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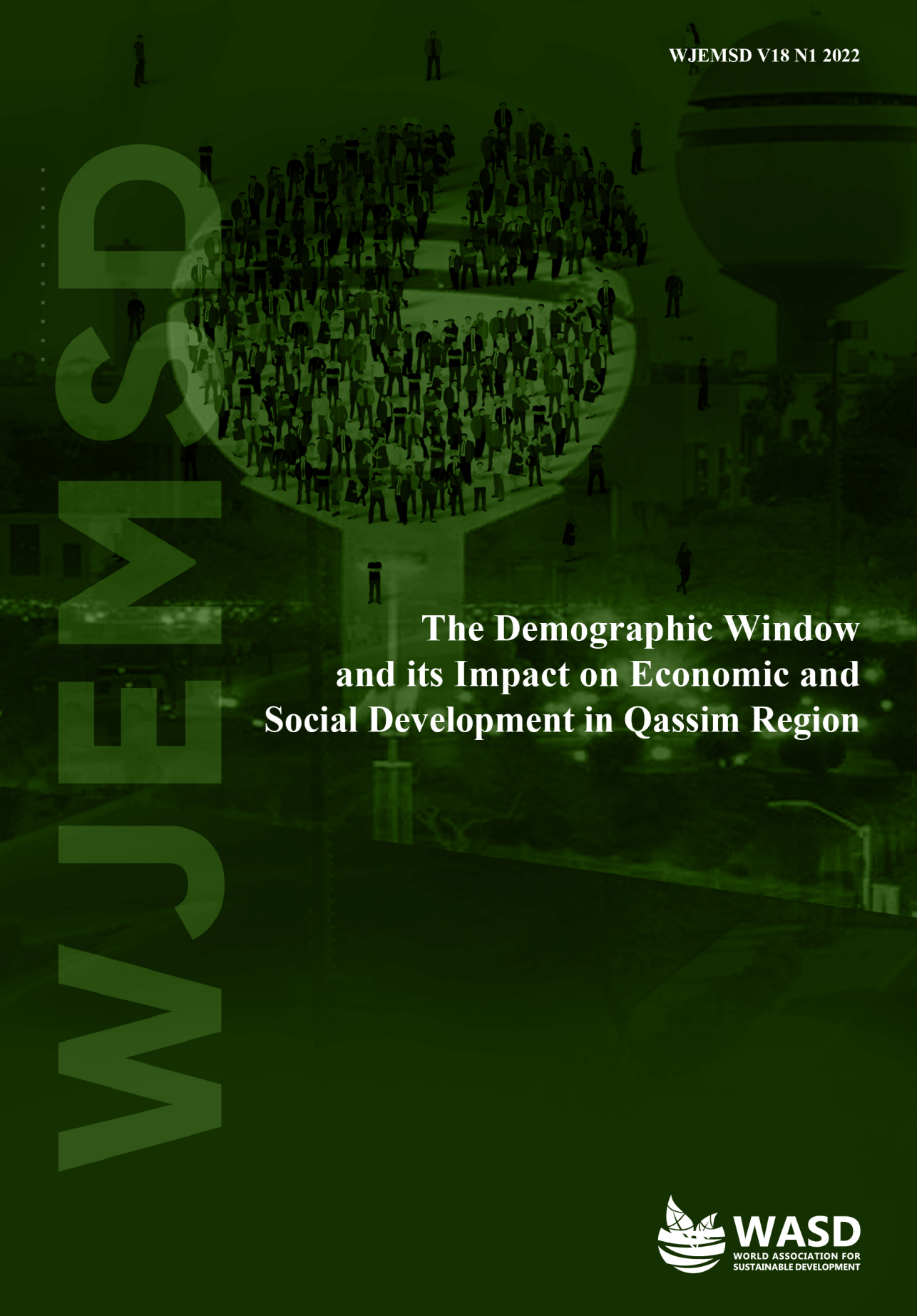

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RESEARCH PAPER

The Demographic Window and its Impact on Economic and Social Development in Qassim Region

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Abstract

Purpose: The paper aims to identify the age and gender structure, the stage of the demographic window of Qassim's population, the type of population pyramid and its impact on economic and social development in the region.

Design/Methodology/Approach: As a preliminary study, this paper uses a descriptive and analytical methodology, using data, reports and estimates obtained from the General Authority for Statistics related to the General Population and Housing Census of Qassim for the years 2004/2010/2018. Comparisons are also made between the results of censuses and estimates to identify discrepancies, using inductive and deductive methods to arrive at the relationship between age and gender composition and economic and social development in Qassim. It also extracts scientific findings of the demographic window phenomenon through available data, and through the demographic reality and its analysis.

Findings: The study finds coherence between population increases in male working age groups and their effect on economic activity. Also, the study finds that there is a decline in fertility rates in the Al-Qassim region. Finally, the study finds a strong link between the number of beds and hospitals, and healthcare personnel in the Al-Qassim region.

Research limitation/implications: Although there was a problem of data saturation due to the sample size, the study conducted a triangulation process by sampling the General Population and Housing Census with similar cognitive processes as theorised. There are broader implications around the use of a qualitative, phenomenological approach to the study of personality types and cognitive processes.

Originality/Values: Promoting diverse methods for optimal investments in the demographic window in Qassim, making it a development tool, and transforming it from a problem and burden into an opportunity and strength; this will help to achieve the Kingdom's vision 2030.

Keywords: *The Demographic Window, The Population Pyramid, Economic Development and Social Development*.

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Introduction

The study of population is of great importance because the relationship between population and development is one of the most interdependent relationships in the world. Populations are the makers of development and are responsible for its success. The change in the age and gender composition of the population is the result of demographic processes over relatively long periods of time. Therefore, demographics and their links to development are important, especially in Arab countries that have recently witnessed major demographic and social transformations affecting the age structure of the population, and therefore its development. Arab societies are among the youngest in the world; statistics estimate that the proportion of the youth population will reach 60% of the demographic composition of the region in 2020 (Wafig, 2020). This is characterised by an increase in the size of the working age population and subsequent decrease in the size of dependent age groups of children and the elderly; this is considered a demographic change, the so-called demographic window.

According to the United Nations, the demographic window concept is defined as the period when the percentage of the population under the age of 15 is less than 30% of the total population, and the proportion of the elderly (65+ years) is not more than 15% of the total population (Olaish, 2016:27). This change can result in a window of opportunity for development through planning and development in its various dimensions, especially economic and social dimensions. There is a close link between population and economic and social development. The Kingdom of Saudi Arabia (KSA), especially Qassim - the study area - is going through the demographic window, as the high working population in the region has a great impact on the workforce and a strong relationship with economic and social planning. It is a true indication of the future needs of the population.

The problem

Population is the basic element for which studies are carried out, and plans for economic and social development are devised to improve the economic and social conditions of the population in the region. The change in the age and gender structure, and the emergence of the demographic window stage with the expansion of the largest proportion of the population those of working-age, led to this group's growth rates exceeding those of the remaining groups. This would enable the region to develop a diversified economy, and this, in turn, pushes the wheel of future growth forward. There is a need to study this demographic shift because of its impact on the economic and social development plans in the region. If the shift is not handled well, the results may become negative, leading to an increase in unemployment and demand for work; this could exacerbate the economic and social problems in the region.

The goal of the Kingdom of Saudi Arabia 2030 towards a new development stage is to create a vibrant society in which all citizens can achieve their dreams, hopes and aspirations in a prosperous national economy. This represents a major development challenge that requires adopting development policies and plans with a future vision in all economic and social fields. The most prominent economic challenge is to provide all those of working age with jobs that are commensurate with their needs. This one of the most important goals of the Kingdom's Vision 2030, to reduce the unemployment rate in the Kingdom.

Objectives

The objectives of the paper are as follows:

1. to know the age and gender structure and the stage of the demographic window of Qassim's residents;
2. to study and analyse the age and gender structure of Qassim's population;
3. to know the type and significance of Qassim's population pyramid;
4. to study the impact of the age and gender structure and the demographic window on economic and social development in Qassim.

The importance of the study

This paper is the first to study the gender structure and the demographic window in Qassim, Kingdom of Saudi Arabia.

The age and gender structure is considered a basic and important pillar when drawing up a country's economic and social development plans. It is important to planners in population and development programmes, and demonstrates the efficiency of the population's economic, productive and social capacity in terms of the size of the workforce, the productive strength of the population, their degree of vitality and their contribution to the production process.

The working age population has a great impact on the labour force and a strong relationship with future economic and social planning.

Terminology of study

The demographic window: is a set of changes that result from demographic shifts, when the growth of the able-to-work population (between 15-65 years) begins to clearly outpace the growth of the dependent categories of children and the elderly. The population structure turns from a classic pyramid to a floral one; i.e., the population pyramid bulges in the middle.

The population pyramid: is defined by the relative distribution of population according to age and gender. In its classic form, it is in the form of a pyramid with a broad base; the base represents the age groups of young people who are supported, and the larger the base of the population pyramid, the higher the dependency rate. This is linked to the rate of births and deaths, so the higher it is, the higher the pyramid will take its classic shape (Al-Sagga, 2011).

Economic development: is the intended quantitative and qualitative change, directed and planned towards ensuring survival and achieving continuity, with the aim of raising the level of citizens in various fields (Hamdani, 2009).

Social development: is the organised effort to improve the conditions of life in the community and encourage residents in the community to help themselves (Al-Saeed, 2005), as defined by Batten (1957). It is the process by which individuals living in a small community can discuss their needs and then develop a plan and work together to fill this need.

Theories

Demographic Transition Theory

Landry developed this theory in 1929. He noticed shifts in birth and death rates in industrial societies formed four stages. Most developed countries reached the third or fourth stage, while the vast majority of developing countries reached the second or third stage. He also summarised the successive stages that societies go through from the transition from a (traditional) demographic system that combines high births and deaths to a (modern) demographic system that combines low births and deaths.

The demographic transition theory is divided into four stages (Teitelbaum, 1975:421) as described below.

The first stage is sometimes known as the primitive or pre-industrial stage. It is characterised by high rates of births and deaths, where the population is exposed to epidemics and famines; the death rate rises significantly among all age groups, especially among infants.

The second stage, known as the early population growth phase, is characterised by a rapid and increasing population growth as a result of a decrease in the death rate while the birth rate remains high, increasing the difference between births and deaths. As a consequence, the gap between births and deaths widens and the stage is characterised by a steady decline in crude death rates due to improved health, economic and educational levels.

The third stage, known as the late population growth stage, is the stage experienced by countries with medium fertility and low mortality; the population growth is characterised by being less than its annual level.

The fourth stage, the last stage in the demographic cycle, includes countries that have reached the stage of stability where the birth and death rates decrease significantly, and consequently the population growth rate falls to its lowest levels. This stage is also called the stage of maturity (stage after the transition) in the modern system, where population growth is non-existent or weak, and the stability of the population size is at a much higher level than it was at the beginning of the transition.

Demographic transformation in Qassim (the study area)

To discover the demographic change in Qassim and what stage it has reached, it is necessary to track the development of the age structure and the demographic growth rate, starting from the available population census data to the latest estimate of the population in the region. These transformations will be identified later.

Demographic Transition Theory and Response

This theory appeared in an article by the scientist Davis (1963). The idea of the theory is that the family always seeks to improve its economic and social situation, leading to a decrease in death rates and a change in its reproductive behaviour, according to cultural characteristics and a reduction in the number of births. Therefore, the main catalyst for change is external influences. Davis' theory is a continuation of the demographic transition theory that explains fertility decline followed by reduced mortality (Davis, 1936:346).

Reproductive Theory based on Socio-Economic foundations

Richard Easterlin (1978) discussed how economic, social, cultural and biological foundations determined the levels of reproduction. He predicted the size of America's population in 1984 based on a number of basic ideas, the most important being determining the number of live children conceived by comparing incentives to reduce childbearing with its cost (psychological, financial, or time-related for women); when incentives are greater than the cost, the birth rate will reduce and vice versa. Incentives to reduce childbearing depend on the difference between the demand for children (determined by the level of disposable income, cost, and individual preference) and their offer (determined by rates of natural fertility, mortality, and survival of children until puberty). If the supply is less than the demand, the incentive is to reduce fertility and vice versa (Easterlin, 1978).

Previous studies

There are some non-Arab studies, e.g., Peng (2005), on the demographic window, human capital and economic growth in China. Human capital plays a major role in the economic growth in China, and it is expected that the demographic window will be clear until 2030. The results showed that the aging population has a clear impact on the country, education and well-being. Oey-Gardiner and Gardiner (2019) studied the demographic dividend of Indonesia or the window of opportunity; they stated that working population will be greatest between 2020 and 2030. Higher productivity will depend on economic and social characteristics, as there is a relationship with the future demographic window. Smits and Crombach (2019) presented a study on the demographic window and economic growth in sub-Saharan Africa; results showed a higher working-age population compared with dependent population, especially in middle-income cities. The area is well-educated, an important and influential indicator of growth. However, data showed that the fertility level is low.

Naeem (1999) is a study on population growth, economic and social development, close interdependence and mutual relations, with a special study of the demographic and developmental reality in Syria in the 1970-1995 period. The study discussed the impact of development and the development process on population growth. The results showed an increase in population growth due to an increase in births and fewer deaths, the qualitative development of the workforce, and the participation of women in economic activity. Al-Nasser (2011) studied the effect of the population window on economic and social development in Syria. The study aimed to identify population characteristics and analyse their relationship with economic and social variables. The results showed the emergence of the population window due to a decline in fertility, and consequently a decline in population growth rate and age structure: the population window had a positive effect on economic and social variables.

Al-Hasnawi and Al-Jubouri (2013) discussed the spatial analysis of the specific age structure in the province of Najaf, Iraq, for the period 1997-2013. The study aimed to identify the population's gender and age composition and the factors behind its spatial variation (Al-Nasser, 2011). The results showed

an increase in the sex ratio in Najaf Governorate, an increase in the proportion of young people, and a low dependency ratio; the study also showed that the population was a young society. Al-Saadi (2014) studied the age structure of the population in Iraq and its relationship to the demographic change: a geographical view and a demographic analysis. The aim of the research was to identify the magnitude of the relationship between the age structure of the population and the demographic shift; it became clear that there is a strong relationship in the area due to an expansion of the youth group.

Naima (2013) aimed to identify the characteristics of the current and future age structure and gender ratio in Wargala, India. The results showed that the population is distinguished by its youthfulness, and the majority are of working age.

Gharaibeh (2015) studied and analysed the age and gender structure of the population in Ajloun Governorate, Jordan, for the period 2004-2012. The results showed that the base of the population pyramid is broad, and the dependency ratio is high. Al-Murshid (2017) presented a study from Morocco that aimed to analyse the path of population growth, its relationship to the demographic shift, and its impact on economic and social indicators. The results showed that Morocco entered the demographic window stage in 2003; however, it was not utilised correctly and there was an increase in unemployment among the youth.

Amer's study (2018) on the age and gender composition of the population of the Republic of South Africa and its impact on some indicators of human development (a demographic study) aimed to identify the general features of population changes, and to study and analyse the factors affecting the age and gender structure. The results showed an increase in the number of workers in all activities; the expected extent of the demographic transition is expected to decrease. Mohamed and Gowadyr (2018) studied the effect of population growth on economic growth in Algeria. The study aimed to test the effect of population growth indicators on per capita gross domestic product (GDP) as an indicator

of economic growth. The results showed the growth of the total population in Algeria, and decreased fertility rate. Salami and Salami (2020) studied the effect of the demographic shift in the age structure of the population on economic growth rates in Algeria for the period 1970-2016. The study aimed to highlight the relationship between the demographic shift in the population's age structure and economic growth rates. The results showed that the demographic window began opening in 2001, but it was not properly utilised and did not stimulate economic growth; this led to the emergence of unemployment.

Al-Khareef (1420 H) studied the age and gender structure of the population of KSA, studying geographical variation and demographic changes. The study aimed to identify the current and future characteristics of the age structure, and the geographical variation in the gender ratios. The results showed that KSA's population is distinguished by its youthfulness, a rise in the working age population and the median age. In general, the age and gender composition is affected by the distribution of the expatriate population and by internal migration; the population is expected to increase in the future.

Al-Saad (2012) studied the indicators of the age-qualitative structure in the KSA according to the 1992-2004 censuses. The study aimed to identify some of the characteristics and changes that occurred to the age and gender structure of the Kingdom by studying the population pyramid and its indicators. The results showed that the Kingdom's population pyramid represented a young society. It was found that immigration has a great role, especially for non-Saudis, and it became clear that there was a decrease in the dependency ratio of young people according to the 2004 census.

Al-Maghazi (2019) aimed to study the nature, components and indicators of the population pyramid in the KSA, a study in the geography of population and development. It became clear that the proportion of young people and the elderly has decreased. In general the population pyramid of the Kingdom will reach the maturity stage, and the Kingdom's population will enter the demographic shift stage.

Al-Khorayef and Al-Mutairi (1440 AH) studied the change in the age structure and its effects on the demographic dividend, and the aging of the Saudi society, aiming to reveal the spatial change and variation in the gender and age composition of the population. The results showed an increase in the average age of Saudis, and an increase in the proportion of the elderly.

It is noted that the results of previous studies (both Arab and non-Arab) indicate that the demographic window has an impact on economic and social variables. This current study is in common with previous studies on the topic, which is the study of the effect of the age and gender structure and the demographic window on the economic and social development in Qassim. However, this study focuses on a region in the KSA as a demographic study. There is a noticeable lack of research on the demographic window in the different regions of the Kingdom, so there is insufficient information available about the age and quality structure and stage of the demographic window for the residents of Qassim.

Study area

Al-Qassim region is located between 600-750 metres above sea level in an average geographical location in the northern part of the KSA (Emirate of Al-Qassim region, 2016). Its area is approximately 73,000km^2, and represents about 3.2% of KSA's total area. Figure 1 shows location and administrative boundaries of the Al-Qassim region. Geographically it is bordered on the east by the eastern region, on the east and south by the Riyadh region, to the north by the region of Hail and the northern borders, and to the west by the regions of Medina and Hail (Ministry of Economy and Planning, 1431 AH, p.4). According to 2018 estimates, the population of Qassim is 1,455,693 (General Authority for Statistics, 2018).

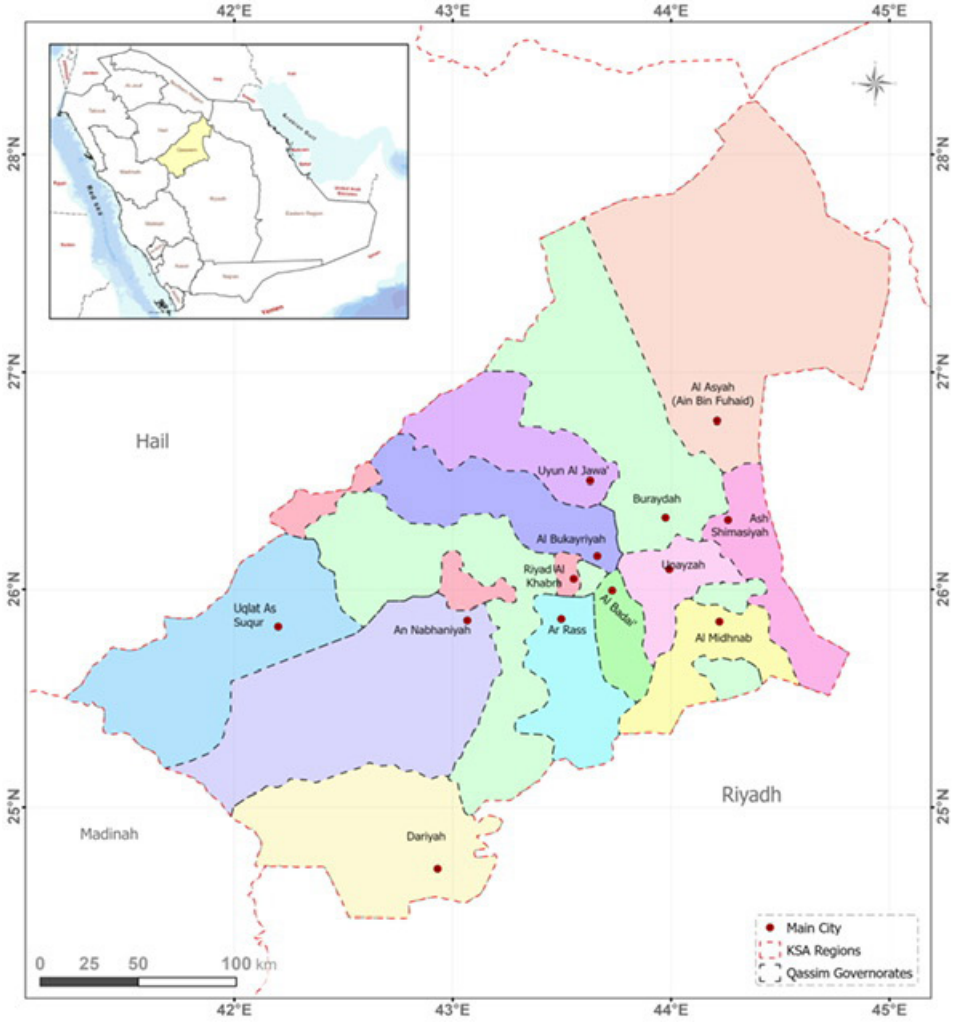


Figure 1: The location of Qassim and its administrative boundaries

Source: Prepared by the researcher based on Qassim Municipality, 2019.

Methodology

This study depends on the descriptive and analytical methodology, through the data, reports and estimates obtained from the General Authority for Statistics related to the General Population and Housing Census of Qassim for the years 2004/2010/2018. To serve the research and its objectives, comparisons were also made between the results of censuses and estimates to identify discrepancies, using inductive and deductive methods to arrive at the relationship between age and gender composition and economic and social development in Qassim. It also extracted scientific findings of the demographic window phenomenon through available data, and through the demographic reality and its analysis.

Sources

As the study requires identifying the demographic window and its impact on economic and social development in Qassim, this research has used available statistics, reports and studies issued by government agencies and departments such as the General Authority for Statistics, the Ministry of Economy and Planning, the Ministry of Health, and the Ministry of Education.

Methods of statistical data analysis

Several statistical methods have been used in this study to describe and analyse the study data. An Independent Samples T test was also used to find the differences in population groups by gender. One Way ANOVA was used to find the differences in age groups and the source of the differences. Multiple Comparisons Post-HOC were made using Scheffe's test, and the Chi-square test was used to discover the relationship between the number of beds and hospitals, between the number of doctors, nurses, years of education, and age groups.

Population growth

Population growth is one of the basic factors for planning and economic and social development in any region of the world. Its factors are either from the effect of natural increase (births and deaths) or from abnormal increase (immigration); population growth is much higher in developing countries (Al-Bassam, 1438 AH, p.3). The Kingdom of Saudi Arabia has witnessed a major development boom in recent years that has resulted in economic and social transformations. According to the United Nations (UN) it is ranked 38 out of 188 countries in terms of very high human development (UN, 2016:22).

The regions of the Kingdom of Saudi Arabia vary in terms of population growth, with a general increase in some regions but not others; this has led to a change in the ranking of many of them. The KSA carried out four official population censuses over 37 years, in 1974, 1992, 2004, and 2010, with estimates in 2018. The Department of Statistics indicated that the population of the Kingdom has grown by more than 24.7 million people over 44 years, from 7,009,466 in 1974 to 33,413,660 in 2018.

In terms of growth, there were differences between the regions with Qassim being a region that witnessed differences and disparities during those periods; it ranked fourth among the thirteen regions of the Kingdom in terms of growth. This disparity is attributed to natural growth and internal and external migrations. The increase in Saudi women's participation in the labour market, and the decline in the number of non-Saudis, may be a reason for this. The annual growth rate reached 4.77% of the total population in 1974, and decreased in 2018 to 2.25%, i.e., from 324,543 people in 1974 to 1,455,693 people in 2018 (see Table 1). This increase was due to the presence of demographic changes and a clear change in the characteristics of the population.

Table 1: Population growth rate 1974-2018

Census	Saudis	Non-Saudis	Total	Rate of annual growth (%)
1974	311,230	13,313	324,543	4.77
1992	610,566	140,413	750,979	2.56
2004	817,464	199,264	1,016,756	3.24
2010	928,491	278,367	1,215,858	2.78
2018	429,778	429,778	1,455,693	2.25

Source: Researcher's calculation based on General Authority for Statistics, 1974, 1992, 2004, 2010, 2018

Age and gender composition

The age and gender structure of the population is mainly related to birth and death rates, as well as its link to migration rates, and clear changes can be seen in the KSA. There is a demographic shift witnessed by the Saudi society (Al-Khorayef and Al-Mitairi, 1440 AH:25). In 1974, the Kingdom showed an increase in the number of young people (under 15 years, 47.4% of the population), due to improved health conditions and a decline in infant mortality. The population over 65 years was high compared to earlier censuses, and decreased in 1992 to 42.5%; however, it remains the highest category. In 2004, the same group declined and decreased to 34.3% in favour of the working-age population group (15-64 years); this is evident in the 2010 census that indicates a decline in fertility rates.

The Kingdom is a country with a high percentage of young people (15-25 years old) in the total population, a situation that constitutes a fertile asset for the future industry (Al-Igtisadiah, 2013); the proportion of this group will increase in the coming years due to the high number of middle age groups. In the latest population estimate (2018), this category showed a clear increase compared to other groups, especially the young age groups, whose base was broad in previous years. Therefore, the demographic composition of the Kingdom indicates a shift to the so-called demographic window. This shows an increase in the middle age population groups (working age group) to more than half of the population; this may affect the economic and social development of the Kingdom.

The age and gender composition of Qassim's population did not appear clearly except in the 2004 census, the 2010 census and the 2018 estimate. The 2004 census showed that the percentage of young age groups (under 15 years) reached 35.12% of the total population, 17.43% being males and 17.69% being females. The working age population (15-64 years) was the highest among the groups (61.89%), while the elderly category (65+ years) was the lowest at a rate of approximately 3%. The development witnessed by the KSA is in terms of health and economic development.

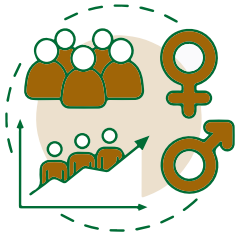


Table 2: Population of Al-Qassim region by gender and age groups - 2004 census

Age	Male	Female	Ratio of males	Ratio of females	Ratio of total age	Ratio of males	Ratio of females
0-4	58,535	57,993	5.76%	5.71%	35.12%	17.43%	17.69%
5-9	61,036	59,371	6.01%	5.84%			
10-14	57,554	62,335	5.66%	6.14%			
15-19	51,726	50,907	5.09%	5.01%	61.89%	36.48%	25.41%
20-24	49,365	40,389	4.86%	3.98%			
25-29	60,989	38,938	6.00%	3.83%			
30-34	57,723	35,145	5.68%	3.46%			
35-39	49,966	29,577	4.92%	2.91%			
40-44	40,120	21,629	3.95%	2.13%			
45-49	27,871	15,859	2.74%	1.56%			
50-54	16,622	10,741	1.64%	1.06%			
55-59	9,065	8,003	0.89%	0.79%			
60-64	7,203	6,939	0.71%	0.68%			
+65	16,389	13,982	1.61%	1.38%	2.99%	1.61%	1.38%
1,015,972	**564,164**	**451,808**	**55.53%**	**44.47%**	**100.00%**	**55.53%**	**44.47%**

Source: Researcher's calculations, based on General Authority for Statistics, 2004

The T test of the independent samples proved that there were no statistically significant differences at the 0.05 level in the children category according to gender, with a value of T 0.521. For the working-age population group, the T test of the independent samples showed that there were no statistically significant differences at the 0.05 level in the productive group according to gender, where the T value was 1.395 with a statistically significant value greater than 0.05.

In 2010, the percentage of young age groups (under 15 years) reached 25.74% out of the total population, and the difference between the percentage of males and females was small. The working age population group (15-64 years) was the highest among the groups (71.74%); however, there was a large difference between the percentage of males and females in this category. The elderly group (65+ years) had the lowest percentage of the population (2.52%): there was no difference between the percentage of males and females (see Table 3).

Table 3: Population of Al-Qassim region by gender and age groups - 2010 census

Age	Males	Females	Ratio of males	Ratio of females	Ratio of total age	Ratio of Males	Ratio of females
0-4	47,757	43,950	3.92%	3.60%	25.74%	13.34%	12.40%
5-9	53,455	51,237	4.38%	4.20%			
10-14	61,433	55,945	5.04%	4.59%	71.74%	42.23%	29.51%
15-19	65,014	58,489	5.33%	4.80%			
20-24	74,329	56,912	6.10%	4.67%			
25-29	85,661	58,032	7.03%	4.76%			
30-34	79,842	49,156	6.55%	4.03%			
35-39	67,030	42,387	5.50%	3.48%			
40-44	51,595	32,360	4.23%	2.65%			
45-49	39,526	25,997	3.24%	2.13%			
50-54	26,658	17,616	2.19%	1.44%			
55-59	15,107	11,045	1.24%	0.91%			
60-64	10,069	7,834	0.83%	0.64%			
65+	18,308	12,440	1.50%	1.02%	2.52%	1.50%	1.02%
1,219,184	**695,784**	**523,400**	**57.07%**	**42.93%**	**100.00%**	**57.07%**	**42.93%**

Source: Researcher's calculations based on General Authority for Statistics, 2010

Using the T test for independent samples, it was proved that there were no statistically significant differences at the 0.05 level in the children's category by gender, where the value of T was 0.726 with a statistically significant value greater than 0.05. The results of the T test for the working age group showed that there were no statistically significant differences at the 0.05 level in the productive group according to gender, where the value of T was 1.454, with a statistically significant value greater than 0.05.

Table 4 shows that, in 2018, the young age group (under 15 years old) decreased to 24.49% while the working age population group (15-64 years, 72.36%) increased; there is a big difference between the ratio of males and females in this group. The percentage of the elderly population (65+ years) was 3.16%.

Table 4: Population of Al-Qassim region by gender and age groups - 2018 census

Age	Males	Females	Ratio of males	Ratio of females	Ratio of total age	Ratio of males	Ratio of females
0-4	62,359	60,780	4.28%	4.18%	24.49%	12.38%	12.10%
5-9	60,756	60,755	4.17%	4.17%			
10-14	57,144	54,634	3.93%	3.75%	72.36%	43.81%	28.54%
15-19	53,261	50,889	3.66%	3.50%			
20-24	68,540	54,111	4.71%	3.72%			
25-29	84,794	59,922	5.82%	4.12%			
30-34	83,698	55,731	5.75%	3.83%			
35-39	97,183	57,509	6.68%	3.95%			
40-44	90,360	50,107	6.21%	3.44%			
45-49	67,985	34,638	4.67%	2.38%			
50-54	46,745	23,267	3.21%	1.60%			
55-59	29,027	17,473	1.99%	1.20%			
60-64	16,213	11,849	1.11%	0.81%			
65+	23,475	22,488	1.61%	1.54%	3.16%	1.61%	1.54%
1,455,693	**841540**	**614153**	**57.81%**	**42.19%**	**100.00%**	**57.81%**	**42.19%**

Source: Researcher's calculations based on General Authority for Statistics, 2018

The T test of the independent samples showed that there were no statistically significant differences at the 0.05 level in the children's category by gender, where the value of T was 0.532 with a statistically significant value greater than 0.05. The T test for the working-age population demonstrated the existence of statistically significant differences at the 0.05 level in the productive group according to gender, where the value of T was 2.161, with a statistically significant value less than 0.05. The differences came in favour of males, as the arithmetic mean was 63,780.60 compared to 41,549.60 for females (see Table 5).

Table 5: Independent Samples T test for differences in the productive category by gender, 2018

Sig Level	Stat. Significance	Value (T)	Deviation	Arith. Average	Gender
Less than 0.05	*0.04	2.161	27,022.92	63,780.60	Male
			18,121.30	41,549.60	Female

Source: Researcher's calculations based on General Authority for Statistics, 2018

By comparing the population census for the years 2004/2010/2018, Table 6 shows that the 15-64 year age group had the highest percentage of the population in 2018. The percentage of males in the population increased from 36.48% in 2004 to 42.23% in 2010, and 43.81% in 2018. This indicates expansion of the percentage of those in the working age groups. The percentage of young age groups decreased from about 17% in 2004 to about 12% in the years 2010 and 2018; this indicates a decline in fertility rates in the region. With regard to the over 65 year age group, their percentages fluctuated during these years; they were lower in 2010 than in 2004 but rose again in 2018. The percentage of males was higher than females. The decrease in fertility rates (births) and the increase in the elderly numbers affected the demographic dependency rates.

Table 6: Comparisons of census data for 2004/2010/2018

Age	Under 15 years		15-64 years		65+ years	
Gender	Male	Female	Male	Female	Male	Female
2004	17.43%	17.69%	36.48%	25.41%	1.61%	1.38%
2010	13.34%	12.40%	42.23%	29.51%	1.50%	1.02%
2018	12.38%	12.10%	43.81%	28.54%	1.61%	1.54%

Source: Researcher's calculations based on General Authority for Statistics, 2004, 2010, 2018

The statistical test, One Way ANOVA, showed the existence of statistically significant differences in the numerical averages of individuals according to age groups, where the value of P was 8.811, with a statistical significance equal to 0.001 (see Table 7).

Table 7: Results of the One-Way ANOVA test for differences in age groups, 2004

	Age	Arith. Average	Deviation	T Value	Stat. Significance	Sig Level
Population in 2004	0-14 years	59,470.67	1,865.33	8.811	**0.001	(0.01)
	15-64 years	31,438.85	18,475.07			
	65+ years	15,185.50	1,702.01			

** Function at level (0.01)

Source: Researcher's calculations based on General Authority for Statistics, 2004

To discover the source of the differences, multiple comparisons Post-HOC were made using Scheffe's test (see Table 8). It became clear that there are statistically significant differences between the average population of the children's group (0-14), and the productive age group (15-64). The differences were in favour of the children's group that showed a larger average (59,470.67). The results of the dimensional comparisons also showed that there were statistically significant differences between the average number of people in the children's group (0-14) and the 65+ years age group. Again, the

differences were in favour of the children's group, also showing a larger average (59,470.67) compared to the average number of elderly people (15,185.50).

Table 8: Dimensional Comparisons Using Sheffe's Test

Age groups	Arith. Average	Children	Productive Group	Older
Children	59,740.67	-	**0.004	-
Productive Group	31,438.85	**0.005	-	-
Older	15,185.50	-	-	-

Source: Researcher's calculations based on General Authority for Statistics, 2004

We conclude from this result that, in 2004, the average number of children in Qassim was more than the average number of both the productive group and the elderly. Likewise, the One Way ANOVA did not show statistically significant differences in the numerical averages of individuals according to age groups for the year 2010, where the value of T was 2.200, with a statistically significant value equal to 0.163, which is greater than 0.05 (see Table 9).

Table 9: Results of the One-Way ANOVA test for differences in age groups, 2010

	Age	Arith. Average	Deviation	T Value	Stat. Significance	Sig Level
Population at 2010	(0-14 years)	55,296.17	61,560.67	2.200	0.132	Larger than 0.05
	(15-64 years)	43,732.95	24,524.64			
	65+ years	15,374.00	4,149.30			

Source: Researcher's calculations based on General Authority for Statistics, 2010

Likewise, the One Way ANOVA did not show statistically significant differences in the numerical averages of individuals by age groups for the year 2018, where the value of T was 2.200, with a statistically significant value equal to 0.163, which is greater than 0.05 (see Table 10).

Table 10: Results of the One-Way ANOVA test for differences in age groups, 2018

	Age	Arith. Average	Deviation	T Value	Stat. Significance	Sig Level
Population at 2018.	(0-14 years)	59,404.67	2,903.07	2.099	0.144	Larger than 0.05
	(15-64 years)	52,665.10	25,129.84			
	65+ years	22,981.50	697.91			

Source: Researcher's calculations based on General Authority for Statistics, 2010

The statistical test, One Way ANOVA, showed the existence of statistically significant differences in the numerical averages of individuals according to age groups for the years 2004/2010/2018, where the value of T was 8.431, with a statistical significance equal to 0.000 (see Table 11).

Table 11: Results of the One-Way ANOVA test for differences in age groups, 2004-2010, 2010-2018

	Age	Arith. Average	Deviation	T Value	Stat. Significance
Population for the years 2004, 2010, 2018	(0-14 years)	57,057.17	5,162.51	8.431	** 0.000
	(15-64 years)	42,612.30	24,165.68		
	65+ years	17,847.00	4,465.99		

** Function at level (0.01)

Source: Researcher's calculations based on General Authority for Statistics, 2004, 2010, 2018.

To discover the source of the differences, Multiple Comparisons Post-HOC was made using the Scheffe test (Table 12). It was found that there are statistically significant differences between the average populations of the children's group (0-14) on the one hand and the productive group (15-64) and elderly group (65+) on the other. The differences were in favour of the children's group that had a larger average (57,057.17). The results of the post-comparisons also showed that there are statistically significant differences between the average numbers of the groups. For the productive group (15-64) and the elderly age group (65+), the differences were in favour of the productive group that showed a larger average of 42,612.30 compared to 17,847.00 for the elderly group.

Table 12: Comparisons using Shiffe test

Age groups	Arithmetic mean	Children's Category	Productive category	Elderly category
Children	57,057.17	-	- 0.012 *	0.000 **
Produced category	42,612.30	-	-	- - 0.007 **
The elderly population	17,847.00	-	-	-

Source: Researcher's calculations based on General Authority for Statistics, 2004, 2010, 2018

Population pyramid and demographic window stage

The world's population has begun to undergo fundamental changes with a decrease in both the population growth rate and the death rate. This changes the population pyramid from a basic pyramid to a barrel shape, where the proportions of age groups of working age have expanded, and consequently the dependency rate has decreased. The world today is facing the phenomenon of demographic transition, as demographic societies have transformed from societies where both birth and death rates are high, to those with low birth and death rates, meaning that the increase in population growth is slowing (Al-Sagga, 2011). In 2004, these changes were evident in the KSA in general, and in Qassim in particular. As can be seen in Figure 2, Qassim's population pyramid is the classic pyramid shape with a broad base. This indicates a high percentage of children and young people (under 15 years old). Then with increased fertility, improved health conditions and a decline in infant mortality, the pyramid gradually begins to decrease heading to the top of the pyramid, passing through the working-age population (15-64 years), up to the elderly group (+65 years). However, an increase in the percentage of males of working age, especially aged 25-29 years old can be seen; this was due to the migration of immigrant workers to the region. For females, a gradual decrease can be seen with the advancing age groups. A small percentage of the population is in the over 65 years age group. This may be due to immigrants returning home after reaching the age of 60 years. The dependency ratio in 2004 reached 61.58%.

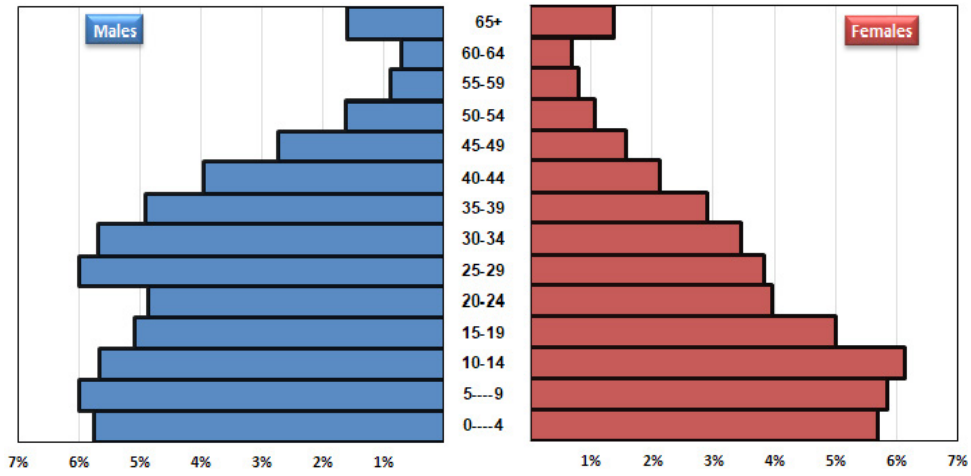


Figure 2: The population pyramid, 2004

Source: Researcher's calculations based on General Authority for Statistics, 2004

When calculating the gender ratio for Qassim's population in 2004 according to the five-year age groups, Figure 3 shows that the percentages reached about 100% in the age group 0-19, with the lowest percentage (92.33%) for the 10-14 year age group. This began to rise after the 20-24 age group and rose sharply to reach 185.49% in the 40-44 age group. The percentage took a sharp decline after the 45-49 age group to reach the lowest gender ratio (103.80%). In the 60-64 and 65+ age groups the gender ratio was 117.21%.

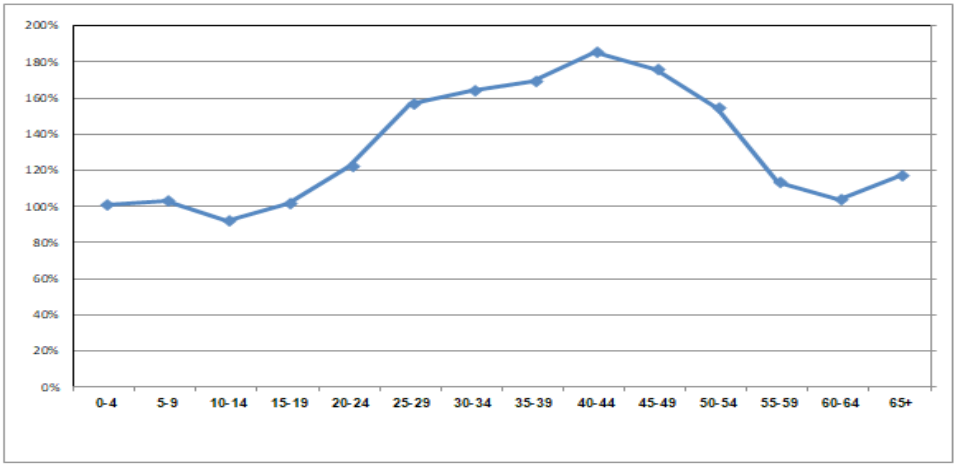


Figure 3: Gender ratio according to age groups, 2004

Source: Researcher's calculations based on General Authority for Statistics, 2004

In 2010, the demographic window emerged among the residents of Qassim due to a decline in fertility. Figure 4 shows the under 15 age group declined in favour of the working age population group (15-64 years). The pyramid began to expand dramatically from the 15-19 age group to the 25-29 age group and decreased in the next groups heading to the top of the pyramid. This indicates a decrease in fertility rates. However, an increase in the share of males in the working age group was observed, which may be due to the presence of migrant workers in the region. The shape of the pyramid and the increase in the number of people of working age (15-64 years) reflected the dependency ratio, which amounted to 39.39%.

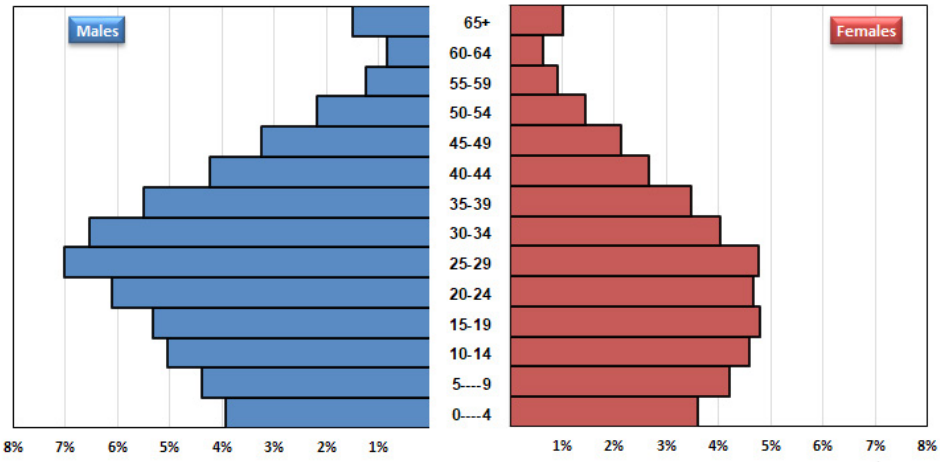


Figure 4: The population pyramid, 2010

Source: Researcher's calculations based on General Authority for Statistics, 2010

Figure 5 shows the gender ratio in 2010 according to the five-year age groups. This shows that these percentages reached about 109% in the 0-19 age group, started to rise gradually after the 20-24 age group to reach 162.43% in the 30-34 age group, the highest percentage; the lowest percentage (104.33%) was in the 5-9 age group. The data indicate fluctuations in the age groups between ages 35 and 64, and the 65+ age group recorded a rate of 147.17%. The total sex ratio for age groups was 132.94%.

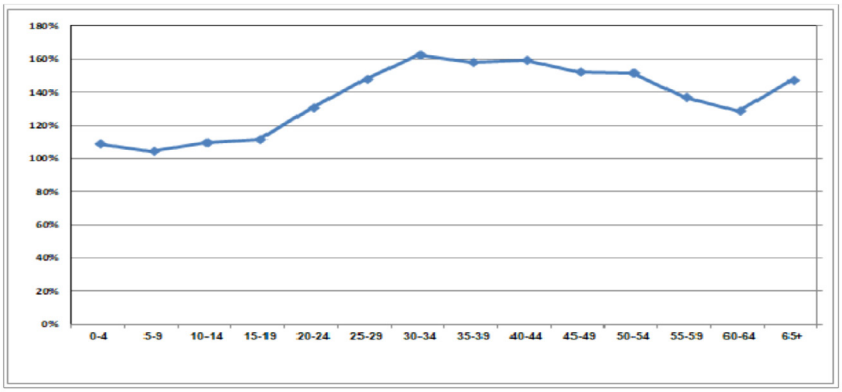


Figure 5: Gender ratio according to age groups, 2010

Source: Researcher's calculations based on General Authority for Statistics, 2010

As shown in Figure 6, in 2018 the demographic window appeared more clearly than in 2010. The shape of the population pyramid began to be more swollen in the middle, especially the male category in the working age group (15-64 years); this is even more pronounced in the 35-39 age group. There is a sharp decline in the female category that may be due to labour migration. With a decline in fertility from 2010, the proportion of males and females was shown to be similar in the young age group (under 15 years). There was a relative increase in the 65+ age group, and the dependency ratio reached 38.20%.

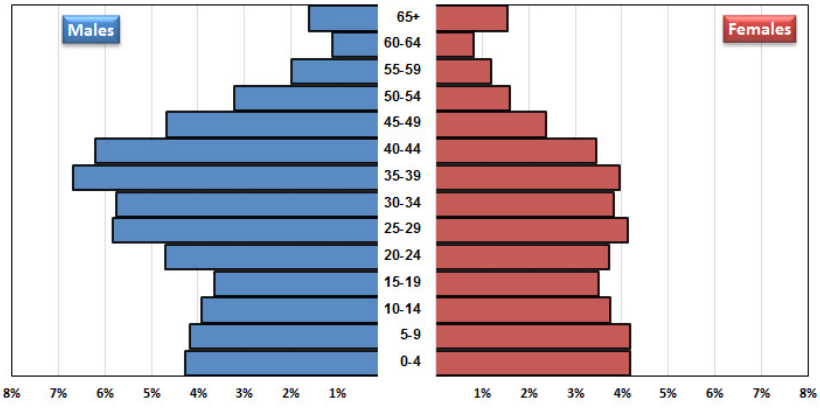


Figure 6: The population pyramid, 2018

Source: Researcher's calculations based on General Authority for Statistics, 2018

As can be seen in Figure 7, the gender ratio in 2018 reached almost 102% in the 0-19 age group. It started to rise after the 20-24 age group, and rose sharply to reach the highest value for gender (200.91%) in the 50-54 age group. It then began to decline sharply in the 55-64 age groups, and the 65+ age group scored 104.39%. The total gender percentage was 137.02%.

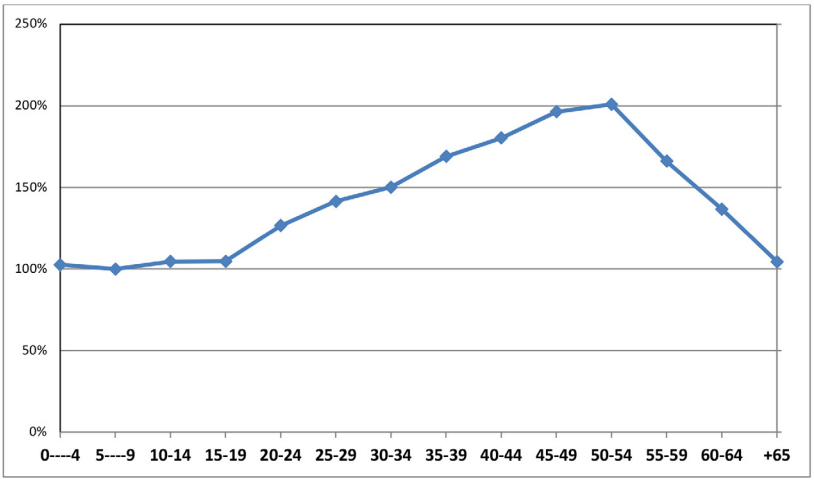


Figure 7: Gender ratio according to age groups, 2018

Source: Researcher's calculations based on General Authority for Statistics, 2018

Economic and social development in Qassim

There is a relationship between demographic growth and economic and social development. This relationship differs from country to country and from one economic and social pattern to another. However, changes in the age structure of the population, specifically those of working age compared to the dependent population in any country, contribute significantly towards achieving that development. As one of the demographic variables that stimulate economic growth, a country's age structure is considered an important element of production, and its level may affect changes in production capacity. This is the main engine for growth, and affects multiple aspects such as investment in activities and their diversity, and other areas such as education and health, all of which are considered of great importance to the state.

Economic activities and professions

Economic activities and professions in Qassim varied from year to year. In 2004, the service professions constituted 65% of the total number of workers in the region. The remainder worked in construction, trade, health and social services sectors.

According to the General Statistics Authority (2004), in 2004 the largest number of people employed by profession was in sales, and constituted 40% of the total number of workers. According to economic activity, in 2010 the percentage of workers in the trade, agriculture and manufacturing industries sectors represented 80% of workers in all sectors (General Authority for Statistics, 2010). In 2018, the largest number of workers according to profession worked in the service professions and constituted 43% of the total number of workers in the region. In the same year and according to economic activity, the percentage of workers in the construction, trade and manufacturing sectors represented 71% of the number of workers in all sectors (General Authority for Statistics, 2018).

Health Services

Qassim, like the rest of the Kingdom's regions, witnessed a comprehensive renaissance in all fields, so many hospitals and health centres were built. Together with an increase the number of hospitals within a short period, there was also an increase in the number of doctors and nurses and in clinical capacity. Among the most important hospitals are King Fahd Specialist Hospital, Maternity and Children Hospital, Buraidah Central Hospital and King Saud Hospital, and many others in the rest of the region's cities.

It can be seen from Table 13 that population growth was reflected in an increase in the number of hospitals in Qassim. In 2004, there were 16 hospitals and 1,968 beds. In 2010 there were 17 hospitals and this increased to 19 in 2018, an increase of 12%. The number of beds also increased to 2,168 in 2010 and 2,804 in 2018, an increase of 29%. Therefore, the increase in population was reflected in the number of hospitals and beds in the region (Ministry of Health, 2020). The Chi-square test showed that there is a strong statistically significant relationship between the number of beds and hospitals, where the Chi-square value came with a value of 71,225 and with a level of statistical significance less than 0.01, the level of significance reached 0.000 as there was a steady increase in the number of beds and hospitals from year to year during the years 2004/2010/2018.

Table 13: Number of hospitals and beds in Qassim, 2004/2010/2018

Year	Number of hospitals	Growth of hospitals %	Number of beds	Growth of beds %	Number of beds per hospital
2004	16	-	1,968	-	123
2010	17	6%	2,168	10%	128
2018	19	12%	2,804	29%	148

Source: Researcher's calculations based on General Authority for Statistics, 2004, 2010, 2018

Table 14 shows that there were 1,420 doctors in 2004 and 2,781 nurses. In 2010, the number of doctors increased to 1,461 and there were 3,412 nurses. In 2018, there were 1,572 doctors and 4,195 nurses. This shows an 8% increase in the number of doctors and a 23% increase in the number of nurses compared to 2010. It can be clearly seen that there was an increase in the number of medical staff in hospitals, which in turn reflected the development and focus in the quality of health care provided to the population (Ministry of Health, 2020). Using the Chi-square test, there was a strong statistically significant relationship between the number of doctors and nurses, as the Chi-square value showed a value of 117.788 and a level of statistical significance less than 0.01, so the level of significance reached 0.000. This was because there was a steady increase in the number of doctors and nurses from year to year during 2004/2010/2018.

Table 14: Number of doctors and nurses in Qassim, 2004/2010/2018

Year	**Number of doctors**	**Growth of doctors %**	**Number of nurses**	**Growth of nurses %**	**Number of nurses per doctor**
2004	1,420	-	2,781	-	1.50
2010	1,461	2.89%	2,412	22.69%	2
2018	1,572	7.60%	4,195	22.95%	3

Source: Researcher's calculations based on Ministry of Health data, 2020

Educational services

Education in Qassim improves all areas of life, the most important being the economic field. It does this by developing individuals' capabilities, competencies and qualifications, therefore improving various technical or scientific skills for the work place, raising the level of development and achieving economic and social growth for the area. Education is one of the most important variables that affect and are affected by other demographic and economic variables. This study is concerned with the impact of the working age (15-64 years) population on social development. It therefore looked at census data for the years 2004/2010/2018 and compared the number of students at all educational stages (secondary, institutes, diplomas, universities) according to gender to discover the impact of population development on the level of education in Qassim.

Table 15 shows that in 2004 15.23% of the total number of students aged over 15 years were enrolled in secondary education, with 14.76% being males and 15.92% being females. In 2010, 24.76% were enrolled in secondary education, with 23.72% being males and 26.25% being females. There was a decrease in the percentage of enrolment in secondary education in 2018, to 5.27% of the 15 years and over age group, with 4.18% being males and 6.95% being females. This reflects the impact of population growth on education; every year a large segment of the population moves to a higher education stage so numbers will gradually increase first in institutes then in university numbers.

Table 15: Age group (15 years and over) according to secondary school enrolment status

Percentage			Secondary school students		General age group (15-64)		Year
Total	Females	Males	Females	Males	Females	Males	
15.23%	15.92%	14.76%	41,090	54,700	258,127	370,650	2004
24.76%	26.25%	23.72%	94,446	122,120	359,828	514,831	2010
5.27%	6.95%	4.18%	28,892	26,648	415,496	637,806	2018

Source: Researcher's calculations based on General Authority for Statistics, 2004, 2010, 2018A

There was an increase in the numbers of the 15-64 year age group, and there were statistically significant differences in the percentages of males and females. The proportion of males increased during 2004/2010/2018, reaching 33.8% in 2010 and rising again in 2018 to 44.87%. In addition, the percentage of females in the 15-64 year age group also increased year after year, reaching 34.8% in 2010; it increased significantly in 2018, reaching 40.2%. This indicates the relationship between years and the numbers in the 15-64 year age group. The Chi-Square test showed that there is a strong statistically significant relationship between them, as the Chi-square was 702.321 with a level of statistical significance less than 0.01, with a significance level of 0.000.

There was a steady increase in the percentage of males and females in the 15-64 year age group from year to year during the years 2004/2010/2018. This indicates an increase in the growth of the working-age population. There were statistically significant differences in the percentage of secondary students during the years 2004/2010/2018, where the value of the Chi-square test was 3,490.06 with a statistical significance level less than 0.01, with a level of significance 0.000. The percentage of male secondary students reached 26.88% in 2004, then increased significantly in 2010, reaching 60.0%; it decreased in 2018 to 13.10%. This is a natural indicator showing the development of education through the transition to postgraduate studies. Likewise, the percentage of female secondary school students increased in 2010 to 57.44% then decreased in 2018 to 17.57%; this indicates the development of education in the same context.

Table 16 shows 3.56% of the population was enrolled in institutes, and the percentage of males was 3.45% while the percentage of females was 3.72%. In 2010, the percentage was 5.06%, with the percentage of males being 6.01% and females 3.69%. The percentage decreased in 2018, reaching 1.05% of the total age group (15 years and over), with the percentage of males being 1.54% and females 0.30%. It became clear that there are statistically significant differences in the percentage of students enrolled in institutes during the years 2004/2010/2018, where the value of the Chi-square test was 5,214.42 with a statistical significance less than 0.01. The percentage of males enrolled in institutes was 23.91% in 2004, increased significantly in 2010 to 57.8%, and decreased in 2018 to 18.29%. This indicates the development of education and the transition to higher levels. The percentage of females enrolled in institutes increased in 2010 to 55.0%, then decreased significantly in 2018, reaching 5.2%.

Table 16: Age group 15 years and over according to institute enrolment status

Percentage			Number of institute students		General Age Group (15-64 years)		**Year**
Total	Females	Males	Females	Males	Females	Males	
3.56%	3.72%	3.45%	9,604	12,803	258,127	370,650	2004
5.06%	3.69%	6.01%	13,273	30,950	359,828	514,831	2010
1.05%	0.30%	1.54%	1,257	9,796	415,496	637,806	2018

Source: Researcher's calculations based on General Authority for Statistics, 2004, 2010, 2018

Table 17 shows university enrolment in 2004. The percentage of those enrolled in universities was 8.63%, with 7.74% being males and 9.90% being females. In 2010, it was found that the percentage of those enrolled in universities was 12.70%, 11.24% being males and 14.79% being females. The percentage decreased in 2018 to 6.10%, 3.77% being males and 9.67% being females. In general, therefore, the number of male and female students increased in 2010 compared to 2004, but in 2018 the number decreased at all educational levels. There were statistically significant differences in the percentage of students enrolled in universities during the years 2004/2010/2018. The Chi-square test value was 4,695.16 with a statistical significance less than 0.01, where, in 2004, the percentage of males enrolled in universities was 25.96%. It increased significantly in 2010 reaching 52.31%, but decreased in 2018 to 21.72%. In 2010, 44.74% of females were enrolled in universities; this decreased in 2018 to 33.78%.

Table 17: Population (15 years and over) according to university enrolment status

Percentage			Number of university students		General Age Group (15-64 years)		**Year**
Total	Females	Males	Females	Males	Females	Males	
8.63%	9.90%	7.74%	25,554	28,706	258,127	370,650	2004
12.70%	14.79%	11.24%	53,210	57,842	359,828	514,831	2010
6.10%	9.67%	3.77%	40,179	24,021	415,496	637,806	2018

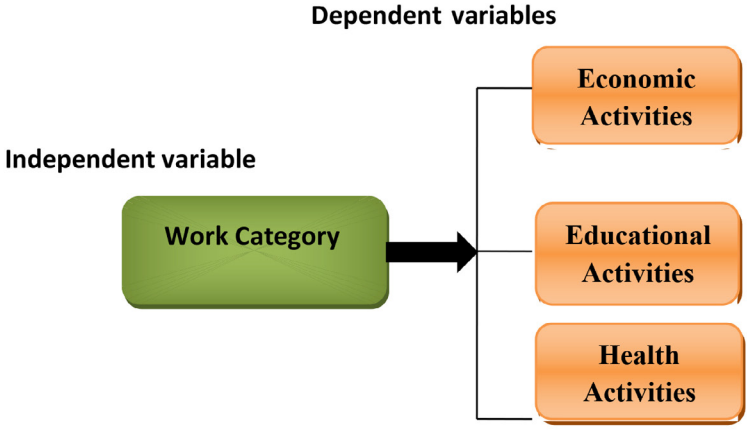
Source: Researcher's calculations based on General Authority for Statistics, 2004, 2010, 2018

Analysis of data on economic, educational, and health activities using simple regression analysis

To identify the effect of the work category on economic, educational, and health activities, a simple regression analysis was used using the following variables:

The independent variables were (X): Liquidity Ratio Producer Category: Individuals between the ages of 15 and 64 years (males and females).

The dependent variables were (y): economic activities, educational activities and health activities.



Source: Devised by author

$Y = a + bX + e$

Where Y = the dependent variable

a = Constant or Intercept

b = the slope of the regression y over the independent variable

Table 18 shows that the simple correlation coefficient R reached 0.997 while the coefficient of determination R2 reached 0.994; this means that the independent variable was able to explain 0.994 (99.4%) of the changes occurring in the dependent variable (economic activities), the remaining 0.6 being due to other factors. Table 18 also shows the high significance of the analysis of variance P test, as the statistical significance was less than 0.01; this confirms the high explanatory strength of the multiple linear regression models from a statistical standpoint. We conclude from this that the independent variable (work category) was statistically significant according to the t-test at a level of significance less than 0.05. According to the previous results, the estimated regression equation is as follows:

Economic activities = 187114.323 + (-0.168 x number of class of work)

Therefore, the change in the number of the class of work with one unit leads to a change in economic activities by about 0.168 units in the same direction. The value of economic activities can be predicted when the independent variable takes specific values.

Table 18: Simple regression analysis of the economic activities variable

Regression coefficients					
Model	Standardised coefficient	Unstandardised coefficient		(T) value	Sig. Value
	B	Beta	Standard Error		
Constant	187,114.323		11,116.794	16,832	0.038 *
Health Activities	-0.168	-0.997	0.013	13,164	0.048 *
The dependent variable: educational activities					
Simple correlation coefficient (R) = 0,0,997					
Coefficient of determination (R2) = 99.4%					
P-value =173.299 statistical significance = 0.001 **(function at 0.01)					

* A function at (0.05) ** level A function at (0.01) level.

Source: Researcher's calculations based on General Authority for Statistics, 2004, 2010, 2018

Table 19 shows results for educational activities. The significance was low by the analysis of variance P test, where the statistical significance was greater than 0.05; this confirms the weakness of the interpretation of the multiple linear regression model in statistical terms. In addition, the independent variable (work category) was not statistically significant with the dependent variable according to the t-test, at a significant level greater than 0.05, i.e., it was not significant in the multiple regression model.

Table 19: Simple regression analysis of the educational activities variable

Regression coefficients					
Model	Standardised coefficient	Unstandardised coefficient		(T) value	Sig. Value
	B	Beta	Standard Error		
Constant	-1,366,258.351		1,193,840.117	-1.144	0.457
Health Activities	1.948	0.817	1.372	1.419	0.391
The dependent variable: educational activities					
Simple correlation coefficient (R) = 0,0,817					
Coefficient of determination (R2) = 0.668 (66.8%)					
P-value =2.014 statistical significance = (0.251)					

Source: Researcher's calculations based on General Authority for Statistics, 2004, 2010, and 2018

Table 20 shows the results for health activities. The significance of the analysis of variance P test was low, as the statistical significance was greater than 0.05; this confirms the weakness of the interpretation of the multiple linear regression models in statistical terms. In addition, the independent variable (the work group) was not significant with the dependent variable, the health activities t-test at a significant level greater than 0.05 did not have a significant effect in the multiple regression models.

Table 20: Simple regression analysis of the health activities variable

Regression coefficients					
Model	Standardised coefficient	Unstandardised coefficient		(T) value	Sig. Value
	B	Beta	Standard Error		
Constant	27,608.112		10,770.191	2.563	0.237
Health Activities	-0.028	0.914	0.012	2.252	0.266
The dependent variable: educational activities					
Simple correlation coefficient (R) = 0.0.914					
Coefficient of determination (R2) = 0.835 (83.5%)					
P-value =5.07 statistical significance = (0.11)					

Source: Researcher's calculations based on General Authority for Statistics, 2004, 2010, 2018

Findings

1- The findings of the study showed an increase in Qassim's population from 324,543 in 1974 to 1,455,693 in 2018.
2- The working-age population group (15-64 years) was the highest among the groups, with more males than females.
3- It is noted from the findings of the study that the percentage of young age groups decreased from about 17% in 2004 to about 12% in the years 2010 and 2018, indicating a decline in fertility rates in the region.
4- The results of the One Way ANOVA showed that there are statistically significant differences in the numerical averages of individuals according to age groups.
5- The findings of the study revealed the emergence of the demographic window among Qassim's residents. The pyramid shape expanded greatly among the working-age population (15-64 years) due to a decline in fertility, becoming more swollen in the middle; this was more pronounced for the male category.
6- The results of the Chi-square test showed that, during 2004/2010/2018, there was a strong statistically significant relationship between the number of beds and hospitals, the number of doctors, and the number of nurses, with a statistical significance level less than 0.01.
7- The Chi-square test results also showed that there is a strong statistically significant relationship between years of education and the number in the 15-64 year age, with a level of statistical significance less than 0.01.
8- The results of simple regression analysis indicate that the effect of the work group (15-64 years) on economic activities and the significance of the test of variance analysis (P) were high, as the statistical significance was less than 0.01.

Recommendations

1- Work should be carried out on optimal investments in the demographic window in Qassim, making it a development tool, and transforming it from a problem and a burden into an opportunity and strength; this will help to achieve the Kingdom's vision 2030.
2-The government should adopt implementation of deep development plans that deal with all the challenges that the Kingdom will face in general, and Qassim in particular, in the near future in light of the growing number of people in the work category.
3- Expand job opportunities for the 15-64 year age group and provide for their social, economic and health needs.

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