International Labour Organization

SOUTHERN AFRICAN MIGRATION MANAGEMENT PROJECT

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ZAMBIA LABOUR MIGRATION TRENDS AND IMPACTS REPORT

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Executive summary

This Zambia Labour Migration Trends and Impacts Report has been prepared under the Southern Africa Migration Management (SAMM) project. The report presents an overview of international labour migration statistics (ILMS) in Zambia, in a context of coverage in the Southern Africa and Indian Ocean region. It assesses the main data sources as well as potential additional data sources, that could contribute to greater coverage and depth of ILMS in the country. Additionally, the report draws from recent Labour Force Surveys to present characteristics of labour migration in Zambia, before presenting a top-level analysis of the impact of migrants on the native-born labour force. The report concludes with recommendations for improving ILMS for evidence-based labour migration governance.

Based on the review of coverage for Zambia in a context of Southern Africa and the Indian Ocean region, Zambia has relatively good coverage of international migrant stock indicators. Zambia relies on its regular Labour Force Survey for information on migrant workers. However, when the microdata is publicly available from the Zambia Census of Population and Housing 2022 it will provide an additional set of data on migrant workers and their characteristics as well as allowing for more up-to-date sample frames for the Labour Force Survey. Some of the findings of the report are as follows:

- **According to the Zambia Labour Force Survey 2021, a total of 71,000 foreign-born persons of working-age (aged 15+) were in the country in 2021.** This represents less than one per cent of the total working-age population (estimated at around 10 million in 2021). This represents a decrease in the numbers since 2017, for which most of the decrease was recorded in 2020, potentially linked to the COVID-19 pandemic. As a result, total numbers of foreign-born working-age population in 2021 is about 15 per cent lower than estimated in 2017.
- **The majority of the foreign-born working-age population are aged 25+, accounting for around 80 per cent of the total foreign-born working-age population.** This has changed only marginally since 2017, although notably there was a drop in the share of the youth population in 2020, again potentially linked to COVID-19 pandemic dynamics.
- **The education profile of the total working-age population shows that the foreign-born population tend to have slightly higher levels of education on average.** In 2021, for instance, around 15 per cent of the foreign-born population had advanced levels of education, compared to 5.9 per cent of the native-born population.
- **Most of the foreign-born population were born in Southern Africa.** The majority are from Southern Africa, particularly Angola, Democratic Republic of Congo, Zimbabwe and Malawi, but also a number from South Asian countries, including India and Bangladesh. Such findings are not dissimilar from estimates of migration flows of other sources.
- **Between 2017 and 2021, the labour force participation rate has steadily increased for the foreign-born population, even through the onset of the COVID-19 pandemic.** In 2017, the labour force participation rate for the foreign-born population was 47.3 per cent, this increased steadily

to 66.5 per cent in 2021. For the native-born population, the labour force participation rate in 2017 was estimated at 45.7 per cent, marginally lower than the foreign-born population. There are several potential reasons for this, but ultimately it may reflect some kind of heterogeneous impact as a result of the COVID-19 pandemic, between the foreign-born and native-born populations.

- **By sex, there are significant differences in labour force participation for the foreign-born population, with narrowing gender gaps in participation over the last few years.** In 2021, the male labour force participation rate was estimated at 76.6 per cent, compared to 53.8 per cent for women. However, while both men and women foreign-born populations have increased their participation since 2017, the participation rate for foreign-born women has more than doubled, from 26.4 per cent in 2017 to 53.8 per cent in 2021. This compares to an increase from 67.3 per cent for men in 2017 to 76.6 per cent in 2021. This is consistent with findings of the COMESA Report on Labour Migration Statistics, 2022, that also highlighted the relative growth of labour force participation of female migrant workers in Zambia (COMESA 2022).
- **The distribution of foreign-born workers by broad sector group in 2021 is only slightly different to the average for the native-born population.** It shows that in 2021, around 54 per cent of the foreign-born population were engaged in the agriculture sector, compared to 60 per cent for the native-born population. Around 32 per cent were engaged in the services sector, compared to 30 per cent for the native-born population and 14 per cent of the population of foreign-born engaged in industry, to 10 per cent of the native-born.
- **For the last two decades, there have been local skill shortages in Zambia's construction and mining sectors, offset by migrant workers.** Mining is driven largely by copper and nickel extraction, which contributes to 'non-ferrous metals' accounting for over 50 per cent of the country's exports. Insufficient skills supply has resulted in foreign direct investment (FDI) in large industrial projects being accompanied by inflows of skilled mining workers to offset the lack of skilled labour in these sectors. Chinese FDI in mining and construction in particular has been increasing over this period, with inflows of Chinese migrant workers to work on these projects. For instance, some estimates suggested that the volumes of Chinese nationals increased by 60 per cent over five years between 2009 and 2015. At the time of the previous Census of Population and Housing (2010), findings have suggested that around a quarter of migrant workers in the country were located in the Copperbelt province, a region with significant mining investment.

At present, there are still a number of data gaps and limitations, including too few observations of migrants in the Labour Force Survey, and gaps on migrant flows and nationals abroad. The following are a summary of potential steps for Zambia to improve its labour migration statistics:

- **Oversample the migrant population in the Labour Force Survey:** Some of the variables in the Labour Force Survey cannot be used due to low numbers of observations. This was the case for a number of key variables, including economic sector, occupation, status in employment, earnings and wages, and other measures of working conditions. As such, available approaches to address this includes oversampling of migrant households.

- **Explore options for capturing information on inflows and nationals abroad in the Labour Force Survey:** It is possible to capture information on inflows and nationals abroad through questions in the population census. The Zambia Labour Force Survey questionnaire suggests that it should be possible to extract data on inflows of migrants and migrant workers.
- **Explore alternative sources of data, particularly administrative data sources:** There are signs that administrative data is collected by different Ministries and agencies and could be used at least for inflows of migrant workers. Issues of cooperation between ministries and different institutions deserves special attention with efforts to build trust, collaboration and cooperation at the inter-ministerial level.
- **Consider additional questions in the Labour Force Survey to examine nationals abroad, returnees and also recruitment costs:** Precise wording of questions can draw from international examples, including countries that have piloted approaches for measuring recruitment costs (per SDG 10.7.1) using Labour Force Survey data. This information, as well as information from returnees, can provide insights into emigration motives, working conditions and characteristics.
- **Once Labour Force Survey data is improved, use Social Accounting Matrices to assess migrants' economic contribution to the economy:** Assessments of the economic contribution of migrants to the economy can be assessed using social accounting matrices. If migrant worker data is improved and more reliable then it can provide analysis of the economic contribution of migrants similar to assessments done elsewhere, e.g. South Africa (OECD and ILO 2018b).

1. Introduction

1.1. Background of the report

This Zambia Labour Migration Trends and Impacts Report has been prepared under the Southern Africa Migration Management (SAMM) project. The SAMM project is an inter-agency project with an overall objective to improve migration management in the Southern Africa and Indian Ocean region, guided by and contributing to the realisation of the 2030 Agenda for Sustainable Development.

Each country in the Southern Africa and Indian Ocean region can be considered to different degrees to be countries of origin, transit and / or destination for labour migration. However, while labour migration is characteristic of the region, there remains a lack of data collected, disseminated and analysed on international labour migration statistics (ILMS).

Improving the knowledge base on migration and labour migration statistics can contribute to improved understanding of migration dynamics, labour market implications and therefore labour migration governance, as well as better understanding of issues related to social exclusion and poverty and other socioeconomic considerations. Ultimately, improved migration and labour migration statistics contributes to stronger evidence-based policymaking, which is particularly relevant in the context of developing Action Plans and Policy Frameworks on labour migration.

The report first presents an overview of the methodology, including key concepts and definitions (Section 2), before presenting an overview of coverage of ILMS in Zambia in relation to the Southern Africa and Indian Ocean region. Section 2 also assesses data sources and potential data sources for addressing limitations and filling data gaps. Section 3 provides an overview of recent labour migration trends using Zambia Labour Force Survey data and Section 4 concludes and provides recommendations.

1.2. Zambian labour migration context

Zambia is a country of origin, transit and destination and is signatory to a number of Regional Economic Communities, including the South African Development Community (SADC), and the Common Market for Eastern and Southern Europe (COMESA). Both SADC and COMESA have processes in place towards the free movement of persons, with varying degrees of progress (COMESA 2023; UNECA, n.d.).[1] At the same time, Zambia has porous borders which facilitates irregular migration flows from the North (particularly migrants from the Democratic Republic of the

[1] The COMESA Protocol on the Free Movement of Persons, Labour, Services, the Right of Establishment and Residence was adopted in 2001 by the COMESA Authority of Heads and States and is in the process of being signed and ratified and currently still in the process of gradual relaxation and removal of visa requirements (COMESA 2023). A draft Protocol on the Free Movement of Persons within SADC was introduced in 1996 and replaced by a Protocol on the Facilitation of Movement of Persons in 1997, and subsequently revised in 2005 to allow visa-free entry for a maximum of 90 days. However, this has not been fully implemented with only some Member States signing the Protocol, yet most Member States exempt one another from visa requirements (UNECA, n.d.).

Congo, East Africa and the Horn of Africa) and the East (particularly migrants from Malawi and Mozambique) (IOM 2019).

Zambia is also a recipient country for refugees and asylum seekers, with estimates suggesting that around 33.3 per cent of the total migrant stock (aged 0+) in Zambia in 2020 were refugees and asylum seekers, equivalent to around 63,000 people (UNDESA 2020). Refugees are technically permitted to work in Zambia under certain conditions, however, access to work is challenging (Nyamazana et al. 2017).

While Zambia has a National Migration Policy, labour migration is only a subcomponent and lacks explicit guidance (Ministry of Home Affairs and Internal Security 2022).[2] Zambia is otherwise subject to regional policies and initiatives, including the SADC Labour Migration Action Plan (2020-2025) (SAMM 2021a; 2021b), alongside a range of its own policies including the Diaspora Policy (Ministry of Foreign Affairs 2019).

1.3. Labour migration statistics

In 2020, the SAMM project published a brief summarising indicators for labour migration in the region (ILO 2020). This brief also contains a shortlist of what can be considered the minimum or core indicators on labour migration. The shortlist can be drawn from a list of 21 indicators used by the ILO for its ILMS Database, spanning three categories: i) international migrant stock, ii) migrant flows (inflows) and iii) nationals abroad (stock of migrants abroad, outflows and returnees).[3]

The International Labour Organization (ILO)'s Statistics Department compiles ILMS and publishes these in its ILMS Database, available on ILOSTAT (ILO, n.d.). The information in the ILMS Database complies with the guidelines concerning statistics of international labour migration endorsed at the 20th International Conference for Labour Statisticians (ILCS) (ILO 2018). The ILO ILMS database, which is compiled from publicly available data as well as information shared by national focal points, can serve as a gauge of what ILMS is available in a country or region.

The ILO has also developed a comprehensive methodology for global and regional estimates of migrant workers which uses available data, and proxies and modelled estimates to fill gaps. There is a distinct lack of real data points for the African region to feed into the models. Improvements in the regional and global estimates of migrant workers can be improved by improved data availability for ILMS in the African region.

[2] A Zambia Labour Migration Strategy is current being drafted at the time of writing of this report.

[3] See Concepts and Definitions section of this report, as well as additional concepts and definitions in Appendix II.

2. Methodology

2.1. Objectives

Given the context outlined in Section 1, this first Zambia Labour Migration Trends and Impacts report aims to contribute to the knowledge and understanding of labour migration in Zambia, and specifically to draw attention to the available data on international labour migration statistics and the gaps therein which can be improved upon in future editions of the report. The report and the analyses therein will serve to support implementation of the National Labour Migration Strategy and improve ILMS in Zambia.

2.2. Methodological framework

While this Zambia Labour Migration Trends and Impacts report stands as an assessment in its own right, there wealth of labour migration statistics available in Zambia provides an opportunity to develop a standardised approach to mapping and analysing ILMS in the Southern Africa and the Indian Ocean region. Accordingly, the report's methodological framework is designed to be structured in a way that is scalable to other countries in the region. It is based primarily on desk research, and covers the following topics:

Mapping of available and potential ILMS data sources

i) Assessment of availability of minimum indicators for labour migration by assessing coverage (by indicator and year) in the ILO ILMS Database (with comparisons to the wider region of Southern Africa and the Indian Ocean);

ii) Assessment of potential additional data on labour migration that is not included in the ILO ILMS Database, including official data sources (e.g. Population Censuses and Household Surveys) as well as administrative data sources;

Analysis of available data on ILMS

i) Assessment of recent trends and estimates from different data sources (from official reports and also from available microdata) on:

   a. International migrant stock
   b. Migrant flows (inflows)
   c. Nationals abroad (stock of migrants, outflows and returnees)

ii) Overview of analysis and findings from recent literature on labour migration in Zambia, including findings on labour market integration, human capital and economic impacts, drawing from OECD/ILO assessments of immigration's contributions to South Africa and Ghana's respective economies (OECD and ILO 2018b; 2018a).

Recommendations and next steps

i) Analysis of capacity to report on minimum labour migration indicators, including an overview of constraints identified in recent literature and through other exchanges (e.g., workshops and bilateral exchanges);

ii) Summary of data gaps on minimum labour migration indicators and recommendations for filling gaps.

2.3. Key concepts and definitions

The following concepts and definitions are those used for international labour migration statistics, in line with the ICLS Guidelines Concerning Statistics of International Labour Migration (ILO 2018). Those provided below are a selection related to the main categories of labour migration statistics analysed in Section 3.[4]

Place of birth

This variable refers to the country of birth criterion for international migration definition and distinguishes a country's native-born population from the foreign-born.

Country of destination

An emigrant's country of destination is the country, other than his country of citizenship, to which that person transfers his or her usual residence.

Foreign-born population

For a given country, comprises all individuals born outside the country.

Stock of international migrants (foreign-born or foreign citizens)

For a given country, refers to the number either foreign-born individuals or foreign citizens in a country at a given period.

Inflow of international migrants (foreign-born or foreign citizens)

Depending on the criterion used to define international migration, the inflow of international migrants includes either foreign-born individuals or foreign citizens who moved to the country during the reference period to establish usual residence there.

Inflow of nationals returned from abroad (returnees)

Refers to the number of citizens who return from a period of residence abroad to live again in their country of citizenship during the reference period.

Outflow of nationals

For a given country, refers to the number of its citizens who left their country of citizenship to establish usual residence in another country during a given period of time.

[4] For a detailed and comprehensive list of all international labour migration statistics concepts and definitions, including labour market concepts, please consult the ILOSTAT Guide to reporting International Labour Migration Statistics to the ILO using the Excel questionnaire (ILO, 2021).

Outflow of nationals for employment

The outflow of nationals for employment includes only the citizens who left their country for employment purposes, or the “for work” emigrants. This group therefore excludes the accompanying family members whose purpose of migration was not employment at the time of entry to the destination country.

Stock of nationals abroad

For a given country, refers to the number of its citizens who have their usual residence in another country at a given period of time.

3. International labour migration statistics and data sources in Zambia

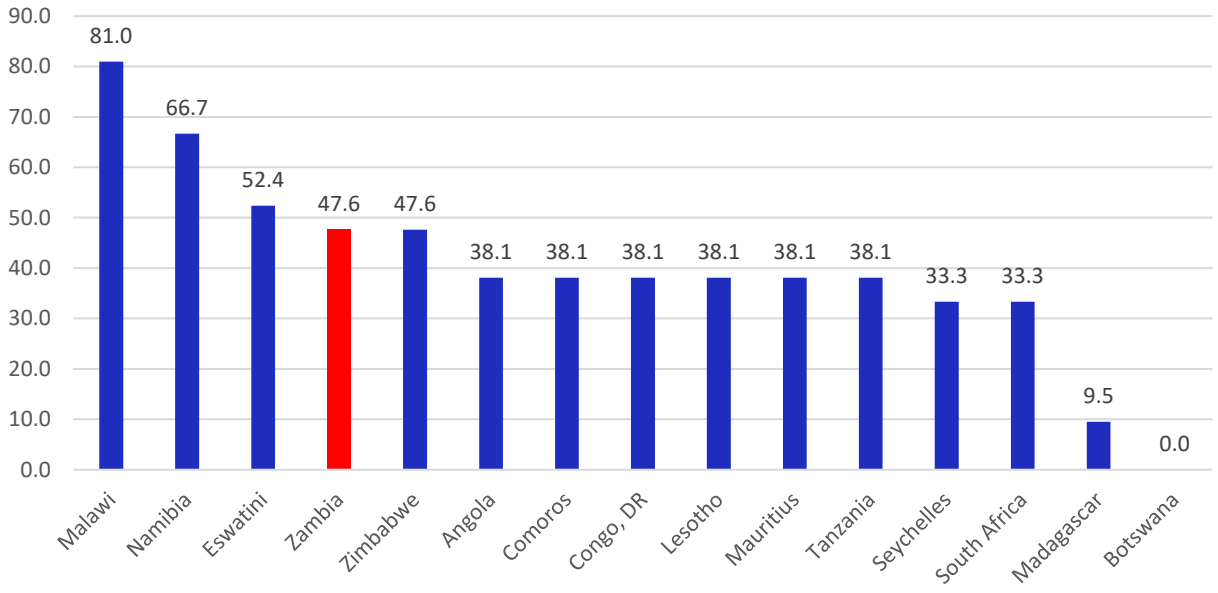
International labour migration statistics (ILMS) can encapsulate a wide range of indicators. This makes it challenging to benchmark coverage and prioritise the expansion of different indicators. To facilitate the assessment of ILMS indicator coverage, a selection of indicators is assessed in this report, these are a set of 21 indicators used to populate the ILOSTAT ILMS Database (Appendix II). Additionally, the SAMM project has identified a subset of these, that are considered minimum indicators (ILO 2020). These minimum indicators are derived from different indicators of the 21 indicators in ILO ILMS Database. For the purpose of this report, the benchmark for Zambia will be based on the 21 indicators, with special attention to those that are highlighted as SAMM minimum indicators.

3.1. International labour migration statistics indicator coverage

3.1.1. Coverage of main indicators

For the Southern Africa and Indian Ocean region, there is a distinct shortage of ILMS available. Figure 3.1 shows for each of the countries in the region, the percentage of the 21 indicators with any datapoint in the ILO ILMS Database. Zambia has datapoints for 47.6 per cent of the indicators, which for the region has one of the best coverage rates, behind Malawi (81 per cent), Namibia (66.7 per cent) and Eswatini (52.4 per cent). Zambia has the same coverage rate as Zimbabwe.

▶ Figure 3.1: Percentage coverage of 21 indicators in the ILO ILMS Database, Zambia and Southern Africa and Indian Ocean countries



Note: Congo, DR = Democratic Republic of the Congo; Tanzania = United Republic of Tanzania. Source: ILOSTAT ILMS Database, available at https://ilostat.ilo.org [Accessed 28 September 2023]

For the region as a whole, such findings on the shortage of data are echoed by the most recent edition of the African Union's Report on Labour Migration Statistics in Africa (African Union Commission et al. 2021). It should be noted however, that absence of data in the ILO ILMS Database, or public data, does not mean it does not exist, data might also not yet be processed or shared externally.

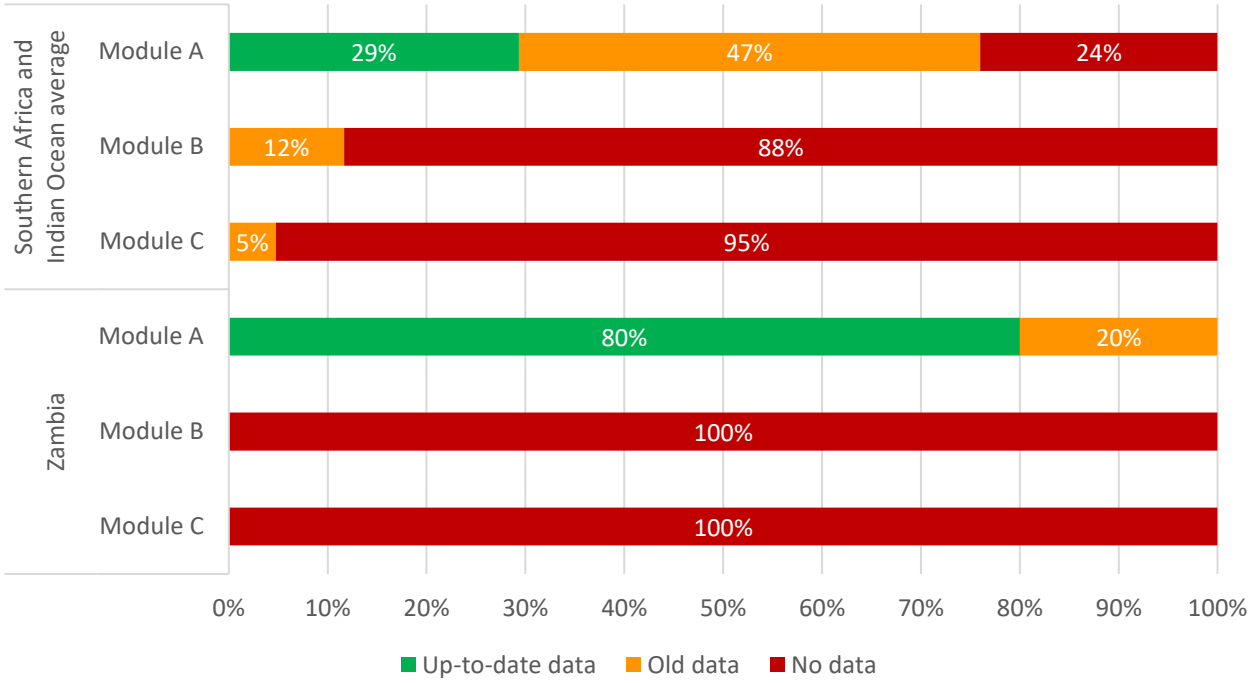
There are three main modules in the ILO ILMS Database, Modules A, B and C (see Concepts and Definitions in the Methodology section). Module A includes information for international migrant stock, while relies largely on population census data and Labour Force Surveys. Because these data sources are typically more readily and publicly available in different countries, coverage for Module A tends to be best across all countries in the ILO ILMS database. Module B refers to international migrant flows, which specifically refers to inflows of migrants and migrant workers. Data for Module B tends to rely on administrative data sources such as work permits and visa information (although other sources can also provide this data), which is not always readily available in countries of origin, resulting in lower coverage. Finally, Module C provides information on nationals abroad, including the stock of migrants abroad, returnees and outflows of nationals abroad. Again, this relies on administrative data and coverage tends to be the poorest of the three modules in the ILO ILMS Database globally.

In the Southern Africa and Indian Ocean region, coverage for the Module A is in line with the global average, with relatively good coverage, of around 76 per cent. Data sources for these countries in Module A are indeed Labour Force Surveys and population censuses. Module B has much poorer coverage, of around 12 per cent, and Module C, even poorer at 5 per cent. There is therefore considerable score for improving coverage of Modules B and C through improvements in the sharing and processing of administrative data. Sharing of administrative data requires cooperation and coordination between different ministries and departments that collect relevant forms of administrative data, with the national statistics office and the ministry of labour / employment / manpower.

For Zambia, coverage is similar to the regional average, with all datapoints for Module A, for which its coverage is 100 per cent (compared to 76 per cent for the Southern Africa and Indian Ocean as a whole).[5] Moreover, 80 per cent of the data for Zambia in Module A is recent and up-to-date data, compared to 29 per cent for the region (see Figure 3.2). This is notable, and reflects the data collected in the annual and quarterly Labour Force Survey implemented in Zambia since 2017. Regular and up-to-date Labour Force Surveys allow for the comparison and assessment of trends over time and are important for evidence-based policymaking.

[5] Southern Africa and Indian Ocean regional average includes Zambia datapoints.

▶ Figure 3.2: Coverage of ILO ILMS Database Modules A to C, Zambia versus Southern Africa and Indian Ocean average



Source: ILOSTAT ILMS Database, available at https://ilostat.ilo.org [Accessed 28 September 2023]

Figure 3.3 shows the latest year of available data in the ILO ILMS Database. The ILO ILMS Database is updated throughout the year, but focal points per country are invited to submit at the end of each year. Hence, as of September 2023, data was last submitted in 2022, which therefore would mean that 2021 and 2022 data would be the latest available in the dataset at the time of writing.

Accordingly, Figure 3.3 shows that for Zambia data is available for eight of the 10 tables in module A. The latest data in most cases is 2021, with the latest data being 2017 for Table 3 and 2018 for Table 8. Table 3 refers to 'Foreign-born or non-citizen working-age population by sex and country of birth or citizenship (Persons)' and Table 8 refers to 'Employed foreign-born persons by sex and country of birth or citizenship (Persons)'. This suggests that data since 2018 has only information on whether a respondent is a national or non-national, with only data from 2017 and 2018 having information on the place of birth or country of citizenship.

In the Southern Africa and Indian ocean region, only Malawi and Namibia have data available for inflows of migrants (Module B). For Malawi, this information is from the Population Census and for Namibia this information (when a person arrived) is captured in the Labour Force Survey. Review of these countries could therefore serve as examples for other countries in the region, including Zambia, to capture information on inflows of migrants. Similarly, only Malawi and Eswatini have any datapoints for nationals abroad (Module C). Again, in both cases this information is taken from population census data and could also serve as examples for other countries for inclusion of additional questions to capture this information. Notably, no country in the region has provided information from administrative sources.

▶ **Figure 3.3: Latest year of available data in the ILO ILMS Database, Zambia and Southern Africa and Indian Ocean countries**

		Angola	Botswana	Comoros	Congo, DR	Eswatini	Lesotho	Madagascar	Malawi	Mauritius	Namibia	Seychelles	South Africa	Tanzania	**Zambia**	Zimbabwe
Module A	Table 1	2021	2022	2021	2020	2021	2019	2022	2020	2011	2018	2020	2017	2020	2021	2021
	Table 2	2021	2022	2021	2020	2021	2019	2012	2020	2011	2018	2020	2017	2020	2021	2021
	Table 3					2021			2018	2011	2018				2017	2021
	Table 4	2021	2022	2021	2020	2021	2019	2022	2020	2011	2018	2020	2017	2020	2021	2021
	Table 5	2021	2022	2021	2012	2021	2019	2022	2018		2018	2020	2017	2020	2021	2021
	Table 6	2021	2022	2021	2020	2021	2019	2022	2018	2011	2018	2020	2017	2020	2021	2021
	Table 7	2021	2022	2021	2020	2021	2019	2022	2018	2011	2018	2020	2017	2020	2021	2021
	Table 8					2021			2018	2011	2018				2018	2021
	Table 9	2021	2022	2021	2012	2021	2019	2022	2020	2011	2018	2020	2017	2014	2021	2021
	Table 10	2021	2022	2021	2012	2021	2019	2012	2013		2018			2020	2021	2021
Module B	Table 11								2018		2018					
	Table 12										2018					
	Table 13								2018		2018					
	Table 14								2018		2018					
Module C	Table 15					2017			2018							
	Table 16								2018							
	Table 17								2018							
	Table 18								2018							
	Table 19															
	Table 20															
	Table 21															

Note: Congo, DR = Democratic Republic of the Congo; Tanzania = United Republic of Tanzania. Source: ILOSTAT ILMS Database, available at https://ilostat.ilo.org [Accessed 28 September 2023]

3.2. Overview of available and potential data sources on international labour migration statistics

3.2.1. Labour Force Survey

International migrant stock

The most common source of data that allows for estimates of international migrant stock is the Labour Force Survey. The Labour Force Survey in Zambia is a quarterly survey (which can be pooled across the four quarters to provide annual data), with recent surveys including 2017, 2018, 2019, 2020 and 2021. As a data source, the Labour Force Survey is an important one for identifying migrant workers. There are two main criteria that need to be met, identification of: i) migration status and ii) labour force status and characteristics. The latter is typically well covered in the Labour Force Survey, provided that questions are asked to all working-age persons whether they are nationals or non-nationals.

Migration status can be captured by questions on place or birth or citizenship. The Zambia Labour Force Survey 2021 questionnaire has a module on labour migration that allows for multiple questions to be asked around place of birth and nationality, including:

- In which district /country was (NAME) born?
- Specify the country in which (NAME) was born?
- What is (NAME) Nationality?
- Does (NAME) have another nationality?

Accordingly, the Zambia Labour Force Survey allows for international migrant stock to be measured, that is, the number of non-nationals (migrants) in Zambia at a given point of time. This can be broken down by different criteria, including economic activity and occupation – all variables related to Module A (see previous section). However, a low number of observations for migrants undermines the amount of analysis that can be conducted. For instance, it is not possible to provide an unemployment rate for migrants, economic activity beyond broad sector groups, wages and earnings, or even occupational skill levels. A data quality assessment is provided in Appendix IV, including the number of observations and relative standard errors.

Notably, the previous section identified that there was no recent information in the ILO ILMS Database for 'Table 3: 'Foreign-born or non-citizen working-age population by sex and country of birth or citizenship (Persons)' and Table 8: 'Employed foreign-born persons by sex and country of birth or citizenship (Persons)'. This information is excluded again due to small numbers of observations.

International migrant flows and nationals abroad

The Zambia Labour Force Survey is not currently used for international migrant flow (inflows) or nationals abroad. International migrant flows (inflows) requires information to be asked about migration status, and also time of arrival and / or period of time in the country. These are asked in the labour migration module of the questionnaire, as followed:

- Has (NAME) moved from another country to Zambia in the last twelve months?
- When did (NAME) move to Zambia?

Therefore, the questionnaire would in theory allow for identification of inflows of migrant workers based on i) migration status, ii) labour force status and characteristics, and iii) time of arrival in Zambia. This information is available in the microdata for the Labour Force Survey, but there are too few observations for reliable estimates and therefore are not included.

To include information on inflows, the migrant population would need to be oversampled in the survey to increase the number of observations and allow for more reliable estimates to therefore be used in analysis.

Similarly, there is a lack of information on emigration and returnees (the Census of Population and Housing being the main source). The Labour Force Survey could be a source of information about these with the right questions. Options include asking other family members about household

members who have gone abroad or talking to returnees about their experience abroad and processes for recruitment and exit. This is an imperfect approach with different biases and considerations to contend with but provides some details and can also be a source of information about recruitment costs and fees (per SDG 10.7.1) of Zambians going to work abroad.

3.2.2. Census of Population and Housing

The Zambia Census of Population and Housing is a reliable source of information on migrants and migrant workers and also provides the sample frame for the Labour Force Survey. The Zambia Census of Population and Housing also includes detailed questions on labour market characteristics that are sufficiently detailed to allow for compliance and alignment with ICLS guidelines. Population Census data is also a good source of data for gathering information on small population groups, for which migrant workers can be considered one – population censuses typically avoid the challenges of smaller sample sizes and few observations of migrant workers, that are more common with household surveys, including Labour Force Surveys.

The main downside of using population census data for migrant worker estimates and characteristics is the infrequency of the census implementation. Population censuses are typically only implemented every 10 years, and this is the case in Zambia. The previous Census of Population and Housing Census was conducted in 2010, with the 2020 round interrupted by the onset of the COVID-19 pandemic, postponing to 2022. Population Censuses also require considerable time to process and publish the findings. This means that the data only allows comparisons every 10 years (or 5 years with a intercensal survey) and also faces a lag with publication. As a result, the Labour Force Survey is typically a preferred source, allowing for more regular and up-to-date information.

3.2.3. Administrative data sources

There is a lack of publicly available information from administrative data sources in the Southern Africa and Indian ocean region and Zambia is no exception. Administrative data sources refer to data that is primarily collected for administrative reasons and not statistical reasons, such as work permit information, visa information and others. Although, existing literature on migration in Zambia have provided numbers on different permit types, including Employment Permits and Temporary Employment Permits, for migrants looking to work in Zambia (IOM 2019). This information would be an important source of inflow information for Zambia and allow for informed analysis of inflows of migrant workers, their characteristics and other details such as economic activity, occupation and skill levels. At the same time, there has also been information shared on entries and exit (IOM 2019). It is unclear whether this information could contain information related to the labour market and therefore labour migration, but is encouraging that it exists and has at least at one point been processed and analysed.

There are a number of challenges of using administrative data for ILMS, including different definitions resulting in inconsistencies and lack of comparability, as well as other limitations such as certain geographical areas, or skill levels and sectors. Nonetheless, the information is still highly valuable, and even if focused only on a certain population group, sector or skill level, it can be a

proxy that reflects trends and provides valuable insights into labour migration to help inform evidence-based labour migration governance. There are a number of steps to facilitating the processing and sharing of administrative data, including i) awareness raising with different departments and ministries of the value of different types of administrative data for ILMS, ii) technical assistance in applying statistical ethics and safeguarding protocols and iii) technical assistance in the processing and sharing of the data. All of which require inter-ministerial coordination and cooperation, often being led by the National Statistics Office or Ministry of Labour. There are challenges to this in countries globally, including lack of cooperation between institutions, sometimes stemming from competition for available funds among other factors.

4. Labour migration trends and characteristics in Zambia

The Zambia Labour Force Survey provides the most up to date estimates of the number of migrant workers. The forthcoming 2022 Census of Population and Housing will provide the most up to date estimates for migrant workers in Zambia, however, is unavailable at the time of writing. The last Population and Housing Census, 2010, estimated the total number of migrant in Zambia at around 43,867 (Central Statistical Office 2013). This referred to those aged 0+ (therefore broader than the working-age population at 15+) and included all types of migrant, noting that around 30 per cent were refugees and asylum seekers and around 20 per cent had come with intentions to settle (Central Statistical Office 2013).

Since then, the migration module was introduced to the Labour Force Survey and estimates that the total stock of international migrant workers was around 85,000 in 2017 and approximately 71,000 in 2021.[6][7][8] At the same time, estimates on flows from administrative data from the Department of Immigration, suggested it had issued around 50,000 Employment Permits and around 20,000 Temporary Employment Permits between 2013 and 2017 (IOM 2019). Such figures are not necessarily inconsistent with one another, but reflect the complex challenge of measuring, analysing and understanding labour migration in the country and underscore the need for coordinated and comprehensive approaches to analysing labour migration for effective evidence-based labour migration governance.

Total migrant stock (aged 0+) of Zambians abroad, is estimated at around 200,700 in 2020 (UNDESA 2020). Of this, around 54 per cent were in Sub-Saharan Africa and 41 per cent in Europe

[6] In this section, Labour Force Survey data is provided for 2017, 2019, 2020 and 2021 only. Available microdata for 2018 did not include the labour migration module. The microdata for the Labour Force Survey 2022 was also not yet available at the time of writing.

[7] Given the characteristics of Zambia in terms of its position as part of regional economic blocs including SADC and COMESA, both with free movement of persons, as well as porous borders and its position as a country of origin, transit and destination, as well as dual nationalities and citizenships, mean that it can be challenging to identify someone as a migrant or non-migrant. As such, for the purposes of this report and this section, the foreign-born population are assessed as a proxy for the migrant population.

[8] All references to Labour Force Survey data in this Section refer to data drawn from the respective year of the Zambia Labour Force Survey.

and North America. Estimates for Zambian migrant workers overseas, both the stock of Zambian migrant workers and outflows of migrant workers are limited and therefore not provided in this section. Alternative data sources should be explored to help fill this gap, including using international sources of data.

4.1. Demographic characteristics

According to the Zambia Labour Force Survey 2021, a total of 71,000 foreign-born persons of working-age (aged 15+) were in the country in 2021. This accounts for less than one per cent of the total working-age population (estimated at around 10 million in 2021). It represents a decrease in the numbers since 2017, for which most of the decrease was recorded in 2020, potentially linked to the COVID-19 pandemic. As a result, total numbers of foreign-born working-age population in 2021 is about 15 per cent lower than estimated in 2017.

▶ **Table 4.1: Selected demographic characteristics, foreign-born population, 2017-2021**

Frequency (000s)	2017	2019	2020	2021	Change 2017-2021 (%)
Working-age population (aged 15+)	84,091	98,995	74,678	71,167	-15.4
Aged-15-24	16,263	21,442	12,125	14,404	-11.4
Aged 25+	67,828	77,553	62,553	56,763	-16.3
Male	42,997	49,841	39,040	39,570	-8.0
Female	41,094	49,153	35,638	31,597	-23.1
Distribution (%)	**2017**	**2019**	**2020**	**2021**	**Change 2017-2021 (pp)**
Aged-15-24	19.3	21.7	16.2	20.2	0.9
Aged 25+	80.7	78.3	83.8	79.8	-0.9
Male	51.1	50.3	52.3	55.6	4.5
Female	48.9	49.7	47.7	44.4	-4.5

Source: Zambia Labour Force Survey, multiple years

The majority of the foreign-born working-age population are aged 25+, accounting for around 80 per cent of the total foreign-born working-age population. This has changed only marginally since 2017, although notably there was a drop in the share of the youth population in 2020, again potentially linked to COVID-19 pandemic dynamics.

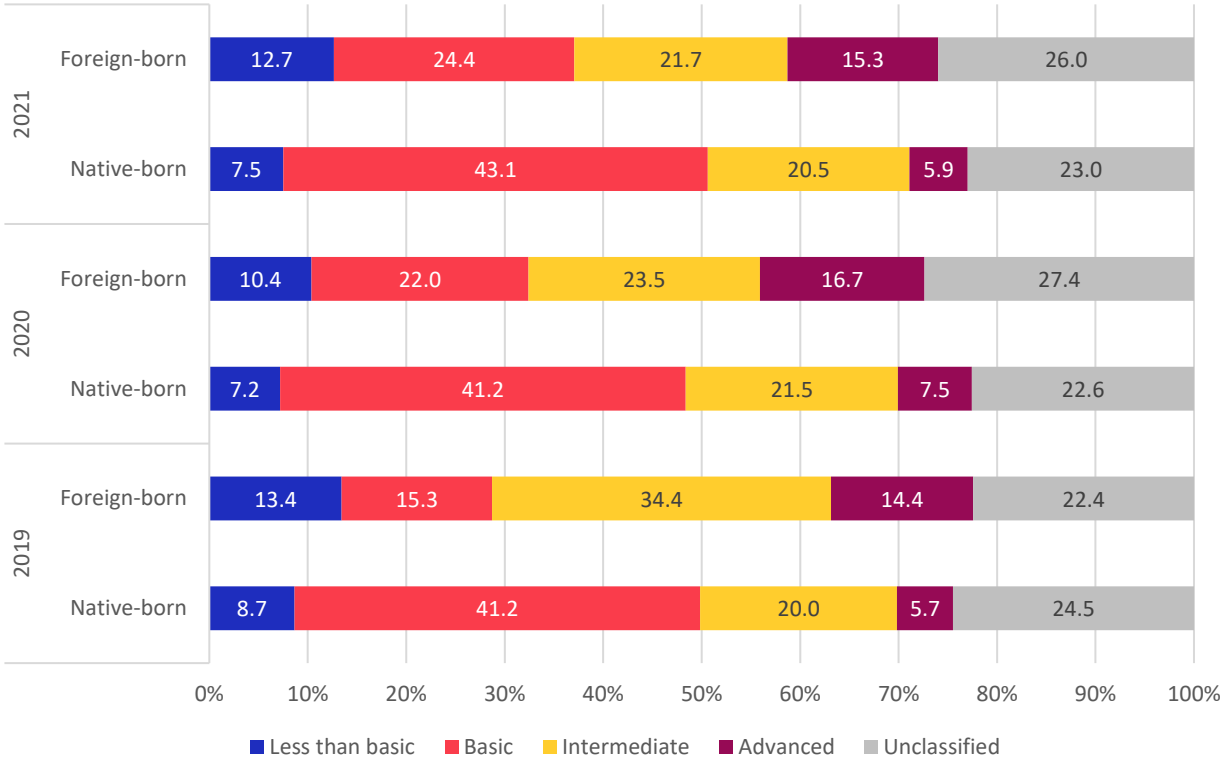
By sex, there is a more visible change in the composition of the foreign-born working-age population between 2017 and 2021. The share of women of the total foreign-born working-age population decreased from 48.9 per cent in 2017 to 44.4 per cent in 2021. This was driven by a greater decrease in the total number of female foreign-born working-age population than for their male counterparts (see Table 4.1). Some of the changes appear to be most drastic in 2020, which again might reflect changes related to the COVID-19 pandemic.

The education profile of the total working-age population shows that the foreign-born population tend to have slightly higher levels of education on average (Figure 4.1). In 2021, for instance, around 15 per cent of the foreign-born population had advanced levels of education, compared to 5.9 per cent of the native-born population.[9] This difference held true in the 2019 and 2020 data too. The foreign-born population were also more likely to have intermediate levels of education than the native-born population, although the difference was marginal in the 2021 data (21.7 per cent to 20.5 per cent, respectively), but more marked in the 2019 data, at 34.4 per cent to 20 per cent, respectively. This also corresponds to the foreign-born population having a lower share with less than basic and basic levels of education compared to the native-born population.[10]

[9] Please note that there could be bias in the data collected, including with foreign-born respondents being more likely to be regular migrants and therefore with higher levels of education.

[10] Notably, very high shares in each of the 2019-2021 surveys have 'unclassified' levels of educational attainment. These are levels of education that cannot easily be assigned to the International Standard Classification of Education (ISCED-11) and most likely sit between basic and intermediate levels.

▶ **Figure 4.1: Composition of native-born and foreign-born by level of educational attainment, 2019-2021 (percentages)**

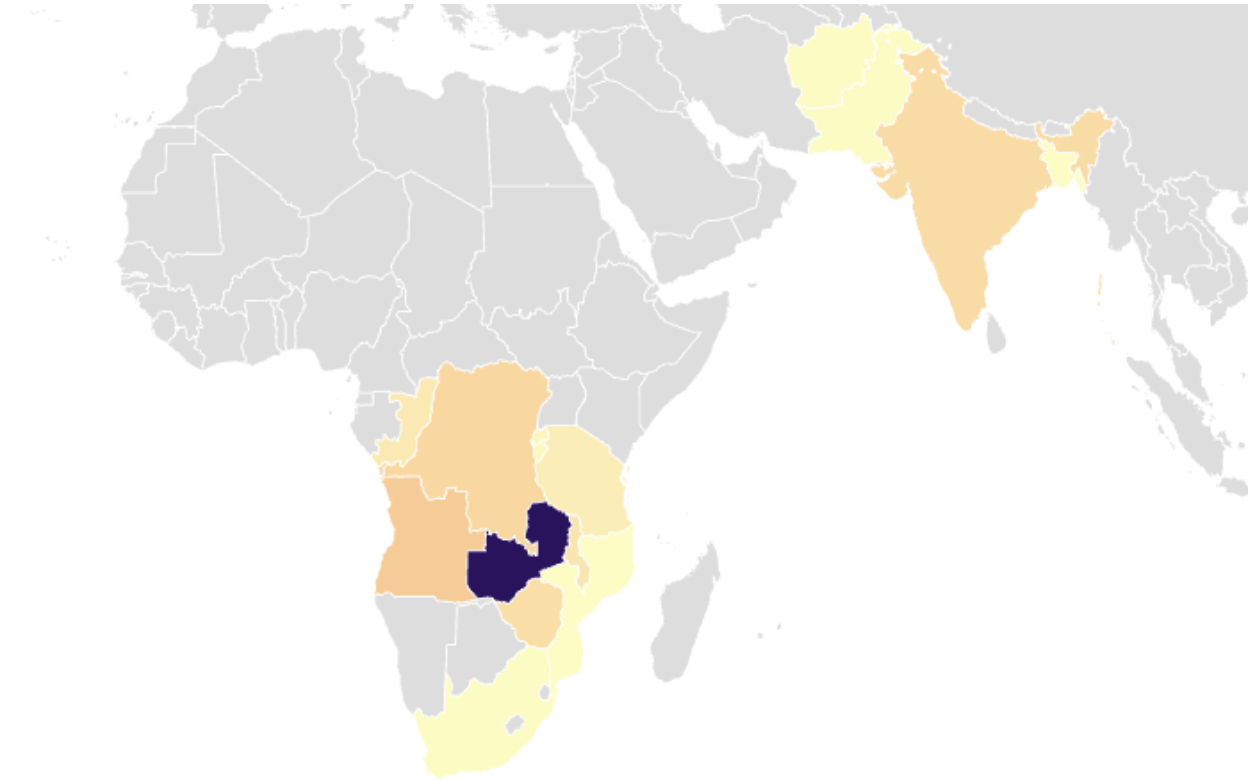


Source: Zambia Labour Force Survey, multiple years

Most of the foreign-born population were born in Southern Africa.[11] Figure 4.2 shows the most common countries of birth for the foreign-born population, and shows that most are from Southern Africa, particularly Angola, Democratic Republic of Congo, Zimbabwe and Malawi, but also a number from South Asian countries, including India and Bangladesh. Such findings are not dissimilar from estimates of migration flows of other sources. A 2019 Migration Profile by the IOM provides an insight into the different routes used, particularly for irregular migration, with those from Democratic Republic of the Congo often transiting through Ndola to Lusaka, with those from the East and Horn of Africa going through Nakonde, entering through Zambia's northern borders and moving southwards, including through Lusaka, while migrants from Malawi and Mozambique use Chipata and Katete routes in the East (IOM 2019).

[11] One of the questions asked in the labour migration module of the Zambia Labour Force Survey is the country of birth. Like most of the other labour migration questions, there are too few observations to provide reliable estimates, however, pooling the unweighted responses from the 2017, 2019, 2020 and 2021 surveys, provides some indication as to the country of origin.

▶ **Figure 4.2: Most common countries of birth for the foreign-born working-age population, according to the combined Labour Force Survey datasets of 2017-2021**



Disclaimer: The boundaries shown on this map do not imply endorsement or acceptance by the ILO.
Note: Dark = Zambia. Yellow to orange scale denotes the common countries of birth (where is orange is most common), based on findings from the LFS combined datasets of 2017-2021. Data should be treated with caution due to low numbers of observations.

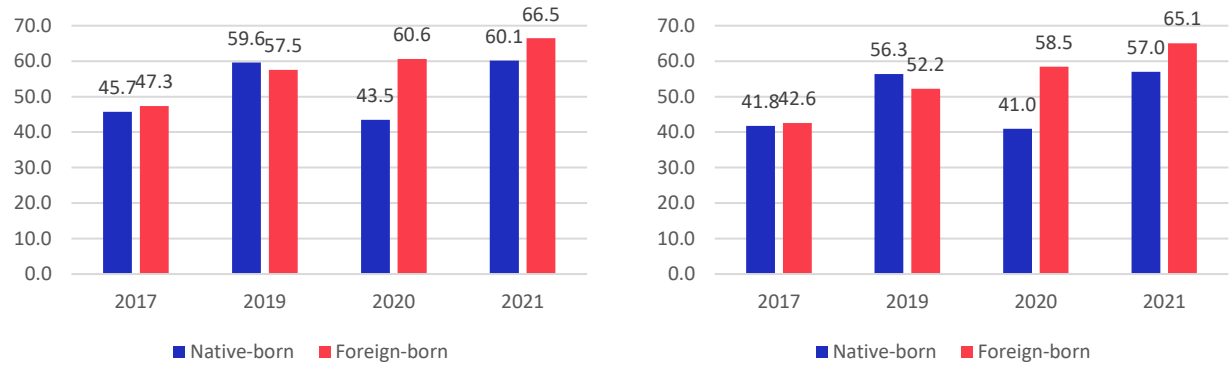
4.2. Labour market characteristics

Between 2017 and 2021, the labour force participation rate has steadily increased for the foreign-born population, even through the onset of the COVID-19 pandemic. In 2017, the labour force participation rate for the foreign-born population was 47.3 per cent, this increased steadily to 66.5 per cent in 2021. For the native-born population, the labour force participation rate in 2017 was estimated at 45.7 per cent, marginally lower than the foreign-born population (see Figure 4.3, Panel A), but this gap widened over the coming years. In 2021, the native-born population had a labour force participation rate of 60.1 per cent, more than six percentage points less than the foreign-born population. The gap was widest in 2020, when the labour force participation rate was 43.5 per cent for the native-born population to 60.6 per cent for the foreign-born population. There are a number of potential reasons for this, but ultimately it may reflect some kind of heterogeneous impact as a result of the COVID-19 pandemic, between the foreign-born and native-born populations.

▶ **Figure 4.3: Labour force participation rate and employment to population ratio, native-born and foreign-born working-age populations (percentages)**

Panel A: Labour force participation rate

Panel B: Employment-to-population ratio

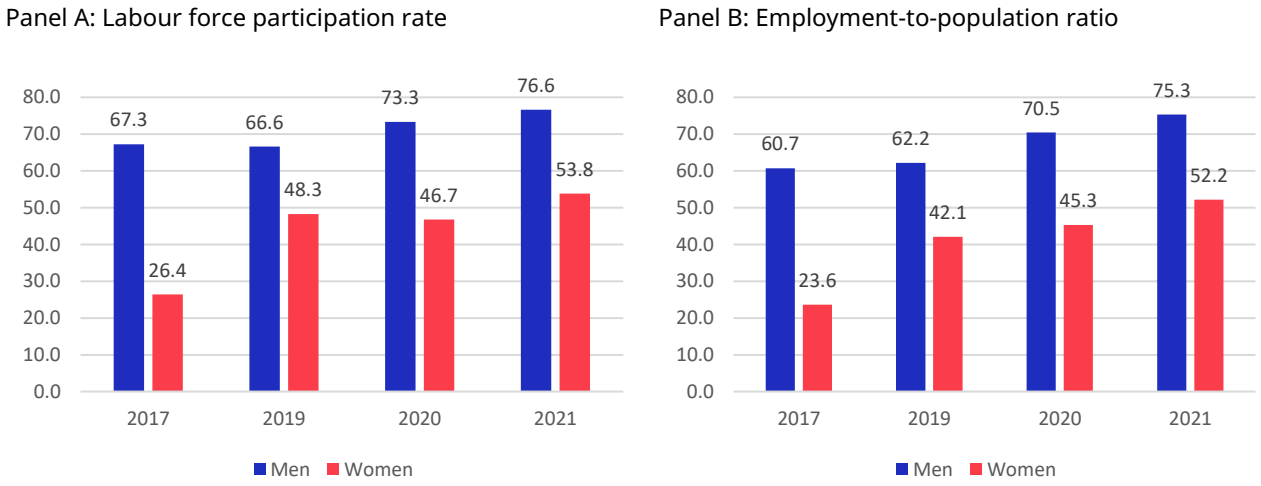


Source: Zambia Labour Force Survey, multiple years

The employment-to-population ratio tells a similar story with nearly two-thirds of the foreign-born working-age population in employment in 2021. This reflects significant growth from an employment-to-population ratio of 42.6 per cent in 2017 for the foreign-born population (Figure 4.3, Panel B). While the comparison of 2017 and 2021 employment-to-population ratios follow similar levels of growth for both the native-born and foreign-born populations, the native-born population had the significant drop with the onset of the COVID-19 pandemic in 2020, such that the 2021 employment-to-population ratio is only marginally higher than pre-COVID-19 pandemic in 2019, at 57 per cent to 56.3 per cent, respectively.

By sex, there are significant differences in labour force participation for the foreign-born population, with narrowing gender gaps in participation over the last few years. In 2021, the male labour force participation rate was estimated at 76.6 per cent, compared to 53.8 per cent for women (with a similar story for the employment-to-population ratio) (Figure 4.4, Panels A and B). However, while both men and women foreign-born populations have increased their participation since 2017, the participation rate for foreign-born women has more than doubled, from 26.4 per cent in 2017 to 53.8 per cent in 2021. This compares to an increase from 67.3 per cent for men in 2017 to 76.6 per cent in 2021. This is consistent with findings of the COMESA Report on Labour Migration Statistics, 2022, that also highlighted the relative growth of labour force participation of female migrant workers in Zambia (COMESA 2022).

▶ Figure 4.4: Labour force participation rate and employment to population ratio, foreign-born working-age population, by sex (percentages)



Source: Zambia Labour Force Survey, multiple years

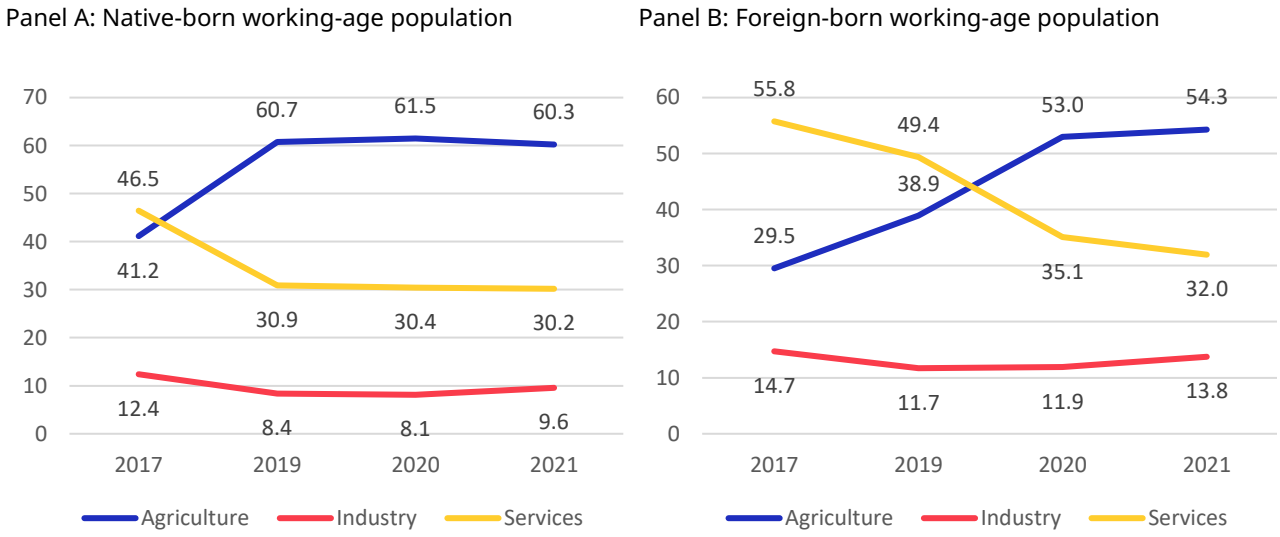
The distribution of foreign-born workers by broad sector group in 2021 is only slightly different to the average for the native-born population. Figure 4.5 shows the share of the native-born (Panel A) and foreign-born (Panel B) population by broad sector group (agriculture, industry and services). It shows that in 2021, around 54 per cent of the foreign-born population were engaged in the agriculture sector, compared to 60 per cent for the native-born population. Around 32 per cent were engaged in the services sector, compared to 30 per cent for the native-born population and 14 per cent of the population of foreign-born engaged in industry, to 10 per cent of the native-born.

Over time, trends suggest the share of the foreign-born population in agriculture has been rising, with a corresponding decrease in the share in the services sector. Between 2017 and 2021, the share of the foreign-born working-age population engaged in the agriculture sector has increased from 29.5 per cent in 2017, to 54.3 per cent in 2021. Meanwhile, the share of the foreign-born population engaged in the services sector has decreased from 55.8 per cent in 2017 to 32 per cent in 2021. These gradual shifts are not observed in the native-born population (at least not since 2019), suggesting that they likely reflect differences between the native-born and foreign-born population's labour market activity. While detailed sector breakdowns have been provided in some reports, these often rely on the estimates from the Labour Force Survey, and so actually are based on the same unreliable numbers.

The number of observations are too few to allow for more detailed analysis by economic activity. For instance, the majority of the foreign-born population in the services sector in 2021 were engaged in the category of 'wholesale and retail trade, repair of motor vehicles and motorcycles', similarly the majority of those in the industry sector were employed in 'manufacturing' however, on their own, the number of observations are too few to be considered reliable (see Appendix IV). This presents challenges in understanding the foreign-born population's labour market integration and contributions and undermines the ability to effectively implement evidence-based labour migration governance.

For the last two decades, there have been local skill shortages in Zambia's construction and mining sectors, offset by migrant workers. Mining is driven largely by copper and nickel extraction, which contributes to 'non-ferrous metals' accounting for over 50 per cent of the country's exports (UNCTADstat 2023). These sectors have also exhibited considerable growth over the previous two decades (Fessehaie et al. 2015). Insufficient skills supply has resulted in foreign direct investment (FDI) in large industrial projects being accompanied by inflows of skilled mining workers to offset the lack of skilled labour in these sectors (Moono and Rankin 2013). Chinese FDI in mining and construction in particular has been increasing over this period, with inflows of Chinese migrant workers to work on these projects (Yang 2016). For instance, some estimates suggested that the volumes of Chinese nationals increased by 60 per cent over five years between 2009 and 2015 (Postel 2015). At the time of the previous Census of Population and Housing (2010), findings have suggested that around a quarter of migrant workers in the country were located in the Copperbelt province, a region with significant mining investment (Coderre-Proulx, Campbell, and Mandé 2016).

▶ **Figure 4.5: Distribution of employment by broad sector group, native-born and foreign-born working-age populations (percentages)**



Note: Relatively few observations for 'industry', please treat these figures with caution. See Appendix IV for more relative standard errors.
Source: Zambia Labour Force Survey, multiple years.

Other labour market variables are also available for the foreign-born population, including by occupational skill level and status in employment, however, the number of observations are too few for reliable estimates and inferences to be made. For instance, in 2021, the majority (around 50 per cent) of the foreign-born population were in the category of 'skilled agricultural and trades workers', compared to around 60 per cent for the native-born population, however, all other categories of occupation at the 1-digit level have too few observations for reliable estimates for foreign-born workers (see Appendix IV).[12] Similarly, by status in employment, the majority of the

[12] 1-digit refers to the top level aggregation of the International Standard Classification of Occupations (ISCO) list.

foreign-born population (around 65 per cent) were own-account workers, compared to around 67 per cent for the native-born population, but again, all other categories for the foreign-born population have too few observations to be considered reliable (see Appendix IV). Similarly, information on wages and earnings are also highly important for effective labour migration governance, and these too were unreliable in the Labour Force Survey and could not be used.

4.3. Impact of migrants on the native-born labour force

The section presents a top-level assessment of the impact of migrant workers on the native-born labour market. The purpose of the analysis is to provide general indications of the impact of migrant (foreign-born) workers on labour force dependent variables, in terms of the significance and direction (+ or -) of the coefficients in regression analysis. A limited number of variables were included as control in the analysis, which simplified the analysis and reduced the R-squared to an interpretable level.

4.3.1. Methodology

The analysis draws heavily from the approaches used in a series of reports on the contribution of immigrants to the economies in host countries (e.g. South Africa (OECD and ILO 2018b) and Ghana (OECD and ILO 2018a)). The analysis in these reports include a full set of interaction variables between control variables of education, work experience, and year. Following Borjas (2003), skill cells based on education and experience are used to assess how labour market outcomes of native-born workers of a certain skill level are affected by the proportion of migrant workers of the same skill level (Borjas 2003).

Breusch-Pagan tests were conducted on preliminary regressions which indicated high Chi-square values, recommending a rejection of the null hypothesis of normal error terms. To address this, heteroskedasticity is addressed while still using ordinary least squares (OLS) estimators by including robust standard errors through clustering as done in other research (Edo 2015). The methodology of the skill cells was comparable to those used in relevant research (Borjas 2003; Gerfin and Kaiser 2010; Edo 2015), with only minor differences applied to education groups.

The final model includes a simple regression of the independent variable: ‘migrants as a percentage of the labour force’ on a series of dependent variables including: the employment to population ratio of native-born population; the unemployment rate of the native-born population; paid employment as a share of the total native-born employed population; the vulnerable employment rate and women as a share of the native-born labour force. Control variables include year of the data, and ‘skill cells’, which is a categorical variable with four levels, corresponding to a matrix of low/high education and work experience. The dataset for Zambia includes 65,061 observations across five consecutive years, from 2017-2021.

4.3.2. Main findings

Table 4.2 shows the results of a series of regression analyses where the purpose was to determine the impact that migrants have on the native-born labour force. The first two regression results suggest that the number of migrants in the workforce does not significantly affect the percentage of the native population that are employed, nor does it affect the percentage of the population that is unemployed.

▶ Table 4.2: Summary of regression results

Independent variable	Result
(1) Employment-to-population ratio of native-born population	o
(2) Unemployment rate of native-born labour force	o
(3) Paid employment rate of native-born employed population	+
(4) Vulnerable employment rate of native-born population	-
(5) Women's share of native-born labour force	-
(6) Log of yearly wages of native-born employed population	+

Note: The table reports the sign of impact of the ratio of immigrants (their percentage of the economically active population) in individual regression analyses, where the dependent variable was the above-listed labour market outcome. Variables included as controls in analysis included time period (year of data), and education*experience values.

o = no significant effect; + = a significant positive effect; - = a significant negative effect.

A value is considered significant at $p<.05$. R-square values for individual regressions ranged from 0.395 for regression 1 to 0.583 for regression 4.

However, significant results for regressions 3 and 4 suggest that the percentage of the workforce that are immigrants does have an impact on the type of employment of the local population. Specifically, it appears that as immigrants are a larger percentage of the workforce, the paid employment rate of the native-born employed population significantly increases, while the percentage of the native-born employed population in vulnerable employment decreases. Together, this suggests that migrants may be taking more own-account work or contributing family work, increasing the likelihood of the native-born population being in paid employment.

Altogether, the results so far suggest that the impact of immigrants in the workforce is relatively positive in Zambia. An increase of immigrants in the workforce is associated with better types of employment for the native-born population while simultaneously not having a negative impact on their employment or unemployment rates.

Regression 5 shows that an increase in the percentage of the workforce that are migrants is associated with a decrease in the number of women in the workforce. This could be interpreted that migrants may be more likely to be in jobs where native-born women also work. Together with the previous two results, this suggests that migrants may be competing with women in own-account work and unpaid family work (i.e. categories of vulnerable employment).

Finally, this dataset contains wage information, which allows us to test the impact of migrants as a share of the population on the wages of local workers. Results are significant, and in a positive direction, suggesting that as migrants increase, wages of the native-born employed population also increase. This is consistent with the above hypothesis that the impact of immigrants in the workforce is positive, bringing additional opportunities and increased wages for the native-born labour force.

5. Conclusions and recommendations

Based on the review of coverage for Zambia in a context of Southern Africa and the Indian Ocean region, it is clear that Zambia has relatively good coverage of international migrant stock indicators. Zambia relies on its regular Labour Force Survey for information on international migrant workers. However, when the microdata is publicly available from the new Zambia Census of Population and Housing 2022, it will provide new set of data on migrant workers and their characteristics as well as allow for more up-to-date sample frames for the Labour Force Survey. At present, there are still a number of data gaps, largely as a result of too few observations hindering disaggregation of key variables (see Appendix IV). In terms of indicators on international migrant flow and nationals abroad, Zambia has limited public data and would benefit from identifying additional sources of data for these indicators to be systematically processed and published.

At the same time, a review of available data sources on labour migration for Zambia identifies that the Labour Force Survey could be used to extract further information on migrant workers but needs to address sample size challenges. While the Labour Force Survey questionnaire includes a range of relevant indicators for assessing migrant workers, a low number of observations mean that for many forms of disaggregation there are not enough observations for the data to be reliable. The following are a summary of potential steps for Zambia to improve its labour migration statistics:

- **Oversample the migrant population in the Labour Force Survey:** Some of the variables in the Labour Force Survey cannot be used due to the low numbers of observations. This was the case for a number of key variables, including economic sector, occupation, status in employment, earnings and wages, and other measures of working conditions. As such, available approaches to address this includes oversampling of migrant households. This process may require a review of why the number of migrants in the sample are relatively low.
- **Explore options for capturing information on inflows and nationals abroad in the Labour Force Survey:** As shown by data in Malawi, Namibia and Eswatini, it is possible to capture information on inflows and nationals abroad through questions in the population census and also the Labour

Force Survey. These are not the only sources of data that can provide information for aspects of labour migration, but the regional examples are available and should be consulted. The Zambia Labour Force Survey questionnaire suggests that it should be possible to extract data on inflows of migrants and migrant workers with oversampling of migrant workers.

- **Explore alternative sources of data, particularly administrative data sources:** Administrative data sources refer to data that is primarily collected for administrative reasons and not statistical reasons, such as work permit information, visa information and others. Often the statistical value is not recognised by the ministries, departments and agencies that are responsible for the administrative data, and access or sharing the data with the national statistics office requires a process of awareness, as well as sometimes development of Memorandums of Understanding (MOUs) and also technical support (to comply with statistical ethics, data security and privacy, such as anonymising data). There are signs that administrative data is already collected and so could be used at a minimum for inflows of migrant workers. Issues of cooperation between ministries and different institutions deserves special attention with efforts to build trust, collaboration and cooperation at the inter-ministerial level.
- **Consider additional questions in the Labour Force Survey to examine nationals abroad, returnees and recruitment costs:** Precise wording of questions can draw from international examples, including countries that have piloted approaches for measuring recruitment costs (per SDG 10.7.1) using Labour Force Survey data. The approaches are imperfect with a range of considerations and biases and often rely on interviewees providing information about household members who have gone abroad, but this information, as well as information from returnees, can provide insights into emigration motives, working conditions and characteristics as well as recruitment fees.
- **Once Labour Force Survey data is improved, use Social Accounting Matrices to assess migrants' economic contribution to the economy:** Assessments of the economic contribution of migrants to the economy can be assessed using social accounting matrices. Social Accounting Matrices are macroeconomic models that combine input-output tables with Labour Force Survey data to allow for economic interlinkages to be assessed and the corresponding labour market variables. If migrant worker data is improved and more reliable (with higher numbers of observations) then it can provide analysis of the economic contribution of migrants similar to assessments done in South Africa (OECD and ILO 2018b) and Ghana (OECD and ILO 2018a), which is currently not feasible to assess for Zambia.

Appendix I: References

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Appendix II : Tables in the ILOSTAT ILMS questionnaire

#	MODULE A. INTERNATIONAL MIGRANT STOCK
1	Working-age population by sex, age and place of birth or citizenship (Persons)
2	Working-age population by sex, education and place of birth or citizenship (Persons)
3	Foreign-born or non-citizen working-age population by sex and country of birth or citizenship (Persons)
4	Employment by sex, age and place of birth or citizenship (Persons)
5	Employment by sex, economic activity and place of birth or citizenship (Persons)
6	Employment by sex, occupation and place of birth or citizenship (Persons)
7	Employment by sex, status in employment and place of birth or citizenship (Persons)
8	Employed foreign-born persons by sex and country of birth or citizenship (Persons)
9	Unemployment by sex, age and place of birth or citizenship (Persons)
10	Mean nominal monthly earnings of employees by sex and place of birth or citizenship (Local currency)
#	**MODULE B. INTERNATIONAL MIGRANT FLOW**
11	Inflow of foreign-born or non-citizen working-age population by sex and country of birth or citizenship (Persons)
12	Inflow of foreign-born or non-citizen working-age population by sex and education (Persons)
13	Inflow of foreign-born or non-citizen employed persons by sex and economic activity (Persons)
14	Inflow of foreign-born employed persons by sex and occupation (Persons)
#	**MODULE C. NATIONALS ABROAD**
15	Stock of nationals abroad by sex and country of residence (Persons)
16	Inflow of nationals returned from abroad by sex and country of previous residence (Persons)

17	Outflow of nationals by sex and country of destination (Persons)
18	Outflow of nationals for employment by sex and country of destination (Persons)
19	Outflow of nationals for employment by sex and education (Persons)
20	Outflow of nationals for employment by sex and economic activity (Persons)
21	Outflow of nationals for employment by sex and occupation (Persons)

Appendix III: Additional data tables

Table A1: Selected labour market indicators, native-born and foreign-born populations, 2017, 2019, 2020, 2021

	2017		2019		2020		2021	
	Native-born	Foreign-born	Native-born	Foreign-born	Native-born	Foreign-born	Native-born	Foreign-born
Total (15+)	8,829,880	84,091	9,587,171	98,995	9,764,765	74,678	9,963,557	71,167
Sex								
Male	4,214,135	42,997	4,539,202	49,841	4,607,893	39,040	4,862,697	39,570
Female	4,615,745	41,094	5,047,969	49,153	5,156,872	35,638	5,100,861	31,597
Age-group								
Aged 15-24	3,251,938	16,263	3,535,670	21,442	3,565,117	12,125	3,669,107	14,404
Aged 25+	5,577,942	67,828	6,051,500	77,553	6,199,648	62,553	6,294,450	56,763
Education (Aggregate level)								
Less than basic	844,461	10,371	830,371	13,301*	702,203	7,739*	748,615	9,011
Basic	5,491,102	36,770	3,947,680	15,115	4,022,453	16,457	4,294,997	17,368
Intermediate	1,951,414	20,534	1,918,420	34,081	2,102,804	17,567	2,040,233	15,410
Advanced	542,903	16,417	543,922	14,285	734,881	12,481*	589,276	10,888*
Labour force status								
Employed	3,689,228	35,823	5,401,413	51,693	5,971,265	48,646	5,678,235	46,308
Unemployed	345,570	3,962*	314,823	5,252*	367,923	1,810*	312,841	1,020*
Outside Labour Force	4,795,082	44,306	3,870,934	42,050	8,240,687	32,745	3,972,482	23,839
Status in employment (ICSE 93) - Main job								
Employees	1,230,349	13,764	1,383,190	19,136	1,398,321	9,067*	1,539,553	12,008
Employers	88,542	2,821*	65,131	2,822*	108,439	8,159*	208,105	2,530*
Own-account workers	2,093,098	18,812	4,245,826	29,090	4,305,213	29,810	4,114,338	30,180
Contributing family workers	277,239	425*	162,828	2,106*	159,293	1,611*	215,750	1,961*
Occupation (Skill level) - main job								
Skill level 1 (low)	475,934	1,508*	512,175	3,557*	465,911	1,304*	555,841	5,880*
Skill level 2 (medium)	2,823,522	28,946	4,813,051	32,345	4,887,640	39,116	4,866,793	33,207
Skill levels 3 and 4 (high)	383,100	5,369*	494,751	15,753	570,915	8,226*	603,282	7,592*

	2017		2019		2020		2021	
	Native-born	Foreign-born	Native-born	Foreign-born	Native-born	Foreign-born	Native-born	Foreign-born
Not classified	6,671*	0*	36,998	1,498*	46,800	0*	51,829	0*
Economic activity (Sector) - main job								
Agriculture	1,518,216	10,576	3,557,577	20,692	3,671,289	25,776	3,661,948	25,340
Industry	457,356	5,272*	489,529	6,220*	484,806	5,782*	581,315	6,420*
Services	1,713,656	19,974	1,809,869	26,241	1,815,170	17,088	1,834,483	14,919

*Note: *denotes low numbers of observations (see Appendix IV for data quality summary) and unreliable estimates*

Source: Zambia Labour Force Survey, multiple years.

▶ Table A2: Distribution of selected labour market indicators, native-born and foreign-born populations, 2017, 2019, 2020, 2021 (percentages)

	2017		2019		2020		2021	
	Native-born	Foreign-born	Native-born	Foreign-born	Native-born	Foreign-born	Native-born	Foreign-born
Total (15+)	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Sex								
Male	47.7	51.1	47.3	50.3	47.2	52.3	48.8	55.6
Female	52.3	48.9	52.7	49.7	52.8	47.7	51.2	44.4
Age-group								
Aged 15-24	36.8	19.3	36.9	21.7	36.5	16.2	36.8	20.2
Aged 25+	63.2	80.7	63.1	78.3	63.5	83.8	63.2	79.8
Education (Aggregate level)								
Less than basic	9.6	12.3	8.7	13.4*	7.2	10.4*	7.5	12.7
Basic	62.2	43.7	41.2	15.3	41.2	22.0	43.1	24.4
Intermediate	22.1	24.4	20.0	34.4	21.5	23.5	20.5	21.7
Advanced	6.1	19.5	5.7	14.4	7.5	16.7*	5.9	15.3*
Labour force status								
Employed	41.8	42.6	56.3	52.2	41.0	58.5	57.0	65.1
Unemployed	3.9	4.7*	3.3	5.3*	2.5	2.2*	3.1	1.4*
Outside Labour Force	54.3	52.7	40.4	42.5	56.5	39.4	39.9	33.5
Status in employment (ICSE 93) - Main job								
Employees	33.3	38.4	23.6	36.0	23.4	18.6*	25.3	25.7
Employers	2.4	7.9*	1.1	5.3*	1.8	16.8*	3.4	5.4*

	2017		2019		2020		2021	
	Native-born	Foreign-born	Native-born	Foreign-born	Native-born	Foreign-born	Native-born	Foreign-born
Own-account workers	56.7	52.5	72.5	54.7	72.1	61.3	67.7	64.7
Contributing family workers	7.5	1.2*	2.8	4.0*	2.7	3.3*	3.5	4.2*
Occupation (Skill level) - main job								
Skill level 1 (low)	12.9	4.2*	8.7	6.7*	7.8	2.7*	9.1	12.6*
Skill level 2 (medium)	76.5	80.8	82.2	60.9	81.9	80.4	80.1	71.1
Skill levels 3 and 4 (high)	10.4	15.0*	8.4	29.6	9.6	16.9*	9.9	16.3*
Not classified	0.2	0.0*	0.6	2.8*	0.8	0.0*	0.9	0.0*
Economic activity (Sector) - main job								
Agriculture	41.2	29.5	60.7	38.9	61.5	53.0	60.3	54.3
Industry	12.4	14.7*	8.4	11.7*	8.1	11.9*	9.6	13.8*
Services	46.5	55.8	30.9	49.4	30.4	35.1	30.2	32.0

*Note: *denotes low numbers of observations (see Appendix IV for data quality summary) and unreliable estimates*

Source: Zambia Labour Force Survey, multiple years.

Appendix IV: Data quality summary for selected Labour Force Survey indicators

Table A3 provides a summary of select labour market indicators and shows the number of observations (i.e., unweighted) as well as the relative standard error for each, for the foreign-born population only. Low numbers of observations are considered unreliable. A rule of thumb is to exclude values below a certain minimum, in this case, observations of 30 or below are highlighted. Similarly, the relative standard error allows for another threshold, in this case, the higher the relative standard error, the more unreliable. Relative standard errors of 30 or above and highlighted red in the table.

Table A3: Number of observations and relative standard error of selected labour market indicators, foreign-born population only, 2017, 2019, 2020, 2021 (percentages)

	2017		2019		2020		2021	
	Number of obs.	Relative standard error	Number of obs.	Relative standard error	Number of obs.	Relative standard error	Number of obs.	Relative standard error
Total (15+)	209	6.9	201	7.2	193	6.6	227	0.9
Sex								
Male	105	9.9	100	9.9	101	9.9	118	9.2
Female	104	9.9	101	9.9	92	10.4	109	9.5
Age-group								
Aged 15-24	39	15.8	40	15.8	31	17.9	52	13.8
Aged 25+	170	7.8	161	7.8	162	7.8	175	7.5
Education (Aggregate level)								
Less than basic	30	19.9	25	19.9	25	19.9	33	17.3
Basic	93	17.4	33	17.4	47	14.6	55	13.5
Intermediate	50	12.7	61	12.7	34	17.1	49	14.2
Advanced	36	15.0	43	15.0	26	19.5	27	19.1
Labour force status								
Employed	89	9.5	109	9.5	132	8.7	154	8.0
Unemployed	7	35.1	8	35.1	4	49.9	4	49.9
Outside Labour Force	113	10.8	84	10.8	57	13.2	69	12.0
Status in employment (ICSE 93) - Main job								
Employees	33	14.8	45	14.8	19	22.9	30	18.2
Employers	7	39.9	6	39.9	12	28.2	7	37.5

	2017		2019		2020		2021	
	Number of obs.	Relative standard error	Number of obs.	Relative standard error	Number of obs.	Relative standard error	Number of obs.	Relative standard error
Own-account workers	48	13.4	57	13.4	99	10.1	116	9.4
Contributing family workers	1	57.5	4	57.5	3	57.5	5	44.5
Occupation (Skill level) - main job								
Skill level 1 (low)	5	33.2	9	33.2	5	44.6	16	24.8
Skill level 2 (medium)	71	13.3	59	13.3	110	9.5	120	9.2
Skill levels 3 and 4 (high)	13	15.3	41	15.3	18	23.4	22	21.2
Economic activity (Sector) - main job								
Agriculture	30	15.4	44	15.4	85	10.9	100	10.2
Industry	13	24.8	16	24.8	13	27.6	17	24.1
Services	46	13.9	52	13.9	35	16.8	41	15.5

Note: Figures highlighted red are those with the number of observations of 30 or less, or with relative standard errors of a value of 30 or more. These are those with relatively too few observations to be considered reliable.

Source: Zambia Labour Force Survey, multiple years.

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