مـركـز الإحـصـاء
STATISTICS CENTRE

Methodology

Vital Statistics

2023

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Overview

Vital statistics encompass essential demographic data that capture significant life events within a population. These statistics include births, deaths, marriages, and divorces, each offering unique insights into societal trends and demographic changes. Birth statistics track the beginning of new life, influencing healthcare planning and educational strategies. Death statistics provide critical information on mortality rates and causes, guiding public health policies and interventions. Marriage statistics reflect cultural norms and family dynamics, while divorce statistics highlight societal shifts and individual transitions. By analyzing these vital statistics using rigorous methodologies and statistical tools, we gain a deeper understanding of population dynamics, enabling informed decision-making for social, economic, and healthcare policies that promote the well-being of communities.

Births and deaths

1. Overview

1.1 Introduction

Data on births is used in public health activities such as postnatal health care programs for mothers and infants, vaccination, and awareness-raising programs specific to health and nutrition.

Vital records are an important, basic, and direct source of demographic data, and help in exploring the demographics of population growth and change, especially births and deaths (natural increase). In addition, the data helps Statistics Center - Abu Dhabi (SCAD) in identifying the trends of the population and its development now and in the future; this helps decision makers and policy designers in developing appropriate plans and programs.

1.2 Concepts and definitions

Births:

Statistics on births in Abu Dhabi cover not only the absolute number of births that occur in the emirate. The statistics compiled provide a wider picture to the nature of births and the implications for the wider economy, in line with international best practice. To further the reputation of this dataset and bring it closer to national benchmarks, SCAD will need to increase the frequency of key data publications to monthly and quarterly basis.

The average age of mother indicator takes data from all the ages of mothers when they give birth and averages them for the Abu Dhabi emirate in each calendar year.

The general fertility rate measures how many births there are every year relative to 1,000 of women at child-bearing age (15-49 years old). This differs from the total fertility rate, which is a summation of age-specific fertility rates (i.e., it is a weighted measure) and therefore can be considered a more specific measure of how many births there are relative to the one woman at child-bearing age.

The sex ratio at birth measures how many males are being born each year relative to 100 females that are being born each year, it measured as the ratio of totals of each indicator.

SCAD’s birth statistics are based on the place of registration and not the mother's usual place of residence.

Deaths:

Statistics on deaths in Abu Dhabi cover not only the absolute number of deaths that occur in the emirate. The statistics compiled provide a wider picture to the nature of deaths and the implications for the wider community of Abu Dhabi.

SCAD produce death statistics for a range of age categories, from neonatal through to elderly. Age-specific mortality rates (i.e., a weighted measure) can be considered a more specific measure of how many deaths there are relative to the population than the crude death rate, which simply measures deaths relative to the size of the population. These allow more valid conclusions to be built when comparing data over time and across sexes.

SCAD's death statistics by location are based on the place of registration and not the usual place residence of the deceased.

Death incidents are defined as being "the state of permanent stop of all aspects of life of an individual at any time after birth including psychosis, cardiac arrest, respiratory arrest, response arrest" This definition is related to the livebirth and excludes the category of stillbirth and all other cases of fetus loss, i e spontaneous abortion and induced abortion. Still births are defined as fetal death after 24 weeks of gestation. The crude death rate is the number of death incidents during a specific calendar year per 1000 mid-year population of the same year.

SCAD measures statistics to reflect the health of the population through:

- Life expectancy at birth
- Survival to age 65
- Adult mortality - probability of death between 15 and 60

The Natural Increase Rate is the difference between the birth rate and the death rate: (+) the number of births and (-) the number of deaths.

1.3 Abu Dhabi special considerations

It should be noted that Abu Dhabi is an emirate and one of 7 emirates in UAE, and data collected is limited to Abu Dhabi emirate territorial. However, since the administrative sources used for collating data pertinent to births and deaths statistics also operate at the emirate level, this should not be a factor which compromises data quality.

1.4 Classifications and standards applied

SCAD follows the international guidelines for the classification of underlying cause of deaths based on the World Health Organization's International Classification of Diseases, Tenth Revision (WHO ICD-10)[1].

1.5 Available breakdown

SCAD publishes births and deaths on the following breakdown:

- Gender (male, female)
- Citizenship (citizen/non-citizen)
- Region (Abu Dhabi, Al Ain, and Al Dhafra)
- Age group
    - 0 - 4

- 5 - 9
- 10 - 14
- 15 - 19
- 20 – 24
- 25 - 29
- 30 - 34
- 35 - 39
- 40 - 44
- 45 - 49
- 50 - 54
- 55 - 59
- 60 - 64
- 65 - 69
- 70 - 74
- 75 - 79
- 80 +

For age groups, the exception is fertility indicators, which start with 15-19 and end with 45-49

1.6 Importance and objectives of the indicator

Countries need to know the numbers of births and deaths that occur each year - especially the main causes of death - to benefit from adequate health systems. The only way to register all people and trace all births and deaths is through civil registration. It provides the basis for giving legal identity to individuals and enables countries to identify their most pressing health issues.

Governments are unable to design efficient health policies or measure their effects when the cases and causes of death remain unrecorded and undocumented. Civil registration systems are resources that all developed countries possess, but developing countries still need them. Information on births and deaths, broken down by age, sex, and cause of death, is the pillar of public health planning.

The objectives of this dataset are:

- Providing reliable, high-quality indicators and statistics on births and deaths in a timely manner.
- Supporting decision makers and data users with respect to their needs of data.

2. Indicator information

2.1 Geographical coverage

The Emirate of Abu Dhabi; it includes three regions (Abu Dhabi, Al Ain, and Al Dhafra).

[1] See https://icd.who.int/browse10/2016/en

2.2 Statistical population

The Abu Dhabi population estimate covers all the usual residents in the three geographical divisions of Abu Dhabi.

2.3 Periodicity

The data is currently published on an annual basis. This is a slower frequency than international benchmarks and SCAD are looking into utilizing administrative data to achieve quarterly or monthly periodicity.

2.4 Timeliness

Births and deaths data are generally produced and published within 10-11 months after the reference year. This is roughly in line with annual data of other countries, such as Australia Bureau of Statistics who publish annual estimates 11-12 months after the reference year. As mentioned however, many national statistics agencies publish higher frequencies as well, so SCAD currently are behind those.

2.5 Units

Persons, percentage, and ratios.

2.6 Reference period

For births and deaths, the reference period is the 12 months of the year collected.

3. Methodology

3.1 Alignment to international standards

SCAD follow international standards in the methodology from:

- UN: Principles and Recommendations for a Vital Statistics System Revision 3 (2014)[2]
- UN: MortPak.[3]
- The Methods and Materials of Demography, 2nd Edition by Jacob Siegel and David Swanson[4]

The use of secondary administrative data aligns with the international standards set out by benchmark national statistical authorities, such as the United Kingdom Office for National Statistics (ONS).

The method used to collect the data, namely through registrations of births and deaths, aligns with the international standards above.

[2] See https://www.un-ilibrary.org/content/books/9789210561402

[3] See https://www.un.org/en/development/desa/population/publications/mortality/mortpak.asp

4 See https://www.researchgate.net/publication/304822739_The_Methods_and_Materials_of_Demography_2nd_Edition

3.2 Data sources

Data on births and deaths use administrative data from the Department of Health – Abu Dhabi.

3.2.1 Survey data

SCAD does not currently conduct a survey to collect data on births and deaths.

3.2.2 Administrative data

SCAD uses civil registration as well as hospital notifications for births and deaths statistics. Birth and death certificates data is now available through integration with Department of Health (DOH) via a live feed, but the data quality has not been fully assessed yet. The frequency of data will increase but this will not affect the annual publication.

The data are collected by place of registration and compiled in two registers – notifications and certifications.

3.3 Data validation and editing

3.3.1 Data validation

The validation and editing process of raw data is important as it constitutes the basis for subsequent statistical analysis. SCAD has put in place various measures to ensure data accuracy and high-quality standards. This system ensures continuity of providing the required data, continuity of updating the register data, consistency of data with statistical definitions and classifications, and a specific mechanism for periodically measuring data quality and revealing shortcomings or lack of coverage in the data.
The auditing processes can be summarized as follows:

1. **Structure Audit:**

   This can be used to verify coverage (all forms are present and not duplicated) and to show that each case has the correct number and type of records. Tests that constitute a structure modification ensure that the form is complete before beginning the consistency adjustment.

2. **Consistency and Validity Check:**

   Checking whether the expected relationships between responses are valid or known, as well as whether the answers are logical or permissible. These checks include consistency between age and marital status and between age and education, etc.

3. **Distribution:**

   Checking whether the data meets the expectations based on statistical analysis (audit and conformance rules from the output team).

3.3.2 Missing data adjustments

SCAD fill missing gaps in the data where possible dependent on the available of other data. For example, for the variable of mother age SCAD can use the mother date of birth to calculate the age.

3.4 Data processing

SCAD do not make any adjustments to the data received from the DOH.

3.4.1 Linking different datasets

Linking different datasets is not applicable to this publication.

3.4.2 Sample weighting

Weighting is not applicable to the production of births and deaths statistics.

3.4.3 Statistical calculation method

After receiving the raw data from DOH, some births and deaths indicators have specific calculations applied to reach the final data that is published.

Births:

General fertility rate (births per 1000 women aged 15 to 49 years):

$$= \frac{Number\ of\ live\ births}{Total\ Women\ population\ aged\ 15-49\ years\ in\ midyear} * 1000$$

Total fertility rate:

$$= 5 * \sum Age\ Specific\ Fertility\ Rate\ (5\ age\ group)$$

Note: the age groups are given in 5-year bands and therefore the multiplication by 5 is required after summation.

Age-specific fertility rate (Births per 1000 women aged 15-49 years):

$$= \frac{Number\ of\ live\ births\ in\ specific\ age}{Total\ Women\ population\ in\ midyear\ of\ the\ specific\ age} * 1000$$

Crude Birth Rate (Births per 1000 population):

$$= \frac{Number\ of\ live\ births}{Total\ population\ in\ midyear} * 1000$$

Sex ratio at birth (males per 100 females):

$$= \frac{Number\ of\ live\ births, males\ in\ a\ year}{Number\ of\ live\ births, females\ in\ a\ year} * 100$$

Deaths:

Age-specific mortality rate (per 1000 population):

$$= \frac{Number\ of\ deaths\ during\ the\ year\ in\ a\ particular\ age\ group}{Total\ mid\ year\ population\ during\ the\ year\ in\ a\ particular\ age\ group} * 1000$$

Crude death rate (per 1000 population):

$$= \frac{Number\ of\ deaths\ during\ the\ year}{Total\ mid\ year\ population\ during\ the\ year} * 100$$

Infant mortality rate (under 1 year old) (per 1000 live births):

$$\frac{Number\ of\ deaths\ during\ the\ year\ of\ infants\ under\ one\ year\ of\ age}{Live\ births\ during\ the\ year} * 1000$$

Neonatal mortality rate (under 1 month old) (per 1000 live births):

$$= \frac{Number\ of\ deaths\ during\ the\ year\ of\ neonatal\ babies\ (aged\ under\ 28\ days)}{Live\ births\ during\ the\ year} * 1000$$

3.4.4. Seasonal adjustment

The data is collected and calculated on an annual basis, with the reference collection period the same each year, so no seasonal adjustment is required.

3.4.5. Chain linking

Chain linking is not applied to this production.

4. Special cases

The births and deaths statistics do not present special cases of indicators.

5. Outputs and quality

5.1 Dissemination and accessibility

Data are disseminated in SCAD official website and available in Excel and PDF on annual basis

5.2. Length of available dataset

Death statistics are available in the SCAD publications, the longest time series is from 1977-2020 for the main headline variables.

Birth statistics are available in the SCAD publications, the longest time series is from 1979-2020 for the main headline variables.

5.3. Methodology changes

- **Geographical change :**The number of regions enumerated in censuses in recent decades has changed from two regions (Abu Dhabi and Al Ain) to four regions (Abu Dhabi, Al Ain, Al Dhafra and Emirates Islands) to currently three regions (Abu Dhabi, Al Ain and Al Dhafra).
- **Changes of calculation method over time :**DOH improved the data collection method by conducting a new hospital notification process system, tested in mid-2011. This has significantly improved the data accuracy and led to less missing data.

5.4. Data coherence and comparability

- **Internal comparability :**SCAD have not changed their methodology since the collection of these statistics changed. However, methodological changes by the DOH have occurred (as mentioned above). Consistency adjustments were made for the population estimates model, to align with final population estimates. Birth statistics were not adjusted for missing records.
- **External comparability :**In general, SCAD follows internationally recommended classification, definitions, and data collection processes. Following the international standards for the classifications of deaths allows the data collected by SCAD to be comparable with other national/regional entities.

5.5. Data accuracy and potential sources of errors

SCAD follows extensive quality checks and has well-defined manuals for statistical data quality framework, statistical survey implementation guide, etc. SCAD do not use a survey to collect the data, and therefore some of the usual sampling errors that are inherent with the methodology for other indicators are not an issue here.

5.6. Revision policy

No revisions are made to previous years' data.

5.7. Limitations of dataset

This data is limited in that SCAD do not currently collect, calculate, and publish the statistics on a more frequent basis than annually. For example, Australia, Canada, and the United Kingdom (U.K.) publish data up to a monthly frequency, with the U.K. even publishing weekly data.

6. Institutional environment

Statistics Centre – Abu Dhabi (SCAD), as the competent government entity in charge of organizing statistical activities in the emirate, plays a pivotal role in supporting decision-makers, and policymakers in Abu Dhabi. The statistical activities in the emirate are organized by SCAD, with its strategic partners in the Statistical System of Abu Dhabi. The Law entrusts SCAD with the task of developing and organizing statistical in Abu Dhabi Emirate.

7. Glossary

Median age of the of mother:

Median age measures the average age of females who gave birth each year.

Births (live-births):

A birth is live when the baby shows any sign of life such as breathing or heart palpitations.

“This term expresses the completion of the process of expulsion or extraction of the product of conception from the mother’s abdomen, irrespective of the duration of pregnancy, so that the newborn breathes after this separation, or shows any other sign of life, such as beating of the heart, umbilical cord pulse or definite movement of voluntary muscles, whether or not the placenta is attached, and any product of such a birth is considered liveborn.” (Source: Dictionary, Principles and Recommendations for a Vital Statistics System, Second Revision, United Nations, 2001)."

General fertility rate:

The number of live births per 1000 women of childbearing age (childbirth), i.e., in the age group 15-49 years, during a calendar year.

Total fertility rate:

The total fertility rate expresses the average number of children a woman may have during her childbearing period. When calculating the rate, fertility rates in the specific age group for each woman should be considered. It is also assumed that there are no deaths, and this rate is expressed as the number of children per woman.

Age-specific fertility rate:

This rate measures the number of births per year per 1,000 women of a given age. To calculate this rate, the number of births during a given year is divided by the population in mid-year. Births to mothers under fifteen as well as births to mothers over 50 are counted in the age groups 15-19 and 45-49, respectively.

Crude birth rate:

The crude birth rate is the simplest way to measure fertility; it is the number of live births registered during a calendar year divided by the total resident population during the 30th of June of that year. It is expressed as the number of births per 1000 population.

Sex ratio at birth:

The sex ratio at birth during a calendar year is expressed as the number of male live births per 100 female live births.

Age-specific mortality rate:

The number of deaths in an age group, occurring during a period (usually one calendar year) per 1000 population in the same age group in the middle of that period.

Crude death rate:

The number of deaths occurring during a period (usually one calendar year) per 1,000 population in the same age group in the middle of that period.

Death:

Death is "a state of permanent interruption of all signs of a person's life at any time after birth including psychosis, cardiac arrest, respiratory arrest, and unresponsiveness". This definition is related to live birth and excludes the category of stillborn and all other cases of fatal loss such as spontaneous abortion and induced abortion.

Infant death:

A child who is born with any sign of life and then dies before completing his first year.

Infant mortality rate (under 1 year old):

The number of infant deaths per 1,000 live births during a period (usually one calendar year).

Neonatal mortality rate (less than 1 month):

The number of deaths among infants aged 28 days or less per 1,000 live births over a period (usually one calendar year).

Under-five mortality rate (per 1,000 live births):

The number of death incidents of children under the age of five within a certain year per 1000 live-births within the same year by Gender.

Average life expectancy at birth:

Life expectancy at birth is defined as the number of years a newborn baby is expected to live given the current life expectancy rates prevailing in a period (usually one calendar year) and is calculated using standard life tables.

Marriage and Divorce Statistics

1. Overview

1.1 Introduction

Marriage is a common social system that represents a socio-religious institution existing in all societies in conformance to multiple forms and functions in whose framework the family is made followed by reproduction and childbirth. It is governed by prevailing laws and dominant customs and traditions in different countries. Often the difference between countries with respect to customs and traditions constitute an obstacle in the way of the opportunity to make international comparisons of the marriage

situation of the population and other indicators relating to marriage and divorce. Divorce is the form in which the marriage contract legally ends between the two parties.

This document provides a detailed description of the methodology used to calculate the marital statistics of the total population of Abu Dhabi. Total population comprises of the census population counting all usual residents regardless of legal status or citizenship All the usual residents are included in the calculation of population statistics. For the marital statistics, SCAD uses cohort component method by gender, citizenship, region, and age.

1.2 Concepts and definitions

Marriage: It is a general social system which represents a social and religious institution that exists in all societies in accordance with multiple forms and functions. Within its framework, the family is formed, followed by productivity and childbearing. This system (marriage) is governed by Sharia, laws, customs, traditions and common practices in the UAE, whose difference often challenges international comparisons of the population's marital status and other indicators related to marriage and divorce. Marriage is performed by a wedding contract which entails rights and duties to be met by both spouses, in accordance with the laws that regulate this relationship with its various forms in the different countries and communities.

Marriage is classified according to the degree of kinship as follows:

- First-degree consanguinity, which means the marriage of paternal cousins – maternal cousins.
- Second-degree consanguinity, which means marriage with relatives other than what is mentioned above, such as the sons of the tribe.
- No kinship, which means that there is no kinship relationship between the husband and wife.

The minimum age at which persons are legally free to marry is 18 Hijri years, otherwise, judge's approval is required. Further, a spouse's age should not be twice the other; otherwise, the judge's approval is sought.

Divorce: It is the form in which the marriage contract legally ends between the two parties, i.e., the husband and wife who are entitled to re-marriage under certain conditions.

According to Islamic law, there are four types of divorce, as follows:

- Revocable divorce, which is a divorce from a wife with whom the marriage has been consummated and does not complete the three divorce cases.
- Minor Baynunah (finality) divorce, which is the first or second divorce after the end of the waiting period for the wife with whom marriage has been consummated or before consummation.
- An irrevocable, major Baynunah (finality), divorce is a divorce that complements three, i.e., preceded by two divorces, and the divorcé is not entitled to remarry the divorcée until after she has married another person, a valid legal marriage and is then divorced from him.
- Khul' divorce is a divorce procedure upon the request of the wife in exchange for a sum of money paid to the husband.

Marriage contract: an official document proving the fact of marriage between the two parties (husband and wife) in their names and containing their personal data.

Divorce certificate: an official document that proves the occurrence of the divorce between the two parties (husband and wife) in their names and contains their personal data.

Usual resident: A usual resident of Abu Dhabi Emirate is a person whose place of usual residence is in the Emirate of Abu Dhabi. Usual residents include the UAE citizens who are outside the UAE but usually reside in the Emirate of Abu Dhabi. It also includes all the non-citizens who have stayed or intend to stay continuously in the Emirate for at least six months.

1.3 Abu Dhabi special considerations

It should be noted that Abu Dhabi is an emirate and one of 7 emirates in UAE, and data collected is limited to Abu Dhabi emirate territorial. However, since the administrative sources used for collating data pertinent to marriage and divorce statistics also operate at the emirate level, this should not be a factor which compromises data quality.

1.4 Classifications and standards applied

SCAD follows the international guidelines for definition of marriage and divorce (tailored to align with Islamic laws) and calculating the statistics with Cohort Component Method and apply this method for citizens and non-citizens separately.

The two international guides followed by SCAD are:

- Methods for Population Projections by Sex and Age[1]
- UN Principles and Recommendations for Population and Housing Censuses[2]
- A textbook on "The Methods and Materials of Demography, 2nd Edition (Description of Cohort Component Method)" by Jacob Siegel and David Swanson[3]

[1] See https://www.un.org/en/development/desa/population/publications/manual/projection/sex-age.asp

2 See https://unstats.un.org/unsd/publication/seriesM/Series_M67Rev3en.pdf

3 See https://demographybook.weebly.com/uploads/2/7/2/5/27251849/david_a._swanson_jacob_s._siegel_the_methods_and_materials_of_demography_second_edition__2004.pdf

1.5 Available breakdown

SCAD publishes marital status indicators on the following breakdown:

- Age Group
  - 15 - 19
  - 20 - 24
  - 25 – 29
  - 30 – 34
  - 35 - 39
  - 40 - 44
  - 45 - 49
  - 50 - 54

55 - 59
60 - 64
65 - 69
70 - 74
75 - 79
80 +

- Gender (male, female)
- Citizenship (citizen/non-citizen)
- Region (Abu Dhabi, Al Ain, and Al Dhafra)

1.6 Importance and objectives of the indicator

Marriage is one of the demographic phenomena that have a significant impact on the social and economic features of the population. This is so because the marital status affects fertility, mortality, migration, and other demographic indicators. To learn about the marital status of society, it is necessary to know the rates of marriage and divorce and changes in those rates from time to time.

Marriage is a demographic phenomenon which has a significant impact on social and economic features of the population. It impacts on fertility indicators, which is one of the key population indicators. Marriage and divorce statistics aim to provide data about the number of marriages and divorces annually and measure their rates. They also seek to obtain age data at the first marriage and measure this phenomenon every year, along with the duration of married life. These are all associated with pregnancy and childbearing. Thus, they influence age and gender structure of population and population growth. These statistics also help to estimate the number of newly formed families in the community which are needed for estimation of the total number of families every year pending the performance of the general population census.

The importance of divorce is due to its impact on the community in general. Divorce is not only a social problem, but it is also a psychological problem that affects children and parents. It is one of the serious problems that threaten women's psychological health. These statistics help to develop programs in the field of family guidance.

Marriage and divorce statistics aim to provide data on the annual number of marriages and divorces, measuring their rates, obtaining data on age at first marriage, measuring this phenomenon annually, the duration of marital life (marriage period) in addition to the end of the relationship, whether by divorce or widowhood. These are all factors relating to childbearing and childbirth and, therefore, affect the age structure of the population and population growth. These statistics help in estimating the number of newly formed families in society in preparation for estimating the annual total number of families until the general population census is conducted.

2. Indicator information

2.1 Geographical coverage

Marriage and divorce statistics cover all cases of marriage and divorce that took place and were registered in Sharia courts, during a particular Gregorian year.

Geographically, the survey covers the three regions of the Emirate of Abu Dhabi:

- Abu Dhabi
- Al Ain
- Al Dhafra

2.2 Statistical population

The Abu Dhabi population estimate covers all the usual residents in the three geographical divisions of Abu Dhabi.

2.3 Periodicity

The data is currently collected and published on an annual basis.

2.4 Timeliness

The indicators are made available in August.

2.5 Units

Statistics on marital status are generally collected and published in numbers and rate.

2.6 Reference period

It is same as the population estimates:

- For population estimates of the resident population the reference period is 12 months.
- The reference date for mid-year estimates is 30 June each year.

3. Methodology

3.1 Alignment to international standards

SCAD follow international standards from the UN and a paper by Jacob Siegel and David Swanson in the classification of data, as mentioned above in section 1.4.

3.2 Data sources

Administrative records: The data is obtained from the Abu Dhabi Judicial Department.

Population Census: The census form includes a question on the marital status of individuals in the age of marriage at the time of the census. This data is used when classified according to the demographic, social and economic characteristics of the population to provide detailed data that helps analyze the marital status of the population in the community.

Recently, SCAD has also initiated “Population Register” as an additional admin source for marital statistics.

3.2.1 Survey data

These indicators' data are not based on sample surveys but solely on administrative records. The data on marriage and divorce indicators are collected directly from records in the administrative sources in the emirate.

3.2.2 Administrative data

SCAD uses Abu Dhabi Judicial Department as a key source to collect the administrative data for marital status statistics. The coverage can be considered full (i.e., 100%), given that it there is a legal obligation to register all marriages with the Abu Dhabi Judicial Department.

This system provides marriage and divorce statistics according to the registration of marriage and divorce contracts whose rules are determined by law in each country the by the Judicial Department and the Family Guidance Department. These rules must be agreed upon in advance. These statistics provide data on these events and the demographic, social and economic characteristics of the individuals concerned with these events. The statistics are reviewed, coded, entered and then classified as required.

3.3 Data validation and editing

3.3.1 Data validation

The validation and editing process of raw data is important as it constitutes the basis for subsequent statistical analysis. SCAD has put in place various measures to ensure data accuracy and high-quality standards. This system ensures continuity of providing the required data, continuity of updating the register data, consistency of data with statistical definitions and classifications, and a specific mechanism for periodically measuring data quality and revealing shortcomings or lack of coverage in the data.

The auditing processes can be summarized as follows:

1. **Structure Audit:**

   This can be used to verify coverage (all forms are present and not duplicated) and to show that each case has the correct number and type of records. Tests that constitute a structure modification ensure that the form is complete before beginning the consistency adjustment.

2. **Consistency and Validity Check:**

   Checking whether the expected relationships between responses are valid or known, as well as whether the answers are logical or permissible. These checks include consistency between age and marital status.

3. **Distribution:**

   Checking whether the data meets the expectations based on statistical analysis (audit and conformance rules from the output team).

3.3.2 Missing data adjustments

Quality adjustments and treatment of missing data is not applied to the data collected from the Abu Dhabi Judicial Department.

3.4 Data processing

The data are assessed by verifying their logicalness and coherence, besides comparing the results produced by SCAD with those of the Abu Dhabi Judicial Department (ADJD) such data and available data from previous surveys to determine the extent of consistency and differences between them.

Data totals are checked during the desk editing of the marriage and divorce events' forms to verify the validity and logicalness of the data. In addition, automated editing rules are applying during data entry to ensure that they are error-free.

3.4.1 Linking different datasets

Linking different datasets is not applicable to this publication.

3.4.2 Sample Weighting

Weighting is not applicable to the production of the marriage and divorce statistics.

3.4.3 Statistical calculation method

The marriage and divorce statistics is calculated using the cohort component method while compiling the data collected from the Abu Dhabi Judicial Department.

Indicator calculation for key indicators:

- **Total marriages:** Number of marriage contracts registered legally in one of Abu Dhabi Emirate courts in the calendar year.
- **Average age upon first marriage:** This is the likely average age upon first marriage or of age-groups centers upon first marriage together with calculation of the number of married people as weights whereby ages are multiplied by weights and the product is added up and divided by the sum-total of weights.
- **Crude marriage rate (CMR):** This is the number of marriage cases per one thousand of the population of a particular area during a given year. It is calculated thus:

  CMR = (M/P)) *1000

  Where M: is the total marriage cases in a particular area during a given year and P: number of populations in mid-year for the same area.
- **Total divorces:** Number of divorce cases registered legally in Abu Dhabi Emirate courts in the calendar year.
- **Crude divorce rate (CDR):** This is the number of divorce cases per one thousand of the population. It is calculated as follows:

  CDR = (DIV/P0*1000

  Where DIV: is the total number of divorce cases during a particular area during a given year and P: Number of populations in mid-year for the same area.
- **Refined divorce rate (RDR):** This is the number of divorce cases occurring during a given year divided by the number of married females in mid-year.

  RDR= (DIV/MF) *1000

Where MF is total number of married females in a particular area in mid-year and DIV: total number of divorce cases occurring in a particular area in mid-year for the same area.

- **General divorce rate:** Number of divorce cases during a given year (not the divorcés and divorcées) per 1000 of the population of 15 and more years of age in mid-year for the same area.
- **General marriage rate:** number of marriage cases during a given year (not married men and married women) per 1000 population aged 15 and over in mid-year for the same area.
- **Duration of marriage:** Subtract date of marriage from date of divorce and presented in year format.

3.4.4 Seasonal adjustment

Seasonally adjusted estimates are not produced for this publication.

3.4.5 Chain linking

Chain linking is not applied to this production.

4. Special cases

Marriage and divorce statistics do not present special cases of indicators.

5. Outputs and quality

5.1 Dissemination and accessibility

Data are disseminated in SCAD official website and available in Excel and PDF on annual basis.

5.2 Length of available dataset

Population statistics is available on the SCAD website from 2005-2019 for the main headline variables. Further details are found in the statistical yearbooks.

5.3 Methodology changes

Geographical change

The number of regions enumerated in censuses in recent decades has changed from two regions (Abu Dhabi and Al Ain) to four regions (Abu Dhabi, Al Ain, Western Region and Emirates Islands) to currently three regions (Abu Dhabi Region, Al Ain Region and Al Dhafra).

5.4 Data coherence and comparability

Internal comparability: Methodological changes (as mentioned above)

External comparability: In general, SCAD follows internationally recommended classification, definitions, and data collection processes.

5.5 Data accuracy and potential sources of errors

SCAD follows extensive quality checks and has well-defined manuals for statistical data quality framework, manual of statistical quality standards and procedures for administrative records.

5.6 Revision policy

SCAD published preliminary, and revised estimates before publishing the final estimates. Once the data is available from the new census, the historic data is interpolated between two census data points and revised.

5.7 Limitations of dataset

No limitations of datasets are applicable for this publication.

6. Institutional environment

Statistics Centre – Abu Dhabi (SCAD), as the competent government entity in charge of organizing statistical activities in the emirate, plays a pivotal role in supporting decision-makers, and policymakers in Abu Dhabi. The statistical activities in the emirate are organized by SCAD, with its strategic partners in the Statistical System of Abu Dhabi. The Law entrusts SCAD with the task of developing and organizing statistical in Abu Dhabi Emirate.

7. Glossary

Divorce:

It is the form in which the marriage contract legally ends between the two parties, i.e., the husband and wife who are entitled to re-marriage under certain conditions.

Divorce certificate:

an official document that proves the occurrence of the divorce between the two parties (husband and wife) in their names and contains their personal data.

Estimates:

Calculations of the current or past value of a variable based on the trends of indicators related to that variable and changes in those indicators.

Individuals:

Includes all individuals residing in the Emirate of Abu Dhabi, according to the usual definition of residence, which is consistent with the concept of residence in accordance with international definitions and as applied in the Emirate of Abu Dhabi during the previous censuses.

Place of usual residence:

The place of usual residence is where a person sleeps most nights during a reference period. For population estimates of the resident population the reference period is 12 months.
of the population in each period compounded annually.

Marriages:

It is the legitimate and legal bond between the husband and wife, and the legitimacy of this marriage is governed by Islamic laws; it is the phenomenon that establishes the family and confers on it a legal status.

Marriage contract:

an official document proving the fact of marriage between the two parties (husband and wife) in their names and containing their personal data.

Usual resident:

A usual resident of Abu Dhabi Emirate is a person whose place of usual residence is in the Emirate of Abu Dhabi. Usual residents include the UAE citizens who are outside the UAE but usually reside in the Emirate of Abu Dhabi. It also includes all the non-citizens who have stayed or intend to stay continuously in the Emirate for at least six months.

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