

## Major Innovations in the Saudi Census 2022

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### Executive Summary

The paper focuses on the last population census held in 2022 in Saudi Arabia, the fifth since 1974. Based on the very first results of the census, the paper identifies and analyses three major innovations characterising this operation, namely, its methodology (introduction of administrative records as a source for a *de jure* enumeration of usual residents in the country); the disclosing of adjustments made to population figures for the period 2010-2021, based on the results of census 2022; and the publication of disaggregated figures of non-nationals by country of citizenship. Using a political demography approach, the paper concludes that the last Saudi census unveils significant changes in the country's policy and politics: enhanced knowledge of the population to streamline the socio-economic reform process, globalisation and "technocratisation" of population governance, and resetting of the place of non-citizens in the national "imagined community" (Anderson, 1991).

A population census is a snapshot of a country's population at a given moment. It provides information on the number and main socio-economic characteristics of all resident individuals (sex, age, household composition, geographic location, migratory status, health, and disability, economic, income, housing, education, and other characteristics), at the smallest geographic level (the household) throughout a country. The population census provides data that are critical for "formulating, implementing and monitoring policies and programmes aimed at inclusive socioeconomic development and environmental sustainability."<sup>1</sup> Beyond such an apolitical, technocratic representation of a population enumeration, a census is also "the most visible, and arguably the most politically important, means by which states statistically depict collective identities" (Kertzer and Arel, 2002, 3). A census reflects and contributes to shape the national "imagined community" (Anderson, 1991, 164-170).

Against this backdrop, the paper focuses on the last population census held in 2022 in Saudi Arabia, the fifth since 1974. Based on very first results of the census published one month before writing, the paper identifies and analyses three key innovations characterising this operation, namely, its methodology (introduction of administrative records as a source for a *de jure* enumeration of usual residents in the country); the disclosing of adjustments made to population figures for the period 2010-2021, based on

1 <https://unstats.un.org/unsd/demographic-social/census/>.

the results of census 2022; and the publication of disaggregated figures of non-nationals by country of citizenship. Using a political demography approach, the paper concludes that the last Saudi census unveils significant changes in the country's policy and politics: enhanced knowledge of the population to streamline the socio-economic reform process, globalisation and “technocratisation” of population governance, and resetting of the place of non-citizens in the national “imagined community”.

### Changing census methodology: administrative centralisation and globalisation

To date, Saudi Arabia has conducted five censuses – in 1974, 1992, 2004, 2010, and 2022. Population censuses used to collect information through face-to-face interviews with heads of households, carried out by interviewers who transcribed information on paper forms. In Saudi Arabia like in other countries, the financial costs and logistical heaviness of such an operation limited the quantity of information which could be collected during interviews,<sup>2</sup> as well as the volume of data processed and disseminated to the public. Additionally, relevant socio-demographic events may be missed during decennial or longer intercensal periods, and information would become quickly outdated for policy-making purposes.<sup>3</sup>

More flexible enumeration methods were also needed to meet international demand for better and more disaggregated data,<sup>4</sup> and more generally, for the modernisation of national administrative and statistical systems to strengthen the state's capacities, as inscribed in Saudi Arabia's “Vision 2030” reform masterplan.

Administrative registers are an alternative source of information on population. These records cover a diversity of domains (housing, employment, tax collection, business, health, education, border crossings, and so on). Intended to address the administrative needs of the state, administrative data's primary objective is not the production of statistics. Yet, administrative data may be used to compile statistics for which they are considered “secondary sources” (UNECE, 2011).

In 2010, Bahrain was the first GCC country to conduct a mixed census, based on both administrative records and a household sample survey. During the 2020 census round, all Gulf states shifted from survey-based to administrative record-based censuses, exclusively or in complement to field-based surveys.<sup>5</sup>

### Administrative centralisation

Organised and conducted by the Saudi General Authority for Statistics (GASat), the Saudi Census 2022 applied a combined methodology, i.e., administrative records' data supported by fieldwork and digital self-enumeration. The enumeration of buildings and households (address canvassing) used geospatial data, including satellite images, the geolocation of mobile phone data to identify new residential locations, as well as the Saudi Post dataset of all national addresses in the Kingdom, and electricity

<sup>2</sup> Because it covers every individual in the resident population, a census can only ask a few questions to each of them. Another issue is the difficulty to access and record specific populations, such as nomads in remote areas, or persons escaping administrative control, for instance migrants in irregular situation (GLMM, forthcoming 2023).

<sup>3</sup> Traditional censuses are usually carried out every 10 years.

<sup>4</sup> For example, the Millennium Development Goals, to which KSA committed (UNDP and KSA, 2013). The objective 1 of the *Global Compact for Safe, Orderly and Regular Migration* also recommends collecting and using accurate and disaggregated data as a basis for evidence-based policymaking (UN General Assembly's Global Compact for Safe, Orderly and Regular Migration, Resolution 73/195 of 19 December 2018, UN doc. A/RES/73/195, 11 January 2019). [https://www.un.org/en/development/desa/population/migration/generalassembly/docs/globalcompact/A\\_RES\\_73\\_195.pdf](https://www.un.org/en/development/desa/population/migration/generalassembly/docs/globalcompact/A_RES_73_195.pdf)

<sup>5</sup> <https://unstats.un.org/unsd/demographic-social/meetings/2021/egm-covid19-census-20210209/docs/s03-09-GCCStat.pdf>.

consumption datasets. This approach aimed to capture granular residential data and enabled a precise headcount of populations, especially those in remote areas. A fieldwork was conducted to verify and confirm all addresses (GASat, n.d. a).

Originally planned for the reference date of March 17, 2020,<sup>6</sup> the field enumeration phase was postponed by the outbreak of the COVID-19 crisis, and eventually kick-started on May 9, 2022.<sup>7</sup> Household data were collected from e-portals of self-enumeration (on residents' mobile devices, laptops or personal computers, or self-enumeration stations/kiosks, located in shopping centres).<sup>8</sup> The digital self-enumeration process was complemented by face-to-face interviews, using digital tablets. The census applied a “de jure” approach, i.e., enumerated individuals according to their usual place of residence.

Residents' National Identification Number<sup>9</sup> was used to link GASat records with those of the National Information Centre (NIC) of the Ministry of Interior and other administrative records (Altekhafi et al., 2020, 153). Resident population's characteristics and residence details, for instance, were drawn for the Ministry of Interior's records, health and educational characteristics from relevant ministries' records, and occupation and income details were extracted from the records of the General Organisation for Social Insurance (GOSI) and the Ministry of Human Resources and Social Development (MHRSD) (GASat, n.d. b, 29). Administrative data were leveraged to cross-validate the information collected throughout the census and support the data collection process. Basic information on households was pre-filled on the self-enumeration tool, and on the interviewers' tablets. Administrative data was also used to impute non-responding households in areas with low response rates (GASat, n.d. b, 28).

Eventually, Census 2022 formed the basis of Saudi Arabia's first population register (GASat, n.d. b, 28). Theoretically, the population register should be updated in real time with new events affecting the resident population (births, deaths, new entries to and exits from the country, changes of address, of profession or employer, of education level, etc.), and provide users up-to-date estimates of the size, structure, and dynamics of the resident population on a regular basis.

Besides improving the delivery of services to residents, the strengthening and administrative centralisation of information on territory and population, achieved with census 2022 and the setting up of a population registry, will serve the country's policy-making process (Lori, 2011). Especially, the successful implementation of the ambitious Vision 2030 socio-economic reform plan indeed rests upon a comprehensive knowledge of the resident population's size and characteristics.

### Administrative globalisation

Census 2022 was also an opportunity to harmonise the definitions of concepts and classifications used by governmental and other national bodies, in line with international standards. GASat uses international classifications and concepts in its statistical production, as well as national adaptations of these.<sup>10</sup> Cabinet Resolution No. 540, dated 9/16/1440 AH (21 May 2019), assigned GASat the task of unifying Saudi occupational classifications, which include the classification of the GASat, the Arab Standard Occupational Classification endorsed by the MHRSD, and the public-sector job classification approved by the former Ministry of Civil Service (now civil service section of the MHRSD). The new classification is aligned with ILO's 2008 International Standard Classification of Occupations (ISCO) and its

6 As part of the planned harmonized 2020 GCC census (<https://unstats.un.org/unsd/demographic-social/meetings/2021/egm-covid19-census-20210209/docs/s03-09-GCCStat.pdf>).

7 <https://portal.saudicensus.sa/portal/public/news/ccf1c707-1f0c-56fb-7e40-f07dfae0c1dc>.

8 <https://www.stats.gov.sa/en/node/61352>.

9 And, presumably, Residency card (*iqama*) number for non-nationals.

10 <https://www.stats.gov.sa/en/#>.

subsequent updates, and includes occupational descriptions based on the Arab Standard Occupational Classification descriptions, as well as classification descriptions of other relevant authorities. The Unified Saudi Occupational Classification follows ISCO's skill-based method for the classification of occupations, based on the International Standard Classification of Education (ISCED-11) designed by UNESCO. The classification also conforms to ISCO's coding methodology.<sup>11</sup>

The standardisation of activities, occupations, and educational attainment in the census and, more generally, the structuring and formatting of the questionnaire, the selection of topics covered, in line international benchmarks (GASat, n.d., 31) enable the comparability of data both within the country and between Saudi Arabia and other countries. The new census is thus another step in Saudi Arabia's rapid connection to socio-economic and cultural globalisation.

### **Adjusting population data: from political to technocratic management of population**

Using administrative records as a base for the census is a ground-breaking innovation in Saudi Arabia. However, the improved knowledge of Saudi Arabia's population brought about by the new census is a sign of a new perception of the population in the country, that of an object of technocratic management.

Until the 2000s, available data on the major aspects of Saudi Arabia's population were scattered and scarce. The 1974 census was the first comprehensive census in Saudi history. However, its rate of coverage and accuracy of data are considered weak. In 1992, estimates of Saudi population and rates of demographic growth for the following years, were considered inflated (Winckler, 2008, 12-15; 2009, 23-31). Readjustments to the figures of nationals drawn from census 2010, based on 2016's Demographic Survey, confirm the plausibility of an overestimation of the numbers of nationals in Saudi statistics, before census 2022.

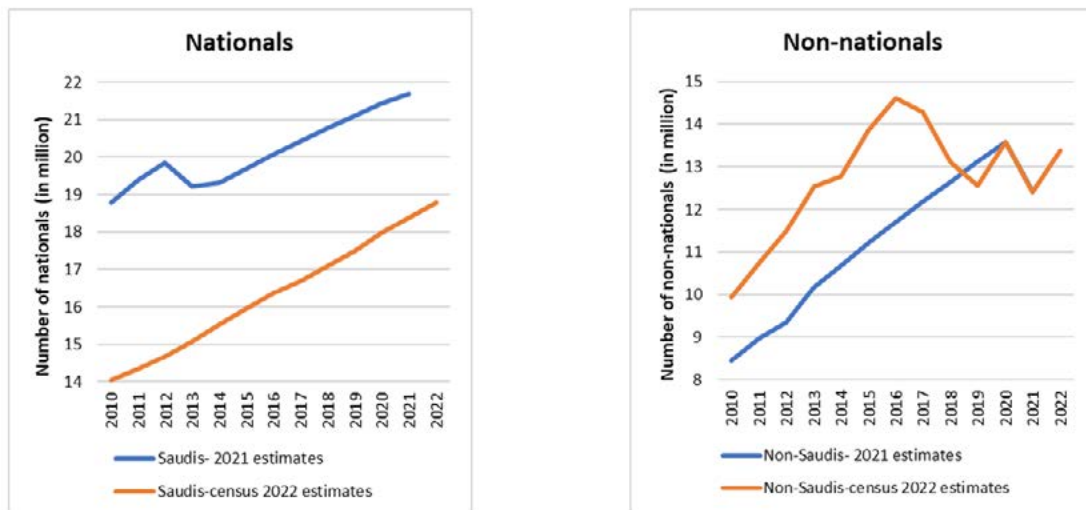
Non-national population, on the contrary, was underestimated in official counts. The first oil boom stirred economic diversification and infrastructure-building, resulting in ever larger flows of skilled and semi-skilled workers into the Kingdom. However, the development of the *kafala* (sponsor) system and the trade of labour visas (charging fees for foreign employees in return for one's sponsorship, without employing them) became a source of income for many nationals. Consequently, labour recruitments became disconnected from market needs, which increased the numbers of undocumented workers, unaccounted for by authorities.

Some authors suggested various explanations to the inflation of the Saudi population. These ranged from standing up demographically to Arab (Egypt, Iraq) and non-Arab (Iran) neighbours, to minimising the share of foreign residents and workers in the Kingdom and (in the 1970s-1980s), increasing population-based oil production quotas with OPEC (Winckler, 2005, 25). As for foreign workers, the presence of large pools of unrecorded migrants served private sector employers' short-term business needs.

The management of foreign population was thus minimal even during the 1990s, when low oil prices spurred the first attempts at structural adjustment to counter emerging unemployment and poverty. Yet, the drastic labour market reforms enacted after 2011 (the *nitaqat* project for the Saudisation of the workforce), later placed at the core of the Vision 2030 reform project, aim to reduce private sector's reliance on foreign labourers through financial and institutional pressure; and create incentives for nationals to join the labour market. Acquiring a precise knowledge of population size and characteristics thus became of major importance to successfully implement such policies.

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11 <https://www.stats.gov.sa/en/page/292>

**Figure 1: Pre- and post-census 2022 estimates of the numbers of Saudis and non-Saudis (2022)**

Source: GASTat

For the first time in the country’s history, census 2022 acknowledged a significant overestimation of the number of nationals (an excess of around 5 million in 2010-2013, or 25 percent) and the under-estimation of non-nationals (-24 percent in 2015-2016) (Figure 1). The drop in foreign residents’ numbers after 2017 is consistent with the implementation of taxes on dependants and other fees that year, and eyewitnesses’ reports that many expatriates had consequently left the country. Despite this drop, the share of non-nationals in the country was found higher than estimated before the census (41.6 percent) (GASTat, n.d. d). Revised estimates of the national and non-national populations, if accurate, suggest that the share of non-nationals in the total population may have neared 50 percent in 2016 (47.2 percent, as opposed to 37.8 percent with the pre-census population estimates).

The methodology used for adjusting data (population back casting) is available on the census’ website (GASTat, n.d. c). The census thus marked a shift from a “political” view on population, to a technocratic approach to population as an object of rational management geared to achieving socio-economic reforms.

### Publishing disaggregated data: a new representation of the population that “counts”

Until very recently, Saudi Arabia did not publish any data disaggregated beyond a binary classification of nationality (Saudi/non-Saudi). No data was ever made available on non-nationals, or subsets thereof, by region of origin (Arabs, non-Arab Asia, ...), or by country of citizenship.

In 2020, for the first time ever, the Ministry of Human Resources and Social Development (MHRSD) published raw datasets in the Ministry’s “open data” section, which listed workers employed in the private and government sectors, by country of nationality.<sup>12</sup> In 2022, datasets were made available on workers in the private sector, as well as in the civil service. The latter dataset detailed employees by country of citizenship, sex, age, detailed geographic location, education level, and more.<sup>13</sup>

<sup>12</sup> <https://gulfmigration.grc.net/saudi-arabia-workers-employed-in-the-public-and-private-sectors-by-country-of-citizenship-2020/>; <https://gulfmigration.grc.net/saudi-arabia-workers-employed-in-the-public-and-private-sectors-by-country-of-citizenship-2021/>.

<sup>13</sup> See the processing of the datasets in GLMM database: <https://gulfmigration.grc.net/saudi-arabia-workers-employed-in-the-private-sector-by-country-of-citizenship-2022/>; <https://gulfmigration.grc.net/saudi-arabia-workers-employed-in-the-government-sector-by-country-of-citizenship-and/>; more tables on workers in the civil service are available here: <https://gulfmigration.grc.net/glmm-database/demographic-and-economic-module/?search=1&cmct=Saudi+Arabia>

It can be argued that raw datasets are not accessible easily and straightforwardly to a wide audience. In 2022, for instance, the data had to be searched for in the Saudi government Open Data Portal, among an enormous number of various datasets pertaining to all aspects of public action. Moreover, raw datasets require a significant processing before use.

The Saudi census thus broke with decades of no or difficult access to disaggregated data. Processed figures of non-Saudi residents by country of nationality were published in the *Population Summary Report* released in June 2023 on GASat’s census website (Table 1).<sup>14</sup>

**Table 1 : Non-Saudi population in Saudi Arabia (top-10 nationalities, 2022)**

Country	Males	Females	Total
<b>Bangladesh</b>	1,950,943	165,249	<b>2,116,192</b>
<b>India</b>	1,712,780	171,696	<b>1,884,476</b>
<b>Pakistan</b>	1,647,704	166,974	<b>1,814,678</b>
<b>Yemen</b>	1,334,481	468,988	<b>1,803,469</b>
<b>Egypt</b>	1,181,180	290,202	<b>1,471,382</b>
<b>Sudan</b>	673,689	145,886	<b>819,575</b>
<b>Philippines</b>	274,305	451,588	<b>725,893</b>
<b>Syria</b>	259,632	189,682	<b>449,314</b>
<b>Nepal</b>	293,049	4,512	<b>297,561</b>
<b>Jordan</b>			<b>204,249</b>
<b>Total non-Saudis</b>	<b>10,244,464</b>	<b>3,138,498</b>	<b>13,382,962</b>
<b>Total population</b>	<b>19,678,595</b>	<b>12,496,629</b>	<b>32,175,224</b>

Source: GASat, Saudi Arabia census 2022, *Population Summary Report*

This suggests a new approach to foreign populations by Saudi authorities. Not only are non-nationals’ number and share in the total population reevaluated; the census’ Methodology reports acknowledged that “KSA’s population became increasingly diverse as a growing number of expatriates called the Kingdom home” (GASat, n.d. a, 14), which contradicts GCC states’ policy assumptions that foreign residents are only short-time contract workers, not meant to settle. The census questionnaires were also available in the top seven languages (Arabic, English, French, Urdu, Hindi, Bengali, and Tagalog).

Disclosing foreign distribution by citizenship and gender thus breaks with a decades-old binary perception of a population split between nationals and “non-nationals”. This is in line with Vision 2030’s set goal of “delivering the highest standards of transparency”,<sup>15</sup> and with the recent introduction of (very selective) paths to long-term or permanent residence. The Premium Residency Card (PRC) scheme, introduced in 2019, aims to attract highly skilled expatriates to contribute to the country’s reform endeavour. Saudi Arabia’s national “imagined community” (Anderson, 1991) may thus begin to incorporate (some of the) foreign nationals in the country.

<sup>14</sup> The full table, sources and references are available here: <https://gulfmigration.grc.net/saudi-arabia-non-saudi-population-by-country-of-citizenship-and-sex-selected-countries-2022/>.

<sup>15</sup> <https://www.vision2030.gov.sa/v2030/overview/an-ambitious-nation/>.

## Conclusion

Saudi Arabia is by far the largest and most populated of the six GCC states. The country hosts an estimated 58 percent of the region's total population and around 45 percent of all its foreign nationals. The release of data on Saudi Arabia is thus of utmost importance for academics, experts, and policymakers, in Saudi Arabia, origin countries, the GCC region, and worldwide, to capture a comprehensive knowledge of migration characteristics in the region. At the time of writing (June 2023), three summary volumes of census results have been released, tackling population, households, and housing. Volumes focussing on other themes (education, health, employment, income, as well as on "migration and diversity") were not available yet. It is hoped that more and detailed data will be made available soon on foreign nationals in the country.

The questionnaire's content introduced changes compared to previous censuses, in line with international standards. The household questionnaire, especially, collected information on the interviewee's country of birth, parents' country of birth, residency abroad, year of entry to Saudi Arabia, and the place of residence five years ago (GASat, n.d. b., 35). Data on duration of stay and place of birth,<sup>16</sup> which would allow measuring the share of second-generation foreign residents, for instance, are almost impossible to find in GCC statistics. The publication of such data for Saudi Arabia would be another, major innovation, characterising a major shift in the perception of foreign populations in the country.

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<sup>16</sup> The birthright for citizenship does not apply in Gulf countries. Therefore, a share of the foreign residents is born in these countries but are not naturalized.

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## About the author



Françoise De Bel-Air (Ph.D.) is a researcher and consultant based in Paris, France. A socio-demographer by training, she specializes in the demography of Arab countries, especially in the Middle East and the Gulf region. Currently a Senior Fellow at the Gulf Labour Markets, Migration, and Population (GLMM) programme of the Gulf Research Center Foundation (GRCF, Geneva) since 2013, she was a Senior Fellow at the French Institute for the Near East (IFPO) in Amman, Jordan for several years, and a part-time Professor at the Migration Policy Centre (MPC), European University Institute (EUI), Florence, Italy.

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