

# LESSON 1: INTRODUCTION TO DEMOGRAPHY

## Activity 3 – Small Group 1



Summarise the information in the text, answer the introductory questions and present your results.

### ***What is demography? What does demography research? How is a population composed?***

The term demography is made up of two words: “Demos”, which means “population”, and “-graphy”, which means “describe.” One can then say that demography is the science that researches and describes a population. More concretely, demography researches the size, composition and (age) structure, as well as the geographic distribution of human populations. In addition, demographers look at how a population develops, changes and reproduces over a certain period of time. Three fundamental aspects are observed: The birth rate (fertility), the death rate (mortality), and emigration and immigration (migration).

Demography does not only research the current population (for example, a group of people in a football stadium or at a music concert), but it works more with the factors that can influence population change. Demographers look at the individual life courses, which means the time between birth and death, and what happens within this time.

Births, deaths and migration are the core aspects of demographic analyses. Age and gender are important factors that determine these aspects. Examples of demography:

- **Age of death:** A death within the first years of life and a death at the age of 93 have very different consequences for the human population. Both influence, however, the development of the overall life expectancy of a population and its age structure.
- **Age of mother at first birth:** It makes a big difference if a woman is a 22-year-old or a 36-year-old when she has her first child. The chances that she will have more children in the course of her life are much higher in the first case than in the second. In that respect, populations where the average age of mothers at first birth is low tend to have higher rates of fertility and larger family sizes.
- **Gender distribution among new-borns:** When there are inequalities in the gender distribution among new-borns for one or more generations, meaning a clearly identified difference in the number of new-born boys and girls, then this will have an impact on their life courses later on. For example, there are fewer partners available to start a family, which can then impact the birth rate.

In addition to age and gender, there are other factors that can interact in population development over a certain period of time: The frequency of marriage and marital status, health status, level of education, the type of household, employment level, education level of women and so on. For example, marital status in the reproductive phase of life, when men and women can reproduce, can influence the birth rate, as can the level of education of women and their opportunities in the labour market.

# LESSON 1: INTRODUCTION TO DEMOGRAPHY

## Activity 3 – Small Group 2



Summarise the information in the text, answer the introductory questions and present your results.

### ***How do demographers acquire the information and data they need?***

Demographers require data, or put more precisely, they require a large amount of data to analyse populations. But where does this data come from? People are constantly born and die, or a couple decides to get married. In Germany, we are legally required to report such an event to a registration office (*Standesamt*). These offices, which are of course under very strict data protection regulations, are a primary source of data for demographers and other researchers.

Registration offices were first founded in Europe in the 18<sup>th</sup> century (though there are differences based on country or region), but populations were recorded before then. In ancient Rome, such population counts already existed in 6<sup>th</sup> century B.C. In certain countries, especially in northern Europe, data sets that cover a long time frame are available.

The immigration, as well as emigration, of people is also tracked by public authorities, even when someone moves within a country, for example from Rostock to Munich, and also when someone crosses borders. Examples of the latter include when people move from France to Denmark (within the European Union (EU)), or from the United States of America to Germany (from a third country to the EU).

But demographers can also find data from other sources, not only from the afore-mentioned registration offices. The majority of information about the characteristics of a population come from the census and from surveys that are led by statistical and scientific institutions. Individual states usually carry out such a census every 10 years. In the case of surveys, however, there are many more differences in their structure and regularity.

Once the data has been put together, statistical institutions will publicise the data in the form of tables. These can either be absolute values, such as the number of marriages in a year, but also a rate, like the birth rate, with which the number of live births per 1,000 residents is calculated. Or, the data can be presented as graphics that the public can usually use free of charge. In addition, demographers and other researchers can acquire individual data (so-called microdata). They typically use more complicated methods and calculate further and more sophisticated indicators in order to answer questions of general interest and politically relevant topics from a scientific perspective.

# LESSON 1: INTRODUCTION TO DEMOGRAPHY

## Activity 3 – Small Group 3



Summarise the information in the text, answer the introductory questions and present your results.

***What is understood as the theory of “Demographic Transition”? What are the differences between the five phases of the “Demographic Transition”?***

Demographers explain the past changes in the population through a theory, or rather a model, known as the “Demographic Transition Theory”. This theory of “Demographic Transition” describes how birth and mortality rates have changed during transition situations, and builds upon the experiences of western Europe in the last two hundred years. This model seeks to summarise the demographic experiences of as many countries as possible within a theoretical framework. However: Even when the model suits the industrial countries well, one has to keep in mind that this model is less applicable in other countries, like in Africa and Asia.

The “Demographic Transition” functions like this:

1. In the first stage, the birth and mortality rates are very high. Many people are born, but within the same population, many people also die, particularly at a young age, specifically new-borns and infants. This results in either very low or even no population growth: There are many births, but this is countered by the high death rate.
2. In the second stage, the mortality rate begins to decrease. Due to scientific and social advancements, fewer people die in the early life stages and they also live longer. During such periods when the mortality already begins to decrease and the birth rate continues to be very high, the population significantly increases temporarily.
3. In the third stage, after some time, the birth rate begins to decline: People bring fewer and fewer children into the world. Parents do not have to have as many children as before since children no longer present an economic benefit. Now is when the birth rate begins to drastically decline.
4. In the fourth stage, both the mortality and the birth rates are low: Less people are dying (or rather they are living longer) and they have fewer children. As a result, the population growth is low or is close to approaching zero.
5. In the fifth stage, the birth rate begins to slowly grow again. The increase does not reach the same level as it was before, but the birth rate gets closer to two children per woman. The population grows either very slowly or stays at zero.

Although population growth is very low, both in the phase before the actual “Demographic Transition” and in the phase after it, the two phases differ considerably in regards to the age composition of the population:

- Before the “Demographic Transition”, there are numerous births and many deaths, the latter also at younger ages. This results in a population with a “young” age structure with a high proportion of children and a small proportion of older people.

- After the “Demographic Transition”, fewer children are born, but the majority of them live until a very high age. This results in a population with an “older” age structure. This is what is meant by “population ageing”.

The beginning, ending and length of the “Demographic Transition” differs by country. In Sweden, the transition lasted from 1810 to 1960, over 150 years, but in France from 1785 to 1970, a total of 185 years. In Asian countries, the changes went a bit faster and happened later on, for example, in China from 1930 to 2000 and in Taiwan from 1920 to 1990. In Germany, the “Demographic Transition” began in 1876 and ended in 1965, so almost 90 years.

# LESSON 1: INTRODUCTION TO DEMOGRAPHY

## Activity 3 – Answer Sheet: What is “Demography”?

**Answers for Group 1:**

**What is demography? What does demography research? How is a population composed?**

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**Answers for Group 2**

**How do demographers acquire the information and data they need?**

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**Answers for Group 3:**

**What is understood as the theory of “Demographic Transition”? What are the differences between the five phases of the “Demographic Transition”?**

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