

is confined to the study of organization and distribution of groups.

HISTORICAL BACKGROUND OF DEMOGRAPHY

It is difficult to pinpoint the exact time or date which saw the rise of demographic studies. In fact, it is said that demographic study is as old as society itself—it started when human beings created civil society. People and societies across the world have kept an account or records of the human population. With the passage of time, societies started realizing the importance and

→ Basic ground
→ nature of it
→ Importance

① Data Analysis
② Results

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necessity of maintaining proper population records. The Egyptian civilization, the Chinese, Greek and ancient Indian civilizations maintained population records. As far back as in 2030 BCE, it appears that the population of Jeddah, a city in Saudi Arabia, was counted. In fact, the system of registrations has a long history. As early as in 1250 BCE, during the reign of King Rameses II in Egypt, an elaborate registration system was set up to register vital events in different periods and for different reasons. Churches started keeping records of baptism, marriages and deaths of their followers. In 480 BCE, Zerxes had his soldiers counted before invading Greece. Ancient records also show that Romans had their population counted for the first time in 435 BCE after which it was frequently counted. In India, the population was counted during the period of the Ramayana and the Mahabharata. Kautilya's Arthashastra mentions the process of population counting in the country. Similar references have also been made in Ain-i-Akbari.

In recent times, Henry VIII of England had records of the victims of the Plague of 1535 CE prepared. Though population counting was not an end in itself, it was a means to an end—to know the strength of the armed forces, to make an estimate of the available manpower, especially for the purpose of invading other countries, and to know how many persons had been added for the purpose of collecting taxes. Religious organizations also maintained records of births and deaths in order to know the number of followers.

It was in the middle of the seventeenth century that population studies emerged as a discipline in England. Most of the early developments in the discipline took place in England and other European countries. Later, the USA became an important contributor to the development of the discipline.

The credit for starting demographic studies in modern times goes to John Graunt (1620–74). He initiated a new field of empirical research in population studies. His famous volume entitled Natural and Political Observations upon the Bills of Mortality was published in 1662. It is the first important work in the history of population studies. It was mainly a quantitative analysis of mortality, in which the causes and number of deaths for certain places were dealt with. Some details of births, migration and family growth were also given. He also made an analysis of the population which was capable of serving in the army. The 'bills of mortality' from which Graunt got the data for analysis were weekly current reports on christening and burials taken from London and its surrounding areas. Parish clerks maintained regular registrations of these events. This data was taken for the period between 1604 and 1661 and a report was prepared. This is considered to be the first systematic and objective analysis of population.

Graunt concluded that the processes of mortality, fertility and migration were interrelated. One of his postulates was that birth rate related to male sex was greater than that related to the female sex; if in a given society the number of males and females is equal. He also stated that the mortality rate

was higher in urban than in rural areas, and that it was higher at the beginning of life than at later stages. Graunt also used the sample survey method to collect data.

Graunt critically analysed data on fertility and mortality, and pointed out their weakness, as well as their biases and inadequacies. He started the traditions of evaluating population data and making observations on the data. He also estimated the size and growth of London's population. According to Peter R. Cox, 'Graunt's work covers so wide an area of interest that it may be said that a large part of demography was born all at once. The developments that occurred subsequently were in the nature of consolidation.'

William Petty (1623-87) continued the work of John Graunt. Petty was an English scholar and a contemporary and friend of Graunt. His work Essay on Political Arithmetic had a considerable influence on the development of population studies, and enhanced the status and prestige of the discipline by bringing it to the focus of the Royal Society. In Political Arithmetic, Petty stated his views about population growth, unemployment, urbanization, national income and so on. He was of the opinion that central statistical office would be of immense help for population studies. Petty also prepared life tables.

William Halley (1656-1742) made an important contribution to the development of population studies. He constructed the first empirical life table, based on the available data on births and deaths. He based this on the assumption that life and death rate will basically remain static. He soon concluded that it would be difficult to maintain static population growth rate. He also coined the term 'expectation of life'. Halley's work inspired research in Germany, the Netherlands, Sweden and other European countries.

Johann Peter Sussmilch was a Lutherian clergyman who lived during the reign of Frederick the Great. He collected figures about various aspects of population—age at marriage, number of deaths, causes of death, growth of population and so on—and analysed them. He wrote a massive volume of 1200 pages in which he combined data collected from Germany, France and Sweden. He based his findings on a large number of observations, and is credited with being the first person to stress on the 'law of large numbers'. He was of the opinion that the value of any study increases with the number of cases on which the findings are based. He tried to prepare mortality tables, which would have universal applicability. On the basis of data collected, Sussmilch concluded that deaths were more frequent in the first few weeks of life, and were low at around the age of fifteen. He studied factors affecting fertility—age at marriage, disruption of marriage by separation or death, effects of health problems or diseases and so on. He also tried to estimate the world's population in his book The Divine Order. However, he gave a religious explanation for population change and movement, seeing a divine hand in them.

God

Gregory King and **Richard Price** made important contributions to the development of population studies. King was an English scholar who made estimates of the populations of England and Wales, which at that time was a first estimate of its kind. Richard Price prepared life tables and analysed the birth and death rates, as well as the growth rate of the population of Sweden. One of his most important contributions came in the form of the preparation of the Northampton Table, which was based on the death rate in Northampton area. He assumed that the population would remain static, with the result that emphasis was laid on death rate.