particular types of social facilities, such as schools, and will have an impact on the budgeting and provisioning of resources. It has been reported that inward migration of learners from within South Africa has seen 122,378 additional new enrolments within the Western Cape education system between 2010 and 2014. The overwhelming majority (105,850) of these learners originate in the Eastern Cape (Grant 2014). To put the practical implications into perspective, these figures illustrate the need for more than 100 new schools over this 5-year period to accommodate these learners. Additionally, the major source municipalities with relatively small populations (such as those in the Eastern Cape) will consequently have to cope with an ageing population as a result of this exodus of young people.

However, the planning and policy formulation of local municipalities are most directly affected. The city of Cape Town is clearly the predominant destination focus area for both the main- and sub-migration streams to the Western Cape, and this has both a positive and negative impact. The city has to deal with the implications of receiving 70.9 % of the province's unemployed migrants and 63 % of the low-income earners, but conversely benefits by receiving the majority of highly skilled and high-income migrants as well. In a city already faced by an unemployment rate of 23.9 % and a youth unemployment rate of 31.9 % (Statistics South Africa 2012), this implies massive challenges for employment creation. The city of Cape Town also bears the brunt of migrants housed in informal housing units (74.8 % of all migrants in informal dwellings in the WC). In addition to the existing housing backlog of the city, this additional demand for housing creates the need for suitably located land and the provision of adequate basic services. Some municipalities containing intermediate-size cities, such as Drakenstein and George, benefit from environmentalism-driven migration, with a greater share of highly skilled and high-income migrants. The migration patterns also strain the resources of smaller and less economically vibrant municipalities, such as Theewaterskloof and Witzenberg, where a substantial proportion of the migrants to these areas are low-skilled and low-income earners (83 % and 89 %, respectively). The impact of the high unemployment rate is also reflected in the income profile of migrants, indicating that 72.1 % of migrants to the province fall in the

low-income category, while in some municipalities, this figure is in excess of 80 %. A large proportion of migrants therefore can fall into the indigent category requiring support from municipalities in making municipal services accessible and affordable.

The results outlined in this article provide an important new perspective on one of the dominant migration streams in South Africa. The data on migration to the Western Cape is interpreted against the framework of mainstream and substream migration as understood in the theory of differential urbanisation (DU). Unlike previous studies, it specifically focusses on the spatial patterns of migration to the WC, both from the perspective of the source and destination areas. Despite the value of the findings of this research, the limitations inherent in the data must be recognised in the interpretation of the results. The most important limitation is the unavailability of economic-sector information in the migration theme of the census data, precluding any analysis of the occupational and economic-sector categories of migrants; this is required to reveal the decision-making processes of productionist-orientated migration in greater detail. The definition of a migrant is also limited to persons not living in the same municipality between the two periods, and it is thus not possible to analyse more nuanced migration streams at place-name level. In the interpretation of the results, it should also be borne in mind that the socio-economic characteristics of migrants reflect their profile in the destination areas, and it is therefore not possible to ascertain their prior circumstances in the municipalities of origin. This study can be further supplemented by additional research on the push-factors at play in the provinces that are main senders of migrants to the Western Cape, and the consequent implications for policy and strategy development. The development of a geographically weighted regression model to analyse the causal relationship between the extent of in-migration to the Western Cape and the underlying contributing factors could potentially provide a tool for exploring the extent and spatial characteristics of future interprovincial migration in South Africa.

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