

Chapter 1

Low Fertility in Europe in a Global Demographic Context

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1.1 Introduction

There are many dimensions of intergenerational justice, and demography matters for many of these. Traditionally, global population growth has been seen as an important danger in terms of worsening living conditions for future generations through exhaustion of natural resources, and other environmental impacts. More recently, the discussions about global climate change have given these concerns a new urgency (O'Neill et al. 2001). While the concern about unsustainable population growth at a global level, and in particular for countries in Africa and West Asia, which still expect very rapid population growth in the future, remains valid and requires all the necessary attention, a new concern has appeared in the context of very low fertility rates in some countries in Europe, and also increasingly in Eastern Asia. As described in this volume, the rapid population ageing that results from low fertility combined with increasing life expectancy raises a host of new challenges for intergenerational justice. Unfortunately, some people tend to focus only on the challenges associated with rapid growth, while others focus on those resulting from rapid ageing, each downplaying the other. But it is important to understand that both rapid growth and rapid ageing can bring about serious challenges, in some cases for different societies, and in other cases even in the same country. The most prominent example of this is China, where further growth due to momentum, and rapid ageing need to be addressed simultaneously. There are many examples in life where opposing extremes bring problems. Only think of temperature, where we want to avoid both too hot and too cold conditions. Why should our attitude to population dynamics be any less sophisticated than this?

In this chapter, we first discuss recent demographic trends on a global level, and briefly discuss the likely outlook for the coming decades, pointing at the abovementioned heterogeneity in trends. Next, we add a measure of “quality”, as economists would say, to the sheer quantity of people, by looking at the

changes of human capital, i.e., the distribution of the population by age, sex, and level of educational attainment. In the second part of the chapter, we present a more in-depth discussion of the future of fertility levels in countries that already have very low fertility levels. We challenge the conventional assumption that in these countries, fertility levels will soon recover, and present plausible mechanisms that may lead to further declines and even lock some countries in a “low fertility trap”. The mechanisms assumed to cause such a trap are closely linked to the issue of intergenerational justice, and in this sense, intergenerational injustice may be one of the reasons why young people will have ever fewer children, and hence reinforce the speed of ageing and shrinking. The concluding section will put this hypothesis again into a broader perspective.

1.2 The End of Population Growth in a Demographically Divided World

Current global demographic trends and the associated challenges are somewhat confusing to many observers. On the one hand, the “population explosion” about which we have heard so much over the past decades seems to continue in some parts of the world – particularly in Africa and the Arab World – while on the other hand, birth rates have fallen so low in many countries that the populations are rapidly ageing and beginning to shrink (Ehrlich 1968; Ehrlich and Ehrlich 1990, UN 2007). Hence, we live in a world in which for some countries rapid population growth due to a lack of family planning is a problem and a major development obstacle, while in other countries, people start to think that their fertility level is already too low, and the associated rapid population ageing will bring problems for old-age security, international competitiveness, and economic growth in the future. This major demographic imbalance may also be the cause of higher migration pressure in the future.

Throughout human history, population numbers have fluctuated mostly due to changing food and disease conditions. The long-term growth of the human population was minimal until the 18th century. Figure 1.1 shows this pattern of growth for the past millennium, and gives projections to the year 2100. Around the year 1800, modern world population growth started to increase rapidly, driven by a decline in death rates that resulted from better nutrition and improving health conditions in Europe. Over the course of the 20th century, the world population grew from 1.6 to 6.1 billion. This very rapid increase, which some authors have labeled the “population explosion”, was a result of falling death rates all over the world caused in particular by the spread of modern medicine after World War II, together with a continuation of high birth rates. But with some delay, birth rates have started to decline, and have already reached very low levels in some countries. Already more than half of the world population has fertility rates below the replacement level of two surviving children per woman (Wilson 2004).

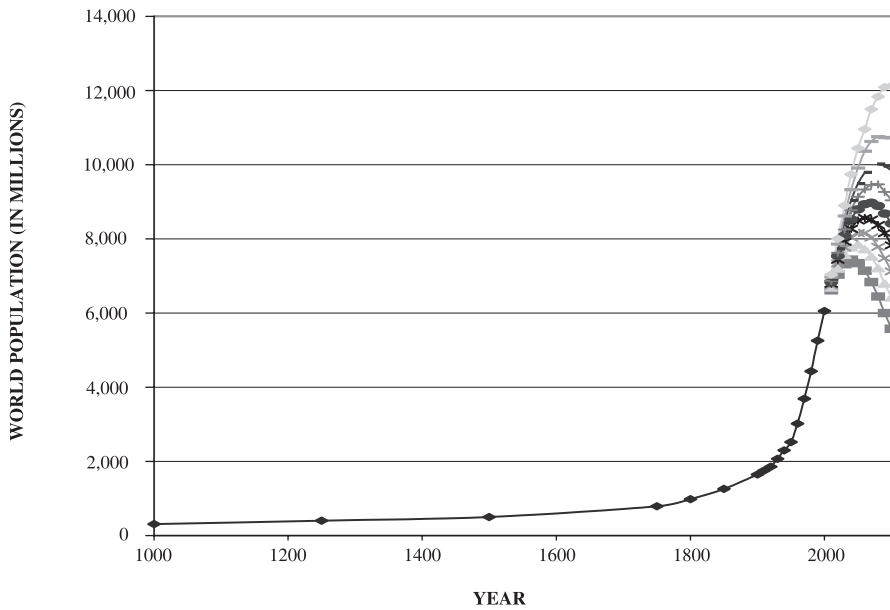


Fig. 1.1 World population growth, 1000–2100 A.D. (after the year 2000, the *lines* represent the deciles of the uncertainty distribution)

On the global level, the population is likely to increase from its current 6.4 billion to somewhat below 9 billion by the middle of the century (Lutz et al. 2001). This significant increase will almost entirely happen in the developing countries, and is due to the rather high fertility in these parts of the world, together with the very young age structure of the population. This so-called momentum of population growth results from the fact that ever more more young women and men will be entering the reproductive ages, and there will be more children born, even if the number of children per woman is at replacement level.

On the right-hand side of Fig. 1.1, the uncertainty range of future population trends is shown. Since the future trends of fertility and mortality are both quite uncertain, population projections also need to reflect the uncertainty around the path that is considered as most likely. The figure gives the likely 80% range of future world population size, which ranges from a world population size of more than 12 billion in 2100 to one of less than 6 billion, i.e., lower than today's size. These data show that there is a high chance that we will experience the end of world population growth in the course of this century. The huge range of uncertainty also tells us that the future path is far from being predetermined, and that it can be greatly influenced by human choice over the coming decades.

These projections also show that the 21st century will bring significant population ageing in all parts of the world. In short, one can conclude that while the

Demographic Change and Intergenerational Justice
The Implementation of Long-Term Thinking in the
Political Decision Making Process

Tremmel, J. (Ed.)

2008, XXVII, 218 p., Hardcover

ISBN: 978-3-540-77083-1