

The Impact of Inter-provincial Migration on the Labor Market Outcomes in Two Developed Provinces in South Africa

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This study used the South African Census 2011 data to examine the impact of inter-provincial migration on the labor market outcomes in the Western Cape and Gauteng, the two most developed and popular inter-provincial migration destination provinces in South Africa. In both provinces, the residents were divided into four groups: permanent residents, intra-provincial migrants, long-term inter-provincial migrants and short-term inter-provincial migrants. The descriptive statistics indicated that both short- and long-term inter-provincial migrants into the two provinces were likely to be young people aged 15-34 years, unmarried African urban residents with 11-12 educational years on average, coming from households with three members. These inter-provincial migrants enjoyed lower unemployment rates than the permanent residents, but the intra-provincial migrants remained the best-performing group with the lowest unemployment rate and highest share of employed persons involved in formal sector activities. The study also conducted a multivariate econometric analysis with probit regressions on labor force participation likelihood, and Heckprobit regressions on employment likelihood (conditional on labor force participation). After controlling for differences in other characteristics (or *ceteris paribus*), compared to the permanent residents, it was evident that both short- and long-term inter-provincial migrants into Western Cape and Gauteng were about 3% significantly more likely to be employed. After examining migrants from the Eastern Cape to the Western Cape and migrants from Limpopo to Gauteng, the study found that both groups enjoyed a much higher labor force participation rate (above 70%) and lower unemployment rate (30%), compared to individuals who remained in the Eastern Cape and Limpopo (labor force participation rate: 45%; unemployment rate: 38%).

Keywords: migration, inter-provincial migration, labor market, Western Cape, Gauteng

INTRODUCTION

Migration is a necessity in the modern labor market of the 21st century, as it represents an essential and potentially beneficial component of all economies, regions and countries (Kalitanyi and Visser, 2010). As a result of globalization, the world is experiencing an increasing flow of labor and capital, both locally and internationally. The general flow of people is from developing to developed countries, and from rural to urban provinces. The main reasons for this are twofold; firstly, due to the disparity in the economic dispensation of developing and developed countries/areas, people find it more advantageous to migrate for the prospect of greater opportunities elsewhere. Secondly, the recruitment policies implemented in developed regions appear to target high-skilled immigrants (Chand and Paldam, 2005).

As far as international migration is concerned, an immigrant is an individual who migrated from another country, an emigrant is an individual who migrated to another country, whereas a native is someone who resides in the birth country (Van Rooyen, 2000; Moses and Yu, 2009). South Africa is a country with a high international emigration rate, and this can be attributed to crime, inequality and unemployment in this country, which have plagued the nation since the advent of the country's democracy (Fauvelle-Aymar, 2015). In contrast, the country is still one of the main destinations of immigration in Africa, because compared to other African countries, immigrants in South Africa enjoy one of the highest rates of employment (Fauvelle-Aymar, 2014).

With regard to inter-provincial migration, the Western Cape and Gauteng account for most of the immigration within South Africa. These two provinces contribute the most towards the economic success of the country, with the lowest provincial employment rate in the country (Kollamparambil, 2017). These two provinces also account for a combined 49% of South Africa's gross domestic product (GDP) – 35% in Gauteng and 14% in the Western Cape in 2018 (StatsSA, 2019). In the Western Cape and Gauteng, 57% and 48% of inter-provincial migrants are employed respectively (StatsSA, 2014). Hence, these two provinces remain attractive destinations for potential job seekers from other provinces.

While there have been empirical studies on inter-provincial migration in South Africa in recent years (reviewed here in section two), these studies have either been outdated, or did not thoroughly examine how the inter-provincial immigrants fared in these two popular destination provinces. A particular area of neglect has been the immigrants' labor market outcomes compared to the natives who remained in their home provinces. Given the persistently high unemployment rate (29.1% in the fourth quarter of 2019), one of the most pressing socio-economic problems of the country, and people seeking better employment opportunities elsewhere, these have emerged as prominent reasons for inter-provincial migration. This study aims to fill the existing research gap in the local empirical literature by providing an updated and detailed analysis of inter-provincial migration into Gauteng and the Western Cape, to gain an understanding of how the migrants from other provinces fare in the labor

market of these two provinces.

The general research objective of this study is to determine the effects of inter-provincial migration on the labor markets in the Western Cape and Gauteng. Additionally, the study aims to achieve the following specific research objectives: to determine the migration patterns in the Western Cape and Gauteng; to identify the characteristics of inter-provincial migrants into these two provinces; and to examine whether the overall impact of inter-provincial migration in the Western Cape and Gauteng is positive or detrimental to the local labor market and employment of the native population.

LITERATURE REVIEW

Migration definition

The term 'migration' can mean many things, depending on the context in which it is used. In the animal kingdom, migration is natural inherent behavior when animals move from one place to another. Human behavior is thus patterned after this phenomenon in nature. Goetz (1999) illustrates one of the many meanings of migration, citing the movement of people across state lines in the USA. Clark (1986: 33) asserts that migration takes place when an individual moves residentially, with the distance between the two locations being "so large that it is no longer possible for the mover to commute to the old place of work". Furthermore, Kok et al. (2006: 10) define migration as the "crossing of the boundary of a predefined spatial unit by persons involved in a change of residence". One common thread that the above definitions have in common is that migration takes place when individuals change their geographical locations, either permanently or for a long duration.

In this study, the focus is on inter-provincial migration, that is, migration from one province to another within the same country (Moses and Yu, 2009). These inter-provincial migrants have been classified into two groups, namely short-term and long-term migrants. While the empirical analysis compares the labor market outcomes of the inter-provincial migrants to those of the intra-provincial migrants – those who migrated from one place to another within the same province – the inter-provincial migrants remain the focus group of individuals in this study.

Migration theories and models

From a theoretical perspective, various factors initiate and perpetuate international migration (Massey et al., 1993). The key theoretical models are discussed below, with specific reference to inter-provincial migration in the two designated provinces.

Initiation of migration

According to the push-pull model, many native individuals left the country due to various economic and non-economic push and pull factors. Push factors are those aspects in the country of origin that produce emigration, whereas pull factors depict

those aspects in the country of destination that induce migration (Oteiza, 1968:126). When it comes to inter-provincial migration, the main push factors include the following in the province of origin: slow economic growth, high and growing unemployment (especially amongst the youth), poor access to services and facilities (e.g. water and electricity) and poor infrastructure (e.g. transport). On the contrary, the main pull factors include the following in the provinces of destination: more rapid economic growth, more abundant employment and professional development opportunities and higher remuneration, better quality of life, and family ties (Van Rooyen, 2000; Moses and Yu, 2009; Rasool et al., 2012; Pekane, 2018).

In the neoclassical model, individuals are deemed to be rational decision-makers by conducting a cost-benefit analysis, before deciding to move if the expected net return of migration is positive. In particular, geographical wage differentials induce migration from low-wage provinces to high-wage provinces. Once wage levels at the provinces of origin and destination converge, inter-provincial migration comes to an end (Massey et al., 1993; De Haas, 2010). In the dual labor market theory, migration is induced by an intrinsic demand for labor in the primary sector, characterized by a capital-intensive production method, higher remuneration and better working conditions. Thus, individuals from the labor-intensive secondary sector, characterized by lower remuneration and poor working conditions, are induced to relocate to the primary sector (Massey et al., 1993; Moses and Yu, 2009).

According to the world systems theory, firms from capitalist, core and developed areas enter peripheral, developing areas to take advantage of low-wage labor by establishing assembly plants there. Nonetheless, as new factory work is associated with demanding tasks and poor remuneration, factory workers work for a short duration only, before leaving to seek new and better opportunities in the more developed areas (Massey et al., 1993). Furthermore, according to the new household economics of migration, household members make migration decisions collectively, by not only maximizing expected income but also minimizing risks. The latter happens by assigning some members to remain in the province of origin, but sending other members to work in other provinces with higher wages and better employment conditions (Massey et al., 1993; De Haas, 2010).

Perpetuation of migration

In the network theory, migrants establish relationships with former, current and potential migrants and non-migrants in both sending and receiving regions. These network connections constitute social capital to assist individuals to gain access to employment in other provinces and to adapt better in the destination province (Massey et al., 1993; Weeks, 1996). On the contrary, according to the institutional theory, many people would like to migrate to a capital-rich region with a limited number of immigration visas available. This leads to development of an underground black market in migration associated with conditions that are conducive to victimization and exploitation. Hence, voluntary humanitarian organizations are in place to pro-

vide migration services and enforce the rights and treatment of migrants. As a result, migration flows become more institutionalized and less dependent on factors which originally induced them (Massey et al., 1993).

The cumulative causation theory assumes that each migration act affects the social environment in both home and host regions, typically in ways that induce additional movements. In particular, the success of migrants' first moves encourages more people in the sending area(s) to move, thereby contributing to increases in migration volume. According to the migration systems theory, a migration system consists of a core, receiving region and numerous sending regions. This system, whilst being stable, may evolve over time in cognizance of international economic and political trends (or provincial trends, when it comes to inter-provincial migration). The countries (or provinces) may not be physically close as economic and political links between countries (or provinces) drive migration flows (Massey et al., 1993).

Review of past empirical studies

This section reviews the recent local empirical studies on inter-provincial migration. Van der Berg et al. (2002) analyzed the 1996 South African census data to investigate rural-urban migration. The authors specifically focused on the migration of Africans from Transkei (an apartheid-era bantustan in the Eastern Cape) to the Western Cape, finding that 90% of inter-provincial migrants to the Western Cape originated from the Eastern Cape. The empirical findings indicated that male individuals aged 19-50 years with secondary education were significantly more likely to move to the Western Cape. The study did not examine how these migrants fared in the Western Cape labor market.

Oosthuizen and Naidoo (2004) used the data from the 2001 South African census and the September 2002 Labor Force Survey (LFS), to examine inter-provincial migration into Gauteng. The authors found that the majority of migrants into this province originated from Limpopo, the Northern Cape and KwaZulu-Natal. These migrants were also relatively younger and less educated than the Gauteng-born native population. The superior employment prospect was clearly the primary reason for migration, as the inter-provincial migrants enjoyed a lower unemployment rate in Gauteng compared with those who remained in their birth provinces, with the exception of the Western Cape. Nonetheless, the employed inter-provincial migrants were more likely to be involved in unskilled occupations (27% share) compared to the Gauteng-born natives (15%), while the opposite happened in high-skilled employment, with inter-provincial migrants at 20% and Gauteng-born natives at 31%.

Moses and Yu (2009) conducted research on migration from the Northern Cape using South African Census 1996 and 2001 datasets. The authors identified the Western Cape, North West and Gauteng as the top three destination provinces. They subsequently examined four migration groups, namely permanent residents in the Northern Cape, permanent inter-provincial migrants from the Northern Cape to another province, recent inter-provincial migrants from the Northern Cape to another

province, and intra-provincial migrants within the Northern Cape. The empirical findings on the labor market analysis indicated that the two inter-provincial migrant groups fared the best, as they were associated with the lowest unemployment rate and highest probability of engaging in high-skilled occupations (if employed). Moreover, the results of the multivariate econometric analysis indicated that, after controlling for differences in other characteristics, the recent inter-provincial migrants enjoyed a significantly greater likelihood of finding employment in the abovementioned top three destination provinces, compared to the reference category (permanent inter-provincial migrants).

Jacobs (2014) identified inter-provincial migration patterns and characteristics of in-migrants to the Western Cape in 2001-2011 by using the South African Census 2011 data (StatsSA, 2011). The author found that 52% and 22% of inter-provincial migrants into the Western Cape originated from the Eastern Cape and Gauteng, respectively. This study also found that the Eastern Cape migrants were relatively less educated, with only 34% having completed Matric or Grade 12, while the Gauteng migrants were much more educated, with 68% having completed Matric, with half of them possessing post-Matric qualifications. While both groups of inter-provincial migrants had similar labor force participation rates (LFPRs) of slightly above 70%, the Eastern Cape migrants suffered a much higher unemployment rate of 33%, which was three times higher than that of the Gauteng migrants (only 11%). One shortcoming of this study is that the work activities of the inter-provincial migrants in the Western Cape were not investigated.

Schiel (2014) examined inter-provincial migration by analyzing the first three waves of the National Income Dynamics Study (NIDS) data (2008 to 2012). After examining the provinces of origin of inter-provincial migrants across all nine provinces, the author compared the personal- and household-level characteristics of the migrants and non-migrants, with one notable finding being that the migrants were relatively more educated. The latter finding explained why a higher proportion of migrants, if employed, were involved in high-skilled occupations, at 30%, compared to the non-migrants, at 25%. The author also conducted a transition matrix on the migrants, and found that for those who were inactive, unemployed and employed in the first wave (2008), 19%, 27% and 64% respectively were employed at the time of the third wave (2012).

Buwembo (2015) used the South African Census 2011 data (StatsSA, 2011) to specifically focus on comparing the inter-provincial migrants from Limpopo to Gauteng with those who remained in Limpopo. This study found that the majority of these migrants resided in the Tshwane municipality and the northern parts of Ekurhuleni. It also found that the Limpopo migrants to Gauteng were 1.3 times more likely to be employed than non-migrants who remained in Limpopo, after controlling differences in various personal characteristics. Similar to the Jacobs (2014) study, the Buwembo (2015) study also excluded a detailed investigation of the work activities of the inter-provincial migrants, despite finding that the Limpopo-to-Gauteng

migrants were more likely to belong to higher-income groups, whereas those who remained in Limpopo were more likely to fall under the lower-income groups.

Kollamparambil (2017) used the first, second, and fourth waves (2008 to 2014) of the NIDS data to examine the impact of internal in-migration on the labor markets of the receiving areas at district level. Only individuals aged 18-59 years at the time of first wave (2008) and who took part in all three waves were included for analysis, with a final sample size of about 7 600 individuals. The empirical findings suggested that in-migration reduced the LFPR in destination locations of the migrants. The author also asserted that initial migration led to the expansion of formal sector employment, while a sustained increase in in-migration in turn led to the informalization of the labor market. The author also found that while the migrants initially suffered lower employment rates than the locals before migration taking place in the first two waves, at the time of the fourth wave (2014), these migrants enjoyed a higher rate of employment than the non-migrants. This study also excluded a comprehensive investigation of the work activities of the migrants.

Upon reviewing these past recent studies on inter-provincial migration in South Africa, this research paper identified the following research gaps: first, the labor market activities of inter-provincial migrants were not investigated in detail, in most of these studies. Secondly, the comparison between inter-provincial migrants and permanent residents was not precise. Thirdly, not all studies clearly distinguished between short- and long-term migrants. Lastly, not all studies specifically focused on inter-provincial migration into Gauteng and the Western Cape, the two most popular destination provinces in South Africa.

METHODS AND DATA

Methods

To achieve the stated research objectives and fill the existing research gaps, this study used the South African Census 2011 data (StatsSA, 2011) to identify the following eight groups of individuals aged 15-64 years at the time of the Census:

- [1]: Permanent residents of the Western Cape
- [2]: Intra-provincial migrants in the Western Cape
- [3]: Long-term migrants from other provinces to the Western Cape
- [4]: Short-term migrants from other provinces to the Western Cape
- [5]: Permanent residents of Gauteng
- [6]: Intra-provincial migrants in Gauteng
- [7]: Long-term migrants from other provinces to Gauteng
- [8]: Short-term migrants from other provinces to Gauteng

Short-term and long-term migration are distinguished from each other based on the time periods before and after 2006. Thus, in-migrants to Gauteng and the Western Cape during 2001-2006 are considered long-term migrants, while those who moved to these two provinces during 2007-2011 are considered short-term mi-

grants. This serves to differentiate the groups [3] and [7] from groups [4] and [8], respectively.

The Stata software package was used to conduct descriptive and econometric analysis. With regard to the descriptive analysis, this study first compares the personal- and household-level characteristics of these eight groups, ranging from gender, race, age cohort, educational attainment and marital status, to labor market status, work activities (if employed) and socio-economic status (SES). The primary focus is on investigating the individuals' labor market outcomes.

Principal Component Analysis (PCA) is used to derive the non-income welfare SES index using the various indicators as shown in Table A1. PCA is a data reduction method to re-express multivariate data with fewer dimensions (Vyas and Kumaranayake, 2006). The primary aim of this method is to re-orient the data so that a multitude of original variables can be summarized with relatively few 'components' that capture the maximum possible information (variation) from the original variables. Each component is the weighted sum of the original variables (the non-income welfare indicators in this study, as shown in Table A1), with the weighting of each variable being proportional to the share of total variance that it represents. The eigenvalue ratios, which represent the proportion of total variance that each principal component explains, are used to identify the number of components to be included in the SES index (Van der Berg et al., 2003). The first principal component explains the greatest possible proportion of variation in the original data, the second component explains additional but less variation than the first component, and so forth, but these components are completely uncorrelated with each other (Vyas and Kumaranayake, 2006).

The econometric analysis employs a probit regression to examine the impact of various explanatory variables on labor force participation likelihood and employment likelihood of the working-age population in these two provinces. The particular focus is on how the inter-provincial migrants to the two provinces (that is, groups [3], [4], [7], and [8]) fare in the labor market, compared with the reference categories (that is, groups [1] and [5]).

In a probit model, the dependent variable is binary with a value of either zero or one. The econometric model can be mathematically represented as follows (Gujarati and Porter, 2009; Wooldridge, 2012):

$$(y=1|x)=P(y=1|x_1,x_2,\dots,x_k)$$

where $P(y=1|x)$ represents the probability that an individual migrant would participate in the labor force (in the probit model on labor force participation likelihood) or find work (in the Heckprobit model on employment likelihood) in the Western Cape and Gauteng. In addition, x_1,x_2,\dots,x_k are the various explanatory variables.

The sample of individuals within the labor force is not random, as these individuals have already undergone a selection process through deciding whether or not to enter the labor force, the estimated results may suffer from sample selection bias.

To address this, the study employs the Heckman two-step approach (Oosthuizen, 2006: 53). First, to ascertain whether or not an individual is likely to participate in the labor force, the probit model is estimated, with dependent variable equaling to either one (labor force) or zero (inactive). This model enables the estimation of the inverse Mills ratio, which is included in the next employment of the Heckprobit model, that is estimated. Thus, if an individual is likely to participate in the labor force, an employment probit is estimated to ascertain if the individual is likely to be employed based on the explanatory variables. The regress and variable therefore, equals one for employed and zero for unemployed. The employment probit is therefore conducted, conditional on labor force participation.

In this study, the explanatory variables include the following:

- Gender (reference category: female)
- Race (reference category: African)
- Age cohort (reference category: 15-24 years)
- Years of education and years of education squared
- Marital status (reference category: not married or living with a partner)
- Migration status (reference category: permanent residents)
- Area type (reference category: rural)
- Number of children aged 0-14 years in the household
- Number of males aged 15-59 years in the household
- Number of females aged 15-59 years in the household
- Number of elderly aged at least 60 years in the household

In both the probit and Heckprobit models, the average marginal effects are derived by estimating the change in the dependent variable for a unit change in the independent variable, holding other variables constant.

As most inter-provincial migrants to the Western Cape and Gauteng came from the Eastern Cape and Limpopo respectively, additional descriptive analysis is conducted on these groups: [I]: Eastern Cape permanent residents; [II]: inter-provincial migrants from the Eastern Cape to the Western Cape (both short-term and long-term migrants are included); [III] Limpopo permanent residents; [IV]: inter-provincial migrants from Limpopo to Gauteng (again, both short-term and long-term migrants are included).

Data

South African Census data, conducted by Statistics South Africa (StatsSA) was used in the study. Three censuses have been conducted in South Africa since apartheid, in the years 1996, 2001 and 2011. The primary aim of a national census is to capture the living conditions and non-income welfare of the population. In addition, there is a comprehensive section with numerous questions on the migration status of the individuals, ranging from the country of birth, province of birth, and year of migrating to the current place of residence, to province of usual residence and province of

previous residence. Census 2011 data (StatsSA, 2011) was used instead of the Census 2001 and Community Survey (CS) 2007 and 2016 data. The main reason is that Census 2001, CS 2007 and CS 2016 captured provincial migration only within the last five years, whereas Census 2011 (StatsSA, 2011) captured provincial migration data from the previous 10 years (i.e. since 2001). This allowed us to analyze both short- and long-term migration.

The key questions contained in the questionnaire of Census 2011 (StatsSA, 2011) that are employed in this research study are, firstly question P-10a (province of usual residence), which determines whether or not the individual is a usual resident of the province. This question is used to determine the various permanent residents in each province. Questions P-11 (Since 2001) and P-11a (month and year moved) determine whether or not an individual has lived in a particular province since 2001 and are therefore used to determine whether or not an individual is a long-term or short-term migrant. In addition, question P-11b (province of previous residence) is used in order to populate the inter-provincial statistics between the various provinces as it identifies an individual's province of origin.

If an individual identifies the same province for Questions P-11b and P-10a, but has recently moved according to Questions P-11 and P-11a, then s/he is an intra-provincial migrant. However, if different provinces are identified for these two questions, then s/he is an inter-provincial migrant. As identified by Questions P-11 and P-11a, individuals who migrated during 2001-2006 and 2007-2011 are regarded as long-term and short-term migrants, respectively.

EMPIRICAL FINDINGS

Descriptive statistics

While not the focus of this study, the results of the PCA are shown in Table A2 and briefly discussed here. The first component accounts for 27.68% of the total variation across the 22 indicators (the corresponding proportions are 8.94% and 7.85% for the second and third components respectively, despite not being shown in the table). The second column shows the scoring factors of each indicator in the first component. Note that a positive (negative) scoring factor is associated with a positive (negative) correlation with the first component, thereby increasing (decreasing) the SES index. The column shows that the scoring factors are the highest in the 'piped water access: inside dwelling' (0.2999) and 'sanitation: flush or chemical toilet' (0.2981) indicators; these results mean that access to these two facilities raises the SES index by the largest amount. In contrast, the scoring factors are the smallest in the 'piped water access: on community stand' (-0.2161) and 'sanitation: pit toilet without ventilation' (-0.1839) indicators; hence, these two indicators result in a lower SES index.

Next, Tables A3 and A4 show that intra-provincial migrants accounted for the highest proportion of total migrants in all provinces. This is no exception in the Western Cape and Gauteng (64.84% and 59.11% shares, respectively). International

immigrants from overseas also accounted for a considerable proportion of migrants – 12.81% in Gauteng and 7.92% in the Western Cape. The various migration patterns observed into and within the Western Cape and Gauteng are largely consistent with the literature. Furthermore, the bottom of Table A4 shows that the share of inter-provincial migrants was the highest in the North West (33.43%), the Northern Cape (32.02%), and Mpumalanga (32.00%).

Table 1 only includes inter-provincial migrants. While the research reviewed earlier, found that the majority of migrants into the Western Cape came from the Eastern Cape, the findings in Table 1 show that in 2011, more than half (53.64%) of inter-provincial migrants into the Western Cape came from the Eastern Cape, followed by Gauteng (20.95%) and KwaZulu-Natal (8.25%). In contrast, Gauteng in-migrants were more evenly spread, with the top four provinces of previous residence being Limpopo (30.92%), KwaZulu-Natal (19.30%), the Eastern Cape (14.22%), and Mpumalanga (11.15%).

Table 1: Previous province of residence versus current province of residence (%), if they are not the same as each other

		Current province of residence								
		WC	EC	NC	FS	KZN	NW	GAU	MPU	LIM
Previous province of residence	WC	N/A	29.47	16.17	5.82	5.64	2.91	5.17	2.85	3.49
	EC	53.64	N/A	12.98	20.63	47.53	17.17	14.22	9.12	9.67
	NC	5.36	2.81	N/A	7.97	2.41	5.59	1.63	1.95	1.71
	FS	3.60	6.55	12.87	N/A	4.24	11.80	7.76	5.86	4.52
	KZN	8.25	18.28	4.54	12.15	N/A	5.30	19.30	17.20	6.28
	NW	2.34	3.94	29.75	10.18	3.18	N/A	9.84	5.23	11.46
	GAU	20.95	30.22	15.97	32.45	25.99	37.86	N/A	34.98	45.82
	MPU	2.47	4.25	3.47	4.45	6.68	5.81	11.15	N/A	17.05
	LIM	3.39	4.48	4.24	6.35	4.34	13.57	30.92	22.80	N/A
		100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Note: intra-provincial migrants and immigrants from overseas are excluded.

Profile of the eight groups of individuals in Gauteng and the Western Cape

Table A5 provides the summary statistics of the Gauteng and Western Cape individuals in the Census 2011 data (StatsSA, 2011). Moving on to Table 2, it shows that the two short-term inter-provincial migrant groups ([4] and [8]) are associated with a younger mean age (about 30 years) and a higher proportion of youth aged 15-34 years (approximately 70% share). In addition, the male share was slightly more dominant in groups [3], [4], [7], and [8].

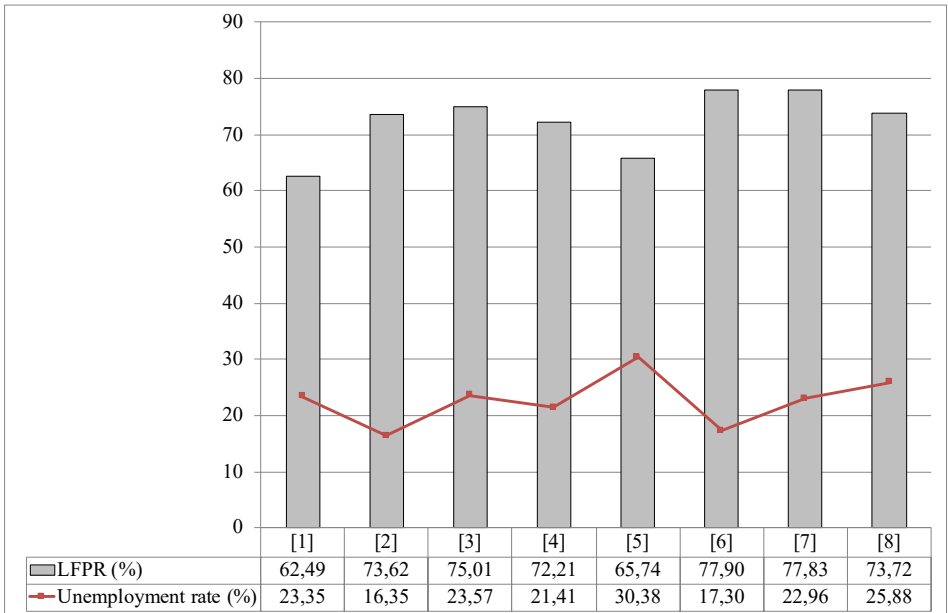
Table 2: Personal-level and household-level characteristics of the eight groups of Western Cape and Gauteng residents (% share unless stated otherwise)

	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]
Age cohort								
15-24 years	26.65	22.55	21.04	34.45	25.99	21.79	20.48	37.03
25-34 years	22.86	33.57	42.26	36.00	24.93	37.41	45.42	39.54
35-44 years	20.41	24.41	20.53	16.44	20.51	24.38	21.06	14.57
45-54 years	18.14	12.56	9.75	7.60	17.39	11.18	8.98	6.09
55-64 years	11.93	6.91	6.43	5.52	11.18	5.25	4.05	2.77
<i>Mean (years)</i>	35.92	34.12	33.14	30.92	35.66	33.45	32.33	29.36
Gender								
Male	48.35	48.56	52.20	52.31	50.74	50.39	54.56	52.85
Female	51.65	51.44	47.80	47.69	49.26	49.61	45.44	47.15
	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Race								
African	30.49	31.40	68.89	60.61	79.99	68.66	81.28	80.08
Coloured	55.91	37.70	6.87	8.03	3.80	3.10	1.94	2.18
Indian	0.89	1.44	1.54	1.96	2.48	3.44	4.43	4.06
White	11.78	27.21	21.79	27.47	13.37	24.00	11.99	13.06
Other	0.94	2.24	0.09	1.93	0.37	0.80	0.37	0.62
	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Marital status								
Married or lived together	47.35	57.74	51.27	45.43	43.59	56.91	49.88	41.96
Never married	46.44	36.22	44.77	50.11	50.79	38.07	46.62	54.80
Other	6.21	6.04	3.97	4.45	5.62	5.02	3.50	3.24
	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Educational attainment								
None	2.61	1.41	1.64	1.64	3.53	1.83	2.19	1.74
Incomplete primary	10.90	5.49	6.08	5.35	7.20	4.07	4.50	3.56
Incomplete secondary	51.69	38.47	46.67	40.75	43.22	32.63	37.96	33.27
Matric	25.54	32.08	28.99	31.22	33.40	34.59	36.04	39.84
Matric + Cert. / Dip.	3.21	6.66	4.47	5.85	4.95	8.81	6.78	7.46
Degree	5.74	15.28	11.71	14.74	7.33	17.44	12.15	13.69
Other/Unspecified	0.31	0.61	0.44	0.45	0.37	0.64	0.38	0.44
	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
<i>Mean (years)</i>	9.69	11.13	10.79	11.12	10.33	11.53	11.12	11.43
Area type								
Urban	90.87	93.95	95.11	90.45	97.01	97.74	97.24	97.02
Rural	9.13	6.05	4.89	9.55	2.99	2.26	2.76	2.98
	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Household size								
One person	4.40	8.53	16.32	16.72	8.15	13.21	18.91	21.34
Two to three persons	26.90	40.76	41.35	46.53	30.01	43.89	40.35	46.62
Four to five persons	36.59	34.70	30.37	25.57	33.02	31.00	27.81	22.36
More than 5 persons	32.11	16.00	11.95	11.17	28.81	11.88	12.94	9.67
	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
<i>Mean household size</i>	4.81	3.78	3.36	3.22	4.53	3.42	3.33	3.02
SES quintile								
Quintile1	4.08	3.89	12.61	10.07	7.28	6.03	17.35	14.38
Quintile2	7.64	6.48	16.78	14.70	7.30	6.49	9.78	11.00
Quintile3	16.88	13.65	22.61	19.42	20.22	16.55	21.98	22.32
Quintile4	35.22	28.49	18.54	19.53	34.37	27.87	22.74	24.09
Quintile5	36.18	47.49	29.45	36.28	30.82	43.06	28.15	28.21
	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Income quintile								
Quintile1	14.29	12.87	18.85	16.75	18.92	13.23	16.71	18.34
Quintile2	19.88	11.50	15.43	11.04	18.53	8.63	11.07	8.47
Quintile3	28.21	19.17	22.72	21.52	22.28	15.93	20.79	20.62
Quintile4	20.35	19.71	16.47	17.79	19.52	20.06	20.71	20.72
Quintile5	17.26	36.75	26.53	32.91	20.75	42.15	30.72	31.86
	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
<i>Mean (2019 Dec prices)</i>	54 277	110 509	86 173	106 047	65 320	138 963	100 822	105 646

In the Western Cape, the permanent residents (group [1]) and intra-provincial migrants (group [2]) were dominated by Coloured individuals (56% and 38% respectively), whereas for both long-term and short-term inter-provincial migrants into this province, Africans accounted for more than 60%. In Gauteng, all four groups ([5] to [8]) were dominated by Africans, even though the African share was relatively higher (slightly above 80%) in the two inter-provincial migrant groups. Furthermore, the unmarried share was most dominant for the short-term migrant groups ([4] and [8]). As far as educational attainment is concerned, the two permanent resident groups ([1] and [5]) were least educated on average, but the opposite happened to the two intra-provincial migrant groups ([2] and [6]). Short-term inter-provincial migrants were also slightly more educated than long-term migrants, on average.

For the results derived at household level, Table 2 shows that the mean household size was the smallest for the short-term migrants (just above 3) and long-term migrants (about 3.3 members). Interestingly, for both short-term and long-term inter-provincial migrants, they enjoyed higher mean per capita income, compared to the permanent residents. Nonetheless, the intra-provincial migrants remained the group associated with better non-income welfare (highest proportion of people belonging to most privileged SES quintile 5) and higher income (highest mean per capita income and greatest proportion of people falling under the richest income quintile 5).

FIGURE 1



Despite not being shown in Table 2, the majority of the migrants into the Western Cape resided in the City of Cape Town (group [3]: 75%, group [4]: 65%). Moreover,

nearly 90% of migrants into Gauteng settled in Johannesburg, Tshwane and Ekurhuleni districts, with the respective shares being 39%, 26% and 24% in group [7], 33%, 30% and 26% in group [8].

Regarding labor market status, Figure 1 shows that the two intra-provincial migrant groups enjoyed the lowest unemployment rates. For both the short-term and long-term inter-provincial migrants, they enjoyed relatively higher LFPRs and lower unemployment rates, compared with the permanent residents in the provinces.

Table 3 shows a more detailed breakdown of the LFPRs and unemployment rates of the four inter-provincial migrant groups by province of origin and compare them with the respective provincial rates. The results show that the LFPR was higher but the unemployment rate was lower in these four groups, thereby confirming the argument that these South Africans relocated to Gauteng and the Western Cape primarily due to the better labor market prospects there. For example, in the Eastern Cape, the LFPR was 42.68% and the unemployment rate was 37.32%. However, for the Eastern Cape individuals who moved to the Western Cape, their LFPR was about 30 percentage points higher (75.73% in group [3] and 69.74% in group [4]) while the unemployment rate was five percentage points lower (group [3]: 32.03%; group [4]: 32.58%). On the other hand, it was previously shown in Table 1 that the majority of migrants to Gauteng came from the Eastern Cape, KwaZulu-Natal, Mpumalanga and Limpopo. The findings in Table 3 show that these migrants had a high LFPR of above 70%, which was much higher than the provincial rate (as low as 42.68% in the Eastern Cape and as high as 55.45% in Mpumalanga), while they also enjoyed a lower unemployment rate (e.g. 18.90% for group [7] migrants who came from KwaZulu-Natal; 23.53% for group [7] migrants who originated from Mpumalanga), which was lower than the provincial unemployment rates of above 30%.

Table 3: Labor force participation rates and unemployment rates of inter-provincial migrants to Gauteng and Western Cape by province of origin

	WC	EC	NC	FS	KZN	NW	GAU	MPU	LIM
Labor force participation rate (%)									
All provincial residents	65.75	42.68	53.82	55.75	47.69	55.19	69.84	55.45	46.17
Group [3]	N/A	75.73	78.65	71.46	72.71	76.88	72.94	74.09	79.00
Group [4]	N/A	69.74	71.33	77.88	73.75	80.65	74.74	75.79	73.47
Group [7]	81.65	76.66	81.42	75.78	79.06	74.84	N/A	75.83	79.05
Group [8]	80.04	74.62	76.72	75.38	76.36	73.81	N/A	71.39	70.75
Unemployment rate (%)									
All provincial residents	21.49	37.32	27.87	32.65	32.92	31.10	26.25	31.56	38.55
Group [3]	N/A	32.03	8.11	10.30	14.40	8.78	9.78	6.44	14.80
Group [4]	N/A	32.58	12.77	9.77	10.56	8.77	11.04	10.16	12.05
Group [7]	9.49	27.09	21.52	19.44	18.90	21.08	N/A	23.53	26.79
Group [8]	12.13	28.61	17.97	20.92	24.02	22.46	N/A	25.49	31.76

Table 4 shows the breakdown of provincial shares of labor force, employed and unemployed in the four inter-provincial migrant groups. For groups [3] and [4], the Eastern Cape share was most dominant, as expected, given that the Eastern Cape people accounted for the majority of migrants into the Western Cape. On the contrary, for groups [7] and [8], migrants from Limpopo were most dominant (more or less one-third in both labor force, employed and unemployed shares), followed by KwaZulu-Natal, Eastern Cape and Mpumalanga (about 20%, 15% and 10% shares in all three labor status variables, respectively)

Table 4: Provincial shares of labor force, employed and unemployed of inter-provincial migrants to Gauteng and Western Cape by province of origin

	WC	EC	NC	FS	KZN	NW	GAU	MPU	LIM	
Labor force (%)										
All provincial residents	15.13	7.85	2.13	4.90	15.62	6.39	33.71	7.37	6.89	100.00
Group [3]	N/A	60.67	5.45	3.48	6.71	1.88	17.02	2.03	2.76	100.00
Group [4]	N/A	48.38	5.38	3.84	9.16	2.93	23.61	2.82	3.88	100.00
Group [7]	4.77	14.27	1.60	7.48	19.19	9.67	N/A	10.55	32.47	100.00
Group [8]	5.93	14.27	1.75	7.97	20.19	9.74	N/A	10.94	29.20	100.00
Employed (%)										
All provincial residents	9.80	11.05	1.95	5.62	18.13	6.84	28.36	8.04	10.23	100.00
Group [3]	N/A	53.96	6.55	4.09	7.51	2.24	20.09	2.48	3.08	100.00
Group [4]	N/A	41.51	5.97	4.41	10.42	3.40	26.73	3.23	4.34	100.00
Group [7]	5.60	13.51	1.63	7.82	20.20	9.91	N/A	10.48	30.85	100.00
Group [8]	7.04	13.74	1.94	8.51	20.70	10.19	N/A	11.00	26.88	100.00
Unemployed (%)										
All provincial residents	13.55	8.80	2.08	5.11	16.16	6.52	32.12	7.57	7.89	100.00
Group [3]	N/A	82.46	1.87	1.52	4.10	0.70	7.06	0.55	1.73	100.00
Group [4]	N/A	73.63	3.21	1.75	4.52	1.20	12.18	1.34	2.18	100.00
Group [7]	1.97	16.84	1.50	6.33	15.79	8.88	N/A	10.81	37.87	100.00
Group [8]	2.78	15.77	1.22	6.44	18.74	8.45	N/A	10.77	35.83	100.00

Table 5 shows the LFPRs and unemployment rates of all eight groups by educational attainment. As expected, a higher educational attainment is associated with a greater likelihood of entering the labor market to seek work and lower unemployment probability, and it is no exception to the inter-provincial migrants to the Western Cape and Gauteng provinces.

Table 5: Labor force participation rates and unemployment rates of the eight groups of Western Cape and Gauteng residents by educational attainment

	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]
Labor force participation rate (%)								
Without Matric	56.42	63.75	71.25	67.58	58.00	67.93	70.64	69.23
Matric	71.73	78.58	77.54	73.76	72.32	79.99	80.63	72.66
Matric + Cert. / Dip.	78.95	85.54	78.82	79.26	79.22	88.14	87.44	78.87
Degree	81.05	87.57	85.21	81.01	83.44	90.40	90.43	86.51
Unemployment rate (%)								
Without Matric	28.84	27.03	32.88	30.53	37.47	27.34	31.19	33.90
Matric	19.07	13.55	18.53	19.55	29.12	17.34	22.58	27.72
Matric + Cert. / Dip.	9.28	6.39	8.04	9.55	18.25	10.36	14.50	18.19
Degree	4.84	3.03	4.35	5.09	7.61	4.28	4.93	7.44

Table 6 examines the LFPRs and unemployment rates of the inter-provincial migrants in the popular destination districts in the two provinces concerned. Groups [3] and [4] had slightly higher LFPRs but also slightly higher unemployment rates in the City of Cape Town compared with the respective rates in the other districts in the province. Therefore, the empirical findings suggest that even though the City of Cape Town is the most popular Western Cape district for the inter-provincial migrants to settle (about two-thirds as mentioned earlier), there is no guarantee these migrants enjoyed the lowest unemployment probability.

On the other hand, the inter-provincial migrants to Gauteng experienced the highest LFPR in Johannesburg (79.54% for group [7] and 75.90% for group [8]), followed by Ekurhuleni (77.46% and 75.18%) and Tshwane (76.31% and 72.08%). However, it is interesting that these migrants enjoyed the lowest unemployment rate in Tshwane (group [7]: 20.02%; group [8]: 22.71%). The respective rates for these migrants were one percentage point higher in Johannesburg (21.30% and 23.62%), but the highest in Ekurhuleni (27.51% and 32.06%).

Table 6: Labor force participation rates and unemployment rates of the eight groups of Western Cape and Gauteng residents in selected districts

Province: Western Cape								
	City of Cape Town				Other districts in Western Cape			
	[1]	[2]	[3]	[4]	[1]	[2]	[3]	[4]
LFPR (%)	62.80	74.86	75.96	72.96	62.00	70.26	73.76	71.09
Unemployment rate (%)	26.61	17.13	25.41	22.85	18.37	14.12	20.61	19.20
Province: Gauteng								
	Johannesburg				Tshwane			
	[5]	[6]	[7]	[8]	[5]	[6]	[7]	[8]
LFPR (%)	66.02	79.88	79.54	75.90	65.05	77.58	76.31	72.08
Unemployment rate (%)	29.35	15.76	21.30	23.62	28.75	16.40	20.02	22.71
	Ekurhuleni				Other districts			
	[5]	[6]	[7]	[8]	[5]	[6]	[7]	[8]
LFPR (%)	66.40	77.92	77.46	75.18	65.11	73.54	77.76	70.97
Unemployment rate (%)	31.90	18.88	27.51	32.06	31.90	20.52	24.36	26.70

As far as the broad occupation categories of the employed are concerned, Table 7 shows that altogether about 60% of the four groups of inter-provincial migrants under study were involved in the following occupations: clerks, service workers, craft and related workers, and elementary occupations. With regard to skills level of occupation, Figure 2 shows that the proportion of workers involved in skilled occupations was the highest for the two intra-provincial migrant groups, whereas this share for both the short-term and long-term inter-provincial migrants was relatively larger, compared to the permanent residents.

Table 7: Labor market characteristics of the eight groups of Western Cape and Gauteng residents

	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]
Occupation (if employed)								
Senior legislators	9.61	12.78	9.77	11.51	9.19	11.85	9.74	10.33
Professionals	6.56	9.71	7.32	9.46	7.90	11.46	9.04	10.11
Technical associates	10.17	10.82	7.80	9.24	9.35	9.99	7.88	8.97
Clerks	13.60	14.75	11.53	12.44	14.00	14.79	13.29	13.78
Service workers	15.10	16.15	17.44	17.18	17.19	17.01	18.89	17.98
Skilled agriculture	0.92	0.86	0.54	0.70	0.40	0.42	0.33	0.41
Craft and related	11.44	10.21	11.98	10.21	12.10	10.37	12.17	11.28
Plant and machinery	6.71	5.01	5.89	5.49	6.05	4.67	5.85	5.48
Elementary occupation	17.44	13.12	18.97	17.00	13.68	10.79	12.91	12.38
Domestic workers	8.42	6.56	8.74	6.74	10.11	8.62	9.87	9.24
Other	0.02	0.03	0.02	0.05	0.02	0.02	0.03	0.03
	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
<i>Skilled</i>	26.35	33.32	24.89	30.22	26.45	33.31	26.67	29.42
<i>Semi-skilled</i>	47.78	46.99	47.39	46.03	49.75	47.27	50.55	48.95
<i>Unskilled</i>	25.87	19.69	27.72	23.75	23.80	19.42	22.79	21.63
Industry (if employed)								
Agriculture and hunting	5.40	3.98	4.71	5.44	1.49	1.40	1.64	1.66
Mining and quarrying	0.31	0.31	0.33	0.46	1.31	1.18	1.18	1.58
Manufacturing	11.27	10.44	10.16	9.57	10.92	9.49	10.63	10.31
Electricity, water and gas	0.71	0.78	0.89	0.72	0.80	0.90	0.91	0.95
Construction	7.90	6.83	9.99	8.65	7.72	7.31	8.58	8.17
Wholesale and retail	19.23	19.37	19.40	19.08	18.23	17.22	17.72	16.93
Transport and storage	6.48	6.79	5.89	6.08	7.23	7.14	7.39	7.10
Financial intermediary	15.96	19.86	19.94	20.93	19.70	23.29	21.36	21.95
CSP services	23.01	23.96	18.48	20.65	20.76	21.75	18.97	20.40
Private household	9.68	7.64	10.17	8.36	11.79	10.19	11.52	10.86
Other	0.04	0.05	0.05	0.06	0.07	0.11	0.09	0.10
	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
<i>Primary sector</i>	5.71	4.29	5.04	5.90	2.80	2.58	2.82	3.24
<i>Secondary sector</i>	19.89	18.06	21.05	18.95	19.45	17.72	20.14	19.45
<i>Tertiary sector</i>	74.40	77.65	73.91	75.15	77.75	79.69	77.04	77.31
Sector (if employed)								
Formal	78.45	79.20	76.11	77.24	77.90	77.13	76.21	75.85
Informal	11.52	9.65	10.53	10.53	8.73	8.03	9.21	8.86
Other/Unspecified	10.03	11.15	13.35	12.23	13.37	14.84	14.57	15.29
	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Number of other household members by labor market status								
Mean number of other employed members	1.08	0.89	0.66	0.79	0.86	0.82	0.69	0.70
Mean number of other unemployed members	0.37	0.22	0.25	0.20	0.47	0.21	0.25	0.22
Mean number of other inactive members	0.98	0.55	0.46	0.41	0.86	0.41	0.42	0.35

FIGURE 2

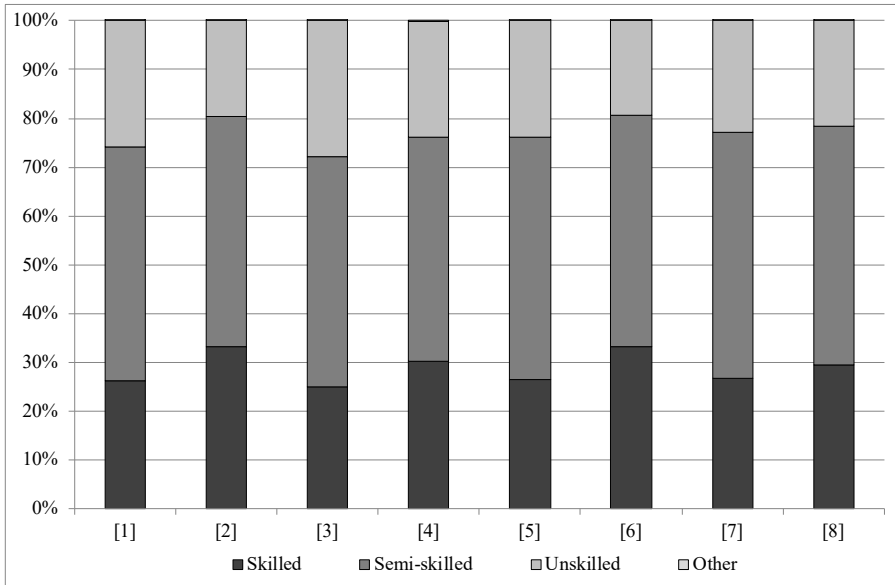


Table 7 also shows that about three-quarters of the inter-provincial migrants were involved in tertiary sector activities, in particular wholesale and retail, financial intermediary, as well as community, social and personal (CSP) services (approximately 20% share in each broad industry category). These results are not much different when compared to the permanent residents and intra-provincial migrants. Furthermore, slightly above three-quarters of all eight groups of individuals worked in the formal sector.

The last few rows of Table 7 show that the four inter-provincial migrant groups came from households with smaller mean numbers of other employed (0.7), other unemployed (0.2) and other inactive (0.4) members. These results are not surprising, given the findings in Table 2 that household size was smaller on average for these inter-provincial migrants.

Profile of the Eastern Cape and Limpopo residents and inter-provincial migrants

Table 8 shows that both groups [II] and [IV] were relatively younger (29 years on average) than the two permanent resident groups (33-34 years of mean age), and the male share was slightly more dominant. In all four groups, the African share was the greatest (ranging between 85% and 95%), whereas the married share was the lowest for groups [II] and [IV]. In addition, groups [II] and [IV] were about two years more educated on average, compared to the corresponding permanent resident groups. Furthermore, the share of urban residents was much higher (above 90%) for the two inter-provincial migrant groups. For the household-level variables, the table shows that the mean household size was smaller (about three members), and both income and non-income

welfare was better for these two groups, compared with the permanent residents.

Table 8: Personal-level and household-level characteristics of the four selected groups of individuals (%)

	[I]	[II]	[III]	[IV]
Age cohort				
15-24 years	33.86	35.94	36.17	35.38
25-34 years	21.86	43.35	24.63	44.53
35-44 years	17.66	13.55	17.23	13.50
45-54 years	15.37	4.84	13.13	4.74
55-64 years	11.24	2.32	8.84	1.84
	100.00	100.00	100.00	100.00
Mean age (years)	34.05	28.80	32.63	28.81
Gender				
Male	46.06	50.63	45.45	54.65
Female	53.94	49.37	54.55	45.35
	100.00	100.00	100.00	100.00
Race				
African	84.69	89.00	95.76	94.07
Coloured	9.15	3.67	0.30	0.41
Indian	0.50	0.33	0.43	0.56
White	5.25	6.46	3.29	4.71
Other	0.41	0.54	0.22	0.25
	100.00	100.00	100.00	100.00
Marital status				
Married or lived together	36.10	39.87	37.38	42.91
Never married	57.56	57.80	57.46	55.11
Other	6.33	2.32	5.16	1.98
	100.00	100.00	100.00	100.00
Educational attainment				
None	6.59	1.82	9.21	1.69
Incomplete primary	15.90	7.12	9.59	3.13
Incomplete secondary	50.71	55.32	50.58	35.10
Matric	19.09	27.51	21.91	43.49
Matric + Cert. /Dip.	3.03	2.86	3.64	7.24
Degree	4.46	5.09	4.84	9.00
Other/Unspecified	0.21	0.27	0.22	0.34
	100.00	100.00	100.00	100.00
Mean education years	8.81	10.20	9.11	11.29
Area type				
Urban	50.34	92.71	21.25	97.07
Rural	49.66	7.29	78.75	2.93
	100.00	100.00	100.00	100.00
Household size				
One person	7.68	17.92	8.38	23.24
Two to three persons	25.43	43.46	24.25	48.54
Four to five persons	29.48	25.42	30.87	19.32
More than five persons	37.41	13.20	36.50	8.90
	100.00	100.00	100.00	100.00
Mean household size	5.02	3.32	4.91	2.90
SES quintile				
Quintile1	32.72	17.59	27.53	22.10
Quintile2	22.91	23.29	39.96	12.85
Quintile3	16.10	28.04	16.36	26.19
Quintile4	17.20	19.05	9.33	23.42
Quintile5	11.07	12.04	6.82	15.44
	100.00	100.00	100.00	100.00
Income quintile				
Quintile1	21.92	22.91	22.13	20.44
Quintile2	36.39	18.46	35.96	9.57
Quintile3	21.58	29.18	21.89	25.39
Quintile4	10.42	16.94	10.90	24.14
Quintile5	9.69	12.51	9.12	20.47
	100.00	100.00	100.00	100.00
Mean per capita income (2019 Dec prices)	30 744	43 244	29 953	61 336

Regarding labor market status, it is interesting that the LFPRs were much higher (above 70%) for groups [II] and [IV], compared with the permanent resident groups of [I] and [III] (only above 40%). Groups [II] and [IV] also enjoyed lower unemployment rates of about 30%, compared to approximately 38% in groups [I] and [III]. These results can be seen in Figure 3.

FIGURE 3

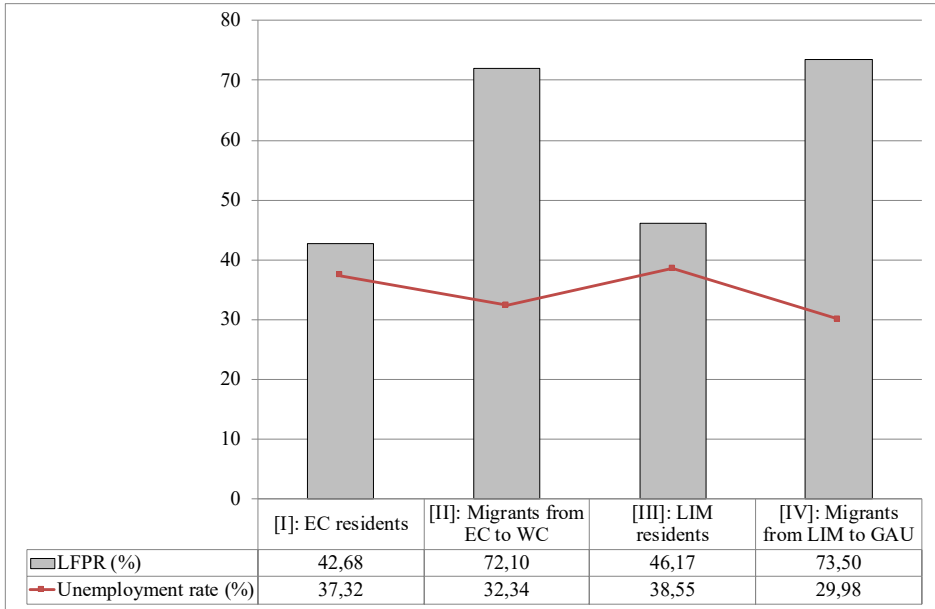
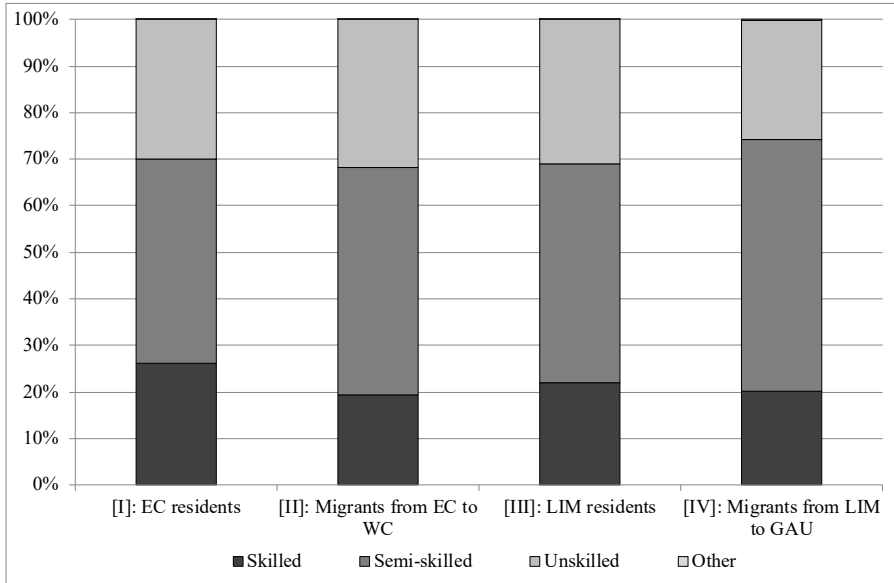


Table 9 shows that the members of group [II] were most likely to be involved in elementary work (22%) and service work (19%) occupations. These two broad occupation categories were also most dominant for the employed in group [IV] – 16% and 21% respectively. Figure 4 shows the share of the employed involved in skilled occupations was higher in the two permanent resident groups (group [I]: 26%; group [III]: 22%). In groups [II] and [IV], about half were involved in semi-skilled occupations whereas only about 20% were engaged in skilled occupations.

Table 9: Labor market characteristics of the four selected groups of individuals (%)

	[I]	[II]	[III]	[IV]
Occupation (if employed)				
Senior legislators	6.58	6.96	5.23	6.84
Professionals	7.00	5.35	7.12	6.12
Technical associates	12.57	7.12	9.62	7.23
Clerks	10.45	10.17	9.94	13.29
Service workers	15.02	19.40	15.99	21.27
Skilled agriculture	1.33	0.55	1.16	0.37
Craft and related	10.64	12.30	13.03	13.24
Plant and machinery	6.44	6.44	6.95	5.76
Elementary occupation	20.24	22.31	20.39	15.58
Domestic workers	9.73	9.37	10.58	10.26
Other	0.01	0.03	0.01	0.04
	100.00	100.00	100.00	100.00
Skilled	26.15	19.44	21.97	20.20
Semi-skilled	43.88	48.87	47.07	53.95
Unskilled	29.97	31.69	30.97	25.85
Industry (if employed)				
Agriculture and hunting	7.29	4.80	9.13	1.90
Mining and quarrying	0.52	0.31	6.15	0.92
Manufacturing	8.20	10.58	6.55	10.53
Electricity, water and gas	0.68	0.58	1.07	0.87
Construction	8.13	10.32	8.94	9.22
Wholesale and retail	17.35	19.70	15.31	18.75
Transport and storage	4.98	5.60	4.18	7.40
Financial intermediary	10.16	19.45	9.24	19.96
Community, social and personal services	29.88	17.38	26.49	18.15
Private household	12.80	11.23	12.92	12.20
Other	0.02	0.05	0.02	0.10
	100.00	100.00	100.00	100.00
Primary sector	7.81	5.11	15.28	2.82
Secondary sector	17.01	21.49	16.56	20.64
Tertiary sector	75.18	73.40	68.15	76.54
Sector (if employed)				
Formal	71.76	75.26	66.96	72.96
Informal	14.25	11.61	17.55	10.39
Other/Unspecified	13.98	13.13	15.48	16.65
	100.00	100.00	100.00	100.00
Mean number of other household members by labor market status				
Mean number of other employed members	0.63	0.63	0.54	0.59
Mean number of other unemployed members	0.35	0.30	0.37	0.24
Mean number of other inactive members	1.29	0.43	1.21	0.35

FIGURE 4



Reviewing other results in Table 9, the majority of the two inter-provincial migrant groups (about three-quarters) worked in the tertiary sector activities – especially in the wholesale and retail, finance and CSP services industries. A greater proportion of these two groups worked in the formal sector (also about three-quarters) compared to the corresponding shares in the two permanent resident groups. It is interesting that the mean number of other inactive household members was much smaller (0.4) in the two inter-provincial migrant groups. This result suggests that the Eastern Cape to the Western Cape migrants, as well as the Limpopo to Gauteng migrants actively looked for work in the destination provinces.

Econometric analysis

This section conducts multivariate econometric analysis, by means of probit regressions on labor force participation likelihood and Heckprobit regressions on employment likelihood (conditional on labor force participation), focusing on the individuals in the Western Cape and Gauteng. The reference categories are as follows: gender: female; race: Africans; age cohort: 15-24 years; migration status: permanent residents who did not migrate in the past 10 years.

The probit regression on labor force participation likelihood (Table 10) results indicate that, after controlling for differences in other personal- and household-level characteristics, males were more than 10% significantly more likely to enter the labor market in both provinces. Africans were significantly more likely to enter the labor force in the Western Cape, whereas this was the case with the white individuals in

Gauteng, *ceteris paribus*. In both provinces, individuals from the four older age cohorts were associated with significantly greater labor force participation likelihood compared to the reference category (15-24 years), *ceteris paribus*. There was a positive but non-linear relationship between years of education and labor force participation likelihood. In addition, the presence of more children and elderly members in households led to significantly lower labor force participation probability.

Table 10: Probit regressions on labor force participation likelihood in Western Cape and Gauteng

	Western Cape	Gauteng
	Marginal effects	
Gender: Male	0.1306***	0.1086***
Race: Coloured	-0.0251***	-0.0003
Race: Indian	-0.0942***	-0.0614***
Race: White	-0.0474***	0.0059***
Age: 25-34 years	0.2510***	0.2422***
Age: 35-44 years	0.2562***	0.2527***
Age: 45-54 years	0.1999***	0.2207***
Age: 55-64 years	0.0259***	0.1057***
Education year	-0.0016***	-0.0089***
Education year squared	0.0015***	0.0017***
Married or living with a partner	0.0570***	0.0491***
Migration status: Intra-provincial	0.0422***	0.0572***
Migration status: Long-term inter-provincial	0.0441***	0.0570***
Migration status: Short-term inter-provincial	0.0377***	0.0527***
Migration status: International/others	0.0352***	0.0664***
Area type: Urban	-0.1165***	-0.0122***
Number of children 0-14 years in the household	-0.0096***	-0.0096***
Number of males 15-59 years in the household	-0.0195***	-0.0198***
Number of females 15-59 years in the household	0.0006**	-0.0051***
Number of elderly 60+ years in the household	-0.0595***	-0.0615***
Number of observations (weighted)	3 685 517	8 222 914
Prob > Chi-squared	0.0000	0.0000
Pseudo R-squared	0.1286	0.1336

*** Significant at 1%

** Significant at 5%

* Significant at 10%

Base categories:

Gender: Female

Race: African

Age cohort: 15-24 years

Migration status: permanent residents

Regarding the migration status dummy variables, compared to the permanent residents, intra-provincial migrants, as well as both long-term and short-term inter-provincial migrants were significantly more likely to be labor force participants in both

provinces, with marginal effects being approximately 4% in the Western Cape and 5.5% in Gauteng, upon controlling for differences in other characteristics.

The results of the Heckprobit regressions on the respective employment probabilities of the two provinces, conditional on participation, are shown in Table 11. First of all, the lambda was statistically significant in both regressions. The inverse Mills ratio that Lambda stands for serves as a measure to which a sample suffers from selection bias. It can thus be ascertained that the members of the labor force do in fact differ from their counterparts who chose not to participate in the labor force. Hence, the use of the Heckman two-step approach to conducting employment probits, is justified.

Table 11: Heckprobit regressions on employment likelihood in Western Cape and Gauteng, conditional on labor force participation

	Western Cape	Gauteng
	Marginal effects	
Gender: Male	0.0116***	0.0282***
Race: Coloured	0.1084***	0.0545***
Race: Indian	0.1170***	0.1626***
Race: White	0.1552***	0.1854***
Age: 25-34 years	0.0198***	-0.0317***
Age: 35-44 years	0.0616***	0.0216***
Age: 45-54 years	0.1008***	0.0859***
Age: 55-64 years	0.1519***	0.1790***
Education year	-0.0209***	-0.0256***
Education year squared	0.0019***	0.0019***
Married or living with a partner	0.0281***	0.0148***
Migration status: Intra-provincial	0.0204***	0.0533***
Migration status: Long-term inter-provincial	0.0201***	0.0291***
Migration status: Short-term inter-provincial	0.0275***	0.0259***
Migration status: International/others	0.0795***	0.0685***
Area type: Urban	-0.1450***	-0.0309***
Lambda	-0.2244***	-0.4229***
Number of observations	2 423 373	5 740 373
Prob > Chi-squared	0.0000	0.0000
Pseudo R-squared	0.1552	0.1496

*** Significant at 1%

** Significant at 5%

* Significant at 10%

Base categories:

Gender: Female

Race: African

Age cohort: 15-24 years

Migration status: permanent residents

The results indicate that, ceteris paribus, males were significantly more likely to be employed in the labor force; with regard to race; Africans were least likely of all the

races to be employed in both provinces, and the marginal effect was the greatest for whites, followed by Indians and Coloureds, *ceteris paribus*. In addition, individuals aged 35-64 years were significantly more likely to be employed, with the marginal effect increasing across these three elderly age cohorts, after controlling for differences in other characteristics.

Higher educational attainment was associated with significantly greater employment likelihood but this positive relationship was not linear. Compared with the reference migration status category (permanent residents), intra-provincial, short-term inter-provincial and long-term inter-provincial migrants into the Western Cape and Gauteng were significantly more likely to find work, with the marginal effect in all three above-mentioned migrant categories being greater in the Gauteng regression, *ceteris paribus*.

CONCLUSION

This study used the Census 2011 (StatsSA, 2011) to investigate how the short- and long-term inter-provincial migrants fared in the labor markets of Gauteng and the Western Cape, the two most developed and popular migration destination provinces in South Africa. Both short-term and long-term inter-provincial migrants into these two provinces were typically youth aged 15-34 years, unmarried African urban residents with 11-12 years of educational attainment on average, coming from households with about three members. The majority of migrants to the Western Cape came from the Eastern Cape (above 50%) and Gauteng (21%), whereas about half of the migrants to Gauteng had Limpopo (31%) and KwaZulu-Natal (19%) as their home provinces.

These inter-provincial migrants enjoyed lower unemployment rates and higher per capita income than the permanent residents but were still outperformed by intra-provincial migrants within these two provinces. In addition, the multivariate econometric analysis found that, other controlling for other differences in personal- and household-level characteristics, the inter-provincial migrants were about 5% more likely to enter the labor market to seek work and 3% more likely to find work, compared with the permanent residents. Both results were statistically significant.

There were also brief descriptive statistics derived on the inter-provincial migrants from the Eastern Cape to the Western Cape as well as from Limpopo to Gauteng. It was found that, compared to those who remained in the Eastern Cape and Limpopo, the two groups of migrants were relatively younger and more educated urban residents, who enjoyed higher LFPRs, lower unemployment likelihoods, better non-income welfare and higher per capita income.

Job-seeking inter-provincial immigration into Gauteng and the Western Cape will certainly continue as long as these two provinces are associated with better economic conditions and more abundant work opportunities, whereas the economic problems like unemployment and poverty persist in the home provinces (Oosthuizen and Naidoo, 2004; Jacobs, 2014). In particular, based on the empirical findings,

these migrants are most likely to cluster in certain districts (City of Cape Town, Ekurhuleni, Johannesburg and Tshwane).

Therefore, the Gauteng and Western Cape provincial governments will continue to face important challenges in addressing the increased burden on basic service delivery, housing, health, education and social service systems as a result of the inter-provincial migration, and backlogs will most likely exist in the abovementioned districts (Posel, 2010). In other words, the national government needs to take inter-provincial migration into consideration when allocating the national budget to provinces, districts and municipalities.

The empirical findings have also indicated that not all the inter-provincial migrants eventually found work in Gauteng and the Western Cape. Assuming they did not return to their home provinces, their presence would mean that the two receiving provinces need to deal with the increased unemployed population, when it comes to job creation and entrepreneurship development strategies.

On the other hand, even though the migrants (assuming they settled and found work in Gauteng and the Western Cape) maintain economic linkages with their home provinces through remittances, it is still undeniable that the emigration of younger and more educated individuals has resulted in an aging and less educated population in the home provinces. Hence, more detailed research needs to be done on the push factors in the home provinces (especially the Eastern Cape and Limpopo) for better policy and strategy development to improve the socio-economic conditions in these provinces, to better address the problems in these less developed provinces, before more private investment and entrepreneurial activities are attracted to retain the youth population there (Gamede, 2017). Otherwise, the provincial brain drain could deprive these provinces of receiving returns on their investment in their potential youth labor force, not forgetting that their departure imposes additional fiscal burden on the remaining residents.

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APPENDIX

Table A1: Non-income welfare indicators included for the SES index

Variable	Category
Dwelling	[1]: Formal house/flat
	[2]: Single room or flatlet
	[3]: Other
Piped water access	[1]: Piped water inside dwelling
	[2]: Piped water inside the yard
	[3]: Piped water on community stand
	[4]: No access to piped water
Sanitation	[1]: Flush or chemical toilet
	[2]: Pit toilet with ventilation
	[3]: Pit toilet without ventilation
	[4]: Other
Fuel source for cooking	[1]: Electricity or solar
	[2]: Gas
	[3]: Other
Refuse removal frequency	[1]: At least once a week
	[2]: Other
Internet access	[1]: From home or cell phone
	[2]: From elsewhere
	[3]: No access
Computer	[1]: Yes
	[2]: No
Landline telephone	[1]: Yes
	[2]: No
Cell phone	[1]: Yes
	[2]: No
Television	[1]: Yes
	[2]: No
DVD player	[1]: Yes
	[2]: No
Refrigerator	[1]: Yes
	[2]: No
Washing machine	[1]: Yes
	[2]: No
Electric/Gas stove	[1]: Yes
	[2]: No
Motorcar	[1]: Yes
	[2]: No

Table A2: First principal components for deriving the SES index

Dwelling: Formal house/flat	0.2068
Dwelling: Single room or flatlet	-0.0084
Piped water access: Inside dwelling	0.2999
Piped water access: Inside the yard	-0.0707
Piped water access: On community stand	-0.2169
Sanitation: Flush or chemical toilet	0.2981
Sanitation: Pit toilet with ventilation	-0.1124
Sanitation: Pit toilet without ventilation	-0.1839
Fuel source for cooking: Electricity or solar	0.2538
Fuel source for cooking: Gas	0.0108
Refuse removal frequency: At least once a week	0.2663
Internet access: From home or cell phone	0.1555
Internet access: From elsewhere	0.0771
Computer ownership: Yes	0.2367
Landline telephone ownership: Yes	0.2022
Cell phone ownership: Yes	0.1184
Television ownership: Yes	0.2579
DVD player ownership: Yes	0.2345
Refrigerator ownership: Yes	0.2718
Washing machine ownership: Yes	0.2774
Electric/Gas stove ownership: Yes	0.2622
Motorcar ownership: Yes	0.2496
Proportion of variation explained by the first principal components	27.68%

Table A3: Previous province of residence versus current province of residence (weighted numbers, 1 000s)

		Current province of residence										
		WC	EC	NC	FS	KZN	NW	GAU	MPU	LIM	Overseas	Not specified
Previous province of residence	WC	690	26	7	4	9	5	41	4	4	1	0
	EC	142	432	6	15	72	28	113	13	10	1	0
	NC	14	3	84	6	4	9	13	3	3	0	0
	FS	9	6	6	167	6	19	62	8	5	0	0
	KZN	22	16	2	9	698	9	154	24	7	1	0
	NW	6	3	14	7	5	243	78	7	12	0	0
	GAU	55	27	7	23	39	61	1 805	49	49	2	1
	MPU	7	4	2	3	10	9	89	225	18	0	0
	LIM	9	4	2	5	7	22	247	32	315	1	0
	Overseas	90	31	6	28	62	67	398	59	87	1	0
Not specified	31	14	4	6	25	11	56	8	6	0	0	
	1 075	566	140	272	937	481	3 057	432	515	6	2	

Table A4: Previous province of residence versus current province of residence (%)

		Current province of residence								
		WC	EC	NC	FS	KZN	NW	GAU	MPU	LIM
Previous province of residence	WC	64.84	4.59	5.36	1.54	0.91	0.94	1.33	0.82	0.72
	EC	13.23	76.41	4.13	5.50	7.41	6.00	3.77	3.03	1.96
	NC	1.24	0.42	60.82	2.06	0.39	1.84	0.43	0.58	0.35
	FS	0.86	1.02	4.03	61.06	0.68	3.84	2.03	1.84	0.94
	KZN	2.00	2.86	1.45	3.22	74.85	1.79	5.06	5.52	1.28
	NW	0.56	0.60	9.43	2.65	0.51	50.72	2.58	1.60	2.29
	GAU	5.06	4.74	5.14	8.58	4.24	12.56	59.11	10.90	9.56
	MPU	0.60	0.61	1.14	1.18	1.08	1.95	2.91	52.49	3.60
	LIM	0.81	0.69	1.35	1.69	0.68	4.50	8.15	7.71	62.23
	Overseas	7.92	5.47	4.12	10.31	6.55	13.44	12.81	13.60	15.84
Unspecified	2.88	2.58	3.04	2.21	2.70	2.41	1.83	1.91	1.26	
		100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Intra-provincial		64.84	76.41	60.82	61.06	74.85	50.72	59.11	52.49	62.23
Inter-provincial		24.36	15.54	32.02	26.42	15.90	33.43	26.25	32.00	20.67
Overseas		7.92	5.47	4.12	10.31	6.55	13.44	12.81	13.60	15.84
Unspecified		2.88	2.58	3.04	2.21	2.70	2.41	1.83	1.91	1.26
		100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Table A5: Summary statistics of the Western Cape and Gauteng residents

	Western Cape residents				Gauteng residents			
	Min	Max	Mean	Std Dev	Min	Max	Mean	Std Dev
Age	15	64	35.1509	13.1918	15	64	34.3236	12.5611
Cohort	1	5	2.4937	1.2530	1	5	2.4937	1.2530
Gender	1	2	1.4871	0.4998	1	2	1.4871	0.4998
Race	1	5	1.5774	1.1414	1	5	1.5774	1.1414
Marital status	1	6	2.2929	1.1122	1	6	2.2929	1.1122
Educational attainment category	1	7	3.4835	1.1012	1	7	3.6559	1.1488
Education year	0	17	10.0960	3.3287	0	17	10.6703	3.3409
Number of children 0-14 years	0	16	1.0991	1.2721	0	16	0.9648	1.2399
Number of male adults 15-59 years	0	19	1.4723	1.0865	0	19	1.3813	1.0545
Number of female adults 15-59 years	0	12	1.5498	1.0827	0	12	1.4036	1.0969
Number of elderly 60+ years	0	5	0.2525	0.5566	0	10	0.2016	0.4981
Labor market status	1	3	1.8263	0.9102	1	3	1.7866	0.8782
Dummy: Labor force participation	0	1	0.6575	0.4745	0	1	0.6984	0.4590
Dummy: Employed	0	1	0.7851	0.4108	0	1	0.7375	0.4400
Broad occupation category	1	99	5.5130	3.2504	1	99	5.4378	3.2082
Broad industry category	1	11	6.7839	2.4633	1	11	7.0360	2.2723
Sector	1	4	1.3491	0.7295	1	4	1.4021	0.7894
Number of other employed members	0	18	0.9818	1.0413	0	25	0.8247	0.9878
Number of other unemployed members	0	10	0.3247	0.7571	0	12	0.3770	0.8225
Number of other inactive members	0	11	0.8441	1.1377	0	12	0.6861	1.0747
Province of residence at the time of interview	1	9	1.0160	0.3017	1	9	6.9956	0.1717
Province of usual residence	1	1	1.0000	0.0000	7	7	7.0000	0.0000
Moved within the last 10 years	0	1	0.2903	0.4539	0	1	0.3700	0.4828
Year of moving	2001	2011	2007	2.7533	2001	2011	2008	2.7646
Province of previous residence	1	11	2.7478	3.1567	1	11	7.1834	1.9165
Migration status category	2	6	5.0862	1.6000	2	6	4.9019	1.6827
Area type	1	2	1.0836	0.2769	1	2	1.0282	0.1656
Household size	1	29	4.4731	2.3877	1	30	4.0815	2.4114
SES index	-5.1610	3.998	1.6444	1.8843	-5.2049	3.998	1.2693	2.1347
SES quintile	1	5	3.9173	1.1263	1	5	3.7254	1.2229
Per capita income (2019 December prices)	0	4 074 731	68 948	159 673	0	4 074 731	85 194	192 585
Per capita income quintile	1	5	3.1828	1.3414	1	5	3.2205	1.4362