Abstract

This first DemoLab Report on Longevity Trends consists of two parts: Longevity trends: The Italian scenario (with a look to foreign experiences), and Changing trends in mortality: an international comparison using the Human Mortality Database.

The first part aims at providing an insight into historical and recent longevity trends, with special focus on the Italian scenario. In the second part, recent trends in mortality in 19 countries are compared, for which relatively up-to-date data from the Human Mortality Database (HMD) are available.

Longevity trends have been focussed by demographers and actuaries since the last decades of the Nineteenth century. Actuaries have in particular been involved in analyzing and forecasting longevity trends since the beginning of the Twentieth century: pricing and reserving for life annuities and pensions appeared as a dramatic challenge because of uncertainty in future trends.

More generally, longevity trends impact on the evolution over time of the age structure of the population. Of course, other factors impact on this structure dynamics, viz fertility, immigration, emigration. In its turn, the evolution of the age structure of the population has a tremendous impact on a number of activities, the insurance activity and the public policy in particular.

A significant degree of heterogeneity affects all the populations, as regards the age pattern of mortality. An important contribution to the mortality heterogeneity is provided by health conditions, which are in turn determined by environmental features, individual income, eating habits, etc. With reference to adult and old ages, health conditions in particular impact on the so called healthy life expectancy, that is, the expected number of years spent by an individual in good or very good health conditions.

Of course, also health conditions have important effects on both the private sector (the insurance industry in particular) as well as the public sector (involving, in particular, care providers).

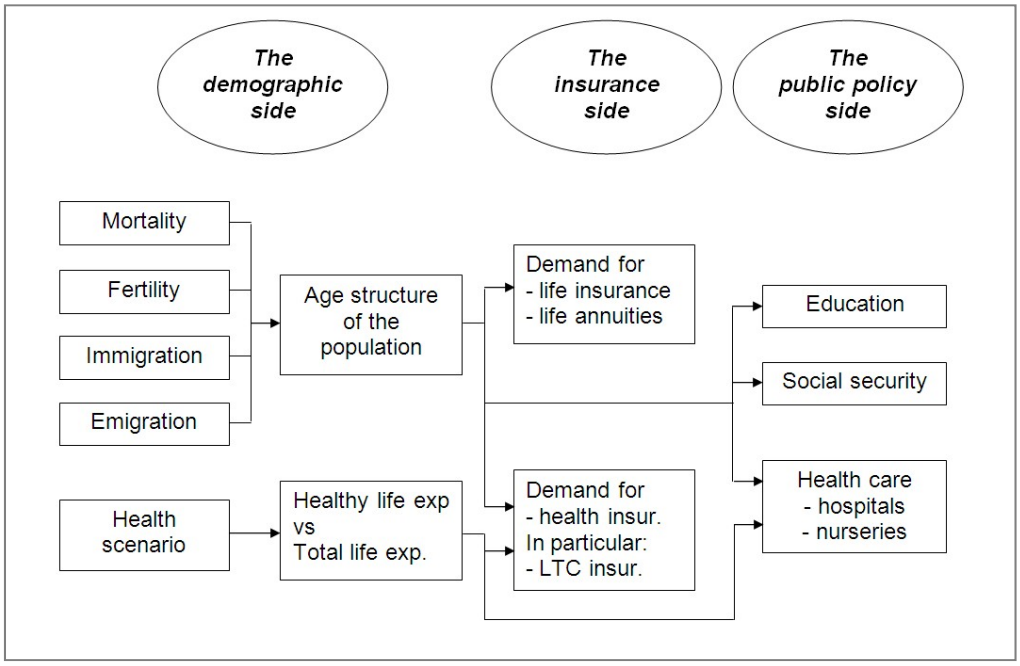
The following Figure shows (some of) the links between the demographic scenario and activities of specific interest to the Demographic Laboratory of the MIB Trieste School of Management. While the present Report only focusses on features of longevity trends, future planned research will in particular address healthy life expectancy and relevant impacts on insurance and care providers, as well as the dynamics of the age structure of the Italian population and the related effects on private and public activities.

Our research work will be based on data provided by several Institutions. The following list, although incomplete, includes the main data providers:

- ISTAT, as regards the Italian population (https://www.istat.it/);
- Human Mortality Database (HMD), which provides the life tables of more than 40 countries (https://www.mortality.org/);
- World Health Organization (WHO), which, besides being a source of information, "works worldwide to promote health, keep the world safe, and serve the vulnerable" (https://www.who.int/);
- Organization for Economic Cooperation and Development (OECD), an international organization which aims at building better policies to improve life conditions (http://www.oecd.org/).

Interesting material (papers, reports, presentations, bibliographic references) is provided by the International Actuarial Association (IAA, https://www.actuaries.org/iaa), and in particular by the two following working groups:

- Mortality Working Group (MWG, https://www.actuaries.org/mortality);
- Population Issues Working Group (PIWG, https://www.actuaries.org/IAA/IAA/Committees/Scientific/Population_Issues_Working_Group.aspx).



Some significant impacts of the demographic features