

II. LITERATURE REVIEW

Population ageing is an inevitable outcome of the demographic transition. Primarily, as a result of declines in fertility and, secondarily, mortality declines, the age structure of a population becomes older, with a growing number and proportion of elderly persons. In recent years, the issue of population ageing has received renewed attention in many countries, especially those in the more developed regions, owing to the continuance of fertility below the replacement level and on-going trends towards lower mortality. While there is great variation among them in terms of the level and pace of population ageing, this demographic process is expected to increase further in these countries, and eventually their populations are projected to level off and decline in the foreseeable future. These changes have profound consequences and far-reaching implications, especially for pension schemes, health-care systems, education programmes and housing plans, as well as for the economic vitality and growth of a country. This chapter reviews selected literature that concerns the impacts of migration on the size and age structure of population. Whereas existing studies have paid a great deal of attention to population ageing and its social and economic implications (see, for instance, United Nations, 2000b; Korea Institute for Health and Social Affairs, 2000; Organisation for Economic Cooperation and Development, 1997), the review that follows primarily gathers the literature that investigates the impact of international migration on population dynamics in a low-fertility setting.

The future population size and age-sex structure of any country depend basically on three demographic components: fertility, mortality and net international migration. As no policies to increase the mortality of a population are socially desirable, there are, in theory, two possible ways of retarding or reversing demographic ageing. First, a reversal of declines of fertility would lead the age structure of the population back towards a younger one, thus slowing down the ageing process. However, the recent experience of low-fertility countries suggests that there is no reason to assume that their fertility will return anytime soon to the above-replacement level (United Nations, 2000c; Lutz, 2000). Although Governments in those countries have introduced, instead of explicit pronatalist policies, a variety of social welfare measures favourable for higher fertility (Demeny, 2000), the long-term effectiveness of such measures is often called into question.

Hence, as a second option, the potential role that international migration could play in offsetting population decline and population ageing has been considered. International migration has become a salient global phenomena in recent years, with a growing number of countries being involved as sending or receiving countries, or both. Given the possibility of attracting larger numbers of immigrants into affluent developed economies, virtually all of which are experiencing low fertility, it appears appropriate to consider the impact that international migration may have on the demographic challenges of ageing. In formulating migration policy, it is also likely that the demand for demographic considerations will increase, as the rapid ageing process in those countries can give rise to rigidities in the labour market and social security (Organisation for Economic Cooperation and Development, 1991).

A number of previous studies have examined the demographic impact of a constant influx of migrants on the growth of a population with below-replacement fertility. For example, taking the twelve countries in Europe or members of the then European Community (EC) together, Lesthaeghe and others (1988) carried out population projections. With the present below-replacement fertility and with no further immigration, the total population of these European countries would be reduced by approximately 20 to 25 per cent by the year 2050. The calculations showed that an overall population decline during the first half of the twenty-first century can be avoided if about one million immigrants move into the area every year. Assuming the same annual migration gain of one million, Lutz (2000) recently showed that the total population of Western Europe would grow by 13 per cent (to 505 million in 2050), as opposed to declining by three per cent (to 422 million) in the case of no migration.

Similar studies have been carried out more frequently at a national level. Ulrich (1998), however, argued that immigration can only slow an inevitable decline of the population of Germany. He applied different fertility assumptions for natives and foreigners and different immigration levels by group of immigrants, and estimated the population size of Germany and its structure in 2030. His projections showed that, even with a relatively high level of immigration, the population of the country would start falling in the near future. Wanner (2000), in his study of Switzerland, also showed that in the absence of future migration the total population of the country would start declining much earlier and would be 5.6 million in 2050, about 1.5 million less than what is currently projected.

The importance of immigration for the growth of population in traditional countries of immigration is relatively well recognized (Appleyard, 1991; Foot, 1991; United Nations, 1998). Nevertheless, even in these countries where relatively large numbers of migrants are systematically admitted, the current level of immigration may not be sufficient to prevent their population size from declining in the future. Espenshade (1986) projected the changes in the population of the United States, assuming that both the fertility and mortality rates remained constant at their 1980 level and that the number of immigrants remained at the level in 1983, with the same age and sex structure. According to these assumptions, the population in the United States would grow until 2025, but decline thereafter. In a similar exercise for Canada it was found that in order to avoid population decline, a volume of immigration exceeding the current annual quota would be necessary after 2050, under the assumption that the current fertility level would be maintained (Wattelar and Roumans, 1991).

Some of these studies demonstrate that long-lasting below-replacement fertility and immigration streams offsetting the negative natural growth of the national population would eventually lead to a significant increase in the foreign population and therefore a marked change in the composition of a host country (Espenshade 1986; Feichtinger and Steinman, 1992; Gesano, 1994; Ulrich, 1998). For example, in Germany, should the high rate of immigration continue at the levels of the 1990s, the foreign population in the country is projected to reach 17 million by 2030, comprising 21 per cent of the total population (Ulrich, 1998). This can be compared with the low variant figure of 8.7 million foreigners, or 12.5 per cent of the total population, assuming a moderate assumption of net annual immigration of 80,000 persons. The demographic consequences of constant immigration flows were also examined using the case of Italy (Gesano, 1994). Accordingly, if the country desires to achieve a stationary population of the same size as the population of 57.7 million in 1991, a constant annual inflow of about 389,000 immigrants would be needed. The population would increase to a maximum of 69.2 million in 2036, when the foreign-born population would increase to 22 per cent. The eventual stationary population would include 31 per cent of foreign population.

From the viewpoint of the economic sustainability of a country, what is probably more crucial is the future changes in the size of working-age population, rather than the total population size. In Western Europe, for example, with the baby-boom cohorts now fully absorbed in the labour force, and the smaller cohorts that follow, the declines in the working-age population can be foreseen. However, some researchers (Coleman, 1992; Feld, 2000) caution against the casual resumption of mass immigration to meet the volatile demands of labour market. In fact, the results obtained in the empirical research demonstrated that the working-age population in Western Europe would continue to increase in the medium term, under the current combined effect of natural increase and international migration (Feld, 2000). Furthermore, recognizing the limited power of international migration to influence the growth and age structure of population under imaginable circumstances, Coleman (1992) asserted that priority should be given to seeking reserves of domestic manpower that have not yet been mobilized, rather than resorting to immigration.

As the age structure of immigrants is often younger than that of the host population, there is a popular belief that a large influx of immigrants makes the population of the host country significantly

younger. Accordingly, it is commonly believed that a more generous immigration policy can immediately increase the size of the working-age population and help reduce markedly the dependency costs of the elderly. However, analyses of the migration flows of recent decades in the developed countries have provided scant evidence to support these conclusions. In the United Kingdom after the Second World War, immigration neutralized the previously dominant pattern of emigration. Thus, without new Commonwealth immigration and the contribution of births from immigrants, the population of the country would have been smaller by 3 million than it was in the early 1990s (Coleman, 1995). Coleman (1995) asserts, however, that the cumulative effects of migration alone on the age structure of the country have been limited, because the age structures of immigrant and emigrant flows are similar and the level of migration is relatively small in relation to natural change. Similarly, Le Bras (1991) explored the demographic consequences of the migration flows since the end of the Second World War in seven developed countries: Australia, Belgium, Canada, France, Germany, Italy and Sweden. He also concluded that the “rejuvenating” effect of migration on the host populations in the recent past had been fairly modest. Immigration had lowered the average age of the population in these seven countries by merely 0.4 to 1.4 years.

A number of other studies have analysed the effects of the steady influx of migration on the future age structure of a host population. They equally point out that the overall ageing trend can be attenuated through immigration, but it cannot be prevented. For instance, Lesthaeghe and others (1988) projected the age structure of the total population of the twelve European countries with and without migration up to the year 2060. Assuming that the total fertility of nationals remained constant at 1.6 and that of non-nationals fell to the replacement level by 2010, the proportion aged 65 years or older among females would rise from 16.3 per cent in 1985 to 25.8 per cent in 2060 in the absence of migration. The proportion was projected to be 21.3 per cent in 2060 if an additional 400,000 female immigrants arrived every year, other things being equal. In Western Europe, almost independent of future fertility and mortality, significant population ageing is virtually certain, as much of the future change is already pre-programmed in the current age structure of the population (Lutz, 2000). Even massive immigration cannot be a remedy for population ageing, unless migrants leave the receiving countries before they reach retirement age, because they also get older and eventually comprise part of the aged population.

Research for the United States also indicates that immigration has relatively little effect on overall age composition of the population and therefore will not be a realistic solution to demographic ageing (Coale, 1986; Espenshade, 1994; Day, 1996). Assuming that immigrants adopt the low fertility of a host population, Coale (1986) compared the age structure of the United States population in 2100 with and without a net immigration of 700,000 per year. He showed that the difference in the projected age distributions of the two populations is fairly modest, regardless of the four different below-replacement fertility scenarios. Similar results were presented a decade later by Day (1996). According to her projections, should fertility and mortality follow the middle-series assumption and net migration be held at 820,000 per year or near the current level, the proportion aged 65 years or older in the United States would increase from 12.8 per cent in 1990 to 20.0 per cent in 2050. Even if a fairly larger level of immigration (1.4 million per year) occurred, it would reduce the future percentage of elderly in the population only slightly (to 19.4 per cent).

Concerns about an ageing society often arise not only from the growing number and proportion of elderly, but also from the rapidly changing ratio of the working-age population to the retired population. In particular, the sharp drop of the ratio may directly affect the viability of social security systems. In the study cited earlier, Lesthaeghe and others (1988) computed the ratio of adult women (20-59 years) to elderly women (60 years or older) for the total population of the twelve European countries under five different scenarios. If the countries kept their current below-replacement fertility, the ratio would decline from 2.4 in 1985 to 1.5 in 2060. Immigration of 400,000 women per year from 1985 onwards would be of some help to alleviate the decline, but would still yield a ratio of 1.8 in 2060. In his study cited earlier, Wanner (2000) showed that in Switzerland, the ratio of the population aged 20 to 64 years to the

population aged 65 years or older would be 1.5 in 2050 in the absence of migration, as compared to 2.1, which is currently projected.

While the foregoing studies unanimously point out the limited effects of international migration on population ageing, Ryder (1997) noted that the outcomes of these population projections could be sensitive to the assumed age distribution of net international migrants. As the age at entry of migrants increases, the expectation of life after migration declines, and so does the reproductive value of a migrant. Using the data for Canada, Ryder demonstrated that the increase in mean age of migrants at entry resulted in an increase in the dependency ratio by about 0.6 per cent per year of age, given a projection period of a century.

Instead of assuming migration to occur with a fixed number or at a constant rate and examining the consequences of this immigration on the age structure of a population, some researchers estimated the level of migration necessary to maintain the age structure of population. A study by Blanchet (1988) on France as well as one by Wattelar and Roumans (1991) on Austria, Belgium, Canada and Spain questioned whether immigration can be an instrument to maintain the equilibrium between the working and the dependent populations under the regime of low fertility. Eventually, these studies demonstrated the inadequacy of regulating age structure through migration in the long run. Migration can help to maintain the equilibrium of age structure in the short run, but migration cycles of a large amplitude may be inevitable in the long run (Blanchet, 1988). These authors' simulations illustrated clearly that initial structural irregularities in the population would cause sudden changes in future age pyramids. For this reason, the scenario that aims to keep constant the ratio of adults to elderly may lead to enormous immigration peaks to make up for the shortfalls of population. Furthermore, such massive inflows of migrants would be likely to bring about a phenomenal increase in the population of a country, as the immigrants themselves would become older and call for further immigration of younger population. Wattelar and Roumans (1991) argued that the desired dependency ratio could be better maintained by delaying retirement rather than resorting to migration from abroad.

In sum, although considerable variation exists in terms of the choice of the base year, the period of projection, the migration assumptions and the fertility scenarios adopted for nationals and non-nationals, the available research studies reach several conclusions. First, inflows of migrants will not be able to prevent population declines in the future, unless the migration streams reach comparatively high levels. Second, international migration can act as only a partial means to offset the effects of population ageing arising from below-replacement fertility. This recognition of the inadequacy of migration to counter population ageing, and in most cases population decline, has been further consolidated by questions regarding the feasibility of formulating and adopting suitable migration policies (Wattelar and Roumans, 1991; Espenshade, 1994; McDonald and Kippen, 1999). The flows to meet such demographic objectives are often unrealistically large and would require strict control of both inflows and outflows of migrants. Furthermore, in many countries, additional large volumes of immigrants are likely to be socially and politically unjustifiable, even as a means of ensuring population stabilization. Therefore, for Governments that may wish to do so, regulation of the level and composition of replacement migration streams to reach a desired population size or population age structure poses enormous challenges.