NATIONAL POPULATION DYNAMICS AND DEMOGRAPHIC TRANSITION

Objectives

- Understand the current Saudi population pyramid
- Understand the Saudi demographic transition over the past 3 decades
- Discuss the implications and future health needs of Saudi Arabia, based on the current population and demographic transition of KSA

Resources slides and Doctors notes

Done by

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Feedback - Editing File

Other important population distribution measures

- Dependency ratio (x 100)

  The proportion of persons above 65 years of age and children below 15 years of age are considered to be dependant on the economically productive age group (15-64 years)

  here you have to specify with age group either 65 years or below 15

- Total dependency ratio (x 100)

  The ratio of the combined age groups 0-14 years plus 65 years and above to the 15-65 years age group is referred to as the total dependency

Population density

Total population in a certain region divided by the surface area of that same region .

How does a population grow?

1. **Natural increase**

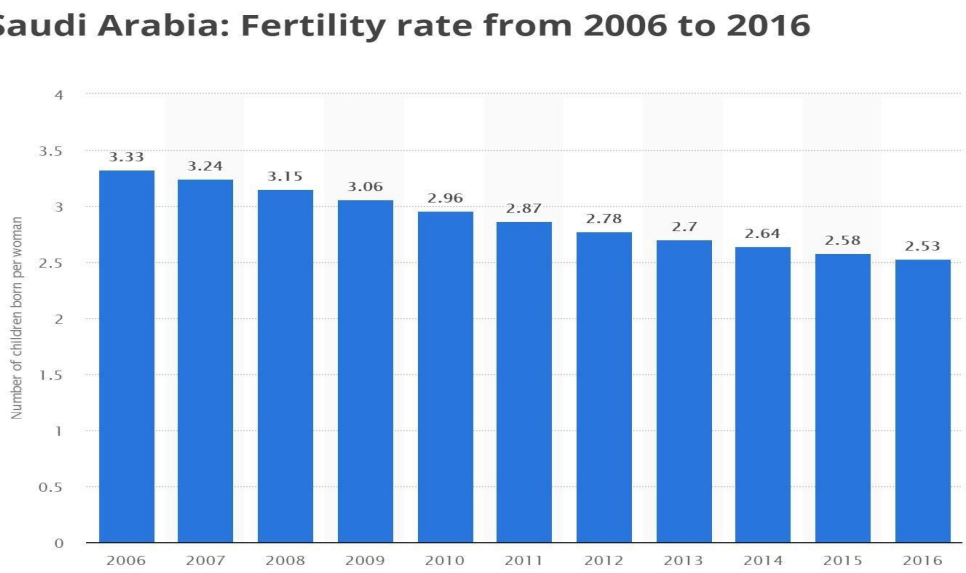
Difference between birth rates and death rates

2. **Net migration**

The difference between migrants coming into the country (immigrants) and leaving the country (emigrants)

Annual growth rate doesn't take in consideration the migration

Saudi Arabia Fertility Rate



History of demographic changes in KSA

- **1970s:** An important tipping point where demographic shift of Saudi Arabia occurred
  - Birth control socially unacceptable (Pronatal society)
  - Polygamous culture
  - Females marriage at early age
  - increasing birth rates, and reduced infant mortality
  - Decreasing death rates

- **1990s:**
  - Studies showed -> low level of marriage before 18
  - Education -> reduces parity and increases marital age
  - Female education did not reduce fertility rates that much
  - (Demographic lag)
  - +ve association between father education and fertility
  - +ve association between income and fertility
  - High sex ratio (male to female ratio) why? Because of male migration

- **2001: research suggested**
  - Reduction of fertility rates from 7 to 4.5 in 15 years
  - Mainly due to:
    1. Shift in educational attainment for females
    2. Delay in marriage
    3. Change of household situation (urbanization)
- **2001 onwards:**
  - Further reduction in birth rates
  - Urbanization (concentration of population in urban)

Migration

- Ranking of countries that host migrants:

	Country	No. of migrants hosted
1	USA	49.8 million
2	Saudi Arabia	12million
3	Germany	Around 12 million
4	Russia	Around 12million
5	Uk	9million

- Saudi Arabia ranks the second worldwide in hosting migrants

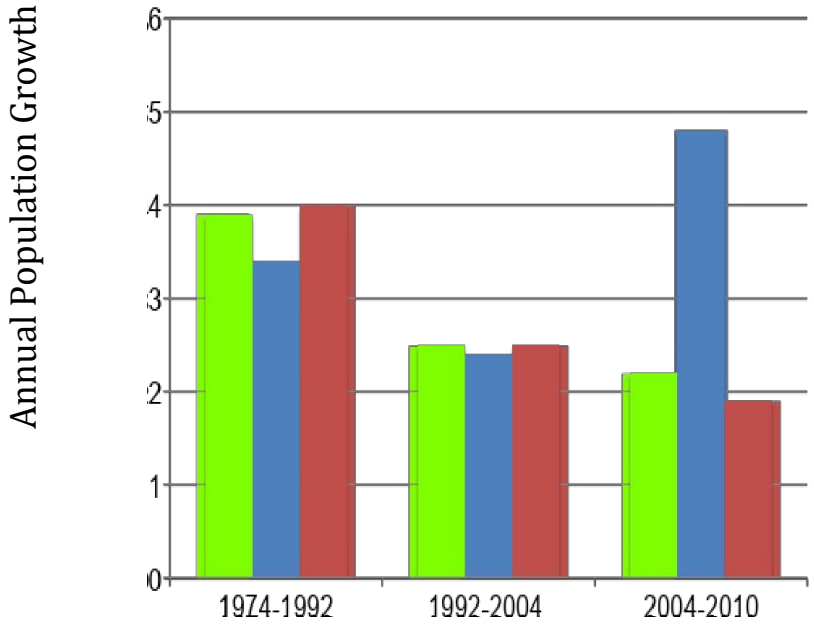
5 Stages for Demographic Transition

- **Stage 1: (High Stationary)**
  - High birth rate
  - High death rate
- **Stage 2: (Early expanding)**
  - Birth rates remain the same
  - Death rates begin to decline
  - e.g. many of the countries in developing world
- **Stage 3: (Late Expanding)** KSA is here
  - Death rates further decline
  - Birth rates begin to fall
  - Birth rates > death rates => population growth

- **Stage 4: (Low stationary)**
  - Low birth rate
  - Low death rate
  - Population becomes stationary; Zero population growth
  - Many developed countries
- **Stage 5: (Declining)**
  - Birth rates very low
  - Death rates very low
  - Birth rates < death rates
  - Population decline
  - e.g. Germany and Hungary

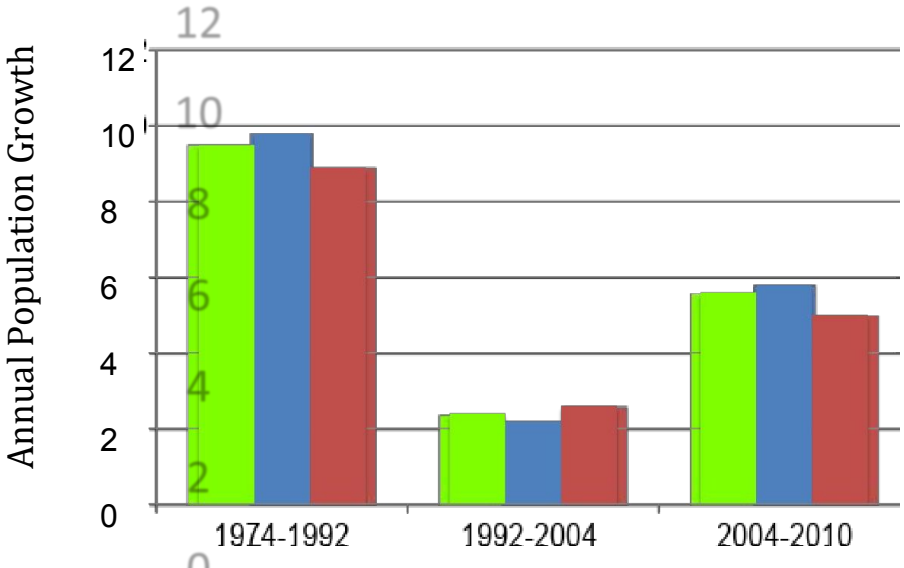
birth rate = death rate

Population growth in Saudi Arabia 1974 – 2010 (Saudi Citizens)



Male is high in the period between (2004-2010) probably because of migration ***but*** it will be the same in 20 years? we don't think so due to the nationalization (السعودة)

Population growth in Saudi Arabia 1974 – 2010 (Expatriate Citizens)



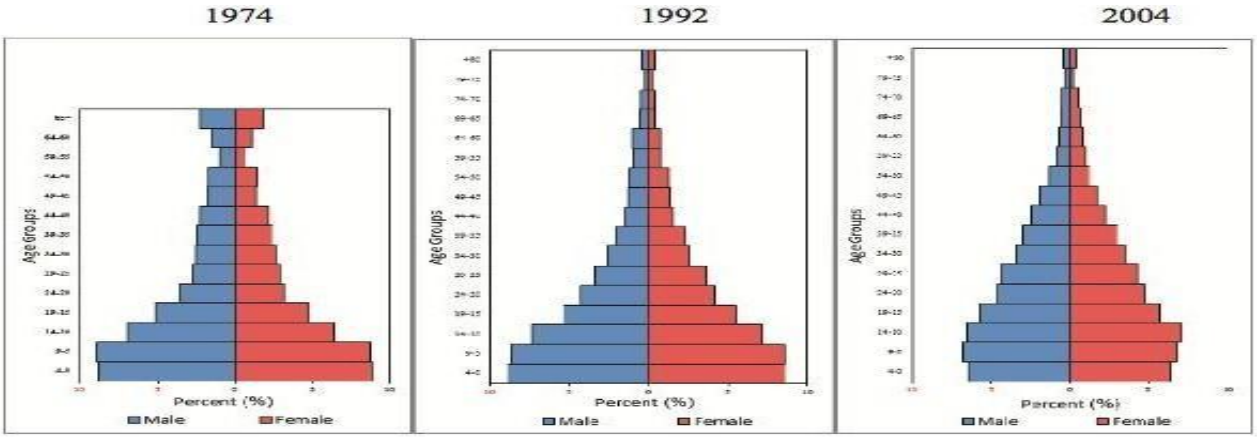
The period between the 1974-1992 there wasn't a lot of saudis who are qualified to work so the migration rate was high

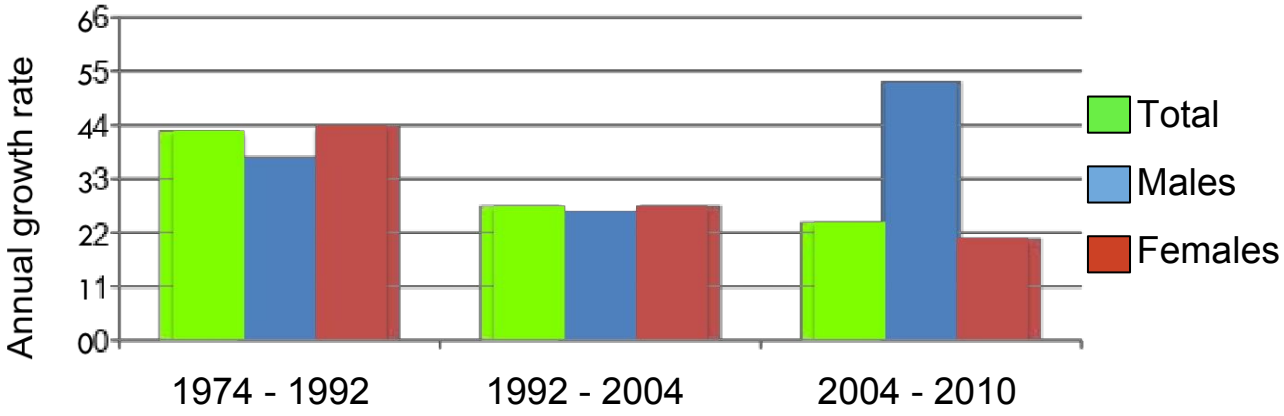
The period between the 2004-2010 lots of opportunity was there,companies and technological development which all require more employees.

Doctor think that will be decreasing of migration number due to the nationalization

Saudi National

- The annual growth rate tells us about the crude birth and death rate only .
- Pyramid : Birth,Death and migration





Expatriates

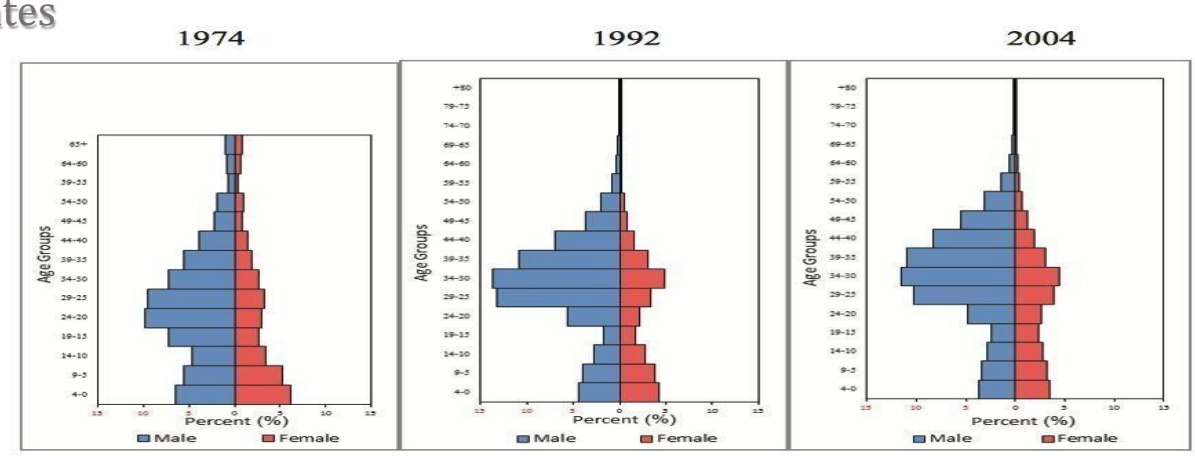
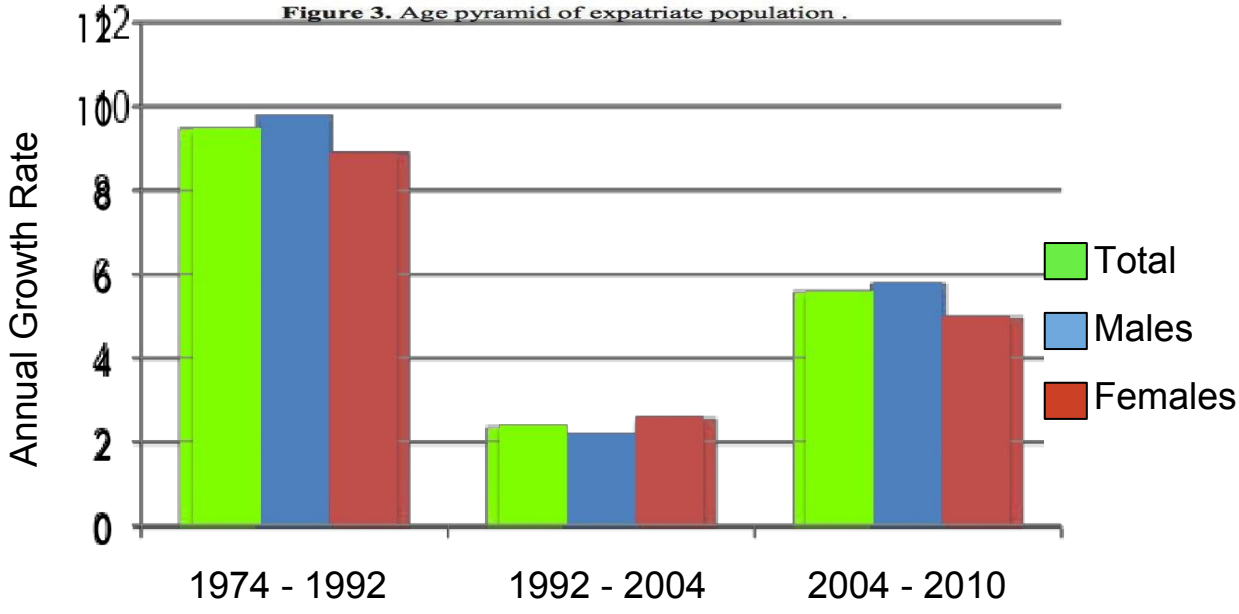


Figure 3. Age pyramid of expatriate population .



Trend in Saudi Arabia 1974-2010 Summary

- Reduction in birth rates (slow reduction)
- Increase in the expatriate population in the later third of this period
- Sex ratio (higher males) => expatriate workforce

Demographic transition stage in KSA

- Reduction in mortality rates
- Slowly reducing (but still high) fertility rate

Net result?

Growing population

Demographic transitional stage: Late expanding

Demographic transition stage in KSA

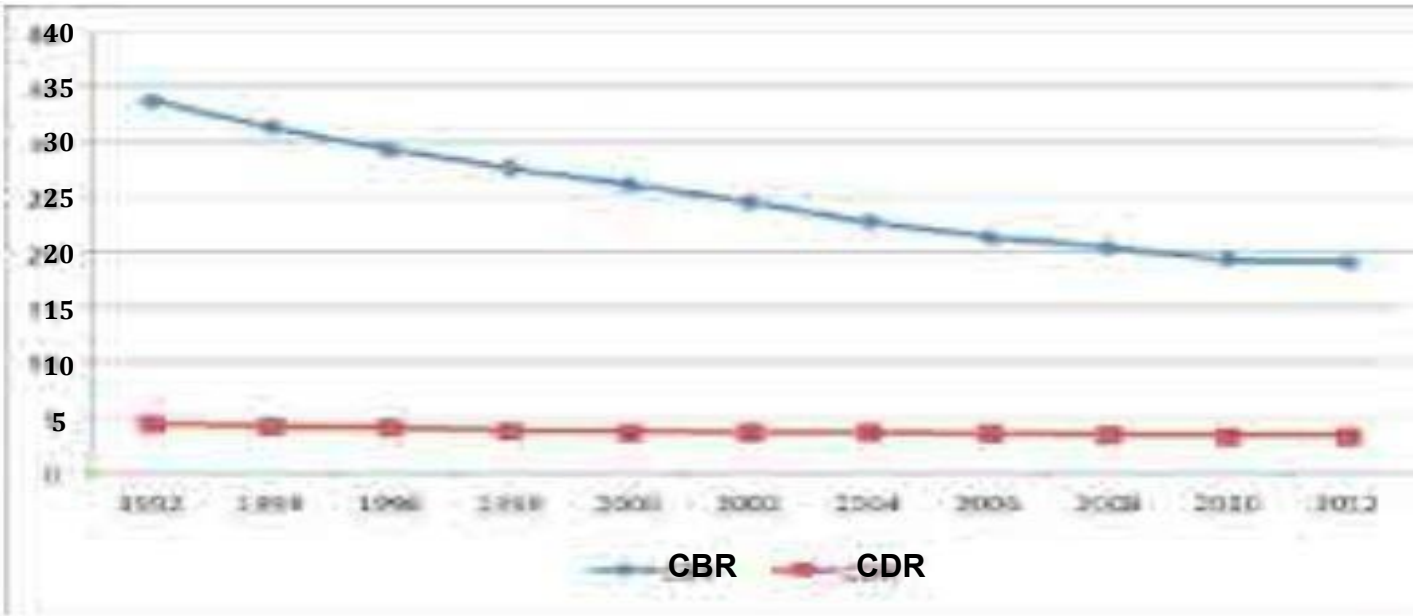


Fig. 1. Demographic Transition in Saudi Arabia showing crude birth rate (CBR) and crude death rate (CDR).
Note: Drawn by using data from US Department of Censuses, United States Census Bureau, International Data Base. www.census.gov/population/international/data/idb/regions.php. Accessed on September, 2012.

What is this graph showing us?

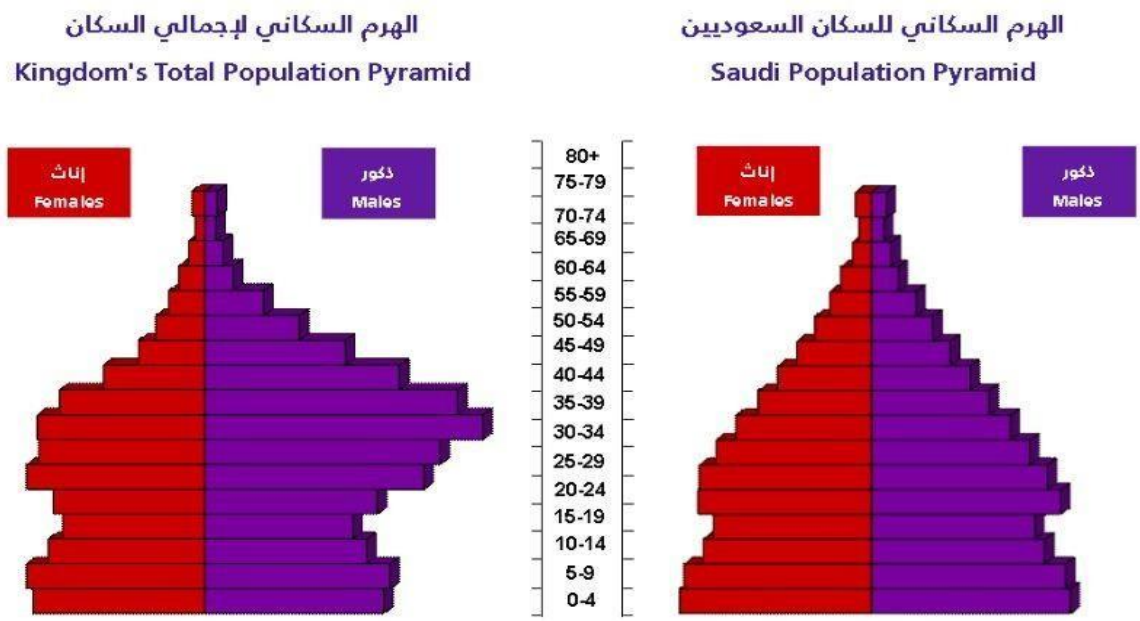
- ❖ it's showing us that the crude birth rate (CBR) and crude death rate (CDR) changed overtime in Saudi Arabia.

  - The crude birth rate has been decreasing as well as the crude death rate.
  - But net result there is a population growth why?
    - o There is still a space between the crude birth and death rate
  - The largest population growth was in 1992 since the difference between the crude birth rate and death rate is high 35-5=30%
  - While in 2012 there was less population growth but still a growth 20-5=15%
  - Annual growth rate (AGR) is not the population size so even if the AGR is declining overtime doesn't mean that the population not growing, it just means that the speed of growing is slower.
  - The importance of Annual growth rate is giving us prediction of how many years will take a population to be doubled and that's needed for the policies and decision maker as for people in 2030 vision, to consider which services should be available

- ❖ How the growth of the population is still increasing (more explanation)
  In 1992 the annual growth rate = 35(CBR)-5(CDR)=30%
  And let's suppose that the population in this year was 10 million
  And they increased 30% out of their population= 3 million in one year the net population 10+3=13 million
  In 2012 the annual growth rate = 20(CBR)-5(CDR)=15%
  And for example the population was 20 million
  And in one year is increasing 15% with net population of 23 million

Final statement the population still growing
As far as the birth rate is higher than the death rate there will be a growing population
If the annual rate reach 0 this mean, there is no more growing in the population

Most recent KSA population pyramid(2016)



Implications for KSA demographic transition

- demographic lag causes growth because low mortality rates not compensated by reduction infertility rate
- Measuring changes in demographic make-up (through crude death rate, infant mortality rate, fertility rates, crude birth rates..etc) reflects population growth
- Realizing this growth by the public raises awareness about population pressure in competing on resources, and may influence taking up healthier behavior

Implications for KSA demographic transition

- Young age structure => burden on work market => increase unemployment?
- Aging population will require availability of elderly healthcare services
- Health risks will be related to the age groups of highest proportion in that area
- Directing healthcare priorities by examining the needs of the age groups most condensed in that community. Example: if a region has lots of children we want to make sure to deliver the vaccination program to all of them through the availability of children health services.

Summary

Other important population distribution measures :

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-Total dependency ratio (x 100)

Population density:

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How does a population grow?

1. **Natural increase.**
2. **Net migration.**

Migration: Saudi Arabia ranks the second worldwide in hosting migrants

History of demographic changes in KSA:

1-In 1970s **2-In 1990s** **3-In 2001: research suggested** **4-2001 onwards**

5 Stages for Demographic Transition :

1-Stage 1: (High Stationary)

2- Stage 2: (Early expanding)

3-Stage 3: (Late Expanding)

4- Stage 4: (Low stationary)

5-Stage 5: (Declining)

Trend in Saudi Arabia 1974-2010:

-Reduction in birth rates(slow reduction).

-Sex ratio(higher males)=>expatriate workforce.

Demographic transition stage in KSA:

-Reduction in mortality rates.

-Slowly reducing(but still high)fertility rate.

-Net result: Growing population.

-Demographic transitional stage: Late expanding.

THE END