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Immigrants in Saudi Arabia and Their Demographic-Cultural Impact: A Spatial Analysis Using GIS

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Abstract

The Kingdom of Saudi Arabia possesses oil reserves amounting to about 25% of the total reserves in the world, and it is also one of the largest countries attracting immigrants to work in its economic and service sectors. The number of immigrants to the Kingdom has developed from 11.3% of the total population of the state in 1974 to 41.6% according to the 2022 census, with a total number of about 13.4 million people coming from 177 countries around the world. The largest flow of immigrants to work in the Kingdom came from the continent of Asia, from 27 Asian countries, with several 10.2 million immigrants, representing 76.1% of the total immigrants to the Kingdom, according to the 2022 census data. The geographical distribution of foreign immigrants varies across the 13 administrative regions of the Kingdom, with 31% of the total foreigners residing in the Riyadh region, followed by the Makkah region at 28.9%, and then the Eastern Province at 16.3%. These three regions are the highest in terms of the number of economic, urban, and service development projects in the Kingdom, and thus provide attractive job opportunities for immigrants. This geographical distribution of immigrants is reflected in the results of spatial analysis of their distribution using geographic information systems, where the average geographic center point of immigrants in the Kingdom is concentrated west of the Riyadh region in the center of the Kingdom, while 65.4% of the total immigrants in 2022 were concentrated on a standard distance circle covering an area of about 804 thousand km² in the center of the Kingdom. The analysis of the trend in the distribution of foreign immigrants showed a trend extending from the northeast to the southwest, from the Eastern Province on the Arabian Gulf in the east, passing through the Riyadh region, and reaching the Makkah region located to the west on the Red Sea. This large number of resident immigrants residing in Saudi Arabia has had a clear demographic and cultural impact on the characteristics of the population. For example, the sex ratio of the total population rose to 157.5 males per 100 females in 2022, exceeding the global average of 101 males per 100 females. The population's age structure and population pyramid were also affected, with the proportions of males, especially in the younger age groups, particularly those between 30 and 45 years old. Some cultural and social characteristics of the local population and resident immigrants were also affected, as restaurants serving national foods to immigrants spread, such as Indian, Pakistani, Filipino, Egyptian, and Yemeni restaurants. In addition to the influence on the Arabic language spoken by residents, where some non-Arabic words have entered, hybrid dialects have emerged combining Arabic with words from the languages of these migrants. Meanwhile, the migrants' culture has also been affected.

Keywords: Immigrants, Demographic and Cultural Impact, Spatial Analysis, GIS - Saudi Arabia.

Introduction

Demographic characteristics are among the most temporally and spatially variable phenomena, and their effects are multifaceted and extensive, making their studies intersect with numerous

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scientific disciplines, such as population geography, sociology, economics, and other social and human sciences.

The movement of migrants to Saudi Arabia for work is one of the most important demographic phenomena. Migration to Saudi Arabia intensified beginning in the late 20th century following the significant boom in global oil prices, which led to substantial financial resources that fueled investment and the establishment of numerous economic, urban, and service projects in the country's vast territories with a small population. This, in turn, increased the need to import large numbers of foreign labor to participate in these projects, which subsequently had numerous demographic and cultural effects on Saudi Arabia's population.

Research Problem

The continuous increase in the number of migrant workers arriving in Saudi Arabia since 1974 has affected the distribution and demographic, social, and cultural characteristics of the population in various regions of the Kingdom. This necessitates studying the development and characteristics of migrants, analyzing their spatial distribution, and documenting their demographic and cultural impact on Saudi society.

Study Area

The Kingdom of Saudi Arabia is geographically located in the southwest of the Asian continent, in the Arabian Peninsula, bordered to the north by the countries of (Jordan-Iraq-Kuwait), to the east by the Arabian Gulf and the countries of (Bahrain-Qatar-United Arab Emirates), to the south by the countries of (Oman-Yemen), and to the west by the Red Sea. It is located astronomically between the latitudes 16° 22' 46" N and 32° 14' 00" N, and the longitudes 34° 29' 30" E and 55° 40' 00" E. Its area is approximately 2.2 million km². According to the latest census in 2022, its population is about 32.2 million (58.4% Saudis, 41.6% non-Saudis) (General Authority for Statistics, Saudi Census, 2022). It is administratively divided into 13 regions, Figure (1).

Study Objectives

- * Track the development of the number of migrants to Saudi Arabia since 1974.
 - * Study the geographical distribution of migrants in the administrative regions of Saudi Arabia.
 - * Analyze the size and direction of the inflow of migrants to Saudi Arabia from various countries and continents around the world.
 - * Study the spatial analysis of migrants using some geographic information system methods.
- 5- Study the demographic and cultural impact of migrants on the local community and their influence on it.

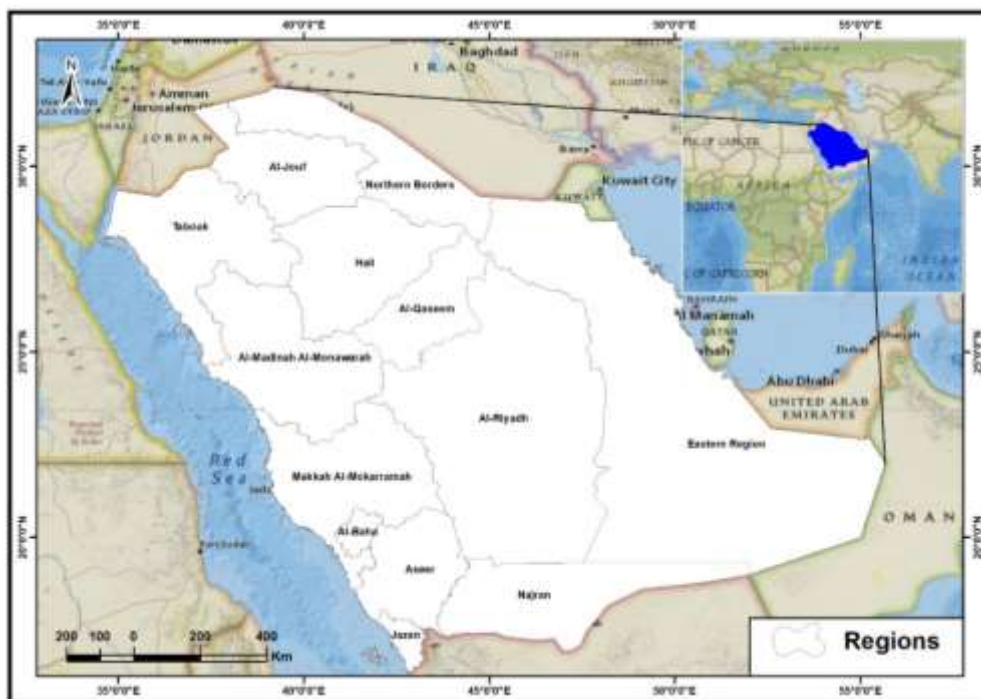


Figure (1) The location of the Kingdom of Saudi Arabia
and its administrative regions.

Study Methods and Approaches

The study utilized various scientific approaches to address the elements of the topic, such as the historical approach, the analytical approach, and the behavioral approach. Quantitative methods and cartographic methods, as well as Geographic Information Systems, were also employed to analyze data on immigrant populations and their geographical distribution.

Previous Studies

Many publications in various disciplines have addressed the topic of migration and immigrants to the Arab Gulf states, whether to monitor it as a demographic phenomenon, or to monitor the impact of these immigrants on the labor market and the economic, social, and demographic aspects of those countries. The following are some of these studies:

International Monetary Fund (1996), Financial Systems and Labor Market in the Gulf Cooperation Council Countries-Part 3: The GCC economies have seen rapid growth in recent decades, with expatriates making up over half of the workforce. Labor markets are segmented, highlighting disparities between nationals and non-nationals, as well as skilled and unskilled workers. This segmentation has led to challenges such as high unemployment rates among nationals due to mismatches in qualifications. In response, policymakers are formulating strategies to improve employment opportunities for nationals, including wage subsidies and training programs, while aiming for greater efficiency in labor markets.

Kapiszewski (2006), Arab versus Asian migrant workers in the GCC countries: Many Arab and Southeast Asian countries have faced difficult economic situations, making labor emigration

an attractive option for their citizens. Governments support this migration to relieve pressure on labor markets and reduce unemployment. Remittances from migrant workers have become a vital economic factor, surpassing regional trade. The Gulf Cooperation Council (GCC) states are prominent destinations, leading to rapid development but also cultural and socio-economic challenges.

Hamza, Sara (2015) "Migrant Labor in the Arabian Gulf: A Case Study of Dubai, UAE: This research investigates labor migration in GCC states, focusing on how the kafala (sponsorship) system subjugates migrant laborers. While facilitating rapid economic development, the system has fostered serious inequalities, creating a multi-tiered society where locals occupy the top tier and migrants the lowest. This has led to significant human rights abuses against migrant workers. A case study in Dubai illustrates how legal norms shape the experiences of South Asian laborers, highlighting the often-overlooked realities behind modernization narratives in the Gulf.

Essomba (2017), Labor Immigration into the Gulf: Policies and Impacts: This essay examines labor immigration in the Gulf, highlighting its economic and historical causes. It criticizes recent restrictive policies, which have had a limited impact due to persistent wage differentials and the low cost of foreign labor. The challenge of replacing migrant workers with locals in the private sector is emphasized, given the higher wages in government jobs. To encourage nationals to enter the private sector, the essay suggests adjusting salary structures and promoting marital unions between nationals and migrants to enhance integration.

Khraif, R. M., Salam, A. A., Nair, P. S., & Elsegaey, I. (2019). Migration in Saudi Arabia: Present and Prospects: Saudi Arabia has unique demographic characteristics compared to other GCC countries, prompting policy reviews. The article explores five migration-related dimensions, including internal migration, population growth, and migrant demographics. Data reveals that internal migration is influenced by push-pull factors and infrastructure differences. International migration across the GCC is shaped by labor demands, especially for adult male workers in Saudi Arabia.

Niblock, Ahmad, Sun (2022), Living Together Separately: social and cultural implications of migration to the GCC countries: This study discusses migrant labor in the Gulf, highlighting well-researched areas such as recruitment, working conditions, and economic impact. However, it points out the lack of research on the social and cultural dynamics of migrant communities. It raises questions about their cultural identity, cohesion, interaction with host societies, and influence on one another. The proposal calls for new research focusing on these overlooked aspects to better understand migrant life in the Gulf countries.

Soleiman (2022), The Influence of Migrant Workforce on the Security of Gulf States Since 1975: Migrant workers have profoundly affected economic, social, cultural, and political aspects of life in Gulf States. Their presence has led to demographic diversity and political subordination, with naturalized individuals comprising over half the population in some regions. This has created challenges for public security and linked local stability to the interests of superpowers and labor-exporting countries.

Charles, Bernard, Rowe & Abel (2023). International Migration and Development: The Changing Impact of Migration on Redistributing Global Population: This research examines how international migration has influenced global population distribution since the 1990s. Although migration intensity remains high, its effectiveness has declined, leading to a

smaller net redistribution of people. The study applies internal migration metrics to global flows, revealing more balanced migration systems over time. Migration's impact is strongest among countries with very high and low human development levels, showing both intensity and flow asymmetry.

First-The Evolution of Migrant Numbers in Saudi Arabia during the period (1974-2022):

The extraction of oil from the Kingdom of Saudi Arabia in 1936 marked a complete transformation in the country's life. A prime example is Sadler's writings in his memoirs about Dammam (currently the largest city in the Eastern Province of Saudi Arabia and the area where oil wealth is concentrated). He described it as a small village with several huts inhabited by the Dawesar tribe since 1922 (Al-Sabbagh, Muhammad, 2019). After oil extraction by California Arabian Standard Oil Company - Aramco currently - in the mid-1930s (Abow, 2015), a new phase of urban and economic development began. Many migrant workers and their families, working in the petroleum extraction sector, moved to the area. Residential neighborhoods were designated for them, named after Dhahran (later becoming a city) (Aramco Story, Vol. 1, p. 83). This had significant urban, economic, and cultural impacts on Saudi society at the time. The company established a school to develop the skills of Arab employees, teaching them English. Around 2,000 employees graduated from this school in 1955. A television broadcasting station in English was also established at Dhahran Airport in 1957.

The first formal census of the Kingdom of Saudi Arabia in its technical and scientific sense was conducted in 1974. The total population of the Kingdom was approximately 7 million (88.7% Saudi – 11.3% non-Saudi). Most non-Saudis were migrants, predominantly employed in economic sectors such as oil extraction, manufacturing, construction, and service sectors like education and municipal services. This occurred alongside a smaller Saudi population and high illiteracy rates among them, reaching approximately 85% in 1974. The number of migrant workers in the Kingdom was initially small, given that financial returns from oil production and sales were relatively limited during the period (1964-1974). From 1.9 million barrels in 1964 to 8.4 million barrels in 1974 (Saudi Arabia's oil production over 50 years), this was concurrent with a low global oil price, averaging around \$20 per barrel during the 1960s. However, the oil supply crisis that accompanied the October 1973 War and the resulting rise in global prices from \$2.48 in 1972 to an average of \$11.58 in 1974 (History of crude oil) changed the situation.

The rise in global oil prices to \$36.83 per barrel in 1980 due to the Iran-Iraq War, with Saudi Arabia achieving a peak daily production of approximately 9.9 million barrels of crude oil (Saudi Arabia's oil production over 50 years), led to a 90% increase in oil revenue since 1974. This prompted the government to plan numerous economic, infrastructure, and development projects across Saudi Arabia. In turn, this increased demand for foreign labor, motivating them to immigrate to Saudi Arabia. The percentage of the non-Saudi population rose from 11.3% of the total population in 1974 to 27.4% in the 1992 census, a 486.3% increase (Table 1 – Figure 2).

Census Year	Population	Saudi %	Non-Saudi %	Increase in non-Saudis (immigrants) %
1974	7009466	88.7	11.3	-
1992	16948388	72.6	27.4	486.3
2004	22678262	72.9	27.1	32.6
2010	27136977	68.9	31.1	37

2022	32175224	58.4	41.6	58.8
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Table (1) The Evolution of the Percentages of Saudis and Non-Saudis (Immigrants) During the Period 1974-2022.

*General Authority for Statistics, Population Census from 1974 to 2022.

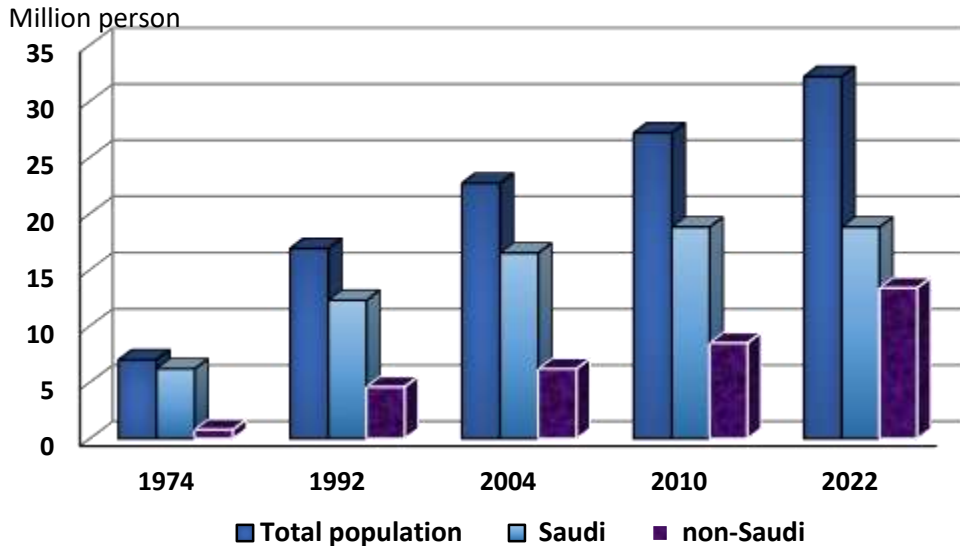


Figure (2) Population Development (Saudis - Non-Saudis) During the Censuses of the Period 1974–2022.

The number of foreign migrants continued to increase in Saudi Arabia during the 2004 census, reaching approximately 6.2 million people, representing 27.1% of the total population. However, a decrease in migrant numbers was observed during this period compared to previous periods, alongside the issuance of numerous labor market regulations, a greater focus on skilled labor compared to the past, and the impact of the regional political situation on the oil price. The price was significantly affected by the 2003 US invasion of Iraq, and the associated financial costs borne by the Kingdom during the first and second Gulf Wars. This led to a slowdown in some projects and consequently a decrease in demand for foreign labor.

The percentage of foreign migrant workers in Saudi Arabia increased in the 2010 census, reaching 31.1% of the total population, with approximately 8.4 million people. This represented a 37% increase compared to the 2004 census. This increase was in line with Saudi development plans, supported by the financial gains from oil sales. The average price of a barrel of oil reached approximately \$144 in 2014 (History of crude oil), with a daily production volume of around 12 million barrels. This also had an impact on the increase in the income of foreign workers, encouraging many of them to bring their families to live with them in the Kingdom. Consequently, the number of migrant residents increased in the latest 2022 census, reaching approximately 41.6% of the total population, with 13.4 million people. This represents a 58.8% increase compared to the 2010 census. This significant increase in the number of non-Saudis has had a noticeable impact on various aspects of service, social, and cultural life in different regions of the Kingdom. The diversity of nationalities among this large number of residents in various

administrative regions highlights the reciprocal influence between Saudi and migrant populations.

Secondly- Trends of immigration flows to Saudi Arabia in 2022:

The results of the 2022 census show that there are about 13.4 million foreign immigrants in the Kingdom of Saudi Arabia from about 177 countries, with the largest proportion coming from 64 countries covering different continents of the world. The flow of immigrants to Saudi Arabia, both workers and entourage, can be studied, as shown in Figure (3), whose analysis shows that:

1- The migration flow coming from eastern Asian countries in Saudi Arabia is the main source of immigration, as 27 countries from the Asian continent contribute about 10.2 million immigrants, accounting for 76.1% of the kingdom's total foreign population, which may be due to several reasons, according to the 2022 census data, including:

*These labor-exporting countries are partially close to Saudi Arabia and have lower wages, such as Bangladesh, which alone contributes about 2.1 million migrants, followed by India with 1.9 million migrants, Pakistan with 1.8 million migrants, and Yemen with 1.8 million migrants. They are all countries located in geographical areas near the kingdom, which facilitates travel and transportation.

*The conditions and climatic conditions in Saudi Arabia are like those in these countries, and in terms of the dominance of climatic conditions, the temperature is enough to rise

*Most of the countries that export labor to Saudi Arabia have low education levels, economies and large populations, and the illiteracy rate is 38.5% in Bangladesh and 27.9% in India (World Bank Group, 2025) Given the decline in economic income in these countries, which leads to a surplus of their labor force, whether exported to Saudi Arabia from these workers' remittances or not, and the total amount of immigrant remittances from the Kingdom of Saudi Arabia will be about \$38 billion in 2022, according to the Saudi Central Bank, it will increase to \$38.4 billion in 2024, India is the largest recipient of remittances from Indian overseas workers, estimated to be about \$89 billion in 2023, according to the World Bank, 15% of this came from the Kingdom of Saudi Arabia, while Bangladesh received \$22 billion from its overseas workers, 19% of which came from the Kingdom of Saudi Arabia and received Pakistan is \$31 billion, 26% of which is Saudi Arabia's attempt (IOM Global Data Institute).

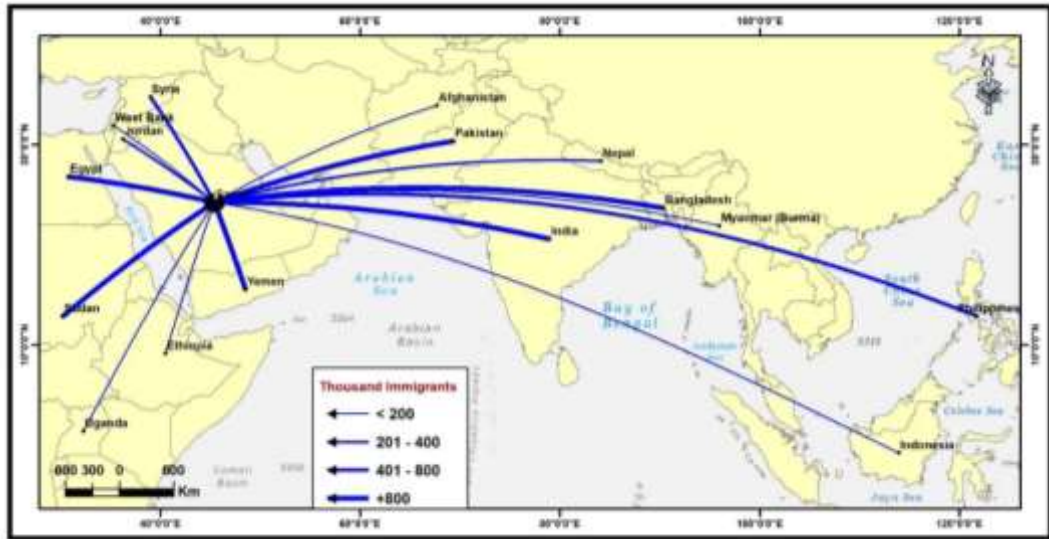


Figure (3) Main trends of immigration flow to Saudi Arabia in 2022.

2-The migrant flow originating from African countries west of Saudi Arabia comes in second place, with Africa contributing approximately 3 million migrants, representing 22.4% of the total migrant population in Saudi Arabia in 2022. These migrants primarily came from 24 countries. Egypt leads the African countries sending migrants to Saudi Arabia for work, contributing approximately 50% of the total African migrants, placing it fifth among the countries sending foreign workers to Saudi Arabia with 1.5 million migrants. Sudan ranks sixth among the countries sending migrants to Saudi Arabia and second in Africa, with 0.8 million migrants in 2022. These two countries are geographically closest to Saudi Arabia, and share numerous cultural and social characteristics, such as language, religion, and some customs and traditions, which motivated this large number of migrants from Egypt and Sudan to seek work in Saudi Arabia.

3-The countries and continents contributing to the third migrant flow to Saudi Arabia are diverse, with migrants predominantly from Europe, North and South America. This flow accounted for approximately 1.5% of the total migrant population in Saudi Arabia in 2022. The low number of migrants in this flow may be attributed to the geographical distance between the sending countries in those continents and the higher wages for workers in those countries compared to Saudi Arabia. Cultural, civilizational, and climatic differences also played a role in the lower number of migrants in this flow. It is noteworthy that most migrants in this flow are skilled and specialized workers in economic activities such as mining, oil extraction, engineering, and electronics.

Thirdly-Spatial Analysis of Immigrant Distribution Across Administrative Regions:

1- Relative Geographical Distribution:

Approximately 13.4 million non-Saudi immigrants are geographically distributed across 13 administrative regions covering an area of approximately 2.15 million km² according to the latest 2022 census data. The following has been revealed from the analysis of Figure (4):

- The Riyadh region hosts the largest number of foreign residents, accounting for 31% of the total foreign immigrants nationwide in 2022. Riyadh, as the country's capital and largest city with a total population of 8.6 million, has attracted the most immigrants due to the economic, urban, and service projects it offers, providing numerous employment opportunities for both ordinary and specialized labor. Foreign immigrants constitute approximately 26.7% of Riyadh's total population.

Makkah Al-Mukaromah region ranks second in terms of population nationwide (8 million), and second in terms of foreign immigrant concentration, with a proportion of 28.9% of the total nationwide. This is attributed to the diverse economic and urban projects and employment opportunities in its major cities, such as Jeddah on the Red Sea, which is the kingdom's largest western port, as well as the presence of the Masjid al-Haram (Sacred Mosque) and related urban projects in Makkah. Foreign immigrants represent approximately 24.9% of Makkah's total population.

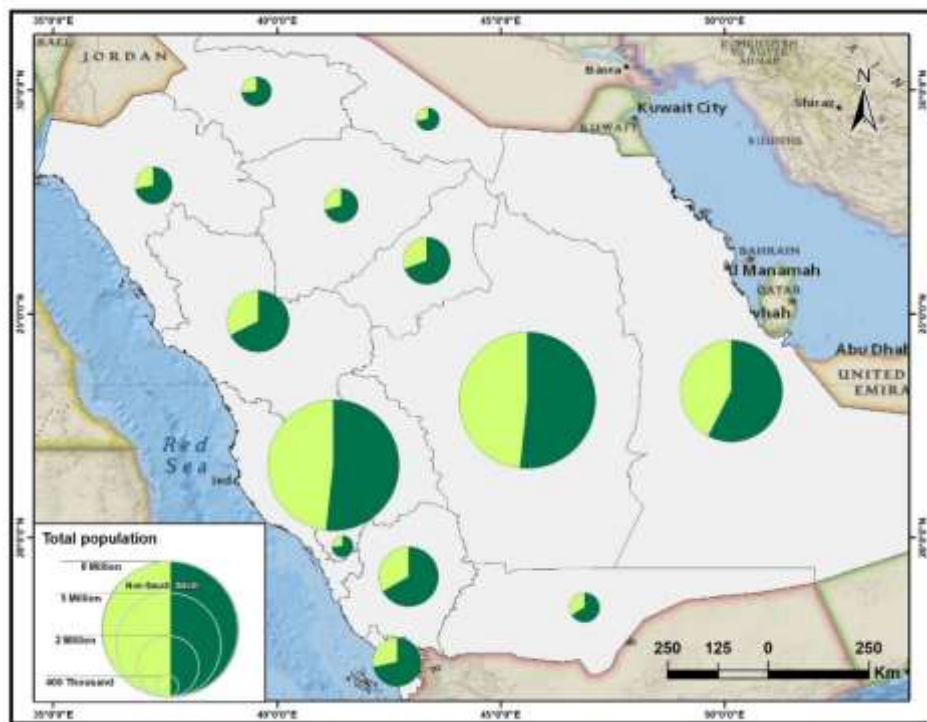


Figure (4) Geographical Distribution of the Population (Saudi - Non-Saudi) in Saudi Arabia According to the 2022 Census.

The Eastern region accounts for approximately 16.3% of the total immigrants in 2022, representing 15.9% of its total population of 5.1 million. This places it third in attracting immigrants due to its being the main area of oil field concentration and related industries. It has historically been the oldest region to receive immigrants for work in this vital sector since the 1930s.

The proportion of immigrants in the remaining regions of Saudi Arabia varied due to several factors, including proximity or distance from the capital, religious and cultural centers, and the

presence of large-scale development projects offering employment opportunities. Regions with fewer such projects, such as the Northern Border region in the north (0.8%), Al-Baha region in the south (0.7%), Jazan region (3%), and Najran region (1.5%), had the lowest immigrant populations. The Northwest region, including Madinah (5.2%), saw a slightly higher proportion due to projects related to the Prophet's Mosque and available economic projects. Similarly, the Aseer region in the southwest (5%) saw an increase due to tourism and entertainment sector projects.

The Median Center:

Analysis of the immigrant distribution in the regions of Saudi Arabia by the Median Center study helps determine the hypothetical geographical concentration point around which immigrants are distributed evenly in all directions, which statistically corresponds to the concept of the arithmetic mean. Processing of immigrant distribution data in the Kingdom's administrative regions revealed that the mean geographical center point is located at coordinates (45° 99' 224 E - 26° 75' 521 N), as shown in Figure (5). This point lies west of the Riyadh region, which aligns with the concentration of foreigners in Riyadh, representing 47.1% of its total population in 2022. This may be attributed to its status as the capital and its numerous large-scale economic projects, construction, and tourism projects, as well as the presence of numerous industrial cities that offer numerous employment opportunities for immigrants.

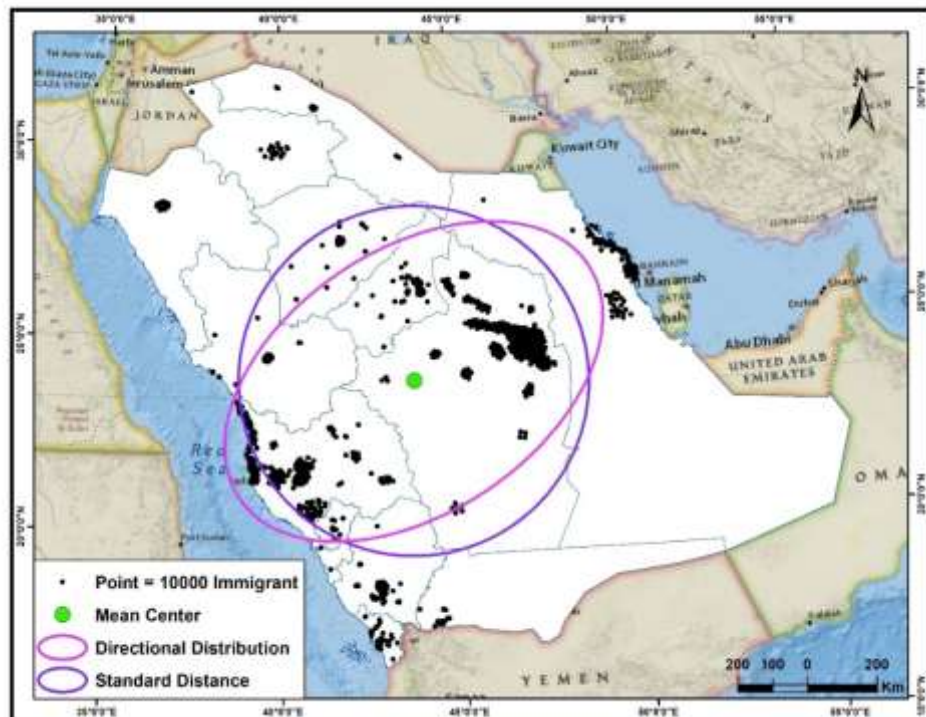


Figure (5) Spatial Analysis of Migrants in Saudi Arabia According to the 2022 Census.

Standard Distance:

Standard distance is a spatial analysis method in Geographic Information Systems (GIS) that helps determine the distribution pattern of immigrants in different regions of Saudi Arabia. Analysis of their distribution data, as shown in Figure (5), reveals that the standard distance circle covers an area of approximately 804,000 km², representing 37.4% of the Kingdom's total area. Approximately 65.4% of the Kingdom's total immigrant population in 2022 is concentrated in this circle. This standard distance circle covers parts of seven regions (Eastern Province, Riyadh, Makkah, Madinah, Hail, Aseer, and Baha). It is noteworthy that these regions, covered by the standard distance circle, have the highest economic, investment, and development activities in Saudi Arabia, and are the most attractive to residents in general and immigrants in particular. Therefore, they were the most affected by immigrants demographically and culturally, as will be clarified later.

Distribution Direction:

Analysis using the distribution direction tool in Geographic Information Systems (GIS) focuses on studying the distribution of immigrants around the mean geographical center point, as shown in Figure (5). The elliptical distribution direction, extending from the northeast to the southwest across Saudi Arabia, has a directional angle of 53.6 degrees. It covers a horizontal area of approximately 611 km² and a vertical area of 383 km². This indicates a significant concentration of immigrants working in key areas stretching from the eastern part of Saudi Arabia on the Arabian Gulf, through its center, to the west on the Red Sea, in a cross-sectional area passing through three regions: the Eastern Province, Riyadh, and Makkah.

Fourthly-The demographic and cultural impact of immigrants in Saudi Arabia:

The direct and indirect demographic and cultural impacts of immigrants on the local population in Saudi Arabia vary. Among the most important impacts observed are the following:

Impact on Sex Ratio:

In stable communities, the numbers of males and females usually balance out, but certain influencing factors can disrupt this equilibrium. One of the most significant factors is population migration, which affects the sex ratio of populations in both the place of origin and the destination. The balance of sex ratio is quantitatively measured through the sex ratio, calculated by dividing the number of males by the number of females multiplied by 100, thereby determining the number of males per 100 females. The migration of workers to Saudi Arabia, especially male migrants from other countries, has contributed to a higher proportion of male immigrants compared to female immigrants, affecting the overall sex ratio of the entire population. Harsh climatic environment and strenuous work have made male migration to Saudi Arabia higher than female migration.

The sex ratio in the 2010 census for the total population in Saudi Arabia was 132.7 males per 100 females, while it reached 238 males per 100 female immigrants. For Saudi citizens, the ratio was 104 males per 100 females, according to the 2010 census.

The value of the sex ratio in Saudi Arabia increased in parallel with the rise in the number of immigrants, reaching approximately 157.5 males per 100 females for the total population in Saudi Arabia, while among immigrants it reached 326 males per 100 females, surpassing the global immigrant ratio of 108 males/100 females in 2023 (IOM, World Migration Report 2024). The sex ratio for Saudi citizens was approximately 100.8 males per 100 females, according to

2022 census data. From this, we conclude that there is a direct relationship between the increase in the number of immigrants to Saudi Arabia and the rise in the sex ratio for its total population, leading to an imbalance in the gender composition.

Impact on the Age Structure:

Migration consistently attracts young working-age individuals. Consequently, Saudi Arabia's population pyramid is influenced by migrants, particularly young people. In 2022, the number of migrants aged 30-34 was 1.7 million males and 0.44 million females, compared to 771,000 Saudi males and 758,000 Saudi females in the same age group. Analyzing the age structure of migrants across broader age groups reveals that the number of migrants at the young age group (0-14) reached 1.4 million (51.3% male – 48.7% female), representing approximately 10.5% of the total migrant population in 2022. These individuals often accompany migrants as spouses or children and reside in Saudi Arabia with them.

The number of migrants in the middle-aged group (15-59) reached 11.6 million (79.5% male – 20.5% female), accounting for 86.6% of the total migrant population in the Kingdom in 2022. Notably, this age group constitutes the largest segment of working-age migrants, particularly those aged 30-45, as shown in Figure (6).

The elderly group (65 years and older) had the fewest migrants (459,000), mostly accompanying family members or working in experience-requiring professions such as caregivers, drivers, and supervisors of migrant workers. This is because some Saudi families have retained them after years of employment, trusting their experience. This leads to the conclusion that Saudi Arabia's population pyramid has been significantly affected, especially the middle-aged groups represented by migrants, particularly young ones. Their numbers even surpass the number of Saudi citizens in these age groups, leading to an overall imbalance in the population structure of Saudi Arabia.

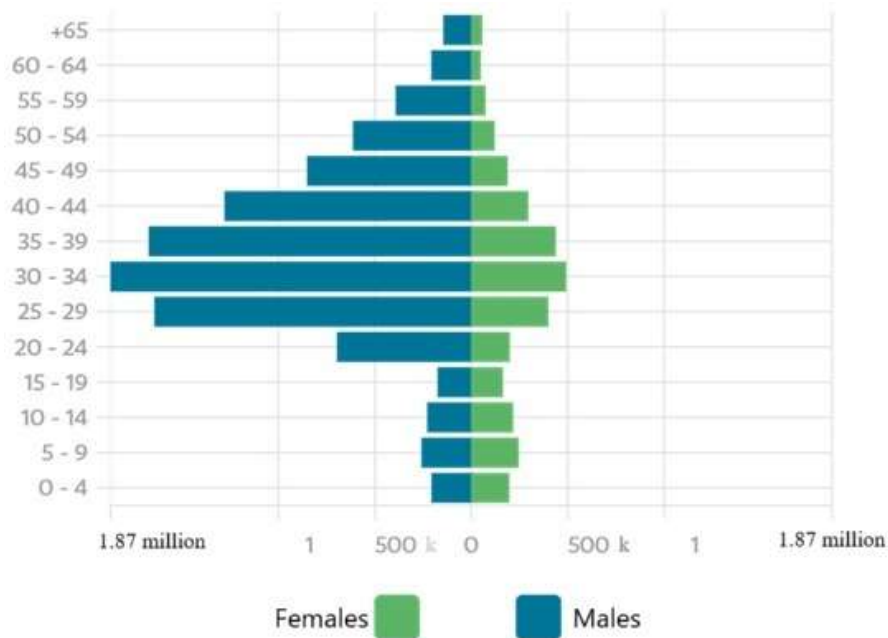


Figure (6) Population Pyramid of Immigrants in Saudi Arabia According to the 2022 Census.

Cultural Impact:

The presence of over 13 million immigrants from more than 100 countries across the globe in Saudi Arabia has had a reciprocal cultural impact on both Saudi citizens and immigrants. This is evident in the significant cultural diversity among the immigrants, including various cultures, religions, and native languages. This has, in turn, influenced Saudi society itself, as seen in various aspects:

Language:

There has been a reciprocal exchange of language between immigrants and Saudi citizens. Through work and daily interactions, many immigrants have acquired some Arabic words (the official language of Saudi Arabia) as a means of communication with Saudi citizens, at the very least, their daily transactions, particularly in craft professions dominated by non-Arabic-speaking immigrants, such as taxi drivers, shopkeepers, laundry workers, and artisans, among others in small and medium-sized enterprises. This is a natural attempt to communicate with native speakers. However, it is also noticeable that the Arabic language of Saudi citizens has been influenced by non-Arabic words. Over time, some foreign words have infiltrated the Arabic language, and Saudi citizens now use them, especially given that many Saudi families employ nannies, mostly immigrant women from non-Arab countries (Philippines, Indonesia, Kenya, Bangladesh, India). Due to their constant daily interaction with children, the language of some young children has become a hybrid, combining Arabic and non-Arabic words. This newly formed language has grown with them. For example, when an Arab asks another person from the same culture and language about a location and wants to direct them, they might say, you will reach the destination when you walk straight along this path. However, a non-Arabic word has become common in everyday Saudi society as a substitute for this phrase. If asked the same question, the person might respond, move towards it, *sida* (this is how it is pronounced, a word from the languages of immigrants from Asia). Another example in the language of Saudi citizens is the equivalent of the Arabic word for similar or same. Sometimes, the word *simsim* (pronounced as it is in Arabic, a corruption of the English word same) is used instead. Many other non-Arabic words have become commonplace in the language of residents and are now part of their vocabulary. This demonstrates the reciprocal influence between Saudi citizens and immigrants on language.

Food:

The diversity of the nationalities of migrants residing in Saudi Arabia has played a role in the variety of their food requirements, which differ according to their nationalities. Therefore, restaurants offering types of dishes that are completely different from the local and prevalent ones among Saudi citizens have spread. Restaurants that serve food specific to each nationality, such as Indian, Chinese, Filipino, Pakistani, Afghan, and other restaurants representing Asian cuisine, are widespread. Egyptian, Sudanese, and Yemeni restaurants representing Arab cuisine have also proliferated, in addition to international restaurants representing global chains as a model of Western cuisine. The number of establishments operating in the food and beverage services sector in the Kingdom of Saudi Arabia reached 93,000 establishments in 2023, employing about 606,000 workers (80% migrants – 20% Saudis) (Chamber of Commerce, 2024). The restaurant sector alone accounted for 70,000 establishments, most of which are concentrated in the Riyadh region (18,000 restaurants) due to the highest concentration of

migrants there, followed by the city of Jeddah in the Makkah region (12,000 restaurants), while 6,000 restaurants are distributed in the city of Dammam in the Eastern region. These are the cities with the highest number of migrants.

This has led to a change in the food culture among Saudi citizens and their preference for some foods from those restaurants, regardless of their original homeland. It has become common to see many Saudi citizens in restaurants that do not serve the usual food for Saudis. This, in turn, has led to the growth of the number of restaurants that do not serve Saudi food. For example, the number of Indian restaurants alone accounts for about 2% of the total restaurants in Saudi Arabia (Chamber of Commerce, 2024). It is also noted that the main meal for a large segment of Saudi citizens is called *Kabsa*, with its main ingredient being Basmati rice, which is not grown at all in Saudi Arabia due to the characteristics of the climate, soil, and scarcity of water, and its primary homeland is Asian countries like India, Bangladesh, and the Philippines. This indicates the significant influence of migrants on the culture of local and national foods, especially since most of them come from Asian countries. It has also become common to see many restaurant and shop signs written in the languages of some migrant countries, whether from India, Bangladesh, or the Philippines.

Conclusions

Saudi Arabia has attracted immigrants since the 1930s in parallel with the discovery and extraction of oil, the ongoing economic and urban development projects, and the availability of job opportunities, which led to an increase in the number of immigrants from 11.3% of the total population in Saudi Arabia in 1974 to 41.6% in the last census of 2022.

The number of immigrants reached 13.4 million in 2022, belonging to more than 177 countries, with the main flow coming from 27 Asian countries (10.2 million), followed by the second flow from African countries (3 million), while the remaining countries contributed to the rest of the immigrants (0.2 million).

The total financial remittances of immigrants in the Kingdom amounted to about 38.4 billion dollars in 2024. India is the largest recipient of remittances from Indian immigrants in the Kingdom, followed by Bangladesh and Pakistan.

- Immigrants are distributed across the thirteen regions of Saudi Arabia, with the Riyadh region accounting for 31% of the total immigrants, followed by the Makkah region at 28.9%, and then the Eastern Province at 16.3%. These three regions are the most populous and have the highest number of projects and economic, urban, and service activities, as well as job opportunities across Saudi Arabia. Meanwhile, the number of immigrants decreases in the administrative regions located on the outskirts.

The results of the spatial analysis of the distribution of immigrants using geographic information systems in the administrative regions of Saudi Arabia showed that the geographic center point is located west of the Riyadh region. The standard distance circle covers an area of 804 thousand square kilometers, accounting for 37.4% of the total area of the Kingdom, and representing 65.4% of the total immigrants in 2022. A study of the distribution trend of immigrants showed their distribution in the center of the Kingdom, extending from the northeast to the southwest.

Immigrants have affected the demographic characteristics of the population in Saudi Arabia, as the gender composition of the total population was affected, with an increase in the number of males compared to females in 2022, leading to a higher sex ratio than the global average. The

age structure of the population was also affected, with an increase in the number of people in the middle age categories, especially the youth. Additionally, immigrants have culturally influenced the Saudi population, as their Arabic language was affected, incorporating some non-Arabic words from the immigrants' languages, resulting in a hybrid language. Immigrants were also influenced by the Arabic language and used some distorted Arabic words as a means of daily communication with the Arabic-speaking population. Furthermore, the food culture of both Saudi residents and immigrants was influenced by their daily interactions and the diversity of the immigrants' nationalities, leading to a variety of national dishes.

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