The Impact of International Migration on Skills Supply and Demand in South Africa

Derek Yu[1]

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Abstract

The existing South African migration literature focuses primarily on examining the well-being of immigrants to South Africa, especially their labor-market outcomes. However, none of these studies examined the well-being of South African emigrants in great detail. The objective of this study is to use the data for the period 2001–2016 sourced from the South African Census reports and Community Surveys, as well as the survey data of the top emigration destination countries to investigate the three groups: (a) immigrants to South Africa; (b) natives who remain in the country; (c) emigrants to the top destination countries (Australia, Canada, New Zealand, the United Kingdom, and the United States). The study derived empirical findings from the perspectives of skills supply and demand. The key findings showed that emigrants were most educated, enjoyed the lowest unemployment probability (10%), and were most likely to be involved in high-paying skilled occupations and tertiary-sector activities. Immigrants to South Africa experienced worse well-being than emigrants but better than natives. These immigrants were slightly more educated, and enjoyed a higher labor force participation rate (LFPR) (75%) and a lower unemployment likelihood (20%), compared with natives (55% and 30% respectively). Furthermore, for both abovementioned two groups, they were distinguished into three sub-groups – long-term, medium-term, and short-term migrants; and long-term migrants was the sub-group that had the best labor-market outcomes. The study concludes by recommending four policy suggestions: ease up regulations to attract skilled immigrants; promote entrepreneurial activities of immigrants; better develop and retain skills of the natives; and improve migration and vacancy data capture, availability, usage and analysis.

Keywords: migration, labor market, labor supply, labor demand, South Africa

1 Department of Economics, University of the Western Cape, Cape Town, South Africa.
Corresponding author. ✉ dyu@uwc.ac.za

INTRODUCTION

Historically, South Africa has been an immigrant-receiving country; the country was occupied by forebears of the Bushman and Khoisan tribes before the Europeans arrived, whereas a great number of people migrated from Central Africa to South Africa during the seventeenth century (Van Rooyen, 2000). The discovery of minerals led to an increased demand for mining labor and subsequently immigration of workers from other countries (Modi, 2003: 1759). The Documented Migration data released by Statistics South Africa (StatsSA, 2004) found that, between 1940 and 2003, a total of 1.25 million people immigrated to South Africa, whereas 0.61 million South Africans left the country, resulting in a net gain of 0.64 million people. The more recent 2016 Community Survey (CS) (StatsSA, 2016) found that 1.32 million people from other countries moved to South Africa.

These findings suggest that the movement of people and transfer of skills across national borders is a common phenomenon, and it is no longer possible for countries to manage population movement independent of international norms and global trends (Wöcke and Klein, 2002: 442). Thus, as globalization encourages greater specialization and division of labor as well as international transfer of skills across countries, national-level labor-market policy planning and implementation has become more complicated, because global labor issues need to be considered, including international migration.

The high incidence of skilled emigration out of South Africa results in a net transfer of human capital and scarce resources to more developed countries in the form of foregone tax revenues and fiscal cost of educating these skilled workers, along with a potential loss of skills in the next generation, because emigrants most likely take their children with them (Waller, 2006; Leipziger, 2008). The emigration of skilled people may further worsen unemployment in the home country, because skilled and unskilled workers are complementary, especially if skilled labor engage in entrepreneurial activities by hiring unskilled labor. In fact, the International Business Publications study (2012: 67) estimated that each skilled emigrant who left South Africa could lead to the loss of as many as 10 unskilled jobs in the country.

Within the Southern African Development Community (SADC), South Africa is the most popular destination country for migrants from other African countries. The United Nations (2019) found that the immigrants' share represented by people coming from countries such as Malawi, Namibia, Zambia, and Zimbabwe gradually increased during 1990–2017, whereas the share represented by Mozambique and Lesotho remained high. African immigrants replenish local labor supply at both ends of the skills spectrum, stimulate entrepreneurship and innovation, and contribute to fiscal revenue. Nonetheless, these immigrants may tighten the labor market by increased competition for local jobs and create social tensions (OECD, 2018).

Many South African empirical studies investigated inter-provincial migration (see, for example, Van der Berg et al., 2002; Oosthuizen and Naidoo, 2004; Moses and Yu, 2009; Kollamparambil, 2017; Kleinhans and Yu, 2020), but there are relatively

fewer empirical studies on international migration. The latter group of studies mainly investigated the well-being of immigrants in selected regions with the aid of primary data (e.g., Sinclair, 1999; Wentzel et al., 2004; Theodore et al., 2017), examined the emigration intention of natives (e.g., Mattes and Richmond, 2000; De Jong and Steinmetz, 2004; Mattes and Mniki; 2007), or estimated the macroeconomic impact of skilled emigration in terms of gross domestic product (GDP) foregone (e.g., Bohlman, 2010).

Only a handful of studies investigated if the immigrants enjoyed better well-being than natives in the labor market (e.g., Zuberi and Sibanda, 2004; Facchini et al., 2013; Budlender, 2014; Fauvelle-Aymar, 2014; Vermaak and Muller, 2019). However, these studies did not compare all three core groups, namely immigrants, natives and emigrants. These studies also did not comprehensively investigate international migration in South Africa from the perspectives of skills supply and demand, and possible imbalances between the two (or skills mismatch). Hence, this study analyzes a wide range of local and international data sources to investigate the impact of international migration on skills supply and demand in South Africa by comparing the demographic, education, and labor market characteristics of the three groups.

LITERATURE REVIEW

Theoretical framework

Before someone decides to migrate, they first compare the returns (R) and costs (C), before discounting both terms into present values. If there is net real income gain from migration (i.e., $R - C > 0$, in present value), the person decides to migrate (Mincer, 1978). Sjaastad (1962) and Stark et al. (1998) assert that returns to migration are mainly influenced by labor-market earnings and probability of securing employment in the destination country. Also, both money costs (e.g., foregone earnings in the country of origin and the costs involved in searching for and learning a new job in the country of destination) and non-money costs ('psychic' costs of changing environment and leaving family and friends behind) are involved.

Numerous well-known migration theories and models exist, such as push-pull model, dual labor market theory, world systems theory, network theory, and cumulative causation theory, to name but a few (for detailed discussion of these theories, refer to Massey et al., 1993). Since this study examines international migration from a labor supply and demand perspective, it discusses the two most relevant models (push-pull and human capital).

In the push-pull model, natives leave the country due to economic and non-economic factors. Push factors are those aspects in the country of origin that cause emigration, while pull factors are those aspects in the destination country that encourage immigration (Oteiza, 1968). The main push factors include slow economic growth, high unemployment, and poor access to facilities and services (e.g., electricity and water). On the contrary, the main pull factors include better

quality of life, better personal security, more abundant employment and professional development opportunities, and higher remuneration (Van Rooyen, 2000; Rasool et al., 2012).

The human capital model argues that skill-biased emigration prospects increase the expected return to human capital, thereby encouraging more people to pursue further education before deciding if they emigrate or not (Di Maria and Lazarova, 2012; Deuster and Docquier, 2018). Thus, the mere possibility of skilled emigration encourages more people to acquire additional skills, leading to a net increase of human capital. Since not all eventually leave the country of origin, the emigration of skilled people does not necessarily lead to brain drain, but could rather result in brain gain, because people who decide not to migrate have higher levels of human capital than they would have had in the absence of emigration possibility (Vidal, 1998; Stark and Dorn, 2013; Todaro and Smith, 2015). Thus, both the countries of origin and destination enjoy an increase of aggregate human capital level.

South Africa's migration policy

South Africa's existing international migration policy is a regime aimed at attracting high-skilled expatriates. In the initial years since the democratic transition, the African National Congress (ANC) did not place international migration policy among key issues in the economic development and reform strategies. There was a lack of understanding on various pressing issues in the broad field of migration, such as the presence of more asylum seekers, brain drain and brain gain, and skills needs of the country (Segatti, 2011: 31, 39–40).

In November 1996, the Department of Home Affairs (DHA) appointed a task team to write the 1997 Green Paper on International Migration, followed by the release of the Refugees Act of 1998 and the Immigration Act of 2002. These two Acts were amended numerous times, before the International Migration Green Paper and the White Paper were published in 2016 and 2017, respectively. The South African government introduced new categories of permanent and temporary residence to gain better control over the types of migrants entering the country, and a points-based system was proposed to replace a stringent quota system on skilled immigration. Nonetheless, the post-apartheid international migration policy instruments remain restrictive and slow to respond to national demands and regional developments (Peberdy, 2001: 17; Van Lennep, 2019a: 2).

The international migration policy instruments are summarized in Table 1 and some of them are explained below. The 1999 White Paper was implemented mainly through the Immigration Act of 2002 and partly through the Refugees Act of 1998. The Immigration Act of 2002 emphasizes numerous principles, including the following: simplify requirements and procedures; expeditious issue of residence permits; issue visas to foreign individuals with skills (i.e., critical skills) that cannot be obtained in South Africa or those with substantial amounts of capital to invest in the country; recruit low- to middle-skilled individuals from SADC countries

only by farmers, mines, and other firms under a temporary Corporate Work Visa; ensure human rights protection in immigration control; and prevent and counter xenophobia (DHA, 2017: 4, 12, 45; OECD, 2018: 62; Van Lennep, 2019a: 5).

Table 1: South Africa's international migration policy instruments since 1994

Instrument	**Document**
Migration Green Paper	International Migration Green Paper 1997
	International Migration Green Paper 2016
Migration White Paper	International Migration White Paper 1999
	International Migration White Paper 2017
Aliens Act	Aliens Amendment Act 1995
Refugees Act	Refugees Act 1998
	Refugees Amendment Act 2008
	Refugees Amendment Act 2017
Immigration Act	Immigration Act 2002
	Immigration Amendment Act 2004
	Immigration Amendment Act 2007
	Immigration Amendment Act 2011
	Immigration Amendment Act 2016

Source: Adapted from Mbiyozo (2018: 3)

Despite these changes being implemented, the 2002 Act has been under criticism on some shortcomings, most notably the argument that the new laws were much like the "two-gate policy" during apartheid by placing restrictions on unskilled immigration while promoting high-skilled immigration. This Act was amended four times. In the 2004 Act, the main refinement was that skilled labor migration was ascertained, by revising the work permit policy to people of a specific class, category or profession, and reducing the number of available quota permits (Van Lennep, 2019a: 6). In the 2007 Act, work permit quotas were once again limited to foreign individuals who fall within a specific category or class as stipulated by the DHA for each sector. Nonetheless, a more outwardly pro-African stance was taken by relaxing the requirement that African students pay repatriation deposits, and making changes that favor cross-border traders, in particular women (Van Lennep, 2019a: 7).

The key highlights of the 2011 Act are as follows: the temporary residence permit was redefined as a visa, whereas the critical skills work visa was introduced; added conditions of capital injection to the country's economy and employment creation were imposed for the business visa application; duration of intra-company transfer permits of foreign executives was extended to four years (OECD, 2018: 62; Van Lennep, 2019a: 8-9). One criticism of the 2011 Act by the businesses was that the

list of skills and professions relevant to the quota system for work permit application was "established without any direct consultation with the business sector, and largely out of sync with the reality of skills needs" (OECD, 2018: 62). The Immigration Amendment Act of 2016 was a response to irregular migration, by extending sanctions on foreigners who overstayed their visas, whereas the confidentiality of applications of asylum-seekers was protected (Van Lennep, 2019a: 9).

In February 2022, the Department of Employment and Labour (DEL), in close collaboration with the DHA, released the draft National Labour Migration Policy (NLMP). The report mentioned that the NLMP aims to address numerous policy gaps, including data for evidence-based policy monitoring and evaluation, migration governance and management, as well as labor migration to and from South Africa (DEL, 2022). The NLMP particularly aims to align better with the skilled planning goals of National Development Plan and National Skills Development Strategy phase III.

The government regularly releases the list of critical skills. The most recently released list in early 2022 included 101 critical skills in total, with 91 belonging to the three high-skilled broad occupation categories. The detailed occupation categories that are most critical to South Africa's labor market are: architects, engineers and related professionals; physicists, chemists and related professionals; computing professionals (RSA, 2022).

While not shown in Table 1, it is worth mentioning that over the years South Africa has issued Special Dispensation Permits to immigrants from countries such as Angola, Lesotho, and Zimbabwe. For example, the Zimbabwe Exemption Permits were granted to Zimbabwean nationals who migrated to South Africa before 2009. However, Marawanyika and Ndlovu (2022) recently reported that the Cabinet announced in November 2021 that the holders' permission to stay in South Africa would expire on 31 December 2021. However, they were given a 12-month grace period to apply for alternative permits under the existing immigration framework.

Lastly, to the author's knowledge, there is currently no explicit South African policy framework on emigration. Nonetheless, the South African Network of Skills Abroad (SANSA) was founded in 1998, with the primary goal of connecting highly skilled emigrants and encouraging them to contribute their skills to South Africa's economic development, without returning to the country permanently (Brown, 2003). To conclude, while this section highlights the South African migration (especially on immigration) instruments since 1994, strictly speaking, these Green and White Papers are really not migration policies.

Review of past empirical studies

Studies using primary data

Sinclair (1999) interviewed 77 immigrants in Cape Town and Johannesburg; the migrants declared that they responded to hostility with anger and indignation, and formed migrant communities to support one another. McDonald et al. (2000)

interviewed 2,300 immigrants from Lesotho, Mozambique, and Zimbabwe, to examine their reasons for visiting and leaving South Africa. The study found that, seeking work was their primary reason for migrating to South Africa (Lesotho: 50%, Mozambique: 40%, Zimbabwe: 35%), and surprisingly the desire to be a permanent South African resident was not too strong.

Wentzel et al. (2004) interviewed immigrants from six African countries. Two-thirds of the respondents declared that "no suitable employment" was the main reason for leaving the previous area of residence, whereas 76% claimed that the "best employment opportunities" was the key reason for moving to South Africa. Theodore et al. (2017) interviewed 600 Zimbabwean day laborers in Tshwane; the migrants and their dependants endured poverty along with food and housing insecurity, due to low-wage underemployment in the informal sector. Lastly, Kalitanyi and Visser (2010) interviewed 120 immigrant entrepreneurs in Cape Town. More than half of them left their countries of origin because of political instability, 55% were engaged in clothing or footwear businesses, and more than 80% hired South Africans in their businesses.

The next group of studies examined emigration intention and interaction experience with the DHA staff. Mattes and Richmond (2000) interviewed 725 skilled South Africans with at least Grade 12 (or matric level of education). The study found that 31% of participants had intentions to emigrate, 14% already applied for a work permit, permanent residency, or foreign citizenship in another country. A high share of interviewees was dissatisfied with taxation level (74%), cost of living (71%), upkeep of public amenities (70%), family's safety (68%), and personal safety (66%). On the contrary, at least two-thirds perceived things to be better overseas in the areas of personal safety (80%), family's safety (80%), upkeep of public amenities (72%), and customer services (67%). Next, De Jong and Steinmetz (2004) interviewed 3,600 households on their emigration intention. About 25% intended to emigrate in the next five years. Also, these households were associated with a significantly higher propensity to leave South Africa, spurred by the following factors: those headed by older individuals with post-matric qualifications; pressure imposed by spouse to emigrate; poor quality of electricity services; and low levels of life satisfaction. The findings of the above studies all correspond with the push-pull model.

Mattes and Mniki (2007) analyzed the 2002 data collected by the Southern African Migration Project (SAMP) on 4,800 postgraduate and final-year undergraduate students. About 40% of survey participants strongly considered relocation to another country. Financial resources, family encouragement, prospects of a better life overseas, and previous travel abroad to inform themselves on living abroad were key factors increasing the students' likelihood of leaving the country, whereas patriotism and strong national identity decreased emigration likelihood. Rogerson and Rogerson (2000) interviewed 200 companies to examine how they dealt with the actual and potential emigration of skilled personnel, especially regarding recruitment and training. One-third acknowledged that the impact of brain drain

was significant; nearly 60% used specialist agencies to recruit skilled personnel, and 62% adopted in-house training methods for skilled personnel.

Two studies investigated the efficiency of the DHA but derived completely opposite results. The earlier reviewed Rogerson and Rogerson (2000) study also examined the experience of firms in dealing with the DHA. The authors found that 60% rated the experience as negative when it comes to recruiting skilled people from overseas. The firms asserted that the following structural problems prevented foreign skilled individuals from entering South Africa: time-consuming, obstructive and procedural processes of DHA; high costs of contracting lawyers or consultants; lack of transparency in the decision-making process, internal operations, functioning and staffing at the DHA; and insufficient understanding on the part of the DHA of the demand for skilled workers.

Davids et al. (2005) interviewed 3,000 people and found that the results were positive. For example, more than 80% were satisfied with the attitude of DHA staff by describing them as attentive, considerate, friendly, helpful, honest, and knowledgeable. The mean waiting time at DHA offices was only 20 minutes, whereas 49% of respondents said DHA's efficiency improved, compared to the apartheid period.

Studies using surveys and censuses

Budlender (2014) analyzed data from the third labor market quarter 2012 QLFS conducted by StatsSA, to examine the personal characteristics and outcomes of different groups of South Africans, with one group being immigrants. They (1.23 million) represented 4% of the working-age population. Compared to natives, immigrants enjoyed higher labor force participation (77%) and employment (65%) rates but lower unemployment likelihood (16%). The employed immigrants were more likely to work in construction and trade industries, as well as agriculture and private households compared to their native counterparts. The latter two were low-paying industries often associated with poor working conditions. Foreign-born workers were also more likely to work in the informal sector with fewer benefits (e.g., medical aid and pension scheme), just like the native informal sector workers (Essop and Yu, 2008).

Fauvelle-Aymar (2014) used the same dataset, but unlike the above Budlender study, the author primarily conducted multivariate econometric analysis; the dependent variables of the regressions were employment, time-based underemployment, informal activities and precarious employment likelihoods. The results indicated that employment probability was significantly higher for immigrants; probability of employment in informal and precarious activities (both characterized by low earnings) was significantly higher for immigrants, but this result was only valid for black African immigrants.

StatsSA (2019) used both 2012 and 2017 QLFS migration module data, to examine the socio-economic and demographic profile of the migrant labor force

and investigated the link between employment and immigration. This study not only compared natives with immigrants, but also examined a third group, namely, internal migrants. The study found that one-third of immigrants moved to South Africa to seek work or start a business, and immigrants were twice more likely to be employed than non-movers and internal migrants.

Five studies used the South African Census and Community Survey (CS) data. Zuberi and Sibanda (2004) examined the relationship between migration status, nativity and labor-market outcomes at the time of the 1996 Census, focusing on male individuals aged 20–55 years. What distinguishes this study from the other four studies below is that two groups of immigrants were identified: SADC-born and other foreign-born. Both groups were separated into long-term (those who migrated to South Africa before 1994) and recent (moved to South Africa 1994–1996) immigrants. All four groups of immigrants were more likely to seek work and find employment, compared to natives. SADC-born immigrants enjoyed an additional advantage: most of them faced much lower fixed costs of migrating to South Africa.

Vermaak and Muller (2019) used the 2011 Census data to investigate whether naturalized immigrants and foreigners enjoyed improved well-being, compared to locals. On average, immigrants were more likely to seek work. Interestingly, some immigrants were involved in more hazardous forms of employment associated with lower returns. After controlling for differences in worker characteristics, it was established that both employed naturalized immigrants and foreigners earned less than the locals, but social networks helped them access jobs with higher remuneration. The OECD (2018) conducted a highly similar analysis as Vermaak and Muller (2019), but analyzed both the 2001 and 2011 Census data. It was found that immigrants performed significantly better than native-born individuals in both labor force participation and employment probabilities, but immigrants were more likely to engage in low-paying unskilled occupations.

Facchini et al. (2013) analyzed the 1996 and 2001 Census as well as the 2007 CS data, with specific focus on south-south migration. At district level, increased immigration had a significantly negative effect on natives' employment rates, especially for skilled white native workers. At national level, increased immigration had a significantly negative impact on natives' total income, but not on employment rate. While Peters and Sundaram's (2015) study also addresses aspects of south-south migration, they only conducted a brief empirical analysis to compare the employment prospects of immigrants from seven countries with the 2001 Census data. Immigrants from developed countries outperformed the natives, and educational attainment was positively associated with employment probability for immigrants.

Other studies

Myburgh (2004) used data from the statistical bureaus of the top emigration destination countries (i.e., USA, Australia, UK, and New Zealand) to examine trends in emigration out of South Africa, and found that these trends could be explained

by real wage differentials, political uncertainty, and immigration restrictions in destination countries. The study did not examine personal and labor-market characteristics of emigrants. Finally, to the author's knowledge, Bohlman (2010) was the only time-series, macroeconomic study to estimate the macroeconomic effect of skilled emigration during the 2007–2014 period. Using the computable general equilibrium model and assuming three simulation scenarios, the author estimated that South Africa's real GDP was 3% lower due to skilled emigration.

DATA AND METHODS

Data

This study used data from Census 2001 and 2011 as well CS 2007 and 2016. The primary strength of these four datasets is that they captured comprehensive information on immigration, as a wide range of relevant questions were asked which help distinguish different sub-groups of immigrants, such as country of birth, year of moving to South Africa, place of usual residence, whether the person resided at the same place five years ago (the threshold was 10 years in Census 2011), year and month of moving, and province of previous residence for those who moved within the last five years (or 10 years in Census 2011). These datasets also captured detailed personal information (gender, population group, age, area type, province), education status (highest educational attainment and field of education – if having post-school qualifications) and labor-related information (labor-market status, occupation, industry).

As this is the first study in South Africa that compares natives and immigrants with emigrants – particularly since the local census and survey data does not contain any information on the emigrants – the study relied on international data sources. It analyzed the most recent census or survey data of the top five emigration destination countries to examine the well-being of South African emigrants in the United Kingdom (Office for National Statistics, 2019), New Zealand (Statistics New Zealand, 2019), the United States of America (United States Census Bureau, 2019), Australia (Australian Bureau of Statistics, 2019) and Canada (Statistics Canada, 2019). However, the researcher encountered challenges in successfully obtaining all the required data, as discussed in the limitations below.

Method

The study used the data obtained from the 2001 and 2011 Censuses as well as the 2007 and 2016 Community Surveys to distinguish the immigrants and natives, and the census data of the top five destination countries to distinguish the emigrants. These three groups are investigated by comparing their personal, educational and labor-market characteristics. The working-age population is divided into six categories, based on their country of birth and migration status, as listed below:

(a) Long-term international migrants: individuals born outside South Africa

but migrated to the country more than five years ago.
(b) Medium-term international migrants: those born outside South Africa but migrated to the country more than one year and up to five years ago.
(c) Short-term international migrants: people born outside South Africa but migrated to the country within the past year.
(d) Native return migrants: individuals born in South Africa but returned to South Africa from overseas within the past five years.
(e) Native permanent residents: people born in South Africa who remained in the country within the past five years.
(f) Other/unspecified: those who did not specify their country of birth.

As indicated earlier, the push-pull and human capital models form the empirical framework to specifically examine if the emigrants enjoy better well-being in the labor markets of the destination countries (i.e., brain drain from South Africa), compared with natives and immigrants. The study also examines whether natives enjoy an improvement in human capital or educational attainment during the 15-year period (i.e., brain gain in South Africa).

Limitations

The four censuses and CSs did not pose the exact same questions on work activities (see Table 2). Furthermore, it was not possible to obtain the CS 2016 data on labor-market activities. Even though the information was captured by StatsSA, the data was not released. Additionally, it was not possible to obtain the full census data for the UK (2011), New Zealand (2013), and Australia (2016), as either the data is only accessible to natives living in these countries, or exorbitant costs are charged by the statistical bureaus of these countries to access and construct detailed statistical tables. Hence, only certain tables could be compiled using the free online table generation tool in the statistical bureau websites.

While it is possible to obtain the 2016 Canada Census data, in the country of birth variable, there are only three broad African categories, namely, "Eastern Africa", "Northern Africa", and "Other Africa". In fact, the online information shows that there were 48,015 South Africans (Statistics Canada, 2019), while the actual data shows that there were 185,925 people in the "Other Africa" category. It means that South Africans account for only a 25.82% share. Hence, in some of the tables below, the "Other Africa" results are "proxy" results for South Africans residing in Canada. For this reason, the empirical findings on South Africans' well-being in Canada need to be interpreted with some caution.

Table 2: Questions on work activities of those employed in each Census and Community Survey

	Census 2001	**CS 2007**	**Census 2011**	**CS 2016**
Broad occupation category	✓	✓	✓	✓ ✂
Detailed occupation category	✓	✓ ✂	✓	✓ ✂
Broad industry category	✓	✓	✓	✓ ✂
Detailed industry category	✓	✓ ✂	✓	✓ ✂
Formal/informal sector		✓	✓	✓ ✂
Employer/employee	✓	✓		
Work hours	✓			

✂The questions were asked in the survey but the data was not made available by StatsSA

Source: StatsSA, 2001, 2007, 2011 and 2016

EMPIRICAL FINDINGS

Examining the profile of immigrants and natives

Table 3 presents the number and share of each of the six groups of international immigrants and natives. The total number of international immigrants (i.e., the sum of groups [1]–[3]) increased from 0.71 million in 2001 to 1.32 million in 2016, and these immigrants as a proportion of the working-age population (WAP) increased from 2.74% to 3.78%. Native return migrants accounted for a negligible share of the WAP. For the remainder of the empirical analysis, they are included as part of total natives, or groups [4] and [5] collapsed into one group called "natives".

Table 3: Number and percentage of people in each migration status category, 2001-2016

	Census 2001		CS 2007		Census 2011		CS 2016	
	Number (1,000s)	Share (%)	Number (1,000s)	Share (%)	Number (1,000s)	Share (%)	Number (1,000s)	Share (%)
[1] Long-term immigrants	616	2.36	877	2.92	825	2.59	923	2.65
[2] Medium-term immigrants	47	0.18	83	0.28	509	1.60	240	0.69
[3] Short-term immigrants	51	0.20	79	0.26	440	1.38	153	0.44
[4] Native return migrants	21	0.08	37	0.12	28	0.09	13	0.04
[5] Native permanent residents	25,403	97.19	28,896	96.19	29,582	92.93	33,475	96.06
[6] Other/Unspecified	0	0.00	68	0.23	446	1.40	46	0.13
	26,138	100.00	30,040	100.00	31,831	100.00	34,849	100.00
[1]–[3]: Total – Immigrants	714	2.74	1,038	3.46	1,775	5.57	1,316	3.78
[4]–[5]: Total – Natives	25,424	97.27	28,933	96.31	29,611	93.02	33,488	96.10
[6]: Total – Other/ Unspecified	0	0.00	68	0.23	446	1.40	46	0.13
	26,138	100.00	30,040	100.00	31,831	100.00	34,849	100.00

Source: Author's own calculations using the 2001 and 2011 Census and 2007 and 2016 CS data (StatsSA, 2001, 2007, 2011, 2016)

Table 4 shows that the male share was more dominant (about 60%) for immigrants, whereas females were slightly more dominant (51%–52%) for the native WAP. As expected, Africans were the most dominant racial group. Long-term immigrants were relatively older with a mean age of about 38 years, whereas the medium- and short-term immigrants were the youngest (mean age of 30 years). Only 38% of the native WAP were married or lived with a partner, but this share was much higher at almost two-thirds for immigrants. This result suggests that immigration to South Africa was more likely to be a household-level decision by the head and spouse.

Table 4: Personal characteristics of immigrants and natives (share of total %) – 2001 versus 2016

		Census 2001						CS 2016					
		[1]	[2]	[3]	[1]-[3]	[4]-[5]	[1]-[6]	[1]	[2]	[3]	[1]-[3]	[4]-[5]	[1]-[6]
Gender	Male	57.68	60.16	56.59	57.76	46.64	46.94	61.67	57.11	53.02	59.84	48.90	49.32
	Female	42.32	39.84	43.41	42.24	53.36	53.06	38.33	42.89	46.98	40.16	51.10	50.68
		100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Race	African	51.76	73.30	72.01	54.63	77.66	77.03	81.80	90.57	91.99	84.58	79.31	79.48
	Coloured	1.42	1.49	1.48	1.43	9.56	9.34	0.90	0.43	0.34	0.75	9.63	9.31
	Indian	3.15	7.12	5.79	3.60	2.84	2.86	4.53	5.78	3.01	4.58	2.67	2.74
	White	43.67	18.08	20.72	40.33	9.93	10.77	12.77	3.23	4.66	10.09	8.39	8.46
	Other	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Age cohort	15-24 years	16.21	32.44	38.58	18.89	33.21	32.82	8.53	31.01	38.22	16.08	29.51	28.99
	25-34 years	27.35	38.56	35.94	28.71	25.47	25.56	33.67	48.05	38.65	36.87	26.76	27.15
	35-44 years	24.54	16.78	15.07	23.35	20.06	20.15	31.96	16.39	15.11	27.16	19.52	19.81
	45-54 years	18.27	8.37	7.00	16.81	13.20	13.30	16.12	3.60	5.69	12.62	14.28	14.22
	55-64 years	13.63	3.86	3.41	12.25	8.06	8.18	9.72	0.96	2.33	7.26	9.93	9.83
		100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
	Mean (years)	38.15	30.81	29.60	37.05	32.97	33.08	37.86	28.98	28.99	35.21	34.12	34.16
Marital status	Married or living together	67.24	52.36	48.10	64.88	41.42	42.06	65.47	53.08	50.31	61.45	34.10	35.15
	Other	32.76	47.64	51.90	35.12	58.58	57.94	34.53	46.92	49.69	38.55	65.90	64.85
		100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Source: Author's own calculations using the 2001 Census and 2016 CS data (StatsSA, 2001, 2016)

Table 5: Educational, geographical and labour-market characteristics of immigrants and natives (share of total %) – 2001 versus 2016

		Census 2001						CS 2016					
		[1]	[2]	[3]	[1]-[3]	[4]-[5]	[1]-[6]	[1]	[2]	[3]	[1]-[3]	[4]-[5]	[1]-[6]
Educational attainment	None	13.64	12.33	10.22	13.31	13.12	13.12	7.41	5.33	6.75	6.95	4.58	4.67
	Incomplete primary	11.24	12.26	11.09	11.30	15.86	15.74	9.98	8.49	11.50	9.88	7.41	7.51
	Incomplete secondary	29.73	36.12	36.55	30.64	44.91	44.52	39.74	49.45	51.06	42.82	44.81	44.73
	Matric	23.99	19.30	20.48	23.43	19.10	19.22	23.89	23.68	19.61	23.36	32.02	31.69
	Matric + Certificate/Diploma	10.68	7.37	7.56	10.23	4.69	4.84	4.39	3.16	2.05	3.89	4.22	4.20
	Degree	10.73	12.62	14.10	11.10	2.32	2.56	10.69	6.97	5.43	9.40	5.18	5.34
	Other/Unspecified	0.00	0.00	0.00	0.00	0.00	0.00	3.91	2.91	3.60	3.69	1.77	1.86
		100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
	Mean (years)	9.29	9.19	9.57	9.30	8.08	8.11	9.74	9.75	9.17	9.67	10.03	10.02
Area type	Urban	80.94	79.31	78.03	80.62	61.05	61.59	84.67	81.19	76.23	83.06	66.37	67.02
	Rural	19.06	20.69	21.97	19.38	38.95	38.41	15.33	18.81	23.77	16.94	33.63	32.98
		100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Province	Western Cape	10.29	10.32	11.56	10.38	10.92	10.91	10.57	12.15	10.90	10.90	11.96	11.94
	Eastern Cape	3.19	2.65	3.44	3.17	13.35	13.07	3.18	3.95	4.34	3.45	11.89	11.56
	Northern Cape	1.29	0.57	0.65	1.20	1.84	1.82	1.05	1.31	1.08	1.10	2.22	2.17
	Free State	3.67	4.65	5.21	3.84	6.26	6.19	3.56	3.29	3.05	3.45	5.28	5.21
	KwaZulu-Natal	9.62	7.14	6.89	9.26	20.71	20.40	5.01	4.90	4.68	4.95	19.13	18.59
	North West	7.15	6.97	7.94	7.20	8.26	8.23	8.00	8.31	8.75	8.14	6.73	6.79
	Gauteng	49.27	52.57	48.57	49.44	21.76	22.51	54.00	48.19	44.79	51.87	25.03	26.05
	Mpumalanga	7.74	7.70	8.03	7.76	6.58	6.61	7.29	7.54	7.36	7.34	7.79	7.77
	Limpopo	7.78	7.44	7.72	7.76	10.32	10.25	7.34	10.36	15.04	8.79	9.97	9.92
		100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Labour market status	Employed	60.48	55.45	46.65	59.16	32.56	33.29	66.23	65.35	58.35	64.02	38.25	39.69
	Unemployed	14.24	17.38	20.27	14.88	24.89	24.62	12.14	13.97	15.64	13.54	16.95	16.78
	Inactive	25.27	27.17	33.08	25.96	42.55	42.10	21.63	20.68	26.01	22.44	44.80	43.53
		100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Source: Author's own calculations using the 2001 Census, 2011 Census, and 2016 CS data (StatsSA, 2001, 2011, 2016)
Note: Since the 2016, the CS did not release labour-market data; the labour-market status results of 2011 are shown in the table instead

Table 5 shows that at the time of the 2016 CS, there were still nearly 60% of immigrants without a matric-level educational qualification. That is, the majority of immigrants to South Africa were not highly educated, despite being relatively more educated on average than native individuals. Both immigrants and natives became more educated over time, as the mean years of educational attainment increased for both groups during the period 2001–2016. The increase in mean educational attainment of natives aligns with the theoretical framework discussion that the possible emigration of skilled people out of South Africa could lead to an improvement of human capital of natives (i.e., brain gain). Furthermore, while not shown in the table, the shares of immigrants with engineering, health, or computer science qualifications (12.97%, 8.27%, and 6.45% respectively, in 2016) were slightly higher compared to the natives (8.33%, 8.16%, and 4.45% respectively).

Over 80% of immigrants resided in urban areas but this proportion was lower (two-thirds) for natives. About half of immigrants lived in Gauteng, and the Western Cape was the second most dominant province of residence (11%). However, the Gauteng share was only about a quarter for the native WAP. That Gauteng and the Western Cape are the two most popular provinces of destination for the international immigrants is as expected, as they are associated with relatively better labor-market outcomes compared with other provinces.

The last few rows of Table 5 show that immigrants were associated with higher LFPR and lower unemployment likelihood, compared with the native WAP. Tables 6 shows the broad occupation and industry categories of employed immigrants and natives. In 2011, only 24% of immigrant workers were involved in high-skilled occupations (managers, professionals, or technicians), and the remaining immigrant workers were involved in semi-skilled or low-skilled occupations (particularly in elementary occupations, service and sales workers, craft and related trades). This result is not surprising, as Table 5 shows that some immigrants did not have high levels of educational attainment. Hence, some high-skilled vacancies might not be successfully filled by both natives and immigrants.

Table 6: Work characteristics of immigrants and natives (if employed) (share of total %), 2001 versus 2011

		Census 2001						CS 2016					
		[1]	[2]	[3]	[1]-[3]	[4]-[5]	[1]-[6]	[1]	[2]	[3]	[1]-[3]	[4]-[5]	[1]-[6]
Broad occupation category	Manager	12.01	8.18	7.53	11.52	5.26	5.56	11.40	7.75	8.32	9.63	8.14	8.28
	Professional	13.56	10.05	12.64	13.29	6.88	7.19	8.58	6.23	5.82	7.27	7.32	7.31
	Technician	9.66	5.35	4.93	9.13	9.91	9.87	7.84	6.71	6.36	7.17	9.98	9.72
	Clerk	9.10	5.54	4.73	8.63	11.51	11.37	10.64	9.25	9.29	9.93	12.42	12.19
	Service and sales worker	11.12	14.09	13.45	11.44	10.28	10.34	16.11	17.94	16.85	16.82	16.24	16.29
	Skilled agricultural worker	2.44	2.96	4.20	2.58	2.61	2.60	0.89	0.76	0.99	0.87	0.94	0.93
	Craft and related trade	15.73	13.67	11.69	15.37	11.76	11.93	15.02	16.68	15.04	15.51	11.99	12.32
	Operator and assembler	4.43	4.63	3.20	4.37	8.73	8.52	6.48	5.96	6.61	6.36	6.77	6.73
	Elementary occupation	17.81	30.17	29.54	19.24	20.04	20.00	14.42	17.57	19.46	16.48	16.68	16.67
	Domestic worker	4.15	5.35	8.09	4.44	13.03	12.61	8.62	11.14	11.26	9.96	9.51	9.56
	Other/Unspecified	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Broad industry category	Agriculture	8.28	16.17	17.94	9.31	9.26	9.27	5.07	6.19	8.35	6.14	5.11	5.20
	Mining	7.17	4.81	4.45	6.87	2.67	2.88	4.68	2.36	2.99	3.62	2.92	2.98
	Manufacturing	13.40	9.79	8.20	12.88	12.90	12.90	9.50	8.28	8.49	8.91	9.89	9.80
	Utilities	0.67	0.32	0.35	0.63	0.74	0.74	0.68	0.62	0.55	0.63	0.87	0.85
	Construction	8.01	7.61	6.70	7.91	5.41	5.53	10.52	11.43	10.89	10.87	7.88	8.15
	Wholesale and retail trade	18.67	23.86	19.73	19.05	15.49	15.66	19.47	23.01	22.11	21.10	16.93	17.32
	Transport	4.03	3.16	3.49	3.95	4.82	4.77	5.34	4.83	4.79	5.07	6.18	6.09
	Finance	12.78	8.17	8.10	12.23	9.61	9.74	16.73	13.98	13.22	15.13	15.16	15.16
	CSP services	22.30	18.94	21.16	22.03	28.73	28.41	17.09	15.27	14.52	15.98	23.69	22.98
	Private households	4.69	7.17	9.88	5.14	10.37	10.11	10.86	13.95	14.01	12.48	11.34	11.45
	Other/Unspecified	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.09	0.07	0.07	0.02	0.03
		100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Source: Author's own calculations using the 2001 and 2011 Census data (StatsSA, 2001, 2011)

Nearly 70% of immigrants employed worked in the tertiary sector (the corresponding proportion was 73% for native employed), especially in the following broad industry categories: wholesale and retail trade (22.11%), CSP services (14.52%), private households (14.01%), and finance (13.22%). Table 7 complements the results at the bottom of Table 5 by confirming that immigrants enjoyed greater LFPR and lower unemployment likelihood compared with natives.

Table 7: Labour force participation rates and unemployment rates of immigrants and natives (%) – 2001–2011

		[1]	[2]	[3]	[1]-[3]	[4]-[5]	All
Labour force participation rate	Census 2001	74.72	72.83	66.92	74.04	57.45	57.91
	CS 2007	80.15	76.15	75.07	79.45	61.15	61.81
	Census 2011	78.37	79.32	73.99	77.56	55.20	56.47
Unemployment rate	Census 2001	19.06	23.86	30.29	20.10	43.32	42.51
	CS 2007	14.20	17.06	21.98	14.98	33.77	32.91
	Census 2011	15.49	17.61	21.14	17.46	30.71	29.71

Source: Author's own calculations using the 2001 and 2011 Census and 2007 CS data (StatsSA, 2001, 2007, 2011)

Examining the profile of emigrants

Table 8 shows that in absolute terms, despite the censuses and surveys not taking place in the same year, the number of South African-born individuals was the highest (above 190,000) in the UK, followed by Australia (more than 160,000). However, South Africans accounted for the 5th highest number of foreign-born persons in New Zealand (7th in Australia and 8th in the UK), thereby explaining why these South African-born people represented a very high share of African-born individuals (nearly three-quarters) and slightly above 5% of all foreign-born individuals in New Zealand. South African-born people also accounted for a high proportion (48%) of all African-born people living in Australia.

Table 8: South African-born people in the top five emigration destination countries

Country	Number	Rank	As % of African-born people	As % of all foreign-born people
UK (2011)	191,023	8th	14.55	2.55
New Zealand (2015)	54,276	5th	73.54	5.42
USA (2015)	103,180	63rd	4.72	0.21
Australia (2016)	162,450	7th	48.04	2.64
Canada (2016)	48,015	39th	6.96	0.58

Source: Australian Bureau of Statistics (2019); Office for National Statistics (2019); Statistics Canada (2019); Statistics New Zealand (2019); United States Census Bureau (2019)

Table 9 shows that approximately half of South Africans migrated to the top destination countries more than 10 years ago. This share was the greatest for South Africans who migrated to the USA (69%) and lowest for those who left for New Zealand (46%).

Table 9: Year of arrival of South Africans in top five emigration destination countries (Share of total %), 2011–2016

UK (2011)	**%**	**New Zealand (2015)**	**%**
Within last 1 year	3.99	Within last 1 year	6.43
Within last 2–4 years	13.11	Within last 2–4 years	17.32
Within last 5–7 years	15.24	Within last 5–9 years	27.88
Within last 8–10 years	18.37	Within last 10–19 years	36.65
Within last 11–20 years	26.08	More than 19 years ago	9.72
More than 20 years ago	23.22	Unspecified	1.99
	100.00		**100.00**
USA 2015	**%**	**Australia 2016**	**%**
Within last 1 year	5.44	Within last 1 year	1.59
Within last 2–5 years	13.29	Within last 2–10 years	41.17
Within last 6–10 years	11.91	Within last 11–20 years	29.00
Within last 11–20 years	30.26	More than 20 years ago	26.51
More than 20 years ago	39.10	Unspecified	1.74
	100.00		**100.00**
Canada (2016)	**%**		
Within last 5 years	12.01		
Within last 6–10 years	11.00		
Within last 11–15 years	11.63		
Within last 16–25 years	22.39		
More than 25 years ago	35.99		
Unspecified	6.99		
	100.00		

Source: Australian Bureau of Statistics (2019); Office for National Statistics (2019); Statistics Canada (2019); Statistics New Zealand (2019); United States Census Bureau (2019)

Regarding Table 10, females were the slightly more dominant gender group, whereas a very high proportion of South Africans lived in urban areas in the UK (84%) and Australia (94%). Only slightly above 35% of South Africans living in the UK were Africans, but this share was more than double (77.15%) for South Africans residing in Canada. Moreover, the 25–34 years and 35–44 years cohorts were more dominant in the UK (close to 50% altogether), while the 45–54 years and 65+ years cohorts were most dominant in Canada (about 21% each).

Table 10: Personal characteristics of South African population aged at least 15 or 16 years in the top five emigration destination countries (share of total %) – 2011–2016

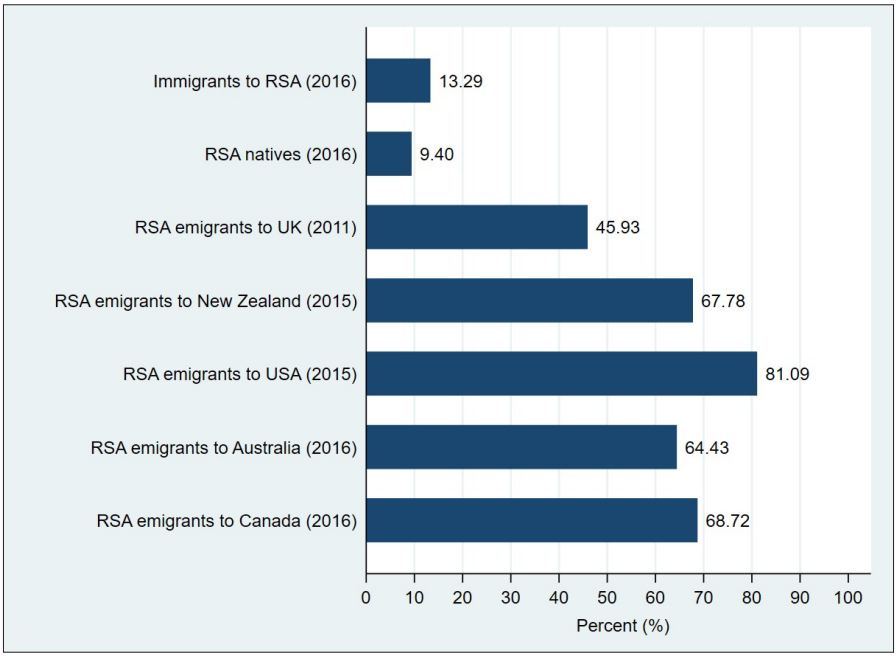
		UK 2011)	**New Zealand (2015)**	**USA (2015)**	**Australia (2016)**	**Canada (2016)**
Gender	Male	48.49	48.61	49.13	49.22	49.68
	Female	51.51	51.39	50.87	50.78	50.32
		100.00	**100.00**	**100.00**	**100.00**	**100.00**
Race	African	36.24	Not available	Not available	Not available	77.15 #
	Coloured	4.13				0.36 #
	Asian/Indian	26.32				3.20 #
	White	30.71				18.23 #
	Other	2.60				1.05 #
		100.00				**100.00 #**
Area type	Urban	84.07	Not available	Not available	93.84	Not available
	Rural	15.93			6.16	
		100.00			100.00	
Age cohort	15/16 to 24 years	12.04	Not available	14.14	14.43	10.22
	25–34 years	32.29		17.16	15.43	14.97
	35–44 years	25.22		20.85	21.96	17.23
	45–54 years	11.71		19.68	21.62	20.61
	55–64 years	9.65		15.88	13.61	16.24
	65+ years	9.09		12.29	12.94	20.74
		100.00		**100.00**	**100.00**	**100.00**

Source: Australian Bureau of Statistics (2019); Office for National Statistics (2019); Statistics Canada (2019); Statistics New Zealand (2019); United States Census Bureau (2019).

"Other Africa" results.

Figure 1 shows that the proportion of South African-born people with post-school qualifications ranged between 45.93% (UK) and 81.09% (USA), whereas the corresponding proportions in 2016 were merely 13.29% and 9.40%, to the immigrants to South Africa as well as the South African natives, respectively. These findings suggest evidence of a brain drain out of South Africa.

Figure 1: Proportion of different groups of working-age population with post-school qualifications, 2011–2016



Source: Australian Bureau of Statistics (2019); Office for National Statistics (2019); Statistics Canada (2019); Statistics New Zealand (2019); United States Census Bureau (2019); as well as author's calculations using the CS 2016 data

Table 11 shows that the LFPR of South Africans was above 70% in all emigration destination countries (similar to the LFPR of immigrants in South Africa) but was above the LFPR of natives who remained in South Africa (around 55%). South Africans enjoyed a lower unemployment rate in the five countries (from 4.45% in the USA to 12.55% in Canada), compared to the results in Table 7. These findings correspond with the push-pull model that South Africans left the country due to better labor-market prospects elsewhere.

Table 11: Labour-market status of South African-born population aged at least 15 or 16 years in the top five emigration destination countries, 2011–2016

	UK (2011)	New Zealand (2015)	USA (2015)	Australia (2016)	Canada (2016)
Employed	128,603	53,775	68,380	106,998	119,917#
Unemployed	11,378	4,785	3,183	7,132	17,205#
Inactive	36,972	22,044	25,868	35,540	48,803#
	176,773	80,604	97,431	149,670	185,925#
LFPR (%)	79.19	72.65	73.45	76.25	73.75
Unemployment rate (%)	8.13	8.17	4.45	6.25	12.55#
National unemployment rate (%) (including natives)	8.03	5.36	6.27	5.71	7.70

Source: Australian Bureau of Statistics (2019); Office for National Statistics (2019); Statistics Canada (2019); Statistics New Zealand (2019); United States Census Bureau (2019)

"Other Africa" results.

To summarize, emigrants to the destination countries enjoyed the best labor-market outcome (high LFPR of approximately 75% and the lowest unemployment rate of around 10%), followed by immigrants to South Africa (high LFPR of 75% and unemployment rate of 20%), and South African natives who remained in the country had the worst outcome (lower LFPR of less than 60% and unemployment rate of around 30%).

Tables 12 and 13 as well as Figure 2 show that, while the broad occupation categorization differ across the countries (in particular Canada), compared with Table 6, a relatively higher proportion of South African emigrants in the destination countries was involved in high-skilled occupations as managers, professionals, and technicians (about 60% employed share), compared with immigrants to South Africa (24%) and natives who remained in South Africa (25%). While not shown in these two tables, a high proportion of South Africans (67%–84%) worked full-time in the tertiary sector in destination countries. These findings once again align with the push-pull model as people moved to the country of destination due to higher remuneration there.

Table 12: Broad occupation category of South African-born population aged at least 15 or 16 years who worked in the top emigration destination countries, excluding Canada (share of all employed, %), 2011–2016

Occupation category	**UK (2011)**	**New Zealand (2015)**	**USA (2015)**	**Australia (2016)**
Manager	13.25	17.06	20.24	16.88
Professional	30.67	31.13	28.90	34.09
Technician	17.40	11.57	19.17	11.45
Clerk	11.30	11.64	9.90	13.77
Service and sales worker	5.03	8.41	11.80	7.26
Skilled agricultural worker	N/A	N/A	0.29	N/A
Craft and related trade	6.80	N/A	3.78	N/A
Community and personal service worker	N/A	7.95	N/A	8.39
Caring, leisure and other service occupation	7.17	N/A	N/A	N/A
Operator and assembler	2.80	2.57	3.35	2.41
Elementary occupation	5.57	5.39	2.13	4.46
Other/Unspecified	0.00	4.28	0.44	1.29
	100.00	**100.00**	**100.00**	**100.00**

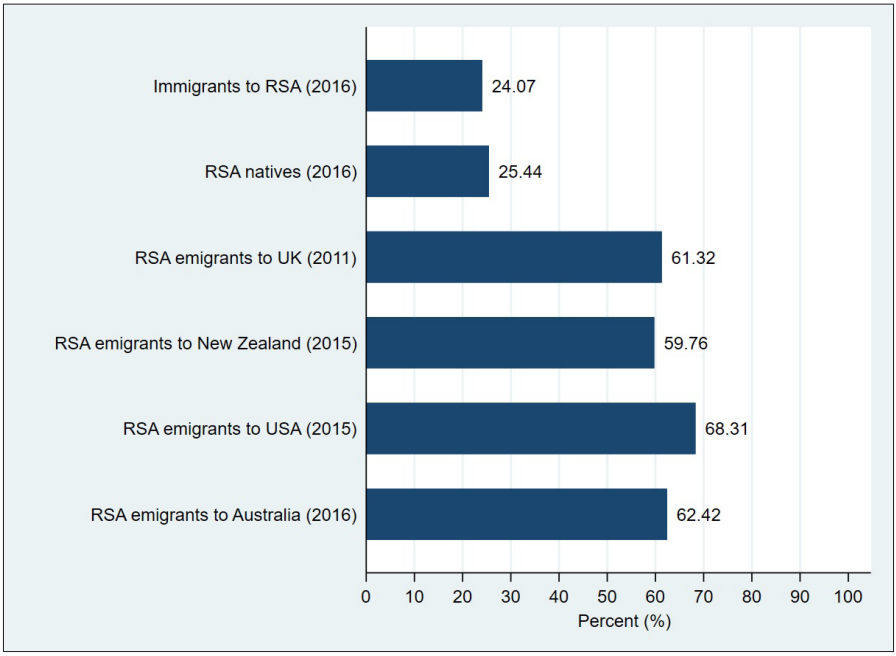
Source: Australian Bureau of Statistics (2019); Office for National Statistics (2019); Statistics New Zealand (2019); United States Census Bureau (2019)

Table 13: Broad occupation category of South African-born population aged at least 16 years who worked in Canada (share of all employed, %), 2016

Broad occupation category	**%**
Manager	7.03#
Business, finance and administrative occupation	15.74#
Natural and applied sciences and related occupation	8.27#
Health occupation	13.02#
Occupation in social science, education, government service, and religion	13.36#
Occupation in art, culture, recreation, and sport	1.67#
Sales and service occupation	18.73#
Trade, transport and equipment operator and related occupation	8.33#
Occupation unique to primary industry	0.28#
Occupation unique to processing, manufacturing and utilities	4.69#
Not available	8.89#
	100.00#

Source: Statistics Canada (2019)
“Other Africa” results.

Figure 2: Proportion of different groups of employed South African-born population aged at least 15 or 16 years in high-skilled occupations in the top emigration destination countries, excluding Canada (%)



Source: Australian Bureau of Statistics (2019); Office for National Statistics (2019); Statistics Canada (2019); Statistics New Zealand (2019); United States Census Bureau (2019); as well as author's calculations using the CS 2016 data

Note: It is not possible to clearly and correctly distinguish the people involved in skilled occupations in Canada, given the broad occupation categorization (see Table 13).

Summary

Table 14 summarizes the personal, educational, and labor-market characteristics of immigrants, natives and emigrants. South African emigrants in the top five destination countries were highly educated, enjoyed higher LFPR and very low unemployment probability; if employed, they were highly likely to engage in high-skilled and tertiary sector activities with higher remuneration and better working conditions.

Table 14: Summary of the profile of three groups of people

	Immigrants to South Africa	**Native South Africans remaining in the country**	**South African emigrants**
Home country	Lesotho Malawi Mozambique Swaziland Zimbabwe	South Africa	South Africa
Host country	South Africa	N/A (remained in South Africa)	Australia Canada New Zealand UK USA
Personal characteristics	Gender: Male (60%) Race: African Age: 40 years (mean)	Gender: Female (51%) Race: African Age: 35 years (mean)	Gender: Female (51%) Race: African Age: 35 years (mean)
Education (% with above matric)	Above 15%)	Above 10%	Above 50%
Geographical characteristics	Area type: urban Province: Gauteng (50%) and Western Cape (10%)	Area type: urban Province: KwaZulu-Natal (20%); Gauteng (20%); Western Cape (10%)	Area type: urban Province: N/A
Labour-market status	LFPR: 75% Unemployment rate: 20%	LFPR: 55% Unemployment rate: 30%	LFPR: 75% Unemployment rate: 10%
Work activities	High-skilled occupations: 25% Tertiary sector: 60%	High-skilled occupations: 24% Tertiary sector: 70%	High-skilled occupations: 60% Tertiary sector: 80%

Source: Author's own calculations

The majority of immigrants originated from other African countries. They were slightly more educated but enjoyed higher LFPR and lower unemployment rates, compared to natives (but their unemployment rate was higher compared to the emigrants – 20% versus 10%). However, employed immigrants were less likely to engage in tertiary sector and formal activities, and less likely to work as employees, compared to natives.

Emigrants enjoyed the best well-being, as they were associated with a much higher educational attainment, a higher LFPR and the lowest unemployment rate (10%). Immigrants to South Africa also experienced better outcomes than natives, as they were slightly more educated, enjoyed a higher LFPR and lower unemployment probability, despite them being relatively less likely to work in the formal sector and tertiary sector, compared with the native employed. Lastly, natives endured the lowest LFPR (55%) but highest unemployment rate (30%) out of the three groups.

As structural change has been taking place in the South African labor market, resulting in an increase in the demand for high-skilled workers, the empirical findings do not suggest that immigrants possess particularly high levels of skills and

education. In fact, only about 24% of immigrant workers engaged in high-skilled occupations. Thus, it is possible that immigration of foreign nationals helps meet the demand for semi-skilled labor to the greatest extent. As occupations of great demand in South Africa require high skills levels – but most of the immigrants (just like natives) did not possess these attributes – skills mismatch has likely taken place in South Africa.

CONCLUSION

This study analyzed the labor-market profiles of three groups. The results enhance the understanding of the impact of international migration on skills supply and demand in South Africa, and identify skills needs of the country. The study benefits stakeholders and policy-makers by better identifying priority critical skills needs of the country, critical skills that are lost, and skills in great demand but in short supply so that these skills needs can be prioritized when issuing work and residence permits for immigrants. Consequently, there will be improvement in national skills planning and skills match, which have direct bearing on the achievement of macroeconomic and social objectives, and effectiveness of government spending on education and training. To conclude, the study suggests four policy recommendations, as outlined below.

Ease up the regulations to attract skilled immigrants

Attraction of foreign skills remains one of the quickest ways to fill the skills gap, to increase capacity and demand for higher levels of skills (Wöcke and Klein, 2002: 451). A strengthened inter-departmental capacity on eligibility and a points-based system for eligibility which can be combined with critical skills are needed, to ensure a thorough implementation and administration of the critical skills visa (Van Lennep 2019b: 2). The DHA should regularly publish a list of scarce skills upon consultation with government departments so that immigrants with the appropriate skills to address South Africa's skills shortage are correctly identified (DHA, 2017: 45–46), whereas eligibility criteria for scarce skills visas should be transparent, clear, and flexible, and facilitate economic growth (Rogerson and Rogerson, 2000: 58).

The government should shift its discourse from the "undesirable African immigration" designation to focus more on the skills that the country can gain from SADC immigrants (Van Lennep, 2019b: 2). South Africa should have a more enabling environment to attract foreign nationals from their home countries; from the most recent Global Competitiveness Report (World Economic Forum, 2019), South Africa was ranked 60th in the Global Competitiveness Index, out of 140 countries. While the country stands out in its financial systems (ranked 19th) and market size (35th), its ranking is dismal in information and communications technology adoptions (89th), skills (90th) and health (118th).

Promote entrepreneurial activities of immigrants

Given the high unemployment rate (35%) and slow pace of job creation in the country, promotion of small and medium businesses by foreign immigrants to help create jobs more rapidly (in both formal and informal sectors) should be encouraged. Wöcke and Klein (2002: 453) suggest that tax and other incentives can be extended by including businesses launched by skilled immigrants that show skills transfer to the native population.

Van Lennep (2019b: 2) asserts that in the Immigration Amendment Act of 2011, one eligibility criterion for a business visa requires the applicants to invest at least ZAR5 million in South Africa, originating from the home country. It is five times greater than what is required in Singapore, for example. There is a need to revisit and revise this criterion, or immigration of foreign entrepreneurs is discouraged.

South Africa may not have a lucrative environment to attract foreigners to migrate to conduct business, as the country was ranked a mediocre 84th in the Doing Business Index, out of 190 countries (World Bank, 2020). The country was ranked low in these sub-indices: enforcing contracts (102nd), registering property (108th), getting electricity (114th), starting a business (139th), and trading across borders (145th). The South African government should address the shortcomings identified in these areas.

Develop and retain skilled natives

To retain skilled South Africans, push factors that most likely drive them out of the country need to be addressed. Crucially, a strong investment climate, adequate opportunities for employees' further education, training and career development, competitive salaries, political certainty, and a low crime rate are required to develop and retain professional skills in the formal sector.

Skills development structures can be improved further by ensuring better cooperation between the government departments, Skills Education Training Authorities (SETAs), Further Education and Training (FET) colleges, and institutions of higher education (Lepheana, 2012), to improve and retain the skills of native workers. For example, the Department of Science Technology (DST) prioritized the Engineering, Mathematics, Science, and Technology fields as key drivers of economic growth; therefore, skilled labor in these fields is expected to be in great demand. Increased financial support from the government and even the private sector for higher education at student, staff and institutional levels, would also be welcomed.

There needs to be ongoing review of the relevance of curricula at FET colleges and universities to the needs of the economy to better align the skills offered by tertiary institutions and skills needs of employers, given technological advancement and digital trends. For example, the Department of Higher Education and Training (DHET) convened a multi-sectoral task team to investigate what teaching, research, and applications of emerging technologies are required to develop capabilities of

the higher education sector to produce graduates with skills demanded in the labor market (Chetty, 2018).

Improve migration and vacancy data capture, availability and usage

There is a need for more regular data on migration flows and better utilization of this information, to strengthen migration information systems. The DHA should release up-to-date and publicly available data on the number of visas issued per year, and personal, educational, and labor-market profiles of immigrants. It is important for such data to be available to the public, to better understand immigrants' contributions to the country's economy (particularly on filling skills shortage gaps and promoting entrepreneurial activities), and more correctly revise the visa eligibility criteria of the earlier mentioned points-based system, as well as update the list of critical skills (Van Lennep, 2019b: 2-4). Lastly, while there is no official vacancy data in South Africa, it is important to utilize this data to better identify the skills shortage areas as well as occupations that are in great demand in South Africa, to assist with better formulation of skills attraction and retention strategies.

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REFERENCES

Australian Bureau of Statistics. 2019. Census table builder. Available at: https://auth.censusdata.abs.gov.au/webapi/jsf/login.xhtml. Accessed on 30 September 2021.

Bohlman, H. 2010. The macroeconomic impact of skilled emigration from South Africa: A CGE analysis. ERSA Working Paper No. 166, Economic Research Southern Africa (ERSA).

Brown, M. 2003. The South African Network of Skills Abroad (SANSA): The South African experience of scientific diaspora networks. In Barre, R., Hernandez, V. and Meyer, J-B. (eds.), *Diasporas Scientifiques*. Marseille: IRD Editions, pp. 1-22.

Budlender, D. 2014. Migration and employment in South Africa: Statistical analysis of the migration module in the Quarterly Labour Force Survey, third quarter 2012. MiWORC Report No. 5, African Centre for Migration and Society, University of the Witwatersrand.

Chetty, K. 2018. *Future of work in South Africa – the road to 2030*. Pretoria: Human Sciences Research Council.

Davids, Y.D., Lefko-Everett, K. and Williams, V. 2005. *The quality of migration services delivery in South Africa*. Cape Town: Southern African Migration Programme (SAMP).

De Jong, G.F. and Steinmetz, M. 2004. Receptivity attitudes and the occupational attainment of male and female immigrant workers. P*opulation Research and Policy Review*, 23(1): 91–116. https://doi.org/10.1023/B:POPU.0000019929.59033.70

Department of Employment and Labour (DEL). 2022. *Draft national labour migration policy for South Africa*. Pretoria: Government Printer.

Department of Home Affairs (DHA). 2017. *White Paper on international migration for South Africa*. Pretoria: Government Printer.

Deuster, C. and Docquier, F. 2018. International migration and human capital inequality: A dyadic approach. Background paper for the 2019 Global Education Monitoring Report. London: United Nations Educational, Scientific and Cultural Organization (UNESCO).

Di Maria, C. and Lazarova, E.A. 2012. Migration, human capital formation, and growth: An empirical investigation. *World Development*, 40(5): 938-955. https://doi.org/10.1016/j.worlddev.2011.11.011

Essop, H. and Yu, D. 2008. The South African informal sector (1997–2006). Stellenbosch Economic Working Papers: 03/08, Stellenbosch University.

Facchini, G., Mayda, A.M. and Mendola, M. 2013. South-south migration and the labor market: Evidence from South Africa. IZA Discussion Paper No. 7362,

Institute of Labor Economics (IZA), Bonn.

Fauvelle-Aymar, C. 2014. Migration and employment in South Africa: An econometric analysis of domestic and international migrants. MiWORC Report No. 6, African Centre for Migration and Society, University of the Witwatersrand.

International Business Publications. 2012. *South Africa investment and business guide – Volume 1: Strategic and practical information*. Washington DC: International Business Publications.

Kalitanyi, V. and Visser, K. 2010. African immigrants in South Africa: Job takers or job creators? *South African Journal of Economic and Management Sciences*, 13(4): 376-390. https://doi.org/10.4102/sajems.v13i4.91

Kleinhans, J. and Yu, D. 2020. The impact of inter-provincial migration on the labour market outcomes in two developed provinces in South Africa. *African Human Mobility Review*, 6(2): 25-57. https://doi.org/10.14426/ahmr.v6i2.797

Kollamparambil, U. 2017. Labour market impact of internal in-migration: A district level analysis of South Africa. ERSA Working Paper No. 667, Economic Research Southern Africa (ERSA).

Leipziger, D.M. 2008. "Brain drain" and the global mobility of high-skilled talent. The World Bank PREM Notes 124, Washington DC: World Bank.

Lepheana, N.G. 2012. The retention of scarce skills: The case of City of Cape Town Municipality – an analysis. Unpublished Master's Thesis, Stellenbosch University.

Marawanyika, G. and Ndlovu, R. 2022. South Africa faces legal fight over Zimbabwean work permits. Available at: https://www.bloomberg.com/news/articles/2022-06-15/south-african-plan-to-end-zimbabweans-permits-faces-challenge. Accessed on 12 July 2022.

Massey, D.S., Arango, J., Hugo, G., Kouaouci, A., Pellegrino, A. and Taylor, J.E. 1993. Theories of international migration: A review and appraisal. *Population and Development Review*, 19(3): 431-466. https://doi.org/10.2307/2938462

Mattes, R. and Mniki, N. 2007. Restless minds: South African students and the brain drain. *Development Southern Africa*, 24(1): 25-46. https://doi.org/10.1080/03768350601165769

Mattes, R. and Richmond, W. 2000. The brain drain: What do skilled South Africans think? In Crush, J. (ed.), *Losing our minds: Skills migration and the South African brain drain*. Cape Town: Idasa, pp. 1-35.

McDonald, D.A., Zinyama, L., Gay, J., De Vletter, F. and Mattes, R. 2000. Guess who's coming to dinner: Migration from Lesotho, Mozambique and Zimbabwe to South Africa. *International Migration Review*, 34(3): 813-841. https://doi.org/10.2307/2675946

Mincer, J. 1978. Family migration decisions. *Journal of Political Economy*, 86(5): 749-

773. Available at: https://www.jstor.org/stable/1828408

Modi, R. 2003. Migration to democratic South Africa. *Economic and Political Weekly*, 38(18): 1759-1762. https://www.jstor.org/stable/4413515

Moses, E. and Yu, D. 2009. Migration from the Northern Cape. SALDRU Working Paper No. 32, Southern Africa Labour and Development Research Unit (SALDRU), University of Cape Town.

Myburgh, A. 2004. Explaining emigration from South Africa. *South African Journal of Economics*, 72(1): 122-148. https://doi.org/10.1111/j.1813-6982.2004.tb00107.x

Office for National Statistics. 2019. Online Census 2011 tables. Available at: http://www.nomisweb.co.uk/census/2011/data_finder. Accessed on 30 September 2021.

Oosthuizen, M. and Naidoo, P. 2004. Internal migration to the Gauteng province. DPRU Working Paper 04/88, Development Policy Research Unit (DPRU), University of Cape Town.

Organisation for Economic Co-operation and Development (OECD). 2018. *How immigrants contribute to South Africa's economy*. Paris: OECD Publishing.

Oteiza, E. 1968. A differential push-pull approach. In Adams, W. (ed.), *The brain drain*. New York: MacMillan, pp.120-234.

Peberdy, S. 2001. Imagining immigration: Inclusive identities and exclusive policies in post-1994 South Africa. *Africa Today*, 48(3): 15-32.

Peters, A.C. and Sundaram, A. 2015. Country of origin and employment prospects among immigrants: An analysis of south-south and north-south migrants to South Africa. *Applied Economics Letters*, 22(17): 1415-1418. https://doi.org/10.1080/13504851.2015.1037428

Rasool, F., Botha, C.J. and Bisschoff, C.A. 2012. Push and pull factors in relation to skills shortages in South Africa. *Journal of Social Sciences*, 30(1): 11-20. https://doi.org/10.1080/09718923.2012.11892978

Republic of South Africa (RSA). 2022. *Critical skills list*. Pretoria: Government Printers.

Rogerson, C.M. and Rogerson, J.M. 2000. Dealing in scarce skills: Employer responses to the brain drain. In Crush, J. (ed.), *Losing our minds: Skills migration and the South African brain drain*. Cape Town: Idasa, pp. 36-62.

Segatti, A. 2011. Reforming South African immigration policy in the post-apartheid period (1990–2010). In Segatti, A. and Landau, L.B. (eds.), *Contemporary migration in South Africa: A regional development issue*. Washington DC: World Bank, pp. 31-66.

Sinclair, M.R. 1999. "I know a place that is softer than this …" – emerging migrant communities in South Africa. *International Migration*, 37(2): 465-483. https://

doi.org/10.1111/1468-2435.00080

Sjaastad, L.A. 1962. The costs and returns of human migration. *Journal of Political Economy*, 70(5): 80-93.

Stark, O. and Dorn, A. 2013. International migration, human capital formation, and saving. ZEF Discussion Papers on Development Policy No. 174. Center for Development Research, Bonn.

Stark, O., Helmenstein, C. and Prskawetz, A. 1998. Human capital depletion, human capital formation, and migration: A blessing or a "curse"? *Economics Letters*, 60: 363-367. https://doi.org/10.1016/S0165-1765(98)00125-6

Statistics Canada. 2019. Census 2016 online data tables. Available at: https://www12.statcan.gc.ca/census-recensement/2016/dp-pd/index-eng.cfm. Accessed on 01 October 2019.

Statistics New Zealand. 2019. NZ stats table viewer. Available at: http://nzdotstat.stats.govt.nz/wbos/Index.aspx?_ga=2.27878460.1485461920.1569840816-1877848411.1569840816. Accessed on 30 September 2019.

Statistics South Africa (StatsSA). 2001. National Census 2001. Pretoria: Statistics South Africa.

Statistics South Africa (StatsSA). 2004. Documented Migration. Pretoria: Statistics South Africa.

Statistics South Africa (StatsSA). 2007. Community Survey 2007. Pretoria: Statistics South Africa.

Statistics South Africa (StatsSA). 2011. National Census 2011. Pretoria: Statistics South Africa.

Statistics South Africa (StatsSA). 2016. Community Survey 2016, Statistical Release P0301. Pretoria: Statistics South Africa.

Statistics South Africa (StatsSA). 2019. Labour market outcomes of migrant populations in South Africa, 2012 and 2017. Pretoria: Statistics South Africa.

Theodore, N., Pretorius, A., Blaauw, D. and Schenck, C. 2017. Informality and the context of reception in South Africa's new immigrant destinations. *Population, Space and Place*, 24(1): 1-10. https://doi.org/10.1002/psp.2119

Todaro, M.P. and Smith, S.C. 2015. *Economic development*.12th edition. Boston: Pearson.

United Nations (UN). 2019. International migration stock: The 2017 revision. Available at: https://www.un.org/en/development/desa/population/migration/data/estimates2/estimates17.asp. Accessed on 05 July 2019.

United States Census Bureau. 2019. American Community Survey: Online tables and tools. Available at: https://www.census.gov/acs/www/data/data-tables-and-tools. Accessed on 30 September 2019.

Van der Berg, S., Burger, R., Leibbrandt, M. and Mlatsheni, C. 2002. Migration and

the changing rural-urban interface in South Africa: What can we learn from census and survey data? Paper presented at the Workshop on Migration and Poverty, Stellenbosch, 04 March 2002.

Van Lennep, T. 2019a. Migration II: The South African migration policy landscape. Available at: https://hsf.org.za/publications/hsf-briefs/the-south-african-migration-policy-landscape. Accessed on 31 March 2020.

Van Lennep, T. 2019b. Migration V: Policy recommendations for the South African migration regime. Available at: https://hsf.org.za/publications/hsf-briefs/policy-recommendations-for-the-south-african-migration-regime. Accessed on 31 March 2020.

Van Rooyen, J. 2000. *The New Great Trek: The story of South Africa's white exodus*. Pretoria: UNISA Press.

Vermaak, C. and Muller, C. 2019. Do immigrants have better labour market outcomes than South Africans? *Development Southern Africa*, 36(5): 678-698. https://doi.org/10.1080/0376835X.2019.1584549

Vidal, J-P. 1998. The effect of emigration on human capital formation. *Journal of Population Economics*, 11(4): 589-600. https://doi.org/10.1007/s001480050086

Waller, L. 2006. Migration of skills in South Africa: Patterns, trends and challenges. Migration Policy Brief No. 20. Southern African Migration Project (SAMP), Cape Town.

Wentzel, M., Viljoen, J. and Kok, P. 2004. Contemporary South African migration patterns and intentions. In Kok, P., Gelderblom, D., Oucho, J.O. and Van Zyl, J. (eds.), *Migration in South and Southern Africa: Dynamics and determinants*. Cape Town: HSRC Press, pp. 97-117.

Wöcke, A. and Klein, S. 2002. The implications of South Africa's skills migration policy for country competitiveness. *Development Southern Africa*, 19(4): 441-454. https://doi.org/10.1080/0376835022000019464

World Bank. 2020. *Doing business 2020: Comparing business regulation in 190 economies*. Washington DC: World Bank.

World Economic Forum (WEF). 2019. *The Global Competitiveness Report 2019*. Geneva: World Economic Forum.

Zuberi, T. and Sibanda, A. 2004. How do migrants fare in a post-apartheid South African labour market? *International Migration Review*, 38(4): 1462-1491. https://doi.org/10.1111%2Fj.1747-7379.2004.tb00244.x