Various studies on the policy implications of demographic change in national and Community policies

LOT 5

Global Population Ageing, Migration and European External Policies

Final report

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Executive Summary

During the last decades, it has become increasingly clear that demographic change constitutes one of the most important challenges of the 21st century. One important factor that has placed demographic change high on the political agenda is an increasing awareness of current demographic trends. Another factor that has contributed to the growing interest in demography is an emerging consensus among social scientists that demographic change is a vital trigger for social, economic and political development. The main question in this report is to what extent European external policies should be reconsidered in the light of current demographic challenges. The report is divided into three parts. In the first, introductory part, we take a look at current demographic trends. In the second part, we analyze demographic transitions and their economic, social and geo-political implications. In the third part of the report, European migration policies are in focus. The following points summarize the main findings.

Some basic facts

1) Global population, which stood at 2.5 billion in 1950, has risen to 6.6 billion today. Middle-ground projections suggest the world will have 9.1 billion inhabitants by 2050.

2) These past and projected additions to world population have been, and will increasingly be, distributed unevenly across the world. Today, 95 per cent of population growth occurs in developing countries. The population of the world's 50 least-developed countries is expected to more than double by the middle of the 21st century, with several poor countries tripling their population over the period. By contrast, the population of the developed world is expected to remain more or less steady at around 1.2 billion, with population increase in the US but stagnation or even declines in most European countries.

3) While global population continues to increase, with medium or high fertility combining with falling infant and child mortality to produce swelling cohorts of young people, that of Europe is changing in a very different way. Fertility constantly remaining below replacement level will lead to a shrinking of the region's population, and increasing life expectancy is tilting the demographic balance from young to old, with large potential impacts on living standards.

4) The crude birth rate in both developed and developing regions has decreased by about half over the last fifty years, which means, of course, a much greater absolute reduction in developing regions. The net result of these reductions is that the crude birth rate in developing regions is now similar to that of the developed regions fifty years ago.

5) The reduction in mortality in developing countries since 1950 has been very rapid – so rapid that the crude death rate in developing countries is now lower than in developed countries.

6) In 1950, the total fertility rate among developing countries was over 6. Now it is below 3 children per woman.

7) Europe's situation is quite different. Halfway through the 20th century, Europe's total fertility rate stood at almost 2.9 children per woman. Today women have an average of less than 1.5 children, well below the replacement rate of 2.1.

8) For the world as a whole, life expectancy increased from 46 years in 1950-1955 to 65 years in 2000-2005. It is projected to rise to 75 years by the middle of this century, with considerable disparities between the wealthy industrialized countries, at 82 years, and the least developed countries, at 67 years. EU25

9) The number of people over the age of 60 in the world, currently at around half the number of those aged 15 to 24, is expected to reach 1 billion (overtaking the 15-24 age group) by 2020 and almost 2 billion by 2050. The proportion of individuals aged 80 or over is projected to rise from one per cent to four per cent of the global population by 2050. Demographic aging is taking place in both developed and developing countries. In the industrialized world, the proportion of people aged 60 or over will increase from 20 to 32 per cent by 2050. In the developing world, it will rise from 8 to 20 per cent.

10) As the experiences of several regions during the past century show, an initial fall in mortality rates creates a boom generation in which high survival rates lead to many more people at young ages than in earlier generations. When fertility falls the age structure of the population then shows a "bulge" or baby-boom age cohort. This creates particular challenges and opportunities for countries, such as a large youth cohort to be educated and, later, an unusually large working-age (approximately ages 15-64) population and the prospect of a "demographic dividend". Lee and Mason (forthcoming 2006) describe two aspects of this dividend: falling fertility, leading to there being more workers per capita and therefore potentially more resources to devote to development and to family welfare, and the extra savings that are generated when people expect a longer retirement period. In addressing some of the problems and opportunities arising from a large youth cohort (ages 12-24), Jimenez and Murthi (forthcoming 2006) stress the importance for long-term economic growth of investing in education and health of the young, and the need to ease entry into the labour market for this group. EU25

11) Migration also alters population patterns. Globally, 191 million people live in countries other than the one in which they were born. On average during the next 45 years, the United Nations estimates that over 2.2 million individuals will migrate annually from developing to developed countries.

12) A significant number of working-age people in developing countries are underemployed relative to the opportunities they perceive in developed countries. At the same time, developed countries face a declining share of working-age people and a large number of elderly who need care. These facts could lead to higher rates of migration than are predicted by the United Nations. Current immigration levels in Europe, North America and Australia also indicate that this UN estimate might be too conservative.

13) The literature on the causes and effects of international migration indicates that there are still many unanswered questions. There is only fragmentary empirical evidence on the effects of emigration on economic development. Available, comparable statistics are meagre and often of poor quality. Research suggests however that (1) whether migration enhances or impedes development differs from place to place and from time to time. Policies thus need to be adapted to national

and regional conditions. (2) Migration is often an integral part of poor people's alternative livelihood strategies. There is sufficient evidence indicating that migration through remittances can reduce poverty. Migration may also lead to increased inequality if remittances strengthen feelings of relative deprivation among the excluded poor. (3) Job creation and decent working conditions seem to be key issues for improving the social and economic environment in developing countries. Better matching between labour market and education policies could contribute with positive economic growth effects as well as counteract brain drain. Development cooperation could play an important role in this regard. Aid is however not sufficient to reduce emigration pressures in the medium-term perspective. There is no consensus in international trade theory whether trade and migration are substitutes or complements. Recent studies show however that various technological trends enhance trade, and should thus indirectly foster migration.

Geopolitical implications of the demographic transition

14) This study explores the possibility that demographic change can be a driving force behind global change. The approach is based both on general considerations concerning the role of demography in social and economic development, and on research results that demonstrate the importance of population change.

15) 15) The general argument rests on three observations: (1) since 1800, the world population has grown from 954 million to 6.6 million people. Life expectancy has increased from less then 30 to around 65 years. The birth rate has declined from 28 per thousand in 1750 to 9.0 per thousand in 2000-05. These demographic shifts are of such a fundamental character that they easily can be seen as one of the most important factors behind the transformation of the modern World. (2) At the time countries emerge from the decline in mortality and fertility associated with the demographic transitions, they tend to become much more similar then they are when they enter into the transition. Therefore, it is easier to explain the outcome as a result of demographic change, than to explain demographic change as a reaction to a specific set of social and economic factors. (3) Research on the decline in mortality and fertility shows that the diffusion of social and cultural innovations, and not only economic growth, play an important role. This lends further support to the notion that demographic change as such can trigger social and economic development.

16) Until the 1990s, economists and social scientists were unable to reach a consensus regarding the effects of population growth on economic development. As a consequence, demographic effects were often ignored as an explanatory factor. Therefore, it was a major breakthrough when it was understood that population age structure must be taken into account in studies of how population change affects the economy. The resulting demographic-dividend theory of economic growth has been widely accepted as a correct explanation of how population change affects the economy.

17) Countries that experience a demographic transition from high to low levels of mortality also experience an age transition. As mortality is reduced and fertility is constant there is a rapid expansion in the number of children but relatively small increases in other age groups. When fertility declines, the number of children is reduced and, instead, the country experiences a youth bulge. Later there is an increase in the middle aged adult population. And, eventually, with a 60+ years lag, the bulge created before the reduction in fertility produces an increase in the old-age population.

18) If countries going through a similar phase of the age transition are compared, they demonstrate a number of similarities that go beyond the effects of the demographic dividend. The child phase, for example, is generally characterized by high levels of poverty, widespread use of child labour, current account deficits, and an extensive mobilization of natural resources for food production. The young adult phase is characterized by rapid urbanization, high levels of migration, an expansion of industrial employment, rapid institutional change, social unrest and declining fertility. The expansion of the middle-aged population is generally associated with high savings rates and rapid per capita income growth. The old age phase, finally, tends to go along with slower economic growth and expansion of social services.

19) The correlation between, on the one hand, demographic change and, on the other, social and economic development makes it possible to use population projections as a basis for constructing forecast for economic growth, international net migration, institutional change, and also for the risks of violent conflicts.

20) The income growth forecast is based on a demographic-dividend model that relates per capita income in different countries to age structure and life expectancy. In combination with the UN population projection this model generates forecasts of per capita income for the next 40 years. The income forecasts show that there will be rapid growth in almost all former developing countries with the exception of sub-Saharan Africa. Growth in the already developed countries will be markedly slower. The result is a rapid growth of the global economy but a declining share of global GDP for the European countries.

21) The estimated dividend-model demonstrates good out-of-sample properties. It can be used to correctly back-project Swedish per-capita income into the 1860s, and it out-performs traditional cross-country growth regression in an out-of-sample test for the 2000-2004 period. The dividend-model forecast, thus, deserves to be taken into considerations in discussions about future global strategies for the European Union.

22) A forecast of international net-migration based on the age-transitions framework shows that the number of countries with very high demands for net-outmigration can be reduced in the coming decades. The reason is declining cohort-growth rates as a result of declining fertility. The most important source region for international net migrations in the 2020s and 2030s is likely to be Sub-Saharan Africa.

23) Large increases in the share of young adults—youth bulges—amplifies the risk of internal violent conflict. This hypothesis has recently been confirmed in a thorough empirical study by Urdal. Urdal's model, which is based on demographic variables, can be used to predict future risk of internal violent conflict. The result is that demographic change in the next decades to come, will drastically augment the number of countries exposed to high risks.

24) There are strong correlations between the demographic factors that favour per capita income growth and the different indicators used to construct the Economic Freedom Index. These correlations indicate that demographically induced per capita income growth will be accompanied by a development towards more market oriented policies and improved legal conditions. Moreover, population ageing in the developing world is likely to be accompanied by rising shares of government consumption, including education and health care, as well as more developed systems for taxed-based income transfers.

Medium-term policy proposals for external cooperation on migration

25) The European Union would have a clear advantage of elaborating robust, medium-term external policies (next 25 years) that take into account global population ageing and migration. While population ageing is expected in developed countries as well as in many current middle-income countries, the share of people of working

age will grow in sub-Saharan Africa. These changes may both increase global competition for labour migrants and cause growing migration pressures in the coming decades. So far, national and external policies of the EU have slowly started to include migration in development cooperation considerations. Much less has however been done in concrete terms to link external policies to global population ageing issues, or to trade and environment issues.

26) So far, there has been mainly a negative linkage between migration and development. This negative linkage has been limited to exploring the option for conditionality of development aid and other cooperation. Proposals have been centred on finding novel approaches to curb irregular migration and to compel developing countries to implement readmission of their nationals who fail to acquire proper residence or work permits in EU Member States. The shortcomings of the increasingly restrictive and one-sided control policies have opened up such avenues to explore anew the linkages between migration and development.

27) However, there are very meagre prospects of achieving a drastically reduced volume of unwanted migration, asylum seekers and prospective labour migrants, by merely inserting migration control instruments in development cooperation. Moreover, this approach has contributed to the current failure in arriving at a coherent coordination between migration and development policies.

28) Since migration control policies and development cooperation have had fundamentally different objectives (combating irregular migration vs. poverty reduction), the starting point must be to identify shared interests and then to develop shared methodologies and policy instruments. As EU Member States increasingly acknowledge the need for orderly labour migration due to population ageing, there is a window of opportunity to re-link migration and development policies in a more positive way. Indeed, the recent upsurge in the international community in policy-relevant research on the benefits of migration for development point to this direction.

29) Much of this new research draws attention to the benefits of remittances for developing countries. Previous eras of more pessimistic research, have been replaced by the notion that although remittances are being spent mainly on consumer goods, they can contribute to development through multiplier effects. Remittances can generate income that exceeds the loss incurred by brain drain. This research also highlights brain gain and the potential role of diasporas as agents of development in countries of origin.

30) Circular labour migration is a positive new notion that could be of potential benefit to both source and destination countries. Migration in this regard is not mainly seen as detrimental, disturbing and disorderly, but something which is needed from the perspective of both industrialised and developing countries. With such an approach, there would be several options to achieve population complementarities between the EU and developing regions. Migration control policies are however not able to fundamentally block out unwanted migration just by opening more legal doors. Efficiency of control is often a combination of political will and priorities, the significance of human rights and the influence of market forces.

31) If the EU would identify strategic partners for long-term cooperation on circular labour migration and population complementarities, policies would need to address a number of basic concerns and shared interests. These include the need to improve the economic conditions in emigration countries by making remittances more efficient; ensuring the rights of the migrants; avoiding brain drain; addressing the links between unbalanced trade conditions and migration; and fostering legal well-managed alternatives to irregular migration.

32) These policies would need to address the specific conditions in each particular partner country. Therefore, the inclusion of migration in Regional and Country Strategy Papers on development is a positive step forward from the perspective of the EU. Also, developing countries need to incorporate migration into their national development strategies and poverty reduction strategies.

33) Much stronger linkages are needed between education and labour market policies. Current deficiencies in the matching between educational output and labour market needs among employers in developing countries, explain some of the brain drain flows and irregular migration targeting the EU. The incorporation of labour market policies in mainstream development cooperation is a positive sign. This could be utilised to a much larger extent than currently as an inroad to policies linking migration with developing country labour markets.

34) Cooperation on active educational policies and active labour market policies; brain circulation policies and joint funding to cater for skilled migration needs in both migrant source and destination countries, are some of the available policy options. EU aid could especially target job creation and decent working conditions to improve the social and economic environment in developing countries and thereby making it more attractive to remain or return.

35) Brain drain particularly affects key sectors such as health personnel in smaller countries in sub-Saharan Africa and elsewhere. The EU and its Member States need to work closer together with international organisations, such as the World Bank and WHO, and like-minded states that are engaged in issues of brain drain. To reverse the brain drain, there is a need for better mapping of the causes, mobility patterns and effects in specific countries. Codes of practice should be encouraged so that countries and recruiting agencies recruit in a responsible way.

36) Assistance could be offered to co-finance education in sectors where there is a skilled labour shortage, e.g. health care, technical engineering. Mutually funded, conditional student grants could ensure that the needed human capital is being trained in developing countries and that students, before or after emigrating, agree to work for a number of years at home to compensate for the costs invested in their education..

37) Moreover, policies linking migration and development need to be gender-sensitive and support frameworks of international rights that offer protection to women, children and vulnerable groups. Migration patterns and remittance habits differ between women and men. Women and children are especially vulnerable to people traffickers, smugglers and to employer abuse. Remittances can also create dependence among migrant households.

38) The notion of migration as an integral part of poor people's alternative livelihood strategies should be incorporated into mainstream development thinking. Most poor people have no access to South-North migration. Instead they are engaged in seasonal, internal or regional migration within poor regions. From a development perspective such migration is of vital importance. Therefore, the EU should reconsider its current South-North bias and the linking of development cooperation within the Neighbourhood policy to readmission agreements. Governments in the South need assistance and transfer of knowledge to establish rights-based migration policies and legislation, especially considering that they might become alternative magnets of migration.

39) Moreover, work towards attaining the Millennium Development Goals (MDGs) need to take into consideration the links to migration more explicitly. Efforts to reach the MDGs and the broader development process might generate more urbanization and more international migration.

40) Remittances could be put to more efficient use to benefit development. The EU needs to ensure that this asset is not used to justify lower levels of development assistance. More competition should be encouraged in the European and global money transfer business. This could bring down transaction costs; attract more remittances from informal into formal channels; and increase efficiency and speed of the transactions. Financial literacy training should be made available to both remittance senders and receivers.

41) The EU needs to work towards an improvement in the general investment climate in developing countries. The common lack of access to credit for entrepreneurs in developing countries could be remedied through encouraging financial intermediaries (e.g. micro finance institutions, retail banks) to attract migrant remittances and direct them towards existing micro-businesses and productive investments. Mandatory schemes to attract remittances need to be avoided as remittances are private assets. Migrants' savings could instead be attracted through repatriable foreign currency accounts or foreign currency denominated bonds. Partnerships with money transfer organisations and retail banks could reduce costs and risks.

42) The EU Commission's proposal to map and analyse the role and activities of existing diaspora groups in Europe should be implemented. Diasporas have a potential to play a more direct role in development cooperation. As migrant organisations often contribute to the welfare of their countries of origin through their own aid projects, they can be regarded as agents of development. Diasporas could e.g. be consulted during the formulation of Country Strategy Papers and be encouraged to exchange information and best practice regarding project management.

43) Professional, ethnic networks can be efficient in bringing innovation, investments and business contacts to developing countries. The downside of strong ethnic networks is however that they sometimes reflect a lack of integration. A development policy focus on diasporas should thus be coordinated with integration policy. Improved validation of qualifications and more efforts to match migrants' education and skills levels to employment in EU Member States, would prepare migrants better for their return and reintegration in local labour markets. Diasporas could have a role in distributing information about legal migration opportunities as well as the risks and costs of irregular migration.

44) Members of diasporas who have settled permanently in EU Member States, could be offered scholarships to work in their countries of origin for brief periods of time in key sectors of the labour market. Such exchange may benefit both source countries and the EU in terms of facilitating future investments, trade relations and cultural exchange.

Long-term policy challenges in a growing global economy

45) Between 1500 and 1900, Europe rose to a demographically, economically and politically dominating position in the global system. During the latter part of the 20th century this position has been severely eroded, and it will erode further in the 21st century if the economic forecasts presented in this report materialize.

46) If Europe upholds its ambition to influence the political development in the world this will, probably, only be possible on the basis of broader international alliances incorporating, for example, the US, India, China, Latin America and other major future players..

47) Demographic ageing populations will put additional strain on the financial resources of European governments. Apart from securing continuing peace in the

European region, external policies should, therefore, put high priorities on measures that have a direct positive effect on the income of and welfare Europeans. This includes policies that (1) promote trade with expanding regions, (2) build goodwill for European firms, (3) increase global environmental security, and (4) establish well-managed systems of international migration.

48) In the emerging global economy, Europe has a central and strategic geographical location. A global headquarter wanting to minimize the total travel times to Tokyo, Beijing, Mumbai, Djakarta, Johannesburg and Sao Paolo would rather choose to locate to Frankfurt than to New York or Los Angeles. The total distance to the six destinations mentioned above is 71,000 km from New York, 74,000 kilometres from LA, but only 53,000 km from Frankfurt.

49) According to the dividend model, population aging in the developing world will lead to large increases in per capita income. This in turn will imply rising energy consumption, rising CO_2-emissions, rising demand for natural resources as well as rapid increases in car traffic. As a consequence, pressures on the environment will increase and, if not counteracted by efficient policies, large environmental damages will ensue.

50) In a global economy characterized by fast growth, international trade will be perhaps the most important factor for increasing prosperity in Europe.

51) During the upcoming decades Europe is likely to loose relative economic strength. On the other hand, strong economic growth in other regions also implies increasing opportunities for large investments in new technologies with a potential to solve problems with, for example, energy production. A challenge for European external policy is, thus, to fasten the rate of global technological growth by promoting technical cooperation not only within the European Union but also with high-growth countries in other regions.

52) Reduced demographically-induced risk for conflicts opens up for a more offensive stand when it comes to implementing policies to curb social, ethnic and political tensions that can trigger violence. It could, therefore, be considered if the European Union and the Member States should adopt more ambitious policies of conflict resolution. A factor to be considered here is the positive record that the Union has with respect to promoting peace and economic development within Europe, a region with a long record of internal violent conflicts. One option, based on Urdal's analysis, is to enact ambitious employment programs that will make it more costly for war lords and rebel leaders to recruit young adults into armed groups.

53) Global income growth can be seen as an opportunity for European weapon producers to increase their sales of arms, warships, and war planes. It is not likely, however, that the fuelling of a global arms race is in the long-term interest of European citizens.

54) The demographically based forecasts presented in this report all indicate that sub-Saharan Africa will be the most troublesome region during the first half of the 21st century. Country-level poverty and risks of internal armed conflict will increasingly become concentrated to sub-Saharan Africa. In addition sub-Saharan Africa will become the most important source region for international net-emigration. These predictions point to a need for detailed consideration of to what extent development aid programmes could help to create jobs, reduce poverty, decrease conflict risks, and improve the health and educational level of possible future migrants from sub-Saharan Africa.

55) In the growth forecast, Latin America is singled out as one of the most expansive regions in the world economy during the next decades. For much of the 20th century Latin America's closets foreign relations have been with the US. Although this US orientation is likely to continue there will also be room for developing stronger links

with Europe. One important factor here is the increasing economic strength of Spain. In the 1950s and 1960s, Spain was not a leading economy and this opened up for increasing US influence in the region. As Spain has modernized its infrastructure, industry and educational system the potential for Spain to become a strong node in Euro-Latin relations has increased. As the Latin American countries grow economically stronger, they may also develop an interest in moving away from an overly dependent position vis-à-vis the US.

56) Also in the Middle East region, there is a large demographic potential for increases in the total GDP. Considering the political situation in the region it can, however, be questioned if the region will be able to realize this potential. On the other hand, Europe has a strong self interest in promoting peace and economic development in this region. Considering the level of development and the demographic situation in the Middle-East, it is likely that a development policy in this region similar to the one adopted by the European community towards countries like Spain and Ireland would have large chances of success. A key to a solution is of course the Israel-Palestine conflict. Here, Europe can play a more active role, also exercising more influence on Israel and the Palestinians as well as on neighbouring countries if needed during negotiations for a permanent settlement of the conflict.

57) With respect to Asia, the forecast we present underlines that the current positive long-term economic growth trend is likely to extend several decades into the future. As a consequence, Asia will become the world's largest market and the world's largest market producer of goods and services. Europe can to take advantage of this expansion by: (1) providing Asia's growing upper middle class with higher education; (2) becoming partners in large-scale investment and R&D projects; (3) considering possibilities for Euro-Asian alliances with the potential of balancing the dominance of the United States.

58) The United States is and will remain a world leader in most fields of technology and science. It is, therefore, essential for European competitiveness to have a very close cooperation with American centres of excellence. For many decades, intellectual migration between Europe and the US was dominated by flows from Europe to the US. In the future it could be possible to reverse this stream. A possible goal for a European research policy could be to promote the development of environments that can become global leaders in their fields.

59) In the long-term (as well as the medium-term), the EU will need to place more emphasis on achieving true coherence between external policies on migration, population, development, trade, security and environment. The EU and its Member States also need to take into account the perspective of its partner countries to a larger extent than currently within the remit of their external relations. The "ownership" of making migration work for development and for maximizing the benefits of demographic dividends needs to be firmly based *both* within EU Member States and within the partner countries.

60) Finally, the EU should also work towards strengthened national and international capacity for analysis, monitoring and evaluation. Such improvements could facilitate the comparative and systematic analysis of the links between demography, migration and development and contribute to the ability to predict and manage migration flows that emerge in relation to population changes, conflicts and the development process.

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The report contains three parts: An introduction with David Bloom and David Canning as main authors. A second part titled ”The Demographic transition: Geopolitical implications” with Bo Malmberg as the main author and with David Bloom and David Canning as co-authors with responsibility for section 3.3 and 7.3. The third part is titled “Migration Policy Challenges” and has Kristof Tamas as its main author. The third part is co-authored by Rainer Münz who has had a special responsibility for chapter 8 and chapter 14. Rainer Münz has also helped with comments on the other parts of the report.

Contents

1 Introduction

During the last decades, it has become increasingly clear that demographic change constitutes one of the most important challenges of the 21st century.
One important factor that has placed demographic change high on the political agenda is an increasing awareness of current demographic trends. It is well known today that we can expect a dramatic increase in the number of elderly people in Europe, due to declining mortality combined with continuing low fertility. The working age population in Europe will decrease. This process of ageing in Europe is the closing phase of the *demographic transition,* a shift from high to low birth and death rates that started already in the 19th century. Matching this process of ageing in Europe, significant demographic changes are expected in the developing world. Here, the demographic transition with declining mortality and fertility will result, first, in a decrease in the number of children together with an expansion in the number of adults of working-age.
Another factor that has contributed to the growing interest in demography is an emerging consensus among social scientists that demographic change is a vital trigger for social, economic and political development. Most importantly, it has been shown that there is a strong positive correlation between changes in age structure and economic growth. An increase in the working-age population has a positive effect on per capita income growth, whereas an increase in the young, dependent population has a negative effect. Furthermore, a growing body of research makes clear that demographic change is a driving force behind shifts in socio-economic and cultural trends. For example, demography influences social phenomena such as migration, urbanization, pressure on the environment, size of government and the risk of armed internal conflict.
Finally, demographic challenges have attracted increasing attention due to the One-World-perspective on global change. Since the end of the Cold War, growing trade, new means of communication, large flows of international migrants, the spectre of cross-border terror, and emerging diseases have demonstrated that demographic, social and political changes in one country have repercussions that extend far beyond national borders. Demographic trends stand out as a crucial aspect of our global interdependence.
The main question in this report is to what extent European external policies should be reconsidered in the light of current demographic challenges. The report is divided into three parts.
In the first, introductory part, we take a look at current demographic trends.
In the second part, we analyze demographic transitions and their economic, social and geo-political implications. First, an extensive research background is presented that discusses to what extent the demographic transition can be taken as a starting point for an analysis of future socio-economic developments. Next, scenarios for global income, global net-

migration, and internal armed conflicts based on demographic projections are presented. A concluding chapter discusses possible political implications of these scenarios.

In the third part of the report, European migration policies are in focus. This part deals with European demography and labour supply, population complementarities and the external dimensions of Europeans asylum and migration policy. First, there is a discussion of how migration can help to shape Europe's future labour force. Then follows a discussion of international migration and external dimensions of European asylum and migration policy.

2 Underlying demographic trends and patterns

All countries that modernize tend to go through a radical process of demographic change, *the demographic transition.* During the demographic transition both mortality and fertility rates go down from high levels, typical of populations in traditional societies, to low levels, which characterize modern populations. Fertility rates lag behind, however, creating one or several enlarged cohorts of children. These enlarged cohorts of children, the ”baby-boomers”, spur population growth and contribute, as they enter working-age, to an abundant labour supply. Eventually population growth levels off, as fertility rates stabilize on low levels. The baby-boomers enter old age.

During the last 200 years, the dynamics of the demographic transition have gradually transformed the world population. The process started in Western Europe as early as the late 18th century. England was among the first countries to enter the demographic transition, with an abundance of children and rapid population growth. Today, the demographic transition still shapes population developments in Asia, Africa and Latin America. In these expanding and youthful regions, current population dynamics contrast vividly with the situation in Europe, where birth rates today are persistently low and the ratio of working-age to non working-age people is about to plummet.

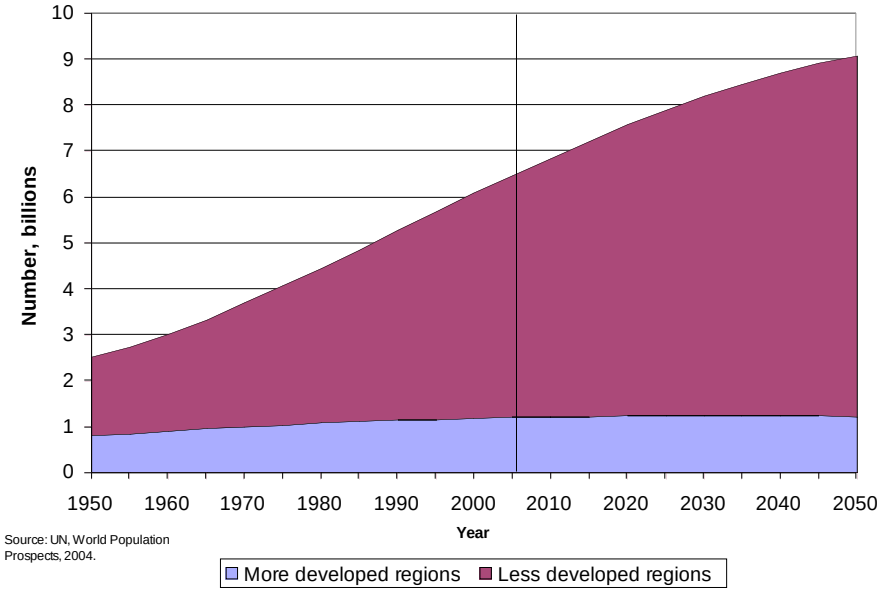
In this section, we present current global demographic patterns and trends. Special attention is given to the contrast between more developed countries, that have passed the demographic transition, and less developed countries, that still experience its impacts. The presentation includes patterns and trends for world population size, fertility rates, mortality rates, life expectancy, longevity, age composition, migration and urban population. The data is from (United Nations 2005) unless stated otherwise. The section closes with an analysis of HIV/AIDS, an epidemic with a potential to significantly influence global populations trends.

Population size. Global population, which stood at 2.5 billion in 1950, has risen to 6.6 billion today. The world is currently gaining new inhabitants at a rate of about 76 million people a year (representing the difference, in 2005 for example, between 134 million births and 58 million deaths). Although this growth is slowing, middle-ground projections suggest the world will have 9.1 billion inhabitants by 2050, when growth will be approximately 34 million a year.

These past and projected additions to world population have been, and will increasingly be, distributed unevenly across the world. Today, 95 per cent of population growth occurs in developing countries (see Figure 2.1). The population of the world’s 50 least-developed countries is expected to more than double by the middle of the 21st century, with several poor countries tripling their population over the period. By contrast, the population of the

developed world is expected to remain steady at around 1.2 billion, with population declines in some wealthy countries.

Figure 2.1: World Population



While global population continues to increase, with medium or high fertility combining with falling infant and child mortality to produce swelling cohorts of young people, that of Europe is changing in a very different way. Fertility constantly remaining below replacement level will lead to shrinking of the region's population, [1] and increasing life expectancy is tilting the demographic balance from young to old, with large potential impacts on living standards. Discussion of specific demographic indicators for Europe appears below, in parallel with the discussion of global demographic indicators.

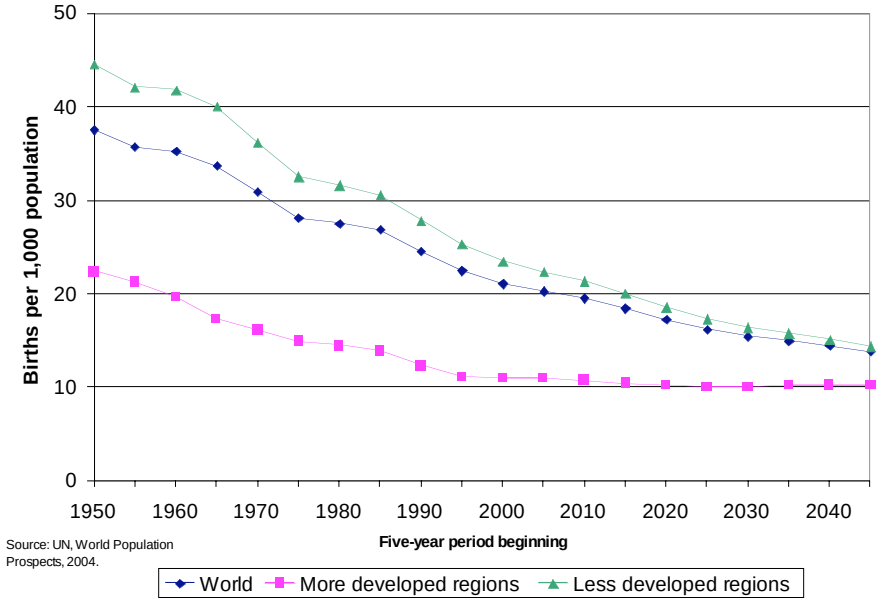
The disparity in population growth between developed and developing countries reflects the existence of considerable heterogeneity in birth, death, and migration processes, both over time and across national populations, races, and ethnic groups. The disparity has also coincided with changes in the composition of populations in terms of age group. An overview of these factors illuminates the mechanisms of population growth and change around the world.

Crude birth and death rates. One of the simplest ways to think about population growth is to compare crude birth and death rates. Crude rates are the number of births and deaths per 1,000 population. On a worldwide basis, the difference between them is the rate of population growth. Within regions or countries, population growth is also affected by immigration and emigration. Figure 2.2 shows that in both developed and developing regions, the crude birth rate has decreased by about half over the last fifty years, which means, of course, a much greater absolute reduction in developing regions. The net result of

[1] Such shrinkage, of course, might not take place if net immigration is sufficiently high. Countries may also pay attention to two different numbers: the overall loss (if there is one) of population, and the loss in population of those born in the country. See further discussion of migration and population shrinkage in Section 5.

these reductions is that the crude birth rate in developing regions is now similar to that of the developed regions fifty years ago.

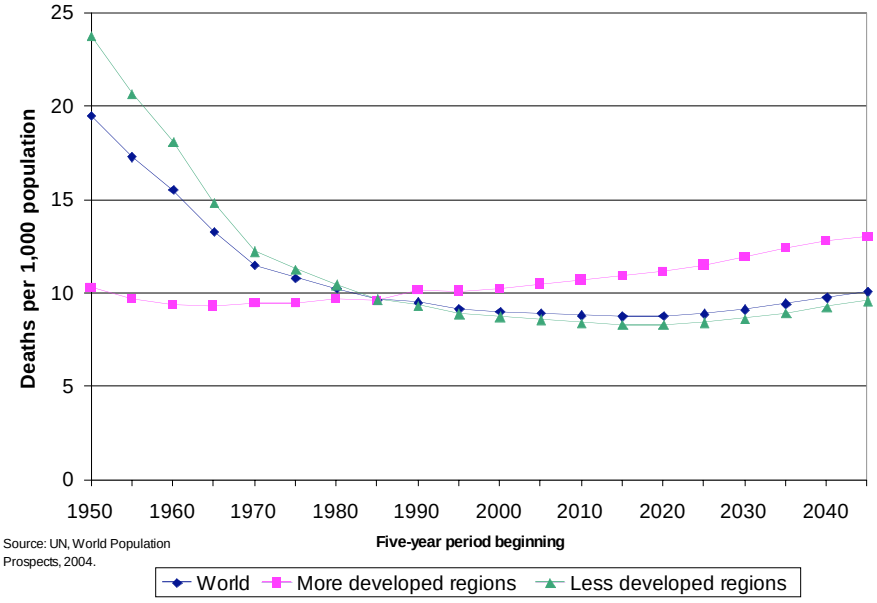
Figure 2.2: Crude Birth Rate



Source: UN, World Population Prospects, 2004.

Figure 2.3 shows that crude death rates follow a different pattern. The reduction in mortality in developing countries since 1950 has been very rapid – so rapid that the crude death rate in developing countries is now lower than in developed countries. The reason for the gradual rise in the crude death rate in developed countries is that infant and child mortality rates have more or less levelled off, but with an aging population, death rates are rising. The graph shows that this will take place in developing countries starting in a couple of decades.

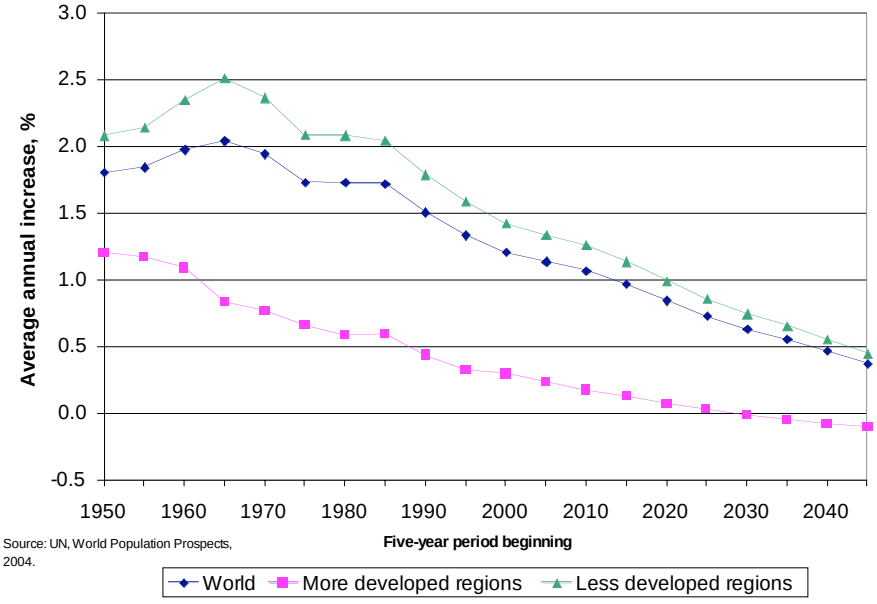
Figure 2.3: Crude Death Rate



Source: UN, World Population Prospects, 2004.

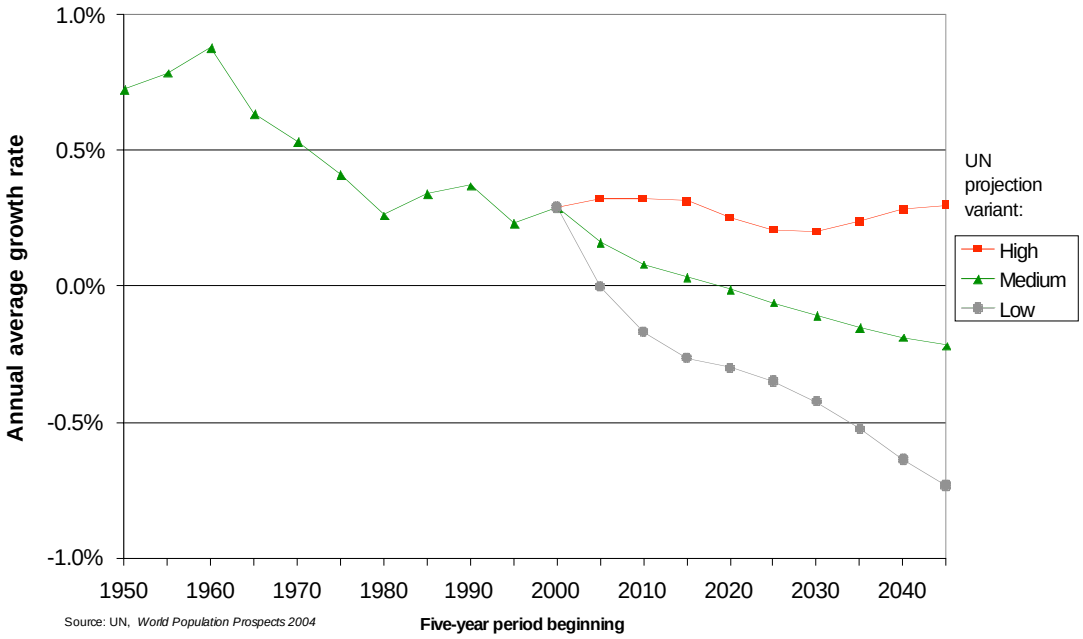
Putting together crude birth and death rates, as modified by migration (primarily from developing to developed regions), leads to figure 2.4.

Figure 2.4: Population Growth Rate



Source: UN, World Population Prospects, 2004.

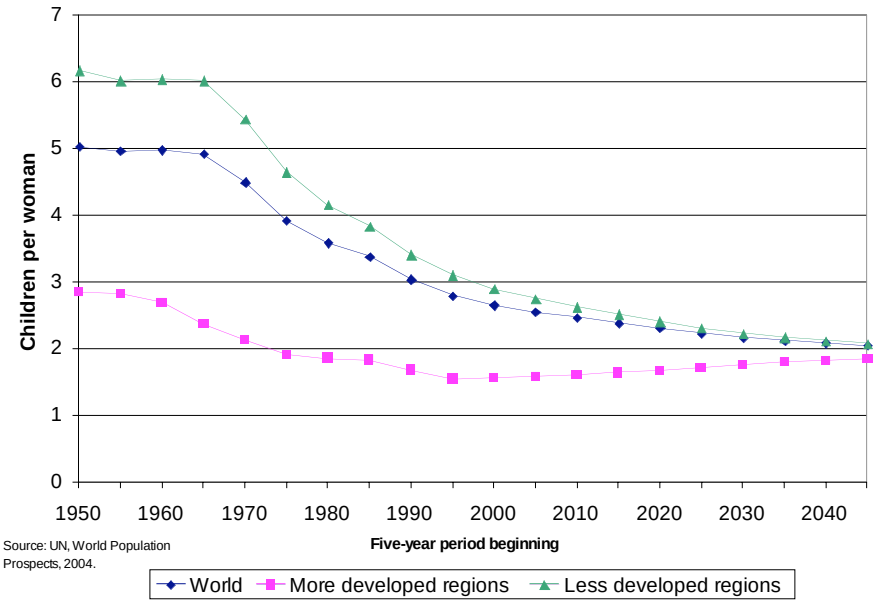
Figure 2.5: Europe's Population Growth Rate



Europe (EU25) clearly represents a different case. Its population size has grown slowly over the past half-century, but around 2020 it is expected to begin falling. Population shrinkage may reach 0.2 percent per year by 2045. (see Figure 2.5). Consistent with these forecasts, some individual countries may experience declines. Italy's population is expected to fall from 58 million in 2005 to 51 million in 2050. Germany's may drop from 83 million today to 79 million.

Total fertility rate. The total fertility rate, i.e., the average number of children born per woman, fell from about 5 in 1950 to a little over 2.5 in 2006 (see Figure 2.6). This number is projected to fall to about 2.0 by 2050. This decrease is largely attributable to changes in fertility in the developing world. In 1950, the total fertility rate among developed countries was already below 3 children per woman; the rate among developing countries was over 6. Fertility in the latter is now below 3 children per woman. The fertility decline in low-income countries can be ascribed to a number of factors, including declines in infant mortality rates, greater levels of female education and increased labour market opportunities, and the provision of family planning services (see Figure 2.6).

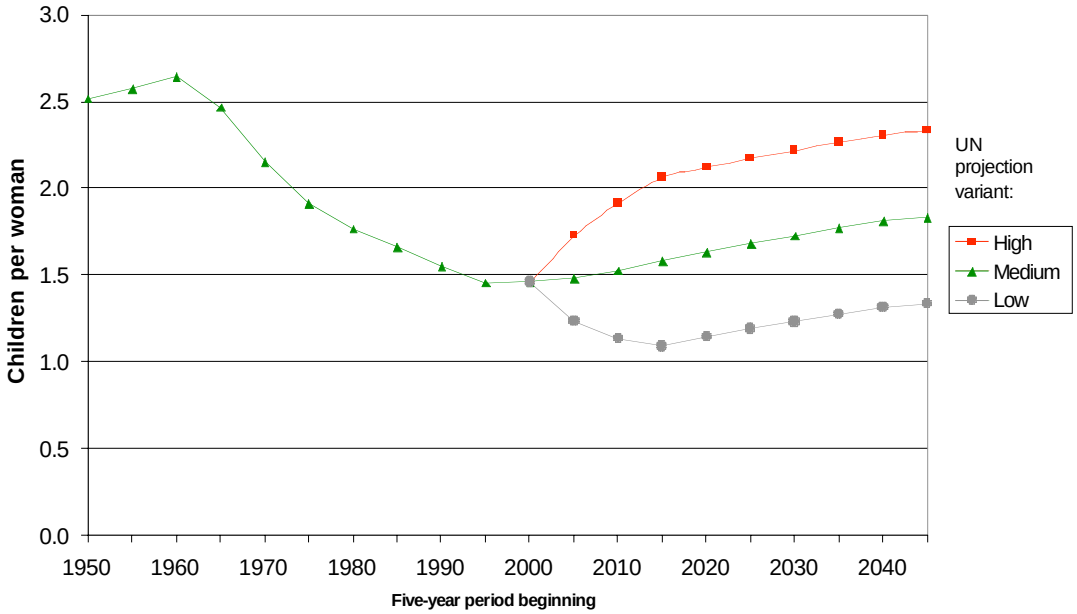
Figure 2.6: Total Fertility Rate



Source: UN, World Population Prospects, 2004.

Once again, Europe's situation is quite different from that of most of the world. Halfway through the 20th century, Europe's total fertility rate stood at roughly 2.5 children per woman. Today women have an average of about 1.5 children (see Figure 2.7), well below the replacement rate of 2.1. In the next 40 years, the United Nations projects a small increase in fertility under its medium variant scenario although with a possible range between 1.34 and 2.34 children per woman by 2045, much uncertainty clouds this forecast, see e.g. (Lutz, Sanderson et al. 2001).

Figure 2.7: European Total Fertility Rate

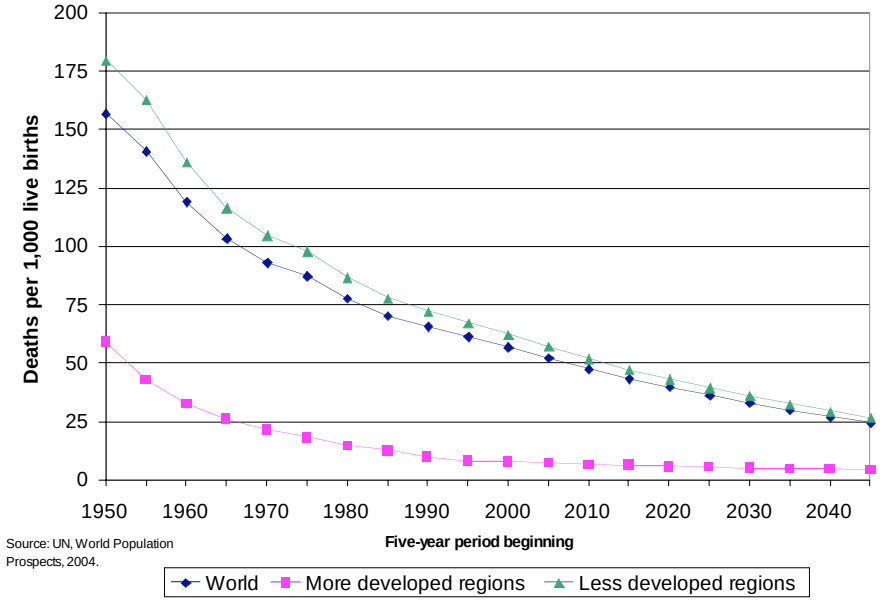


Source: UN, *World Population Prospects 2004*

Some European countries have remarkably low fertility rates. Hungarian women have an average of 1.30 children; in the Czech Republic, the figure is 1.17. Such low rates are not limited to Central and Eastern Europe: Spain and Italy have fertility rates of 1.27 and 1.28 children per woman respectively.

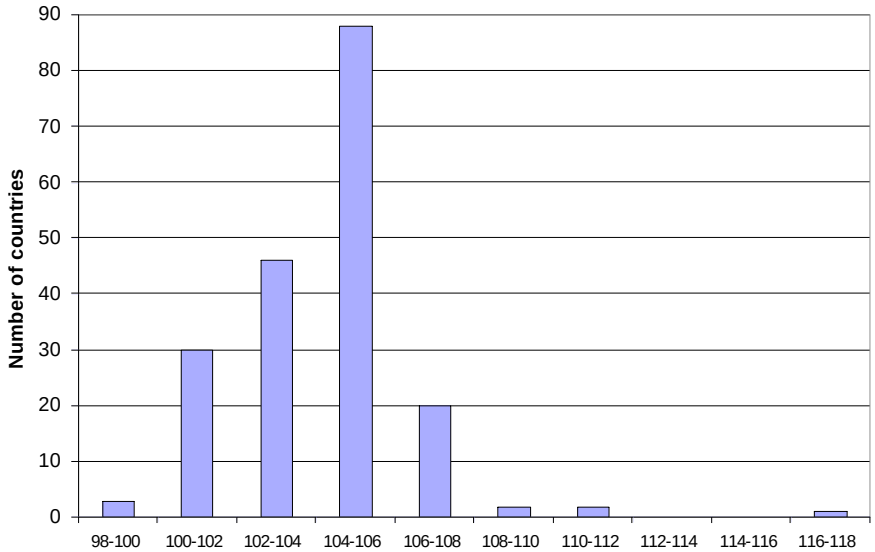
Infant and child mortality decline. The developing world has seen significant reductions in infant and child mortality over the past fifty years (see Figure 2.8). These gains are primarily the result of improved nutrition, public health interventions related to water and sanitation, and medical advances such as the use of vaccines and antibiotics. Infant mortality (death prior to age one) in developing countries has dropped from 180 to about 57 deaths per 1,000 live births. It is projected to decline further to fewer than 30 deaths per 1,000 live births by 2050. Infant mortality rates in the developed world have been, and will continue to be, significantly lower those than in the developing world. Developed countries have seen infant mortality decline from 59 to 7 deaths per 1,000 live births since 1950, and this is projected to decline further still, to 4 by 2050. Child mortality (death prior to age five) has also fallen, in both developed and developing countries. Figure 2.9 addresses a widely discussed issue relevant to infant and child mortality: that of "missing women" in some countries. Primarily because of the selective abortion of female fetuses, selective infanticide, and/or neglect of baby girls, the usual pattern of young boys aged 0-4 outnumbering young girls of the same ages is severely distorted in a few countries.

Figure 2.8: Infant Mortality Rate



Source: UN, World Population Prospects, 2004.

Figure 2.9: Number of Countries in Which Number of Males per 100 Females Is in a Given Range, Age 0-4

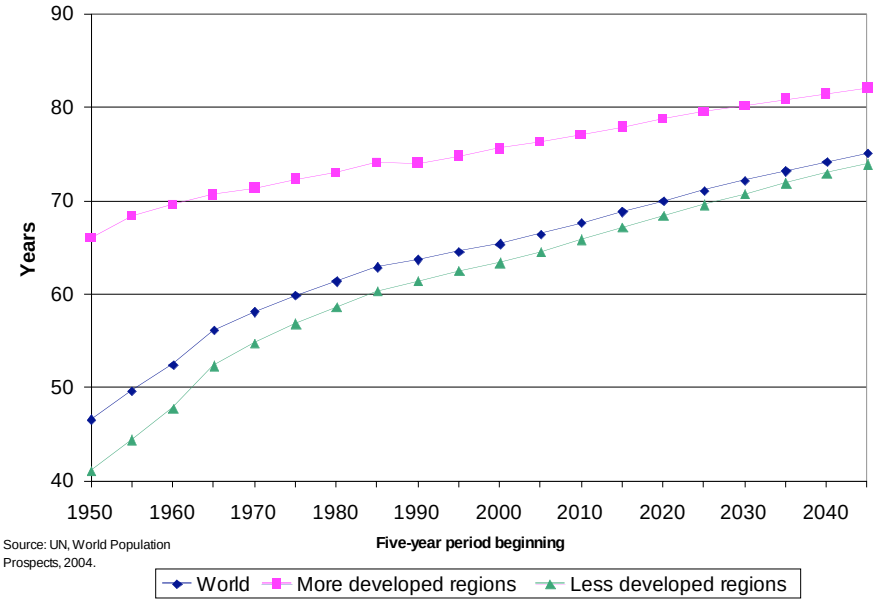


Source: UN, World Population Prospects, 2004.

Life expectancy and longevity. For the world as a whole, life expectancy increased from 46 years in 1950-1955 to 65 years in 2000-2005. It is projected to rise to 75 years by the middle of this century, with considerable disparities between the wealthy industrialized countries, at 82 years, and the least-developed countries, at 67 years (see Figure 2.10). As a result of the global decline in fertility, and because people are living longer, median age is rising (see figure 2.11). In addition, the proportion of the elderly in the total population is rising sharply. The number of people over the age of 60, currently at around half the number of those aged 15 to 24, is expected to reach 1 billion (overtaking the 15-24 age group) by 2020 and almost 2 billion by 2050. The proportion of individuals aged 80 or over

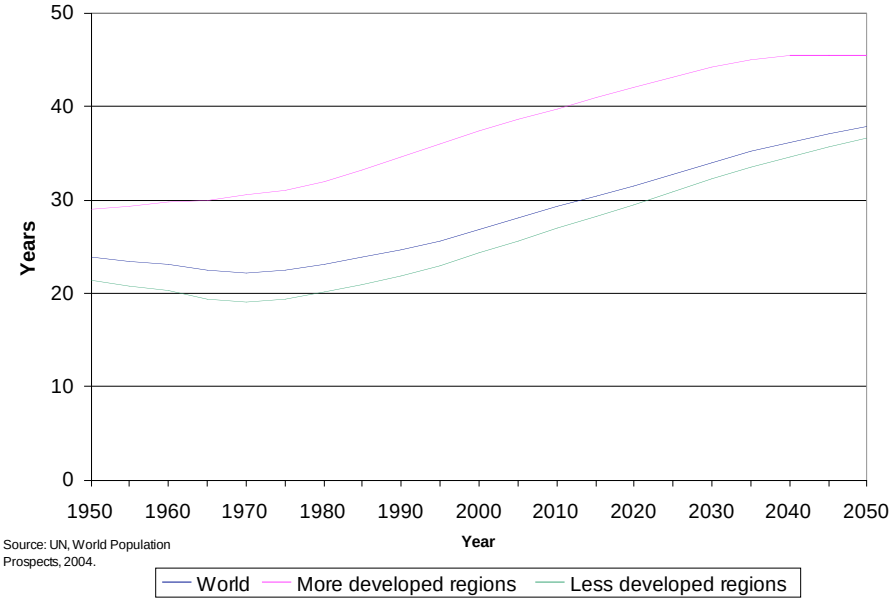
is projected to rise from one per cent to four per cent of the global population by 2050. (Figure 2.12 shows the history and projections for the number of individuals aged 80 or above.) Demographic aging is taking place in both developed and developing countries. In the industrialized world, the proportion of people aged 60 or over will increase from 20 to 32 per cent by 2050. In the developing world, it will rise from 8 to 20 per cent. Gender differences in life expectancy are also notable. Figure 2.13 shows that life expectancy of women is on average 4 to 6 years longer than life expectancy of men, but there is considerable variation across countries.

Figure 2.10: Life Expectancy



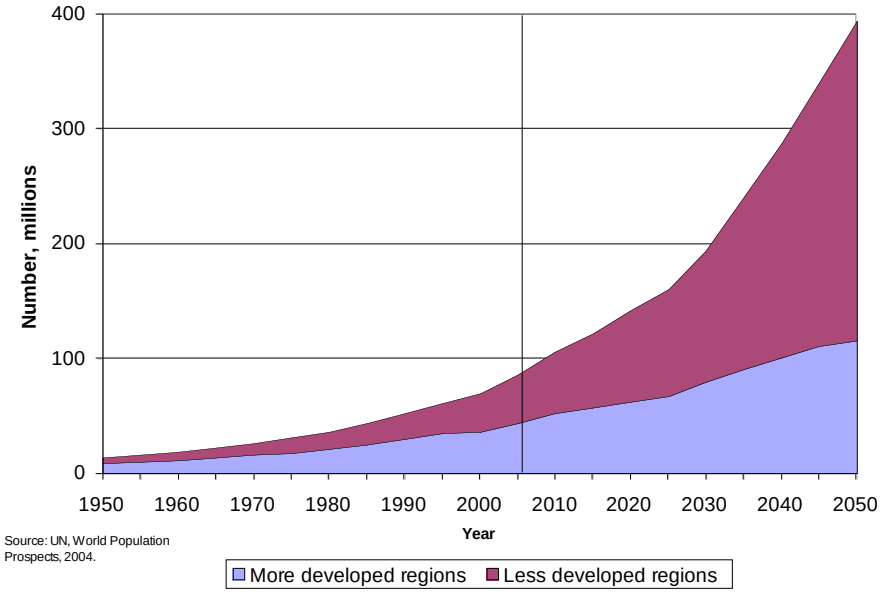
Source: UN, World Population Prospects, 2004.

Figure 2.11: Median Age



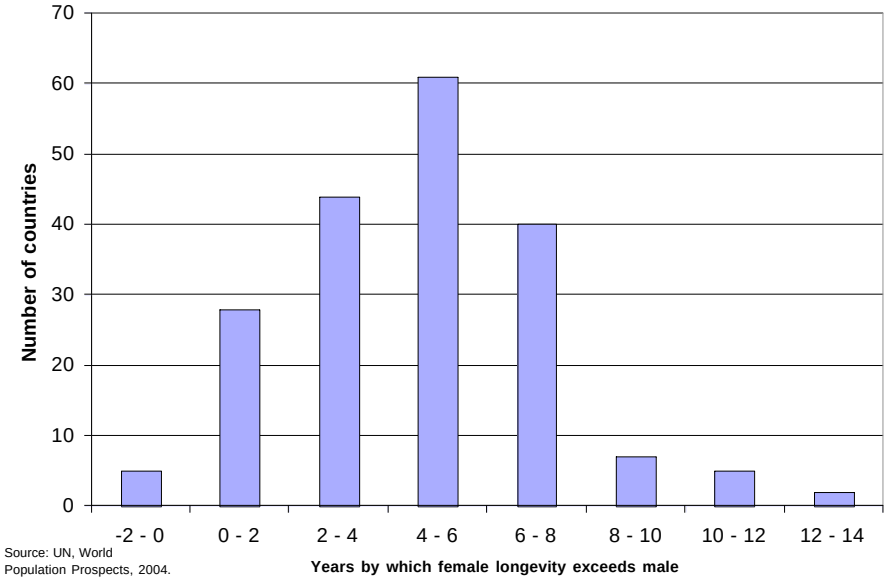
Source: UN, World Population Prospects, 2004.

Figure 2.12: Number of People Aged 80 or Above



Source: UN, World Population Prospects, 2004.

Figure 2.13: Number of Countries in Which Female Longevity Differs from That of Males by a Given Range of Years



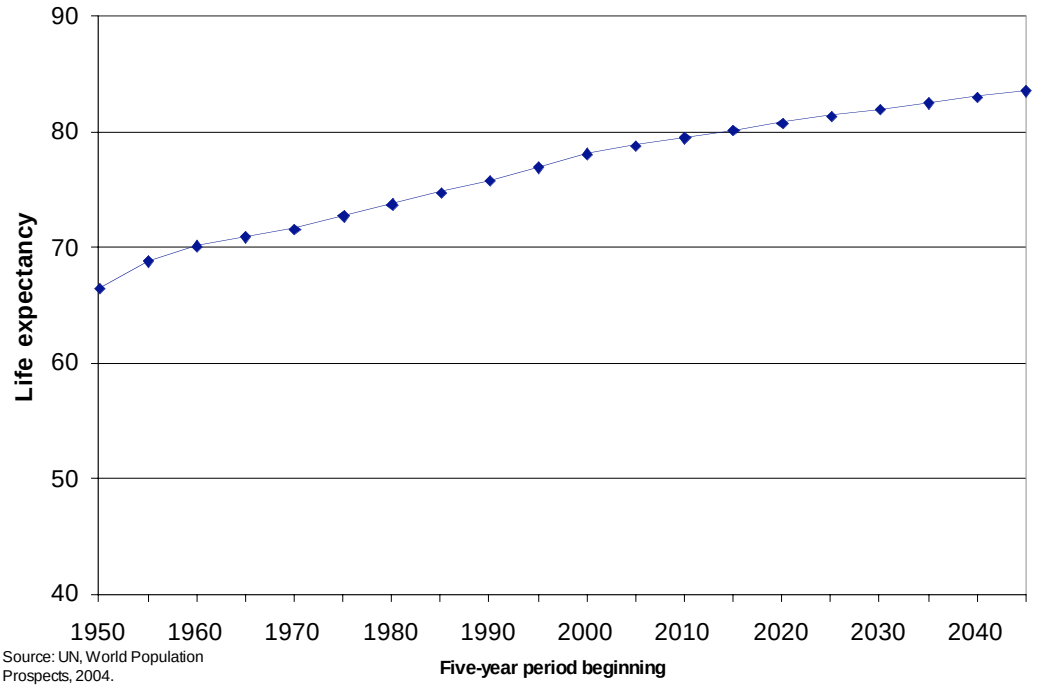
Source: UN, World Population Prospects, 2004.

First discussed in detail by Preston (1975), the positive correlation between life expectancy and income is one of the most central relationships in the area of health and international development. Preston observed the strong, positive relationship between national income levels and life expectancy in poorer countries, though the relationship is nonlinear as life expectancy levels in richer countries are less sensitive to variations in average income. He also noted that life expectancy is increasing over time at all income levels. Although the

basic facts set out by Preston are generally accepted, there is still a great deal of dispute about the mechanisms that lie behind the relationships and the policy implications we can draw from them. [2]

In most parts of Europe, life expectancy has increased (see Figure 2.14). Since 1950, life expectancy at birth has risen by more than 10 years. In conjunction with falling birth rates, rising life expectancy will lead to a Europe in which the proportion of the population aged 60 and over will be 36 percent in 2050, as compared with 22 per cent at present (see Figure 2.15), although the variability in UN projections is considerable.

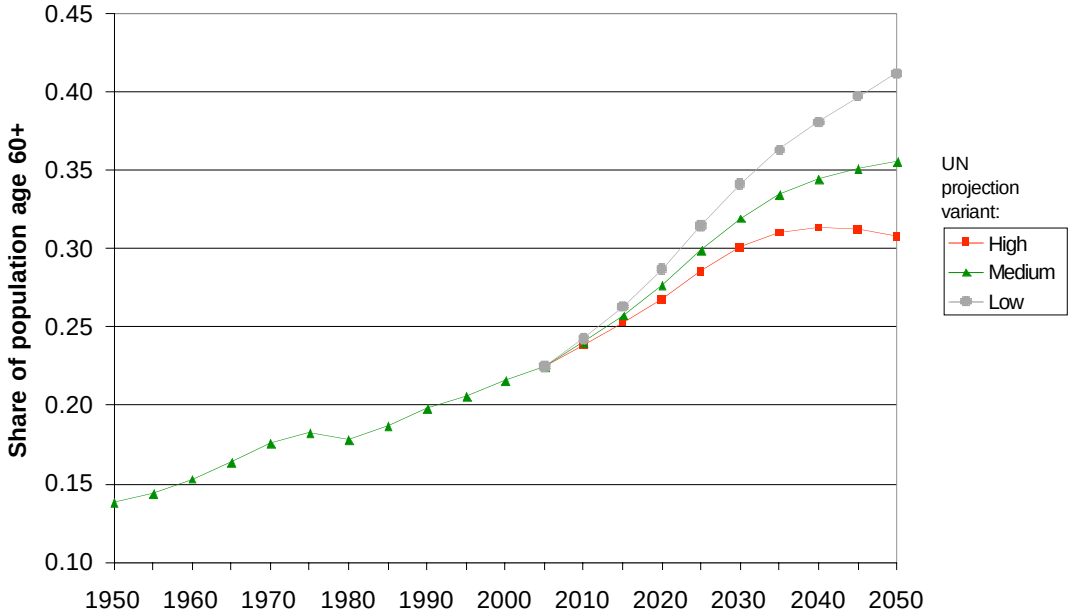
Figure 2.14: Life Expectancy in Europe



Source: UN, World Population Prospects, 2004.

[2] See Bloom and Canning (2006) for more on Preston's paper.

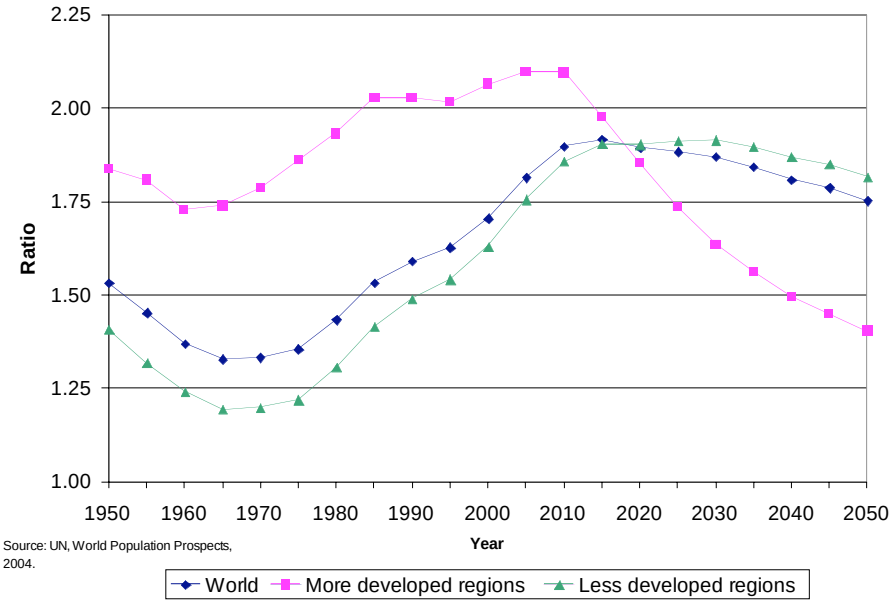
Figure 2.15: Share of European Population Age 60+



Source: UN, World Population Prospects, 2004.

Age distribution: working-age population. Various baby booms have altered the demographic landscape in many countries. As the experiences of several regions during the past century show, an initial fall in mortality rates creates a boom generation in which high survival rates lead to many more people at young ages than in earlier generations. Fertility rates fall over time, as parents realize they do not need to produce as many children to reach their desired family size, or as desired family size is reduced for socio-economic reasons. When fertility falls and the baby boom stops, the age structure of the population then shows a "bulge" or baby-boom age cohort created by the non-synchronous falls in mortality and fertility. As the members of this generation work their way through the age structure of the population, they represent a share of the population larger than the cohorts that precede or follow (see Figure 2.16). This creates particular challenges and opportunities for countries, such as a large youth cohort to be educated and, later, an unusually large working-age (approximately ages 15-64) population and the prospect of a “demographic dividend”. Lee and Mason (2006) describe two aspects of this dividend: falling fertility, leading to there being more workers per capita and therefore potentially more resources to devote to development and to family welfare, and the extra savings that are generated when people expect a longer retirement period. In addressing some of the problems and opportunities arising from a large youth cohort (ages 12-24), Jimenez and Murthi (2006) stress the importance for long-term economic growth of investing in education and health of the young, and the need to ease entry into the labour market for this group.

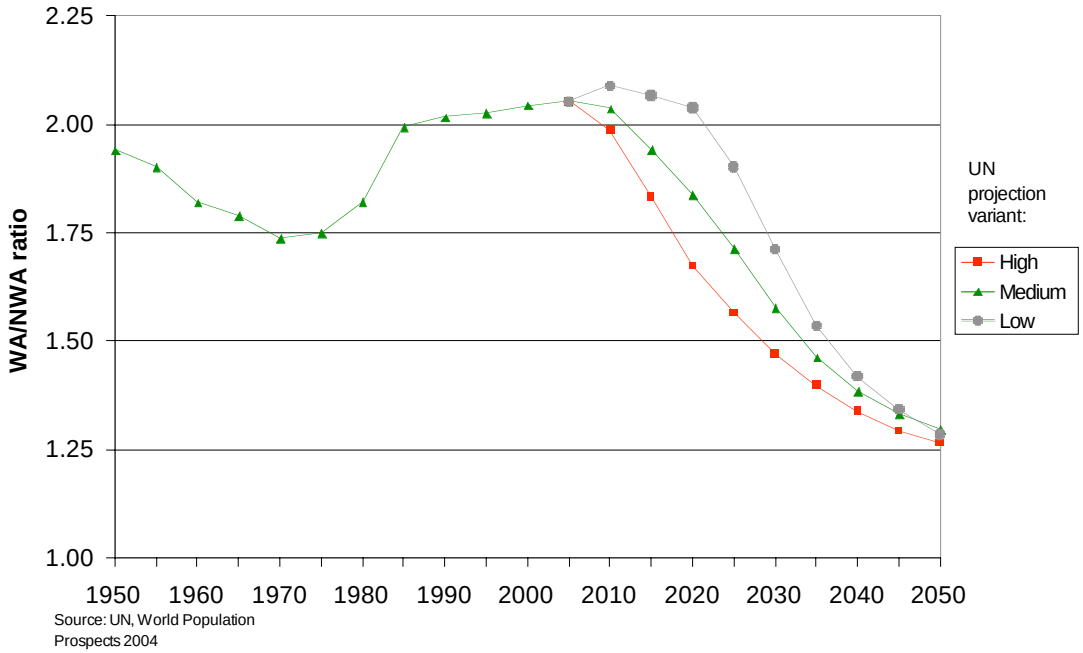
Figure 2.16: Ratio of Working-Age to Non-Working-Age Population



Source: UN, World Population Prospects, 2004.

In Europe low birth rates and demographic aging due to increased life expectancy will lead to a large shift in the ratio of people at working age to those at non-working age. As Figure 2.17 shows, there are currently more than two people aged 15-64 for every individual outside that age bracket. As the number and share of elderly grows – and is not compensated by the fall in share and numbers of younger people (below age 15) – this ratio will plummet to below 1.5 people of working age per dependent by 2035. This will be a far lower ratio than at any other time since 1950 .

Figure 2.17: Ratio of Working-Age to Non-Working-Age Population in Europe



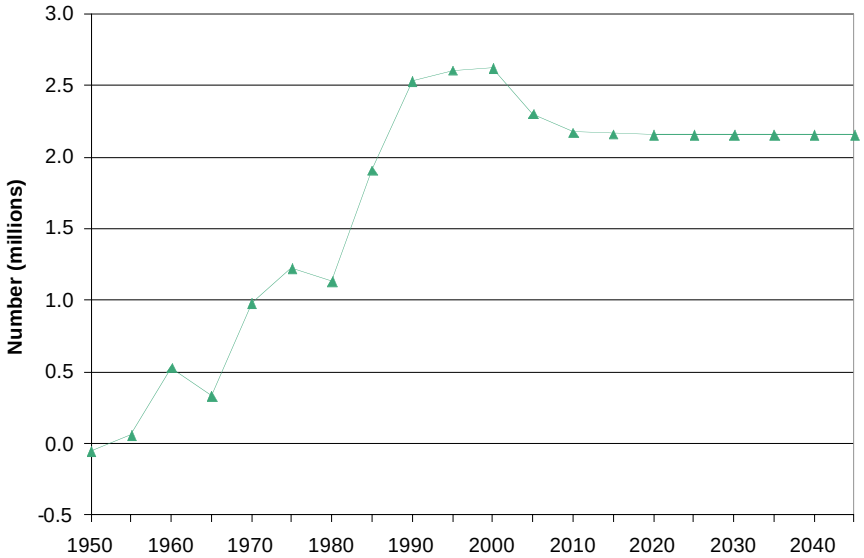
Migration. Migration also alters population patterns. Globally, 191 million people live in countries other than the one in which they were born. On average during the next 45 years, the United Nations Population Division estimates that over 2.2 million individuals will migrate annually from developing to developed countries (see Figure 2.18).[3] According to the United Nations, the United States will receive by far the highest number of immigrants (1.1 million a year), and China[4], Mexico, India, the Philippines, and Indonesia will be the main sources of emigrants.

[3] In light of current data and recent trends, the UN estimate seems to be a very low number. The estimate does not aim to take into account various scenarios that could affect migration trends in the future. It also evidently does not take into account future population growth (and in particular of increased population in developing countries and stagnant or eventually falling population in developed countries), which, independent of any other factors, would seem likely to lead to increased numbers of international migrants.

[4] Regarding the UN figures: Rapid economic growth and demographic aging in China suggest that China may not experience net outmigration over the whole period 2005-2050.

Figure 2.18: Number of Migrants from

Less Developed to More Developed Countries



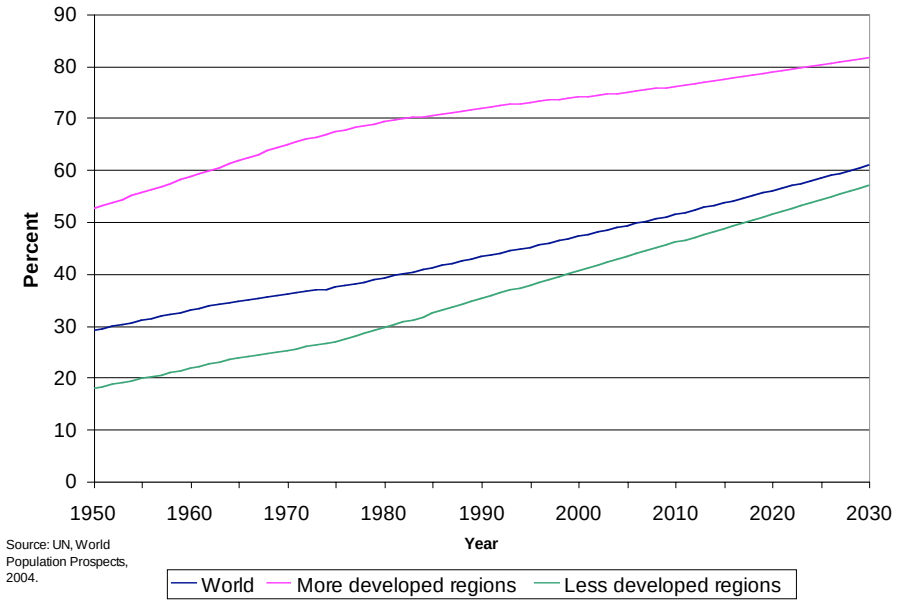
Source: UN, World Population Prospects, 2004.

Several factors affect migration from developing to developed countries. A significant number of working-age people in developing countries are underemployed relative to the opportunities they perceive in developed countries. At the same time, developed countries face a declining share of working-age people and a large number of elderly who need care. These facts could lead to higher rates of migration than are projected by the United Nations. Because migrants are disproportionately of working age, migration can affect age distribution in both sending and receiving countries. In sending countries, the ratio of workers to dependents will tend to rise more slowly than it otherwise would, whereas in receiving countries, this ratio will be higher than it otherwise would have been.

Williamson (forthcoming 2006) provides an economic explanation of the emigration life cycle: First, people are too poor to emigrate; this is the "migration poverty trap". As wealth increases and demographic booms begin, more can emigrate, and there are more who are driven to. Then, in response to remittances, industrialization, conditions improving at home, and there being relatively fewer workers, emigration subsides. In the case of Europe, as transport and industrialization spread within the continent, the poorer countries joined the richer ones in sending migrants to the Americas. Pointing in the same direction (and now going beyond Williamson's explanation), the demographic transition produced young “surplus populations” first in Western and Northern Europe and only later in Southern, Central, and Eastern Europe.

Urbanization. In both developed and developing countries, there has been huge movement from rural to urban areas since 1950 (see Figure 2.19). Less developed regions, in aggregate, have seen their population shift from 18 per cent to 44 per cent urban, while the corresponding figures for developed countries are 52 per cent to 75 per cent. This move toward urban areas – and the concomitant urbanization of areas that were formerly semi-urban or rural – is consistent with the shift that nearly all countries have experienced in moving from agriculturally based economies to service-based and industrial economies.

Figure 2.19: Percentage of Population Living in Urban Areas



Source: UN, World Population Prospects, 2004.

The existence and growth of mega cities (i.e., those with 10 million or more residents) is a late-20th century phenomenon that has brought with it special problems. There were 20 such metropolitan areas in 2003, 15 in developing countries. Tokyo-Yokohama is by far the largest, with 35 million people, followed by (in descending order) Mexico City, New York, São Paulo, and Mumbai (all with 17 to 19 million).

Cities in general allow for economies of scale and for a broad mix of people and activities that make them centres of economic growth and activity. These characteristics account, in some measure, for their attractiveness. As continued movement to urban areas leads to mega cities, these factors seem to be countered, to some extent, by problems that arise in the areas of transportation, housing, air pollution, and waste management. In some instances, socioeconomic disparities are particularly exacerbated in mega cities.

2.1 Looking to the future

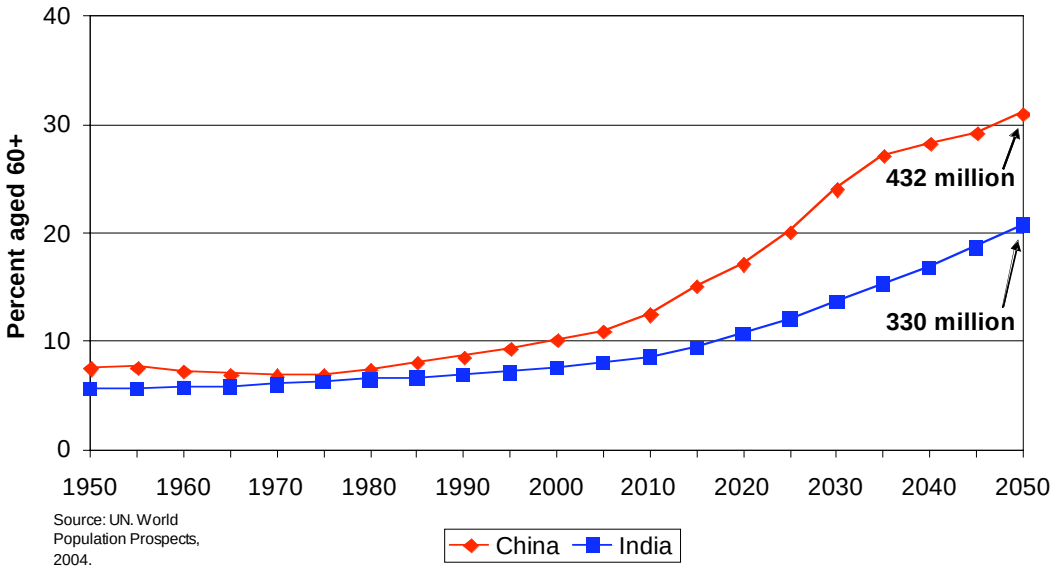
What can we expect in the next half-century? Can we project the economic consequences of future demographic trends? Based on the indicators that are available, we can make a few important points:

- All signs suggest that there will be continued but slowing population growth. This continued growth will result in the addition of roughly 2.5 billion people to the world population, with a slow down to around 9 billion by 2050.[5] Managing this increase will be an enormous challenge, and the economic consequences of failing to do so could be severe.
- The world's population is aging, and the growth in the sheer number of elderly people will be substantial both in absolute and in relative terms. The United Nations projects that 31% of China's population in 2050 – 432 million people – will

[5] The UN forecasts a further increase until 2070-80, a leveling off, and a subsequent decline in the 22nd century.

be age 60 or over. The corresponding figures for India are 21% and 330 million (see Figure 2.20). No longer can aging be thought of as a developed-world phenomenon, see also (Bloom, Canning et al. 2006, forthcoming).

Figure 2.20: Growth of the Elderly Population in China and India



- International migration will continue, but the extent is unclear. The pressures that encourage people to migrate – above all the lure of greater economic well-being in the developed countries – will undoubtedly persist, but the strength of countervailing policy restrictions that could substantially stanch the flow of migrants is impossible to predict.
- Urbanization will continue, but here, too, the pace is impossible to predict. Greater economic opportunities in the cities will surely continue to attract migrants from rural areas, but environmental and social problems may stymie growth.

Although demographic changes are, for the most part, easier to project than economic changes, the big picture outlook for the world as a whole is nonetheless unclear. Will an outbreak of avian flu or another disease become pandemic, killing many millions and decimating economies? What happens if these diseases are, or become, drug-resistant? Conversely, scientific advances in areas such as genomics, contraceptive methods, or vaccines for diseases such as AIDS or malaria could save and improve millions of lives. Global warming and other environmental change, or large-scale wars, could completely alter the context of demographic projections and economic predictions. Millions of refugees, from any cause, could make demographic projections be far off the mark, and could, of course, lead to upheavals that would dwarf the importance of the analysis offered here.

European countries grappling with demographic change potentially have three broad policy measures at their disposal. Pro-natalist policies may be effective in countering future labour shortages. Increased immigration may also be effective, depending on the number and characteristics of the immigrants. Such policies, however, run the risk of political backlash, both internally and internationally. Finally, governments can choose to encourage people to save more and can refrain from discouraging people from working longer – by ensuring

that involuntary retirement is not the norm and by making sure that pension systems continue to offer rewards even as people work beyond traditional retirement ages (Bloom and Canning 2006).
Some of the policies that aim for these ends will not be easy to sell to electorates, however. Both more rigorous research and clearer advocacy by governments may help convince societies that such policies are needed and likely to work. The challenges posed by Europe's looming population bust are not insurmountable. Although Europe has 20 million unemployed, shortages in some job categories loom. Immigrants may be able to ameliorate this problem to some extent. (Economists have long argued that the "inflexibility" of labour in Europe contributes to unemployment, but Schmitt (2006) finds that since 2000 Europe is creating jobs faster than the United States – and this despite European governments having done relatively little to make labour more "flexible", compared to the full package of labour-related reforms favoured by advocates of moving to a more US-style system). Pro-natalist policies cannot produce new workers in less than a generation, but immigration can have an effect in a relatively short period of time (see the experiences of Greece, Ireland, Spain, and the United Kingdom). But as the share of the elderly population increases, its political power may make changes hard to bring about. Given the scale of the challenges, policy-makers would be well advised to act sooner rather than later.

2.2 HIV/AIDS

Twenty-five years have passed since HIV/AIDS cases were first reported. In that time, over 25 million people have died of the disease. Life expectancy has collapsed in several countries, health systems have been stretched beyond breaking point, and millions of children have been orphaned, threatening the future fabric of societies. UNAIDS, the United Nations agency responsible for coordinating international efforts to tackle the virus, continues to describe the response as "nowhere near adequate" (UNAIDS 2006).
In this section we first outline the progress of the epidemic, with a particular focus on Europe. We then review the literature on the impacts of the virus, including demographic, social, and economic effects. Lastly, we look at the policy response by public and private sectors and the international community.

Progress of the epidemic

HIV prevalence worldwide. UNAIDS estimates that 38.6 million people were living with HIV in 2005. 4.1 million were newly infected during that year, and 2.8 million died of AIDS. The virus continues to spread. Worldwide, adult HIV prevalence is approximately 1.1%, but there are enormous differences between regions (UNAIDS 2005). Sub-Saharan Africa had an adult HIV prevalence rate of 7.2% in 2005. The next most affected region, the Caribbean, had a rate of 1.6% (see table 1). Mortality also varies widely, with Sub-Saharan Africa accounting for 76% and South and South East Asia for 15% of all AIDS deaths.

Table 2.1 – HIV adult prevalence rates, number of adults and children living with AIDS, and AIDS deaths 2005

Region	*Adult (age 15-49) prevalence (%)*	*Adults and children living with HIV*	*Adult and child deaths due to AIDS*
Sub-Saharan Africa	7.2	25.8m	2.4m
Caribbean	1.6	300,000	24,000
Eastern Europe and Central Asia	0.9	1.6m	62,000
South and South East Asia	0.7	7.4m	480,000
North America	0.7	1.2m	18,000
Latin America	0.6	1.8m	66,000
Oceania	0.5	74,000	3,600
Western and Central Europe	0.3	720,000	12,000
North Africa and Middle East	0.2	510,000	58,000
East Asia	0.1	870,000	41,000

Source: AIDS Epidemic Update 2005, UNAIDS

There is also considerable variation within regions. Adult HIV prevalence rates in southern Africa, home to almost 1 in 3 of those living with the virus worldwide, range from 33.4% in Swaziland and 24.1% in Botswana to 3.7% in Angola (UNAIDS 2005). West Africa has much lower overall prevalence than southern Africa, with Cote d'Ivoire (7.1%) having the highest rate and Senegal (0.9%) among the lowest.

Prevalence trends. The spread of HIV proceeded rapidly during the 1980s and 1990s. In 1990, fewer than 10 million people worldwide were living with the virus. Ten years later that number had surpassed 30 million, and it is now approaching 40 million (UNAIDS 2005).

HIV incidence (the proportion of previously uninfected people who contract the virus in a given year) is thought to have peaked in the latter half of the 1990s and remained steady since. With the number of AIDS deaths increasing, this has led to a levelling off of global adult HIV prevalence, which has remained steady for the past four years. Because of population growth, however, stable prevalence does not stop the number of people living with AIDS from rising – this figure increased from 36.2 million in 2003 to 38.6 million in 2005 (UNAIDS 2005).

As with current prevalence rates, trends in the spread of HIV vary by region. Sub-Saharan Africa's infection rate has remained stable since 2000, but in other regions the epidemic is expanding. The number of people living with HIV/AIDS in Eastern Europe and Central Asia increased from 1.2 million in 2003 to 1.6 million two years later, with prevalence rising from 0.7% to 0.9%. South and South East Asia saw an increase in infections of 900,000 over the same period.

HIV in Europe. The HIV epidemic in Europe is split into two. Western and Central Europe have been grappling with the virus for over two decades, and many countries in the region have had great success in limiting its spread. Parts of Eastern Europe, on the other hand, face a rapidly expanding epidemic that they have so far been unable to stall.

0.3% of adults in Western and Central Europe are infected with HIV. This prevalence rate translates into a total of 720,000 individuals living with the virus. 22,000 people from the region were newly infected in 2005 and 12,000 died.

Whereas in Sub-Saharan Africa the main channel for HIV infection is heterosexual transmission, in Europe injecting drug use and sex between men have a relatively greater importance. In some Western European countries, such as Germany, the Netherlands, and Greece, the latter is responsible for more new infections than other channels (UNAIDS 2004). In Portugal, Italy, France, and Spain, injecting drug use accounts for a high proportion of new infections. In the United Kingdom, where heterosexual transmission is most common, people who had contracted the virus in countries with generalized epidemics accounted for 70% of all new heterosexually transmitted cases (UNAIDS 2004)

HIV is resurging in some parts of Western Europe, in large part due to an increase in unsafe sex. In each of Ireland, the UK, Finland, and Norway, new infections have increased by at least 50% since 1998 (UNAIDS 2004). Overall prevalence in the region, however, has remained steady and low since 2003.

Eastern Europe and Central Asia face a greater challenge. 0.9% of adults in the region are living with HIV and the number of people infected increased by 33% between 2003 and 2005. Deaths also rose sharply over this period, from 36,000 to 62,000 (UNAIDS 2005).

Injecting drug use accounted for the vast majority of new infections in the early stages of Eastern Europe's epidemic. Partly as a consequence, most of those with the virus are young. 75% of new infections between 2000 and 2004 were among people below the age of 30, compared to just 33% in Western Europe (UNAIDS 2005).

In recent years, however, the role of heterosexual sex has become more important, with injecting drug users who also have unprotected sex spreading the virus into the mainstream population. As this trend has developed, more women have acquired the disease – 440,000 women are now HIV positive, compared to 310,000 in 2003. Sex workers and their clients have also become more vulnerable to infection.

Within the Eastern Europe region, Ukraine has the highest HIV prevalence, at 1.4% (UNAIDS 2005). The number of cases in the country rose by 25% from 2003 to 2005. As with other parts of the region, women account for an increasing share of new infections as the virus has dispersed from injecting drug users and sex workers to the general population. Russia, too, has seen a rapid rise in the number of cases in the past ten years, from fewer than 10,000 in 1996 to nearly 350,000 today. Most of the rest of Eastern Europe has prevalence well below 1%, though vulnerable groups including men who have sex with men, sex workers, and injecting drug users have higher prevalence in some countries, particularly in Baltic states where injecting drug use is on the rise and in Belarus, Moldova, Kazakhstan, Kyrgyzstan, and Uzbekistan (Epstein 2004).

Demographic impacts of AIDS

The demographic impacts of HIV/AIDS are, of course, largely felt by countries with high prevalence of the disease.

Death rates have increased significantly because of AIDS in many Sub-Saharan African countries. South Africa has a crude death rate (the number of annual deaths per 1,000 people) of 21. Without AIDS it would have been just 7. Botswana, Namibia, Mozambique, Zambia and Kenya would also have much lower crude death rates without AIDS, (Epstein 2004). Outside Africa, AIDS has also increased death rates, though by smaller amounts, in Guyana, Haiti, and Vietnam.

These increased death rates are caused by the mortality of both adults and children. The US Census Bureau has estimated that infant mortality (mortality in children below the age of one year) in Botswana, which stood at 54.8 infants per 1,000 live births in 2004, would have been just 15.4 per 1,000 in the absence of the virus (Heaton, Fowler et al. 2004). In other countries the difference is also marked – South Africa's infant mortality rate is 62.3 per 1,000 (it would have been 37.5 per 1,000 without AIDS); Namibia's rate is 49.6 per 1,000 (up from 23.9 per 1,000). In all the other 12 developing countries studied, AIDS has

increased infant mortality to a lesser extent, and some countries, such as Kenya and Uganda, are projected to reduce infant mortality in the next ten years because of concerted efforts to tackle the virus.

Child mortality has also increased, as many HIV-positive children die between the ages of one and five years. In Namibia, for example, child mortality has doubled as a result of AIDS, and in Botswana it has almost quadrupled (Epstein 2004).

It is adults, however, who are most affected by the virus. Without AIDS, adults between the ages of 15 and 49 years account for a disproportionately low share of total deaths. In many developing countries, this share is approximately 20%. Since the advent of AIDS, however, the share of adult deaths in total deaths has soared to over 50% in Botswana, Namibia, and South Africa, and to well over 30% in many other poor countries (Epstein 2004). The crude death rate among adults has more than doubled in many heavily affected settings.

The increase in death rates as a result of AIDS has slashed life expectancy in many countries. The gains in longevity made by many poor countries in the 20th century have been reversed. Male and female life expectancies in Botswana have fallen by 20 and 30 years respectively since 1995 (Heaton, Fowler et al. 2004). In Namibia they have fallen by 17 and 23 years respectively. In some African countries life expectancy may fall to 30 years in the next decade.

Population size has also altered because of AIDS. Because of the virus, the populations of Botswana and Zambia are estimated to be 15% and 12% smaller respectively than they would have been (Heaton, Fowler et al. 2004). Smaller effects of the same type have been seen in Countries including Ethiopia, Mozambique, Cote d'Ivoire, Namibia, and Rwanda have seen smaller effects. Over the next ten years these effects are forecast to be greater still.

Social impacts. The demographic effects of AIDS described above are likely to have serious repercussions for societies. The loss of so many adults has left millions of children without one or more parents. In many cases, children who lose both parents have to cope, at least temporarily, without any adult help. Some have to drop out of school to care for sick relatives, thus damaging their prospects even further than may have already been the case. In other cases, grandparents, who may lack the energy, physical strength, and financial resources of working-age adults, take over the care of children.

The loss of working-age adults deprives societies of their engines. Teachers, nurses, doctors, the army, police, business entrepreneurs, community leaders, and others all play roles that societies would struggle to cope without. Their absence raises the threat of increased crime, war, morbidity, and mortality from other illnesses than HIV/AIDS, and a reduction in job opportunities. Millions of orphans with no parents or teachers to guide them are easy prey for recruiting armies or gangs. Their prospects of a fulfilling career are limited, and their contribution to society more likely to be harmful than if the bulwarks were in place to ensure a smoother passage to adulthood.

Poverty traps may also become easier to fall into and more difficult to escape as AIDS begins to take root. As it has spread, the virus has increasingly become a disease of the poor (Bloom, Mahal et al. 2004). Poor people are less able to access health services, less likely to receive information on HIV/AIDS transmission, and have less power to insist on safe sex than wealthier communities. Weak nutrition makes it more likely that they will succumb to opportunistic infections. When they become infected, moreover, they lack the capacity to cope with the illness, and they cannot afford antiretroviral treatment (ART). Where ART is provided free, they may lack the means to attend clinics in order to receive it. Many poor families sell off the few assets they have in order to pay for treatment, so a vicious circle is created whereby climbing out of poverty is made impossible and health worsens as a result (Bloom, Mahal et al. 2004).

The stigma surrounding AIDS can have further social impacts. Those infected with the virus are often ostracized by society. In a survey in China, for example, half of respondents argued that infected individuals should be punished, while over half would not wish to be friends with an HIV-positive person (UNAIDS 2006). A further survey in Asia and the Pacific found that over half of HIV-positive participants reported discrimination based on their HIV status (Paxton, Gonzales et al. 2005).

Women are particularly vulnerable to discrimination. Some women in the Asia-Pacific study were forced to have abortions when their HIV status was revealed. Others reported physical and verbal abuse.

Women are increasingly bearing the brunt of the HIV/AIDS pandemic. Although infection rates across the world differ markedly by gender – in East Asia, just 18% of those infected are women, whereas in sub-Saharan Africa this proportion rises to 57% (see table 2.2) – overall prevalence among women is rising relative to that among men. Women are biologically more likely than men to be infected with HIV during heterosexual contacts. Unequal relations between men and women in many parts of the world mean that women are often forced into having unsafe sex. The majority of sex workers, moreover, are women, and poor sex workers in particular lack the power to ask their clients to wear condoms. As a consequence of these and other factors, AIDS has pushed life expectancy among women in some hard hit countries below that of men.

Table 2.2 – Proportion of adults living with HIV/AIDS who are women

Region	*% of infected adults who are women*
Sub-Saharan Africa	57
Oceania	55
Caribbean	50
North Africa and Middle East	47
Latin America	32
Eastern Europe and Central Asia	28
Western and Central Europe	27
South and South East Asia	26
North America	25

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The Demographic transition: Geopolitical implications

In the 1965, the total fertility rate of the world population was 5.1 children per women. By 2002, this figure has declined to only 2.6. In the same time, infant mortality has been more then halved, from 122 per thousand in 1960, to 55 per thousand in 2002. Life expectancy at birth has increased from 50.2 to 66.7 years (World Bank 2006). Given these aggregate population trends, it is clear that the last decades have witnessed a demographic transition of historical proportions.

For professional demographers, this demographic transition didn't come as a surprise. Already by 1945, demographers at Princeton University put forward the idea that demographic transitions from high to low birth and death rates could become a general phenomenon during the latter half of the 20th century. Their prediction was based on the observation that demographic transitions accompanied the modernization of the Western World from the late 18th century, and on evidence that mortality was beginning to show a downward trend also in other parts of the world (Davis 1945; Notestein 1945).

The prediction of a worldwide demographic transition is probably one of the most successful forecasts ever put forward by social scientists. In the second half of the 20th century, the demographic transition affected country after country, with different religions, family structures and economic systems. The most conspicuous result was a rapid increase in world population. In the 1950s, 1960s and 1970s, this "population explosion" triggered intense political and scientific debates about the economic and social consequences of population growth (Ehrlich 1968).

In view of the dramatic impacts of the 20th century demographic transition, one could have expected a growing interest in demography as a driving force behind economic, social and cultural change. However, progress in this direction has been slow.

The main reason is that for a long time, it has been a strongly embraced notion that demographic change should not be seen as a driving force behind shifts in social, economic and cultural trends, but as a response to changing economic and social conditions. This was the point of the departure for the Princeton demographers, when they launched their successful prediction about post WWII population trends. The idea of the Princeton demographers was that the driving force behind falling mortality and fertility should be economic development.

Eventually, an alternative approach has developed, built on the idea that demographic change should not only be seen as a reflection of economic and social change, but as a driving force. A growing body of empirical research has paved the way for this reorientation. Most importantly, it has been shown that income growth is neither a necessary condition for lower mortality nor for lower fertility. In fact, a demographic

transition can take off under very diverse social conditions and also in low-income societies. The Princeton demographers were successful in predicting the demographic transition, but this transition did not come about in the way they believed it would.

How can demographic transitions take off without being triggered by economic development? Historical evidence shows that a key factor behind declining mortality or fertility is adequate knowledge. Such knowledge often spread according to mechanisms of innovation diffusion.

One example of innovation diffusion triggering demographic transitions is the introduction of smallpox vaccination. Smallpox vaccination does not require large financial resources but has contributed significantly to lower mortality. Another example is the spread of breast-feeding, oral re-hydration and improved hygiene in infant care. High income is no prerequisite for knowledge about these procedures.

This report builds on the presumption that demography should be analyzed as a driving force behind economic and social change. Long-term economic and social change can be explained with reference to fundamental shifts in demographic trends Demographic transitions have shaped the modern world and population dynamics will continue to play a major role in the decades to come.

In the following chapters, a more thorough presentation is given of the demographic approach, including a research background and a comprehensive framework for analyzing social and economic change during the last 200 years on the basis of demographic trends. The presented framework is subsequently used to sketch possible, demographically based scenarios for global economic trends in the 21st century. Finally, we explore policy challenges in a growing global economy.

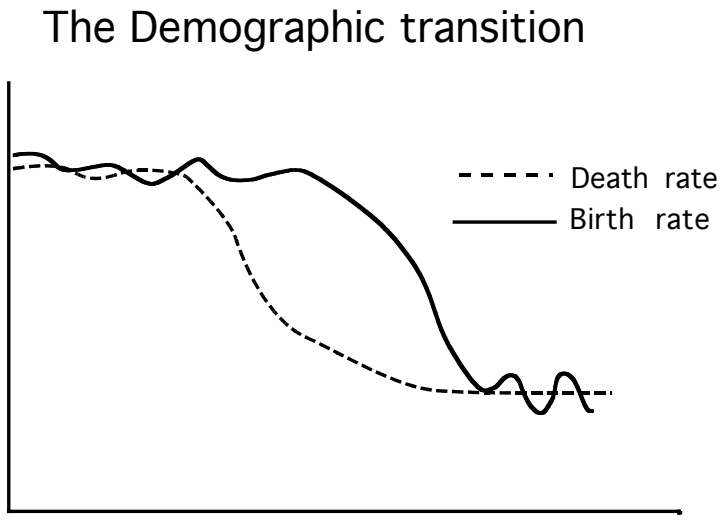
3 Research background

The analysis of demography as a driving force behind social and economic change raises a number of methodological and theoretical issues. In this section, special emphasis is given to modes of analyzing the social and economic implications of the demographic transition, in particular age structure changes.

3.1 Implications of the demographic transition: alternative modes of representation

The standard representation of the demographic transition is a diagram showing death rates and birth rates that over time go from high to low levels (see Figure 3.1). This representation allows the observer to easy distinguish between the different phases of the transition: high mortality and fertility, the onset of mortality decline, the onset of fertility decline, and the final phase with low mortality and fertility. Another advantage is that the diagram also gives a representation of the natural rate of population growth as the gap between the birth rate and the death rate. It is, thus, easy to see that the demographic transition implies a transition from low rates of population growth to high rates and back to low rates.

Figure 3.1 The standard representation



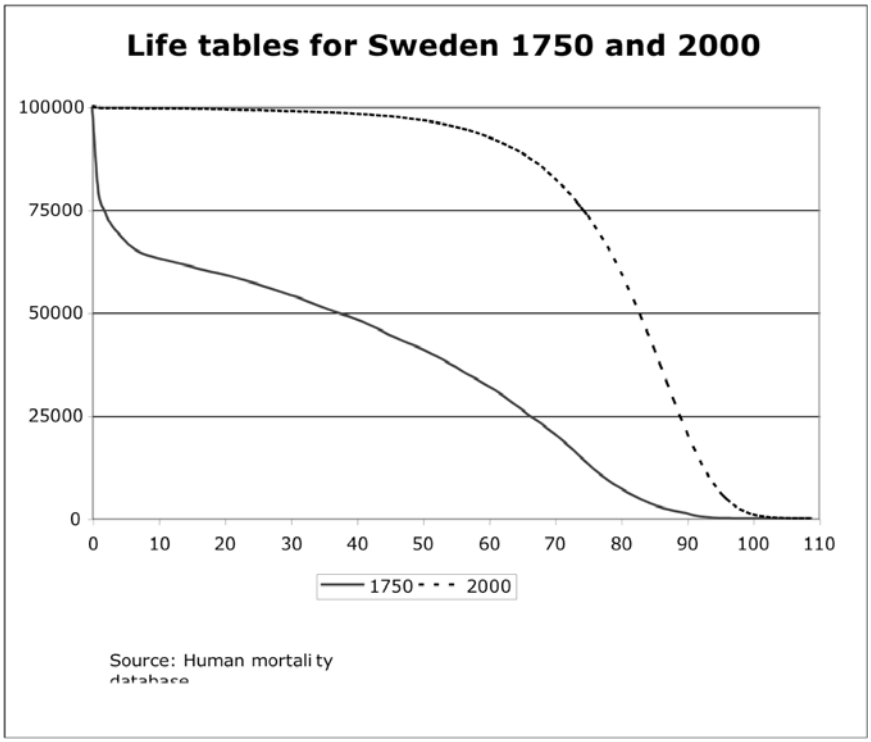
However, the standard representation of the demographic transition also has important limitations. The most important of these limitations is that the standard representation links the transition too closely to the question of population growth. Population growth, however, is only one aspect of the demographic transition and, when it comes to the social and economic consequences of the transition, not necessarily the most important one. In order to analyze how lower fertility and mortality affect people's lives, for example, or how demographic change influences social and economic development, there are alternative modes of representation that are more appropriate.

Declining mortality: life table comparisons

An alternative representation, that is instructive for a discussion about the economic and social implications of the mortality decline, is a comparison between the life table for a high mortality population on the one hand and the life table for a low mortality population on the other. A life table shows how many survivors there will be at different ages from a birth cohort of 100,000 children that are exposed to the same death risk as a historical population. It can be seen both as a forecast for the survival probability of individuals and as an account of how a cohort shrinks over time due to mortality.

An example of this type of representation is given in Figure 3.2 that illustrates the life tables for the Swedish population 1750 and 2000 (before and after the demographic transition). Clearly, the differences between the Swedish population in 1750 and the population in 2000 are large, not only during infancy and early childhood, but also through working life. In 1750, less then half of those who reached 15 years could hope to be alive at age 65. In 2000, the corresponding figure was 90%. High mortality, however, has an effect also on those who survive to older ages. In 1750, even if somebody was still alive at age 65, more than half of the people of his/her own age group would have been dead. Thus, in order to understand how the demographic transition affects a society it is necessary to analyze how the increasing prospects of longevity have affected human behaviour.

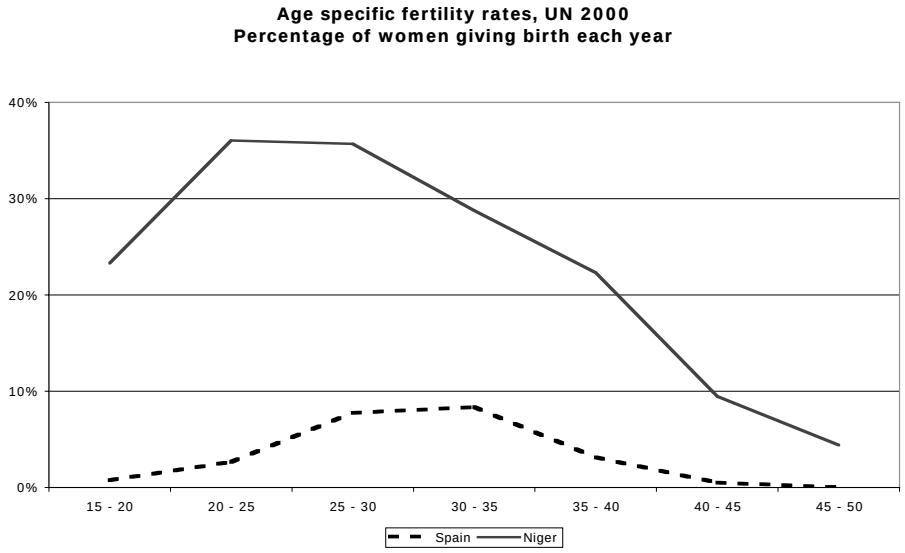
Figure 3.2



Declining Fertility: age specific fertility rates

A corresponding illustration of how lower fertility affects the life of primarily women is given in figure 3.3 below. Here, age specific fertility rates between 1995 and 2000 for Niger (TFR=8.00) and Spain (TFR=1.15) are visualized. Among Spanish women between the ages of 20 and 25, only one in 40 gave birth to a child during a given year. In Niger, each year, more than one in three women of this same age group gave birth to a child. If we assume that fertility is evenly spread among women this implies that just about every women in Niger has a child under the age of three as she celebrates her 24th or 25th birthday. In Spain, less then one in ten is in a similar situation. Clearly, this difference in fertility must have strong effects on how the daily lives of women are structured. It might even be the case that in no other area is the difference between modern and non-modern life larger than here. This is not to say that it is self-evident what the role of lower fertility in the changing life of women, and also men, is. The argument is, instead, that the age specific fertility graph focuses on an aspect of the demographic transition that might be overlooked if only the standard representation is used.

Figure 3.3

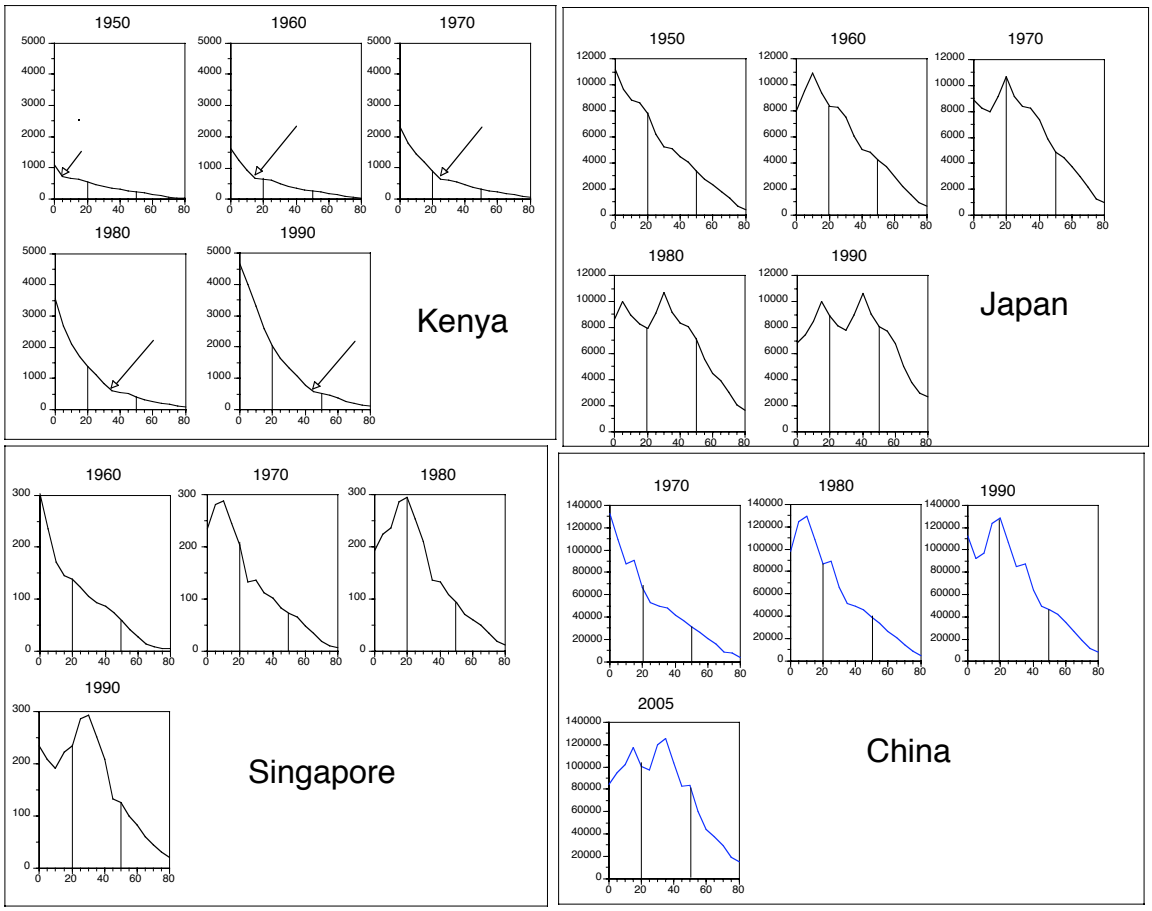


Age structure change: age transitions diagrams

A key aspect of the demographic transition relates to age structure changes. In order to illustrate this aspect another alterative way to represent the demographic transition has been developed, *age transitions diagrams.* Examples of this mode of representation are shown in figure 3.4.) Here UN data are used to show how the age structure of a population changes when (1) mortality declines and (2) fertility is reduced. Four examples are given: Kenya 1950-1990, Singapore 1960-1990, China 1970-1990, and Japan 1950-1990.

The Kenyan example shows how the age structure is affected during the first phase of the demographic transition, when mortality has started to decline but fertility remains constant at a high level. What can be seen here is the following: initially, only the youngest age group is affected, primarily because of a decline in infant mortality. Lower infant and child mortality implies increasing numbers of survivors in each birth cohort. As these larger cohorts age the size of older age groups starts to expand,15-20 years after the reduction in infant mortality. Once these larger cohorts reach fertile age and fertility remains high, this leads to an increase in the absolute number of children born. Thus, the increase in cohort size accelerates. The result is a concave age structure where population growth is concentrated to the youngest age groups. Still, in 1990, there have been only modest increases in the population aged 30 years and older.

Figure 3.4



Looking at Singapore in 1960, we see an age structure that is similar to the Kenyan age structure in 1990. During the 1960s, however, fertility in Singapore fell. As a result, by 1970, a "hump" appears in the age structure that since then has been moving into older ages. Subsequently, by 1990, Singapore had relatively few people below 20 years of age, but still relatively few people above 60 years of age. Instead most of the population was concentrated in the working-ages.

The Chinese development is similar to the one found in Singapore, but it begins ten years later. Thus, in 1990 the hump is apparent in the early 20s and thus swelling the size of the population in student ages.

For Japan, finally, the age structure in 1950 was dominated by the youngest cohorts. But in Japan fertility declined already in the 1950s. This implies that Japan in the 1970s and 1980s had a favourable age composition with a large working age population, but few children and still few older people. In 1990, the old age population has started to swell, though. And this process has continued after 1990.

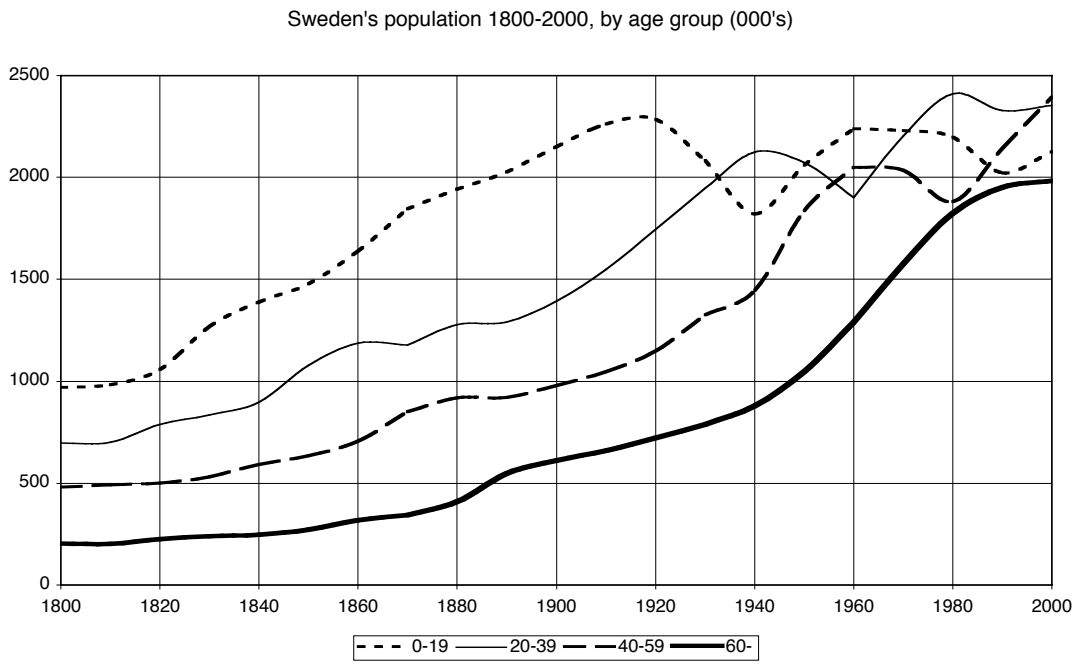
One strength of the age-structure oriented representation of the demographic transition given in these examples is that the dynamic effect of lower mortality and lower fertility is well illustrated. Another strength is that this representation makes one thing clear: population growth during the different phases of the demographic transition is not evenly

distributed across age groups. This is particularly important in consideration of the different economic roles taken by children, youth, working-age adults and old people. A disadvantage, however, is that this type of age transition diagrams lacks a direct, historical time axis. The lack of a time axis makes it harder to see the linkages with social change, economic change, and shifts in human behaviour, since these are phenomena that tend to be observed in historical timeframes. In order to deal with this limitation, age transition diagrams can be complemented by a fourth, alternative mode of representation, *the age phase diagram.*

Age structure change: age phase diagrams

Figure 3.4 illustrates age-structure changes related to the demographic transition in historical time. In contrast to the standard representation of the demographic transition that shows how death rates and birth rates change over time, this age phase diagram focuses on the changing size of four different age groups: children and youth 0-10 years old, young adults 20-39 years old, middle aged adults 40-59 years old, and finally, older people aged 60 years and over. In Figure 3.4, Swedish data are used. Graphic representation using data for other countries that have experienced the demographic transition look very similar.

Figure 3.4



What Figure 3.4 illustrates is the age transition consists of four distinctive phases, marked by the increase of one specific age group. First comes a *child phase,* then a *young adult phase,* thereafter a *phase of population maturity,* and finally a *phase of ageing*.

The first phase of the age transition, the child phase, occurs when falling death rates during the initial stage of the demographic transition produce an increase in the number of children. The reason for this increase in the number of children is that in high-mortality populations, most of those who die are infants and children. A reduction of mortality

therefore primarily spares the lives of the very young age cohorts. Furthermore, as the cohorts who survive into adulthood become larger, the fertile population will soon grow as well, and, with unchanged fertility behaviour, this will further increase the number of children born. In consequence, some 30-40 years after a fall in mortality a population with unchanged fertility behaviour will be both youthful and expanding. From a macro-economic point of view, the child phase is a period when consumption needs tend to exceed productive capacity. The *child dependency rate* is high, and women in particular need to invest substantial financial and temporal resources in the sphere of reproduction (Robertson 1991; Sommestad 1998).

When fertility rates start to decline this picture changes dramatically. Most countries that undergo a demographic transition do in fact not only experience a fall in the rate of fertility, but also a reduction in the total number of children born. As was shown above in the age transition diagrams, this reduction in the number of births creates a "hump" in the age structure, built up by the cohorts that were born just before the absolute birth rate started to fall. In Figure 3.4 we can see this "hump" moving over time. Different age groups have similar growth trajectories, but growth in older age groups is lagging behind growth in younger age groups.

In the standard representation, the fall in the birth rate is the last phase of the demographic transition. However, as shown in the age phase diagram (Figure 3.4), the age transition is far from completed at this stage. The reason is simple. A population that has developed a hump in its age composition will be continuously transformed for as long as it takes for this hump to pass through the entire age structure. The second stage in the age transition, the young adult phase, is attained when the hump passes through the young adult ages. Later it will pass through the middle aged cohorts, which marks the third phase: the phase of maturity. Still later, more than 60 years after the onset of the fertility decline, the hump enters the older age groups. All in all, a society that experiences an age transition goes through remarkably predictable demographic phases, from the initial challenge of high child dependency rates up to the closing phase of maturing and finally ageing.

3.2 Demography and economic growth

The alternative representations of the demographic transition presented above make clear, that in order to understand how the demographic transition affects social and economic development it is not sufficient to analyze population growth. In addition, the social and economic implications of changing life expectancy, changing fertility patterns and changing age structures must be clarified.

As will be shown in the following, the effects of age demographic change on economic growth deserve special attention. In fact, the renewed interest in the age structure aspect of the demographic transition has made it possible to solve, in recent years, an age-old controversy in the social sciences over the effect of population growth on economic development. Furthermore, recent research has pointed to the crucial role of declining mortality in shaping the conditions for economic growth.

The classic debate on the effect of population growth

Already in the 18th century the question of how an increasing population affects social and economic development was addressed by social scientists. Two opposing views soon emerged. One, most clearly outlined by Adam Smith, was that population growth could act as an important stimulus for economic development.

His argument was that increasing productivity is an effect of the division of labour and that the extent of the division of labour is limited by the extent of the market. With a sparse population, thus, there can be no division of labour:

In the lone houses and very small villages which are scattered about in so desert a country as the highlands of Scotland, every farmer must be butcher, baker, and brewer, for his own family. In such situations we can scarce expect to find even a smith, a carpenter, or a mason, within less than twenty miles of another of the same trade. The scattered families that live at eight or ten miles distance from the nearest of them, must learn to perform themselves a great number of little pieces of work, for which, in more populous countries, they would call in the assistance of those workmen.

Adam Smith's original insight has, ever since, occupied an important position in development thinking. It provides the basis for Walter Christaller's (1933) and Lösch's (1954) theories of central places. It has a place in Gunnar Myrdal's account of cumulative regional development (1956), in Allen Pred's model of urban development (1962; 1966; 1977), and in Ester Boserup's theories of population induced economic development (1965; 1981). More recently, Adam Smith's ideas of the importance of market size has been cast as formal economic models by Paul Krugman and Paul Romer (Romer 1986; Krugman 1991; Romer 1991).

Adam Smith also discusses at some length the effect of population growth on the demand for natural resources. Here he notes that the relative price of cattle versus corn tend to be much lower in less populous countries. The same is the case with timber: "Barren timber for building is of great value in a populous and well-cultivated country" whereas in sparsely populated areas "timber is left to rot upon the ground". Similarly, the relative price of fish will increase when a larger population increases the demand.

Adam Smith's view of population growth as a positive contribution to economic development comes clearly out in his text. In a discussion about Columbus he notes that "Instead of the wealth, cultivation, and populousness of China and Indostan, he found, in St. Domingo, and in all the other parts of the new world which he ever visited, nothing but a country quite covered with wood, uncultivated, and inhabited only by some tribes of naked and miserable savages." Also his argument for free trade is partly based on this notion: "The most perfect freedom of trade is permitted between the British colonies of America and the West Indies, both in the enumerated and in the non-enumerated commodities. Those colonies are now become so populous and thriving, that each of them finds in some of the others a great and extensive market for every part of its produce. All of them taken together, they make a great internal market for the produce of one another." The American development is contrasted with the situation in company-run colonies in Asia. Here, in order to raise profit by restricting supply, the Dutch burn spices and destroy wild grows of clove and nutmeg trees. This had led to a reduction in the population and dwarfed economic development. And, according to Adam Smith, the English company in Bengal was carrying out a similar plan.

The opposing view, that population growth is a source of increasing human misery, was advanced by Thomas Malthus in his "Essay on the principle of population" , published 22 years after Smith's "The wealth of nations" (Malthus 1798). Malthus' main argument was that in the long run food production cannot keep pace with unrestricted population growth. Population growth, therefore, must necessarily lead to increasing misery and famine. Malthus doesn't present his argument as an attack of Adam Smith's view on population. To the contrary, in the introduction, Malthus states that "The principles on which [his argument] depends have been explained in part by Hume, and more at large by Dr Adam Smith". However, the last part of his essay is devoted to a long argument against Adam Smith's positive view on population growth.

An important difference between Smith and Malthus is that the latter concentrates almost solely on the possibilities of producing food whereas Smith's notion of material wealth includes all the diverse products of that make up human consumption. Another difference is that whereas Smith sees the demand for labour as an important driving force family formation and population growth, Malthus maintains that it is the real wage, preferably expressed in terms of food, determine if the population rises or declines. Moreover, an addition made by Malthus is to represent population growth as a natural force, outside the control of human intentions.

One way to characterize Malthus's model is to see it a biological construct that contrasts sharply with Smith's attempt to reveal the role of population growth in human history. Thus men in Malthus's model are strikingly similar to animals. The only consumption goods that count are the products of land: plants or meat. As soon as they are not hungry anymore they procreate. Adam Smith in contrast puts social production based on an extensive division of labour and mediated by market exchange and trade at the centre of economic development. In this way he his able to portray human development as closely linked to the establishment of populous societies.

Given that Malthus' model abstracts from typical human characteristics it is not surprising that it has been adopted by biologists. Most important here is, perhaps, the fact that Malthus doctrine of the tendency towards geometrical increase of population was incorporated as an essential foundation of Darwin's theory of evolution. More interesting, though, is the influence that Malthus's model has had on economic thinking. During the first half of the 19th century, Malthus's ideas, elaborated by David Ricardo became an essential part of the economic doctrine.

On example is John Stuart Mill who in 1848 argued against the idea of taxing the middle-class in order to give poor relief to workers with children (Mill 1848). Such a program "would suspend all checks, both positive and preventive; there would he nothing to hinder population from starting forward at its rapidest rate; and … taxation, to make up the growing deficiency, must advance with the same gigantic strides". Putting unemployed to work would not, in Mill's view, alter this outcome: "But let them work ever so efficiently, the increasing population could not, as we have so often shown, increase the produce proportionally: the surplus, after all were fed, would bear a less and less proportion to the whole produce, and to the population: and the increase of people going on in a constant ratio, while the increase of produce went on in a diminishing ratio, the surplus would in time be wholly absorbed; taxation for the support of the poor would engross the whole income of the country." And as a result "the check to population either by death or prudence, could not then be staved off any longer, but must come into operation suddenly and at once".

The importance of the Malthusian argument in the British context at that time is evidenced by Mill's final remark: "These consequences have been so often and so clearly pointed out by authors of reputation, in writings known and accessible, that ignorance of them on the part of educated persons is no longer pardonable."

Towards the end of the 19th century, Malthus status among economists began to wane. One important reason was that his prediction that population growth was incompatible with rising real wages had been falsified in England (Pareto 1897), the country where Malthusianism had had its strongest position. One important signal of the new situation was the treatment Marshall gave to the subject in his the fourth book of his Principles: The Agents of Production: Land, Labour, and Capital and Organization (Marshall 1890).

Marshall here acknowledges that there is a law of diminishing returns. But then he adds that: "an increase of population tends to develop the organization of trade and industry; and therefore the law of diminishing return does not apply to the total capital and labour spent in a district as sharply as to that on a single farm". More specifically he notes that

with respect to raw produce the law of diminishing return may be difficult to avert. On the other hand "in those industries which are not engaged in raising raw produce" there is a law of increasing returns. Here "an increase of labour and capital generally gives a return increased more than in proportion". The result of "this improved organization tends to diminish or even override any increased resistance which nature may offer to raising increased amounts of raw produce." This opens the way for a "law of constant returns" when "actions of the laws of increasing and diminishing return are balanced" (Marshall 1890).

At the end of Book IV, Marshall summarizes his discussion about how population change may affect the different production factors land, labour, and capital and organization. His conclusion is balanced and impressively insightful:

> *A rapid growth of population has often been accompanied by unhealthy and enervating habits of life in overcrowded towns. And sometimes it has started badly, outrunning the material resources of the people, causing them with imperfect appliances to make excessive demands on the soil; and so to call forth the stern action of the law of diminishing return as regards raw produce, without having the power of minimizing its effects. Having thus begun with poverty, an increase in numbers may go on to its too frequent consequences in that weakness of character which unfits a people for developing a highly organized industry. These are serious perils: but yet it remains true that the collective efficiency of a people with a given average of individual strength and energy may increase more than in proportion to their numbers. If they can for a time escape from the pressure of the law of diminishing return by importing food and other raw produce on easy terms; if their wealth is not consumed in great wars, and increases at least as fast as their numbers; and if they avoid habits of life that would enfeeble them; then every increase in their numbers is likely for the time to be accompanied by a more than proportionate increase in their power of obtaining material goods. For it enables them to secure the many various economies of specialized skill and specialized machinery, of localized industries and production on a large scale: it enables them to have increased facilities of communication of all kinds; while the very closeness of their neighbourhood diminishes the expense of time and effort involved in every sort of traffic between them, and gives them new opportunities of getting social enjoyments and the comforts and luxuries of culture in every form. No doubt deduction must be made for the growing difficulty of finding solitude and quiet and even fresh air: but there is in most cases some balance of good.*

This view was supported by the American economist J. B. Clark. In 1885 he argued that increasing effectiveness of the labour outside agriculture would compensate for the need to employ more people in food production (Spengler 1933). Pareto, in 1906, was even more dismissive. According to him Malthus' work was confused, imprecise, and error-ridden (Spengler 1944). And Irving Fisher's treatment on Malthusian wage fund theory was no less harsh (Fisher 1896).

A possible reason that Malthusianism came out of fashion in the late 19th century is the economic progress optimism that characterized the pre-1914 period. This is evidenced by the fact that the catastrophe of World War I and its chaotic aftermath generated a rebound of Malthusianism (Petersen 1955). A leading figure in the rebound was J. M. Keynes who pointed to population pressures and diminishing returns as key economic problems. Yet, the 1920s ended with a magnificent statement of the opposite view, A.A. Young's paper on increasing returns and economic progress (Young 1928). For the post-war discussion about population growth and economic growth no contribution has been of larger importance than Solow's (1956) paper "A contribution to the theory of economic growth" . The Solow model—originally conceived as an attack on the then popular Harrod-Domar model of

economic growth—makes formally explicit much of the discussions about capital accumulation, labour force growth, wages and rates of return on capital that had been going on since the time of Adam Smith. The success of the model rests on the fact that the model achieves this comprehensiveness within a simple and clear analytical structure. One might even argue that the model has been too successful. This advanced tool—allowing economist to play with rates of technical change, labour force scenarios, types of savings behaviour, and production functions, and to analyze the outcome with respect to per capita income, capital-labour rations—turned out to be irresistible. And, almost in the way teenagers become infatuated with a computer game, economists can be accused of preferring trips in the virtual reality of the Solow growth model to the analysis of real-life economic development.

The answers given by the Solow growth model with respect to the effect of population growth are simple.

(1) Population growth may, also in the long run, be compatible with constant real wages. Or, if there are continuous improvements in technology, even with increasing real wages.

This conclusion rests on the fact that Solow assumes that there are constant returns to scale when inputs of labour and capital are increased in proportion. This "amounts to assuming that there is no scarce non-augmentable resource like land". And, Solow adds: "Constant returns to scale seems (?) the natural assumption to make in a theory of growth. The scarce-land case would lead to decreasing returns to scale and the model would become more Ricardian". The Malthusian "devil"—that is the fear that population growth must outrun available natural resources—is, thus, put to rest by means of an explicit assumption. This can be seen as an ingenuous adaptation to the existing empirical evidence. Population growth had been shown to be compatible with increasing real per capita income. What would, then, be the point to have a model that rules out this possibility?

On the other hand, the constant returns to scale-assumption also implies the following: Smith's and Young's idea that an expanding scale of production can improve productivity is assumed away. This might have technical reasons (see his discussion in note 7), but the effect is that the connection between the real world and the virtual world of the Solow-growth model literature becomes tenuous. In the Solow-model world there are no natural-resource constraints, and no increasing-division-of-labour effects on productivity. Thus, it is a world both without land, and without cities. As I see it, this can be an important reason why communication about economic development between economists and other social scientists at times has been severed.

Solow's elegant solution, thus, comes at a price. Marshall sees constant returns as a possible outcome of diminishing returns in the production of raw materials balanced by increasing returns in other sectors. Solow, in turn, takes this possibility as an established fact. If diminishing and increasing returns always are in balance, such an assumption is not problematic. However, if Marshall is correct in his view that diminishing returns sometimes can dominate over increasing returns, or the other way around, then a model based on constant returns will be of little help in explaining the patterns of economic development that we can observe.

The constant-returns-to-scale assumption does not imply, however, that differing population growth rates are of no importance. What comes in focus when the land constraint is removed is instead the balance between labour force growth and capital accumulation. If the capital stock is constant or grows at a lesser rate than the labour force the real wages will fall. Slower population growth, thus, becomes a means to raise per capita growth rates. In this respect, the Solow-model can be designated as neo-Malthusian. By establishing a relation between population growth, capital accumulation and changes in the real wage the Solow model can be seen as capturing important aspects of Adam Smith's discussion about the relation between stocks and labour demand as well as some of the

ideas that the wage-fund theory expressed, albeit in a marginal formulation. Thus, it is conceivable that Solow's model would have been appreciated by staunch neo-Malthusians such as Mill and Wicksell.

The success of the Solow model has been such that economic growth often is conceived as a Solow-model process. It has become the standard model and, thus, using a Solow-model to analyze economic growth doesn't require any further justification. The burden of proof is instead put on those who introduce alternative assumptions. In this way, the assumptions underlying the Solow-model are often not seen as assumptions but as representation of reality. This is not an innocuous practice. For example, a motivation for the constant-returns-to-scale aggregate production function is that the economy consists of identical, relatively small, optimal sized firms (Solow 1956, p 79). Using the Solow model to represent a real-world economy, thus, can suggest that this is an economy characterized by pure competition.

Another necessary assumption of the Solow model is that labour is homogenous. If not, labour cannot be an input in the aggregate production function. But if the division of labour is extensive, then individual workers and professionals that have been trained in specific task are not substitutes. The practice of using the Solow model as a standard model, however, imposes the idea of homogenous labour on reality. As a consequence it provides a basis for the belief that cities that grow by immigration will experience a strong downward pressure on wages, despite massive evidence to the contrary.

Post-war growth economics, though, is far from being variations on a Solow theme. Through the 1950s, 1960s, 1970s, 1980s and 1990s there has been a steady stream of approaches that look seriously on the role played by increasing returns to scale, heterogeneous inputs, and market size. Of special interest here is trade theory where the traditional, constant returns to scale model of Heckscher-Ohlin has lost much of its dominance to theories based on increasing returns. Moreover, the endogenous growth literature that has grown up since the 1980s brought new life to economists' interest in the role of external economies in economic growth.

The conclusion is that the conflicting views on the role played by population growth that was exposed already by Adam Smith and Thomas Malthus remains unresolved. The Malthusian idea that population growth will reduce real wages is still present in the popular Solow model, albeit in a neo-Malthusian, non-deterministic form. Similarly, the idea that expanding markets and increasing returns can generate economic development is alive in the new growth theory and in the "economic geography" subfield of economics. Despite almost 250 years of debate, economic theory still cannot provide us with a consistent answer to the question of how population growth affects economic development.

The dividend approach

The inability of economic theory to provide a clear understanding of the relation between demographic change and economic development was challenged by a set of empirical findings made since the mid-1990s. The most important of these findings was the demographic-dividend effect, a discovery that solved the 200-year old problem in economic analysis we have discussed above. Considering how simple the solution turned out to be it is surprising that it took so long to find it.

The mid-1990s studies demonstrated that the effects of demographic change on economic development depend on the nature of population growth. What matters is the answer to this question: Is there an expansion of children, working-age adults or post-working-age adults? Once this question is taken into account the empirical correlation between population change and economic growth turns out to be strong and clear-cut. An increase in the young dependent population has a negative effect on per capita income growth, whereas an increase in the working-age population has a positive effect.

How can this strong effect of demographic change on economic development be explained? The theoretical reason to expect this result is the existence of an economic life cycle that strongly influences the behaviour of people as they go from childhood to adulthood and old age (Modigliani and Brumberg 1954; Modigliani 1975). The economic behaviour of individuals varies over the life cycle and, therefore, the macro-economic effects will differ depending upon the age-composition of population growth. From this follows that a population might create very different economic conditions, depending on which age group that predominates population growth: children, younger adults or the old aged.

Most important, from a life cycle perspective, is the indisputable fact that an individual's productive capacity varies over the life cycle. Newborn humans are unable to survive without the support of older, more able-bodied custodians. Many years of care, education and training are needed before children have acquired the productive potential of an average adult. Similarly, above a certain age, individual productive capacity tends to decrease, until it finally falls short of what people need for survival. Towards the end of life, some of us become as helpless as we were as newborn babies.

By contrast, most adults have a capacity to produce more than they need for their own immediate survival. They are not only able to support themselves, but they also typically act as providers. Moreover, in the course of the life cycle, people acquire experience, and they also tend to build up savings. In consequence, people in their middle ages are often richer in resources that younger adults. All in all, the youngest and the oldest members of a society constitute an economic burden, while working adults – and in particular the middle aged – produce a surplus on which economic growth and development depend.

It can be asked why it took so long for a simple idea like the dividend approach to be acknowledged and empirically demonstrated? One possible explanation is that the empirical data required did not become readily available until the early 1990s. One important source are the Penn World Tables also referred to as the Summers-Heston data set, containing PPP-adjusted measures of per capita income for more than 100 countries for the post-1960 period. As second important data set is the UN Population Division's World Population Prospects which was first released electronically in 1989.[6] When these data were at hand it became straightforward to decomposition population growth into different age components and then assess their effect on per capita income growth separately from each other.

Lower mortality and economic growth

Changing age structure is not the only characteristic of the demographic transition. Declining mortality and fertility are as important. In recent years the relation between n low mortality and high per capita income has been given a radical re-evaluation.

Increasing income has traditionally been seen as a major driving force for improved health and increased life expectancy. But from the late 1990s there was an increased interest in the possibility that improved health also could stimulate economic development. Theoretically, four different paths can be of importance (de la Croix and Licandro 1999; Kalemli-Ozcan, Ryder et al. 2000; Zhang, Zhang et al. 2001; Kalemli-Ozcan 2002; Bloom, Canning et al. 2003; Boucekkine, de la Croix et al. 2003; Zhang, Zhang et al. 2003).

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[6] The Penn World Tables that were supplied on floppy disks in 1988 and reissued in a new version in 1991. The World Population Prospects, with data on age distributions, was first released electronically on floppy discs in 1989. The first CD-ROM release of the World Development Indicators (registered in the Library of Congress) is dated 1991.

First, higher life expectancy can increase the expected returns on education. Individuals that can expect longer working lives benefit more from education that raises there annual wage than individuals with a short working life.
Second, increased life expectancy implies that more people can expect to reach retirement age. This is likely to increase the amount of savings for retirement purposes.
Third, low mortality is a trigger of low fertility. The mortality decline, therefore, has been as a driving force for a shift from investments in child quantity to child quality.
Fourth, lower adult mortality also stimulates a more extensive division of labour.

3.3 Demography and economic growth: empirical evidence

A number of empirical studies give strong support to the idea of demographic change as a driving force behind social and economic development. One example is recent research on the post WWII baby boom Several studies have estimated that this demographic shift was responsible for one-third of East Asia's economic growth between 1965 and 1990. A similar development, on a smaller scale, has been observed in Ireland. As in East Asia, the Celtic Tiger experienced a significant increase in the working age population. In contrast, studies on Sub-Saharan Africa illustrate how continued high fertility makes it difficult to rise out of poverty.
East Asia's baby boom. East Asia's remarkable economic growth in the past half-century coincided closely with demographic change in the region. As infant mortality fell from 181 to 34 per 1,000 births between 1950 and 2000, fertility fell from six to two children per woman. The lag between falls in mortality and fertility created a baby boom generation. Between 1965 and 1990 the region's working-age population grew nearly four times faster than the dependent population. Several studies have estimated that this demographic shift was responsible for one-third of East Asia's economic growth during the period (i.e., the "demographic dividend").
Labour supply and the Celtic Tiger. From 1960 to 1990, the growth rate of income per capita in Ireland was approximately 3.5 percent per annum. In the 1990s, it jumped to 5.8 percent, well in excess of any other European economy. Demographic change contributed to the country's economic surge. In the decade following the legalization of contraceptives in 1979, Ireland saw a sharp fall in the crude birth rate. This led to decreasing youth dependency and a rise in the working age share of the total population. By the mid-1990s, the dependency burden in Ireland had dropped to a level below that in the United Kingdom.
Two additional demography-based factors also helped fuel economic growth by increasing labour supply per capita. First, while male labour force participation rates remained fairly static, the period 1980–2000 saw a substantial increase in female labour force participation rates, particularly in the 25-40 year old age group. Although one would expect rapid economic growth to encourage female labour participation, it seems likely that at least some of the increase was due to the availability of contraception and women's increased freedom to choose between working and rearing children. Second, Ireland historically had high levels of outward migration of young adults (around 1 per cent of the population per year) due to the inability of its economy to absorb the large numbers of young workers entering the labour market created by its high fertility rate. The loss of these young workers exacerbated the problem of the high youth dependency rate. The decline in youth cohort sizes and rapid economic growth of the 1990s led to a reversal of this flow, resulting in net in-migration of workers, made up partly of return migrants and also, for the first time, substantial numbers of foreign immigrants.
Continued high fertility in Sub-Saharan Africa. Demographic change of a very different type can account for slow economic development. Much of Sub-Saharan Africa remains

stalled at the first stage of a demographic transition.[7] Fertility rates actually increased a bit during the 1950s through the 1970s and only recently have begun a slow fall. As swollen youth cohorts have reached working age, an inadequate policy and economic environment in most countries has prevented many young people from being able to engage in productive employment. The existence of large dependent populations (in this case, of children) has kept the proportion of working-age people low, making it more difficult for these economies to rise out of poverty.

3.4 Wider implications of the age transition: Four examples

What research on the dividend effect has demonstrated is that age structure change plays a fundamental role in triggering economic development. However, the effects of age transitions extend to other areas of social, political, and economic development as well. In order to shed light on these wider implications of the age transition, four national cases will be reviewed in greater detail. These cases illustrate, with regard to different cultural contexts, that the age transition is closely related to the process of modernization.

The first case is Sweden, a country for which reliable demographic data covering the entire age transition are available. Due to this, Sweden can be used as a model for the analysis of how the age transition affects social, economic and political development. Japan, the second case, was the first Asian country to complete the demographic transition (in the 1950s) and to reach the old age phase (in the late 1980s). China, the third case, has experienced a dramatic demographic transition, characterized in particular by a rapid fall in fertility. In consequence, the country is currently experiencing a powerful age transition. Finally, Egypt is an illustrative case of a prolonged demographic transition, characterized by a remarkably slow fertility decline .

Sweden

For Sweden, the different, partly overlapping, phases of the age transition are quite easy to identify, as was demonstrated in figure 3.4 above. The first phase, associated with an increasing number of children, started in the early 19th century and continued to World War I. The second phase, with an expansion of the young adults, started around 1840 and continued into the inter-war years. The third phase with an expanding middle aged population started in the 1870s and continued up to the 1960s. A fourth phase with an expanding old age population started in the early 20th century and continued up to the 1990s. Still today the “hump” created by the demographic transition is clearly visible, but now we have to look at the very oldest age groups, above 80 years of age, to find these cohorts. The age transition in Sweden, thus, was a process that lasted for almost two hundred years.

What does the Swedish case tell us about the wider economic, social and political implications of the age transition?

Beginning with the child phase, Swedish empirical evidence confirms the basic economic relationship between age composition and economic growth. Due to the limited productive capacity of children and their dependence on care, education and training, the child phase in Sweden – as in other countries - was closely related to poverty.

[7] Some African nations – notably Zimbabwe and those in southern Africa including Namibia, Botswana, and South Africa – are beginning to experience faster fertility declines.

Sweden entered the *child phase* in the 1820s. At this time, declining mortality rates resulted in significantly larger cohorts of children. In the wake of this demographic shift, the period from the 1830s up to the early 1870s was marked by recurring political struggles about the so-called "poverty question". Contemporary evidence tells the story of a country challenged by an unexpected population growth and alarming signs of disintegration and destitution. The connection between children and rural poverty in 19th century Sweden is confirmed by the fact that the share of children (0-14 years of age) in Swedish counties around 1870 is strongly correlated with the poverty rate (defined as the share of adults unable to pay taxes). Statistical analysis shows that a one-percent increase in the share of children corresponds to a 2.5 percent increase in the poverty rate. The share of children explains slightly more than 50 percent of the regional variation in poverty (Malmberg and Sommestad 2000).

Another characteristic feature of the Swedish child phase was the occurrence of child labour, a phenomenon clearly connected to the state of poverty (Cunningham; Cunningham 1990; Cunningham and Viazzo 1996). In Sweden, child labour was widespread during the child phase, and regional analyses indicate that the incidence of child labour peaked in different regions when the share of children in the population was at the highest level.

Finally, the Swedish example illustrates how child abundant countries typically depend on foreign capital. In Sweden, the entire child phase, from the 1820s up to World War I, was marked by capital imports. Lennart Schön has shown that for 60 years Sweden's current account was negative: from the 1850s up to the 1910s. By 1910, Sweden was probably one of the most indebted nations in the world. The estimated debt amounted to 75 percent of GNP. A similar correspondence between age structure and the dependence on foreign capital has been observed for several countries in the 20th century as well (Higgins and Williamson 1997).

In Sweden, the *young adult phase* started in the 1840s and continued – with some delay during the period of mass emigration in the late 19th century – to about 1940 (see Figure 3.4). The most clear-cut period of youth increase lasted from the 1890s to about 1940. In these decades, when mass emigration finally came to an end, Sweden experienced a continuous growth of the young population.

What were the characteristic features of this period? First and foremost: the young adult period in Sweden was strongly associated with modernization. Poverty prevailed, but as larger cohorts entered into working age, a prospective spirit became more marked. As other youthful societies, Sweden became increasingly oriented towards the future.

The young adult phase was a time of agricultural transformation, liberalization, railway building, migration, urbanization, industrialization, popular movements, and, towards the end of the period, rapidly falling birth rates. New industries emerged, international trade developed, and financial markets boomed – and collapsed. Furthermore, the increase in the share of young people coincided with substantial emigration, above all to the United States, and with increasing social and political conflict. In response to these developments, Swedish society experienced a strong movement towards democratization and more extensive state intervention. In the late 19th century Sweden, modern ideas about public health, social security, protective labour legislation, urban housing, vocational education, etc. were launched, and these policies, designed to deal with the multiple risks, dangers and possibilities of early industrialization, would later form the basis for more comprehensive welfare state policies.

In view of the typical life-cycle pattern, it is actually not surprising that observations from the young adult phase show a largely positive macro-economic development, mixed with reports about individual economic hardships and political instability. In contrast to children, young adults can support themselves with their labour. This favours economic development. However, young people are in general less stable than older citizens are. For

example, they are more mobile. The overwhelming proportion of all migrants, from the 19th century and onwards, has been young adults. Furthermore, young people lack life experience, earn less, and have a limited capacity to generate savings. Finally, it is probable that a large increase in the share of young, less experienced labour will push down the relative wages of this age group, while the growing need for investments, not least in housing and infrastructure, will drive up the price of capital. Income inequality and inflationary pressures may follow (Malmberg and Sommestad 1997).

More stable economic conditions characterize the third phase of the age transition, the *phase of population maturity*. In Sweden this phase started around 1870 and continued up to about 1970. The increase of the middle-aged group was particularly strong in the period 1920 to 1960 (see figure 3.4).

A common characteristic among countries that have entered the middle age phase is sustained economic growth. Countries that for a number of decades have benefited from increases in the middle-aged group seem without exception to have entered the club of industrialized countries (Malmberg 1994; Lindh and Malmberg 1999). This is true both for the countries that industrialized early and for more recent members in the club such as Japan, Korea and Singapore. An increase in the group of middle-aged people is thus clearly associated with a more developed stage of economic growth, a stage that the economist Walt Rostow once designated ”the drive to maturity” (Rostow 1960).

As regards Sweden, the phase of population maturity overlaps almost exactly with the most successful period of economic growth. Between 1920 and 1970 the Swedish GNP per capita grew by almost 400%. The average annual growth rate was 3.2 %. This compares to a 1.1% annual growth rate in the 50 years before 1920 and a 1.6% annual growth rate between 1970 and 2000 (Maddison 1991). In view of this remarkable rate of growth, it is important to note that this was also the period, when the work force participation among Swedish women decreased markedly. In the 1950s it eventually reached its lowest level ever, slightly above 40 percent.

Some factors causing the correlation between middle-aged people and economic growth are still to be identified. Observations of economies, however, that pass through the phase of population maturity fit well with the micro-economic characteristics of middle aged people. One important factor is savings behaviour. When people enter this part of the life cycle, they tend to save more, and in addition, they increasingly switch their investments from housing, for example, to financial assets. This is important for industrial investments. Other factors are life experience and well-developed social networks among the middle aged. It can be expected that this type of capacity, that we may call ”human capital”, is of great importance to the emergence of modern industrial economies. As regards women's low work force participation in this period, it is likely that low youth- and old age dependency rates make it possible to reach economic growth without gainful labour of younger married women. With an ample labour supply, women can more easily focus on domestic chores and child rearing.

The final phase of the age transition, *the phase of older age,* is largely a late 20th century phenomenon. In Sweden, as well as in the other Scandinavian countries, the growth in the share of old aged people did not accelerate until after World War II, see table 3.4. However, once the process of ageing had begun in Sweden, it was remarkably rapid, and up to 1990, no other country has had such a pronounced ageing process as Sweden.

Due to availability of reliable comparative data collected by the OECD, it is possible to find out how the expansion of the old age group is correlated with macro-economic performance. Two features stand out. First, ageing countries have experienced a decline in economic growth, along with a number of related negative economic trends. Thus, statistical analyses of OECD data show that there is a negative association between, on the one hand, the share of people above age 60 and, on the other hand, per capita income

growth, productivity growth, rate of capital formation in the business sector, foreign trade balance, and housing investments. Ageing is also associated with increasing long-term interest rates. If we differentiate between different groups of old aged, people above 80 years of age stand out as particularly costly.

Second, population ageing in the OECD countries has been closely connected with growing public expenditure and budget deficits. There is thus a strong positive association between the share of people over age 60 on the one hand, and government consumption, public sector employment, public debt, and tax levels on the other hand. All in all, these correlations indicate that the *old age phase* of the age transition is associated with a major structural shift in the economy away from a traditional high-growth industrialized economy towards an economically less vigorous welfare state. If the results are compared to life cycle behaviour, it is evident that the decreasing productive capacity, that marks individual ageing, translates into the macro economy as well (Lindert 1994).

In Sweden, with its pronounced process of ageing from the 1970s onwards, the correlation between ageing and welfare state growth is evident indeed. In particular, expenditures for old age care and services, health care, and childcare have expanded. Parallel to this, women's labour force participation has increased, and in particular within the public sector, part time work has become institutionalized. In contrast to the 1940s and the 1950s, only very few Swedish women are today full-time homemakers.

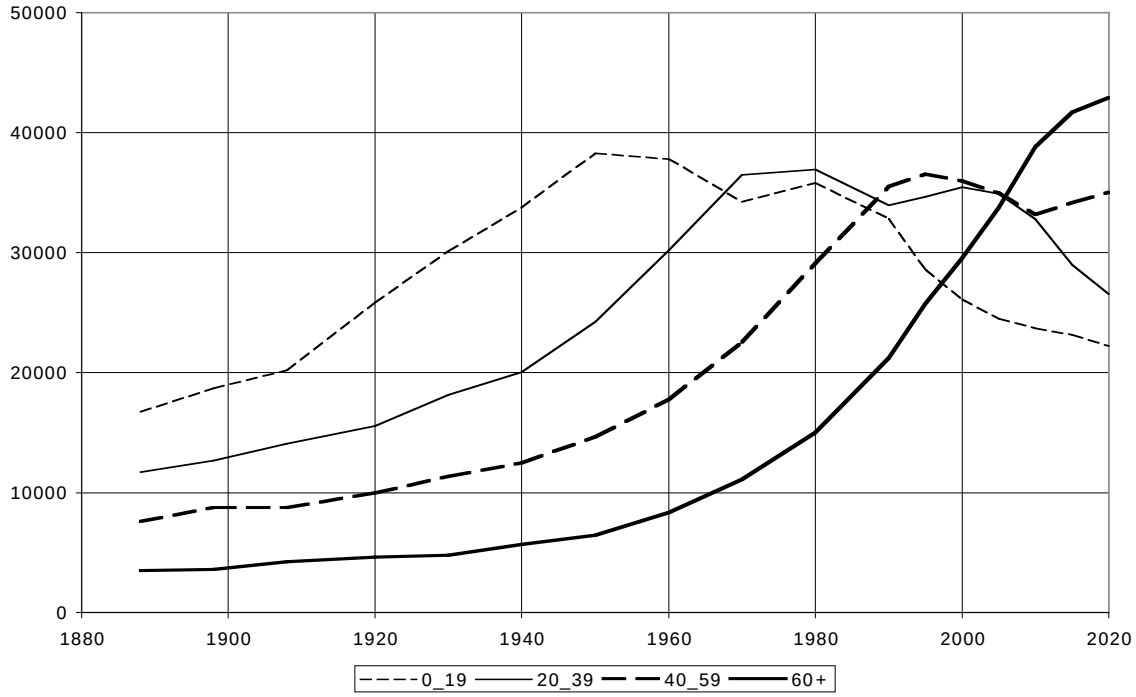
In some respects this last phase of the age transition has similarities to the first, the phase of child abundance. This is not surprising, since both the earliest and the last phase of the life cycle are characterized by a deficit of productive capacity in relation to consumption needs. There are, however important differences as well. The old-age phase of the transition comes after a period of strong economic growth and, therefore, it is not likely that it will generate mass poverty. Another difference is that in the child abundant period individuals must cope with subsistence problems largely on their own. This is not so in the old-age phase when public institutions and public transfers of income hitherto have played a much larger role for the redistribution of resources between people of different ages and also between regions.

Japan

Japan provides a nice example of a near completed age transition (see Figure 3.5). As shown in this figure there was already substantial growth in the child group during the last decade of the 19th century and growth in this group accelerated after 1908. Growth in the child group continued up to 1950 when it was abruptly halted and then reversed. Growth in the young adult group had also started by the end of the 19th century but it was accelerated in the 1920s and between 1940 and 1950. Growth in the young adult group was strong up to 1970 when growth, like in the child group 20 years earlier, abruptly halted. Growth in the middle age group started slowly after 1908 and accelerated after 1940. The period of the largest increase was between 1960 and 1990, but thereafter, it came to a sudden end. Growth in the old age group has almost entirely been a post-1950 phenomenon. In the 1950s only one in twelve Japanese was above 60 years of age. Since then the number of old aged people has grown rapidly. Soon after 2010, one in three Japanese will be above 60 years of age.

In correspondence with the Swedish development, we can expect that Japanese economic, social and political development since the late 19th century has been strongly influenced by the age transition. This is also the case, although the Japanese case differs in certain respects from the Swedish one.

Figure 3.5



One distinctive difference is that mass poverty, as it seems, did not materialize as a political problem during the child phase in Japan in the same way as it did in Sweden. This is not to say that Japan during the child phase was an affluent country. On the contrary, income per head in Japan in the early part of the 20th century was only between 10-20% of the English level and between 30-40 % of the Italian level (Johansson and Mosk 1987). Moreover, the budgets of the overwhelmingly rural population were very meagre (Nakamura 1921). The low living standard in the Japanese countryside was seen as an important motivation for young people to migrate to the cities (Taeuber 1951). Analysts have also argued that a driving force behind the strong mobilization of Japanese tenants against the landlord was declining living standards (Allen 1926). However, the challenges of poverty were dealt with in Japan in ways that largely prevented political conflicts.

How did Japan meet the challenges imposed by an increasing child dependency burden? Perhaps the most important reaction was the mobilization of family labour. Since a large-scale expansion of agricultural acreage was not an option (the agricultural area could only be increased by 20% between 1881 and 1929, Johnston 1951), family labour was instead largely mobilized in non-agricultural sectors, domestic and rural small-scale industries. For example in silk and cotton weaving, 56 % of the employed worked in establishments with less the 5 employees, according to an official estimate made in the 1920s. Another estimate states that 90% of the production of cotton crepe, an important export good, was carried out in the homes of farmers. Many other goods like shoes, brushes, cutlery, umbrellas, lanterns, and pottery were also produced in home industries (Orchard 1929).

Still in 1920, 67 % of the manufacturing workforce was employed in rural locations (White 1978, table 2). Also much of the largely female labour of the textile mills was connected to the family economy, where they stayed in dormitories. Child work was a regular feature of the family economy. In 1930, 44% of all girls were gainfully employed at age 14, 62 % at age

15-19 (Taeuber 1951). Especially in the textile industry did child labour constitute a major part of the workforce (Matsuoka 1931).

Another factor that helped secure subsistence was increased agricultural intensification, including a large-scale introduction of commercial fertilizers and the development of new rice varieties that responded favourably to the application of more fertilizers (Johnston 1951). With these new methods, it became possible to increase the yield per acre by more than 50%. It is interesting to note that an increase in the use of commercial fertilizers implies that also non-agricultural production on the farm can be seen as a part of the subsistence strategy. By engaging in the production of non-agricultural goods the rural population earned incomes that could be used to finance purchases of fertilizers. The subsistence problem of the Japanese rural population, therefore, was partly solved by their participation in an extended division of labour.

In Japan, a reliance on imported food played an important role in restoring the balance between subsistence needs and production capacity during the child phase. Until the end of the 19th century Japan was virtually self-supporting with respect to food. However, during the first decades of the 20th century imports became increasingly important (Allen 1926). In the 1930s about 20% of the rice was imported (Holland 1936). By 1951 food imports had reached $558 million and contributed the most important part of the large trade deficit of Japan. At that time food imports was five times more important than the importation of iron ore and coke (Cohen 1952).

In general, Japan's young adult phase shares many characteristics with those of other countries. There was rapid urbanization. In the period from 1920 to 1969, the share of the population living in urban areas tripled, from only 18.1 percent to 63.6 percent (Mosk 1977). There was also rapid industrialization. In the interwar years Japan became a major exporter of cotton goods. In competition with British producers Japan was able to capture a large share of the Indian and Chinese market. Another sector with rapid growth was silk production. Exports grew from 189 million yen in 1913 to 784 in 1929. In the 1930s Japan was, in fact, accused of social dumping because of its ability to produce cheap cotton goods (Hansen 1937). However, even if the Japanese industry grew rapidly it didn't become a dominating sector in terms of employment. Until after World War II Japan was a predominantly rural country.

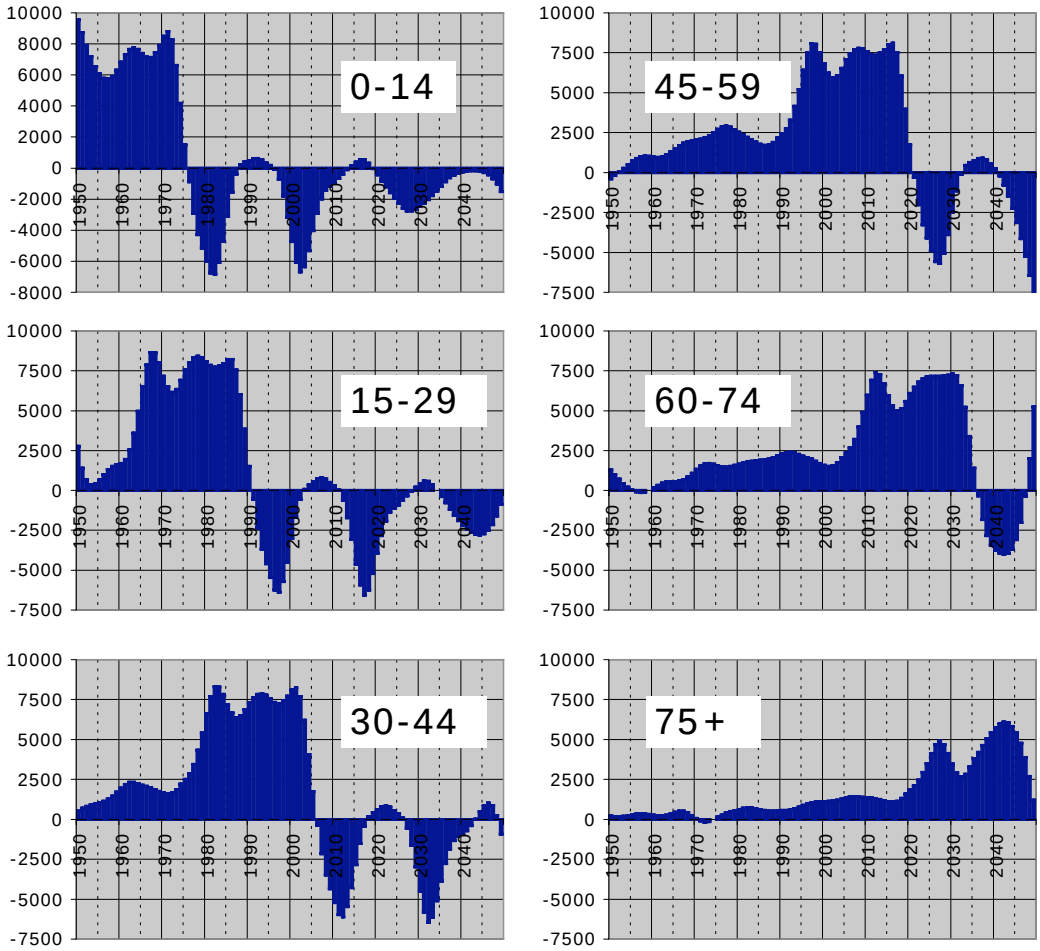
The expansion of the young adult population led to strong social tensions. During the inter-war years the most intense struggle took place in the Japanese countryside between landlords and agricultural tenants. The latter were organized in associations similar to labour unions. The main issue was the level of rents and the battle was fought with rent strikes, with evictions, and in the courts. Social unrest continued after World War II with recurring strike waves and incidents of mass demonstrations (Passin 1962; Smith 1970; Kim 1993).

With respect to migration Japan is not typical. Certainly, emigration became important during the young adult phase. However, many countries closed their borders to Japanese migrants and this prevented Japanese emigration from reaching massive proportions (Bronfenbrenner 1961; Tigner 1981). In 1938, when Japan's population was estimated at 72.2 million there was, according to official statistics, 1.38 million Japanese living abroad (Rager 1941). On the other hand, after Japan's defeat in World War II, 6.2 million Japanese—ex-soldiers, civilian migrants, and ethnic Japanese—returned to the home country (Taeuber 1950). This indicates that the young adult phase had generated, if not emigration proper, so at least different forms of large scale outward movements of people.

The pace of Japan's economic development was much discussed during the 20th century. The military victory over Russia in 1905 brought attention to Japan's increasing strength and the early development of the Japanese cotton industry caught the eye of Western observers. Still in the 1920s there were voices that answered the question "Can Japan

Develop Industrially?" in the negative (Orchard 1929). An important argument for this view was Japan's large dependence on a large agricultural sector that, in spite of improvements in hectare yields, demonstrated clear signs of exhaustion in the interwar period. Thus, in spite of a successful development of many industries before 1950, the most impressive gains in per capita GDP were made after 1950. At this time Japan had an estimated per capita income of $1873 (constant 1990 ppp US Dollars) according to Maddison, compared to $1334 in 1913 and $741 in 1870. In absolute terms, this increase cannot be designated as "miraculous". However, between 1950 and 1973 per capita income rose from $1873 to $11017 in constant ppp USD and to $19425 in 1990. The period of the Japanese rise to an affluent society coincides, as the age transition framework would predict, with the middle age period.

Figure 3.6



A note on China

China's age transition has been very dramatic (see Figure 3.6). Up to the mid 1970s the number of children increased rapidly. This came to a halt, as strong restrictions were imposed in order to reduce population growth. The young adult phase begins in the early

1960s and end by 1990. The proportion of early middle-aged people has been expanding from the end of the 1970s and the group of late middle-aged from the 1990s. The elderly are still few.

In China, the child phase of the 1950s and 19602 chimes well with what could be expected in a country with a substantial burden of children to provide for. China was, for a long time, dependent on aid from the Soviet Union. It failed to achieve a broad industrialization during the so-called Great Leap Forward in 1958-1959. Instead, the country was hit by a devastating famine.

The 1960-1990 youth phase coincides in China with the shocking Cultural Revolution after 1965, and with a severe housing shortage, falling fertility rates and the introduction of a strict one-child policy. Major economic reforms were launched towards the end of the 1970s, and the pace of economic reform increased in the 1980s. In 1989 demonstrators demanding democracy challenged the dominant position of the Communist Party. All in all, the youth phase in China was strongly marked by political repression and great strains on the social and political structures.

Since the 1990s, the largest Chinese cohorts entered their middle ages. In line with the demographic-dividend effect, this shift in the Chinese age structure contributed to an impressive economic take off that still pervades Chinese society. However, the proportion of early middle-aged people in the Chinese population has already started to fall. After 2020 the same thing will happen with the late middle-aged. During the remainder of the 21st century, elderly people will dominate Chinese society.

Egypt

During the 20th century Egypt has experienced a dramatic growth in its population. Already in 1950 this country had 22 million inhabitants. Since then its population has nearly tripled to 74 millions. Behind this growth is the familiar demographic transition pattern combining declining infant mortality with relatively high fertility. The total fertility rate in Egypt started to decline in the 1960s but is still on a relatively high level (3.3 in 2000-2005[8]).

As in other countries, the demographic transition in Egypt has produced a long-term age transition with first an increasing number of children followed by an expansion in the young adult group, and later the beginning of an expansion in the middle aged group (see Figure 3.7).

As can be seen in Figure 3.7 the child phase was under way in Egypt already by 1950, and according to UN projections it will probably last until 2020. The expansion of the young adult group started in the mid-1960s and is still accelerating. Growth in the middle-aged population was relatively slow until 1990, but has since then it accelerated. Until recently, the absolute growth in the old age population has been modest, but this group will start to expand more rapidly in the decades to come.

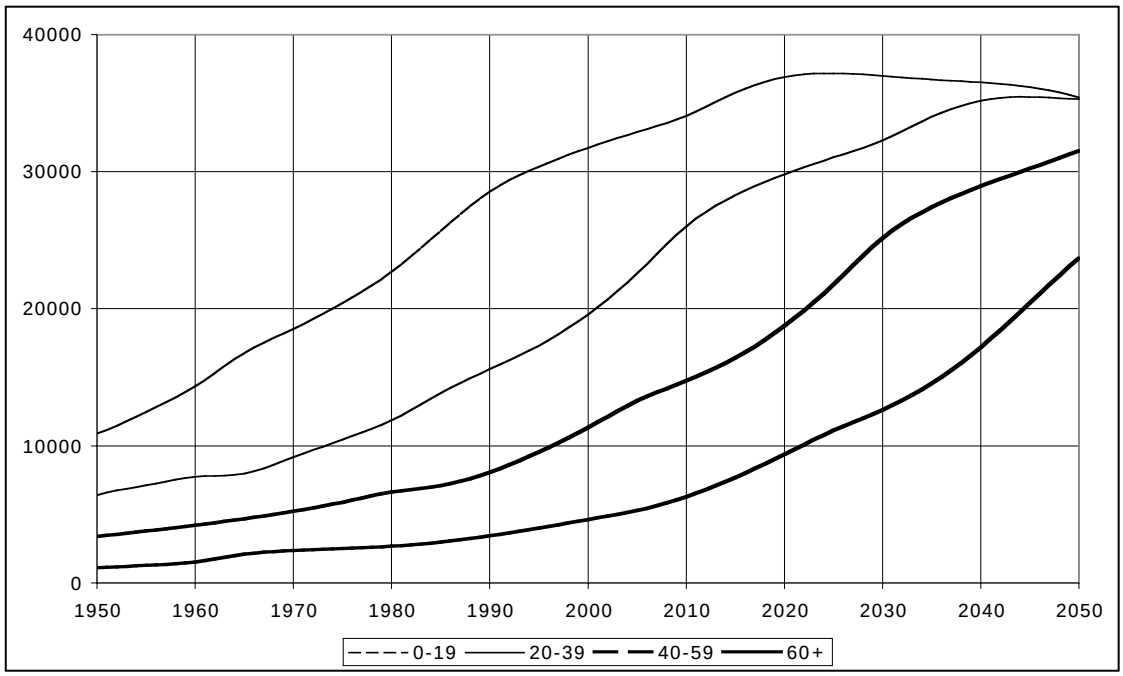
To analyze Egypt's social and economic development, the age transition approach provides a useful framework.

As regards the child phase, Egypt gives evidence of multiple strategies to cope with the burden of growing cohorts of children. One such strategy is to increase the participation of children in productive activities. According to ILO statistics, more than 25% of Egyptian children in the age group 10-14 were in the labour force in the early 1960s. Thereafter the share declined, but not until after 2000 did the labour force participation of 10-14 year old children go below 10%. And by international standards this is still a high figure. This

[8] According to UN World Population Prospects, 2004 revision.

history of child labour in Egypt corresponds well with the development of Egyptian child dependency. According to UN statistics, the child dependency rate in Egypt reached a maximum in the early 1960s and did not start to decline rapidly until the end of the 1980s.

Figure 3.7



A second Egyptian strategy to cope with child-related poverty has been to increase the mobilization of available resources for the production of subsistence goods, in particular food. Since it is not possible to increase the acreage of land used for agricultural purposes, due to climatic reasons, many households have chosen instead to reduce the production of non-food crops. This strategy is evidenced by a drastic reduction of the production of seed cotton. The production of this traditional Egypt staple peaked in the early 1960s at a level of 1.5 million metric tones. During the first years of the 2000s production was down to 700,000 metric tons, less then half of the peak level. The amount of land devoted to cotton production has been reduced even further, from one third of Egypt's arable land in 1962 to barely 10% in 2004.

The downside of decreased cotton production is that cotton was Egypt's most important export good in the 1960s. In combination with an increase in the domestic demand for cotton, reduced production has led to a shortfall in export earnings, resulting in a negative current account. In consequence, Egypt has been dependent, during the child phase, on foreign credit and transfers to finance a large part of its imports. As shown (Hebertsson and Zoega 1999) this is a typical pattern of countries with high dependency rates.

Despite a high level of resource mobilization, Egypt has not been able to avoid high poverty levels during the child phase. An indicator of this is provided by WHO estimates of malnutrition, based on measures of height in relation to age. According to this estimate the malnutrition prevalence was almost 40% among children under age 5 in Egypt in 1978. As the child dependency burden declined after 1990 the problem of malnutrition was reduced. It fell under 30% in the early 1990s and in 2003 it was approaching 15%.

The Egyptian youth phase started, as shown in Figure 3.8, in the 1960s. Since 1965 the number of young adults, 20-39 years old, has been growing at a rate of 2.5% per year.

Trends associated with the young adult period in the age transition framework are agricultural transformation, high population mobility, urbanization, and industrialization. But the young adult phase also stands out as a period of rapid institutional change and of increasing social tensions.

In both the socio-economic and political dimensions Egypt is a typical young adult phase country with the exception that urbanization has not been as dramatic as it often is when the young adult population expands. Already in 1960, 38% of Egypt's population lived in urban areas[9]. By 2003, this figure has risen to 43%. Considering that the total population had risen from 28 to 71 million during the same period this still implies a strong increase in the urban population. A continued relatively high share of rural inhabitants has not, however, implied a restriction on the growth of non-agricultural employment. Between 1970 and 2000 agricultural employment only grew by 1.2 million, whereas industrial employment increased by 2.4 million and service employment with 6.3 million. The share of agriculture in employment, thus, has declined from 50% to 30%.

Also with respect to migration Egypt follows the expected pattern. Egypt became a country of net emigration after 1965. Since then, according to the UN, Egypt has suffered net migration losses of nearly 4 million people. Assuming that the net migrants have been largely working age adults this implies that foreign labour markets have absorbed more of Egypt's expanding labour force than the domestic industrial sector.

Emigration has contributed to solving Egypt's employment problem by "exporting" part of the large youth cohorts. During the last quarter century remittances from workers abroad have also covered about 60% of Egypt's trade deficit. Emigration, thus, has made an important contribution to the solution of Egypt's child dependency challenge.

However, to absorb 15 million new young adults into the agricultural system, labour market, housing market, and into the social and political system is not a process that proceeds without friction. In Egypt's case the land reform initiated in 1952 played an important role in this process. Before the land reform, land ownership was highly concentrated in the hands of a small upper class. The top 5% of the landholders controlled 64% of the land. By 1962, the share of the top 5% holders (above 10 acres) had declined to 44%. And by 1974 their share had fallen to 18%, its lowest point during the 20th century. This transfer of land to relatively small farmers led to an impressive increase in the total number of holdings: from 1.6 million in 1962 to 2.6 million in 1974 and to a maximum of 3.0 million holdings in 1977. During this period, thus, land fragmentation helped to accommodate an increasing number of young adults. After 1977 there has, however, been no additions to the number of holdings. Most members of the expanding group of young adults, therefore, have been forced to look for alternative livelihoods.

Egypt's young adult phase has also been characterized by recurring events of social unrest. Violent demonstrations occurred in 1968 after Egypt's defeat in the 1967 war with Israel. During 1972-73 there were massive student protests and in 1977 about 80 persons were killed and more than 1000 persons were wounded in riots over increasing prices for bread. The 1980s saw several strike waves and in the 1990s there have been numerous violent incidents, many of them involving islamist activists.

Growth in the middle age group started to accelerate towards the end of the 1980s but has so far been relatively modest. Therefore, it remains to be seen if the middle age phase will be characterized by accelerated economic growth in the same way as has been observed in other countries. So far, the most promising signs for a possible acceleration in Egypt's

[9] Definition of urban areas: Governorates of Cairo, Alexandria, Port Said, Ismailia and Suez; frontier governorates; and capitals of other governorates as well as district capitals?).

economic development include different economic reforms aimed at modernizing the economy and a marked improvement in the trade balance. A factor that can put a break on this development, however, is the fact that the fertility decline is somewhat slower than, for example, in India.

3.5 Concluding remarks

The last fifteen years have seen a rapid development of our knowledge of how demographic change triggers social and economic development. An important consequence of this new knowledge is that population projections can be used as a starting point for a discussion of future economic, social and political trends. In the following chapters we will focus on three areas. First, the dividend approach is used to obtain forecasts of per capita income growth around the world for the next four decades. Second, the correlation between changing age structure and migration discussed above is use to project future trends in international net migration. Third, we follow up on the links between demographic change, social conflict and institutional change that can be observed during the age transition. Can demographic projections be used to forecast future policy shifts?

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4 Forecasting global income growth

How important are demographic shifts for changes in per capita income? In order to answer this question (Malmberg and Lindh 2004) have developed a model that correlates per capita income growth with both life expectancy and age structure variables. The inclusion of age structure variables is motivated both by age transition theory and by the demographic-dividend literature. Moreover, the model includes not only life-expectancy at birth, and log population shares for the 0-14, 15-29, 30-49, 50-64, and 65+ age groups. In order to account for the fact that life-cycle based economic behaviour may shift over time, the model also allows for interaction effects between life expectancy and the age structure variables. Theoretically, this can be motivated by the idea that lower mortality can have an effect on decisions on education and on savings behaviour. Thus, it cannot be expected that a high share of, for example, young adults will have the same effect in a high-mortality society were few people enter higher education as in low mortality societies where a large part of every cohort participate in tertiary education.

Table 4.1 Parameter estimates for the Dividend model

	Level of life expectancy				
	40	50	60	70	80
Intercept	19.96	21.17	22.16	22.99	23.72
log 0-14	-1.53	-1.30	-1.10	-0.94	-0.80
log 15-39	0.49	0.29	0.13	0.00	-0.12
Log 30-49	0.73	0.55	0.40	0.27	0.16
Log 50-64	0.31	0.32	0.32	0.32	0.33
log 65+	-0.69	-0.27	0.07	0.36	0.61

The results of the estimation are presented in table 4.1. Several things can be noted in the table. First, the increase in expected per capita income that results from lower mortality should be noted. But age structure also plays an important role. There are, for example, strong negative effects of high shares of children in the population. Therefore, especially at low levels of life expectancy, there will be large gains in per capita GDP when a decline in fertility reduces the share of children and increases the share of young adults. The model, thus, contains a strong demographic dividend effect.

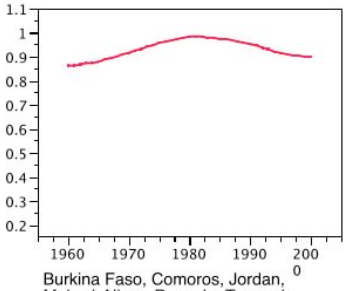
As life expectancy increases, the age pattern changes and increasing population shares for older adults becomes a more important driving force for higher per capita income. This should come as no surprise considering the large differences in economic structure that exists between countries with high and low life-expectancies. An important message of the model, though, is that population aging, so far, has been associated with increasing per capita incomes. Although more research is needed here, this model does not single out population aging as a factor that will bring an economic downturn.

The importance of child dependency for per capita income growth is illustrated in the Figures 4.1 and 4.2 below. Here, the 111 countries used in the analysis have been grouped together based on their child dependency rates between 1960 and 2000. The top row Figure 4.1 shows the mean child dependency rates of countries that have experienced no significant declines in this rate. The second row illustrates the development in countries with average declines in child dependency. Countries in row three have experienced large declines in child dependency and the bottom row contains countries that have experienced significant reductions in child dependency despite the fact that they started at a relatively low level in 1960.

Figure 4.2 shows observed changes in per capita income for the same country group as well as changes in per capita income as they are predicted by the dividend model. As can be seen by a comparison there is a close correlation between the child dependency of a country group and the per capita income development. Countries with continuing high child dependency rates have no or even negative growth in per capita income. Average declines in child dependency have led to some improvements in per capita GDP whereas rapid declines have been accompanied by spectacular growth in per capita income. High levels of per capita GDP are closely associated with low child dependency rate. The conclusion is that demographic trends must be considered in every discussion about the economic development trend of different countries.

Figure 4.1

Child dependency rates 1960-200, by country groups



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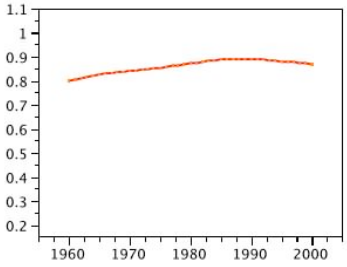
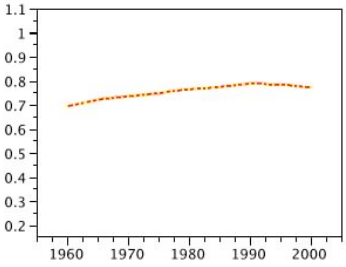
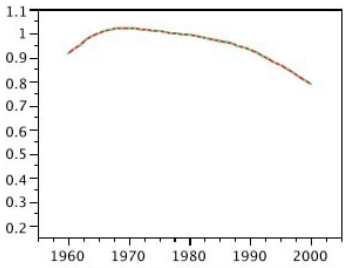


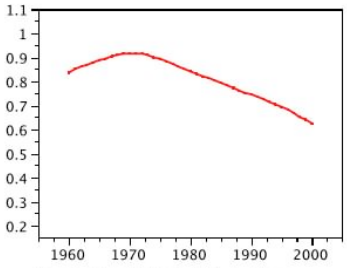
Angola, Benin, Burundi, Cameroon, Chad, Congo, Congo, Zaire, Cote d'Ivoire, Ethiopia, Ghana, Guatemala, Guinea, Madagascar, Mali, Mauritania, Mozambique, Namibia, Nigeria, Senegal, Togo



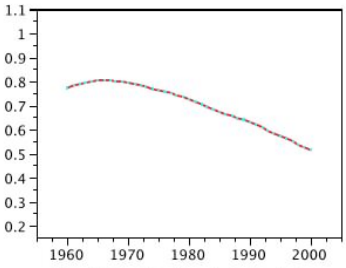
Central African Republic, Equatorial Guinea, Gambia, Guinea-Bissau, Haiti, Lesotho, Nepal, Pakistan, Sierra Leone



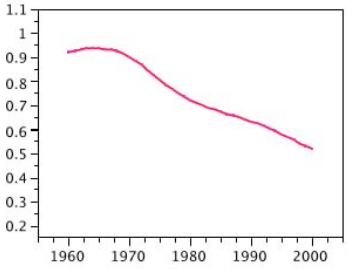
Botswana, Honduras, Kenya, Nicaragua, Syria, Zimbabwe



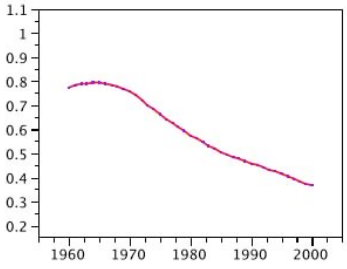
Algeria, Bangladesh, Bolivia, Cape Verde, El Salvador, Iran, Jamaica, Mexico, Morocco, Papua New Guinea, Paraguay, Philippines



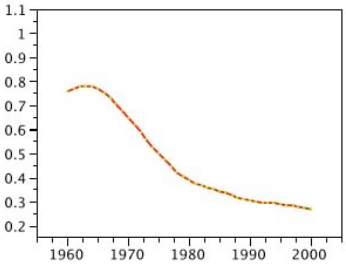
Brazil, Ecuador, Egypt, India, Indonesia, Panama, Peru, South Africa, Turkey



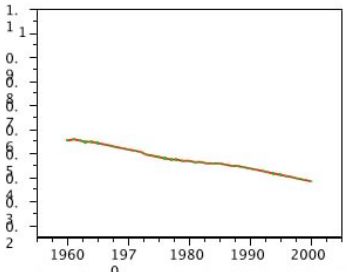
Colombia, Costa Rica, Dominican Republic, Fiji, Guyana, Malaysia, Tunisia, Venezuela



Barbados, Chile, China, Korea, Republic of, Mauritius, Sri Lanka, Thailand, Trinidad and Tobago



Hong Kong, Singapore



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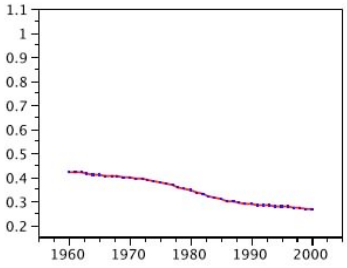
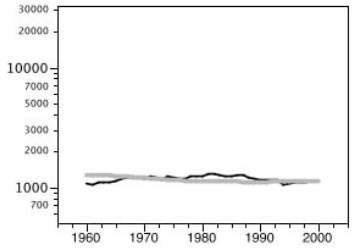


Australia, Austria, Belgium, Canada, Denmark, Finland, France, Greece, Italy, Japan, Luxembourg, Netherlands, Norway, Portugal, Romania, Spain, Sweden, Switzerland, USA, United Kingdom

Figure 4.2



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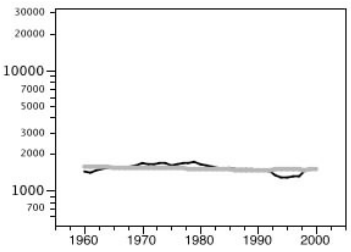
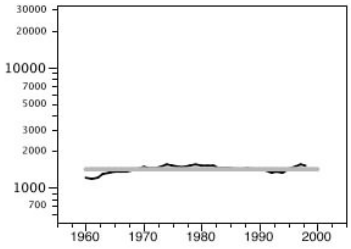
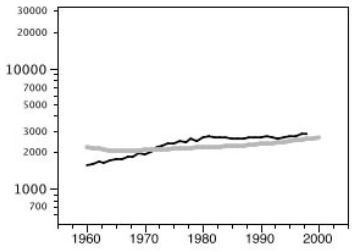


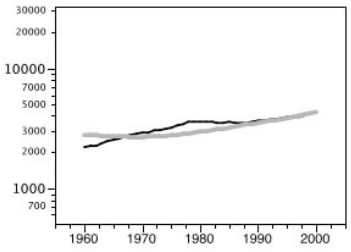
Angola, Benin, Burundi, Cameroon, Chad, Congo, Congo, Zaire, Cote d'Ivoire, Ethiopia, Ghana, Guatemala, Guinea, Madagascar, Mali, Mauritania, Mozambique, Namibia, Nigeria, Senegal, Togo



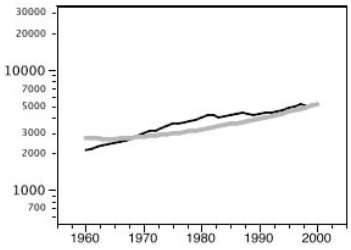
Central African Republic, Equatorial Guinea, Gambia, Guinea-Bissau, Haiti, Lesotho, Nepal, Pakistan, Sierra Leone



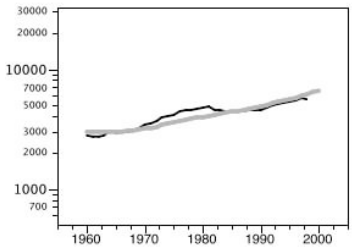
Botswana, Honduras, Kenya, Nicaragua, Syria, Zimbabwe



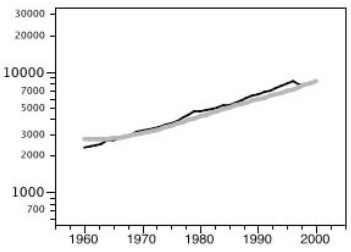
Algeria, Bangladesh, Bolivia, Cape Verde, El Salvador, Iran, Jamaica, Mexico, Morocco, Papua New Guinea, Paraguay, Philippines



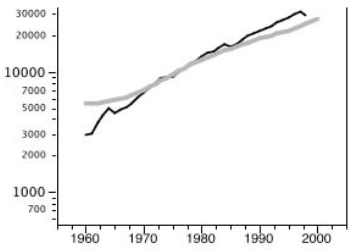
Brazil, Ecuador, Egypt, India, Indonesia, Panama, Peru, South Africa, Turkey



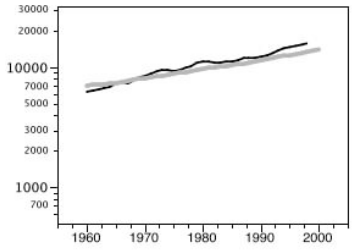
Colombia, Costa Rica, Dominican Republic, Fiji, Guyana, Malaysia, Tunisia, Venezuela



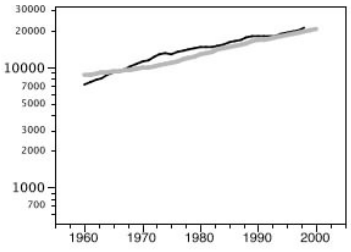
Barbados, Chile, China, Korea, Republic of, Mauritius, Sri Lanka, Thailand, Trinidad and Tobago



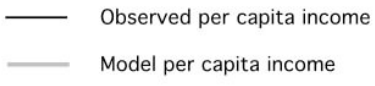
Hong Kong, Singapore



Argentina, Cyprus, Iceland, Ireland, Israel, New Zealand, Uruguay



Australia, Austria, Belgium, Canada, Denmark, Finland, France, Greece, Italy, Japan, Luxembourg, Netherlands, Norway, Portugal, Romania, Spain, Sweden, Switzerland, USA, United Kingdom

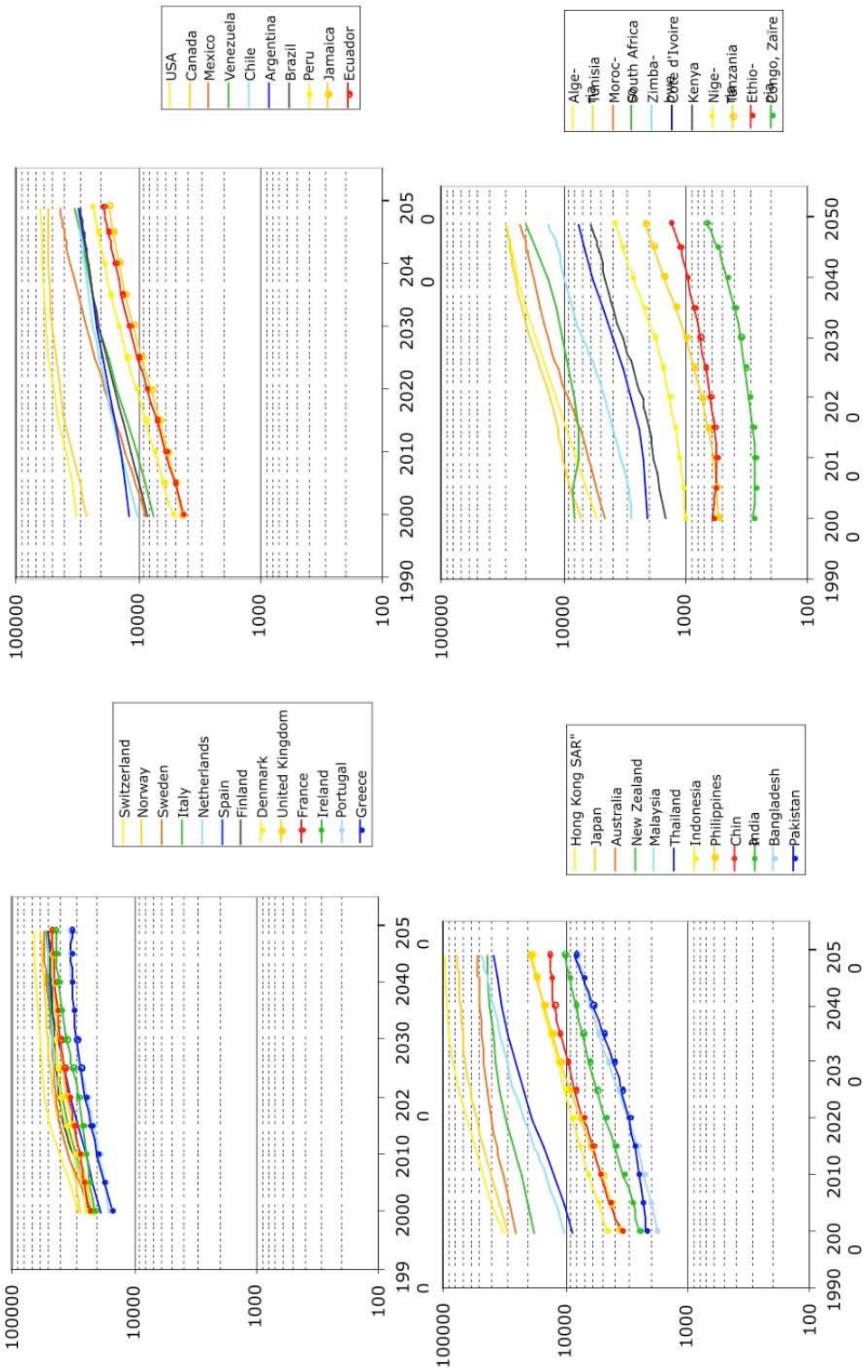


4.1 Forecast

The original dividend model was estimated on data for 111 countries over the period 1960-1996 but it can be used for all countries for which both demographic and data on initial GDP per capita are available. The projection presented below includes 158 countries and is based on (United Nations 2005) and (World Bank 2006). The jump-off year for the projection is 2000, that is, the projections have been calibrated in order to have a correct value at that date. The calibration was done using purchasing power parity GDP per capita from the on-line version of World Development Indicators. Calibration to a certain start-value is easy given that the dividend model uses log per capita income as its dependent variables. With a log specification, the difference between the predicted values at two points in time is equal to the percentage increase in the predicted value over that period. Thus, to get a calibrated forecast for a specific year one needs only to apply the predicted percentage increase to the jump-off value of the purchasing power parity GDP per capita.

During this period, the UN predicts substantial reductions of fertility and mortality in most parts of the developing world with the exception of sub-Saharan Africa. For sub-Saharan Africa the projection is that fertility and mortality will decline very slowly.

The per capita income projections based on the dividend model are illustrated in figure 4.3 below.



4.2 A Different World—An analysis of the growth forecast

If the income growth forecast presented in the previous chapter will be realized, what will be the effect on the world economy? On answer is given in Table 4.1 and Table 4.2 below. From Table 4.1 we can see that in 2050 global GDP will be four times higher than today. This corresponds to an annual growth rate of 2.8%. Growth, however, will not be uniformly distributed. In Latin America, the Middle East, and in South Asia the growth will be above 4% per year. For EU25 the prediction is 1.4% annual growth and for North America 2.1% p.a. As a consequence, distribution of global GDP will shift towards today's medium-income countries.

The result, presented in Table 4.2 leads to a more balanced distribution of economic power. The EU25 share of global GDP will be about halved. North America's share will decline by almost 30%. Regions gaining importance are instead Latin America and the Caribbean (an increase from 8% to 15%), South Asia (from 7% to 13%), and the Middle East (from 4% to 11%). In 2000 the GDP for each of EU25, North America, and East Asia was at least two and a half times bigger than the GDP of any other region. In 2050, on the other hand, most regional GDPs lie in a relatively narrow band starting from an 8% share of global GDP in South East Asia and ending with a 17% share of global GDP for North America. The exception from this trend towards more balance is Sub-Saharan Africa. This region's share of global GDP will, according to the forecast, continue at the very low level of 3%.

Table 4.1: Distribution of global GDP by world regions 2000-2050, Billion US$,

	2000	2020	2035	2050	2000-2050 growth rate
EU 25	10 400	16 500	20 200	21 300	1.4%
North America	10 600	18 400	25 500	31 000	2.1%
Latin America and the Caribbean	3 700	9 400	17 600	27 400	4.0%
East Asia	9 000	19 800	29 000	32 900	2.6%
South East Asia and Oceania	2 400	5 900	10 300	15 300	3.7%
Middle East	2 000	5 200	11 000	19 100	4.5%
Sub Saharan Africa	1 100	1 800	3 200	5 900	3.4%
South Asia	3 100	7 300	14 200	23 700	4.1%
Former SU	1 500	2 000	2 600	2 800	1.2%
Non EU Europe	600	1 100	1 300	1 400	1.7%
Total	44 300	87 500	135 000	180 800	2.8%

Table 4.2: Share of global GDP per world region

	2000	2020	2035	2050	Index (2000=100)
EU 25	23%	19%	15%	12%	*50*
North America (excluding Mexico)	24%	21%	19%	17%	*72*
Latin America and the Caribbean	8%	11%	13%	15%	*182*
East Asia	20%	23%	21%	18%	*90*
South East Asia and Oceania	5%	7%	8%	8%	*155*
Middle East (including North Africa)	4%	6%	8%	11%	*237*
Sub Saharan Africa	3%	2%	2%	3%	*131*
South Asia	7%	8%	10%	13%	*190*
Former SU	3%	2%	2%	2%	*47*
Non EU Europe	1%	1%	1%	1%	*53*
World GDP, Billion US$	44 300	87 500	135 000	180 800	

From a European perspective this forecast leads to the following conclusions. One is based on the fact that political power and economic power are closely related. A diminishing share of EU25 in global GDP, thus, implies that the European Union and its member states can expect a declining weight in the global power balance. This decline, though, is not due to the rise of a centralized economic power in another part of the world. Rather, Europe's relative decline is accompanied by the eventual rise of five to six possible power blocs of similar magnitude. A consequence is that Europe's influence in world politics will depend more on its ability to develop partnerships with other regions than on its own economic and military strength.

Outside Europe we can expect, first the relative decline of North America (excluding Mexico) and, after 2020, of East Asia. These are the regions that today dominate European economic exchange in terms of trade and investment. Politically, the relation to North America has been the most important. Will this change as North America's share of global GDP will decline? The probable answer is: yes.

It is of interest to look at the regions that are expected to increase their share in global GDP. One of these regions is Latin America and the Caribbean. This region is projected have 15% of world GDP in 2050, up from 8% today. 15% is only a bit smaller that the 17% share projected for North America. This near-equality can be compared with the one-to-three relation in 2000. This will have a strong effect on Spain in particular, a country for which Latin America is already important today. In the future, though, Latin America will increase its importance for European politics in general.

Another region that will become of increasing interest due to an increasing share of global GDP is the Middle East and North Africa. Although not quite as large economically, 11% compared to 15% for Latin America, of global GDP in 2050, this region is closer geographically and, thus, can be expected to be at least as important. If, for example, the Middle East would be considered as a part of a wider region including both EU25 and the Middle East countries, the Middle East GDP share of this Middle East/European region would have been 15% in 2000 but grow to 46% in 2050. It is, therefore, likely, that EU25 firms in the future will become less dependent on the EU25 market, but heavily increase there dependence on markets south and east of the Mediterranean. This trend can serve to put in perspective the current discussion on the relation between Europe and Islam. Indeed, the current view that Muslim influence of Europe is on the rise can certainly be correct. And moreover, this influence is likely to become even stronger in the future. Given

that the economic strength of the Middle East region can increase almost tenfold, from 2,000 billion US$ in GDP in 2000 to 19,000 billion US$ in 2050, restricting the exchange between Europe and the Middle East is not, however, a likely option. Instead, the focus must be on how to mould this relationship in a way that is advantageous for both regions.

The third region projected to have a large increase in its share of global GDP is South Asia, up from 7% in 2000 and almost doubling to 13% in 2050. This is about the same share of global GDP that EU25 is projected to have. South Asia, however, is more distant than the Middle East and, although the growth rates are impressive, projected per capita GDP in 2050 will still be less then 50% of what the more advanced EU25 countries had in 2000. It is, therefore, possible that economic interchange with this region will be less intense than with the Middle East region. On the other hand, South Asia, especially India, has a well developed university system and a large part of the population is English speaking. Moreover, in the long-term the demographic potential of South Asia is larger that that of East Asia because of higher birth rates. It is, therefore, possible that South Asia in time, will overtake East Asia as the centre for manufacturing production in the world.

In South East Asia and Oceania (including Australia and New Zealand), the expansion will be somewhat weaker, only a 55% increase in the share of global GDP. Nonetheless, if South Asia and South-East Asia are added together their combined, projected share of global GDP will be 21%, and it would, thus, constitute the largest economic region of the world.

East Asia, according to the projection used here, will reach a peak in its relative economic power in 2020, but will, of course still be one of the most important economic players in 2050. Albeit in a multi-centred world economy the relative decline of East Asia after 2020 is due to a rapid aging process. It is, therefore, conceivable that the relation between EU25 and East Asia will be influenced by the fact that both regions will be experiencing a similar ageing process. Thus, there is room for an exchange of technical and institutional solutions in areas such as medicine, old age care, and improved conditions for disabled persons.

Sub-Saharan Africa, however, according to the projection, is not a region that will become a more prominent position in the world economy by 2050. Thus, based only on its share of global GDP, Sub-Saharan Africa's economic importance will remain somewhat marginal. If instead labour force growth is factored in, Africa's importance is significantly higher.

One result of the forecast is that it does not predict very high growth rates for the successor states of the former Soviet Union. In fact, this is the region that will have the slowest GDP growth according to the dividend model. This is the result of a declining total population in combination with relatively slow per capita income growth.

One observation on this table is that the relative redistribution of world income is likely to have an effect on global investment patterns. Today, most funds invest in Europe, North America and East Asia, that is, in accordance to the weight different regions have in the world economy. As the share of some regions decline and the share of other increases global investment can be expected to follow. Thus, it can be foreseen that outward investment from Europe increasingly will go to Latin America, North Africa, and South Asia. At the same time, Europe should expect that inward investment in the future no longer ill be dominated by from Japan and North American investors.

When the results of the dividend based forecast are analyzed it should be noted that the model captures the average effect of demographic change and nothing more. Countries can do both better and worse than this forecast suggests, depending on both external and internal factors. For example, a country that is endowed with natural resources for which demand increases rapidly can be expected to have higher income growth than predicted. The same effect is visible in countries that are successful in attracting large amounts of international direct investments.

In the sample used to estimate the dividend effect, countries receiving more that 30 US$ per capita in net foreign direct investment inflows had on average a GDP per capita 56%

larger that predicted by the dividend model. Countries with less than 30 US$ per capita in net foreign direct investment had a GDP per capita 5% lower than predicted (WDI). Similarly, the positive effect of the demographic dividend can be spoiled by bad policies and lack of good governance. Probably the best example here is Stalinist central planning and collectivization. A similar effect is that countries with very high shares of government controlled investment (i.e. more than 65%), had on average 20% less GDP per capita than expected according to the dividend model. Countries with less than 40% government controlled investment, on the other hand, had on average a per capita income 38% higher that expected from the dividend model. This underlines the importance of allowing room for market based investment decisions if countries are to benefit from the demographic dividend.

The global income distribution

Looking at total GDP is relevant in order to evaluate the future economic power of different regions or to evaluate market growth. Other aspects of the development process are better captured by looking at changes in the per capita income. An overview is given in Table 4.3 which shows the projections of per capita GDP for nine world regions. Table 4.4a to 4.4c give a more detailed picture of the growth process.

Table 4.3: Growth in per capita income by world regions 2000-2050, US$,

	2000	2020	2035	2050	2000-2050 growth rate
EU25	23 000	35 500	44 000	47 500	1.5%
North America	33 000	48 500	61 500	70 000	1.5%
Latin America and the Caribbean	7 500	14 500	24 500	35 500	3.1%
East Asia	6 000	12 500	18 000	21 000	2.5%
South East Asia and Oceania	5 000	9 500	15 000	21 000	2.9%
Middle East	5 500	11 000	19 500	31 000	3.5%
Sub Saharan Africa	1 500	2 000	2 500	3 500	1.7%
South Asia	2 500	4 000	7 000	10 500	2.9%
Former SU	5 500	7 500	10 500	12 000	1.6%
Non EU Europe	12 000	20 500	26 500	30 500	1.9%

In 2000, as shown in Table 4.4a, 103 countries belonged to the three lowest income categories. Of these countries only 29 are projected to stay in the same income category until 2025. The rest will move up into a higher income category. And this process will continue further between 2025 and 2050. 65 countries will start in the three lowest income categories but only 12 are projected to remain in the same category until 2050. 53 countries will move up at least one category.

The result is shown in Table 4.4c. Almost half of the countries with very low income in 2000 will have become middle income countries by 2050. Of the remaining 24, 60% will have moved from the very low income to the low income category. Today's low income countries have faired even better. 92% of these countries have entered the high middle income or high income category by 2050.

Table 4a: Per capita income levels in 2000 and 2025, countries by income category

		Income in 2025, US$:						
		Very low *<2000*	*Low* *2000-3999*	*Low middle* *4000-7999*	*High middle* *8000-15999*	*High,* *16000-31999*	*Very high,* *32000+*	2000 total
Income in 2000, US$:								
Very low	*<2000*	24	**21**	2	0	0	0	47
Low	*2000-3999*	0	2	**13**	10	0	0	25
Low middle	*4000-7999*	0	0	3	**26**	2	0	31
High middle	*8000-15999*	0	0	0	3	**15**	4	22
High	*16000-31999*	0	0	0	0	2	**28**	30
Very high	*32000+*	0	0	0	0	0	3	3
2025 total		24	23	18	39	19	35	

Table 4b: Per capita income levels in 2025 and 2050, countries by income category

		Income in 2050, US$:						
		Very low *<2000*	*Low* *2000-3999*	*Low middle* *4000-7999*	*High middle* *8000-15999*	*High,* *16000-31999*	*Very high,* *32000+*	2025 total
Income in 2025, US$:								
Very low	*<2000*	10	**13**	1	0	0	0	24
Low	*2000-3999*	0	1	**18**	4	0	0	23
Low middle	*4000-7999*	0	0	1	**15**	2	0	18
High middle	*8000-15999*	0	0	0	7	**27**	5	39
High	*16000-31999*	0	0	0	0	3	**16**	19
Very high	*32000+*	0	0	0	0	0	35	35
2050 total		10	14	20	26	32	56	

Table 4c: Per capita income levels in 2000 and 2050, countries by income category

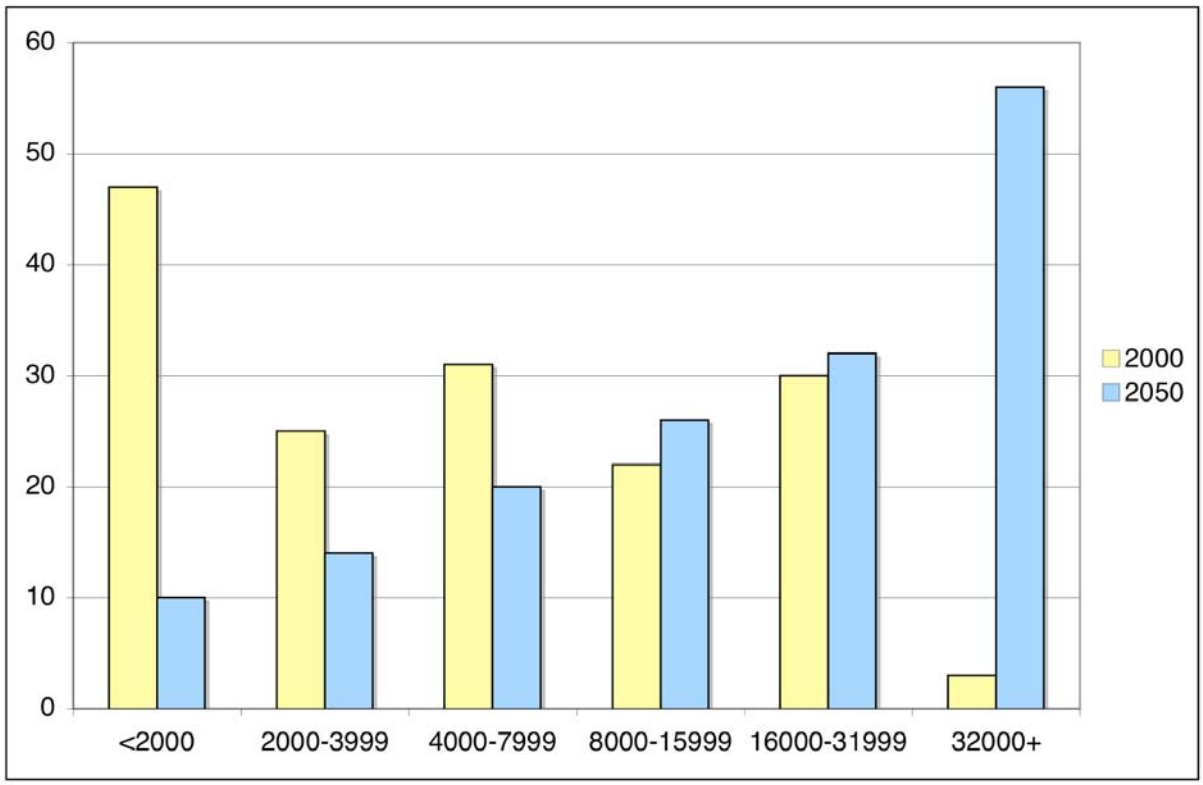
		Income in 2050, US$:						
		Very low *<2000*	*Low* *2000-3999*	*Low middle* *4000-7999*	*High middle* *8000-15999*	*High,* *16000-31999*	*Very high,* *32000+*	2000 total
Income in 2000, US$:								
Very low	*<2000*	10	**14**	**18**	**5**	0	0	47
Low	*2000-3999*	0	0	**2**	**14**	**9**	0	25
Low middle	*4000-7999*	0	0	0	**7**	**17**	**7**	31
High middle	*8000-15999*	0	0	0	0	**6**	**16**	22
High	*16000-31999*	0	0	0	0	0	**30**	30
Very high	*32000+*	0	0	0	0	0	3	3
2050 total		10	14	20	26	32	56	158

Today's middle income countries can also expect large gains in per capita income. Of 53 countries in this category in 2000, 21 are projected to be in the high income or very high income group by 2025 and another 25 by 2050.

In Figure 4.4, the global income distribution in 2000 and 2050 are compared. In 2000 we can observe that there are three peaks in the distribution: In the very low income group, in the low middle income group, and in the high income group. This pattern reflects the fact that the world today is characterized by income disparities, with large groups of countries at widely varying income levels. Moreover, the distribution is dominated by countries with very low levels of per capita income.

By 2050, the situation will be reversed. Then the distribution will be dominated by the very high income group and the distribution has only one peak. This can be taken to indicate a more equal world in the sense that a large majority of countries will have high or relatively high levels of per capita income. On the other hand, there is also an important minority group of countries that lingers on at low levels of per capita income. The situation predicted could, perhaps, be described as a two-thirds society at the global level as compared to today's tree-tiered world.

Figure 4.4 Number of countries at different per capita income levels 2000 and 2050



Changing consumption patterns

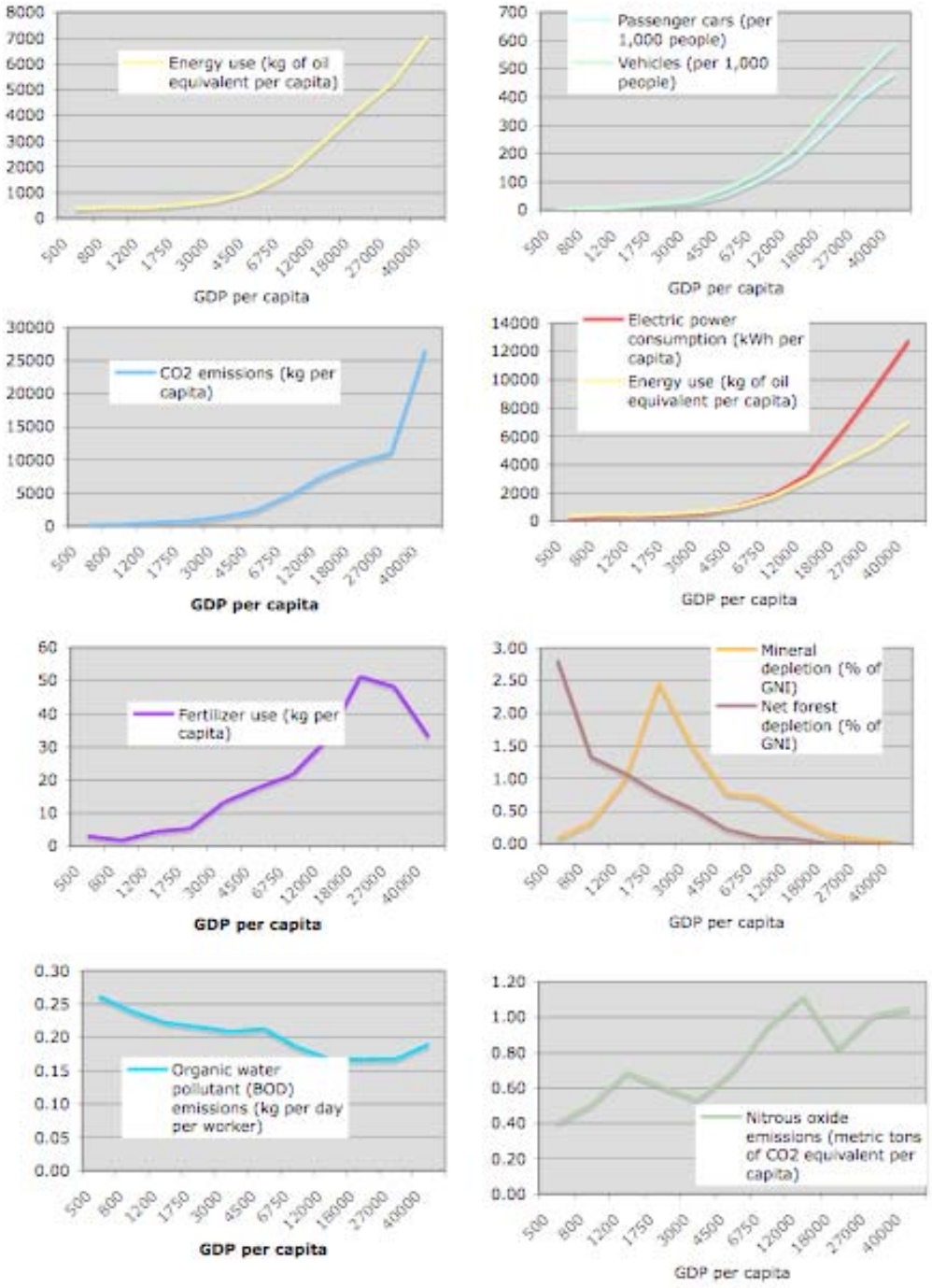
How will these large increases in per capita income change the world? One possible answer is given in Figure 4.5 were the relationships between per capita GDP and different human activities are shown (World Bank 2006).

The upper left graph shows the increase in energy use as per capita income increases. Clearly, as countries moves from low to high levels of GDP per capita this will imply a rapid increase in energy demand across the world. As shown in the first graph of the second row, this will also imply rapidly increasing CO2-emission, unless the current link between CO2 and per capita income can be decoupled. An important driving force behind increasing energy demand is transportation. The upper-right graph here shows how car-ownership changes as per-capita income levels increase. Clearly, if the growth countries of the 21st century follow a similar path as the growth countries of the 20th century this will imply a rapid expansion in road traffic across the world, a rapid expansion of car manufacturing, and increasing demand for the raw materials needed to produce cars. Furthermore, as shown in the second graph of the second row, the demand for electric energy can be expected to grow faster than energy demand in general.

Not all curves increase monotonously with per capita income, though. Today, for example, fertilizer use increases up to a per capita level of about 20000 US$ but then levels off. Similarly, mineral depletion as a percentage of national income reaches a peak at around 2000 US$ per capita and then declines. Certain forms of environmental pressures also

seem to decline with increasing income. This is the case with forest depletion and the emission of organic water pollutants. Nitrous oxide emissions, on the other hand, increase with per capita income, probably in line with an increase in car use.

Figure 4.5



4.3 How Strong is the Dividend Model?

The analysis provided in the above demonstrates that the dividend model, when combined with the UN population projections, generates clear and, to some extent, dramatic predictions of how the world might change over the next 40-50 years. But how much trust is to be put in these predictions? A definitive answer to this question cannot, of course, be given until time has shown the predictions to be correct or erroneous. Instead, alternative ways of assessing the trustworthiness of the model must be tried. Here, three different tests will be presented.

The first is a back projection. Since the model cannot be tested on future data an alternative is to test, if the model can account for long-term historical growth as it has been observed in a developed country.

A second test is to compare the out-of-sample performance of the dividend model with the predictions of an alternative model. One interesting comparison can be made with a model presented in a recent World-Bank research paper (Ianchovichina 2005).

The third test is to compare the dividend predictions with alternative long-term forecasts. One influential set of forecast are the GDP assumptions used by the CO2 emission scenarios produced by the Intergovernmental Panel of Climate Change, IPCC. Forecast of future GDP growth for a relatively large group of countries have also been based on the traditional Solow model in combination with assumptions on technological convergence.

Back projection

If the model captures a statistical relationship between demography and per capita income that is valid only during a specific historical period, that would make the dividend model less useful for long-term predictions. . Te fact that the data set used to estimate the dividend models covers up to a 50-year period is, to some extent, a guarantee that the statistical relation is not only a short run correlation. However, for a few countries there are much longer time-series available for both per capita income and for the demographical variables used in the dividend model. These data can be used to test if the dividend model captures some essential features of the economic development process. If this is the case, feeding historical data into the model should result in a prediction of historical growth in per capita GDP that is relatively correct.

One attempt at such a back-projection has been presented in a working paper by (de la Croix, Lindh et al. 2006). The use Swedish long-term demographic data an find that the back-projection of GDP per capita generated by the dividend model is successful in tracking economic growth in Sweden back to the 1860s (see Figure 4.6).

Figure 4.6 Back projection using Swedish data

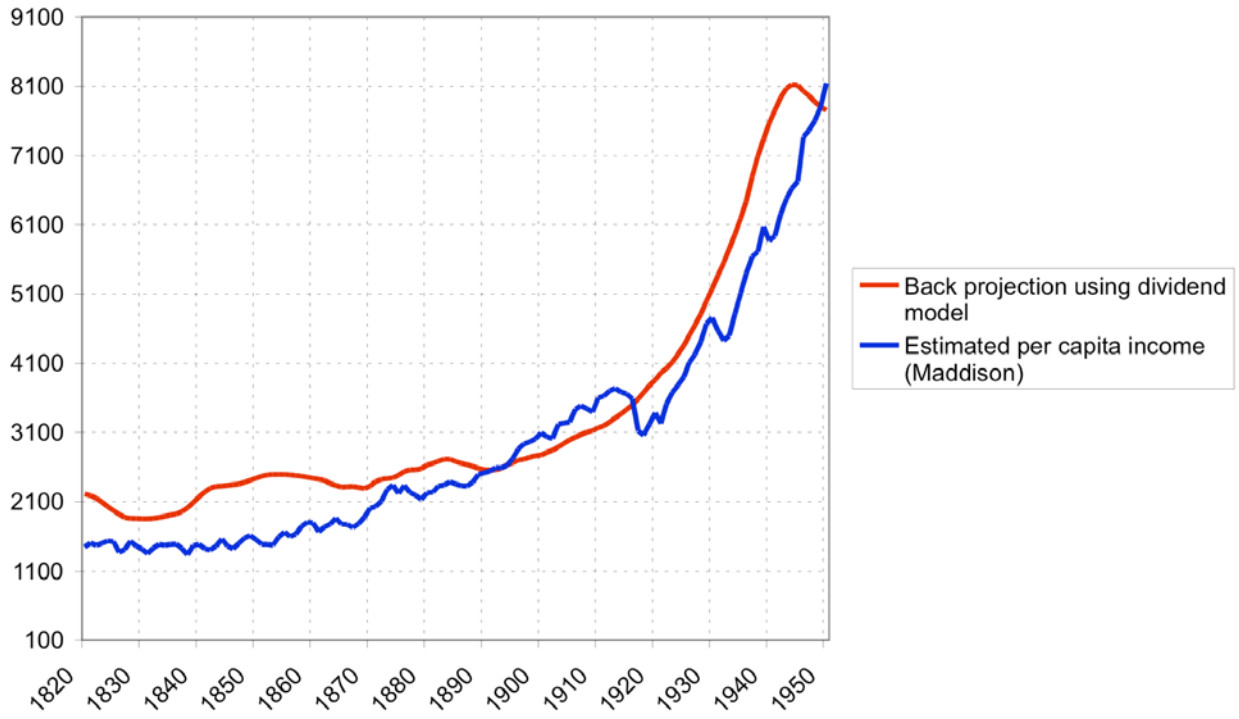


Figure 4.7 Back projection using UK data

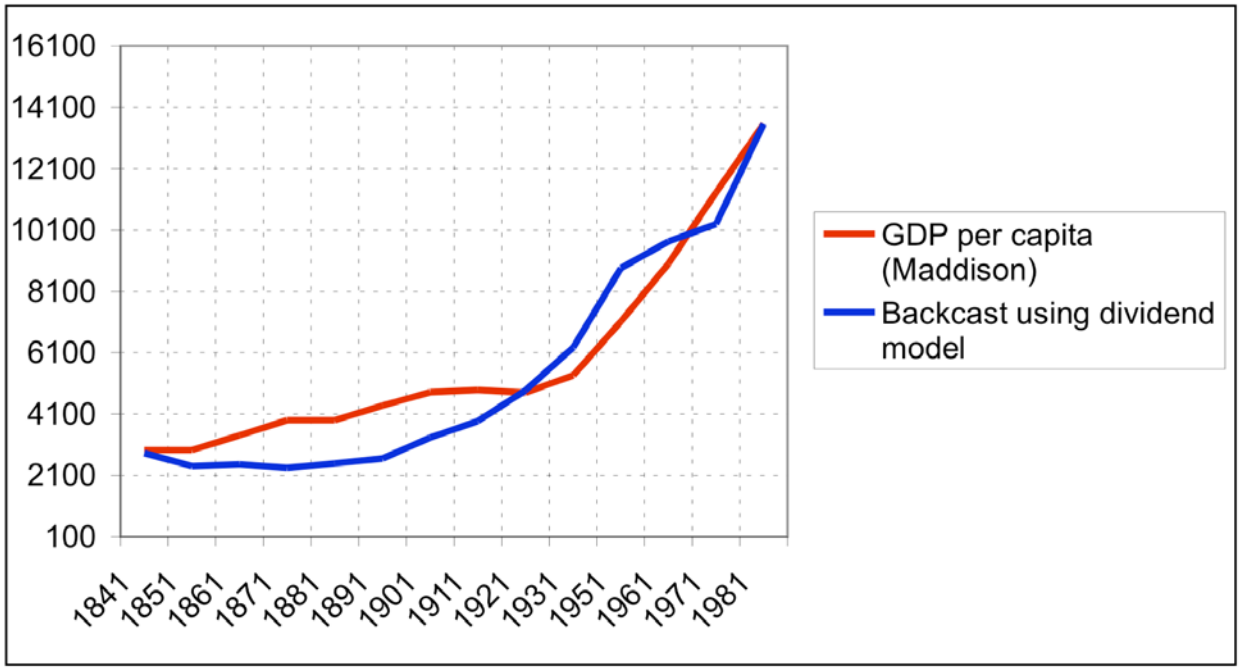


Figure 4.7 shows the result of a similar exercise for the UK. The dividend model can successfully predict the per capita income in the UK in 1841 based on age structure data and data on life expectancy. Or, to be more precise, the model predicts the change in per capita income from 1841 to 1981, since the per capita income in 1981 is used as the jump-off point for the back-projection.

The figure also shows that there are discrepancies between the estimates and the back-projected values from 1851 to 1911. The dividend model predicts an increase in GDP per capita only after 1881 when the British decline in fertility starts and further acceleration after 1891 when the UK experiences rapid health improvements. Maddison's estimates, on the other hand show relatively constant growth between 1851 and 1911 followed by slower growth in the 1910s, 1920s, and 1930s. These differences underline that the dividend model does not capture all factors that influence economic development. However, the dividend model gives a very good long-term approximation of the development process. In fact, a forecaster that in 1840 had been equipped with the dividend model and population projections for the period 1840-1980 would have been able to give a correct prediction of the 1981 level of GDP per capita!

Thus, the statistical relation between per capita income and demography that the dividend model captures in modern data, seems to hold to a surprisingly high degree also in data stretching back to the 19th century. This long-run stability of the statistical relationship between demography and per capita income is good news for the dividend model as a tool for long-term forecasting. Since the model works quite well when it is applied to pre-1950 data, there is a good chance that it can prove to give correct predictions also for the post-2000 period.

Out-of-sample performance

Dividend-model forecasts are based on a close statistical relation between demographic change and per-capita income growth. A range of other factors commonly put forward as explanations for economic growth are not included in the dividend model. Such factors include investment, education, openness to trade, good governance, technological change, etc. For forecasting it is easy to argue for a model using only demographic variables. The reason is the availability of good demographic forecasts with time-horizons extending fifty years or more. Most economic forecasts, in comparison, seldom extend the horizon beyond 24 months.

Demographers' ability to make long-term forecast is based on the fact that future demographic change to a large extent is predetermined by the current demographic situation. In a developed country the number of deaths 20 years from now will be largely determined by the number of people in different age groups above age 65. And this distribution, in turn is determined by the number of people aged 45-70 that are alive today. Similarly, the number of births twenty years from now will be influenced by the size of the fertile population, which in turn is dependent on the number of girls aged 0-19 that are alive today. Moreover, life expectancy and fertility rates seldom make sudden jumps. Most of the time change in these parameters follows relatively stable time trends.

Yet, using only demographic variables to forecast a phenomenon that most researchers associate with a broader set of explanatory variables can be controversial. Therefore, it is important to test more directly how the dividend model compares to a forecast based on more standard cross-country growth regression. If it can be showed that the dividend model compares at least as well or even better than the standard model, this will be a strong argument in favour of a demographically based approach to income forecasting.

A problem here is that papers that estimate cross-country growth regression rarely use the estimated models to make forecasts. A possible explanation is that there are no well-established forecasts for many of the explanatory variables used in the cross-country regressions. More difficult to explain is the lack of out-of-sample test which are strongly recommended most statisticians. One exception is the recent study by (Ianchovichina and Kacker 2005). These authors have the ambition to use cross-country regression models for forecasting and they also make an out-of-sample test of their estimated model.

The Ianchovichina and Kacker model uses seven explanatory variables in addition to initial per capita income: Enrolment in secondary education, financial debt, trade openness, government consumption, main telephone lines, and governance. They use data up to 2000 to estimate their model and then use the model to forecast growth from 2005 to 2014 assuming no change in the explanatory variables. Their out-of-sample test uses data on 126 countries for the 2000-2004 and the results for each country are presented in the table with information on real GDP per capita in 2000, forecasted GDP per capita in 2004, and actual GDP per capita in 2004.

This information makes it easy to do a comparison with the dividend model. Of the 126 countries in the Ianchovichina and Kacker table, dividend model predictions for 2000 and 2004 could be obtained for 117. The implicit 2004 dividend forecast was then computed by applying the predicted 2000-2004 dividend model growth rate to the value of Real GDP per capita in 2000 provided by Ianchovichina and Kacker. A comparison shows that the dividend model performs better. Ianchovichina and Kacker's model has a mean absolute error of 2.7% in the annual growth rate in the 4-year out-of-sample prediction. For the same period the mean absolute error of the Dividend model is only 1.6%.

4.4 Conclusion

The strong correlation between, on the one hand, the level of per capita income and, on the other hand, population age structure and mortality makes it possible to use UN population projections to forecast future trends in per capita income. The model is stable over time and performs well in out-of-sample tests. Therefore, forecasts based on the dividend model deserves to be taken seriously. What these forecasts predict is that the next decades will be characterized by rapidly increasing per capita income in a large group of today's low-income countries.

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5 Forecasting net migration

Long-term forecasting of social phenomena is a contentious business. In his essay "The poverty of historicism", Karl Popper has, for example, argued that social trends cannot be predicted (Popper 1960). The basis for his argument is that social processes are influenced by the development of new knowledge. Since, by definition, we cannot know what new discoveries will be made in the future we do not have access to the information we would need to make correct forecasts. And, therefore, historical predictions such as Marx' about the necessity of socialism are not valid.

Popper, however, does leave a door open for conditional forecasts; that is, forecast that are dependent on the realization of given premises. Such premises could be, for example, the continued validity of certain empirical laws or the continued stability of certain empirical trends. As it turns out, migration research of the last one hundred years has in fact provided us with some empirical laws that may be used for conditional forecasts. Most important here is the strong correlation between age and migration propensity. Over and over again, from the early 20th century and onwards, it has been shown that an overwhelming proportion of all migrants are young adults in the ages between 15 and 35 years, with people in their early 20s being the most active group. This pattern is not restricted to developed countries and the post-war period but can be found across cultures and in different temporal and geographical settings. Thus, if this empirical law is not broken, young adults will dominate migration flows also in the 21st century (Boyle, Halfacree et al. 1998).

Theoretically, the high migration propensity of young adults can be explained by the theory of human capital. In this perspective migration is seen as an investment. You move from one place to another in order to increase the valuation of your human capital. But it is costly to move, especially over large distances. You have to pay a passage, perhaps learn a new language and it becomes difficult and expensive to maintain contact with old friends and relatives. For young people this cost can be balanced by many years in a more rewarding employment. For older individuals, however, the net benefit will be much smaller or even negative (Schwartz 1976).

High migration propensity among young adults implies that rates of out-migration will be higher in countries where young adults are numerous relative to other age groups, then in countries with relatively few young adults. If countries with the same population size have the same probability of being chosen as destination country, this would imply then that net migration rates will tend to be negative in countries with many young adults and positive in countries where young adults are few (Hatton, Williamson et al. 1998).

This association between high population shares of young adults and negative net migration will be further strengthened by economic factors. Countries where large cohorts

are entering working age will experience a rapid increase in labour supply. This might lead to a downward pressure on wages and to unemployment problems creating a push effect on migration. Moreover, countries where the cohorts that reach working age grow from year to year tend to be countries that have had high fertility rates and, therefore, high child dependency rates and low per capita income. Countries where cohort sizes are constant or which have falling have low fertility rates, low rates of child dependency and high per capita income (Macunovich 2000).

Demographic factors, thus, can play a key role in influencing net migration rates. This can be the case directly, by determining the size and growth rate of the highly mobile, young adult population, and indirectly, via age structure effects on per capita income. The importance of demographic factors is good news for our abilities to forecast net migration. The reason is that population change, especially age structure change, is relatively easy to forecast. The procedure is, first, to use historical data to estimate a model where net migration is related to demographic structure. Then, this model can be combined with data from population forecasts to produce predictions of future net migration.

5.1 The model

The model used here to estimate how demographic factors influence net migration is based on (Hatton and Williamson 1994; Hatton and Williamson 2003). In order to capture the effect of cohort growth on migration Hatton and Williamson use the rate of natural population growth 20 years earlier. That is, the births minus deaths in relation to the total population. As long as infant mortality is high this measure gives a relatively good approximation to the cohort growth rates. However, in ageing populations with low infant mortality most deaths occur at high ages and then the Hatton & Williamson formulae will not produce a good measure of cohort growth. In the estimates presented below the measure of cohort growth is, instead, based on an estimate of the number of survivors in each cohort at five years of age.

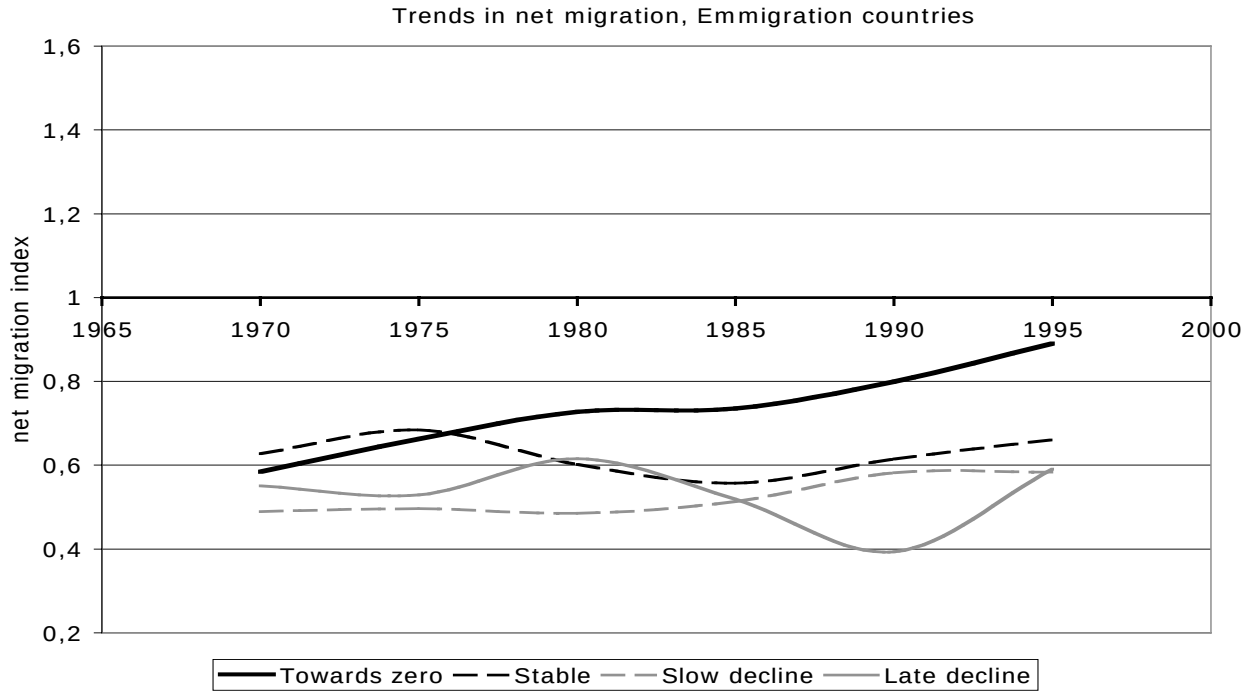
This model also uses a different specification of the dependent variable. Hatton & Williamson use the number of gross emigrants as their dependent variable. However, due to lack of good data on gross migration flows for many countries this is a variable that cannot be used to estimate demographic effects on migration in a larger world sample. In the population data made available by the Population Division at the UN, only estimated net migration rates are available. These rates can be inferred by comparing the result from different censuses and do not depend on any registration of gross migration flows.

A problem is however that net migration rates can be both positive and negative. This rules out the use of a logarithm specification that, for other reasons, would be preferable to a linear specification. Instead of using net migration rates, the dependent variable used in this estimation will, therefore, be the number of survivors in a birth cohort to age five is adjusted for the number of net migrants estimated for the period when the cohort reaches the age 20-24.

The dependent variable used in this estimation is therefore constructed by adding the number of net migrants (a negative number if net migration is negative) during a 5-year period to the estimated number of survivors at age five for the cohort that reaches the age 20-24 in the period. If all net migrants would come from the 20-24 age group this sum would represent the current size of the cohort. This is generally not the case. However, by dividing this hypothetical current cohort size with the size of the birth cohort adjusted for survival we do get a measure with some desired properties. This ratio—which will be designated *net migration index*—will be equal to one if there is no net migration. The net migration index will be below one if net migration is negative and above one if net migration is positive. As long as total net migration is less than the size of the birth cohort

minus deaths before five years of age, the net migration index will be positive. And hence, the log of the net migration index can be used as the dependent variable in the regression. Although the use of the 20-24 age group to normalize net migration is somewhat arbitrary, this is the cohort to which most migrants belong.

Figure 5.2a:

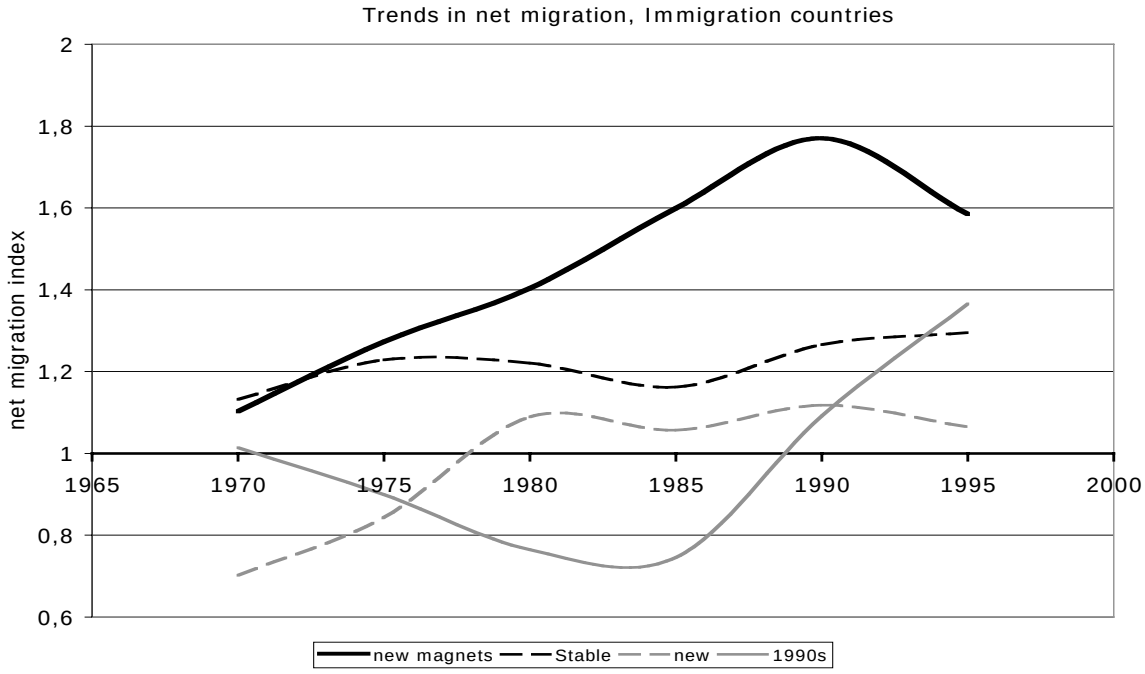


5.2 Trends in the net migration index

A consequence of using the size of the birth cohort adjusted for 0-5 survival is that using UN data, the net migration index can only be computed for 1970 and onwards. Thus, the analysis of net migration trends has to be restricted to the post 1970 period. The results of such an analysis is presented in figures 5.2a and 5.2b. Here the development of the net migration index for eight different country-groups is illustrated. The countries have been grouped both according to the level of the net migration index and in response to changes in the index. The sample here is the 187 countries for which the UN Population division provides data *minus* 27 small countries that sometime during the 1950-2000 period have experienced a negative net migration index—that is, migration losses larger than the size of an entire cohort.[10]

[10] The excluded countries are Afghanistan, Albania, Belize, Bhutan, Bosnia and Herzegovina, Djibouti, East Timor, Equatorial Guinea, Eritrea, Fiji, Guinea, Guyana, Jordan, Kuwait, Lebanon, Liberia, Malawi, Mozambique, Rwanda, Saint Lucia, Samoa, Saudi Arabia, Sierra Leone, Somalia, Suriname, Western Sahara, and Yemen.

Figure 5.2b:



As illustrated in the figures the data can be conveniently grouped into immigrant and emigrant countries. In the late 1990s, about a third of the countries could be classified as immigrant countries. Of these, however, about half have become immigrant countries during the period of study and another ten, including China, Germany, Greece, Italy, Japan, Slovenia and Switzerland—have experienced large increases in their net migration index. Countries with relatively constant net migration indexes during this period include Australia, Canada, Denmark, France, Netherlands, Sweden, United Kingdom, and the United States. On average in these countries, total net migration is about 20-30% the size of a birth cohort.

An interesting feature in the data is that a large group of emigrant countries have experienced declining net migration rates. This group includes Chile, Dominican Republic, Gambia, India, Indonesia, Malaysia, Mexico, Morocco, South Africa, Sri Lanka, Tunisia, Turkey and Viet Nam. In the early 1970s total net migration from these countries could be as high as 40% the size of a birth cohort. In the late 1990s this figure has declined to around 10%. A majority of the emigrant countries, however, are still experiencing high rates of out migration, although there is a tendency towards a decline, especially in the last, 1995-99 period.[11]

[11] An interesting feature in this data is that there is a general positive trend in net migration. That is, in emigration countries there is a reduction in net out migration whereas in immigration countries there are tendencies toward increasing net immigration relative to the size of native-born cohorts. The explanation for this simultaneous reduction in net out-migration relative to cohort size in sending countries and increase in net immigration in receiving countries is that increases in total net migration from sending countries has not been as large as recent increases in cohort size. Whereas in receiving countries, net migration has stayed constant or increased when cohort sizes have declined or demonstrated slow growth.

5.3 Determinants of net migration

The rate of net migration experienced by a specific country during a certain time-period is influenced by a long range of factors: War, social unrest, religious conflicts, political repression, labour market conditions at home and abroad, educational opportunities, etc. In order to fully explain historical patterns in net migration it would, therefore, be necessary to study each migration flow as an almost unique event. However, such an idiosyncratic approach to net migration is difficult to use as a basis for forecasting. The approach taken here is instead to analyze to what extent a factor that one can predict — population change — has an influence on net migration. This is not to say that only demographic factors matter. But if net migration is influenced by demographic factors in a systematic way, and if the effect of demographic change on net migration in the future will be similar to what we have seen historically, then an understanding of demographic influences on migration can help us to predict future trends in net migration.

Thus, the model estimated below will be very simple. The dependent variable is, as stated above, the log of the net migration index. And following Hatton and Williamson the cohort growth rate twenty years earlier is included among the regressors, *cohort growth*. The hypothesis here is that large increases in cohort size will be associated with high net migration. Unlike Hatton and Williamson it has not, however, been possible to include data on relative wages in the model. Instead we use purchasing power adjusted GDP per capita as a measure of income (in logs), *ln initial*, the hypothesis being that a high level of income will attract migrants whereas low per capita income will stimulate emigration. Data on this variable is available in the Penn World tables. The third explanatory variable is the population size of the largest city in the country (in logs), *ln maxpop*. The argument for including this variable is that population-driven migrations tend to go from rural areas towards larger urban centres (Berry, 1993). Therefore, in countries endowed with large cities, significant shares of the migrant population will end up not in large cities abroad but in the metropolitan areas of their home country. Furthermore, since large metropolitan areas are attractive also for foreign-born migrations we should expect city-rich countries to have a high net migration index.[12]

The number of countries that can be included in the regression depends on which regressors are used. Data on the dependent variable are, as stated above, available for 187 countries (160 excluding outliers). This is the case also for the cohort growth variable since this variable is from the data set. Note though, that the first observation for cohort growth is from 1950-55 to 1955-60. Since this variable will be used with a 20-year lag the first observation of the dependent variable in the regression will be the net migration index for the 1975-80 period. The Penn data set contains 116 countries with data from 1975. Of these only 113 are parts of the UN data sets.[13] Another restriction on the sample is necessary in order to include the city size variable. The UN only reports the size of cities if they during the 1950-2000 period at one time have had more than 750 000 inhabitants. The largest cities of 115 countries meet this criterion but of these 10 have been excluded as net migration outliers. The effective sample size for a regression with cohort growth and largest

[12] Data are from the United Nations (2000) *World urbanization prospects,* United Nations Dept. of International Economic and Social Affairs, New York.

[13] The missing countries are Taiwan, the Seychelles, and Sao Tome and Principe. Taiwan is excluded by the UN for political reasons, Seychelles, Sao Tome and Principe for having to small populations. 9 of the 113, however, are part of the outlier group that has been excluded in the present analysis.

city size as explanatory variables is thus 105 countries (times 5 periods). And for only 80 of these 105 does the Penn data set provide information on per capita income.

There are indications that net migration reacts somewhat differently to cohort growth in these samples. More specifically, the effect of cohort growth on migration tends to be weaker for countries lacking large cities and even weaker still for countries that were not included in the Penn data set in the 1970s and 1980s. That net migration in non-Penn countries is less influenced by cohort effects could be explained by the fact that these countries tend to be non-market economies. It could be argued that the experience of these countries could be less interesting for forecasting purposes, if it is believed that the late 20th century diffusion of the market model will continue in the 21st. In the estimates presented below we therefore use two samples. First, the 104 country sample for which there is both income and migration data, excluding migration index outliers. Second, the 80-country sample that in addition to income and migration data also contains has information on the size of the largest city. It should be noted that the selection of these samples implies that the estimated parameters will reflect migration patterns in market economies and, with respect to the 80-country sample, migration in countries with a least one major city.

5.4 Estimation results

In Table 5.1 the estimation results for the migration model are presented. The table shows as expected that cohort growth has a significant negative effect on net migration. That is, strong growth in cohort size leads to negative net migration whereas declining cohort size will stimulate positive net migration. The effect is particularly strong when per capita income is not controlled for. With initial income included, the effect is reduced but it is still strong and significant. Varying the sample and controlling for urban size, however, has negligible effects.

Initial income is also, as should be expected, a strong determinant of net migration. In accordance with theory high-income countries receive net inflows of migrants whereas low-income countries have net outflows. With respect to urban structure the hypothesis that countries with large cities are less affected by migration outflows is born out by the data. Taken together, cohort growth, per capita income and urban structure account for about 60% of the variation in the migration index. This implies that a forecast model based on these variables could help us to predict migration trends in the 21st century.

Table 5.1: Cohort growth, income, and urban structure effects on net migration

(*log migration index*). Estimation results for 6 different models Standard error in parentheses.

	(1) 80 countries	(2) 104 countries	(3) 80 countries	(4) 80 countries	(5) 104 countries	(6) 80 countries
Intercept	-0.038	-0.072	-0.84567	-2.561	-2.475	-2.918
	(0.023)	(0.020)	(0.132)	(0.141)	(0.123)	(0.157)
Cohort growth	-2.238	-2.167	-2.033	-0.520	-0.530	-0.483
	(0.167)	(0.149)	(0.163)	(0.157)	(0.141)	(0.153)
ln initial				0.282	0.271	0.268
				(0.016)	(0.014)	(0.016)
ln maxpop			0.103			0.062
			(0.017)			(0.013)
R_square	0.312	0.290	0.372	0.620	0.592	0.641
adj R square	0.310	0.288	0.369	0.618	0.590	0.638
obs	400	520	400	400	520	400

Source: (United Nations 2001; United Nations 2002)

5.5 The effects of the age transition on net migration

In the model estimated above it was demonstrated that trends in net migration are closely associated with cohort growth, per capita income and urban development. Given that these explanatory variables can be forecasted it would, then, be possible to forecast the future trends in net migration. A projection for the cohort growth variable is easily calculated from the UN population forecasts. And for projection of future trends in per capita income it is possible to rely on earlier work in this area that recently has been presented at a symposium on global income growth organized by the Institute for futures studies. These projections are based on the stable correlations that exist between per capita income, on the one hand, and age structure, life expectancy and urban structure, on the other, see (Lindh and Malmberg 2004). The same report also contains a projection of the size of the largest city for the countries that were used in the regression above.

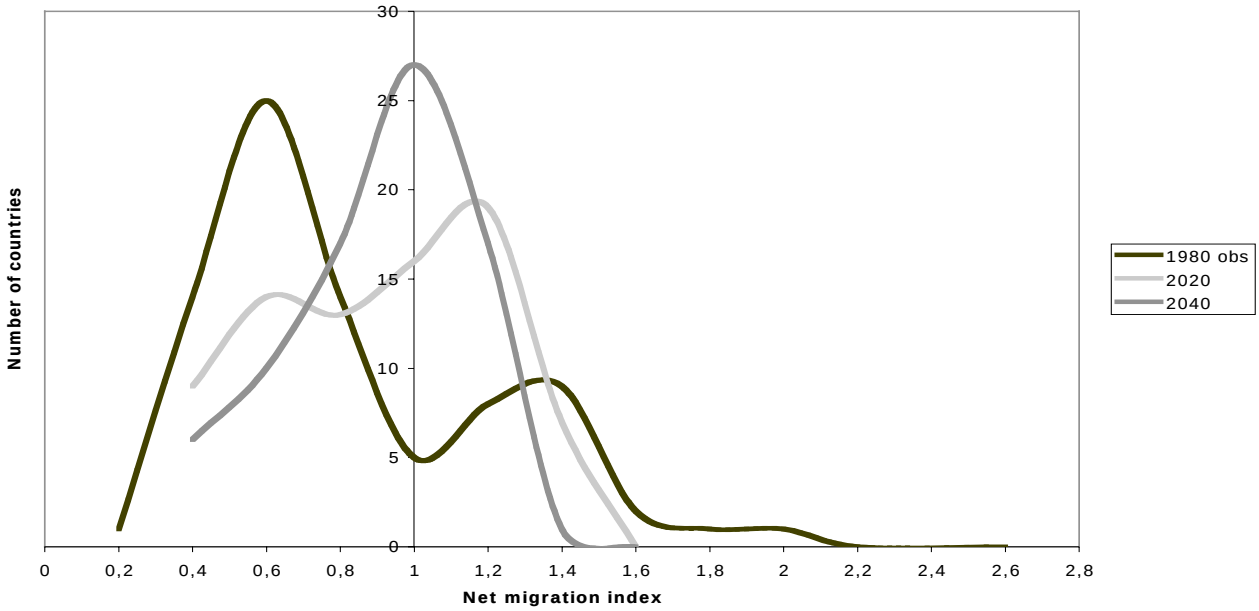
Thus, with access to the UN-based projections of cohort growth, changes in per capita income, growth in the size of the largest cities, and an estimated model for how these variables influence net migration, prediction becomes relatively straight-forward. For the prediction we use the model presented in the last column of table 1 with one modification. Instead of using the log of per capita income for each country, the mean value of logs per capita income across countries for every period is subtracted from each observation. The motive for this is that differences in per capita income rather than levels should be what influences net migration. This change has only marginal effects on the estimates. Most pronounced is that the numeric value of the cohort growth parameter increases somewhat, from –0.48 to –0.55.

5.6 Results

The main results of the projection are shown in figure 5.3. The curves presented here represent the frequency distribution of the migration index in three different years for the countries for which we have data on all the explanatory variables. The first curve is based on the observed values for 1980. The second curve shows the projected frequency distribution for 2020. And the third curve represents the projected frequency for year 2040. Looking first at the distribution for 1980 we can see a situation characterized by strong polarization. A large group of countries—half the 80-country sample—in 1980 had very low values on the net migration index, around 0.6 or less. This implies that in these countries population losses through net migration amounted to about 40% or more of an entire cohort. Simultaneously, a fairly large group of 12 countries experienced large net migration gains—around 40 % or more in gain compared to the size of a cohort. Only five countries had less then 10% gain or loss from net migration.
high emigration countries (migration index below 30%). The number of countries in this group has been almost halved from 40 to 23. There has also been a decline in the number of high immigration countries, from 12 to 7. However, the number of countries with moderately high immigration has risen from 8 to 19. That is, in 2020 we should still expect substantial global net migration flows. The major sending countries will however not necessarily be the same. Also, since there will be an increase in the number of immigrant countries, we can expect that there will be increased competition between receiving countries for talented immigrants.

Figure 5.3

Frequency distribution of the net migration index, 1980, 2020 and 2040



In 2020 this situation is projected to have changes substantially. Most pronounced is the reduction of Looking another 20 years ahead, there is an even more pronounced shift in net migration patterns. According to the projection the number of high emigration and high immigration countries will be further reduced between 2020 and 2040. Compared to 1980

the share of high emigration and high immigration countries has fallen from 66% to 20%. The most important group in 2040 is instead the low net migration group, i.e. countries where net migration as a share of cohort size is less the 10%. Every third country will be in this group by 2040 compared to one in sixteen in 1980. In 2040 the low to moderate net migration group constitutes 80 % if the sample.

Our forecast, thus, predicts very substantial changes in the patterns of net migration during the next 40 decades. The forecast certainly does not predict that there will be no international net migration in 2040. However, if mass migration is defined as net migration flows that are very large in relation to the size of the native born cohorts that arrive on the labour markets, then the forecast that has been presented here does indicate a substantial reduction in global mass migration. As was pointed out in the beginning, gross flows may still be substantial, but it will not necessarily be the case that many countries make big population losses from migration whereas other make large gains.

The most important factor behind the decrease in the number of high emigrant countries is the reduction in cohort growth rates. The median cohort growth rate, for example, is projected to decline from 2.5% annually in the early 1980s to practically zero in 2040. In addition, the UN also predicts that the declining cohort size that has affected a group of countries during the end of the 20th century will slow down after 2020. And according to the estimated model this will decrease the demand for immigration. Income growth in many of today's developing countries may also help to slow down net migration. The reduction in birth rates in former high fertility countries will bring about a more advantageous age structure with drastically improved prospects for economic growth. At the same time there is a risk that population ageing in today's developed countries with lower their rates of economic growth. As a consequence, many of today's developing countries may be able to catch up with the richest countries and this will reduce their demand for emigration.

5.7 Policy implications

Sharply reduced fertility in most developing countries will in a few decades drastically alter the demographic determinants of net migration. Much of today's high migration pressure is likely to decline. There are also strong indications that some of the late 20th century's emigrant countries will become immigrant countries in the 21st century. An important trend is also that for a large group of countries net migration in relation to cohort size will be much smaller in the future. As discussed in the beginning of this paper, low levels of net migration need not imply low levels of gross migration or low levels of cross-boundary movements. However, in a situation where net migration pressures are reduced the demands on a global mobility regime may change drastically. There will no longer be a strong need for measures that regulate large population transfers. Instead more emphasis can be put on removing obstacles to educational and professional mobility.

Another policy implication can be drawn if the current strong net migration pressures are transitory. Ageing countries that would like to profit from an inflow of working age adults must not be too slow to move towards a more open policy. If such a country fails to find ways of taking advantage of the present demand for immigration, an important opportunity to compensate for low fertility rates may be lost. Finally, the cohort growth perspective on international net migration also points to an issue of global justice. Individuals who happen to belong to cohorts that are much larger than before have been struck by a demographic event that has been beyond their own control. If they due to this event have difficulties in finding a livelihood in their country of birth, this is not something that they themselves can be blamed for. Neither is the fact of rapid cohort growth among people in their 20s something that can be solved by bringing down current fertility rates. Instead, one could

argue that all nations have a responsibility to help to accommodate the present situation. It is not a problem that will go on forever. But finding ways to relieve the strains put on societies that experience a very rapid expansion of young adults could have important long run effects.

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6 The political demography of global population aging

After 15-20 years of relatively intensive research it is by now a well-established fact that the demographic transition influence economic development, primarily via its effect on the dependency rate. More recently, there has also been a growing interest in the political effects of demographic change. Much of this interest has focused on the youth bulge phenomenon and its relation to social unrest.

6.1 The youth bulge

The youth bulge concept was, as it seems, introduced by Gary Fuller in the 1990s in his work on ethnic conflicts in Asia (Fuller 1995). Fuller defined used the term to describe a situation where the share of people aged 15-24 years reaches above 20 %. The term was popularized by Samuel Huntington's book "The clash of civilizations" who, building on Fuller's work, argued that youth bulges in the Arabic world is a major factor behind Muslim resurgence (Huntington 1996). After 9/11 this idea entered into the popular debate and this, in turn, has stimulated serious research into the topic.

The suggestions that a large youth cohort can introduce social unrest has been put forward much earlier, though. Already in 1855 did the Norwegian priest and pioneer sociologist Eilert Sundt observe that a large youth cohort stirred labour unrest in Norway in the 1840s (Sundt 1980). Herbert Moller, in 1968, provided an historical overview of the relation between large youth cohorts and social turbulence (Moller 1968). A theme developed more extensively by (Goldstone 1991).

An excellent overview of the recent literature is provided by (Urdal 2006). In addition, he makes an important contribution to the field by carrying out well-designed test of the youth bulge hypothesis using a data set on internal armed conflicts during the 1950-2000 period. Urdal's conclusion is that the youth bulge hypothesis is correct, as the share of the 15-24 age group in the adult population increases the risk of internal armed conflict, and also of terrorism and rioting becomes larger. Urdal discusses different potential explanations for this pattern. On is the *greed* perspective. The explanation here is that a large youth cohort provides a large supply of potential rebel soldiers and that this reduces the cost of recruiting the forces necessary for an attack on the existing government. A second explanation build on a *grievance* perspective. Here the idea is that a large youth cohort leads to a relative deprivation of young adults and that they, therefore, rebel in order to improve their social position.

An innovation in Urdal's study is that he relates the size of the youth cohort to the adult population and not to the total population. According to his estimates, this gives a more

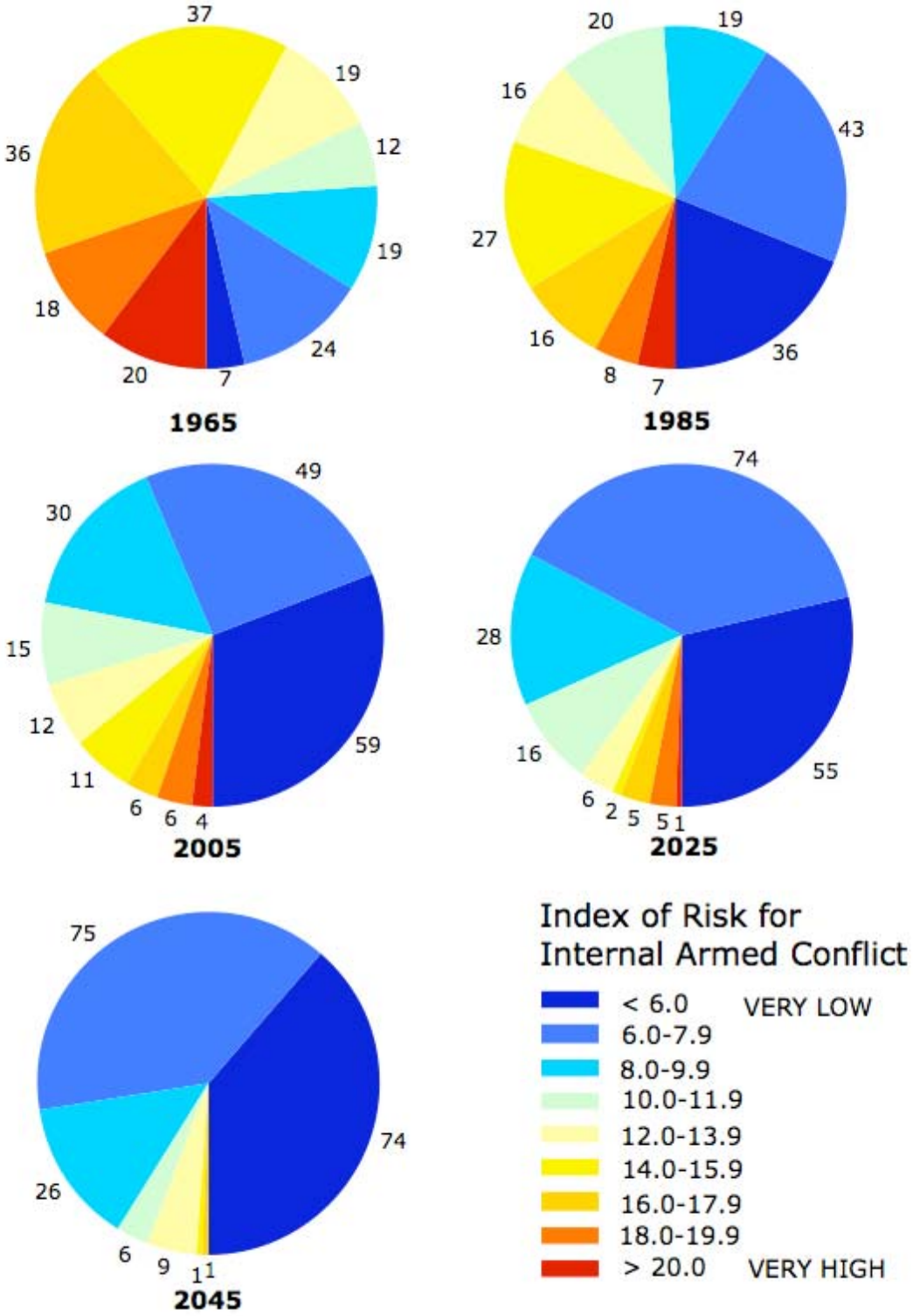
clear-cut effect of youth bulges on the risk of internal armed conflict. His argument is that high fertility countries, because of a high child dependency rate, can have a low youth-to-population ratio that does not mirror a low share of young adults in the adult population. In fact, his estimates show that the child-to-youth ratio has a strong and significant positive effect on the risk of internal armed conflict. And, moreover, that a high child-to-youth ratio strengthens the effect of high youth-to-populations rates on conflict risk.

In addition to age structure variables, Urdal uses data on infant mortality, population size, regime type, and an indicator of earlier armed conflict as explanatory variables. This implies that apart from the regime variable and the earlier conflict indicator, forecast for all the variables used in Urdal's model are available in the population estimates and projections provided by the Population Division of the United Nations. The Urdal model, therefore, can be used to forecast changes in the risk of internal armed conflict in different parts of the world over the next decades.

The results of such a forecast are presented in figure 6.1. These figures are based on four assumptions. First, that the UN population projections are correct. Second, the regime type has been normalized to level 5 on the 1-10 scale used by Urdal, where 10 is fully democratic. Third, also the population size has been normalized to make comparisons between countries easier. In Urdal's model large countries have a higher risk of experiencing internal armed conflict but this effect is not included in figure 6.1. Fourth, previous experience of armed conflict has not been used in the forecast. The figure, thus, illustrates changes in the risk of conflict that are related to a changing demography.

What can be seen from this graph is that there have been very large reductions in the risk of internal armed conflict since the mid-1960s. At that time, almost three quarters of the countries in the world had a population structure associated with moderate to high risks on conflict. Large countries with very high predicted risk in 1965 include Algeria, Viet Nam, Indonesia, and Nigeria. By 2005, the share of countries with high or moderate predicted risk has declined to about one quarter, and even further reductions can be expected in the next 20-40 years. This trend is in line with what has indeed happened. According the armed conflict database, the number of armed conflicts in 2005 was the lowest for the entire post-cold war period (Harbom and Wallensteen 2006). In 2025 most of countries with high risks of internal armed conflict will be in sub-Saharan Africa.

Figure 6.1


37
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4
59
2005
74
28
16
6
2
5
5
1
55
2025
75
74
26
6
9
1
1
2045
Index of Risk for
Internal Armed Conflict
< 6.0 VERY LOW
6.0-7.9
8.0-9.9
10.0-11.9
12.0-13.9
14.0-15.9
16.0-17.9
18.0-19.9
> 20.0 VERY HIGH

6.2 Institutional change

Lower risks of internal armed conflicts are a clear example of the political consequences of demographic change. Given the close correlation between the age transition and growth in per capita income it can be assumed that population change also will have broader social effects. One easy way to test this is to use widely available and used data such as the Economic Freedom in the World data set (Gwartney, Lawson et al. 1996). This data set has been assembled in order to test if there is a relation between economic freedom, as defined by the responsible for the data, and economic performance. However, the data can also be used to assess to what extent demographic shifts that have an effect on per capita income also have an effect on political variables.

To carry out such a test, the indicators presented in the EFW data have been plotted against the per capita income level predicted by the dividend model. Mathematically, the per capita income level predicted by the dividend model is an index based on population age shares and life expectancy. If the country specific fixed effect is removed, the predicted value is a composite index based only on demographic variables. However, since we now that this composite index is related to per capita income it can be expected to related to other macro-level indicators of social development as well. Thus, if we are looking for a relationship between demographic change and political development it can be a good idea to start with relating EFW-indicators to predicted values from the dividend model.

The results are presented in figure 6.2. Here the relationship between demography (as captured by the dividend model index) and economic freedom is presented for the five dimensions used in the EFW data as well as for the EFW summary index. As can be seen in these graphs there is substantial variation in the role played by demographic factors for these different dimensions. The strongest correlations with demography are found for legal system development and for freedom to trade internationally.

High scores for legal system development is predominantly found in countries with a demographic structure that is compatible with high per capita income. Low scores, on the other hand, characterize countries that have low predicted per capita income according to the dividend model. That is, countries with low life expectancy and high child dependency rates. R-square for the relation between log predicted per capita income and EFW scores for the legal system is 0.54 indicating a strong statistical correlation.

R-square for the freedom to trade indicator is 0.355, indicating a relatively strong relationship. Countries scores high on this indicator if they have low tariffs, little regulatory trade barriers, deregulated exchange rate markets and allow free flows of capital. The correlation indicates that countries that are in the early stages of the age transition more often impose restrictions on international trade that countries that have reached the later stages characterized by high per capita income.

The size of government indicator, on the other hand, has a close to zero linear correlation with the demographic dividend index. From the graph it can be seen that countries with low life expectancy and high child dependency rates, as well as countries with high life expectancy and low child dependency rates score low on this indicator. There is also a tendency for countries with an intermediate position in the demographic dimension to have somewhat higher scores, implying less government involvement.

The scatterplots of the Sound Money and Regulation show that for these indicators there is some correlation to the dividend index, stronger for Sound Money and weaker for Regulation.

Although the correlation with the dividend index is strong only for two of the indicators, this is sufficient for generating a strong correlation between the dividend index and EFW summary index. This shows that as a population moves away from a situation with high child dependency and low life expectancy towards a more mature age structure and high life expectancy this is accompanied by a development towards a more liberal society.

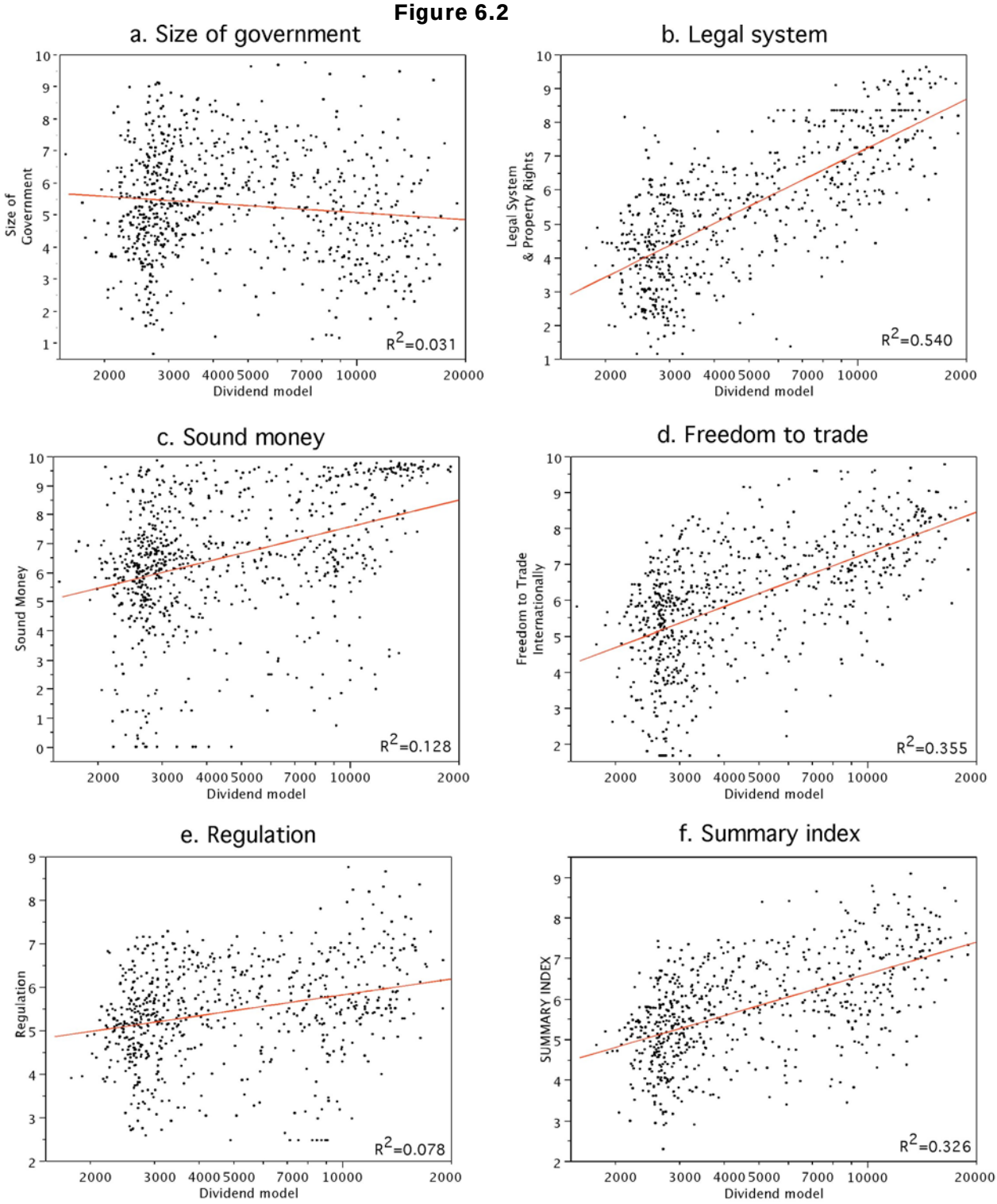
It should be noted, though, that not all the sub-indicators used to construct the EFW index are positively correlated with the dividend index. Four sub indicators of economic freedom have a clear negative correlation. These include government consumption as share of total consumption, transfers and subsidies as a share of GDP, labour force share with wages set by centralized collective bargaining, and unemployment insurance. In EFW high scores on these variables is taken as a sign of decreasing freedom. Thus, the negative correlations imply that levels of government consumption, transfers, collective bargaining and unemployment insurance increases as the dividend index gets higher.

For two other sub-indicators the relationship is non-linear. The top marginal tax rate is high for countries with high and low and low for countries with average dividend indexes. An the same is the case with hiring and firing practices. These are more liberal in countries with average dividend indexes and stricter in countries with high or low values on the dividend index. There are also a group of sub-indicators for which the correlation is close to zero.

For most of the subindicators, however, there is a significant positive correlation between the dividend index and the level of economic freedom. These EWF sub indicators include: Government enterprises and investment as a share of GDP, Impartial courts, Military in Politics, Law and Order, Freedom of citizens to own foreign currency bank accounts, International trade tax revenues, Mean tariff rate, Standard deviation of tariff rates, Hidden import barriers, Costs of importing, Regulatory Trade Barriers, Difference between official and black market exchange rates, International Capital Market Controls, Interest rate regulations, Interest rate controls, Credit Market Regulation, Ownership of banks, Price controls and Business Regulations.

The conclusion is that the UN population projection that forecast large increases in the dividend index for most countries that currently are have low values, implicitly forecast a development towards more market oriented policies and improved legal conditions. The correlation patterns that can be found in the historical data also indicate, however, that population ageing in the developing world will be accompanied by rising shares of government consumption, including education and health care, as well more developed systems for taxed based income transfers.

Figure 6.2


a. Size of government
Size of Government
Dividend model
R^2=0.031
b. Legal system
Legal System & Property Rights
Dividend model
R^2=0.540
c. Sound money
Sound Money
Dividend model
R^2=0.128
d. Freedom to trade
Freedom to Trade Internationally
Dividend model
R^2=0.355
e. Regulation
Regulation
Dividend model
R^2=0.078
f. Summary index
SUMMARY INDEX
Dividend model
R^2=0.326

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7 Policy challenges in a growing global economy

In this chapter possible policy implications of on-going, global demographic change are discussed. Three general questions will be in focus. First, what types of development policies are called for in different demographic situations? Second, what policies should be enacted as a response to the social and economic trends that are the likely results of demographic change? The third questions is what need there will be for policies that influence the demographic trends themselves? Each of these questions will be treated in the sections below.

7.1 Policy matters – how demography affects economics depends in part on policies

Rapid and significant demographic change places new demands on national and international policy making. Transitions from high mortality and fertility to low mortality and fertility can be beneficial to economies as large cohorts enter the workforce and save for retirement. Rising longevity also tends to increase the incentives to save for old age.

The ability of countries to realize the potential benefits of the demographic transition and to mitigate negative effects of aging depends crucially on the policy and institutional environment. Attention to the following areas is likely to be essential for the development of effective policy to deal with the effects of demographic change:

Health. Although it has long been known that increased income leads to improved health, recent evidence indicates that good health may also be an important factor in economic development. Health improvements – especially among infants and children – often lead to declines in fertility. Focusing on the diseases of childhood can therefore increase the likelihood of creating a boom generation and certain positive economic effects. Countries wishing to accelerate fertility decline may benefit from focusing on access to family planning services and education about fertility decisions and reproductive health.

Education. Children are better able to contribute to economic growth as they enter the workforce if they have received an effective education. East Asia capitalized on its baby boom by giving these children a high-quality education, including both general schooling and technical skills that equipped them to meet the demands of an ever-changing labour market. Ireland also gained from its baby boomers by introducing free secondary schooling and expanding tertiary education.

Labour market institutions. Restrictive labour laws can limit a country's ability to benefit from demographic change, particularly where they make it difficult to hire and fire workers or to work part-time.[14] Restrictions on immigration are also of concern, as they hold down the labour supply. In many countries immigration is a politically controversial issue, but arguments to lower barriers to immigration are likely to grow stronger as populations in developed countries age. International outsourcing, another controversial subject, may also be an increasingly important means of meeting the demand for labour.

Trade. One means by which East Asian countries provided productive opportunities to their baby boom cohorts was by carefully opening up to international trade. The opportunity to export provides an outlet for the product of a large demographic cohort. Bloom and Canning (2004) found that open economies benefit much more from demographic change than the average, and that closed economies do not derive any statistically significant benefit from age structure changes.

Retirement. Population aging will require increased savings to finance longer retirements. This will affect financial markets, rates of return, and investment. In addition, as more people move into old age, healthcare costs are likely to spiral upward, with the expansion of healthcare systems and growth in long-term care for the elderly. Bryant and Sonerson (2006), however, provides cautionary arguments with respect to the assumption that an aging population is the main driver of rising expenditures on health. Their analysis shows that factors not related to demographics are more substantial drivers in increasing health expenditure.

As non-tradable, labour-intensive sectors with a low rate of technical progress, healthcare and eldercare may potentially slow measured growth. [15] The ability of individuals to contribute to the financing of their retirement may be hampered by existing social-security systems, many of which penalize individuals who work beyond a fixed retirement age. In any case, as explained by Turner (2006), demographic factors play a central role in determining the potential viability of pension systems, a fact that applies equally to fully funded and pay-as-you-go plans. Recent work by Kulish, Smith, and Kent (2006) on Australia suggests that changes in fertility and longevity, functioning jointly, tend to increase the ratio of capital to labour inputs, and that, on average, people still spend a similar portion of their lives in retirement as before these changes.

7.2 European External Policies

From 1500 and five centuries onwards, Europe rose to a dominating position in the global system. During the latter part of the 20th century this position has been severely eroded, and it will erode further in the 21st century if the economic forecasts presented in this report materialize. This implies a need for Europe to rethink its role in global politics.

In the future it will become increasingly difficult for Europe to reach foreign policy goals by putting military or economic pressure on competing powers. Moreover, it will also become increasingly difficult to pursue such policies in collaboration with the US. The reason is that

[14] There are also arguments on the other side of this issue that deserve consideration. For example, in many countries, labour unions have led to improved living conditions, including for non-members. The same might also be said of minimum wages even if, in some circumstances, they have constrained some aspects of economic development.

[15] One might speculate that compensating mechanisms would limit or nullify such a slowdown in growth, but that is beyond the scope of this paper.

the combined relative economic strength of the North Atlantic region is likely to diminish rapidly. If Europe has an ambition to influence the political development in other parts of the world this will, probably, only be possible if our actions are coordinated with broader international alliances incorporating, for example, India, China, Latin America and others.

An issue that ought to be discussed in relation this diminishing relative power is what the goal for Europe's external policies should be. One argument is that the goal cannot any longer be to have a dominating role in world politics, in isolation or in cooperation with the US. Such a goal was possible to pursue as long as North Atlantic economy dominated the global economy. With diminishing power it is, instead necessary to put up more restricted goals that can be reached with the more limited means that Europe will have at its disposal.

One possible, alternative goal for Europe's external policy could be to aim at securing the well-being of European citizens. With an ageing population it is possible that the financial resources of European governments will become restricted. Apart from securing continuing peace in the European region, external policies should, therefore, put the highest priorities to measures that have a direct positive effect on the income of Europeans.

This implies, first, that external policies should promote political changes that increase the potential for profitable trade. Since trade is sensitive to distance, greater attention should be given to regions that are close to Europe, for example the Middle East. Today, the miserable security situation in this region is a factor that severely disrupts the potential for economic development. European Middle East policies should, according to this line of argument, aim at promoting favourable conditions for economic growth in this region. This does not only require peace, but also improved economic integration, a trans-regional transportation network, and political conditions of self-determination that are conducive to internal and external trade.

Equally important, in this perspective, external policy should be used to build goodwill for European firms. How can external policy measures, including immigration policy, educational exchange, human rights interventions, technical cooperation, promotion of environmental protection and development aid, be used to build a European trademark that makes European products and business partners attractive?

A third important goal for external policy should be to provide environmental security. With growing per capita income across the world, energy consumption will increase rapidly. If this energy is produced using today's technologies, we can expect fast increases in CO2-emissions and growing problems with adaptation to climate change. A major challenge for European external policy is, therefore, to negotiate effective global agreements to control CO2-emissions. Europe should also take the lead in promoting investments in environmentally -friendly energy technologies.

A fourth possible goal for external policy, extensively discussed in other parts of this report, could be to provide a framework for regular and well-managed systems of international migration. Such systems should be designed both to help Europe to cope with the aging problem and to improve relationships with countries of out-migration.

The analysis presented in this report indicates that we cannot expect, in the future, the same patterns of development in different neighbouring regions. Therefore, different policies in response to external economic and demographic challenges will be required. But before these policies are discussed, one geo-political fact should also be noted: Europe has a locational advantage in the future global economy. The reason for this is simple. Most of the global land mass excluding Antarctica is concentrated to the northern hemisphere and away from the Pacific Ocean. A global headquarter wanting to minimize the total travel times for visits to Tokyo, Beijing, Mumbai, Djakarta, Johannesburg and Sao Paolo would rather choose to locate to Frankfurt than to New York or Los Angeles. The total distance to the six destinations mentioned above is 71,000 km from New York, 74,000 kilometres from

Los Angeles, but only 53,000 km from Frankfurt. Thus, it could be argued that Europe lies at the geographical centre of the new, emerging global economy. This advantage is important to keep in mind.

Environmental challenges

According to the dividend model, population aging in the developing world will lead to large increases in per capita income. Historical experience makes clear, that we can expect that these rising incomes will result in growing energy consumption, rising CO2-emissions, larger demand for natural resources as well as rapid increases in car traffic. That is, as poverty is reduced in large parts of the world and income levels converge, the consumption pattern earlier observed in rich countries will be adopted by rising proportions of the global population. As a consequence, pressures on the environment will increase and, if not counteracted by efficient policies, large environmental damages will ensue.

Much of this potential environmental degradation will occur outside Europe. Nevertheless, there are strong reasons to make global environmental protection a top priority on the European external policy agenda.

First and foremost, to tackle global environmental threats is a matter of both ethics and economics. Climate change is a major threat that can lead to massive damage to our planet. Climate change also threatens the security and well-being of citizens in all parts of the world. The costs of inaction are bound to be huge. Similarly, It can be argued that the spread of chemicals and the depletion of biological resources have consequences that go far beyond national borders.

Second, strong European action to halt environmental degradation is an important means to build confidence in North-South co-operation Much of the future environmental degradation will no doubt take place outside Europe, but up to now, the bulk of environmental damage has been the result of activities in early industrialized countries. Therefore, developed countries have since long promised to take the lead in this area.

Finally, an additional argument for making environment a top priority for European external policies, is that environmental protection is a sector where Europe currently has a competitive advantage. Increasing global environmental ambitions can generate business opportunities for European firms while contributing, at the same time, to technology transfer and capacity building

Trade

In a global economy characterized by fast growth, international trade will be perhaps the most important factor for increasing prosperity in Europe, above all through an increase in the supply of low-cost, high quality goods from producers around the world. A large number of European firms will be hurt by competition from emerging industrial economies, but the net effect will most probably be positive. What can already be seen is that an increasing volume and diversity of low-cost goods have stimulated growth in the retailing and distribution sector of the economy. Thus, jobs lost in manufacturing (-2.2 million in EU15 since 2000) are compensated for by more jobs in firms that handles the increasing flows of globally produced goods and services (+5.5 million jobs in health, education, wholesale and retail, restaurants and hotels in EU15 since 2000).

Economic and technical cooperation

The economic projections we have presented indicate that an increasing proportion of global economic growth will occur outside the European region. A pessimist, thus, could conclude that Europe will be an economic looser over the next decades. A more optimistic

scenario could be that strong economic growth in other regions generates increasing opportunities for Europe as well. Large increases in global demand imply, for example, growing opportunities for large investments in new technologies with a potential to solve pressing environmental problems. A challenge for European external policy in this perspective, is thus to fasten the rate of global technological growth by promoting technical cooperation not only within the European Union but also with high-growth countries in other regions.

Security issues

From a security perspective, the most important consequence of global population aging will, according to the Urdal model, be a decline in the risks of internal violent conflict. This would constitute a radical break with the trends of the second half of the 20th century, but it should also be consistent with the trend towards fewer conflicts during the last decade. To be sure, there will still be a group of countries with demographic structures that indicate high risks for conflict. But the situation will be radically different from what prevailed in the 1970s, when demographically instable countries were abundant. Moreover, we can expect a further reduction of the number risk countries for every decade up to 2045.

Will this have an effect on European external policy? One view is that reduced demographically-induced risk for conflicts opens up for a more offensive stand when it comes to implementing policies to reduce social, ethnic and political tensions that can trigger violence. The argument here is that policies to reduce tensions are more likely to succeed in a situation where these efforts are not counteracted by demographic factors that increase the risk of violence. If this is correct, then it should be considered if the European Union and the member states should adopt more ambitious policies of conflict resolution. A factor to be considered here is the positive record that the Union has with respect to promoting peace and economic development within Europe, a region with a long record of internal violent conflicts.

Urdal's findings also give indications of how conflict risks might be reduced in countries where the demographic situation promotes instability. If it is the case that the risks of violent conflict rises when it is easy to recruit young adults into armed groups, then it can be considered if ambitious employment programs could reduce the risk of armed clashes in countries at risk. Such targeted programs were probably not a viable option when a large number of countries were at risk. But as the number of risk countries is reduced it can become possible to use larger resources to defuse potential threats of escalation.

Increasing economic wealth is not, as we know from the European experience, a guarantee against war. To the contrary, as the productive capacity of a countries increase, there is also an increase in their capacity to wage even more destructive wars. Global income growth could, therefore, be seen as an opportunity for European weapon producers to increase their sales of arms, warships, and warplanes. It is not likely, however, that the fuelling of a global arms race, notwithstanding other considerations, is in the long-term interest of the European citizens.

Development aid

If the global income growth projection presented in chapter 4 is correct, then country-level poverty will increasingly become a problem concentrated to sub-Saharan Africa. Similarly, Urdal's model of internal armed conflict predicts that it is primarily countries in sub-Saharan Africa that will experience high, demography-induced conflict risk in upcoming decades. In addition, the net migration forecast indicates that in the 2020s and 2030s, sub-Saharan Africa will become the most important source region for international net-outmigration.

All these predictions points to a need for detailed consideration of to what extent development-aid programs could help to reduce poverty, decrease conflict risks, and improve the health and educational level of possible future migrants from sub-Saharan Africa. Given that health improvements and increasing educational opportunities are strongly correlated with declining birth rates, it is likely that successful programs in this area will stimulate economic growth through a demographic dividend effect. In addition, strong efforts should be directed towards finding means by which the risk for internal violent conflict can be reduced.

Policies towards Latin America

In the growth forecast, Latin America is singled out as one of the most expansive regions in the world economy during the coming decades. For much of the 20th century Latin America's closest foreign relations have been with the US. Although this US orientation is likely to continue, there are reasons to expect that there will also be room for stronger links with Europe. One important factor, that can contribute to strengthen Euro-Latin relations, is the increasing economic strength of Spain. In the 1950s and 1960s, Spain was not a leading economy and this opened up for increasing US influence in Latin America. As Spain has modernized its infrastructure, industry and educational system the potential for Spain to become a strong node in Euro-Latin relations has increased. As the Latin American countries get economically stronger, they may also have an interest in getting away from a too-strong dependency on the US.

Policies towards the Middle East

In the same way as for Latin America, the Middle East region can, according to the dividend based forecast, expect a very large increase in total GDP. However, this forecast is only based on the demographic potential of the region and not on an assessment of the political situation. It could, therefore, be questioned if the region will be able to exploit its demographically-based growth potential.

On the other hand, since this region is a close neighbour, Europe has a strong interest in promoting peace and economic development here. Considering the level of development and the demographic situation in the Middle East, it is likely that a development policy in this region similar to the one adopted by the European community towards countries like Spain and Ireland would have large chances of success. A key to a solution is of course the Israel-Palestine conflict. Here, Europe has for many years allowed the US to play a leading role. A motive for this has been that Israel's dependency on the US for military and economic support will allow the US to put pressure on Israel. But it can also be argued that the US has not been able to reach a solution. This opens up for a European based initiative. In fact, Europe already has a key role in relation to Israel, since US support for Israel depends on using Europe for logistic support. Moreover, Israel is economically strongly dependent on Europe for trade, tourism, and travels. Thus, if necessary, Europe will probably be as capable as the US to put pressure on Israel if it is needed during negotiations for a settlement.

A strong motive for Europe to develop more pro-active policies towards the Middle East, is the European security interest. A continuing war-like situation in Israel-Palestine continuously threatens to spill over into violence also within the EU. One way forward here would be to look at the Israel-Palestine conflict as an internal European conflict and to choose a policy stance that would be appropriate in such a situation.

Asian Policy

With respect to Asia, the growth forecast we have presented is in line with what many observers have already noted. Perhaps the most important contribution of the demographically based forecasts is that it underlines the following: the current positive long-term growth trend is likely to extend several decades into the future. As a consequence, Asia will become the world's largest market and the world's largest producer of goods and services.

What European policies should consider in relation to Asia is how to take advantage of this extraordinary expansion. Points to consider are:

- Increasing per capita income will increase the demand for education. Europe has many of the world's leading institutions for higher education. Providing Asia's growing upper middle class with higher education can become one of Europe's leading exports.
- Large increases in GDP will generate large demand for investments in transport infrastructure, urban infrastructure, energy production and means of transportation. These large investments, in turn, will make large-scale R & D-projects economically feasible. The European Union should consider how to become a leading partner in such projects.
- Today, the United States considers itself the most important player in world politics. This situation is likely to persist as long as other leading powers to not respond to the United States in a coordinated way. However, with Asia's growing economic strength, a Euro-Asian alliance would be able to contest the dominance of the United States. To consider such an alliance should be part of a long-term European external strategy.

Relationship to North America

The United States is—and, for many decades, will remain—a world leader in most fields of technology and science. In order to secure European competitiveness, it is therefore essential, also in the future, to have a close cooperation with the United States in research and development.. However, Europe should also aim at strengthening its position and develop co-operation with centres of excellence and business communities in other parts of the world. For many decades, flows from Europe to the United States dominated trans-Atlantic intellectual migration, In the future it must be possible to reverse this stream A possible goal for a European research policy could be to promote the development of a number of research environments that could become global leaders in their fields.

7.3 Can demographic trends be shifted? Government's responses to demographic change

Many European countries have taken steps to address eventual decline of the non-immigrant population and mitigate the effects of aging. In a 2005 UN survey, 28 European governments viewed their countries' fertility as too low. 22 of these had implemented family-supportive policies to increase it, (United Nations 2005).

Measures to encourage couples to have more children vary across countries. [16] They range from reducing support for contraception to making child rearing easier and child care more

[16] See further detail on pro-natalist policies, below.

accessible for working parents. In developed regions as a whole, the proportion of governments providing direct support for contraception fell from 62 per cent in 1976 to 38 per cent in 2005. Some countries, such as Austria, Italy, and Poland, provide one-time payments to couples that have children (in Italy's case this starts with the second child), while in others parents receive income tax benefits depending on the number of children they produce. In most countries existing support measures include child/family allowances and subsidized social insurance (usually health and pension) coverage for dependent family members.

Once they have encouraged couples to have children, governments then endeavour to make parenthood easier. Most countries give monthly allowances to couples with children. In France this allowance increases more than proportionally for families with three and more children. Mothers and sometimes fathers receive paid parental leave: Spanish mothers' 16 weeks of paid leave and Norwegian mothers' 10 months are fully funded by the state. When they return to work, parents' benefits from state-funded child-care – France provides fee day care at crèches to younger children, and Italy gives free places at nurseries (BBC News 2006).

The efficacy of these policies is unclear. France, whose family-promoting (or pro-natalist) policies are among the most comprehensive in the world, has a high fertility rate for Europe, at 1.9 children per woman United Nations (2004). A number of studies have found that policies that promote having children, reduce the costs of child care, enable parents to work, and involve fathers in parenting help increase fertility (Hoehn, 2000; Lesthaeghe, 2001; McDonald, 2001; Milligan, 2002; Chamie, 2004; Hoen et al, 1999). On the other hand, the benefits of pro-natalist policies in Singapore, which include tax credits, one-time payments to parents, and priority housing for families with three or more children, were short-lived, with fertility rising briefly after implementation in the early 1980s before falling off to 1.42 children per woman by 2001.

Although Singapore's results may in part be due to limited uptake or implementation of some policies, the difference in outcomes between France and Singapore may be due to the fact that the measures in France not only subsidize families but also give mothers a chance to remain in the work force and to have their own income (and later their own pension), thus lowering the opportunity costs of children. The measures in Singapore only address direct costs (and not the opportunity costs) and do not make it easier for parents to stay in the workforce or to organize childcare. In addition, Singapore is a city-state and fertility is usually lower in cities.

The European Union's public opinion Eurobarometer found that 84 per cent of men surveyed had not taken or did not intend to take parental leave because, for example, either such leave did not exist, they could not afford it, they perceived such leave as being mainly for women, or their wife or partner did not work (European Commission 2004). Further discussion of the efficacy of pro-natalist policies appears below.

Aside from pro-natalist policies, a more immediate way to alter the size of cohorts and counterbalance possible shortage of workers is by allowing increased immigration and even pro-actively recruiting qualified migrants. There is great pressure, which is very likely to increase, from people in North Africa, Sub-Saharan Africa, and Asian parts of the Muslim world to migrate to Europe.[17] The difference in living standards is likely to continue to make the prospect of moving attractive to larger numbers of people. This also has a demographic background. Europe's native populations are aging and tilting towards lower numbers of

[17] In contrast to public perception, the inflows from other regions (e.g., Latin America and Eastern Europe) are much larger than immigration from North Africa.

people at working-age. The age structure of immigrant-sending countries shows to some extent the opposite pattern. The latter have large and growing numbers of young people who encounter difficulties finding work at home.

There is, however, resistance to immigration among Europe's domestic populations. Those who feel immigrants may threaten their jobs or their regional culture have a strong interest in lobbying to limit their numbers; European reluctance to admit Turkey to the EU is partly related to such fears. Security is another factor, with the recent terrorist attacks in Madrid, London, and Northern Germany heightening distrust of "outsiders".

A further countervailing pressure is that measures other than immigration could be adopted, or could evolve, to alleviate some of the possible labour shortages that Europe faces. Wage rates will rise over time in occupations that, because of shifts in age structure, are more in demand. Expectations of what constitutes a reasonable standard of living may also change, either in response to a lack of workers or an antipathy to immigrants, or in response to other challenges such as global warming, war, or epidemics.

Governments may also choose to tackle the fiscal burden of an aging population by encouraging people to work for longer. Raising the retirement age and encouraging higher labour force participation (particularly among groups, such as women, whose participation in some societies has traditionally been low) are among the measures already being considered or implemented in countries such as the UK and Germany.

Pro-natalist policies

While some countries have been reluctant to be characterized as pro-natalist, more governments—especially in Europe—have, within the last 10 years, become increasingly concerned with falling fertility rates and aging population. Of governments in more developed regions, 65% list low fertility as a significant issue and 44% considered their natural rate of population growth to be too low (UN 2005).[18] Twenty of the 21 developed countries that viewed their population growth as too low are in Europe, with about 2/3 of the countries in Europe viewing fertility as too low. Not only do these countries consider fertility to be too low, but they are also taking policy action in attempts to increase fertility. Of the 46 countries that viewed fertility as too low in 2005, more than 3/4 had policies to boost fertility (Table 7.1).

[18] Most countries give answers to the UN based on the natural growth rate of their population, which is the crude birth rate minus the crude death rate. The overall rate of population growth must add to this the net rate of immigration.

Table 7.1: Countries that view fertility as too low

	Fertility Policy
Armenia	Raise
Australia	Raise
Austria	Raise
Barbados	Raise
Belarus	Raise
Bosnia and Herzegovina	No intervention
Bulgaria	Raise
Canada	No intervention
Cook Islands	Raise
Croatia	Raise
Cyprus	Raise
Czech Republic	Raise
Democratic People's Republic Of Korea	No intervention
Estonia	Raise
Finland	Raise
France	Raise
Gabon	Raise
Georgia	Raise
Germany	No intervention
Greece	Raise
Hungary	Raise
Israel	Raise
Italy	Raise
Japan	Raise
Kazakhstan	Raise
Kuwait	Raise
Latvia	Raise
Liechtenstein	No intervention
Lithuania	Raise
Malta	No intervention
Mongolia	Raise
Niue	Raise
Poland	No intervention
Portugal	Raise
Republic of Korea	Raise
Republic of Moldova	Raise
Romania	Raise
Russian Federation	Raise
Serbia and Montenegro	Raise
Singapore	Raise
Slovakia	Raise
Slovenia	Raise
Spain	Raise
Switzerland	No intervention
Ukraine	Raise
Uruguay	No intervention

Source: *World Population Policies 2005.* United Nations

These measures (Table 7.2), which include baby bonuses, family allowances, maternal and paternal leave, subsidized child care, tax breaks, subsidized housing, and flexible work schedules, are generally aligned with international standards of human reproductive rights and often are used to promote gender equality and opportunity rather than explicit fertility goals. Some countries (for example, Austria, Denmark, France, Italy, and Switzerland), however, "have reduced their support for contraceptive methods possibly as a response to below-replacement fertility…" (UN 2005). Of governments in more developed regions, the

percentage of countries providing direct support for contraceptive methods decreased from 62% in 1976 to 38% in 2005.

Table 7.2: Family policies in Europe

Country	Policies
France	Most extensive state-funded child care in Europe: Younger children entitled to full-day childcare (crèches)
	Mothers- 16 weeks paid maternity leave for the first child, rising to 26 weeks for the third child; total of 26 months parental leave
	Income tax benefits for each additional child
	Monthly allowance (~ £180) for families with three children, which rises when they reach 11
	"carte famille nombreuse" - gives transportation discounts and reduced price for amenities
Germany	14 weeks maternity leave plus parental leave up to 36 months, various level of pay
Ireland	Mothers get 26 weeks maternity leave plus 14 weeks parental leave
Italy	Government offers one-time payment of 1,000 euros to couples who have second child
	New fathers two weeks paid leave
	Free government early education places at nurseries
Poland	Woman receive one-off payment of 258 euros for each child she has; poorer families receive double
Spain	fully funded maternity leave for 16 weeks, unpaid leave of three years available
Sweden and Norway	"Nordic model" - social policies aimed at helping people balance their work and family life
	Sweden: parents 18 months leave paid for by government; Public day care heavily subsidized and flexible work schedules
	Norway: mothers 12 months off work with 80% pay or 10 months with full pay;
	Fathers are entitled to take almost all of that leave instead of the mother
	Fathers must take off at least 4 weeks; financed through taxes
UK	New mothers six months' paid leave, option six months further unpaid leave

Note: These policies appear to be aligned with sexual health and reproductive rights.
Source: BBC News. Mar 2006

As noted earlier, however, the efficacy of these policies is still unclear. Some studies have found that policies that promote childbearing, reduce the costs of childrearing, facilitate working couples, encourage greater male involvement in parenting and preferences to couples with children, have “noticeable effects on period total fertility” (Hoehn 2000, Lesthaege 2000, McDonald 2001, Milligan 2002) and that “experience, available evidence and intuition point to a link between fertility rates and public aid to families” (Chamie 2004). Looking at preference surveys as well as the proportion of employed women with children, McDonald contends “policy should be organized around the gradual return of mothers to the labour force as their youngest child ages” and that assistance should be given to stay-at-home parents. Some studies have shown that low rates of continuation (having more children) beyond the first birth are associated with poor levels of support for both parents to combine work and family (Hoem 1999, McDonald 2001), so pro-natalist policies should allow mothers to ease back into employment through paternal leave and part-time work provisions as well as free, quality education and child care services.

Potential rises in fertility, however, may only be temporary because government incentives and programs often cause couples to have children sooner, but do not alter overall fertility (Chamie 2004). Because incentive packages frequently change while the decision to raise children carries long-term implications, "incentive schemes that presumably should have stimulated fertility have not worked well in the past" (Demeny 2003). Even with generous family leave programs, moreover, individuals may not necessarily choose to use them. The European Union's public opinion Eurobarometer in 2004 revealed, that "84 percent of the men surveyed either had not taken parental leave or did not intend to do so, even when informed of their rights" (European Commission 2004). Reasons for low utilization of benefits may include "information barriers; leave compensation and pay disparities; hard-to-find or inflexible childcare facilities, and fear among employees that taking leave will isolate them from the labour market." Furthermore, "In Greece, some employers say that they avoid hiring women who either have or will have family commitments, considering such recruitment to be counterproductive…In Slovenia, according to a 1996 study, 70% of employers considered that employing a young woman who might possibly take maternity or parental leave represented a greater risk and cost than employing a man or a woman with grown-up children" (EIRO 2004).

Programs aimed at creating gender equality, moreover, may not necessarily result in increases in fertility. These policies (parental leave policies and flexible working hours for mothers re-entering the work force) may account for some fertility differentials between Western European countries and are supported by some economists for macroeconomic reasons: female labour participation helps correct for the decreasing ratio of those in the labour force to retired people. These work-life balance programs are self-reinforcing and have helped promote higher labour force participation of women. At the same time, government-imposed collectivization of childbearing costs is funded through heavier taxes that may increase the necessity for both parents to work. Social policies that encourage a combination of work and childbearing, then, may actually contribute to the one or two child norm because while having two children may be compatible with both parents working, having three or more may require outside help or one parent to stay at home (Demeny 2003). On the other hand, higher taxes that finances subsidies for families with children is a means by which parent can receive a compensation for the economic cost that are associated with having children.

The conclusion is that a successful policy for increasing European birth rates should rest on three pillars (EU Commission, 2006): First, a reduction of the economic penalties that are associated with having children. This can be done with child allowances, paid parental leave, and subsidized child care. Second, improvements in young adults' access to accommodation that are appropriate for families. Third, policies that improve the employment situation for young adults.

A look at family planning and contraceptive use worldwide

Although fertility has declined steeply in most parts of the world during the 20th century (Caldwell 2001), large concerns over population growth, whether too high for developing countries or too low for industrialized ones, remain today.

For developed countries in the West, governments are fretting that fertility has reached levels below those needed to replace preceding generations. Populations are aging, leaving shrunken working-age cohorts with a potentially crippling burden if they are to support the health care and pension needs of a bulging elderly generation. Of governments in more developed regions, 65 percent reported low fertility as a significant issue and 44 percent considered their population growth to be too low. The proportion of developed countries

with policies aimed at raising the growth of their population, moreover, increased from 23 percent in 1996 to 35 percent in 2005 (United Nations 2006).

In most of the developing world, on the other hand, fertility remains well above replacement levels. While here too fertility has fallen sharply, 41 percent of all governments believed that their fertility was too high in 2005, and 53 percent of governments in less developed countries had policies aimed at lowering fertility. This is because some developing countries, like many Western nations in the latter half of the 20th century, have the potential to benefit from "baby booms" as temporarily larger working-age cohorts have reduced proportions of elderly and youth dependents to support.

Academic debate over the cause of fertility declines continues to rage. Some argue that families began to have fewer children as they grew wealthier. Mortality decline resulting from medical, nutritional, and sanitation improvements, for example, has led to fertility transitions and eventual fertility decline (Cleland 2001). Increased economic opportunities encouraged more women to forsake childrearing in favour of work (Brewster and Rindfuss 2000). Better health care provision and credit systems for the elderly, moreover, reduced the need for families to rely on children for security and health care provision during old age (Lee and Miller, 1990).

Those on the other side of the debate argue that while the above factors were important, the provision of family planning services was a crucial tool by which families achieved lower fertility. Family planning programs are at the heart of population policy in most developing countries. Their advocates believe such services slow population growth by reducing unwanted fertility, which is caused largely by a lack of access to contraception.

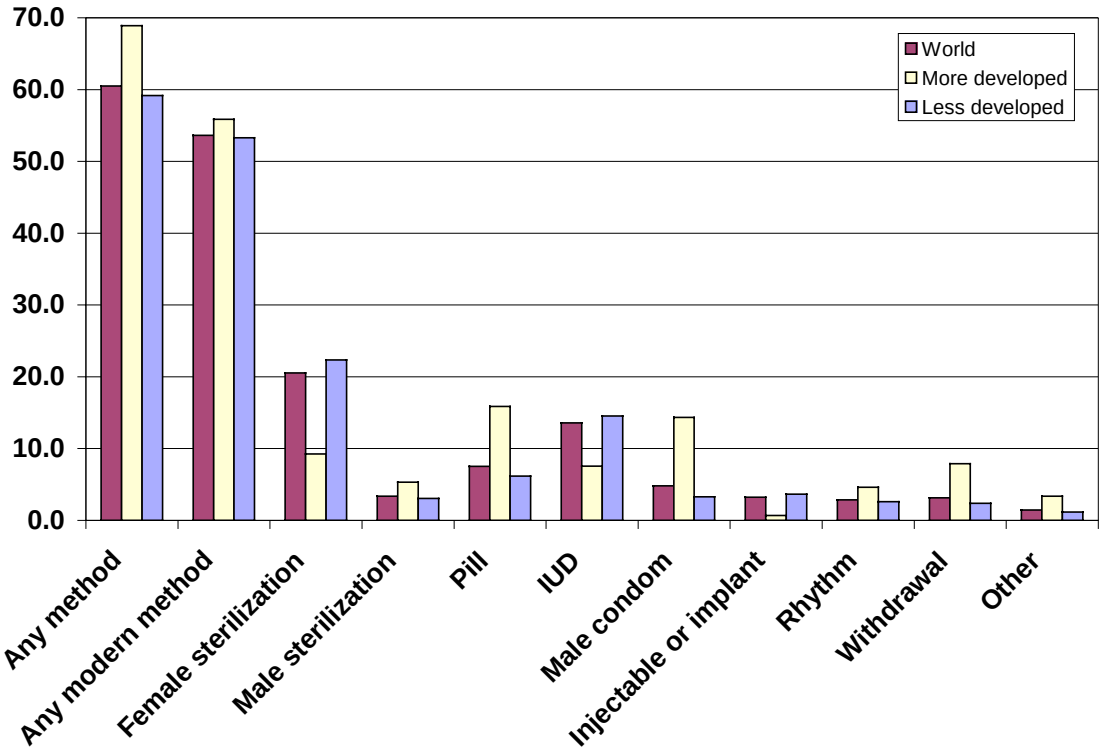
Below, we assess global patterns and trends in contraceptive use. We also briefly review the key points in the family planning debate.

Patterns and trends in contraceptive use. The United Nations Population Division measures contraceptive use by the percentage of women of reproductive age (aged 15-49) who are married or co-habiting with a man and currently using contraception. Clearly this does not cover women in steady but not co-habiting relationships, nor women with more temporary sexual relationships. It does, however, provide an idea of how common contraception is in a given country, and how trends develop over time.

A further issue is that all data were collected from surveys. Sexual behaviour is a notoriously difficult subject for people to talk about in most cultures. In many, it is more difficult still for women. Some of the findings may therefore be distorted by reticence or by a reluctance to answer questions.

Current contraceptive prevalence. As shown in Figure 7.1, more than 60% of women worldwide were using contraception in 2005. In more developed regions, the proportion was 69% and in less developed regions, 59%.

Figure 7.1: Prevalence of Contraceptive Methods Worldwide



Source: UN, *World Contraceptive Use 2005*

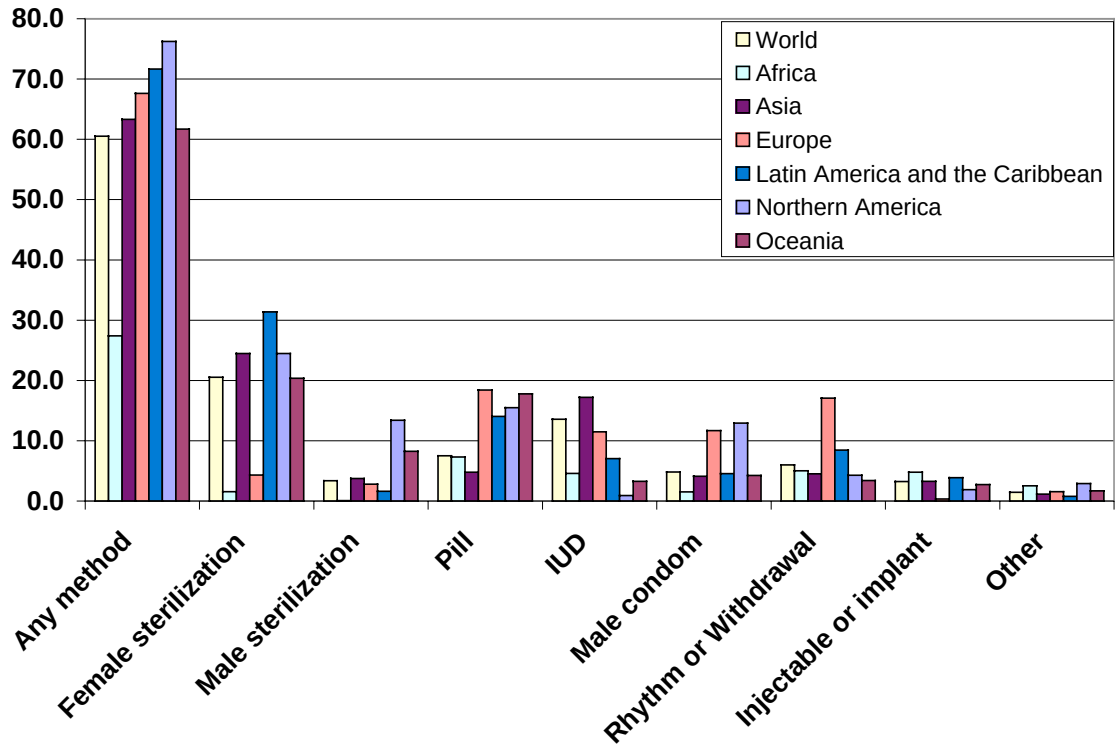
54% of women use modern contraceptive methods. This includes female and male sterilization, the contraceptive pill, intrauterine devices (IUDs), male condoms, injectable or implanted contraceptives, vaginal barrier methods (such as diaphragms, cervical caps, and spermicides), emergency contraception, or female condoms. For modern methods, the difference between more and less developed regions was smaller, with 56% and 53% respectively using modern contraception.

Contraceptive use varies dramatically by geographical region. In North America, 76% of women use contraception, and in Latin America and the Caribbean (72%), Europe (68%), Asia (63%), and Oceania (62%), well over half of women use contraception. The overall worldwide figure, however, is dragged down by Africa, where only 27% of women use contraception. The proportion in northern and southern Africa is over 50%, but in West Africa, only 13% of women currently use any form of contraceptive.

The type of contraceptive method used also varies geographically. In more developed regions, the pill (used by 16% of women) and male condom (14%) are most prevalent, ahead of female sterilization (9%). In less developed regions, on the other hand, female sterilization is the method used by 22% of women, followed by IUDs (15%). It appears that in the latter regions in particular, women take sole responsibility for contraception, with male condoms only used by 3% of women.

Within more and less developed regions, there are further significant differences (see Figure 7.2):

Figure 7.2: Type of Contraceptive Use by Region



Source: UN, *World Contraceptive Use 2005*

In Africa, the pill (used by 7% of women) is most common, followed by injectables and IUDs. In Asia, female sterilization (used by 25% of women) is widespread, although it is concentrated in eastern and south-central Asia. IUDs (17%) are also common. Female sterilization (31%) is the most popular method in Latin America and the Caribbean and in northern America (25%) and Oceania (20%). In Europe the pill (18%) is the most widely used contraceptive method. The non-modern withdrawal method is most common among European women, 11% of whom use it, rising to over 15% in eastern and southern Europe. 6% of European women use the rhythm method.

Contraceptive prevalence over time. UNPD has also compiled data on trends in contraceptive prevalence. Data are available for 36 countries in Africa, 25 in Asia, 14 in Latin America and the Caribbean, 6 in Europe, and the United States. No trend data are available for any countries in Oceania. Data cover the period between 1990 and 2004. For most countries, only two data points are available, and the years for which data were collected vary from country to country.

Although one cannot draw broad conclusions either by region or worldwide, given the patchy nature of the data, it may be interesting to note that of the 83 countries for which data were amassed, 71 saw an increase in contraceptive prevalence between the first and last surveys. Two others saw no change. This apparent increase in contraceptive prevalence is supported by historical data showing that between 1960 and 1990, worldwide use of contraception rose from 10% to 60% (Bongaarts, 1994).

The policy environment may be important to trends in contraceptive use. Many governments responding to HIV/AIDS have urged couples to use condoms more frequently and warned of the dangers of unprotected sex. Although unlikely to account for all of the increase in contraceptive prevalence – many couples are likely to have switched to condoms from another method – this may have been an important factor over time.

On the other hand, some governments that are worried about falling fertility have used various incentives to encourage couples to have more children. Tax breaks and free child care are among these measures, but support for contraception has also declined in some areas (Chamie, 2004). In the developed world, where falling fertility is a more immediate problem, the proportion of governments providing direct support for contraception declined from 62% to 38% between 1976 and 2005 (United Nations, 2005).

Does increasing contraceptive use cause fertility decline?

The "yes" camp. Family planning programs have spread across the world in recent decades, and they continue to do so in developing countries (Mauldin and Ross, 1991).

John Bongaarts (1994), perhaps the most vocal academic supporter of family planning programs, has argued that such programs have in most countries been "a key factor in assisting individuals in changing their reproductive behaviour." As contraceptive prevalence rose rapidly between 1960 and 1990, he notes, fertility in developing countries fell from an average of 6.1 to 3.8 children per woman. While acknowledging that socioeconomic development is also important to reduced fertility, with the balance varying by country, Bongaarts claims that in a few countries, including China and Bangladesh, family planning has been the principal driver of fertility declines.

Family planning, the "yes" camp argues, allows people to access contraception and thereby limit the number of unwanted children they produce. In developing countries, programs stopped or slowed the growth of unwanted fertility. Bongaarts (1994) calculated that family planning programs accounted for 43% of fertility declines in such settings between the 1960s and 1980s.

Several empirical studies support Bongaarts' thesis. In Ireland, the gradual legalization of contraception in the 1970s and 1980s accelerated fertility declines. The crude birth rate in the 1980s fell from 21 per thousand to 14 per thousand (Bloom and Canning, 2003). A study in Matlab, Bangladesh, found that the introduction of high-quality family planning services in a number of rural villages greatly reduced rates of unintended pregnancy and, largely as a consequence, abortion. Contraceptive prevalence in the treatment area rose steeply, leading to a large difference in the number of births per woman between treatment and control areas (Rahman et al, 2001).

The "no" camp. World Bank economist Lant Pritchett is among the leading critics of the view that family planning is key to fertility declines. He points to the fact that unwanted fertility has not diminished in developing countries that have experienced overall fertility declines (an argument John Bongaarts countered by suggesting it would have risen in the absence of programs).

Instead, Pritchett(1994) believes desired fertility is key to overall birth rates. He has shown that 90% of fertility differences between countries are a result of differences in desired fertility. He argues that the number of births per woman falls principally because socioeconomic development reduces the demand for children. Desired fertility therefore falls.

Pritchett also argued that even in the Matlab case, which showed clear impacts of family planning, the program was too expensive to be financially sustainable.

Support for Pritchett's view comes from a study in Indonesia by Paul Gertler and John Molyneaux (1994). They calculated that 75% of that country's rapid fertility decline between 1982 and 1987 was due to a large rise in contraceptive use. However, the latter was due mainly to economic development, improved education, and greater economic opportunities for women. Only 5% of the increased demand was attributable to more widespread availability of family planning services. The authors acknowledge, however, that the effect of socioeconomic factors on contraceptive use was only possible because, "there already existed a highly responsive contraceptive supply delivery system."

Summing up. The debate on the impact of family planning on fertility declines continues. It is clear that a combination of factors, including wealth, education, health and family planning, play a part, but the weight of each is not yet established. The balance, moreover, is likely to vary by region.

What is undeniable, however, is that contraceptive use has increased since the 1960s, and that where this involves condom use it may have helped stall the spread of HIV/AIDS and other sexually transmitted infections. Family planning has also improved child and maternal health. It may be as interesting for academics of the future to ask how far family planning services have strengthened women's health and control over fertility decisions, and whether it has reduced the spread of HIV/AIDS, as to continue focusing on its impact on fertility.

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MIGRATION POLICY CHALLENGES

8 Migration trends, current population, demographic outlook: Will there be sufficient labour in Europe?[19]

Today, demographic change is a global phenomenon resulting from two almost universal trends: declining fertility and increasing life expectancy. All countries in the world experience declining fertility or have stagnating fertility. In most developed countries fertility is below replacement level.[20] And the majority of countries report increasing life expectancies.[21] As a consequence most parts of the world will witness demographic aging during this 21st century. Large discrepancies, however, will remain. At the same time most developed countries have become immigration countries. This is particularly true for the EU and most of its member states.

Europe and Japan have entered the stage of very slow demographic growth and will most likely be confronted with some population decline during the first half of the 21st century. In Europe the age group 0-15 is already shrinking. This world region now faces declining working age populations and the prospect of shrinking resident labour forces. In contrast to this, the United States will experience sustained population growth until 2050 and most likely throughout the whole 21st century.[22] China is still growing, but the country has entered the stage of slow demographic growth and will have to deal with a stagnating and subsequently falling population. Demographic decrease in China is expected to start around the year 2025.[23] Europe's neighbouring regions Africa and the Middle East, however, will continue to grow significantly and stay younger. These regions still have much higher fertility. And their populations are much younger, with a median age of 20 years or less, compared to 38 in Europe.

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[19] This chapter has profited from close research co-operation with Robert Holzmann (World Bank, Washington DC), very valuable research support by Johannes Koettl (World Bank, Washington DC), and very helpful support by Thomas Buettner and Patrick Gerland (United Nations Population Division, New York), Heidi Kaiser-Mühlecker and Valérie Mauritz-Dulot (Erste Bank, Vienna). It is based on Holzmann and Münz (2004, 2005).

[20] On average fewer than 2.1 children per women (Total Fertility Rate/TFR).

[21] Main exceptions are countries with a high prevalence of HIV/AIDS and several post-Soviet successor states in Europe and Central Asia which have experienced stagnating or even declining male life expectancy since the late 1980s. See UN Population Division (2004, 2005).

[22] See forecasts of the US Bureau of the Census and the UN Population Division (2004, 2005).

[23] See forecasts of the UN Population Division (2004, 2005).

From a demographic point of view Europe combines some "extremes": Many of the 25 EU member states[24] and other parts of Europe (other EEA, Balkans, European CIS) experience the lowest fertility worldwide. At the same time most EU 25 member states and all other parts of Western Europe[25] belong to the group of countries with the highest life expectancy world wide.

In the future the majority of EU member states will experience an excess of deaths over births. And until 2050, the median age will rise to 48 years. As a result prospects and consequences of demographic ageing are widely discussed in Europe. Today, public pension regimes as well as private pension plans and their sustainability are at the centre of the debate. The effect of ageing on future innovation and productivity has drawn some attention. And there is a discussion on potential demographic and migratory arbitrage between Europe and regions with youthful and growing populations.

8.1 European migration pattern

For more than two centuries most countries of Europe have primarily been countries of emigration. During the last 60 years, all countries of Western Europe have gradually become destinations for international migrants and asylum seekers. Today all West European countries and several Central European member states of the European Union (EU) have a positive migration balance. And it is very likely that sooner or later this will also be the case in other new EU member states and candidate countries.

During the 1950s Europe as a whole and many today's EU/EEA member states still experienced net emigration. Overseas destinations in North and South America, Australia as well as (to a smaller degree) to Israel and South Africa were dominant among permanent emigrants. At that time, the main receiving countries in Europe were Belgium, France, Germany and Switzerland, where post-war recruitment of (supposedly temporary) labour mainly from Italy, Portugal and Spain, but also from the Maghreb had already started. The Baltic States – in particular Estonia and Latvia - experienced the inflow of slavophone migrants from other Soviet republics. In total Ireland, Italy, Poland, Portugal, Spain, and the UK recorded the largest net-outflows (1950-60, Table 8.1). Single events like the mass emigration from Hungary linked to Soviet military intervention ending the revolution of 1956 are also visible in available flow statistics.

During the 1960s European emigration to overseas destinations continued. But for the first time in modern history the migration balance of today's EU25 became positive. The main reason was that additional West European countries – in particular Austria, Luxemburg, the Netherlands and Sweden – also had started to recruit labour migrants. As a result - in addition to Italy, Portugal and Spain – other sending countries of labour migrants became more important; in particular Finland, Greece, Ireland, Turkey and former Yugoslavia (in particular Bosnia, Croatia and Serbia). Morocco and Tunisia

[24] Currently the following countries are EU member states: Austria, Belgium, Cyprus, the Czech Rep., Estonia, Denmark, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxemburg, Malta, the Netherlands, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, and the UK.

[25] These other West European countries comprise EEA (European Economic Area) member states outside EU (=Iceland, Liechtenstein, Norway) and Switzerland.

registered more emigration to Europe. Return of former colonial settlers to Western Europe also contributed to the positive migration balance of countries like France. In total France, and Germany recorded by far the largest net inflows. Net outflows were largest in Italy, Poland, Portugal, and Turkey (1961-70, Table 8.1).

During the 1970s labour migration to Western Europe peaked and came to an end as, in 1973 or 1974, most receiving countries halted recruitment in response to the so-called oil price crisis and the baby boom cohorts reaching working age. This created return flows to Southern Europe and Turkey, but also led to the inflow of dependent family members of previously recruited labour migrants. In total Germany, France, the Netherlands and Portugal recorded the largest net-inflow; in the case of Portugal mainly because of post-colonial return migration. Net outflows were largest in Cyprus, Poland, Turkey, the UK and former Yugoslavia (1971-80, Table 8.1).

During the 1980 inflows to Western Europe were dominated by family reunion as well as the re-emergence of refugee and ethnic migration flows; for example to Germany. In total Germany, France, the Netherlands and Portugal recorded the largest net-inflow; the latter mainly caused by post-colonial return migration. In total France, Germany, Greece, Italy, Spain, and the UK recorded the largest net-inflows. Net-outflows were largest in Bulgaria, Ireland, Poland, Portugal, and Turkey (1981-90, Table 8.1).

With the fall of communist regimes in Central and Eastern Europe, the dismantling of the Iron Curtain and the disintegration of former Yugoslavia and the Soviet Union intra-European East-West migration gained momentum; including ethnic migration flows, refuge flows and new labour migration. During the 1990s Latin America, North Africa, Russia and Kazakhstan became prime source regions of immigration from outside today's EU countries to Western Europe. In the first part of the 1990s Germany was the main destination in the EU while in the second part of the 1990s Italy and Spain became prime destinations. In total France, Germany, Greece, Italy, the Netherlands, Spain, and the UK recorded the largest net inflows. Net outflows were largest in Bosnia, Bulgaria, Estonia, Latvia, Poland, Romania, and Turkey (1991-2000, Table 8.1).

In recent years migration was characterized by new labour migration from new and future EU member states (in particular from Poland, Lithuania, Bulgaria and Romania) to parts of Western Europe (in particular to Italy, Ireland, Portugal, Spain, and the UK). Other countries of Western Europe experienced continuous family reunion, but reduced flows linked to asylum and ethnic migration, but a steadily growing inflow of irregular migrants from Northern and Western Africa, the Middle East and Asia. Ukraine emerged as new important source country. In total Italy and Spain recorded by far the largest net inflows; followed by France, Germany, Greece, Ireland, and the UK. Net outflows were largest in Bulgaria, Poland, Romania, and Turkey (2000-2006, Table 8.1). But following the general trend, most EU/EEA countries (including several new EU member states) had become net immigration countries (Table 8.2).

8.2 European migration: main "gates of entry"

EU and EEA citizens are more or less free to move within Western and Central Europe, to take residence and to join the work force in any other EU/EEA Member States.[26] Restriction only apply to citizens of new EU Member States (EU8+Bulgaria and Romania) seeking employment in another EU country. The transitional regime limiting the free movement of workers from the new EU member states (except Cyprus and Malta) following enlargements of the European Union on May 1, 2004 and January 1, 2007 allows all EU countries to decide to postpone the opening of their national labour markets up to a maximum period of seven years.[27] Initially only three countries, the UK, Ireland, Sweden had opened their labour markets to newly arriving EU8 citizens.[28] In 2006 Finland, Greece, Italy, Portugal and Spain followed their example. Since 2007 a similar transitional regime limits the free movement of Bulgarian and Romanian (EU2) workers. So far only a few EU25 countries (including the Czech Rep., Estonia, Finland, Poland and Slovakia) have opened their labour markets for EU2 workers.

The key gates of entry for third-country nationals immigrating to the EU are temporary and long-term labour migration, family reunion[29] and family formation, the inflow of asylum seekers (some 350,000 applications in EU25 in 2005),[30] and the inflow of co-ethnic

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[26] And to Switzerland (which is affiliated to the EU via bi-lateral treaties).

[27] According to the transitional arrangements (2+3+2 regulation) the EU 15 can apply national rules on access to their labour markets for the first two years after enlargement. After two years (EU8: 2006; EU2: 2009) the European Commission reviews the transitional arrangements. Member States that wish to continue national measures need to notify the European Commission and can continue to apply national measures for up to another three years. At the end of this period (EU8: 2009; EU2: 2011) all member states will be invited to open their labour markets entirely. Only if countries can show serious disturbances in the labour market or a threat of such disturbances, will they be allowed to resort to a safeguard clause for a maximum period of two years. From 2011/2013 all member states will have to comply with the Community rules regulating the free movement of labour.

[28] As a result Ireland (2004-2006: +160,000) and the UK (2004-2006: +427,000) experienced unprecedented gross inflows from EU8, mainly from Poland, Lithuania and Slovakia (Tamas and Münz 2006).

[29] The European Union sees 'the right to family reunification (…) as an indispensable instrument for integration." The European directive on Family unification adopted by the Council in September 2003 therefore "recognises the right to family reunification for third-country nationals holding a residence permit of one year or more who have reasonable prospects of obtaining permanent residence". Member States will be entitled to require for the exercise of this right that third-country nationals comply with integration measures in accordance with national law. An essential provision for the integration of family members is that they be entitled, in the same way as the applicant, to access to employment, education and vocational training." (European Commission 2003a)

[30] UNHCR (2006); see also UNHCR (2004). The European directive on "minimum standards for the qualification and status of third-country nationals and stateless persons as refugees or as persons who otherwise need international protection contains a specific chapter regulating the content of international protection and specifying the rights to be enjoyed by a refugee or person granted subsidiary protection. These require Member States to provide programmes tailored to the needs of refugees to facilitate their integration into society." (European Commission 2003a)

"return" migrants and their dependent family members.[31] In 2004 some 25 percent of the residence permits (issued to newly arriving third country nationals) were granted in EU15 for employment and another 45 percent for family reunifications.[32] Statistics on residence permits, however, do not give the full picture. On the one side these numbers do not account for seasonal and temporary labour migration, which is quite common in countries like Austria, Germany, France, Italy and Spain. On the other side, they do not include irregular migration which in most cases also increases immigrant labour.[33]

For a selected number of EU/EEA member states, the relative importance of employment, family reunion, asylum and other reasons for immigrants to enter the Union is known. Entry visa or residence permits granted for work purposes accounted for over 40 percent of all permits in Denmark, Portugal and Switzerland (2004). In the UK, Finland, Austria, Italy and the Netherlands their share was 30-35 percent. In Austria, France, Germany, Italy, Sweden, and Switzerland over 50 percent of residence permits were granted for purposes of family formation/reunion (2004). In Italy, Norway and the UK asylum and the admission of quota refugees played a quantitatively significant role (2004: over 20 percent of all permits). [34] In the UK, employment was the reason for entry in only 27 percent of the cases, as was family reunion (also 27 percent). [35]

These figures, however, do not account for all relevant migration flows. For example, in several EU countries economic migration takes place to a larger extent in the form of seasonal and temporary labour migration (some 600,000 persons admitted annually in EU25)[36] as well as in the form of irregular labour migration of at least the same magnitude. The latter only becomes statistically visible at the occasion of so-called amnesties and regularization programs. During the period 1995-2005 some 3.7 million migrants were formally regularized in EU15.[37] An unknown, but considerable number of EU8 citizens living in EU15 acquired legal resident status when their countries of origin became EU member states.[38] The same happened when Bulgaria and Romania became EU member states in 2007.

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[31] These two related inflows are of particular relevance for countries like Germany (ethnic German Aussiedler), Greece (Pontian Greeks) and Hungary (ethnic Hungarians).

[32] Source: European Commission 2003a.

[33] Münz (2007).

[34] OECD (2006).

[35] In January 2005, the European Commission published a "Green Paper" on economic migration following a "proposal for a directive on the conditions of entry and residence of third-country nationals for the purpose of paid employment and self-employed economic activities" which failed to get sufficient support in the Council. The idea behind the proposal for the directive and the Green paper "is both to provide a pathway for third-country workers which could lead to a more permanent status for those who remain in work, while at the same time giving a secure legal status while in the EU to those who return to their countries of origin when their permit expires." (European Commission 2003a)

[36] Admitted mainly by Austria, Germany, France, Italy, the Netherlands and Switzerland (see OECD, 2006).

[37] The US on the basis of the 1986 Immigration Reform and Control Act legalized 2.8 million irregular foreign residents. For regularization in Europe and the US see Papademetriou et al.,2004. In 2005 Spain offered regularization to some 800,000 irregular migrants.

[38] Tamas and Münz (2006).

8.3 European population and migration today

As stated above, many EU member states and other parts of Europe experience the lowest fertility worldwide. On average European women have 1.4 children. In order to keep native populations constant, an average of 2.1 children would be necessary. Turkey is the only country in Europe where fertility (2.4 children per woman) is above this level. In France (1.9) and several Scandinavian countries (Iceland: 1.9, Norway: 1.8, and Sweden: 1.7) fertility is just below 2 children per woman. Austria, Germany and Switzerland are all close to the European average (1.4). Most countries in East-Central and Southern Europe have very low fertility. The lowest levels are reported by the Czech Rep., Italy, Slovakia and Ukraine (all below 1.2 children per woman).

Many parts of Europe belong to the group of countries with the highest life expectancy world wide. Europeans have on average a life expectancy at birth of 70 years (men) and 78 years (woman). In Iceland (79.0), Switzerland (78.6) and Sweden (77.9) male life expectancy reaches record levels while the female life expectancy is highest in Switzerland (83.7), Spain (83.6) and Italy (82.9). Europe's lowest life expectancies are recorded outside EU25: for men in Russia (58.8), Belarus (62.3) and Ukraine (62.7); for woman in Russia and Moldova (both 72.0).

In early 2006, the total population of Western and Central Europe, the Balkans, Turkey and the European CIS countries was 813 million. The European Union (EU25) had 462 million inhabitants: of these, 389 million were either citizens or foreign residents of the 15 pre-enlargement member states (EU15). The other 73 million were citizens or foreign residents of the 10 new EU member states (EU10; of them: 72 million in Central Europe and the Baltic States [EU8]). 106 million people were living in new EU member states of 2007 and candidate countries[39] (among them 29 million in Bulgaria and Romania, and 73 million in Turkey), another 12 million people in the rest of Western Europe,[40] and 20 million in other Western Balkan countries.[41] The European CIS countries42 has 219 million inhabitants altogether.

In 2005, Western and Central Europe still experienced population increase. In the 28 EU/EEA countries and Switzerland (=EU25+) total population growth was +2.1 million or 4.4 per 1,000 inhabitants. This increase in total population was based on a net gain from international migration (+1.8 million people; 3.7 per 1,000) and a small natural increase (+300,000 people; 0.7 per 1,000 inhabitants). A comparison of these two components defining total population change shows the following. In contrast to the US some 85 per cent of Europe's recent population growth is resulting from international migration.

The majority of EU member states continue to have some population growth. In 2005, relative to population size this increase was largest in Cyprus (+31.3 per 1000 inhabitants) followed by Ireland (+20.2) and Spain (+17.1). Only Estonia (-2.8 per 1,000), Germany (-0.5 per 1000), Hungary (-2.1), Latvia (-5.4), Lithuania (-7.0) and Poland (-0.7) had a declining population. Among EU accession countries Bulgaria (-7.4) and Romania (-2.5) also experienced declining numbers of residents. In the coming years the number of such countries with declining domestic population will increase. The other 19 countries (analysed in Table 8.2) still experienced some natural population growth.

In sharp contrast to historical periods prior to the 1960s and 1970s, today most countries of Europe have a positive net migration balance. In 2005, this was the case in 24 of the 28 EU/EEA countries and Switzerland (=EU25+). In absolute numbers, net migration was largest in Spain (+652,000) and Italy (+338,000), followed by the UK (+196,000), France

[39] Croatia, Macedonia and Turkey.
[40] Iceland, Liechtenstein, Norway and Switzerland.
[41] Albania, Bosnia-Herzegovina, Macedonia, Serbia and Montenegro (including Kosovo).
[42] Armenia, Azerbaijan, Belarus, Georgia, Moldavia, Russia, Ukraine.

(+103,000), Germany (+99,000), Portugal (+64.000), Austria (+61,000) and Ireland (+47,000).[43] In Central Europe and the Baltics (EU8) the Czech Rep. experienced the largest net migration gain (2005: +36,000). But Hungary, Slovakia, Slovenia also had a positive migration balance. Among the new EU Member States of 2007 and EU candidate countries of the next enlargement rounds only Croatia reported a positive migration balance.

A considerable number of European countries had both an excess of births over deaths (=positive natural growth) and a positive migration balance. Several countries, in particular the Czech Republic, Italy, Greece, Slovenia and Slovakia, only showed population growth because of immigration. In other countries, for example Germany and Hungary, gains from migration are not large enough to stop population decline; but recent population decline would have been much larger without a positive migration balance. Only a few countries, in particular the Baltic states, Poland, Bulgaria and Romania experienced both an excess of death over births (=negative natural growth) and a negative migration balance.

In early 2006, the European Union (EU25) and associated countries (other EEA, CH) had 474 million inhabitants. Of them some 42 million were regular international migrants; they represented 8.9% of Western and Central Europe's (=EU25+) total population. A minority of these migrants had come from other EU member states. We can assume that at least one in four has migrated from one of today's EU member states into another Western or Central European country.[44] The remaining 30 million have come from other parts of Europe and from other world regions.

In 2005, in absolute terms Germany had by far the largest foreign-born population (10.1 million), followed by France (6.3 million), the UK (5.1 million), Spain (4.8 million) and Italy (2.5 million). Relative to population size, two of Europe's smallest countries – Luxembourg (37.4%) and Liechtenstein (33.9%) – had the largest stock of immigrants, followed by Switzerland (22.4%), two Baltic States (Latvia 19.5% and Estonia 15.2%) and Austria (15.1%). In the majority of West European countries the foreign-born population accounts for 7-15% of total population. Among the new EU member states of Central Europe, Slovenia had the highest share of foreign-born residents (8.5%) followed by the Czech Republic (4.4%; see Table 8.4).

8.4 Expected changes in total population until 2050

Low fertility and increasing life expectancy in Europe both reverse the age pyramid, leading to a shrinking number of younger people, an ageing work force, and an increasing number and share of older people. Most experts assume that immigrants will only partly compensate for the declining resident population and work force. As a consequence medium-term population projections of Eurostat[45] and the UN population division[46] for EU 25 expect a moderate decline in EU total population after the year 2025. Both projections assume a continuing increase from 461 million in 2005 to some 467 million in 2025 and a

[43] Net flow of migrants (regardless of citizenship) according to Eurostat (Chronos data base).

[44] The exact proportions of intra-EU migrants vs. migrants from third countries are unknown because some EU countries (in particular Germany and Italy) do not have (or do no publish) detailed data on place of birth of their population. The suggested proportion is an estimate based on the analysis of the European Labour Force Survey (Muenz and Fassmann 2004) and OECD data (2006).

[45] Based on Eurostat's most recent Europop 2004 projection (baseline scenario) assuming cumulated net immigration of 40 million people to EU 25 (2005-2050). See Eurostat 2004.

[46] Based on the 2004 Revision of UN World Population Prospects (UN WPP, medium variant; UN Population Division 2004, 2005) assuming cumulated net immigration of some 30 million people to EU 25+ (2005-2050).

subsequent decline to 450 million in 2050, with most of the new EU member states in Central Europe and the Baltics as well as many old EU member states – Germany, Greece, Italy and Spain in particular – anticipated to have a marked decrease of resident populations.

Based on the UN population projection (medium variant, assuming immigration) total population for EU 25+[47] will increase from 472 million (2005) to 478 million (2025) and then start to decline (2050: 462 million; Table 8.5). During the same period, in the absence of mass migration Western and Central Europe's total population would already start to decline after reaching its maximum in 2010. By 2025 the region would still have 468 inhabitants. By 2050 this number would have dropped to 415 million (Table 8.7).[48]

Neighboring Balkan countries of South-Eastern Europe[49] – including the two new EU Member States of 2007 and remaining candidate countries (without Turkey) – have 54 million (2005) inhabitants all together. Their total population is already declining and will continue to do so: to 50 million in 2025 and to 43 million in 2050 (Table 8.8).[50]

A similar decline is likely to occur in Russia and other European CIS countries.[51] Total population of this sub-region is projected for fall from 219 million in 2005 to 196 million in 2025 and to 164 million in 2050 (Table 8.9). During the same period Central Asian CIS countries will continue to have demographic growth. Today this region has a total population of 58 million. According to the analyzed projection this number will increase to 70 in 2025 and to 76 in 2050 (Table 8.10). Turkey's population is expected to grow at a similar pace: from 73 million (2005) to 90 million (2025) and further to 101 million (2050; Table 8.11).[52]

Among the world regions analyzed in this paper, the largest growth will occur in the Middle East and North Africa. Labour importing Gulf States (MENA5) will double their total population. Today they are home or host to 36 million residents and immigrants. Total population will reach 54 million by 2025 and 71 million by 2050 (Table 8.12). The remaining countries of North Africa and the Middle East (MENA14) are home to 313 million people. Total population of this region is projected to increase to 432 million by 2025 and to 542 million in 2050 (Table 8.13).[53]

8.5 Changing age structures in Western and Central Europe

In Europe, low fertility and increasing life expectancy both reverse the age pyramid, leading to a shrinking number of younger people, an aging and eventually shrinking work force, and an increasing number and share of older people. In the age group 0-14 the quantitative decline is already taking place today.

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47 EU 25+ including EU 25, other EEA member states and Switzerland.

48 Based on the 2004 Revision of UN World Population Prospects (UN WPP, zero migration variant; UN Population Division (2004, 2005) assuming no immigration/emigration.

49 Albania, Bosnia, Bulgaria, Croatia, Macedonia, Romania, Serbia and Montenegro (including Kosovo).

50 Based on the 2004 Revision of UN World Population Prospects (UN WPP, medium variant; UN Population Division (2004, 2005).

51 Armenia, Azerbaijan, Belarus, Georgia, Moldova, the Russian Federation, and Ukraine.

52 Based on the 2004 Revision of UN World Population Prospects (UN WPP, medium variant; UN Population Division (2004, 2005).

53 Based on the 2004 Revision of UN World Population Prospects (UN WPP, medium variant; UN Population Division (2004, 2005).

In Western and Central Europe (EU 25+)[54] the size of the working age population (age group 15-64 in 2005: 317 million) will start to decline after the year 2015 reaching 302 million (-15 million or -5%) in 2025 and 261 million in 2050 (-66 million or -18%; Table 8.5).[55] Within this group the momentum will shift from younger to older people at employable age. The number of younger Europeans entering the labour market (age group 15-24) is already shrinking in a number of EU member states and will decline in EU25 as a whole over the next 45 years (2005-2050: -25%). In contrast the age group 30-54 will continue to grow until the year 2010. And the age group 55-65 is likely to grow until the year 2030 when the largest cohorts of the baby boom have reached (today's) retirement age. After 2030 all (native) adult age groups below age 65 will be declining in size.

On the other hand, as a result of increasing life expectancy and the aging of the baby boom generation the age group 65+ (2005: 79 million) will grow to 107 million in 2025 (+28 million or +35%) and to 133 million in 2050 (+54 million or +68%). Within this age group the largest increase is to be expected for people over 80 years of age (2005: 19 million, 2050: 51 million; +22 million or +180%).[56]

For Europe the demographic process analyzed here can be characterized as a shift from a society with quantitatively dominant younger cohorts to a society in which the elderly form a solid majority. This is best reflected when looking at the median age. In 1960, during the unfolding of the baby boom, the median age of all 25 countries that now belong to the European Union was 32 years. Today this median age of EU25 is 38.5. By the year 2050 it will most likely have risen to 48 years – meaning that by then, almost half of Europe's population will be above age 50.

Today within EU 25 the demographically defined *old age dependency ratio* is: 25 people in the age group 65+ per 100 people at working age (15-65; Table 8.6). In Germany and Italy (both 29 in the age group 65+ per 100 people at working age) this ratio is well above EU25 average. In contrast to this Cyprus, Ireland, Malta and Slovakia still have relatively young populations with old age dependency ratios of 17-18.

By the year 2050 this ratio will double to 51 people in the age group 65+ per 100 people at working age (15-65). By that time Spain (68), Italy (66) and Portugal (58) are expected to have the highest old age dependency ratios. Due to the lasting effects of higher numbers of children per women/family countries like Luxemburg (36), the Netherlands (39), Denmark (40) and Sweden (41) will have much lower old age dependency ratios. Compared to today, however, the increase appears to be a universal phenomenon.

For the financing of future pensions a related support ratio is of major importance: Today EU 25+ has 35 people in the age group 65+ per 100 people in the labour force. By the year 2050 – at constant labour force participation rates and with immigration (medium variant) – this support ratio would reach the level of 72 people in the age group 65+ per 100 people in the labour force. If a considerable number of people below age 65 have already retired – as it is the case today – in 2050, the actual support ratio would be well above 72 per 100!

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[54] EU 25+ consists of 25 EU member states, another 3 EEA member states and Switzerland.

[55] UN WPP, medium variant; UN Population Division (2004, 2005) assuming cumulated net immigration of some 30 million people to EU 25+ (2005-2050).

[56] UN WPP, medium variant; UN Population Division (2004, 2005) assuming cumulated net immigration of some 30 million people to EU 25+ (2005-2050).

8.6 Demographic change in other parts of Europe and in neighboring regions

The situation on the Balkans and in the European CIS countries[57] is similar to the one in the EU25. Sustained endogenous population growth, however, is expected for Albania, Azerbaijan, Kosovo, Macedonia, Turkey (Table 8.11), and most parts of Central Asia (Table 8.9),[58] but many Balkan countries, Russia, and Ukraine face considerable demographic decline (Tables 8.8 and 8.10).

In contrast, the situation in Europe's southern an south-eastern neighbor regions, i.e. in the Middle East and North Africa (the Gulf States and MENA14;[59] Tables 8.12 and 8.13) is characterised by higher – but declining – fertility, rising life expectancy, and sustained demographic growth. Total population in MENA14 will grow steadily from 313 million in 2005 to 438 million by 2025 (+40%) and to 557 million by 2050 (+78%). During this period, in MENA14 the number of people between ages 15 and 64 will almost double: from 195 million in 2000 to 289 million by 2025 (+48%) and to 365 million by 2050 (+78%). At the same time, this region also faces an ageing problem and its population over age 65 will grow almost fivefold over the next 45 years (Table 8.13).

8.7 Implications for total work force in the absence of mass migration

Demographic developments have a considerable impact on the size of various age groups, including populations at working age. As a consequence demographic trends – together with labour market trends and labour force participation rates – determine the size of future work force as well as the number of the retired persons.

Today's labour force of EU25+ comprises 227 million people. Of them some 21 million (=9%) are foreign-born. At current labour force participation rates, demographic aging translates into a shrinking labour force. The change in the economically active population will, however, be smaller than the projected changes for the age group 15–64, as only 60–80% of this age group are currently employed or self-employed.

Based on the assumptions of the UN medium scenario Western and Central Europe's (EU25+) work force would decrease to 211 million (-16 million or -7%) in 2025 and to 183 million (-44 million or -19%)[60] in 2050 (Table 8.5).[61] In the absence of any international migration this decline would be even larger (2025: 201 million; -26 million or -12%; 2050: 160 million; -66 million or -29%; Table 8.7).[62]

In the Balkans, the situation is similar if we assume no large migration flows affecting the demographic situation. Population at working age (2005: 36 million) will decrease after the year 2015 to 34 million (-8%) in 2025 and to 27 million (-28%) in 2050. At current labour force participation levels this would mean a decrease of the work force from 26 million

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[57] EECA-20 countries in Europe are Albania, Armenia, Azerbaijan, Belarus, Bosnia-Herzegovina, Bulgaria, Croatia, Georgia, Macedonia, Moldova, Montenegro, Romania, Russian Fed., Serbia, Turkey, and Ukraine.

[58] EECA-20 countries in Asia are Kazakhstan, Kyrgyz Rep., Tajikistan, Turkmenistan, and Uzbekistan.

[59] MENA-14 countries are Algeria, Djibouti, Egypt, Iran, Iraq, Israel, Jordan, Lebanon, Libya, Morocco, Palestinian Territories/West Bank and Gaza, Syria, Tunisia, and Yemen.

[60] Comparing 2050 with 2005.

[61] UN WPP, medium variant; UN Population Division (2004, 2005) assuming cumulated net immigration of some +30 million people to EU 25+ (2005-2050).

[62] UN WPP, zero migration variant; UN Population Division (2004, 2005).

(2005) to 24 million (-8%) in 2025 and to only 18 million (-30%) [63] in 2050. In countries such as Bulgaria, Moldavia, Montenegro, Romania, and Serbia,[64] the active or job-seeking population is already shrinking (Table 8.10).

Russia and other European CIS countries – in the absence of mass immigration – face an even larger decline of population at working age (15-65): from 154 million today (2005) to 132 million (-14%) in 2025 and to 101 million (-34%) in 2050.[65] At current labour force participation rates this would translate into a considerable decline of the labour force: from 119 million today (2005) to 101 million (-15%) in 2025 and to only 75 million (-37%)[66] in 2050 (Table 8.8).

In contrast, Europe's neighboring regions are marked by higher fertility leading not only to a younger population, but also to larger cohorts entering working age. Many of them, however, remain unemployed. In MENA14 countries outside the Gulf region population at age 15-65 will grow from today's 195 million to 289 million (+48%) in 2025 and to 365 (+87%) in 2050.[67] Without mass emigration and at current labour force participation rates this demographic growth would translate into a MENA14 labour force growing from 118 million (2005) to 184 million (+55%) in 2025 and to 236 million (+100%)[68] in 2050 (Table 8.13). It is relatively clear that most national labour markets in this region will not be able to absorb this additional supply of domestic labour.

Turkey and the countries of Central Asia face a similar problem. In Turkey the age group 15-65 will grow from 48 million (2005) to 63 million (+31%) in 2025 and at a slower pace to 67 million (+40%)[69] in 2050. During the same period – at current labour force participation rates – Turkey's work force would grow from today's 35 million to 47 million (+32%) in 2025 and to 51 million (+45%) in 2050 (Table 8.11).

In Central Asia the age group 15-65 will grow from 37 million (2005) to 50 million (+36%) in 2025 and also at a slower pace to 55 million (+51%)[70] in 2050. During the same period – at current labour force participation rates and assuming no massive emigration – the work force of this region would grow from today's 27 million to 38 million (+39%) in 2025 and to 40 million (+49%) in 2050 (Table 8.9). Again labour markets in Central Asia will probably lack the capacity to absorb the increase that will primarily occur during the coming 20 years.

8.8 Coping with the impact of demographic aging on the work force

The most obvious – not mutually exclusive – strategies to cope with demographic aging and the eventual decline of resident work forces are:

- *Higher labour force participation rates*. This strategy primarily applies to countries where participation rates of women and immigrants from middle- and low-income countries are below EU average.[71] In 2003, EU 15 countries on average had a male labour force participation rate of 78.3 percent (for population age 15-65)

[63] Comparing 2050 with 2005.
[64] Without Kosovo.
[65] UN WPP, zero migration variant; UN Population Division (2004, 2005).
[66] Comparing 2050 with 2005.
[67] UN WPP, zero migration variant; UN Population Division (2004, 2005).
[68] Comparing 2050 with 2005.
[69] Comparing 2050 with 2005.
[70] Comparing 2050 with 2005.
[71] Ágeirsdottir, 2004, EC, 2002a, EC, 2003b, 2004c, Independent High Level Group, 2004.

and a female labour force participation rate of 60.8 percent (for population age 15-65) leaving room for considerable increase of the latter.[72]

- *Higher retirement age*. This strategy particularly applies to countries where actual retirement age is well below legal retirement age.[73] In more than half of EU 25 countries actual male retirement age has fallen to or even below age 60 whereas female retirement age already is below age 60. As a result the employment rate for people aged 55-65 was 40.2% in 2003 – far below the European objective of 50% defined by the Lisbon agenda.[74] After reaching this goal a rise in legal retirement age should also be considered. The employment rate of 65-74 year olds in EU was 5.6% in 2003, compared to 18.5% in the USA.[75]
- *Pro-active economic migration policy*. This strategy obviously applies to countries with current and future shortages of labour and skills.[76] In recent years annual net immigration to EU 25 was in the order of 1.2-1.5 million people. In 2004 and 2005 it reached 1.7 million per year. During this period Spain, Italy, the UK and Germany were the destination of more than two thirds of this net inflow. In 2004, some 25 percent of the residence permits (issued to newly arriving third country nationals) were granted in the EU for employment and another 45 percent for family reunifications In several EU countries, however, economic migration takes place to a larger extent in the form of seasonal and temporary labour migration (some 600,000 persons admitted in 2004 in EU 15),[77] So far only a small number of the newly arriving migrants are selected according to their skills and professional experience.

8.9 Could changes in labour force participation substitute for migration?

The expected relevance of the strategies discussed above can be demonstrated by looking at their impact on the size and composition of Europe's future labour force.

In the absence of mass immigration (zero migration variant) Western and Central Europe's labour force[78] would decline from today's 227 million (2005) to 201 million in 2025 (-26 million or -12%) and to 160 million in 2050 (-66 million or -29%[79]; Table 8.7, Table 8.16).

If by 2050 all EU 25+ countries could match labour force participation rates[80] of the three European countries currently having the highest participation rates,[81] Western and Central Europe's work force would increase (medium variant with immigration; Scenario I) to 233 million in 2025 (+3%) an and only then start decreasing to 222 million in 2050 (-2%; Table

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[72] "To meet this challenge, the Lisbon Agenda must be resolutely implemented, in particular those policies focusing on getting people into jobs – especially certain groups in the population such as women and both younger and older people – on innovation and increasing productivity." (EC, 2005b)

[73] Ágeirsdottir, 2004, Bishop, 2005, EC, 2002a, EPC, 2002, 2003, Independent High Level Study Group, 2003.

[74] EC 2004c, 2005b, Independent High Level Group, 2004.

[75] EC 2005b.

[76] EC 2003a, 2005a, Holzmann and Muenz, 2004, Papademetriou, 2003, Reitz, 2005.

[77] Admitted by France, Germany, Italy, Sweden, and Switzerland (OECD/Sopemi 2004).

[78] Calculation based on the assumption of constant national labour force participation rates in EU 25+.

[79] Comparing 2050 with 2005.

[80] Assuming steady incremental change: 50% between 2005 and 2025, 50% between 2025 and 2050.

[81] Denmark, Iceland, and Sweden.

8.20).[82] In the absence of migration (zero migration variant; Scenario I) the labour force would slightly decrease to 222 million in 2025 (+2%) and then decline to 195 million in 2050 (-16%[83]; Table 8.20).

If, however, by 2050 all EU member states would manage to increase female labour force participation in age groups 15-65 to the (national) level of male labour force participation,[84] Europe's work force would stagnate (medium variant with immigration; Scenario II) at 224 million in 2025 (-1%) an and only then start decreasing to 205 million in 2050 (-10%; Table 8.20).[85] In the absence of migration (zero migration variant; Scenario II) the labour force would stagnate at 225 million in 2025 (-1%) and then decline to 179 million in 2050 (-21%[86]; Table 8.21).

An increase of actual retirement age by 5 years until 2025 and by 10 years until 2050 would lead to a slightly growing European work force (medium variant with immigration; Scenario III 2025: 228 million; +1%) and only then to subsequent decline (2050: 216 million; -5%; Table 8.20).[87] In this scenario III, even in the absence of migration (zero migration variant) the labour force would decline to 218 million in 2025 (-4%) and then continue to decline to 190 million in 2050 (-16%[88]; Table 8.21).

In the absence of mass migration only a combination of Scenarios I and III – i.e. a combination of Scandinavian labour force participation rates for all EU 25+ countries plus a rise in retirement age by 10 years until 2050 – could compensate for the impact of demographic aging on the work force. By 2050 a combination of Scenarios I and III would lead to a Western and Central European work force of 228 million (2005: 227 million). Without mass immigration a combination of Scenarios I and II – i.e. female labour force participation rates at male levels in all EU 25+ countries plus a rise in retirement age by 10 years until 2050 – would still lead to a decline of Western and Central Europe's work force to 206 million (2005-2050: -21 million or -9%). And a combination of Scenarios I and II – i.e. current male Scandinavian labour force participation rates for men and women in all EU 25+ countries – would lead to a slightly smaller decline of Western and Central Europe's work force to 215 million (2005-2050: -12 million or -5%; Table 8.21).

8.10 How much migration would be needed to narrow the demographic gap?

At current labour participation rates and in the absence of migration (zero migration variant) Western and Central Europe's labour force will decline by 26 million during the period 2005-2025 and by 66 million during the whole analyzed period 2005-2050 (Table 5). Labour migration might compensate for the whole "gap". But in this case, between 2005 and 2025, EU 25+ would have to add a net amount of 1.3 million migrants annually to its work force. And between 2025 and 2050, this number would increase to 1.6 million migrants annually. Assuming that at best 70 percent of newly arriving immigrants join the work force,[89] the annual net gain from migration would have to be in the order of 1.9-2.0

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[82] Comparing 2050 with 2005.
[83] Comparing 2050 with 2005.
[84] Assuming steady incremental change: 50% between 2005 and 2025, 50% between 2025 and 2050.
[85] Comparing 2050 with 2005.
[86] Ibid.
[87] Ibid.
[88] Ibid.
[89] This conclusion can be drawn from an analysis of the European Labour Force Survey showing labour force participation rates above 65% (age groups 15-65) for West European immigrants

million annually until 2025 and 2.3 million annually between 2025 and 2050. Under these assumptions, between 2005 and 2050 a net migration gain of 95 million people at working age (15-65) would be required to add 66 million economically active migrants to Western and Central Europe's labour force. This would lead net migration well above European levels of the last decades.

Given the divergence of demographic trends it would be possible to recruit labour migrants in larger numbers from Europe's neighboring regions. In the Middle East and North Africa (outside the oil producing Gulf states) the labour force is expected to grow from 118 million (2005) to 184 million (+66 million) in 2025 and to 236 million (+118 million)[90] in 2050 (Table 11). During the same period Turkey's work force will grow from today's 35 million to 47 million (+12 million) in 2025 and to 51 million (+16 million) in 2050 (Table 9).

Despite the fact that from a mere quantitative point demographic and migratory arbitrage between Europe and its neighboring regions would be a possibility, one might come to the conclusion that net immigration in the order of 90-100 million people – even over a period of 45 years – is beyond Europe's integration capacity. The following, however, should also become clear: North Africa, the Middle East and Central Asia cannot solve their employment problems by just "exporting" surplus labour. In these regions economic and labour market reforms will also be necessary to cope with rapid increase of working age populations.

8.11 Conclusions

The overall picture is clear: Europe's demographic situation is characterised by low fertility, an increasing life expectancy, and overall by a projected shrinking of resident populations in the decades to come. This contrasts with the demographic prospects of neighboring regions to the south and south-east, where fertility is much higher, albeit declining, life expectancy is also increasing, and overall population is projected to continue to grow at a considerable pace.

Compared to other world regions Europe faces rapid demographic ageing. During the period 2005-2050, the median age of the European Union's population (EU25) is projected to rise by 10 years: from 38 to 48 years. New EU member states and candidate countries in the Balkans face a similar increase. Demographic ageing is inevitable, but future changes in labour force and population at working age are not only determined by population dynamics. This gives European societies a variety of policy options including rising retirement age, higher labour force participation of women and a pro-active recruitment of migrant labour and skills. These strategies are not mutually exclusive, but – depending on the mix – they have different outcomes: Pro-active immigration policies will inevitably lead to much larger ethno-cultural and religious heterogeneity; higher labour force participation rates would require a radical departure from early retirement which in many EU countries has become a widespread phenomenon. In any case Europe will experience a shift from societies with quantitatively dominant younger cohorts to societies in which the elderly form a solid majority.

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living in another EU member state as well as for Australian, Canadian, Japanese and US immigrants in the EU (Muenz and Fassmann, 2004).

[90] Comparing 2050 with 2005.

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Annexes

Table 8.1: Net Migration Flows in Europe, 1950-2005

	cumulative net flow (+inflow, -outflow)											
	1950-1960		1961-1970		1971-1980		1981-1990		1991-2000		2001-2005	
	in thousands	annual rate in ‰	in thousands	annual rate in ‰	in thousands	annual rate in ‰	in thousands	annual rate in ‰	in thousands	annual rate in ‰	in thousands	annual rate in ‰
Total EU-25	**-2,284**	**-0.6**	**148**	**0.0**	**3,078**	**0.7**	**2,926**	**0.7**	**7,343**	**1.7**	**8,786**	**1.9**
Austria	-129	-1.8	67	0.9	79	1.0	138	1.8	238	3.0	235	2.9
Belgium	86	0.9	114	1.2	111	1.1	28	0.3	142	1.4	198	1.9
Cyprus I)	n.a.	n.a.	-31	-5.3	-147	-29.9	21	3.9	68	10.5	54	7.6
Czech Republic	37	0.4	-99	-1.0	-18	-0.2	-39	-0.4	87	0.8	50	0.5
Denmark	-59	-1.3	34	0.7	22	0.4	45	0.9	133	2.6	40	0.7
Estonia	58	4.8	90	7.0	63	4.4	32	2.1	-147	-10.2	1	0.1
Finland	-85	-1.9	-178	-3.9	4	0.1	44	0.9	60	1.2	33	0.6
France	973	2.1	2,033	4.2	605	1.2	494	0.9	227	0.4	718	1.2
Germany	1,011	1.4	1,488	2.0	1,505	1.9	2,022	2.6	3,347	4.1	799	1.0
Greece	-201	-2.4	-397	-4.7	258	2.9	220	2.2	718	6.8	193	1.8
Hungary	-190	-1.9	6	0.1	-19	-0.2	-167	-1.6	177	-1.7	64	0.6
Ireland	-392	-13.8	-140	-4.9	105	3.3	-204	-5.8	112	3.1	217	5.5
Italy	-1,014	-2.0	-972	-1.9	-84	-0.2	-132	-0.2	410	0.7	1,889	3.3
Latvia	62	3.0	133	5.9	98	4.0	74	2.9	-172	-6.9	-10	-0.4
Lithuania	-112	-4.1	43	1.5	52	1.6	86	2.4	-217	-6.0	-29	-0.8
Luxembourg	7	2.2	16	4.9	27	7.6	16	4.4	39	9.6	12	2.7
Malta	n.a.	n.a.	-54	-16.8	-3	-1.0	4	1.2	16	4.3	9	2.3
Netherlands	-164	-1.4	113	0.9	330	2.4	206	1.4	370	2.4	58	0.4
Poland	-308	-1.0	-300	-1.0	-307	-0.9	315	0.9	-543	-1.4	-71	-0.2
Portugal	-637	-7.2	-1,306	-14.5	383	4.3	-209	-2.1	199	2.0	284	2.7
Slovakia	73	1.8	-92	-2.1	-41	-0.9	-36	-0.7	-48	0.9	10	0.2
Slovenia	-50	-3.2	14	0.9	62	3.5	25	1.3	-9	0.5	19	1.0
Spain	-796	-2.6	-608	-1.9	144	0.4	-227	-0.6	1,302	3.3	2,967	7.1
Sweden	85	1.1	223	2.9	84	1.0	172	2.1	200	2.3	140	1.6
United Kingdom	-539	-1.0	-49	-0.1	-235	-0.4	-2	0.0	634	1.2	906	1.5
EU Member States of 2007												
Bulgaria	-165	-2.0	-20	-0.2	-134	-1.5	-351	-3.9	-370	-4.4	7	0.0
Romania	-179	-0.9	-116	-0.6	-109	-0.5	263	1.2	-533	-2.3	-584	-2.7
EU 27	**-2,628**	**-0.7**	**12**	**0.0**	**2,835**	**0.6**	**2,838**	**0.6**	**6,440**	**1.4**	**8,209**	**1.7**
EU Candidates Countries												
Croatia	-140	-3.3	-1	0.0	-28	-0.6	-6	-0.1	-201	-4.2	56	1.3
Macedonia	10	0.7	-37	-2.5	1	0.1	-253	-12.6	-10	-0.5	-31	-1.5
Turkey II)	25	0.1	-488	-1.6	-488	-1.2	-488	-1.0	-513	-0.8	-413	-0.6
Other EEA and Switzerland												
Iceland	0	0.0	-5	-2.6	-5	-2.3	0	0.0	2	0.8	5	1.7
Liechtenstein	0	4.9	2	10.5	2	8.4	2	7.5	2	6.5	1	2.9
Norway	-23	-0.6	1	0.0	40	1.0	58	1.4	102	2.4	68	1.5
Switzerland	307	5.8	326	5.6	-89	-1.4	255	4.0	251	3.6	198	2.7
Other South-Eastern Europe												
Albania III)	7	0.4	7	0.4	-6	-0.3	-43	-1.5	-311	-9.6	-350	-11.2
Bosnia IV)	-182	-5.7	-224	-6.3	-133	-3.4	-20	-0.5	-350	-8.8	31	0.8
Moldova	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Serbia and Montenegro V)	-111	-1.4	-29	-0.3	-29	-0.3	174	1.7	-1	0.0	50	0.6

I) 1971-2005: Since 1971, Greek part of Cyprus only.

II) 1961-1990: Estimates for Turkey based on an average for 1961-1990.

III) 1971-1980: Data for 1978 missing.

IV) 2001-2005: Provisional data.

V) 1961-1980: Estimates for Serbia based on an average for 1961-1980.

Sources: UN Population Division (2002), author's calculations.

Table 8.2 1: Demographic Indicators 2005 in Europe

	Pop. January 2005	Births	Deaths	Nat. pop. change	Net migration	Total pop. change	Pop. January 2006
	in 1,000	per 1,000 population					in 1,000
EU25	**459,488**	**10.5**	**9.7**	**0.7**	**3.7**	**4.4**	**461,507**
Germany	82,501	8.4	10.1	-1.7	1.2	-0.5	82,456
France	60,561	12.6	8.8	3.7	1.7	5.4	60,892
UK	60,035	11.9	9.9	2.0	3.3	5.3	60,354
Italy	58,462	9.9	10.4	-0.5	5.8	5.3	58,772
Spain	43,038	10.9	8.8	2.1	15.0	17.1	43,781
Poland	38,174	9.4	9.7	-0.3	-0.3	-0.7	38,148
Netherlands	16,306	11.6	8.4	3.1	-1.2	2.0	16,338
Greece	11,076	9.4	9.2	0.2	3.1	3.3	11,112
Portugal	10,529	10.5	9.7	0.8	3.9	4.7	10,579
Belgium	10,446	11.4	10.0	1.4	3.2	4.6	10,494
Czech Rep.	10,221	10.0	10.5	-0.5	3.5	2.9	10,251
Hungary	10,098	9.6	13.5	-3.9	1.8	-2.1	10,076
Sweden	9,011	10.4	9.9	0.5	2.7	3.2	9,040
Austria	8,207	9.4	9.0	0.4	7.4	7.8	8,270
Denmark	5,411	11.8	10.3	1.6	1.4	3.0	5,428
Slovakia	5,385	10.0	9.8	0.2	0.8	0.9	5,390
Finland	5,237	11.0	9.2	1.8	1.7	3.5	5,255
Ireland	4,109	15.3	6.5	8.8	11.4	20.2	4,193
Lithuania	3,425	8.9	12.9	-4.0	-3.0	-7.0	3,401
Latvia	2,306	9.3	14.2	-4.9	-0.5	-5.4	2,294
Slovenia	1,998	8.8	9.2	-0.5	3.6	3.1	2,004
Estonia	1,347	10.6	13.1	-2.5	-0.3	-2.8	1,343
Cyprus [1]	749	10.9	6.7	4.1	27.2	31.3	773
Luxembourg	455	11.5	7.6	3.9	3.4	7.3	458
Malta	403	9.9	7.2	2.7	5.0	7.8	406
Other EEA							
Iceland	294	14.2	6.2	7.9	2.0	10.0	297
Liechtenstein	35	10.8	6.4	4.5	3.8	8.3	35
Norway	4,606	12.4	8.8	3.7	4.7	8.4	4,645
EEA	**464,423**	**10.5**	**9.7**	**0.7**	**3.7**	**4.4**	**466,484**
Switzerland	7,415	9.6	8.3	1.3	4.7	6.0	7,460
EU Mem St. (of 2007)							
Bulgaria	7,761	9.0	14.6	-5.6	-1.8	-7.4	7,704
Romania	21,659	10.2	12.3	-2.1	-0.5	-2.5	21,604
Candidate ctrys (CC)							
Croatia	4,444	9.4	11.1	-1.7	2.6	0.9	4,448
Turkey[2]	71,609	18.9	6.2	12.6	-5.9	6.7	72,520
New EU MS + CC	**105,472**	**16.0**	**8.3**	**7.6**	**-4.1**	**3.5**	**106,276**

Notes:

[1] Greek part of Cyprus only.

[2] Provisional data on net migration.

Source: EUROSTAT, Chronos Database, Münz et al., 2006

Table 8.3: Stocks of Foreign-born Population in Europe, 1960-2005

	Stock of foreign-born population in Europe, 1960-2005											
	1960		1970		1980		1990		2000		2005	
	in thousands	% of total population	in thousands	% of total population	in thousands	% of total population	in thousands	% of total population	in thousands	% of total population	in thousands	% of total population
Total EU-25												
Austria	103,672	1.5	168,727	2.3	279,158	3.7	473,341	6.1	926,835	11.4	1,233,546	15.1
Belgium	441,555	4.8	679,891	7.0	865,323	8.8	899,357	9,0	879,262	8.5	719,276	6.9
Cyprus I)	29,589	5.2	34,489	5.6	38,876	6.4	43,822	6.4	80,081	10.2	116,137	13.9
Czech Republic	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	475,438	10.5	615,896	13.7	661,417	14.5
Denmark	84,212	1.8	117,453	2.4	163,815	3.2	220,193	4.3	304,249	5.7	388,535	7.2
Estonia	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	382,012	24.1	249,588	18.3	201,743	15.2
Finland	31,904	0.7	32,220	0.7	38,221	0.8	60,969	1.2	134,135	2.6	156,179	3.0
France	3.507,213	7.7	5,210,336	10.3	5,890,633	10.9	5,906,752	10.4	6,277,189	10.6	6,471,029	10.7
Germany	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	5,936,181	7.5	9,802,793	11.9	10,143,626	12.3
Greece	51,793	0.6	89,572	1.0	171,755	1.8	411,923	4.1	730,941	6.7	973,677	8.8
Hungary	518,137	5.2	437,279	4.2	369,039	3.4	347,510	3.4	295,990	2.9	316,209	3.1
Ireland	73,019	2.6	130,411	4.4	223,238	6.6	229,924	6.5	384,872	10.1	585,429	14.1
Italy	752,346	1.5	913,368	1.7	1,108,852	2.0	1,346,174	2.4	1,634,290	2.8	2,519,040	4.3
Latvia	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	805,491	29.7	539,728	22.7	449,215	19.5
Lithuania	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	349,233	9.4	212,018	6.1	165,197	4.8
Luxembourg	40,938	13.0	61,751	18.2	92,855	25.5	113,936	30.2	160,645	36.9	173,645	37.4
Malta	1,712	0.5	10,401	3.4	6,313	1.9	5,770	1.6	8,696	2.2	10,676	2.7
Netherlands	446,620	3.9	261,402	2.0	490,976	3.5	1,191,634	8.0	1,563,564	9.8	1,638,104	10.1
Poland	2,424,881	8.2	2,088,027	6.4	1,544,384	4.3	1,127,166	3.0	822,660	2.1	343,929	1.8
Portugal	38,899	0.7	101,611	1.8	265,425	3.5	435,766	5.3	634,934	7.3	763,668	0.7
Slovakia	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	41,295	0.8	118,458	2.2	124,464	2.3
Slovenia	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	178,077	9.2	174,437	8.9	167,330	8.5
Spain	237,230	0.8	373,474	1.1	240,906	0.6	765,585	1.9	1,628,246	4.0	4,790,074	11.1
Sweden	294,012	3.9	535,228	6.7	610,096	7.3	780,698	9.1	992,623	11.2	1,117,286	12.4
United Kingdom	1,661,889	3.2	2,945,891	5.4	3,471,854	6.3	3,753,370	6.6	4,764,824	8.1	5,408,118	9,1
EU Member States of 2007												
Bulgaria	20,295	0.3	21,189	0.3	21,709	0.2	21,510	0.2	101,000	1.3	104,076	1.3
Romania	330,878	1.8	283,837	1.4	201,305	0.9	142,770	0.6	134,204	0.6	133,441	0.6
EU 27												
EU Candidates Countries												
Croatia	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	475,438	10.5	615,896	13.7	661,417	14.5
Macedonia	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	95,025	5.0	125,529	6.2	121,291	6.0
Turkey	957,880	3.4	371,991	1.0	868,147	1.9	1,150,463	2.0	1,259,322	1.8	1,328,405	1.8
Other EEA and Switzerland												
Iceland	3,830	2.2	4,765	2.3	5,877	2.6	9,005	3.5	15,610	5.6	23,097	7.8
Liechtenstein	4,072	24.6	6,891	32.3	9,246	36.7	10,834	37.4	11,715	35.6	11,716	33.9
Norway	61,426	1.7	88,747	2.3	128,220	3.1	184,740	4.4	298,616	6.6	343,929	7.4
Switzerland	714,235	13.3	1,091,990	17.7	1,065,788	16.9	1,376,417	20.1	1,562,606	21.8	1,659,686	22.9
Other South-Eastern Europe												
Albania	48,901	3.0	54,045	2.5	59,730	2.2	66,013	2.0	76,695	2.5	82,668	2.6
Bosnia	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	56,000	1.3	96,000	2.5	40,814	1.0
Moldova	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	578,500	13.3	474,400	11.1	440,121	10.5
Serbia and Montenegro	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	130,336	1.3	691,559	6.6	512,336	4.9

I) Greek part of Cyprus only.

Sources: UN Population Division Data Base (2005), authors' calculations.

Table 8.4: Foreign National and Foreign-born Population in Europe, 2005

Countries	Foreign-national and foreign-born population			
	Foreign nationals[i]		Foreign born[ii]	
	in 1000	%	in 1000	%
EU-25	**23.837**	**5,2**	**40.501**	**8,8**
Austria	777	9,5	1.234	15,1
Belgium	871	8,4	1.186	11,4
Cyprus[iii]	65	9,4	116	13,9
Czech Republic	254	2,5	453	4,4
Denmark	268	4,9	389	7,2
Estonia	95	6,9	202	15,2
Finland	108	2,1	156	3,0
France	3.263	5,6	6.471	10,7
Germany	6.739	8,9	10.144	12,3
Greece	762	7,0	974	8,8
Hungary	142	1,4	316	3,1
Ireland	223	5,5	585	14,1
Italy[iv]	2.402	4,1	2.519	4,3
Latvia	103	4,3	449	19,5
Lithuania	21	0,6	165	4,8
Luxembourg[v]	177	39,0	177	37,4
Malta	7	1,6	11	2,7
Netherlands	699	4,3	1.736	10,6
Poland	49	0,1	703	1,8
Portugal	449	4,3	764	7,3
Slovakia	22	0,4	124	2,3
Slovenia	37	1,9	167	8,5
Spain	2.984	6,9	4.790	11,1
Sweden	463	5,1	1.117	12,4
United Kingdom	2.857	2,9	5.553	9,3
EU Member States of 2007				
Bulgaria	26	0.3	104	1,3
Romania	26	0.1	103	0,6
Total EU 27				
EU Candidate Countries				
Croatia	18	0.4	661	14,5
Macedonia	:	:	101	5,2
Turkey	1	1,8	1	1,9
Other EEA and Switzerland				
Iceland	:	:	23	7,3
Liechtenstein	:	:	12	33,9
Norway	213	4,6	344	7,4
Switzerland	2	20,2	2	22,9

Notes:

(i) EU citizens from other EU Member States and third country nationals in 2004; most countries according to OECD Data Base; UN Data Base and national sources for Cyprus, Estonia, Italy, Latvia, Lithuania, Malta, and Slovenia).

(ii) Intra-EU migrants from other EU Member States and migrants born in third countries in 2005; most countries according to UN Data Base; OECD Data Base for Belgium and the Netherlands).

(iii) Greek part of Cyprus only.

(iv) Foreign nationals for Italy: ISTAT 2006.

(v) Foreign nationals for Luxembourg: Census Data 2001.

Source: Foreign-born population: OECD Data Base (2006), UN (2005); Foreign national population: OECD Data Base (2006), UN (2005), Eurostat; national sources (see notes); Münz et al., 2006.

Table 8.5: Medium variant projections: demographic and labour force development in the EU-25(i) and other European countries(ii) by age group, 2005-2050 (millions)

	2005	2015	2025	2050
Age group 0-14	75.6	71.4	69.6	68.6
Index	*100*	*94*	*92*	*91*
Age group 15-64	317.1	315.3	302.1	261.1
Index	*100*	*99*	*95*	*82*
Age group 65+	78.9	91.0	106.8	132.6
Index	*100*	*115*	*135*	*168*
Total	**471.7**	**477.7**	**478.6**	**462.2**
Index	*100*	*101*	*101*	*98*
Labour force(iii)	226.7	223.4	210.5	183.3
Index	*100*	*99*	*93*	*81*
Old-age dependency ratio				
Age group 65+/age group 15-64	0.25	0.29	0.35	0.51
Age group 65+/labour force	0.35	0.41	0.51	0.72

Notes:
(i) Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, and the United Kingdom.
(ii) Channel Islands, Liechtenstein, Iceland, Norway, and Switzerland.
(iii) Numbers for labour force calculated by aggregating country data, based on national participation rate projections for 2005 and 2010 over age group and sex by the ILO, and population projections for 2005, 2015, 2025, and 2050 over age group and sex by the UN, multiplying population projections for 2015-2050 with participation rate projections of 2010.
Sources: ILO, 1997, UN, 2005, Koettl, 2005, Holzmann and Münz, 2005.

Table 8.6: EU 25 old age dependency ratio: population at working age in relation to population 65+ based on Eurostat's Europop 2004 projection,(i) (2000-2050; in %)

	2000	2005	2025	2050
EU 25				
Austria	22.9	23.6	34.5	53.2
Belgium	25.5	26.3	36.5	48.1
Cyprus(ii)	17.0	17.7	29.3	43.2
Czech Rep.	19.8	19.8	35.0	54.8
Denmark	22.2	22.6	33.8	40.0
Estonia	22.4	24.1	31.3	43.1
Finland	22.2	23.7	41.4	46.7
France	24.6	25.3	36.9	47.9
Germany	23.9	27.8	39.3	55.8
Greece	24.2	26.8	35.5	58.8
Hungary	22.0	22.8	34.5	48.3
Ireland	16.8	16.5	25.2	45.3
Italy	26.8	29.4	39.7	66.0
Latvia	22.1	24.1	30.7	44.1
Lithuania	20.8	22.5	29.2	44.9
Luxemburg	21.4	21.2	27.7	36.1
Malta	17.9	19.2	33.8	40.6
Netherlands	20.0	20.7	32.5	38.6
Poland	17.6	18.7	32.8	51.0
Portugal	23.7	25.2	34.7	58.1
Slovakia	16.6	16.3	28.1	50.6
Slovenia	19.8	21.7	35.8	55.6
Spain	24.5	24.5	33.6	67.5
Sweden	26.9	26.4	36.5	40.9
UK	23.9	24.4	33.2	45.3
EU 25 average	**23.4**	**24.9**	**35.7**	**52.8**

Notes:

(i) Based on the assumption of net immigration 2005-2050 amounting to almost 40 million people.

(ii) Greek part of Cyprus only.

Source: Eurostat (Europop 2004, base scenario)

Table 8.7: Zero-migration variant: demographic and labour force development in the EU-25(i) and other European countries (ii) by age group, 2005-2050 (millions)

	2005	2015	2025	2050
Age group 0-14	75.6	69.6	65.4	59.2
Index	*100*	*92*	*86*	*78*
Age group 15-64	317.1	308.6	288.6	229.0
Index	*100*	*97*	*91*	*72*
Age group 65+	78.9	90.3	105.5	126.5
Index	*100*	*114*	*134*	*160*
Total	**471.7**	**468.5**	**459.4**	**414.7**
Index	*100*	*99*	*97*	*88*
Labour force(iii)	226.7	218.4	200.5	160.4
Index	*100*	*96*	*88*	*71*
Old-age dependency ratio				
Age group 65+/age group 15-64	0.25	0.29	0.37	0.55
Age group 65+/labour force	0.35	0.41	0.53	0.79

Notes:
(i) Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, and the United Kingdom.
(ii) Channel Islands, Iceland, Norway, and Switzerland.
(iii) Numbers for labour force calculated by aggregating country data, based on national participation rate projections for 2005 and 2010 over age group and sex by the ILO, and population projections for 2005, 2015, 2025, and 2050 over age group and sex by the UN, multiplying population projections for 2015-2050 with participation rate projections of 2010.
Sources: ILO, 1997, UN, 2005, Koettl, 2005, Holzmann and Münz, 2005.

Table 8.8: Zero-migration variant: demographic and labour force development in CIS - Caucasus and Eastern Europe(i) by age group, 2005-2050 (millions)

	2005	2015	2025	2050
Age group 0-14	34.7	33.2	30.5	26.2
Index	*100*	*96*	*88*	*76*
Age group 15-64	154.2	147.6	132.3	101.3
Index	*100*	*96*	*86*	*66*
Age group 65+	30.7	28.4	34.7	40.0
Index	*100*	*92*	*113*	*131*
Total	**219.5**	**209.2**	**197.5**	**167.5**
Index	*100*	*95*	*90*	*76*
Labour force(ii)	119.0	113.0	101.4	74.9
Index	*100*	*95*	*85*	*63*
Old-age dependency ratio				
Age group 65+/age group 15-64	0.20	0.19	0.26	0.40
Age group 65+/labour force	0.26	0.25	0.34	0.54

Notes:

(i) Armenia, Azerbaijan, Belarus, Georgia, Republic of Moldova, Russian Federation, and the Ukraine.

(ii) Numbers for labour force calculated by aggregating country data, based on national participation rate projections for 2005 and 2010 over age group and sex by the ILO, and population projections for 2005, 2015, 2025, and 2050 over age group and sex by the UN, multiplying population projections for 2015-2050 with participation rate projections of 2010.

Sources: ILO, 1997, UN, 2005, Koettl, 2005, Holzmann and Münz, 2005.

Table 8.9: Zero-migration variant: demographic and labour force development in CIS - Central Asia(i) by age group, 2005-2050 (millions)

	2005	2015	2025	2050
Age group 0-14	18.0	17.8	17.6	15.1
Index	*100*	*99*	*98*	*84*
Age group 15-64	36.7	44.9	49.9	55.3
Index	*100*	*122*	*136*	*151*
Age group 65+	3.3	3.5	5.5	12.0
Index	*100*	*104*	*165*	*361*
Total	**58.0**	**66.1**	**73.0**	**82.4**
Index	*100*	*114*	*126*	*142*
Labour force[(ii)]	27.0	33.5	37.5	40.3
Index	*100*	*124*	*139*	*149*
Old-age dependency ratio				
Age group 65+/age group 15-64	0.09	0.08	0.11	0.22
Age group 65+/labour force	0.12	0.10	0.15	0.30

Notes:

(i) Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, and Uzbekistan.

(ii) Numbers for labour force calculated by aggregating country data, based on national participation rate projections for 2005 and 2010 over age group and sex by the ILO, and population projections for 2005, 2015, 2025, and 2050 over age group and sex by the UN, multiplying population projections for 2015-2050 with participation rate projections of 2010.

Sources: ILO, 1997, UN, 2005, Koettl, 2005, Holzmann and Münz, 2005.

Table 8.10: Zero-migration variant: demographic and labour force development in South East Europe(i) by age group, 2005-2050 (millions)

	2005	2015	2025	2050
Age group 0-14	8.9	8.0	7.5	6.5
Index	*100*	*90*	*84*	*73*
Age group 15-64	36.8	36.3	33.9	26.7
Index	*100*	*99*	*92*	*72*
Age group 65+	7.8	8.2	9.5	12.0
Index	*100*	*105*	*122*	*153*
Total	**53.6**	**52.5**	**50.9**	**45.1**
Index	*100*	*98*	*95*	*84*
Labour force[(ii)]	26.1	25.7	24.1	18.4
Index	*100*	*99*	*92*	*70*
Old-age dependency ratio				
Age group 65+/age group 15-64	0.21	0.23	0.28	0.45
Age group 65+/labour force	0.30	0.32	0.39	0.65

Notes:

(i) Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Macedonia, Montenegro, Romania, and Serbia.

(ii) Numbers for labour force calculated by aggregating country data, based on national participation rate projections for 2005 and 2010 over age group and sex by the ILO, and population projections for 2005, 2015, 2025, and 2050 over age group and sex by the UN, multiplying population projections for 2015-2050 with participation rate projections of 2010.

Sources: ILO, 1997, UN, 2005, Koettl, 2005, Holzmann and Münz, 2005.

Table 8.11: Zero-migration variant: demographic and labour force development in Turkey by age group, 2005-2050 (millions)

	2005	2015	2025	2050
Age group 0-14	21.4	21.3	20.7	18.5
Index	*100*	*100*	*97*	*87*
Age group 15-64	47.8	56.3	62.6	66.8
Index	*100*	*118*	*131*	*140*
Age group 65+	4.0	5.1	7.7	17.3
Index	*100*	*129*	*194*	*436*
Total	**73.2**	**82.8**	**91.0**	**102.7**
Index	*100*	*113*	*124*	*140*
Labour force[(i)]	35.3	41.6	46.5	51.1
Index	*100*	*118*	*132*	*145*
Old-age dependency ratio				
Age group 65+/age group 15-64	0.08	0.09	0.12	0.26
Age group 65+/labour force	0.11	0.12	0.17	0.34

Notes:

(i) Numbers for labour force calculated by aggregating country data, based on national participation rate projections for 2005 and 2010 over age group and sex by the ILO, and population projections for 2005, 2015, 2025, and 2050 over age group and sex by the UN, multiplying population projections for 2015-2050 with participation rate projections of 2010.

Sources: ILO 1997, UN 2005, Koettl 2005, Holzmann and Münz (2005).

Table 8.12: Zero-migration variant: demographic and labour force development in the Gulf Cooperation Council Countries(i) by age group, 2005-2050 (millions)

	2005	2015	2025	2050
Age group 0-14	12.1	12.9	13.1	11.9
Index	*100*	*107*	*109*	*99*
Age group 15-64	22.9	29.1	34.5	40.6
Index	*100*	*127*	*151*	*177*
Age group 65+	0.9	1.4	2.9	10.1
Index	*100*	*157*	*319*	*1,108*
Total	**35.9**	**43.4**	**50.6**	**62.6**
Index	*100*	*121*	*141*	*175*
Labour force[(ii)]	14.7	18.4	21.4	24.9
Index	*100*	*126*	*146*	*169*
Old-age dependency ratio				
Age group 65+/age group 15-64	0.04	0.05	0.08	0.25
Age group 65+/labour force	0.06	0.08	0.14	0.41

Notes:

(i) Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and the United Arab Emirates.

(ii) Numbers for labour force calculated by aggregating country data, based on national participation rate projections for 2005 and 2010 over age group and sex by the ILO, and population projections for 2005, 2015, 2025, and 2050 over age group and sex by the UN, multiplying population projections for 2015-2050 with participation rate projections of 2010.

Sources: ILO, 1997, UN, 2005, Koettl, 2005, Holzmann and Münz, 2005.

Table 8.13: Zero-migration variant: demographic and labour force development in other countries of the Middle East and North Africa(i) by age group, 2005-2050 (millions)

	2005	2015	2025	2050
Age group 0-14	104.3	115.0	120.1	116.2
Index	*100*	*110*	*115*	*111*
Age group 15-64	195.2	243.7	289.2	364.8
Index	*100*	*125*	*148*	*187*
Age group 65+	13.7	18.1	28.5	75.6
Index	*100*	*132*	*208*	*551*
Total	**313.2**	**376.8**	**437.8**	**556.6**
Index	*100*	*120*	*140*	*178*
Labour force(ii)	118.3	154.7	183.6	236.2
Index	*100*	*131*	*155*	*200*
Old-age dependency ratio				
Age group 65+/age group 15-64	0.07	0.07	0.10	0.21
Age group 65+/labour force	0.12	0.12	0.16	0.32

Notes:
(i) Algeria, Djibouti, Egypt, Iran, Iraq, Israel, Jordan, Lebanon, Libya, Morocco, Syria, Tunisia, West Bank and Gaza, and Yemen.
(ii) Numbers for labour force calculated by aggregating country data, based on national participation rate projections for 2005 and 2010 over age group and sex by the ILO, and population projections for 2005, 2015, 2025, and 2050 over age group and sex by the UN, multiplying population projections for 2015-2050 with participation rate projections of 2010.

Sources: ILO, 1997, UN, 2005, Koettl, 2005, Holzmann and Münz, 2005.

Table 8.14: Zero-migration variant: demographic changes in Wider Europe by age group, from 2005 to 2025 (millions)

	Age group 0-14	Age group 15-64	Age group 65+	Total
EU25(i) and Other Western Europe(ii)	-10.2	-28.6	26.5	**-12.3**
CIS - Caucasus and Eastern Europe(iii)	-4.2	-21.9	4.0	**-22.0**
CIS - Central Asia(iv)	-0.4	13.2	2.1	**15.0**
South East Europe(v)	-1.4	-2.9	1.7	**-2.6**
Turkey	-0.6	14.8	3.7	**17.8**
Gulf Cooperation Council Countries(vi)	1.0	11.7	2.0	**14.7**
Other Middle East and North Africa(vii)	15.8	94.0	14.8	**124.6**
Total	**0.0**	**80.3**	**54.9**	**135.2**

Notes:
(i) Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, and the United Kingdom.
(ii) Channel Islands, Liechtenstein, Iceland, Norway, and Switzerland.
(iii) Armenia, Azerbaijan, Belarus, Georgia, Republic of Moldova, Russian Federation, and the Ukraine.
(iv) Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, and Uzbekistan.
(v) Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Macedonia, Montenegro, Romania, and Serbia.
(vi) Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and the United Arab Emirates.
(vii) Algeria, Djibouti, Egypt, Iran, Iraq, Israel, Jordan, Lebanon, Libya, Morocco, Syria, Tunisia, West Bank and Gaza, and Yemen.

Sources: ILO, 1997, UN, 2005, Koettl, 2005, Holzmann and Münz, 2005.

Table 8.15: Zero-migration variant: demographic changes in Europe and its geo-political neighborhood by age group, from 2005 to 2050 (millions)

	Age group 0-14	Age group 15-64	Age group 65+	Total
EU25[(i)] and Other Western Europe[(ii)]	-16.4	-88.2	47.6	**-57.0**
CIS - Caucasus and Eastern Europe[(iii)]	-8.5	-52.9	9.4	**-52.0**
CIS - Central Asia[(iv)]	-2.9	18.6	8.7	**24.4**
South East Europe[(v)]	-2.4	-10.2	4.2	**-8.4**
Turkey	-2.8	18.9	13.4	**29.5**
Gulf Cooperation Council Countries[(vi)]	-0.1	17.7	9.2	**26.7**
Other Middle East and North Africa[(vii)]	11.9	169.6	61.9	**243.4**
Total	**-21.2**	**73.6**	**154.2**	**206.7**

Notes:
(i) Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, and the United Kingdom.
(ii) Channel Islands, Liechtenstein, Iceland, Norway, and Switzerland.
(iii) Armenia, Azerbaijan, Belarus, Georgia, Republic of Moldova, Russian Federation, and the Ukraine.
(iv) Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, and Uzbekistan.
(v) Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Macedonia, Montenegro, Romania, and Serbia.
(vi) Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and the United Arab Emirates.
(vii) Algeria, Djibouti, Egypt, Iran, Iraq, Israel, Jordan, Lebanon, Libya, Morocco, Syria, Tunisia, West Bank and Gaza, and Yemen.

Sources: ILO, 1997, UN, 2005, Koettl, 2005, Holzmann and Münz, 2005.

Table 8.16: Zero-migration variant: changes in the labour force in Europe and its geo-political neighborhood, from 2005 to 2025 and 2050 (millions)

	2005 to 2025	2005 to 2050
EU25[(i)] and Other Western Europe[(ii)]	-26.2	-66.3
CIS - Caucasus and Eastern Europe[(iii)]	-17.6	-44.1
CIS - Central Asia[(iv)]	10.5	13.3
South East Europe[(v)]	-2.0	-7.7
Turkey	11.2	15.8
Gulf Cooperation Council Countries[(vi)]	6.8	10.2
Other Middle East and North Africa[(vii)]	65.3	117.9
Total	**48.0**	**39.0**

Notes:
(i) Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, and the United Kingdom.
(ii) Channel Islands, Liechtenstein, Iceland, Norway, and Switzerland.
(iii) Armenia, Azerbaijan, Belarus, Georgia, Republic of Moldova, Russian Federation, and the Ukraine.
(iv) Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, and Uzbekistan.
(v) Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Macedonia, Montenegro, Romania, and Serbia.
(vi) Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and the United Arab Emirates.
(vii) Algeria, Djibouti, Egypt, Iran, Iraq, Israel, Jordan, Lebanon, Libya, Morocco, Syria, Tunisia, West Bank and Gaza, and Yemen.

Sources: ILO, 1997, UN, 2005, Koettl, 2005, Holzmann and Münz, 2005.

Table 8.17: Medium variant projections: demographic changes in Europe and its geo-political neighborhood by age group, from 2005 to 2025 (millions)

	Age group 0-14	Age group 15-64	Age group 65+	Total
EU25[i] and Other Western Europe[ii]	-6.0	-15.0	27.9	**6.9**
CIS - Caucasus and Eastern Europe[iii]	-4.4	-23.5	3.9	**-24.0**
CIS - Central Asia[iv]	-1.1	11.0	2.0	**11.9**
South East Europe[v]	-1.6	-3.4	1.6	**-3.4**
Turkey	-0.7	14.4	3.7	**17.4**
Gulf Cooperation Council Countries[vi]	2.0	14.1	1.7	**17.8**
Other Middle East and North Africa[vii]	14.3	89.7	14.7	**118.7**
Total	**2.6**	**87.3**	**55.5**	**145.3**

Notes:
(i) Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, and the United Kingdom.
(ii) Channel Islands, Liechtenstein, Iceland, Norway, and Switzerland.
(iii) Armenia, Azerbaijan, Belarus, Georgia, Republic of Moldova, Russian Federation, and the Ukraine.
(iv) Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, and Uzbekistan.
(v) Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Macedonia, Montenegro Romania, and Serbia.
(vi) Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and the United Arab Emirates.
(vii) Algeria, Djibouti, Egypt, Iran, Iraq, Israel, Jordan, Lebanon, Libya, Morocco, Syria, Tunisia, West Bank and Gaza, and Yemen.

Sources: ILO, 1997, UN, 2005, Koettl, 2005, Holzmann and Münz, 2005.

Table 8.18: Medium variant projections: demographic changes in Europe and its geo-political neighborhood by age group, from 2005 to 2050 (millions)

	Age group 0-14	Age group 15-64	Age group 65+	Total
EU25[i] and Other Western Europe[ii]	-7.0	-56.0	53.6	**-9.5**
CIS - Caucasus and Eastern Europe[iii]	-8.8	-55.8	8.6	**-55.9**
CIS - Central Asia[iv]	-4.2	13.9	7.9	**17.6**
South East Europe[v]	-2.7	-11.3	3.9	**-10.1**
Turkey	-3.1	17.9	13.2	**28.0**
Gulf Cooperation Council Countries[vi]	1.4	25.4	8.6	**35.4**
Other Middle East and North Africa[vii]	9.1	158.9	61.0	**229.1**
Total	**-15.2**	**92.9**	**156.9**	**234.6**

Notes:
(i) Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, and the United Kingdom.
(ii) Channel Islands, Liechtenstein, Iceland, Norway, and Switzerland.
(iii) Armenia, Azerbaijan, Belarus, Georgia, Republic of Moldova, Russian Federation, and the Ukraine.
(iv) Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, and Uzbekistan.
(v) Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Macedonia, Montenegro, Romania, and Serbia.
(vi) Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and the United Arab Emirates.
(vii) Algeria, Djibouti, Egypt, Iran, Iraq, Israel, Jordan, Lebanon, Libya, Morocco, Syria, Tunisia, West Bank and Gaza, and Yemen.

Sources: ILO, 1997, UN, 2005, Koettl, 2005, Holzmann and Münz, 2005.

Table 8.19: Medium variant projections: changes in the labour force in Europe and its geo-political neighborhood, from 2005 to 2025 and 2050 (millions)

	2005 to 2025	2005 to 2050
EU25[(i)] and Other Western Europe[(ii)]	-16.2	-43.4
CIS - Caucasus and Eastern Europe[(iii)]	-18.9	-46.4
CIS - Central Asia[(iv)]	8.7	9.8
South East Europe[(v)]	-2.4	-8.6
Turkey	10.9	15.0
Gulf Cooperation Council Countries[(vi)]	8.9	15.9
Other Middle East and North Africa[(vii)]	62.1	110.3
Total	**53.2**	**52.6**

Notes:
(i) Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, and the United Kingdom.
(ii) Channel Islands, Liechtenstein, Iceland, Norway, and Switzerland.
(iii) Armenia, Azerbaijan, Belarus, Georgia, Republic of Moldova, Russian Federation, and the Ukraine.
(iv) Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, and Uzbekistan.
(v) Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Macedonia, Montenegro, Romania, and Serbia.
(vi) Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and the United Arab Emirates.
(vii) Algeria, Djibouti, Egypt, Iran, Iraq, Israel, Jordan, Lebanon, Libya, Morocco, Syria, Tunisia, West Bank and Gaza, and Yemen.

Sources: ILO, 1997, UN, 2005, Koettl, 2005, Holzmann and Münz, 2005.

Table 8.20: Medium variant projections: impact on the labour force of various policy goals, reached by 2050, in the EU25(i) and Other Western Europe(ii)

	2005	2025[iii]	2050[iv]
Base Scenario			
Total Labour Force (millions)	226.7	210.5	183.3
Index	*100*	*93*	*81*
Absolute change (base=2005, millions)	*..*	*-16.2*	*-43.4*
Average age of labour force	*39.5*	*41.0*	*40.6*
Participation rate of 55-74 age group (%)	*25.8*	*24.6*	*23.6*
Scenario I: Benchmark[v]			
Total Labour Force (millions)	226.7	233.1	221.7
Index	*100*	*103*	*98*
Absolute change (base=2005, millions)	*..*	*6.4*	*-5.0*
Average age of labour force	*39.5*	*42.2*	*42.9*
Participation rate of 55-74 age group (%)	*25.8*	*35.8*	*44.8*
Scenario II: Adjustment of female participation[vi]			
Total Labour Force (millions)	226.7	223.5	204.8
Index	*100*	*99*	*90*
Absolute change (base=2005, millions)	*..*	*-3.2*	*-21.9*
Average age of labour force	*39.5*	*41.5*	*41.5*
Participation rate of 55-74 age group (%)	*25.8*	*28.5*	*30.7*
Scenario III: Increase in retirement age[vii]			
Total Labour Force (millions)	226.7	228.2	215.5
Index	*100*	*101*	*95*
Absolute change (base=2005, millions)	*..*	*1.5*	*-11.2*
Average age of labour force	*39.5*	*42.9*	*44.3*
Participation rate of 55-74 age group (%)	*25.8*	*38.7*	*52.0*
Scenario I+II			
Total Labour Force (millions)	226.7	239.8	233.5
Index	*100*	*106*	*103*
Absolute change (base=2005, millions)	*..*	*13.1*	*6.8*
Average age of labour force	*39.5*	*42.6*	*43.5*
Participation rate of 55-74 age group (%)	*25.8*	*39.0*	*51.1*
Scenario I+III			
Total Labour Force (millions)	226.7	252.1	257.5
Index	*100*	*111*	*114*
Absolute change (base=2005, millions)	*..*	*25.4*	*30.8*
Average age of labour force	*39.5*	*44.1*	*46.3*
Participation rate of 55-74 age group (%)	*25.8*	*50.9*	*76.3*
Scenario II+III			
Total Labour Force (millions)	226.7	244.5	243.2

Index	*100*	*108*	*107*
Absolute change (base=2005, millions)	*..*	*17.8*	*16.5*
Average age of labour force	*39.5*	*43.5*	*45.3*
Participation rate of 55-74 age group (%)	*25.8*	*45.2*	*64.4*
Scenario I+II+III			
Total Labour Force (millions)	226.7	257.9	267.8
Index	*100*	*114*	*118*
Absolute change (base=2005, millions)	*..*	*31.2*	*41.1*
Average age of labour force	*39.5*	*44.3*	*46.5*
Participation rate of 55-74 age group (%)	*25.8*	*53.4*	*81.2*

Notes:
(i) Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, and the United Kingdom.
(ii) Channel Islands, Liechtenstein, Iceland, Norway, and Switzerland.
(iii) The data presented under this column assumes that 50 percent of the respective policy goals are reached by 2025.
(iv) The data presented under this column assumes that the respective policy goals are reached by 2050.
(v) Scenario I assumes that all countries adjust to a benchmark participation rate profile, which equals the average participation rates for every age group and sex of the three countries with the highest national participation rate in 2005, namely Denmark, Iceland, and Sweden.
(vi) Scenario II assumes that the national female participation rates adjust to the male participation rates for every age group.
(vii) Scenario III simulates an increase of the legal retirement age by 10 years.

Source: Holzmann and Münz, 2005.

Table 8.21: Zero-migration variant: impact on the labour force of various policy goals, reached by 2050, in the EU25(i) and Other Western Europe(ii)

	2005	2025[iii]	2050[iv]
Base Scenario			
Total Labour Force (millions)	226.7	200.5	160.4
Index	*100*	*88*	*71*
Absolute change (base=2005, millions)	*..*	*-26.2*	*-66.3*
Average age of labour force	*39.5*	*41.3*	*41.0*
Participation rate of 55-74 age group (%)	*25.8*	*24.6*	*23.4*
Scenario I: Benchmark[v]			
Total Labour Force (millions)	226.7	222.4	194.9
Index	*100*	*98*	*86*
Absolute change (base=2005, millions)	*..*	*-4.3*	*-31.8*
Average age of labour force	*39.5*	*42.5*	*43.2*
Participation rate of 55-74 age group (%)	*25.8*	*35.8*	*44.4*
Scenario II: Adjustment of female participation[vi]			
Total Labour Force (millions)	226.7	212.9	179.2
Index	*100*	*94*	*79*
Absolute change (base=2005, millions)	*..*	*-13.8*	*-47.5*
Average age of labour force	*39.5*	*41.7*	*41.8*
Participation rate of 55-74 age group (%)	*25.8*	*28.5*	*30.3*
Scenario III: Increase in retirement age[vii]			
Total Labour Force (millions)	226.7	218.0	190.2
Index	*100*	*96*	*84*
Absolute change (base=2005, millions)	*..*	*-8.7*	*-36.5*
Average age of labour force	*39.5*	*43.2*	*44.7*
Participation rate of 55-74 age group (%)	*25.8*	*38.7*	*51.8*
Scenario I+II			
Total Labour Force (millions)	226.7	228.9	205.5
Index	*100*	*101*	*91*
Absolute change (base=2005, millions)	*..*	*2.2*	*-21.2*
Average age of labour force	*39.5*	*42.8*	*43.9*
Participation rate of 55-74 age group (%)	*25.8*	*38.9*	*50.7*
Scenario I+III			
Total Labour Force (millions)	226.7	241.2	228.3
Index	*100*	*106*	*101*
Absolute change (base=2005, millions)	*..*	*14.4*	*1.6*
Average age of labour force	*39.5*	*44.4*	*46.7*
Participation rate of 55-74 age group (%)	*25.8*	*50.9*	*76.1*

Scenario II+III			
Total Labour Force (millions)	226.7	233.6	214.7
Index	*100*	*103*	*95*
Absolute change (base=2005, millions)	*..*	*6.9*	*-12.0*
Average age of labour force	*39.5*	*43.8*	*45.7*
Participation rate of 55-74 age group (%)	*25.8*	*45.2*	*64.1*
Scenario I+II+III			
Total Labour Force (millions)	226.7	246.8	237.5
Index	*100*	*109*	*105*
Absolute change (base=2005, millions)	*..*	*20.1*	*10.8*
Average age of labour force	*39.5*	*44.6*	*47.0*
Participation rate of 55-74 age group (%)	*25.8*	*53.4*	*81.1*

Notes:
(i) Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, and the United Kingdom.
(ii) Channel Islands, Liechtenstein, Iceland, Norway, and Switzerland.
(iii) The data presented under this column assumes that 50 percent of the respective policy goals are reached by 2025.
(iv) The data presented under this column assumes that the respective policy goals are reached by 2050.
(v) Scenario I assumes that all countries adjust to a benchmark participation rate profile, which equals the average participation rates for every age group and sex of the three countries with the highest national participation rate in 2005, namely Denmark, Iceland, and Sweden.
(vi) Scenario II assumes that the national female participation rates adjust to the male participation rates for every age group.
(vii) Scenario III simulates an increase of the legal retirement age by 10 years.

Source: Holzmann and Münz, 2005.

9 The causes and effects of international migration

9.1 Overview

This section gives a brief overview of recent academic and policy-oriented literature.[91] After a short introduction with a discussion of studies on the causes and effects of migration both in source and in destination countries, we focus on the developmental role and effects in source countries of remittances; brain drain and brain gain; diasporas and trade. The dynamics of international migration are important to present here as a background to the following discussions on alternative strategies to cope with an ageing European society, and how to improve further external cooperation with third countries, many of which currently are developing countries and may be future partners in labour mobility exchange, aid, foreign investments and trade.

International migration is often a response to the absence of economic or social development. In general, it is broadly expected that lower unemployment; higher wages and general job security; stable democracy and good governance; improved infrastructure and social welfare; less corruption and lower crime rates; safe environment and health; and safeguarded social and human rights, would all contribute to lower emigration rates from middle and low-income countries. Such conditions are generally ultimate objectives of development policies (see e.g. European Commission, 2005f). Development policies in general, however, lack clear targets focusing on how to avoid forced migration and brain drain, or to promote economically beneficial migration and growth-enhancing remittances.

A number of useful, general studies about the causes of migration in the context of the migration and development nexus were carried out in the 1990s. Some of these reviewed migration dynamics in various world regions (Appleyard, 1998), while others focused on theories within various disciplines (Massey et al., 1998). One study raised the issue of why most people stayed immobile in contradiction to what many theories predicted should be prevalent factors conducive to emigration (Hammar et al., 1997). Yet other studies focused on the migration networks between migrants in Europe and in their countries of origin in neighboring regions (Schoorl, 2000).

One important cause of migration is poverty. However, the links between migration and poverty from a development perspective are far from being clear and fully understood (see Skeldon, 1997). The poorest people do not participate in long-distance South-North migration as they lack the necessary means, access to networks and necessary information. This is especially the case for chronically and severely poor people. Moreover, the poorest

[91] This section builds on Tamas (2006).

people are often over-represented in circumstances of forced or distressed migration due to severe livelihood constraints (Waddington and Sabates-Wheeler, 2003).

While most migrants from poor countries in Africa and South Asia remain in the South (World Bank, 2005: 8), it is more the middle-income group of countries that are likely to participate in international migration flows (Abella, 1999: 235) to destinations such as the European Union. The same is true within individual countries. For example, migration from Mexico to the US is dominated by households that are in the middle and upper-middle income levels (World Bank, 2005).

The complexity of the migration-development nexus is evident when relating migration to the achievement of the Millennium Development Goals (MDGs) (see UNFPA, 2005). The MDGs do not explicitly include migration. Migration and the development role of remittances have however been discussed in the context of the MDGs (United Nations, 2004a) and remittances are mentioned in the 2005 Millenium Development Goals Report (United Nations, 2005b). Migration is certainly linked to poverty reduction and the MDG of halving the proportion of people with an income below US$ 1 per day. Since most poor people live in rural areas far away from cities, achieving this MDG would also include changing the proportion of rural/urban populations (Skeldon, 2005a: 57-59).

Also the MDGs on ensuring environmental sustainability and increasing access to primary education might lead to increased urbanisation. As living conditions in urban slum areas are enhanced, more people would move there for employment or education. In the next step and often as a consequence of education, some of these people might consider emigrating (ibid.). Also in this scenario, thus, development would lead to more international migration. The function of rural-urban migration as a stepping-stone towards further international migration has been confirmed in other studies (see Malmberg, 1997), and there are also an increasing number of studies on the links between internal and international migration (Zhu, 2006; IOM, 2005; Adepoju, 1998b).

The broader economic literature usually differentiates between micro and macro-economic causes of migration. Traditional, basic divisions into pull-factors and push-factors have become more nuanced. The micro-economic studies focus on decision-making of individual migrants and their families. Age, gender, education, family-status and intergenerational considerations are all important variables. Levels of income and employment situation are crucial, both in absolute terms and in comparison to peer groups, i.e. relative deprivation (Stark and Taylor, 1991). Income-levels however, need to be related to access to information and other resources on the one hand, and expected costs and risks on the other hand.

On a meso-level, transnationalism studies highlight the role of migrant networks and also take into consideration geographic, historical and cultural links. Such studies by anthropologists, sociologists and cultural geographers are very useful to further improve the understanding of migrant decision-making. Network theories give a more dynamic explanation of how migration flows emerge and are maintained (Faist, 2000; Boyd, 1989). The development of migrant networks can increase the likelihood that more members of a community acquire the opportunity and means to migrate internationally. Often the first members of a community who migrate have higher incomes as information is scarcer and the costs to migrate are relatively higher. As more people of a community become mobile, migration costs decrease and also relatively poorer community members can afford to migrate and benefit from already existing migrant networks (McKenzie, 2006).

Individual reasons to move abroad are often embedded in structural macro-factors. Decision-making could be partly forced, partly voluntary. Political and ethnic conflicts, human rights violations, lack of democracy and human security are often the causes of forced migration. Such emigration is however not always restricted in time to specific outbreaks of violence. Both before and after violent conflicts, migration flows may be triggered by social and cultural factors, economic factors, environmental, geographic and historical aspects, as well as demographic and health conditions (Hammar and Tamas, 1997).

While the causes of international migration are often a combination of pull factors as well as push factors, the actual volume, composition and direction of migration flows are to a large extent influenced by migration control policies (Cornelius et al., 2003; Brochmann and Hammar, 1999). Such policies are not able to exercise total control over migration flows and there usually is irregular, illegal or disorderly migration outside existing legal channels. Efficiency of control is often a combination of political will and priorities, the significance of human rights and the influence of market forces (see e.g. Hollifield, 1992; Soysal, 1994; Sassen, 1999).

9.2 General effects in migrant destination countries

International migration affects development in both emigration and immigration countries. Relatively more research has been invested in studying the effects of the receiving societies. A recent overview that summarizes some of the available studies in a European context, points to generally positive labour market effects. Although there may be briefer periods of adjustment, there is no general evidence that immigration would press down wages or increase unemployment. On the other hand, the immigration that takes place in European countries is not properly matched to the labour market demands. More attention would thus need to be directed at planning and selecting labour migration (Zimmermann, 2005).

Labour market effects from immigration in destination countries are often analysed on the basis of whether immigration is a complement or a substitute to the national labour force (for an overview see Tamas and Münz, 2006). An inflow of substituting, competing foreign labour often results in downward pressures on wages and unemployment, while complementary foreign labour tends to increase productivity and exert an upward push on wages (Chiswick, 2005; Boeri, Hanson and McCormick, 2002; Ekberg, 2002; Wadensjö, 1999). A broad survey of empirical studies shows that the number of cases where wages fall is slightly higher than the number of cases in which wages rise as a result of immigration. However, the measured effects are relatively small on average (Münz et al., 2006).

Studies in the US indicate a reduction of average annual earnings among residents as a consequence of immigration (Borjas, 2004). Wage effects from immigration in the US and European countries may however differ widely due to the smaller average income differences between various occupations in Europe, and the stronger presence of labour unions (Barabas et al., 1992). Some European scholars argue that there is insufficient evidence that immigration should have a predominantly negative effect on employment among nationals (Dustmann et al., 2003b).

Overall, the labour market effects depend both on the skill levels among the immigrants, and on demand and labour market conditions (Zimmermann, 1995, 1994). High-skilled migrants tend to make net contributions while low-skilled migrants often present higher costs to the receiving countries' national income and welfare systems (Lee and Miller, 1997; Storesletten, 2003). Studies in the Nordic countries suggest that the balance of welfare transfers to immigrants depends on their status. Net contributions have been recorded for labour migrants while data on refugees and their family members show net consumption (Ekberg, 1999).

Empirical studies in the UK (Gott and Johnston, 2002; see also Glover et al., 2001) and Germany (see Baldwin-Edwards, 2002; Barabas et al., 1992; Ruland, 1994), have concluded that immigrants contribute more than they consume in welfare transfers. A study analysing the situation in the Netherlands has reached the opposite conclusion (Rodenburg et al., 2003). Also according to some studies in the US, the overall fiscal effects of immigration are negative (Smith and Edmonston, 1997). High dependence on welfare transfers in specific immigrant groups relates, as in the case of the Nordic and Dutch studies mentioned above, to levels of qualification and labour force participation (Bird et al., 1999).

Besides such labour market and economic effects, the great challenges of international migration for receiving countries are centered on integration and social cohesion. Much of the sentiments are based on myths rather than facts and evidence-based knowledge about the character and effects of immigration. Integration studies therefore increasingly direct attention to the need for a two-way integration process whereby both the newcomers and the resident populations need to adapt to the societal changes brought about by immigration (see e.g. Castles, 2002; Heckmann and Schnapper, 2003).

9.3 General effects in migrant source countries

The two or three years run-up to the High Level Dialogue in the UN General Assembly in September 2006 generated a large policy-oriented body of literature on migration and development. Besides this recent sudden growth, there has been relatively limited empirical research on the links between migration and development in emigration countries. There is only incomplete empirical evidence on the economic effects of migration and especially the impact on economic development (Schiff and Özden, 2006: 1; Lucas, 2005). Available statistics are meager, frequently of poor quality and are often not comparable. Nevertheless, the overview-literature on the links between international migration and development is vast, heterogeneous and still incomplete.

There are roughly three schools of thought addressing the impact of migration on development in developing countries. The first two alternatives are mainly based on economic theory analysing alternative outcomes in emigration and immigration regions. Emigration from relatively less developed countries to more developed countries is assumed to be caused mainly by the prevailing income differences. As migration continues, these income differences are supposed to either decrease, and eventually lead to convergence, or increase, and bring more divergence.

Firstly, in the *convergence* alternative, the levelling out of income differences in the long run is the result of faster income increases in the migrant source region than in the destination region, partly caused by growing scarcity of labour in the former. Secondly, *divergence* would occur if migration was dominated by brain drain causing higher wages in immigration regions and lower wages in countries of emigration. As the stock of highly skilled is reduced in the emigration country, growth rates and productivity will be lower, also leading to poorer quality of basic services for those who remain. Eventually such a downward spiral could lead to even more emigration and a growing lack of skilled labour (see Fischer, Martin and Straubhaar, 1997).

To the somewhat simplistic neo-classical models of the convergence school, it is also necessary to add other factors besides income differences, such as changes of technology and gains in productivity. Moreover, non-economic factors such as migrant networks and immigration regulation in destination countries also influence migration patterns and effects (Fischer, Martin and Straubhaar, 1997; Hermele, 1997). The divergence school considers some of these other factors, notably the effects of politics. Much of this approach has been based on structural, core-periphery or conflict theories and was therefore more common in the 1970s and the 1980s.

Some of these shortcomings are avoided but not entirely solved by the third approach, which can be referred to as the *complexity* school. It brings together a wide range of scholars from different disciplines. Their studies regard the links between migration and development as much more ambivalent and complex. They can see both growth enhancing and detrimental effects of emigration for the source countries. Both important factors – remittances, which can fuel development, and brain drain, that can hamper it – are merged in the equation (see Hermele, 1997). The complexity school has become a more common approach in the 1990s and 2000s (Schiff and Özden, 2006; Kapur and McHale, 2005; Lucas, 2005; Nyberg-Sorensen, van Hear, and Engberg-Pedersen, 2002ab; Appleyard, 1998 and 1992ab; UNFPA, 1998; Hammar et al., 1997; Papademetriou and Martin, 1991).

Emigration effects on source country labour markets

There is no clear-cut evidence regarding the effects of migration on labour markets in migrant source countries. Whether emigration brings mainly positive or negative labour market effects depends partly on whether the country is losing scarce, skilled labour, or if it is mainly a surplus labour which leaves (unemployed and underemployed). The profile as well as the number of migrants obviously will affect labour market outcomes. In most cases both employed and unemployed people emigrate. The relative composition within migration flows from a specific country can however change over time, e.g. as in the case of Morocco. For decades migrants included both employed and unemployed, but more recently it is mainly the unemployed who leave (Collyer, 2004: 21; NIDI, 1997).

Migration may lead to poverty reduction if poor people who remain in the source country gain higher wages or find better opportunities for employment (World Bank, 2005). There are studies indicating gains in wages of remaining residents as an effect of emigration, e.g. among various workers in Mexico, construction workers in Pakistan, and manufacturing and agricultural workers in the Philippines. Wages in Sri Lanka increased for a while as a consequence of migration but later decreased due to other factors and may have triggered further emigration. In Albania, migration played a role in employment creation by facilitating the transition from employment in the state sector to the private sector. This positive effect was discernible as many migrants returned with their savings and started small businesses (Lucas, 2005: 90-100).

Positive labour market outcomes, however, cannot be taken for granted. There are several examples of the opposite effect (ibid). An early ILO-study in Egypt found that emigration of people with prior domestic employment was harmful to the local economy. It was hard for employers to replace those who left with workers from other sectors. The result was skills shortages parallel to growing unemployment, leading to even more emigration (Collyer, 2004: 13).

9.4 The effects of development and aid on migration propensity

The causal links between the level of development and international migration are not unanimous as development is a multidimensional process. Economic, political and social variables interact. When development brings more livelihood alternatives at home the attraction of the migration option fades. Migration can however be sustained through strong international migrant networks. In the short-term, development can even increase migration. Massey (1990) has argued that rapid economic growth is often coupled with higher capital inflows, rationalization of local and rural work force resulting in lay- offs, privatization of land and increased market competitiveness. These processes might be economically and socially destabilizing and are likely to increase emigration. Moreover, growth in developing countries might facilitate higher emigration levels as more people can afford to migrate as globalisation reduces air fares and other travel costs and as more poepl can utilise existing migrant networks.

The so called inverted U-curve hypotheses/migration hump model is based on the assumption that economic development at an early stage increases emigration. Gradually, as economic development brings sufficient income opportunities and safe political environments at home, more and more people prefer to stay. As development has reached a certain level, it transforms the country to a net immigration country, as it then also becomes increasingly attractive for migrants from poorer countries. So far, no convincing empirical evidence has been presented to support this model. There are however some data offered by Faini and Venturini's econometric estimates for Southern Europe for the period 1962-88, which suggest that there was a turning point in the income/migration link at

around US$4,000 per capita per annum (1985 prices) (Faini and Venturini, 1994; see also Abella, 1999: 235-36).[92]

The migration hump model was part of the conclusions presented by the U.S. Commission for the Study of International Migration (1990), when analysing potential migration effects of trade, aid and investment flows. This was also used as a background document for considerations regarding the NAFTA free trade agreement. The Commission forecasted that economic growth in emigration countries might lead to increased emigration propensity for decades to come. Russel and Teitelbaum (1992: 33-34) described the first of two paradoxes highlighted by the Commission in the following way:

> *Over the long term of generations, rapid economic development in the Third World can be expected to moderate the pressures that produce high propensities toward out-migration, currently and prospectively. [...] In the shorter-run however, the effects of successful and rapid economic development are in the opposite direction: they increase the propensities for emigration.*

The second paradox in the Commission's report alluded to the shortcomings of development aid, which seemed to be too limited and its effect often neutralized by other economic policies of developed countries such as trade protectionism. Therefore, it was argued, only more trade and foreign investments could be of such a scale to boost economic development (Russel and Teitelbaum (1992: 34-35). Other studies have, however, shown that also foreign direct investment in the short term could encourage emigration (Sassen, 1988). This might be the case when modern manufacturing industries are established in developing countries which offer job-training opportunities and access to information about the country that undertook the investment.

Development assistance policies have had rather limited effects on job-creation and migration potential in developing countries. Aid has only to some extent addressed institutional aspects of the development process which may have an impact on the absorption capacity on local labour markets and on mobility (Appleyard, 1992b: 10-11). More recently, an econometric analysis of migration to Europe, suggests that aid and support of democracy, economic development and trade are not sufficient to reduce emigration in the medium-term perspective. This holds true even if migration restrictions would be efficient (Rotte, Vogler and Zimmermann, 1997). The migration hump model thus indicates that any attempts to use aid to lower migration pressures need to be reconsidered. Migration should not be linked to development as a means to reduce or stop migration, as it may very well have the opposite effect for a period of time (see also Böhning and Schloeter-Paredes, 1994).

9.5 The role of remittances in development

In recent years, several international organisations, international and regional development banks have formulated recommendations and programmes to increase the developmental effects of remittances. These include the European Union, the World Bank and the IMF, the Inter-American and the Asia Development Banks, the OECD, as well as a number of United Nations Organisations. The impact of remittances and migration on economic growth and poverty reduction were the main themes of the 2006 issue of *Global Economic Prospects* (World Bank, 2006). Remittances were also highlighted at a G8 meeting (G8, 2004) and at the 2002 Monterrey conference on development financing (United Nations, 2002b).

The importance of remittances is now also being reassessed in the academic literature due to the overwhelming increases in the actual volume of remittances and the assumed

[92] The equivalent value in 2006 would be about US$7,400.

growth-potential from multiplier effects (see Kapur, 2003; Glytsos, 2002; Lianos and Glytsos, 2005). This interest has generated a growing body of academic and policy-oriented studies (see e.g. Schiff and Özden, 2006; Terry and Wilson, 2005; Maimbo and Ratha, 2005; OECD, 2005; Gammeltoft, 2002). Still, evidence is mixed and based on a large number of different methods and techniques to measure the amount of remittances as well as their effects on development.

The volume of remittances is affected by many factors, including the number of migrants abroad; their length of stay; their level of education and type of economic activity; the size of their earnings; income-structure of dependant family members still living in the country of origin; gender-relations and household characteristics such as marital status and age of household members. Other important factors include information and available options for transferring money, and the political situation in the migrant source countries (Puri and Ritzema, 1999: 13). Gender is important as women often remit a higher share of their income and more frequently than men, although their lower average earnings may only enable them to send less in total than men. Poorer migrant women may forfeit investments in their own nutrition, health care and education in order to send money home (United Nations, 2004b: 21-22; Connell and Brown, 2005: 36).

Workers' remittances to developing countries (as measured by the IMF's annual balance of payments statistics) have doubled over the last five years. Total remittances to developing countries in 2005 are estimated at US$ 167 billion. These remittances are more than twice as high as official Overseas Development Assistance (ODA) and international aid flows which are partly sent from other developing countries. As every second migrant from a developing country moves to another developing country, the share of South-South remittances amounts to 30-45 per cent of total remittances to developing countries (World Bank, 2006: vii, ix, 85).

The recent increase in the value of remittances is partly influenced by factors such as cuts in transaction costs; increases in total migration flows and improvements in the measurement and reporting of remittances (World Bank, 2005: 28-29). Stricter controls after September 11, 2001 may also have contributed to an increase in official remittance flows (Sriskandarajah, 2005: 14). The latter factor would not have an impact on actual flows, but on their statistical "visibility".

Nevertheless, formal remittance statistics still underestimate total flows. Total unofficial remittances may add an extra fifty percent to the recorded flows (World Bank, 2006: ix). In some developing countries, a few money transfer organisations (MTOs) are insufficiently supervised as there is a lack of registration and reporting requirements (de Luna Martínez, 2005). Moreover, many migrants bring money or valuable products and gifts in kind when they go back home. Informal remittance channels are often preferred not because of lower costs, but because they are quicker, involving less paper work and are more confidential than formal remittance channels (Maimbo et al., 2005).

A large part of remittances are used for subsistence and daily consumption such as food, clothing and health care. Money is also spent on housing, durable consumer goods and education. In most cases only a limited share is used for savings, productive investments or income-generating activities, such as purchasing land or tools, or setting up a business. It should be noted though that there are considerable regional differences in spending patterns (Ramamurthy, 2006).

Remittances that are spent on investments should in general have a larger developmental effect than spending on consumer goods. The dividing lines are however not so clear. There might be multiplier effects also from consumption, but they tend to be smaller than from investments. When remittances are invested in e.g. housing, they can indirectly lead to growth in the construction sector and thus enhance overall economic growth (Stahl and Habib, 1991). As much consumption goes to imported goods, however, this limits the development effects. Consumption of domestic goods on the other hand could feed inflation if there is a lack of supply (van Doorn, 2002; United Nations, 2004b: 21).

The literature on the economic role of remittances is divided. Those studies which reveal positive developmental effects of remittances focus mainly on the macroeconomic level. Remittances can often give a positive impact through foreign currency injections, adding to the balance of payments and funding imports (Puri and Ritzema, 1999: 16). Remittances as well as FDI have become more important sources of finance for developing countries than total official flows (including ODA) and private aid or private lending. The lower volatility of FDI and remittances compared to debt finance, give developing countries a more stable financial environment (Ratha, 2003). Remittances can also generate income that exceeds the loss incurred by brain drain. One estimate suggests that net fiscal loss due to emigration to the U.S. ranged between 0.2-0.6 per cent of Indian GDP in 2001, while the value of remittances equaled 2.1 per cent of GDP (Desai, Kapur and McHale, 2001).

Remittances are relatively more important for poor countries than for middle-income countries. Many poor families use migration as an alternative livelihood strategy as they send out a family member who remits his/her savings. Some studies thus argue that there is sufficient evidence indicating that migration can reduce poverty (e.g. World Bank, 2005: 8, 28-29; de Haan, 2000). One such study argues that an increase by 10 per cent in the share of international migrants in a country's population would result in a 1.9 per cent decline in the share of people living on less than US$ 1 a day (Adams and Page, 2003).

On the negative account, it is clear that remittances could also create dependence through long-term negative effects on the effort level of migrant households (Chami, Fullenkamp and Jahjah, 2005). Remittances can lower educational or professional motivations in the home countries as they provide for future income security or as remittance receivers hope to move abroad (Levitt, 1996). Some also argue that remittances are as likely to lead to poverty alleviation as to increased inequality. When remittances are geographically and socially unevenly distributed, they can strengthen feelings of relative deprivation among the excluded poor and also lead to deeper poverty (Skeldon, 2005a:56; Stark and Taylor, 1991).

Improving the developmental effects of remittances

Although remittance transaction costs have fallen in recent years, they undercut the potential developmental effect of migrants' savings. These costs need to be cut in both the sending and in the receiving end (de Luna Martínez, 2005). Transaction costs could be reduced with improvements in banking technology by speeding up check clearance, reducing exchange losses and through partnerships between major banks and post offices (Ratha, 2003), or by attracting more remittances into formal banking deposits with higher interest rates, improvements in the domestic banking sector and the national balance of payments (Lowell and de la Garza, 2002; 2000).

More competition and transparency in the global money transfer business could also bring down transaction costs. Migrants would be able to compare prices and chose the cheapest and most efficient money transfer channel. As many migrants lack insight and knowledge about the banking sector and the actual cost to transfer money, financial literacy training would also contribute to reduced transaction costs. An internet web-site with information about costs and services of various MTOs, funded by the UK Department for International Development (DFID) is a recent and successful initiative.[93]

If migrants were to use the formal banking sector in their countries of origin to a larger extent, they would also open up other sources of finance for those countries. Remittances that are saved in developing country banks could be made available for investments (Puri and Ritzema 1999: 25). It would be fruitful to encourage closer cooperation among larger international banks and smaller local banks in developing countries so that networks of

[93] http://www.sendmoneyhome.org/

branches in migrants' countries of origin and destination can be linked together (World Bank 2004: 172).

An unknown part of remittances are used to service debts to smugglers who have assisted the irregular travel of migrants (United Nations, 2004b: 22). Obviously, if migrants use smugglers, their costs will be much higher and to the detriment of the remittance receiving family members. There is a need for studies on the significance of this leakage from migrants' welfare and its effects on development.

As remittances do not always contribute to development, a number of policy measures could be adopted to steer remittances into more productive and growth enhancing activities. First of all, for remittances to contribute to development there must be an efficient and adequate policy for investment and capital formation (Stahl, 1982). There are links between good governance, institutional reforms, general improvements in the investment climate, and increasing financial inflows to poor countries, including FDI, official flows and remittances. Developing countries thus need to work towards a general improvement in the investment climate (World Bank, 2005: 9).

Remittance receiving households need more options and incentives to invest their money productively, which could be facilitated e.g. by market-oriented local development funds and credit unions in developing countries (G8, 2004). Migrants' savings could also be attracted through incentives such as making available repatriable foreign currency accounts or foreign currency denominated bonds (Puri and Ritzema, 1999). Encouraging financial intermediaries such as banks and micro finance institutions to utilise migrant remittances and savings to direct them towards existing micro-businesses, could also have a broad developmental impact (Puri and Ritzema, 1999: 25-26; Siddiqui and Chowdhury, 2003: 6-10).

9.6 Migration and brain drain

A negative sentiment regarding brain drain prevailed in the 1960s and 1970s. The divergence school of the time assumed that the emigration of highly skilled would be to the detriment of the country of origin. More recent interest among international and national stakeholders has made available a number of fresh studies of the migration of highly skilled and its effects on brain drain (see e.g. Kapur and McHale, 2005; Carrington and Detragiache, 1999). Several of them show that brain drain has increased during the last two decades and thus continues to be a predicament for many developing countries.

Highly-skilled people are more likely to migrate than low-skilled. Evidence for this can be found in a new global data-base on the educational level of international migrants (Docquier and Marfouk, 2006; 2004). About 15 per cent of tertiary educated from the Philippines compared to roughly 1.5 per cent of the primary educated are international migrants. Comparable pairings for El Salvador are 31.5 per cent to 11.2 per cent; and as high as almost 83 per cent to 8.3 per cent for Jamaicans (Kapur and McHale, 2005; Docquier and Marfouk, 2006; 2004). As another example, over a third of all college-educated citizens in 40 per cent of the African countries are estimated to be emigrants (IOM, 1999).

The recent increase in the migration of highly skilled has induced several developing countries to reverse the brain drain by promoting return. These policies are also based on the idea that the countries of origin benefit from migrants returning with new knowledge and skills, as well as from access to investments, technology and new trade opportunities (United Nations, 2005a).

Brain drain among health-care professionals

There is an alarming deficit of skilled health-care professionals in many developing countries. Most sub-Saharan African countries have fewer than 20 nurses per 100,000 in the population, compared to 50 times more in some developed countries (Redfoot and Houser, 2005). Such low numbers are due to both a general lack of resources to educate sufficient numbers of health care professionals, as well as the fact that many of those who are indeed trained, leave their countries of origin. The relatively low initial numbers of trained professionals, make certain countries very vulnerable to further loss of their health-care professionals.

The most affected countries are to be found in Southern Africa, but also small island republics in the Caribbean and some Asian countries are hard hit (see McDonald and Crush, 2002; Chen and Alkire, 2006). The WHO *World Health Report 2006* includes data on doctors trained in sub-Saharan Africa but working in OECD countries. On average, 23 per cent of the home country workforce has moved to an OECD country to work. The Republic of South Africa has a relatively high percentage (37 per cent) as well as Ghana (29), Angola (19) and Ethiopia (17). Regarding nurses and midwives trained in sub-Saharan countries and working in OECD countries, the average loss is much lower (5 per cent) but a few countries are disproportionately affected, notably Zimbabwe (34), Lesotho and Mauritius (both 18) (WHO, 2006: 100).[94]

Other sources suggest that developing countries probably supply 56 per cent of all migrating physicians and receive less than 11 per cent (OECD, 2002a). In the Philippines, approximately 70 per cent of graduate nurses have emigrated, many to the US. While a large share of these nurses are trained in privately funded schools in the Philippines for foreign labour markets, there are some signs of shortages of nurses with specialist skills (Asis, 2006; Redfoot and Houser, 2005). An estimated 60 per cent of graduates of Ghana's main medical school qualifying as medical doctor between 1986 and 1996 have emigrated and this has been very detrimental to the country's health care system (Dovlo and Nyonator, 1999).

These brain drain patterns increase inequality and have broad negative effects in source countries. Among the effects can be a deteriorating general health as well as lower average life expectancy due to HIV/AIDS and other diseases that cannot be prevented nor properly treated. Such brain drain also raises global equality issues since poorer countries are contributing to richer countries with educated personnel without being duly compensated for it (Alkire and Chen, 2006; Loewenson and Thompson, 2005).

A new database on the migration to OECD countries of health-care professionals from sub-Saharan countries illustrates the effects on AIDS death rates, life expectancy and economic growth. An analysis based on the country-level longitudinal data for the period 1990-2004, suggests that lower income levels and higher HIV prevalence is associated with significantly more brain drain. This in turn, has led to higher death rates due to AIDS and lower life expectancy. Regressions for GDP growth form the basis of proposals from Bhargava and Docquier that the underlying trends in population need to be taken into account when formulating policies. Investments in the economies and life expectancy, they argue, could be significant contributors to higher GDP growth rates (Bhargava and Docquier, 2006).

Measures to reverse the brain drain

How can the brain drain be reversed? Will developing countries inevitably lag behind as they lose their best and brightest? What can be done to make developed countries refrain from recruiting in a way that hampers development and economic growth? It can be argued

[94] Destinations include eight and seven OECD countries respectively.

that it is in the rational self-interest of labour importing countries to avoid brain drain, as a long-term reduction of health and other key personnel in developing countries could deteriorate general living conditions to an extent that in itself triggers other and larger economic migration and even refugee flows (Tamas and Palme, 2006a: 13; Alkire and Chen, 2006).

The EU could therefore as a first step support better mapping of the causes and patterns of brain drain flows, their effects and policy suggestions such as institutional and governance responses in human resource development, better remuneration and improved working conditions (Alkire and Chen, 2006; Loewenson and Thompson, 2005). Smaller developing countries also need to promote the return of health professionals (Redfoot and Houser, 2005) and improve retirement conditions (WHO; 2006). Measures need to address the poor remuneration and working conditions as well as vulnerable human security in many developing countries. For instance, health workers in sub-Saharan Africa are increasingly exposed to the risk of HIV/AIDS infection due to poor safety measures (ILO, 1999, referred to in Alkire and Chen, 2006).

Moreover, as suggested in a recent study, public policies should adapt human resource development to the process of globalisation to achieve an improved impact on development. In developing countries trade and FDI can have a positive effect on the supply of education and training. The brain drain of e.g. South African teachers, nurses and doctors could therefore be counter-balanced by improved export of goods and services as well as additional investments into South Africa. Stronger management efforts from governments are needed to promote interaction between public and private sectors regarding the planning and provision of education adapted to the effects of globalisation and to the private sector needs. Human resource development needs to be constantly adapted to achieve the best possible matching between demand and supply of skills (Willem te Velde, 2005; see also WHO, 2006: 102).

A related proposal has been put forward by Ron Skeldon, arguing for a two-tiered health training system. This could include one system for global markets and the other for local markets. Retention and return of skilled migrants could be buttressed by policies that encourage outsourcing of education and health care centers to developing countries (Skeldon, 2005b). Another option is to agree on precautionary “bonding contracts” with students in developing countries. The students would agree to work for a number of years in their home country in order to compensate for the costs invested in their education. Then they would be able to migrate as they wished (Sriskandarajah, 2005: 8). This corresponds to the OECD’s advice that developing countries should encourage student returns by making student grants conditional on the student’s return home (OECD, 2002b).

As a complementary measure, some also suggest more private funding of the education system. The Philippines already has a very large share of privately funded education, which perhaps adds to the acceptance of the country’s substantial skilled labour emigration (Sevilla, 2006). On the other hand, the attractive option to emigrate as a nurse has distorted the Philippine market for health education to the extent that several thousand doctors have retrained to gain better chances to emigrate as nurses (Asis, 2006). In order to avoid such brain waste and the broader problems of brain drain in developing countries, the migrant receiving countries may assist such countries to finance part of their educational systems, especially in targeted sectors where there is a skilled labour shortage, e.g. health care (Sriskandarajah, 2005: 8).

Finally, it is essential for states and recruiting agencies to recruit in a responsible way. They should ensure that the migrant source countries also benefit from migration via aid or return. Codes of practice can help to make recruiters more attentive and avoid recruiting from specific countries and sectors where there is an identified risk of labour shortages of skilled persons. The challenge is however to make employers, recruitment agencies and countries to implement the code and to coordinate global monitoring (ibid).

Brain gain

Some scholars tend to play down the significance of brain drain for developing countries. They argue that although it might be a major challenge for some smaller countries or professions, it is not a general, widespread problem (Lucas, 2005). Policymakers, as well as some scholars, have also started to talk about brain circulation. To some extent this notion reflects wishful thinking and the realization that developed countries will need labour migration in the future due to population ageing. As constituencies are expected to be hesitant to large-scale permanent immigration, policymakers are increasingly relying on the potential of temporary migration. Such mobility appears the more attractive since it could reduce brain drain and also promote development of the source countries (Tamas and Palme, 2006b).

There are however some potential compensatory gains from the mobility of human capital. Several recent studies suggest that the anticipation of migration opportunities may improve human capital formation through an increase in the number of people seeking education. As only some of the educated people finally migrate, there may be an overall gain in the country's level of human capital as well as enhanced economic growth (see e.g. Wong and Yip, 1999; Vidal, 1998).

Using data on educational levels among migrants from 50 developing countries, one study could identify a highly significant positive effect of migration prospects on human capital formation. The "winner-countries" experiencing a positive growth effect of emigration, are usually larger countries and demonstrate low levels of human capital and low emigration rates per capita. Those who lose are usually small countries with high emigration rates and/or high enrolment rates in higher education (Beine, Docquier and Rapoport, 2002; Rapoport, 2002).

More recently, however, the brain gain hypothesis has received growing critique. Faini argues that there is very little evidence of brain gain in terms of the emigration option fostering a higher demand for education and gains in total human capital (Faini, 2004). A 2006 World Bank publication and a study by Harvard economists come to similar conclusions (Schiff and Özden, 2006; Kapur and McHale, 2005).

9.7 The role of diasporas in development

Migrant diasporas contribute to the development in their countries of origin in several ways. First, they often send money, individually or collectively. Second, they may gain valuable experience abroad which they can share upon return. Third, they can make small-scale investments and start small businesses that generate income and employment opportunities. In addition, migrants contribute to their former home countries with non-monetary transfers, so called *social remittances*, including "ideas, behaviours, identities, and social capital" (Levitt, 2006; 1996). The involvement of diaspora communities can thus improve the livelihood chances of poor people in many developing countries.

The welfare of diasporas (as well as those left behind) could to a larger extent constitute a common ground for mutual, cooperative policies between the EU Member States and migrants' countries of origin. An increasing number of governments of labour exporting countries have already started to pursue active policies to protect their migrants' rights and to preserve good relations with their diasporas (Østergaard-Nielsen, 2000).

So far, however, the involvement of the European Union and its Member States with diaspora networks to promote development in countries of origin has been limited (for an overview, see de Haas, 2006). The EU Commission's Communication on migration and development from September 2005, does suggest that EU Member States make inventories of their diasporas and their developmental links (European Commission, 2005b). This initiative is encouraging and could be further developed.

Among EU Member States, France has had the most long-lasting cooperation with diasporas through its *codéveloppement* policy. The UK is also positive to more co-operation between diasporas, governments, aid authorities and the private sector (HCIDC, 2004:68). A DFID-commissioned study suggests that diaspora groups should be involved in the formulation of country strategy papers and poverty reduction strategy planning (van Hear, Pieke and Vertovec, 2004). Germany's agency for technical development cooperation (GTZ) has also explored possible cooperative arrangements.[95] Belgium and the Netherlands have also formulated policies that incorporate migration, diaspora linkages and development (Netherlands Ministry for Foreign Affairs, 2004).

The Nordic countries have funded several studies focusing on the links between migration and development. DANIDA has supported studies on the policy links between aid, refugees policy and poverty reduction focusing on the role of diasporas in development. These studies argue that diasporas should be regarded as a development resource (Nyberg-Sørensen, van Hear, and Engberg-Pedersen, 2002a; 2002b). NORAD has also funded a study on the role of diasporas as well as remittances for development (Carling, 2005). In addition the Swedish Ministry for Foreign Affairs and Sida have commissioned studies on migration and development also exploring a role of diasporas in development (Tamas, 2006a; 2006b).

Despite such initiatives, the limited host country encouragement of diasporas, at least in the Nordic countries, is related to the fact that asylum-seekers and their families rather than labour migrants have constituted the main share of total migration flows in recent decades. These migrants often represent different sides in an unresolved ethnic, social or economic conflict. Diasporas have often evolved during several decades and consist of migrants with both political and economic motives. Many migrant diasporas are thus highly heterogeneous. Bringing these various groups together in a migrant receiving country may represent several challenges (Koslowski, 2005; Østergaard-Nielsen, 2002).

Ethnic networks and collective transfers

There is sufficient high quality research on migrant networks and their role in international trade and economic growth. Ethnic networks can be used to overcome informal barriers regarding information costs, risk and uncertainty. They can also be used in trade by establishing trust and facilitate contract enforcement (Epstein and Gang, 2004). Immigrants in host countries often create a demand for local products from the countries of origin. This demand leads to export opportunities for specific goods and services from developing countries (Nyberg-Sørensen and Fog Olwig, 2002).

On the other hand, the downside of strong ethnic networks is that they sometimes result from contexts where integration has failed (Epstein and Gang, 2004). A development policy focus on diasporas should thus be coordinated with integration policy and labour market policy aimed at counteracting marginalization of immigrant groups in Europe.

There are a growing number of active diaspora groups in Europe. Some of them are more focusing on professional identities while others are based on ethnic or village identities. The professional ethnic networks of highly skilled migrants seem to have the largest potential to contribute to development (United Nations, 2005a: 91-92). Lessons could be learnt from other world regions. In Latin America e.g., migrant diasporas – most of them not highly skilled – have been active in collective transfers of remittances to their home communities. Such migrant's Home Town Associations (HTAs) have contributed to the improvement of roads, water and sanitation systems, health clinics, schools, small businesses and

[95] Deutsche Gesellschaft für Technische Zusammenarbeit, see:
http://www2.gtz.de/migration-and-development/konferenz-1
http://www2.gtz.de/migration-and-development/konferenz-2

manufacturing activities in communities from where migrants originate. In addition to investments by HTAs, some local governments and donors have doubled or tripled these investments through matching funds in joint efforts to promote local development (Martin, 2002; Terry and Wilson, 2005; Orozco, 2004; 2003).

Return of qualified nationals and entrepreneurial programmes

One way to balance negative brain drain effects is to encourage temporary return of skilled emigrants. The earlier return-incentive schemes during the 1970s in Europe, appear in general to have been of little success. One of the reasons why the guest worker migrants did not return seems to be the lack of guarantees of finding employment upon return. The various short term benefits offered were neither sufficient in duration nor in scope. They functioned more as aids to migrants who were returning in any case than as incentives to return decisions (Rogers, 1983).

In the past two decades, new kinds of programmes have emerged, including UNDP's Transfer of Knowledge Through Expatriate Nationals (TOKTEN); IOM's Return of Qualified Nationals (RQN); Return programme for qualified African nationals (RQAN); and the Migration for Development in Africa (MIDA). Some of these programmes could be models for similar activities in the future. But although there are some good experiences, results overall are very mixed (United Nations, 2005a: 92).[96]

In Europe and Africa, small-scale projects have been undertaken within the framework of the French *codéveloppement* agreements with Mali, Senegal and Morocco. The Franco-Senegalese cooperation has involved French support of a number of funds managed by Senegalese banks. Evaluation of the first voluntary training, return and reinsertion projects during the 1980s showed very disappointing results. Training turned out to be ill-adapted to the migrants' individual and family characteristics and local market demand. Lessons learnt for the future include a separation of the training programmes from the return and reinsertion programmes, ensuring that projects are financed only after proper training has been completed (Diatta and Mbow, 1999). In contrast, programmes in the 1980s for return migrant entrepreneurs in construction, small scale service and large scale manufacturing in the Maghreb, reached quite positive results (Collyer, 2004: 15).

These examples show that results are mixed also with regard to entrepreneurship training programmes. Such programmes usually seem to work better targeting highly skilled than low skilled return migrants. The selection process to identify suitable people seems to be a key issue (Puri and Ritzema, 1999: 23-25). Management of small-scale projects is moreover, increasingly abandoned by aid donors in favour of broader and more long-term budget support to developing country governments.

9.8 Migration and trade creation

Theoretical aspects

There is no consensus in international trade theory whether trade and migration are substitutes or complements. The role of trade has often been emphasised as an alternative to labour movements.[97] For example in a Heckscher-Ohlin framework, if two countries are

[96] The RQAN programme has been replaced by the programme on Migration for Development in Africa (MIDA). This programme encourages mobility, return and an enhanced developmental role of the diasporas.

[97] See Mundell (1957) and Venables (1999); see Layard et al. (1992) for a study on East-West migration in Europe.

differently endowed with labour and capital but have similar technologies, each country has a comparative advantage in that sector of production in which its abundant factor is intensively used. This could lead to welfare gains through an international division of labour. Subsequently, trade leads to convergence of goods' prices, which implies factor price equalisation. Thus, the incentives for factor movements – foreign direct investments and international migration – are reduced, meaning that international trade, foreign direct investments and international migration are substitutes.

In a Ricardian world, with countries having different technologies but the same factor endowments, each country specialises and exports the goods for which it has an advantage in productivity. If free movement of capital and labour is included in the model, there will be an inflow of the intensively used factor in the export sector and the initial comparative advantage is enhanced by the resulting endowment differences. International trade and factor flows are in this case complements.[98] Models of the New Trade Theory, that account for increasing returns to scale, monopolistic competition as well as agglomeration forces, also strongly suggest that trade and factor movements (including international migration) are complements.[99]

Russel and Teitelbaum (1992: 42) have argued that the interlinkages between migration and trade are very close and work in both directions. Migration may enhance trade between source and destination countries, but it may also provoke trade protectionism. Migration literature of the last decade analysing the impact of immigration on the source and destination countries' trade balance suggests the same. It is argued that the immigrants influence bilateral trade flows in two ways. First, immigrants bring with them a preference for the products of their home country, and secondly, immigrants can reduce the transaction costs of bilateral trade between their host and home countries. The first effect certainly would have a positive impact on the source country's exports. However, the second mechanism would affect both imports and exports of the two respective countries involved and thus, have a positive impact on both economies.

The mechanisms through which immigrants can reduce the transaction costs of bilateral trade can be broadly classified into two categories, depending on whether the effect of the immigration on trade is individual-specific or not. The first category is marked by network connections. Transaction costs are reduced because of individual business connections or personal contacts of the immigrants with their home country or other diaspora communities in third countries. Under this mechanism, regardless of the immigrants' country of origin, immigration would always lower the transaction costs of international trade. The second mechanism is non-individual-specific. Transaction costs of bilateral trade are reduced because of the specific knowledge, brought by immigrants, about foreign markets and different social institutions. This know-how could be taken advantage of only in the case that immigrants come from a country with social and political institutions that are substantially different to those in the destination country. Although these two mechanisms are not entirely exclusive, their relative importance could be identified in some destination countries' export data.

Recent developments in network theories highlight the role of social networks in enforcing contracts and in overcoming inadequate information about trading opportunities. Rauch (1999) points out that search processes in international trade involve transaction costs that are determined between others due to pre-existing ties between trade partners. Rauch and Trindade (2002) argue that where ethnic communities are a large part of the countries' population, and have numerous connections across borders, they facilitate international trade mainly by providing market information and matching. On the other hand, ethnic communities that are small fractions of the destination countries' population are close-knit

[98] See Markusen (1983).
[99] See Krugman (1995) and Fujita, Krugman, and Venables (1999).

and facilitate international trade primarily by enforcing community sanctions that deter opportunistic behaviour.

Empirical evidence

In order to measure the size and direction of the relationship between immigration and trade, empirical studies in general use gravity models of trade[100] augmented by immigration. Gould (1994) analysed the impact of immigration on trade between the US and 47 trading partners between 1970 and 1986. He observed that exports were influenced to a greater extent by immigration than imports and that immigration influences trade in consumer goods rather than trade in production goods. A further finding was that the immigrant-link effect exhausts itself as the number of immigrants is increasing over time.

Dunlevy and Hutchinson (1996) studied the links between immigration and import patterns of the US for the period 1870 to 1910. They discovered a strong relationship between the size of the migrant cohorts and imports. Furthermore, they found that differences in culture and language as well as the possession of specialised information enabled immigrants from Asia and Latin America to exploit trade opportunities missed by American and northern European immigrants. However, these findings come only from the study of imports, which are strongly affected by the preference of immigrants. Later studies on the destination countries' export pattern provide a better picture over the relative impact of the individual specific and non-individual specific mechanisms on transaction costs.

Helliwell (1997) analysed the influence of borders on trade among Canadian provinces and between Canadian provinces and US states. He found effects of migration on international but not on inter-provincial trade and explained this by the fact that Canadians moving from one province to another do not contribute much in enhancing relevant knowledge, as their information about institutions and markets of their provinces are not new to the receiving provinces. Similar to Gould (1994) he suggested that returns from migration are decreasing over time and with the formation of larger diaspora communities in the receiving country.

Girma and Yu (2002) examine the bilateral trade between the UK and 48 selected trading partners by distinguishing between Commonwealth and non-Commonwealth countries. Their results indicate first that Britain has a generally higher propensity to trade with Commonwealth countries. Second, that there is robust evidence that immigration from non-Commonwealth countries has a significant trade enhancing effect. A 10 per cent increase in the immigrant stock increases UK exports to those countries by 1.6 per cent. However, the effect of immigration from the commonwealth countries on the UK's exports to them is statistically insignificant. Thus, their findings support the idea that immigration increases bilateral trade through the knowledge brought by immigrants about foreign markets and different social institutions rather than their business connections or personal contacts with their home countries. Third, they detect a pro-trade effect of immigration from non-Commonwealth countries, similar to other studies in the literature, but reveal a trade substitution effect of immigration from Commonwealth countries. The latter could be the result of import-substituting activities by immigrants from commonwealth countries. Since the immigrant population in the UK from Commonwealth countries is relatively large compared to that from non-Commonwealth countries, manufacturing activities could be more attractive than importing activities when there are economies of scale for production. On the other hand, they argue that, in the case of the UK, since immigration flows into the UK are small in magnitude compared to domestic migration flows, the effect of decreasing returns to immigration could be avoided.

[100] In these models, trade is assumed to be negatively correlated with the geographical and/or cultural distance between countries.

Blanes-Cristobal (2003) obtained similar results for the effects of Spanish immigration on bilateral trade with 40 partner countries for the period 1991 to 1998. However, as an OECD study points out, trade flows between Spain and other EU countries have in many cases preceded the migration of people. Similarly, the immigration of non-EU foreigners to Spain is still very recent, and largely reflects already existing cultural and economic (including trade) links, e.g. with Latin American countries (OECD, 2003). Thus, the direction of causality is not fully clear.

Hofmann and König (2006) present an overview on existing literature and present their own empirical analysis. They come to conclude that a vast majority of studies found that either trade fosters migration or vice versa. For Germany, they found statistical evidence for such effects comparable in size to those of other key drivers. For the UK, the US, and Australia their analysis did not show significant effects. Hofmann and König (2006) also point to the fact that various technological trends enhance trade, and should thus indirectly foster migration.

9.9 Summary

This overview of research on the causes and effects of international migration indicates that there is a vast and heterogenous literature, but that there are still many unanswered questions. There is only fragmentary empirical evidence on the effects of emigration on economic development. Available, comparable statistics are meagre and often of poor quality. Whether migration enhances or impedes development differs from place to place and from time to time. Policies therefore should be adapted to national and regional conditions.

Migration is often an integral part of poor people's alternative livelihood strategies. Most poor people have no access to South-North migration. Instead they are engaged in seasonal, internal or regional migration within poor regions. From a development perspective such migration is of vital importance. There is sufficient evidence indicating that migration through remittances can reduce poverty.

Migration may also lead to increased inequality if remittances strengthen feelings of relative deprivation among the excluded poor. Policies thus need to take into account both the upside and the downside of migration's effects on development. Job creation and decent working conditions seem to be key issues for improving the social and economic environment in developing countries. Better matching between labour market and education policies could contribute with positive economic growth effects as well as counteract brain drain. Aid is however not sufficient to reduce emigration pressures in the medium-term perspective and should not be used as a means to reduce or control migration.

Brain drain particularly affects key sectors such as health personnel in smaller countries in sub-Saharan Africa and elsewhere. The European Union needs to work closer together with international organisations, such as the World Bank and WHO, and like-minded states that are engaged in issues of brain drain. To reverse the brain drain, there is a need for better mapping of the causes, mobility patterns and effects in specific countries. Codes of practice should be encouraged so that countries and recruiting agencies recruit in a responsible way.

It is essential to reach general improvements in the investment climate in developing countries. Given such a beneficial environment, remittances can generate income that exceeds the loss incurred by brain drain. They can however also create dependence among migrant households. As remittances do not always contribute to development, measures should be identified that can steer remittances into more productive and growth enhancing use.

There is great potential in encouraging diaspora groups to play a more direct role in development cooperation. As migrant organisations often contribute to the welfare of their countries of origin through their own aid projects, they can be regarded as agents of

development. Professional, ethnic networks are often efficient in bringing innovation, investments and business contacts to developing countries.

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10 The development of a common European asylum and migration policy

10.1 The origins of a migration root cause approach

There is a growing body of literature on migration control policies of EU Member States and other developed states (Entzinger et al, 2004; Cornelius et al, 2003; Niessen and Schibel, 2003; Andreas and Snyder, 2002; Guiraudon and Joppke, 2001; Brochmann and Hammar, 1999; Hailbronner et al., 1998). As a number of such studies have noted, migration policy has increasingly become linked to foreign policy (Niessen, 2003; Martin, 2001; Münz and Weiner, 1997; Teitelbaum, 1984; Widgren, 1990a) and to state security (Weiner, 1993; Waever et al, 1993; Lahav, 2003; Weiner and Stanton Russell, 2001), both in Europe and in other parts of the world. Such linkages have become even more important since September 11, 2001 (see. e.g. Koslowski, 2006).

Migration control policies are an expression of state sovereignty based on the maintenance of membership-based welfare provisions and the ideal of the socially homogenous nation (Brochmann, 1999; Hammar, 1990). Moreover, control policies are to a great extent influenced by media, public opinion concerns, and populist parties that use migration as a vehicle through which more votes can be allocated. Therefore, the development of the external dimensions of such policies can be regarded as a means to approach migration in a more holistic and proactive way while taking into account both the internal and external aspects of migration management.

Some scholars, e.g. Stephen Castles, argue that migration policies have often failed or had unintended consequences as policymakers did not regard migration as a social process with its own, self-sustaining dynamics embedded in structural dependence between source and destination countries. Globalisation and income differences, transnationalism, and conflicting interests in the national political systems can explain such policy-deficiencies. Castles argues therefore that migration policies need to be linked to long-term political objectives regarding trade, development and conflict-prevention in order to be viable (Castles, 2004; 2003). To some extent, such policy linkages are already made within the European Union as migration policies are becoming increasingly comprehensive, externalized and linked to foreign policy and other policy issue areas.

Notions of a comprehensive approach to the root causes of refugee and other migrant flows emerged both on domestic and international arenas in the late 1980s and early 1990s. Although this notion was still embryonic, policymakers and academics alike identified an international tendency towards proactive and comprehensive approaches (Widgren, 1990ab). Mark Miller and Philip Martin e.g. observed that "[b]y 1990, the focus of the quest for immigration control shifted from domestic to foreign policy, from unilateral legal

measures to curb illegal immigration to regional strategies to address the root causes of illegal immigration" (Miller and Martin, 1992).

The UN and UNHCR had addressed the root causes of refugees during the 1980s, partly as a way to solve the challenges posed by the refugee flows from Indochina. As a consequence of the fall of the Berlin Wall in November 1989 and the disintegration of the Soviet Union, various stakeholders, states and international organisations started worrying about potential East-West mass migration in Europe and ways to prevent it. For instance, UNHCR and ILO commissioned research and organised a joint meeting in 1992 on the topic of "aid in place of migration" (Böhning and Schloeter-Paredes, 1994). The Balkan wars as well as other refugee crises around the world led the UN High Commissioner for Refugees Sadako Ogata to argue that "the growing scale and complexity of the refugee problem as well as the changed international context, make clear the inadequacy of asylum as the whole response" (Collinson, 1993: 74). The emergence of the external dimension of migration policies in the European Union needs to be regarded within this broader domestic as well as international context.

10.2 Initial attempts in the mid-1980s

The starting point for concrete efforts on behalf of EU Member States to control migration flows by establishing a Community policy on migration issues can be dated to 1985 (Papademetriou, 1996). The Council then endorsed the Commission's Communication guidelines for a Community policy on migration (European Commission, 1985). The White Paper on completing the internal market was also presented by the European Commission in 1985. The subsequent Single European Act signed in 1986 and coming into force the following year, provided for the creation of the internal market including the free movement and establishment of EU citizens. The White Paper acknowledged that the freedom of movement would need to include third country nationals. Free internal mobility would therefore affect Member States' visa-agreements and would require compensatory measures and common external borders.

Further cooperation on asylum and migration was partly also shaped by the pragmatic problems of coordinating the multitude of cooperative fora that emerged within this issue-area.[101] In 1985 asylum and immigration issues were discussed in only 5 international fora in Europe, while a few years later in 1989 more than 15 groups came together on a regular basis (Widgren, 1993). By 1991 more than 100 meetings took place on asylum issues alone (Rogers and Copeland, 1993: 109), and the number of meetings and the intensity of institutional activities have increased even more since.

10.3 From Maastricht to Amsterdam

Following the summit in Maastricht, the intergovernmental three-pillar structure that was to be introduced included special provisions on cooperation on asylum and migration. The Maastricht Treaty signed in February 1992 came into force in November 1993 as the Treaty on European Union (TEU). The harmonization of visa policy was already subject to the supranational Community decisionmaking structures (Article 100c of the EC Treaty). In the

[101] An increasing number of intergovernmental fora for discussion and cooperation on migration were established from the mid 1980s and onward. They included the Group of National Coordinators on the Freedom of Movement of Persons, the Ad Hoc Group of Senior Ministers Responsible for Immigration, and the Schengen group based on the Schengen Agreement in 1985 and the subsequent Implementing Convention in 1990.

asylum issue area, the most far-reaching agreement was the Dublin Convention on the state responsible for examining applications for asylum, signed in 1990.

Within the TEU legal framework, Member States were mainly required to inform and consult each other and a growing number of Council joint positions, joint actions and conventions were adopted in the area of Justice and Home Affairs. This was enabled by the provisions under Title VI (the Third Pillar) in TEU whereby this issue area was considered of "common interest" to Member States. Decisionmaking procedures within the Third Pillar were partly based on those within the Second Pillar Common Foreign and Security Policy.

Migration and its causes had been highlighted in a Communication from October 1991 and during discussions at the Edinburgh summit in 1992. At the time, the debate was very much under the influence of the end of the Cold War, the fall of the Iron Curtain and the related fears about mass migration from the East towards the West. A Commission Communication in 1994 made recommendations regarding the reduction of migration pressures through the establishment of a holistic, root causes approach, covering mechanisms for "early warning", "human rights policies, humanitarian assistance, security policy, demographic policies, trade, development and cooperation policies" (European Commission, 1994).

These early suggestions to link migration policy with the Union's external relations and long-term economic development in countries of emigration were however not matched with the necessary political will and institutional preconditions. Neither did the mass East-West flows materialize, except for the ones following the Balkan conflicts whereby several million people were displaced. While the number of asylum seekers in Europe peaked at almost 700,000 in 1992, the Dayton peace agreement in 1995 coupled with more restrictive control measures ensured a reduction almost by half in the subsequent years. Subsequently, it took another four years after the Commission Communication was launched before more concrete proposals were made in regard of the root causes approach.

In 1998 the Austrian EU Presidency issued a Strategy Paper, which again called for a holistic approach, combining foreign policy and development assistance to reduce emigration pressures. Most of the paper was however forcefully rejected as some Member States, accompanied by the UNHCR and human rights organisations, were strongly opposed to the suggestions on reviewing and even abandoning the Geneva Convention (van Selm, 2002).

The Dutch government took a fresh and more balanced initiative in October that year. It suggested a new body at the Community level. The High Level Working Group on Asylum and Migration (HLWG) was subsequently formed based on "a common, integrated and cross-pillar approach." It was to report to the General Affairs and External Relations Council. In consultation with the UNHCR and NGOs, the HLWG collected and exchanged information on the situation in the source countries of asylum-seekers and migrants. It considered the possibilities for readmission agreements and could also initiate specific projects and political dialogue with those countries.

The first Action Plans of the group were based on an earlier Action Plan on Iraq. They covered Morocco, Albania and the neighboring region, Somalia, Afghanistan and Sri Lanka. These first reports had been drafted without consultation with the countries in focus, which caused resentment especially in Rabat. The cross-pillar working method brought together development and external relations officials with migration specialists. The mandate of the group was renewed and its remit expanded to cover more countries. Later on there were improvements in the coordination between the migration and development aspects, a stronger emphasis on regions rather than countries, as well as the incorporation of HLWG Action Plans in the dialogue within existing cooperation mechanisms such as the EU-Morocco Association Council and the Stability Pact (van Selm, 2002).

These policy developments within the Third Pillar were more than purely intergovernmental cooperation, as the option of gradually increasing the Communitarian elements had been provided for in the TEU. Later on, the Amsterdam Treaty included

provisions to incorporate asylum, immigration and external border issues within the supranational first pillar of the Union and to include the Schengen agreements into the EU acquis communautaire. A new Title IV "Visa, Asylum, Immigration and Other Policies Related to Free Movement of Persons" was amended to the EC Treaty. Thereby, the Third Pillar was to remain only for judicial cooperation in criminal matters and police cooperation, including Europol. There was a transitory time-period of five years from the day of entry into force of the Amsterdam Treaty on 1 May 1999, before the changes were to take effect.

10.4 The Schengen cooperation and its dimensions

The Schengen cooperation deserves specific attention, as several aspects of subsequent cooperation have emerged in consequence of decisions taken within this framework.[102] Cooperation among Schengen-participants was partly established to avoid heavy truck-traffic at internal European borders and also as some of the Member States of the European Community were of the opinion that the advancements within the area of free movement of people and the gradual abolishment of border controls were not fast enough. The original Schengen Agreement (Schengen I) dates from 1985 and covered France, Germany, Belgium, Luxembourg and the Netherlands. The subsequent Implementing Convention (Schengen II) was agreed upon in 1990 and came into effect in 1995. By 1997 and after the signing of the Treaty of Amsterdam, the Schengen cooperation involved 13 countries. Through a Protocol attached to the Treaty of Amsterdam, the Schengen acquis (decisions taken within the Schengen cooperation) has since May 1999 been incorporated into the European Union legislative framework.

Within the Schengen area, internal border checks have been abolished to enable the free movement of persons. As compensatory measures, a single external border has been established and is being controlled according to a set of common rules regarding visas and asylum claims processing. Schengen states have adopted measures to separate people at airports and sea ports travelling within the Schengen area from people arriving from outside the Schengen area; harmonized rules on entry and visas for short stay; and they coordinate their administrative routines and border surveillance through liaison officers and allow hot pursuit for police forces of a particular Schengen state into neighboring Schengen states. Legal cooperation also enables faster extradition systems and exchange of information pertaining to implementation of criminal judgments. The Schengen Information System (SIS) is providing the infrastructure for exchange of data and information on identities of individuals crossing borders. Schengen states also apply common rules for the country responsible to review asylum applications through the Dublin Convention, which in 2003 was replaced by the Dublin II Regulation and since then is also supported by the Eurodac fingerprint database.

Denmark can choose within the EU framework which new decisions taken under Title IV of the EC Treaty it wants to apply, including new developments of the Schengen acquis. Denmark is however bound by some of the measures within the common visa policy. The UK and Ireland have chosen to remain outside the Schengen cooperation. More recently however, UK and Ireland partially started to implement the Schengen acquis according to Council Decisions (European Council, 2005).[103] The ten Member States that joined the EU

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[102] Regarding the historic background and developments of the Schengen cooperation, see e.g. http://europa.eu/scadplus/leg/en/lvb/l33020.htm

[103] Ireland's and the UK's protocols to the Treaty of Amsterdam allow them to take part in all or some of the Schengen arrangements if the Schengen Member States vote unanimously in favour. The UK asked in March 1999 to join the police and judicial cooperation in criminal matters, the fight against drugs and the Schengen Information System (SIS) within the Schengen

in 2004 are bound by the Schengen acquis. Some of the provisions are however only to apply when they have abolished border controls, to be implemented after a decision by the Council scheduled to take place not earlier than 2008 when SIS-II will have become operational and as the new Member States can show that all necessary external compensatory measures have been taken so that internal border controls can be abolished (ibid.).

10.5 The Tampere Conclusions in 1999

At a special EU-summit in the Finnish town of Tampere in mid-October 1999, deliberations were focusing entirely on the creation of an area of freedom, security and justice in the European Union (European Council, 1999). In the Council Conclusions it was made clear that the European Council wanted to "send [...] a strong political message to reaffirm the importance of this objective." Reference was made to the deadlines in the Amsterdam Treaty as well as in the Vienna Action Plan, tabled under the Austrian Presidency in 1998, which further elaborated on necessary steps towards harmonization. To ensure quicker progress, the Conclusions invited the Commission to make a proposal for a special Scoreboard (European Commission, 2000).

At Tampere it was declared that the issues of asylum and migration call for the development of a common EU policy including 1) partnership with countries of origin, 2) a common European asylum system, 3) fair treatment of third country nationals and 4) management of migration flows. Regarding partnership with countries of origin, the proposed policies focused on a comprehensive approach. The Conclusions stated that (European Council, 1999):

> *The European Union needs a comprehensive approach to migration addressing political, human rights and development issues in countries and regions of origin and transit. This requires combating poverty, improving living conditions and job opportunities, preventing conflicts and consolidating democratic states and ensuring respect for human rights, in particular rights of minorities, women and children.*

Although migration issues through the Tampere-summit had moved up to the very top of the EU's political agenda, many observers as well as policymakers saw that political will was still lacking. For instance when the first EU Commissioner for justice and home affairs, Anita Gradin, in 1999 concluded her five-year term, she argued that the Community would need to put much more efforts into *preventive* policy measures in order to manage conflicts such as the ones in Bosnia and Kosovo. Such policies were very much linked to efficient burden-sharing mechanisms which had not yet been achieved at the EU level at the time (Gradin, 1999).

Adequate prevention could not be agreed upon despite many signs pointing towards the ensuing crisis in the Western Balkans. On the other hand, the European Union was monitoring post-conflict developments following the Dayton Agreement and the Kosovo events in Spring 1999, when almost 800,000 had fled due to ethnic cleansing instigated by the Milosevi regime. Support to the Western Balkans' efforts towards democracy, the rule of law, reconciliation and respect for existing borders and other international obligations was later offered partly within the framework of the Stability Pact.

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cooperation. A Council Decision approved this in 2000. Ireland became part of similar aspects of Schengen cooperation in 2002 after a Council decision. The UK started to implement police and judicial cooperation subsequent to a Council decision in December 2004.

10.6 From Tampere to the Hague 1999-2004

During the early years of the 2000s, some steps were made during the Swedish EU Presidency to strengthening the EU-dialogue with transit countries and countries of origin within the HLWG, the Stability Pact for the Western Balkans, the Euro-Mediterranean cooperation (Barcelona Process) as well as with Russia, Ukraine and China. There were also steps taken towards more restrictive regulations against the smuggling of human beings and harmonised sanctions against transport companies, although with specific clauses on humanitarian grounds and for asylum cases.

The subsequent Belgian Presidency continued to push forward the comprehensive approach tabled in Tampere. In the Belgian Presidency Conclusions at Laeken in December 2001, the European Council stressed that the management of migration flows should be incorporated into the foreign policy of the European Union (European Council, 2001). However, mainly readmission agreements and the fight against illegal migration and trafficking were mentioned in this context.

During the European Council in Seville in June 2002, it was noted that progress had been too slow, and it was therefore decided to speed up the implementation of all aspects of the programme adopted in Tampere. A special Road Map for the follow-up of the Seville Council Conclusions was to be developed.[104]

A number of points in these Conclusions are of special interest from the perspective of the migration root causes approach and EU external policies. The wording was further developed into stressing the need for an *integrated, comprehensive and well balanced strategy*. The long-term goal should always be to deal with the *underlying causes of illegal immigration*. The Council suggested to this end that in all future EU-agreements, association agreements or mixed agreements, a paragraph should be included on common management of migration flows and of compulsory readmission in case of illegal migration.[105]

The Council also saw it as necessary to start a systematic evaluation of the relations with third countries regarding illegal migration. In case of a lack of cooperation on readmission, the Council could unanimously decide on measures within the common foreign and security policy. The objectives of development cooperation would, however, not be questioned by any such measures. This last sentence was a compromise after persistent critique by France, Sweden and Luxembourg against the original wording, suggesting that development assistance should be conditional upon cooperation in readmission issues.

In December 2002 the European Commission published a Communication on integrating migration issues in the European Union's relations with third countries (European Commission, 2002). The Communication was followed-up by Council Conclusions in July 2003 requesting the Commission to present further concrete proposals on how to integrate migration into the EU's development policy (European Council, 2003). In 2002, there was also a Green paper presented on a community return policy on illegal residents, which had been preceded by Communications on a common policy on illegal immigration (in 2001) and on a Community immigration policy (in 2000). Linked to these proposals, the

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[104] The Road Map was named "Combating illegal immigration, integrated management of external borders, integration of immigration policy into the Union's relations with third countries and speeding up of legislative work in framing a common policy on asylum and immigration."

[105] A migration/readmission-clause had already been included in several EU-association agreements and in the 2000 Cotonou-Agreement between the EU and 77 developing countries in Africa, the Caribbean and the Pacific (the ACP-countries). The effect of these clauses had however so far been limited.

Commission also issued a Communication during spring 2003 on the relation between immigration, integration, social and labour market policies.

With these Communications the Commission attempted to initiate comprehensive policy models on all those areas of asylum and immigration which were included in the Tampere milestones, but which had not as yet been seriously considered in terms of draft legislation. In comparison to most of the earlier Council Conclusions, these proposals revealed that the European Union was now willing to describe migration in positive terms, and contemplated a long-term, holistic vision both regarding the internal and the external dimensions of migration management. The importance of the area of freedom, security and justice had grown gradually, also reflected by the increasing budget allocations (for Title B5-8) especially since the entry into force of the Treaty of Amsterdam – from EUR 29.6 million in 1998 to EUR 51.3 million in 2002. The European Refugee Fund (ERF) obtained 43 per cent of the total in 2002 (European Commission, 2002).

In 2003, during the Greek and Italian Presidencies special efforts were devoted to the implementation of measures in the fight against illegal migration and expulsion (European Council, 2002). Initiatives towards a root cause approach came from the British Prime Minister Tony Blair and the Spanish Prime Minister José Maria Aznar, who presented a joint declaration on combating illegal immigration in February 2003. They re-affirmed their "commitment in particular to addressing the root causes of migratory flows and making sure that source and transit countries stand by their obligations on readmission." Also in 2003, the European Council adopted a regulation on the establishment of a European Border Management Agency and steps were taken to start implementing a Return Action Programme and the development of a Visa Information System during the period 2004-06.

The Thessaloniki Conclusions in June 2003 stated that "[g]iven the top political priority ascribed to migration, there is a marked need for a more structured EU policy, which will cover the whole spectrum of relations with third countries", including the assessment of legal migration channels "under specific terms of reference" (European Council, 2003). In this context, the issue of smooth integration of legal migrants into EU societies was to be further examined and enhanced. The assessment of legal migration channels and possible future increases in such options, was thus to be incorporated into the root causes approach. Now the Community had identified a need to draw the attention of developing countries to the benefits of long-term EU policies for labour mobility. With the ageing populations of European countries in mind, these statements were formulated as a preparatory step towards a future need for increased labour migration. This more positive sentiment stood in stark contrast to the heated debate that took place just a few years before when the UN Population Division presented its report on *Replacement Migration* in 2000 (see also Grant et al., 2004; Niessen and Schibel, 2002).[106]

In January 2004, The Irish EU Presidency noted at its briefing to the European Parliament that its key objective would be to observe the Amsterdam Treaty's deadline of 1 May 2004 for the establishment of an area of freedom, security and justice. The Presidency also made provision for a new European Refugee Fund for the period 2005–09, and further progress in the debate on Regional Protection Programmes.[107]

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[106] Later on and more recently, the EU Commission has argues that "[w]hile immigration in itself is not a solution to demographic ageing, more sustained immigration flows could increasingly be required to meet the needs of the EU labour market and ensure Europe's prosperity, quoted in European Commission (2005) by Grant et al (2004: 23).

[107] This debate originated in a controversial proposal on *Zones of Protection* that the British Prime Minister Tony Blair presented in early March 2003 to his Greek colleague, and subsequent counter-proposals from the UNHCR and the EU Commission.

In 2004, the European Council also adopted a new multi-annual programme in the area of freedom, security and justice for the period 2005-10 termed the Hague Programme and laid out as an Annex to the Council Conclusions in November 2004 (European Council, 2004). This programme outlined the future role for the Union of "legal migration", in particular labour migration:

> *[l]egal migration will play an important role in enhancing the knowledge-based economy in Europe, in advancing economic development, and thus contributing to the implementation of the Lisbon strategy. It could also play a role in partnerships with third countries.*

Furthermore, the document emphasised that the competence regarding labour migration would remain with Member States. The Hague programme also pinpointed the need to develop a coherent strategy adapted to the specific relations with various third countries and regions.

Regarding the external dimension of asylum and migration and partnership with third countries, the Hague Programme stated that:

> *[a]sylum and migration are by their very nature international issues. EU policy should aim at assisting third countries, in full partnership, using existing Community funds where appropriate, in their efforts to improve their capacity for migration management and refugee protection, prevent and combat illegal immigration, inform on legal channels for migration, resolve refugee situations by providing better access to durable solutions, build border-control capacity, enhance document security and tackle the problem of return.*

An important step was also for the Hague Programme to set a target for the integration of migration issues into Country and Regional Strategy Papers for all relevant migrant source countries during 2005. Finally, the Hague Programme outlined the further development of EU Regional Protection Programmes in partnership with third countries and in consultation with UNHCR (see also European Council, 2005).

The hybrid form of intergovernmental cooperation within the Third Pillar in the period between 1999 and 2004, meant that much of these policy developments took place without any formal possibilities of democratic scrutiny by the European or national parliaments or judicial supervision by the Court of Justice. Formally the European Parliament (EP) has had a right to give an opinion, to ask questions and to make recommendations and the EP has also held regular debates on the implementation of decisions produced within the Third Pillar. However, the EP has mainly been involved at a stage when decisions have already been made and thus, the influence has been limited. Moreover, the Commission did not have any exclusive right of initiative in Third Pillar matters during this period.

Following a commitment in the Hague Programme, the Council adopted a decision in December 2004 to extend qualified majority voting and co-decision to the major part of Community immigration and asylum legislation, in place since January 1, 2005. Legal immigration remains subject to unanimity decision-making within the Council. Moreover, there were no provisions regarding the powers of the Court of Justice (European Commission, 2005b). The 2001 Treaty of Nice made provisions for visa, asylum and immigration policy to be brought under the co-decision procedure [108] Qualified majority

[108] According to a statement signed by the heads of state and government in Nice, the shift to qualified majority voting and co-decision was to take place on May 1 2004 (without the need for a unanimous decision) for Article 62 (free circulation of legally resident third country nationals on EU territory) and Article 63 of the EC Treaty (illegal immigration and the repatriation of illegally resident persons), see http://europa.eu/scadplus/leg/en/lvb/l33022.htm.

voting was provided for under Article 63 of the EC Treaty regarding asylum and temporary protection, but subject to prior unanimous adoption of a common framework legislation on asylum. The Hague Programme has subsequently set 2010 as the deadline for the establishment of a Common European Asylum System.[109]

10.7 From the Hague to Tampere II 2004-2006

Since 2005 thus, freedom, security and justice policies under Title IV (TEC) have been partly "communitaurised", but there is still some institutional inertia as this process has not been brought to its completion. There are still some limitations regarding the competence of the Court of Justice for preliminary rulings. Legal migration, family law and a common European asylum system (as mentioned above) are still subject to unanimity decisions in the Council (European Commission, 2006a).

Regarding the institutional issues and the decision-making process, therefore, the EU Commission has argued that the European Union needs to reconsider the options entailed in the current Treaties (without pre-empting the Constitutional Treaty) in order to fully implement the Hague Programme. This concerns mainly the so called "bridging clauses" or "passerelle" in Articles 67(2) TEC and 42 TEU (ibid.).

Article 67(2) TEC allows the Council to bring policies on legal migration under the co-decision procedure after a unanimous decision and consultation with the European Parliament. Similarly, the preliminary ruling competence of the Court of Justice under the "communitaurised" area of freedom, security and justice, would be aligned to the procedures governing other EC policies to enable an improved role of the Court of Justice. However, although the deadline for the transitory period 1999-2004 has expired, the Council has still not fully adapted the provisions in Article 68 TEC regarding preliminary rulings of the Court of Justice (ibid.). Currently, the Court of Justice has only partial competencies to settle legal disputes regarding the field of migration and asylum. The Commission has proposed that national Courts should be able to request the Court of Justice to give a ruling on the interpretation of EU asylum and immigration legislation (Euractiv, 2006a).

Qualified majority voting in the area of justice and home affairs was to be introduced with the Treaty establishing a Constitution for Europe.[110] The current stalemate is the result of the 2005 French and Dutch no-votes which put the Constitution on hold in lieu of consensus on the way forward. Article 42 TEU, however, enables a degree of flexibility regarding the voting conditions (European Commission, 2006a).

In late September 2006, the Finnish EU Presidency and the EU Commission encouraged the Member States to discard their veto option in justice and home affairs. There was however a resistance to go ahead with such a move of flexibility before more progress is made on the issue of the constitution at large (EUObserver, 2006). This was the first debate on the issue since May 2006 (European Commission, 2006b) when the Commission presented a proposal through which the "bridging clauses" could enable the veto in issues of justice to be lifted (EUObserver, 2006; ECRAN, 2006).

Despite the slow progress in this regard, the Luxembourgian, British, Austrian and Finish presidencies brought the historic Hague summit agenda forward by a few further steps

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[109] For a brief summary of the historic background and developments of European cooperation on migration and asylum, see http://europa.eu/scadplus/leg/en/lvb/l33022.htm

[110] The Constitutional Treaty is the result of the Intergovernmental Conference and the Convention, which were both based on the Laeken declaration in 2001 where the objective of an open, effective and democratically controlled Community approach was outlined.

during 2005 and 2006. The Commission has presented a proposal for a Directive on common standards on return as well as several Communications including a Policy Plan on legal migration and a Green Paper on an EU approach to managing economic migration; on migration and development; and on a common integration framework for the integration of third-country nationals. Legislation was also adopted covering a special procedure for admitting third-country nationals for the purposes of scientific research and an information and coordination network for Member States' migration management services (European Commission, 2005). A Communication has also been issued with concrete proposals for practical cooperation on asylum procedures, country of origin information and on dispatching expert teams when the EU is faced with sudden influxes of large numbers at the external borders of the EU (European Commission, 2006c).

The EU Commission also adopted a package of four communications in June 2006 concerning progress in the implementation of the Hague Programme and with the aim to arrive at a balanced approach in the area of migration and asylum (European Commission, 2005; 2006d). The package includes communications on further implementation of the Hague Programme and Action Plan and on evaluation of policies on justice, freedom and security as well as a special communication (including a draft council decision) on a strengthened role of the Court of Justice in this area (European Commission, 2006e).

In this context, the Commission noted that the level of transposition of the Community measures had been too low and thus suggested methods to improve monitoring and evaluation of the real impact and benefits of measures taken through introducing a Strategic Evaluation Mechanism including indicators linked to the overall objective of each policy area. Such evaluation has still not been made and is surely needed regarding the linkages of migration, development and labour market issues in both source and destination countries.

Step by step, the EU has also started to reflect more on the linkages between population ageing and migration policy. The EU Commission has attempted to change the popular, restrictive perceptions regarding labour migration by arguing that population exchange and labour migration will be inevitable in the future. EU Commissioner Ferrero-Waldner opined in January 2006 at a conference on the European Neighbourhood Policy that:

> *the truth is, Europe needs migration. Our populations are getting smaller and growing older. In many European countries the net increase in population is already entirely due to immigration. By 2050 the population of my own country, Austria, would shrink by a quarter if there were no immigration. In Italy, one in three Italians would be over 65 years of age. If that were to happen, there would be jobs left vacant and services left unfulfilled. The EU's growth rates would plummet, as would our standard of living (European Commission, 2006f). Immigration is an important part of the solution. It will help us make the transition to a new economic situation, and maintain a certain level of growth. To maintain their dynamism countries need human capacity. For Europe, with its falling, ageing population that will inevitably mean attracting brains and labour from outside.*

But attention in the last two years has been diverted from the long-term concerns raised by Ferrero-Waldner in this quote to more immediate issues. Events being referred to as an "immigration crisis" have taken place and have brought increased attention to the limits of a merely control-oriented approach to migration. Between January and September 2006, more than 24,000 irregular migrants have arrived on Spanish soil by boat, compared to less than 5,000 in 2005. Large numbers have also arrived in Malta and Italy. Most of them have come from Africa sailing towards the Canary Islands or crossing the Mediterranean. Thousands of other undocumented migrants are estimated to drown each month when trying to arrive in Europe in boats which, as a rule, are either not seaworthy or carrying passengers well above their maximum capacity. Two-thirds of the estimated annual 400,000 people who cross the EU external borders without the required travel documents are believed to take the Mediterranean route (Euractiv, 2006bc).

Such events motivated French President Jacques Chirac to argue in a 2006 speech that "Africans will flood the world" if the continent is not developed and that "[w]e have an immense problem, which is that of development". While EU Commissioner and Vice-President Franco Frattini has called for more border guards and joint patrols using the EU external border control agency FRONTEX, it is still hard to motivate a sufficient number of Member States to share the costs and responsibility for such measures (Euractiv, 2006b). Spain has proposed to unilaterally send planes to scan the coast off Senegal to monitor and prevent the inflow (Euractiv, 2006c), and ministers from Britain, France, Germany, Italy and Spain (the so called G5 group) have agreed to introduce regular flights of shuttle airplanes for monitoring as well as for deportations (Euractiv, 2006d).

At an informal minister's meeting in Tampere in September 2006, the Finnish Presidency raised the issue of strengthening the mechanisms for sharing responsibilities among Member States to better manage such migrant inflows and linked it to border controls and asylum matters (Finnish EU Presidency, 2006). At the same time, the President of the European Commission Jose Manuel Barroso announced that he was going to visit Addis Abeba to start a dialogue with the Commission of the African Union on immigration, "[b]ecause that is a problem to which a solution can only be found by working together. We are not going to answer this particular problem with security measures. What we need to look for, is the long term development of the countries where immigrants originate from" (Euronews, 2006). And finally, the EU Commission decided to set up and hold the first meeting before the end of September 2006 of a Commissioners Group on Migration Issues coordinated by Vice President Franco Frattini, in order to bring together all policy areas that are related to development and external relations (European Commission, 2006g).

10.8 Summary

In sum, during the period 1985-2006 migration climbed successively higher on the European agenda. The main advancement in developing the external dimensions of a European migration and asylum policy has been made since the 1999 Tampere milestones. Progress has however been much slower than expected. Policy developments have to a large extent been event-driven and sensitive to national media and public opinion concerns regarding control issues. As a result, much more efforts have been invested in pressing short-term issues of border control and the fight against illegal migration, than in developing a common asylum policy at a high standard of international protection and on policies addressing the migration and development nexus in cooperation with partner countries in developing regions.

There has undoubtedly been some move forward in the development of a comprehensive, root causes approach within the European Union's external relations. It has, however, been defined in a more control-oriented and restrictive manner than what might be most efficient in terms of enhancing development through migration. Migration policies *per se* as well as when integrated into other EU external policies, could definitely become more pro-development oriented. Proper linkages between migration and population, trade, environment and other related issues are yet to be developed.

The latest developments across the Mediterranean illustrate well the basis of the discussion in the next section on how migration has been further elaborated as a part of the external relations of the EU and specifically regarding its links to development policy. This is the area where the most far-reaching steps have been taken in the past few years and which may play an increasingly important role for the linkages between migration and population issues in the EU's external relations. The challenge is to move on from a day-to-day control policy dominance to make the long-term root cause approach a more immediate priority also in the short and medium terms.

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11 Current European Union migration and development policies

11.1 Incorporating migration into development policy

The EU and its Member States provide more than half of total world development assistance (ODA). Based on the "European Consensus" framework, EU Member States will implement their development policies on the basis of complementarity. EU policy also accentuates the importance of achieving synergy between the external and internal dimensions of the EU's policy areas. Moreover, development policy is supposed to be coherent and well integrated with all other external policies (European Commission, 2005f: 4).

In its European Consensus document, the EU argues regarding the links between migration and development that:

> *[d]evelopment is the most effective long-term response to forced migration and destabilising migratory flows […]. Development cooperation is also part of the recipe for sustainable solutions for refugees and displaced persons and in combating the trafficking of human beings and illegal migrants. The vulnerability of women and children to these phenomena calls for special efforts to be made.*
>
> *In turn, the positive impact of migratory phenomena on development must be maximised, in particular via transfers of migrant workers' incomes and the movement of qualified persons. The EU will seek to optimise these favourable effects and to limit the "brain drain", in particular in the health and research sectors (European Commission, 2005f: 8-9).*

This quotation indicates that a process has been started at the EU level that aims to identify shared interests between migration and development policies. Here are e.g. important links between development policies and policies towards refugees as well as labour migrants. The European Council has also concluded that migration issues need to be incorporated into policy dialogue and in EU country and regional strategies and action plans (European Council, 2005b). The EU also intends to promote the ILO concept of decent working conditions for all (European Commission, 2005f: 8-9; ILO, 2004), which relates *inter alia* to labour markets and measures for job creation in developing countries (European Commission, 2005g).

11.2 EU migration policy and developing country partnerships

The Hague Programme adopted in 2004 has led to a number of follow-up initiatives by the Commission regarding migration and partnerships with migrant source countries

(European Commission, 2006c). The EU envisions that a common approach shared by EU Member States as well as countries of origin and transit, could help in achieving the objectives to better manage international migration to the benefit of all concerned. In this endeavour, it can make use of the EU common foreign and security policy, development assistance as well as justice and home affairs policies.

In September 2005, the Commission issued a Communication on migration and development (European Commission, 2005b). This document outlined further operational steps based on the 2002 Communication on migration and EU external relations. The 2005 Communication includes a number of practical and innovative proposals. There are e.g. plans for a directive for an improved legal framework for payments aimed at reducing costs of sending remittances and increasing their developmental effects. Such regulation could enhance transparency in the remittance business, increase competition with money transfer organisations (MTOs) and thereby cut costs. The Commission also recommends improvements in migrants' access to financial services. This could serve the dual purpose of making funds available for productive investments as well as offering legal alternatives to unofficial financial transactions. Another suggestion by the Commission is to develop codes of conduct for recruiters in order to avoid brain drain. Such measures could be combined with development initiatives to increase access to education and employment in countries of origin.

Despite these and other promising proposals, the South-South migration aspect is lacking from this Communication. Such an aspect is however briefly mentioned in another Communication on policy coherence for development (European Commission, 2005c). A consistent South-South dimension would be necessary to demonstrate that the EU is committed to manageing migration that benefits development; and not merely that the migration-development linkage is attempted at reducing migration pressure through development cooperation. Even with some statements by the EU Commission in this regard quoted below (European Commission, 2006a), the development community still needs to be convinced that poverty reduction is the basic reason for introducing migration management into country and regional strategies and action plans.

EU Member States responded to the Commissions' Communication on migration and development through the GAERC[111] Council Conclusions on migration and external relations in November 2005 (European Council, 2005b; 2005c). The Council underlined the importance of coordinating activities in the area of migration and external relations combined with joint efforts of interior affairs and development. The Council recognized that migration should be a crucial part of the development agenda and of development policy; furthermore it concluded that migrants themselves need to be involved. The role of migrant remittances, diasporas as agents of development in countries of origin, co-development actions and counteracting brain drain were highlighted as priority issues. These issues were also directly linked to the current and future needs of the EU for labour through exploring the potential of temporary and circular migration (European Council, 2005c).

11.3 A special focus on migration from Africa

A separate Council Conclusion on an EU Strategy for Africa, including a section on migration cooperation, was also approved at the same GAERC Council in November 2005. This strategy highlighted the need to address the root causes of migration, including poverty and insecurity. It was also argued that migration issues should become an integral part of the political dialogue with the African Union and other regional organizations and that African ownership was important in this context.

[111] General Affairs and External Relations Council.

Regarding migration in Africa the Council thus noted that there is a need for:

> *an approach addressing regional and Pan-African dimensions of migration so as to facilitate dialogue and cooperation between countries of origin and transit and the EU. The Council agrees that work should cover a broad and balanced agenda, including a long-term strategy to address the causes of migration, including crisis or post-crisis situations.*

The EU Strategy on Africa and its migration component was based on a British initiative at the informal European summit at Hampton Court in October 2005 (European Commission, 2005d), as well as an earlier British-Spanish joint initiative on illegal migration and development in 2003, that had several follow-up activities. At Hampton Court, the focus was also on treating migration as a global phenomenon and through a "Global Approach". Migration was here linked to both development and security and regarded as of relevance to all EU external policies. The relative urgency for deeper cooperation would depend on various regions' relevance as migrant sources for the EU. EU President Barroso stated after Hampton Court that "the Commission would develop a list of priority actions for improving global migration, with a special focus on the African region" (European Commission, 2005d).[112]

The attempt to focus on Africa at a high level materialized at the first Euro-African ministerial conference on migration and development, hosted by the Moroccan government in Rabat in July 2006.[113] This conference signified several steps forward in terms of the declared intention to strengthen both the political and operational dialogue. An Action Plan was tabled at the conference including several innovative and concrete follow-up suggestions to be implemented in the short and medium term, which deserve to be enlisted at length (Euro-African Conference, 2006a; 2006b; Malta Foreign Ministry, 2006):

- Strengthening economic cooperation through partnerships between technical and scientific institutions and through developing trade
- Identifying and implementing cooperation projects which generate employment
- Creating centers of entrepreneurial excellence
- Co-financing diaspora investment projects and granting technical assistance to migrant entrepreneurs in their countries of origin
- Supporting the creation of a Euro-African economic and business forum focusing on SMEs and export of African goods
- Supporting the creation of a Euro-African professional network
- Setting up co-development projects focusing on areas with large-scale emigration

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[112] The concept of a "Global approach to migration" was launched at Hampton Court and further developed in a Commission Communication in November 2005 (European Commission, 2005d), and it was endorsed by the European Council which adopted the "Global approach to migration: Priority actions focussing on Africa and the Mediterranean", (see European Council, 2006). A global approach to migration management is defined as a process whereby "a Common Immigration policy addressing the situation of legal migrants at Union level is developed **in parallel** with measures to address more effectively illegal migration and to enhance the fight against migrant smuggling and trafficking in human beings, in particular women and children" (European Commission, 2006c: 6).

[113] From the part of the African side, The AU Summit Executive Council Decision in January 2006 in Khartoum gave a mandate to the Commission of the African Union to convene an Experts' Meeting on Migration and Development and such a meeting was held in Algiers, Algeria 3-5 April 2006 to prepare a common African position for the Africa-Europe Ministerial Conference on Migration and Development in Rabat in July 2006 (see African Union, 2006).

- Developing knowledge and know-how and measures to guarantee that sufficient skills are available for the development of African countries
- Facilitating access of African researchers to scientific networks and study at universities in Africa and Europe
- Developing twinning and partnerships between research centers, universities and hospitals
- Counteracting brain drain by making return attractive to newly created “Regional centers of excellence”
- Establishing programmes for cooperative management of legal migration
- Improving information on the needs of the European and African labour markets and better matching of supply and demand
- Setting up a Euro-African immigration observatory for a better understanding of migration patterns
- Establishing relevant financing mechanisms and optimizing existing funds

Such an ambitious list of cooperative activities and projects will need a much stronger institutional framework than is presently available. The Rabat Action Plan suggested that a follow-up Committee should be established to implement the proposals and to ensure coherence with other initiatives e.g. within the Euro-Mediterranean cooperation and regional cooperation mechanisms in Africa. While there is still no substantial follow-up and several Member States put into question whether these visions are viable or mainly rhetorical, we will see in the following that there are several existing institutional frameworks that could be used for implementation and further elaboration.

11.4 EU horizontal, external policy coherence

In October 2005 the Commission adopted a broad and coherent co-operation strategy on the external dimension of the area of freedom, security and justice. It is targeting the following areas: human rights; institutional capacity and good governance; migration, asylum and border management; the fight against terrorism and organised crime. Demographic concerns are not mentioned. Instead, geographic differentiation, partnership, flexibility and a regular review of co-operation with third countries are suggested to be the guiding principles for co-operation (European Commission, 2005a).

As noted above, the EU High Level Working Group (HLWG) had since the late 1990s been working within a cross-pillar, horizontal scope to develop comprehensive and coherent measures towards migrant source and transit countries. The basic notions have been to establish partnerships with migrant source countries to remove the root causes of irregular migration and to establish safe first countries of asylum. HLWG has focused on the Commission’s Communications on migration and development and highlighted issues such as readmission agreements and durable solutions to forced migration. As a Council working group however, the remit of this institutional context has been rather limited both in terms of access to budget resources and operational outcomes.

Regarding the framework of the more formal and traditional development cooperation, the 2000 Cotonou Agreement between the EU and almost 80 developing ACP countries (Asia, Caribbean and Pacific) covers migration in its Article 13. This basically evolved as a readmission clause, but within the framework of development strategies and national and regional programming, the Cotonou parties are also to take account of structural constraints linked to migration and support economic and social development and poverty reduction in emigration regions. Moreover, the EU is to support the training of ACP nationals in their country of origin, in another ACP country or in an EU Member State, with a view to labour market integration in the countries of origin (see Higazi, 2005).

Implementation of this agreement has, however, been rather slow. The Cotonou Agreement was revised in Luxembourg in June 2005 and is now referred to as the ACP-EC Partnership Agreement.

More recently, there has been some fresh impetus within this framework and some progress. Ministers responsible for asylum and migration from countries within the ACP Group met for the first time in Brussels in April 2006 and adopted a declaration and a plan of action which was partly related to the EU-cooperation and partly to the UN High Level Dialogue (ACP Group of States, 2006).[114] Among other concrete proposals, ACP ministers decided that before the end of 2006 an ACP Migration Facility should be established to reinforce capacities in ACP countries to manage especially South-South migration. Within this Facility, there would also be a Migration Observatory to collect information and analysis to improve migration policies. ACP countries have also emphasized the importance of involving non-state actors and civil society in global policy developments within this issue area.[115] These proposals have subsequently been supported by a European Parliament report on migration issues. The EP report also recommends that the EU and ACP in all their negotiations and agreements should include equal treatment regarding social security as well as easier access to short-term visas for ACP nationals in the EU. The former was already provided for in the Lomé Convention but has not yet been applied (European Parliament, 2006).

The most recent ACP-EC Joint Council of Ministers in June 2006 also included a debate on migration and development, which indeed indicates a new impetus to the linkage of development policy in the management of migration from the perspective of both source and destination countries.[116] Moreover, there has been a concrete move towards opening up the reserve of the long-term development envelope of the 9th European Development Fund (EDF) to measures in the area of migration. A decision was made by the ACP-EC Council of Ministers in April 2005 to "ensure methodological support and capacity building in the field of migration and regional cooperation, focusing on south-south migration" and therefore "it is appropriate to allocate supplementary resources to this effect." In substance, EUR 25 million was set aside for *inter alia* the creation of an "intra-ACP migration capacity building facility" (OJEU, 2005a).

Subsequently, a technical meeting on migration with the EU Commission and Member States was scheduled to take place end of June 2006 to identify available resources in the 9th EDF to finance projects on migration before the end of 2007. Also a high-level meeting has been planned in September 2006 involving the Commission, Spain, the Canary Islands, ECOWAS (Economic Community of Western African States) and the African Union (AU) to discuss pilot-projects between the EU and ACP countries (related to the Mediterranean migration flows discussed above). Civil society actors have been critical to using ODA to finance migration management measures of this kind (ACP-EC Council of Ministers, 2006).[117]

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[114] ACP Heads of State and Government had already highlighted the importance of a coordinated approach to migration and development when formulating new policies, programmes and projects at the 2002 Nadi and the 2004 Maputo Declarations, (see ACP Secretariat, 2006).

[115] The ACP-EU Joint Parliamentary Assembly has also agreed to prepare a comprehensive report and Resolution on Migration and Development to be adopted at its 2007 Session in Germany (see ACP Secretariat, 2006).

[116] http://www.ue2006.at/en/News/information/0106EU-ACPMainResults.html

[117] See also http://www.acp-programming.eu/wcm/index.php?option=com_content&task=view&id=280&Itemid=177

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11.5 EU Programmes supporting migration and development

Since a few years back there are a number of regional support programmes financing the integration of asylum and migration matters into EU external policies, *inter alia* Phare, CARDS, TACIS and MEDA. Phare is part of the EU-enlargement process supporting Candidate Countries' adaptation to the EU acquis. The CARDS programme under the Stability Pact has made available EUR 4.65 billion to countries of the Western Balkans during the period 2000-2006. Part of this support went to measures in the field of justice and home affairs. The TACIS Regional Justice and Home Affairs Programme covering Eastern Europe and Central Asia is focusing on border management, migration and asylum systems and counteracting illegal migration flows and smuggling of migrants (European Commission, 2002: 19).

Migration is also part of the framework for the European Neighbourhood cooperation (European Commission, 2004c). A European Neighbourhood and Partnership Instrument (ENPI) has been established which makes available community assistance to promote closer cooperation, especially focusing on implementation of partnership and cooperation agreements, or association agreements. Funding is made available for measures in the field of justice and home affairs, including asylum and migration. The target region includes Russia, Ukraine, Moldova and Belarus, Southern Caucasus, and Southern Mediterranean countries in North Africa and the Middle East.The Euro-Mediterranean cooperation has highlighted migration and social integration as core issues and progress is assisted by specific migration and social affairs working groups. There has been twinning between the EU and Mediterranean partners' administrations. Cooperation on justice and home affairs including migration has been covered by the MEDA Regional Indicative Programme for both 2002-04 and 2005-06. A future programme is planned in order to further enhance and reform cooperation in justice and home affairs (Euro-Mediterranean Partnership, 2004).

Moreover, at the Euromed Conference for Ministers in May 2005 the ministers called for establishing targets and objectives in cooperation on justice and home affairs, including migration issues. The approach to migration issues was suggested to be comprehensive, covering both the causes of migration, transit issues, the fight against racism and xenophobia in host countries and studies of the labour markets in both EU member states and in partner countries (European Council, 2005a).

The EU-Asia cooperation within the ASEM framework has also enabled the incorporation of a migration dialogue, resulting in the ASEM Ministerial Conference on co-operation for the management of migratory flows in April 2002 and a political declaration on migratory flows (the "Lanzarote Declaration"). Decisions have also been made to set up a network of contact points to facilitate expert meetings at the level of Director-General of immigration services. The focus so far has mainly been on illegal migration flows. Also cooperation with Latin America has resulted in some results in terms of a political declaration at the EU-Latin America and the Caribbean Summit in Madrid in May 2002 on the intention to undertake an integrated analysis of migration issues (European Commission, 2002: 19).

The Aeneas Programme for financial and technical assistance to third countries in the area of migration and asylum was equipped with a substantial budget for the period 2004-08. It was aimed at succeeding the preparatory measures taken between 2001 and 2003 which were financed from a much smaller budget heading (B7-667). Aeneas funds have been made available to develop migration policy in relation to third countries, to support legal migration channels, strengthen international refugee protection, combat illegal migration and trafficking, and promote readmission agreements as well as durable reintegration after return in migrant source countries (European Commission, 2004d). In order to conclude the current EU financial framework by the end of 2006, the Aeneas programme has been

reduced to three years,[118] and its funds for this period total EUR 120 million (compared to the initial EUR 250 million) albeit with an additional boost of EUR 45 million allocated in September 2006 to co-finance actions against illegal immigration especially in countries bordering on the enlarged EU (Euractiv, 2006).

Aeneas has enabled the implementation of the priorities and strategies proposed in the Commission's Communications on migration and development. It is also used to complement other regional cooperation instruments and measures already taken within existing national and regional strategies. It was envisaged that an important part of Aeneas funding could go into cooperation with developing countries in the ACP Group, Asia and Latin America. The 2004 programme focused on the Mediterranean, but also on Asia and the Balkans. The 2005 programme covered Eastern Europe, Southern Caucasus and Central Asia, Africa and Turkey, and somewhat less also Latin America, Asia and the Balkans (European Commission, 2004d).

Countries with which EU readmission agreements are under negotiation or with which such agreement have already been concluded are being prioritized as beneficiaries of Aeneas support (ibid). Thus, the EU approach has partly been using financial and technical assistance as incentives to control irregular migration. For the sake of further strengthening strategic partnerships and putting the money where it makes the biggest developmental impact, the European Commission might want to reconsider the objectives with regard to Aeneas funding so it could benefit developing countries irrespective of having concluded EU readmission agreements or not.

A new Thematic Programme for cooperation with third countries in the areas of migration and asylum will continue the Aeneas actions within the framework of the Financial Perspectives 2007-2013 (European Commission, 2006b). The thematic programme is based on the Hague programme and its provisions that EU policy should promote cooperation with third countries in the migration field "in full partnership, using existing Community funds where appropriate". The purpose of the thematic programme is to support projects in third countries that aim to improve the management of migratory flows. Similar frameworks have been produced for the other key objectives within the area for freedom, security and justice. There will be multiannual programming by the Commission through a thematic strategy paper and a multiannual indicative programme.

Shortly before launching the thematic programme on migration, EU external relations Commissioner Ferrero-Waldner argued that this programme would confirm the change in policy away from "more development for less migration" to "better managing migration for more development" (European Commission, 2006a). Specific priority is however given to the main regions of emigration and transit to the European Union rather than to poor countries on the basis of their development needs. The thematic programme will make available support to the links between migration and development; economic migration; prevention and combating illegal immigration; voluntary return and reintegration of migrants; and international protection. All third countries within the European Neighbourhood Policy Instrument and the Development Cooperation and Economic Cooperation Instrument have access to support through the thematic programme.

Regarding migration and development linkages, measures are to focus on the contribution of diasporas to development of their country of origin; counteracting brain drain; facilitating migrant remittances; supporing voluntary return and professional reintegration; and building capacity for migration management. Moreover, support could also go to information distribution on legal recruitment and entry and residence conditions in the EU. Support is as previously also targeting illegal migration and readmission of illegal immigrants; measures against smuggling of and trafficking in human beings; information

[118] http://europa.eu/scadplus/leg/en/lvb/l14510.htm

to discourage illegal immigration; and prevention of illegal immigration. Measures should also cover protection of migrants against exploitation and exclusion, racism and xenophobia and strengthen the legal asylum and protection framework in third countries.

The Communications outlining the Commission's strategic orientations for the Financial Perspectives 2007-2013, cover the area of freedom, security and justice and aim to secure sufficient financial resources (European Commission, 2004a; 2004b). The proposed Framework Programme on Solidarity and Management of Migration Flows has also the objective of indicating a fair division of responsibilities between Member States regarding the costs related to the Community's external borders and the common policies on asylum and immigration. Each of the three key objectives of freedom, security and justice is supported by a framework programme. The framework programme related to migration proposes decisions on establishing a European Refugee Fund, an External Borders Fund, a European Fund for the Integration of Third-country Nationals and a European Return Fund. Of the total funds, EUR 2,152 million will go to external borders management; 1,184 million to asylum and refugee issues; 759 million to the return Fund; and 1,771 million will be spent on integration of third-country nationals (European Commission, 2005e).

11.6 Summary

Summarizing and evaluating these programmes so far, it is important to stress that they should be further developed in much closer cooperation with the partner countries. A sense of "ownership" among developing countries is equally important regarding migration as within other development cooperation. This is a basic condition for a successful outcome since the experience, interest and capacity of the migrant source and transit countries is essential. This would also ensure that the migration and development nexus is supported from a population management and a poverty reduction perspective, and not mainly from an immigration control policy perspective. When looking ahead a couple of decades, it is clear that cooperation arrangements that are truly based on equal partnership are the best equipped to succeed. Such partnerships may also help the European Union to build long-term alliances with countries and regions that will benefit from demographic dividends or that could provide necessary labour force. With such a perspective, it is necessary to link migration and development also with a broad range of other external policy areas.

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12 Migration and other external policy areas

Policy developments as described above show that migration issues have gradually become an important part of the European Union's external relations. While development has been regarded as the long-term approach to migration, the short-term measures have been dominated by more immediate strains and demands to impose control over unwanted migration flows. As migration now in very concrete ways is being integrated into development policy, this section illustrates how similar integration will be needed in a number of other external policy areas as well.

12.1 Migration, trade and agriculture

One of the most efficient ways to support economic growth in developing countries is the expansion of trade. Recent research has found that trade liberalization during the 1990s led to both more trade between developing and developed countries as well as larger FDI flows directed towards developing countries. Trade and FDI are on the one hand more attracted to those developing countries which have skilled labour and can at the same time spur additional investments in education (Faini, 2004). Job creation in developing countries through increased trade opportunities might also reduce migration propensities as it creates alternative incomes at home (Schiff, 1996).

Systematic linkages between trade and migration have so far been absent from the European policy agenda. Developed countries have recently improved access to world markets for especially the least developed countries. However, missing the January 2005 deadline of the Doha development agenda and the subsequent deadlock in the negotiations (or "modalities") on trade in agriculture and industrial products, indicates that similar liberalization towards other developing countries are much more unwieldy to reach in a time of growing trade protectionism. Meanwhile, it is becoming increasingly hard to defend agricultural subsidies that both contribute to unemployment in most developing regions and to growing irregular labour markets for agricultural workers in developed regions. Such outcomes are at the same time counterproductive and incoherent.

While addressing such shortcomings, linking migration to trade policies would also be coherent with a more intense focus of development assistance policies on job creation and labour markets in developing regions. Indeed, the European Commission has argued that in order "[t]o contribute to the objectives of the [European] Community migration policy the Community should … continue to promote the improvement of effective market access of developing countries' products into the EU and other industrialised countries as well as the integration of developing countries in the world trading system. […] Furthermore, the Community shall continue to promote the enhancement of south-south trade, the promotion of foreign direct investments into developing countries and the promotion of

core labour standards" (European Commission, 2002: 21). A successful implementation of such proposals depends on the Member States' positions and so far there is no total agreeement on market liberalization.

The WTO-GATS negotiations on the so called Mode 4 – mobility in services – are closely related to both migration and economic growth. This issue is however usually treated separately from migration as it rather concerns short-term mobility. Negotiations have been highly technical, and focusing on specific professions. While developing countries promote wider market access and more generous terms of mobility and length of stay, many developed countries are concerned about the distinctions between temporary mobility for delivery of services and migration for employment. Such distinctions need to be further specified in order to avoid stalemates, and concerns of irregular migration. The EU could play an important role in such efforts.

12.2 Migration and environment

Population, migration and environment issues are closely interrelated with poverty. The poorest people are usually the most affected by environmental degradation as well as the most dependent on local natural resources, which they often over-exploit. While deforestation and desertification may be an effect of imbalances between population growth and available environmental resources, such outcomes are also related to poor people's use of land. Environmental degradation may also cause involuntary internal or international migration (Castles, 2002).

High population growth in e.g. sub-Saharan Africa in combination with unequal distribution of land resources and traditional inheritance laws, has contributed to the parcelling of land into small subsistence holdings or the allocation of unsuitable farming land and increases environmental degradation. Many farmers, among them rural women, overexploit water and wood for land and household use. Deforestation, erosion and desertification are some of the consequences. Many African men move from rural to urban areas due to the low returns from farming and the increasing pressures on rural land from growing populations, which also increases the number of female headed households in many rural areas (FAO, 1995).

Furthermore, it is also necessary to develop strategies to cope with the increase in the number of environmentally induced migrants and internally displaced people due to large scale energy or infrastructure investments and natural disasters. According to one estimate up to 100 million people were displaced in the 1990s due to infrastructure and development projects such as the construction of dams, roads or urban developments (Cernea and McDowell, 2000). The EU does encourage the integration of environmental priorities into development strategies in order to enhance sustainable development (European Council, 2005). This could however be done in an even more consistent manner also in cooperation with other stakeholders, including private business interests.

12.3 Migration, peace and security

International migration is often closely related to lack of peace and security (Commission on Human Security, 2003). Support to democratic structures, rule of law and good governance certainly contributes to diminishing the long-term risks of forced migration. For more immediate actions, the notion of conflict prevention has been adopted as a promising tool by the EU as well as the international community and also tested in a number of cases in various world regions. The EU has already outlined its objective to increase support to conflict prevention and peace networks, as well as targeting reconciliation activities, and support to demobilisation, disarmament and reintegration and rehabilitation of combatants (European Commission, 2002: 22). Nevertheless, in 2004 there were more than 30 ongoing armed conflicts involving African countries (Economic

Commission for Africa, 2006: 5). Many of these conflicts lead to forced migration flows and the international response to several of them have come too late and often without coordinated and sufficient efforts, e.g. in the Great Lakes region and in Darfur.

Such shortcomings indicate that conflict prevention should be more systematically linked to population and forced migration issues. In the case of long-term conflicts, the effects on various types of migration and development need to be better understood. More research and more targeted policies need to address high population growth in areas of limited natural resources which may contribute to conflicts that are often instead explained as ethnically, economically or politically motivated, e.g. Rwanda, Burundi, Democratic Republic of the Congo or the Chittagong Hill Tracts in Bangladesh.

Since September 11, 2001, international efforts to fight terrorism have inevitably intensified. However, concerns have been raised regarding the effects of security measures on personal integrity. Moreover, some of the measures taken bear the risk of impeding international labour mobility and can thus have detrimental effects on development in poor countries. International cooperation should therefore balance the security concerns with the need to respect personal integrity as well as promote orderly migration channels. The related challenges concern both ways to control the mobility of individuals and their resources in order to forestall terrorism. As pointed out by Rey Koslowski, terrorists have used the same means of transport as ordinary tourists, visitors and business people, and preventing security threats thus concern all forms of geographic mobility and not only migration (Koslowski, 2006).

12.4 Migration and human rights

Human rights can become an issue for international migrants at any stage of the migration process. Human rights violations in the home country can trigger an exodus of migrants and refugees. If they leave due to persecution, they will fall within the mandate of UNHCR and the 1951 Geneva Refugee Convention. If they are the victims of traffickers or smugglers of human beings, they fall under the remit of the United Nations Convention Against Transnational Organized Crime and its relevant protocols from 2003/2004. When facing discrimination or poor conditions during work, there are a number of ILO Conventions that might protect them. As labour migrants, they could to some extent also rely on the 1990 International Convention on the Rights of Migrant Workers. As child labourers or female migrants, they have yet other legal instruments which could offer them protection.

While there are a number of international legal norms such as these in place, adherence and implementation is often limited. The 1990 Migrant Workers Convention has for instance only been signed by some 30 states (United Nations, 2005), all of which are middle and low-income countries. The normative framework might be sufficient, as argued recently by GCIM (2005). Nevertheless, still much work needs to be done in order to enlighten migrants, employers, government officials and other stakeholders about these rights and to ensure broad implementation.

This is necessary, since there are direct links between the respect for human rights, good governance, democratisation, and poverty reduction. Human rights in accordance with international conventions and other international instruments, and respect for the fundamental rights of migrants, refugees and displaced persons are all targets for EU development assistance cooperation (European Commission, 2005a:7). Nevertheless, there is still room for significant improvements regarding these linkages to ensure sustainable development in many developing countries.

12.5 Refugees and development

Refugees and internally displaced people both affect and are affected by socio-economic development. The majority of the 20.8 million people of concern to UNHCR in 2005 (including refugees, asylum seekers, internally displaced and stateless people) were hosted by poor countries. Refugees (8.6 million) and internally displaced people (6.6 million) therefore often have to compete for scarce resources with poorer residents of host countries (UNHCR, 2006; 2005a). The strains caused by refugee situations often lead on to further deteriorations in local conditions that can trigger new displacements and outflows of people.

Several political and economic conditions play a role in causing flight and irregular migrant flows. They include illicit trade in raw materials and drugs and the sale of arms to regimes that persecute their minority groups and have contributed to several of the past refugee-producing conflicts. Moreover, several of the past macro-economic reforms in poor countries that introduced sudden economic liberalisation and reduction in public services, have also caused higher rates of unemployment as well as emigration (UNHCR, 2001: 7). External policies in these areas therefore also need to be more in tune with the objectives of a comprehensive migration policy.

Within the so called Convention Plus process, UNHCR has tried promoting means for the international community to assist people who fall outside the scope of the 1951 Geneva Convention. Such development assistance is based on the notion that refugees can contribute to a positive economic development. Refugees receive support to become at least partly self-sufficient as a way of integration in the host country or to prepare return and reintegration. The host community is provided with similar backing in order not to provoke resentment targeting refugees. UNHCR suggests that national poverty reduction strategies incorporate this notion (UNHCR, 2005b).

When addressing long-term refugee situations and durable crises, humanitarian assistance is only one of several instruments to use. Specific support to post-conflict rehabilitation can be made available to bridge the phase between emergency relief and development (ACP-EU Courier, 2003). The Commission has specific funds for emergency assistance, for example to assist uprooted people in Asia and Latin America, which is also phased out and replaced by more long-term development assistance where appropriate. In other regions such support to uprooted people are covered under the European Development Fund and MEDA (European Commission, 2002: 20).

Related work within the EU regarding asylum seekers has led to the launch of Regional Protection Programmes in close cooperation with the UNHCR (European Commission, 2005b). The first pilot projects will be implemented in Ukraine, Moldova, Belarus and Tanzania; other places of interest are Northern Africa and Afghanistan. Such initiatives illustrate the need for closer EU-cooperation with developing regions to strengthen the capacity of poorer countries to offer protection and to find durable solutions to refugee situations. When assisting developing countries to build up a capacity in the area of refugee reception, it is also vital to link such efforts to prevention of violent conflicts, management of mixed flows, development assistance and the long-term sustainability of the measures. Of essential importance in such contexts is also to ensure that these partner countries respect human rights and international legal norms and also have the capacity to uphold EU standards in this regard.

12.6 Summary

Migration issues have gradually become an important part of the European Union's external relations. As migration now is being integrated into development policy, similar integration will be needed in a number of other external policy areas as well.

Trade and FDI are more attracted to those developing countries which have skilled labour and can at the same time spur additional investments in education. Job creation in developing countries through increased trade opportunities might also reduce migration propensities as it creates alternative incomes at home. But systematic linkages between trade and migration have so far been absent from the European policy agenda. Meanwhile, it is becoming increasingly hard to defend agricultural subsidies that both contribute to unemployment in most developing regions and to growing irregular labour markets for agricultural workers in developed regions. Such outcomes are at the same time counterproductive and incoherent.

Population, migration and environment issues are closely interrelated with poverty. The poorest people are usually the most affected by environmental degradation as well as the most dependent on local natural resources, which they often over-exploit. Environmental degradation may also cause involuntary internal or international migration. It is necessary to develop strategies accordingly, and also in order to cope with the increase in the number of environmentally induced migrants and internally displaced people due to large scale energy or infrastructure investments and natural disasters.

International migration is often closely related to lack of peace and security. Support to democratic structures, rule of law and good governance contributes to diminishing the long-term risks of forced migration. For more immediate actions, the EU also needs to increase support to conflict prevention, reconciliation activities, and support to disarmament. More research and more targeted policies need to address high population growth in areas of limited natural resources which may contribute to conflicts.

Since September 11, 2001, international efforts to fight terrorism have inevitably intensified. However, concerns have been raised regarding the effects of security measures on personal integrity. Moreover, some of the measures taken bear the risk of impeding international labour mobility and can thus have detrimental effects on development in poor countries. International cooperation should therefore balance the security concerns with the need to respect personal integrity as well as promote orderly migration channels.

Human rights can become an issue for international migrants at any stage of the migration process. While there are a number of international legal norms in place, adherence and implementation is often limited. Still much work needs to be done in order to enlighten migrants, employers, government officials and other stakeholders about these rights and to ensure broad implementation. This is necessary, since there are direct links between the respect for human rights, good governance, democratisation, poverty reduction, and eventually migration.

Several political and economic conditions play a role in causing flight and irregular migrant flows. Refugees and internally displaced people both affect and are affected by socio-economic development. The strains caused by refugee situations often lead on to further deteriorations in local conditions that can trigger new displacements and outflows of people. External EU policies in these areas need to be more in tune with the objectives of a comprehensive migration policy.

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13 Population complementarities and balanced migration inflows and outflows

13.1 Overview

During the coming decades, the EU Member States will need to open up their labour markets for somewhat more labour immigration to cater for their labour needs as a consequence of population ageing. During the same period, migration pressures from developing regions, including sub-Saharan Africa, are likely to increase. Could the demographic imbalances in one region be compensated by a different imbalance in another region? While the European ageing societies could cater for the increasing labour market needs, developing countries could provide such needs and reap the benefits – such as remittances, brain gain and upgraded return of skills – without loosing needed skills through brain drain. Are such population complementarities viable, and how might such considerations influence external policies in the future?

More or less explicit expectations in Europe and elsewhere in this regard feed the current debate on circular labour migration. One objective is – explicitly or implicity – that options for labour migration should reduce pressures at the irregular mobility channels. However, the dynamics of migration pressure and migration potential need to be much better understood. What are the prospects of arriving at migration patterns that are characterized by a balance between inflows and outflows? What is the explanation for such an exchange of migrants, and what importance do such migrations have for economic development?

The beneficial potential of population complementarities has been aptly illustrated by a recent World Bank simulation, suggesting that if high-income countries would allow a 3 per cent rise in the share of developing country workers in their labour force over the period 2001-2025, the global gains in gross wage income in 2025 would amount to US$ 356 billion. The new migrants would gain the most (almost half of this sum) but also residents in developing source countries and rich host countries would gain (about 140 billion respectively). The ones to lose seem to be the already settled migrants in high-income countries (almost -90 billion) (World Bank, 2005). The potential gains can be compared to the current annual ODA benefiting developing countries at around US$ 70 billion (Pritchett, 2006). Similar calculations have also arrived at positive results, which might even exceed the benefits of all outstanding trade liberalisation of goods (Winters et al, 2002; Walmsley and Winters, 2003).

While keeping such potential gains in mind, we will in the following discuss how the EU and its neighbouring regions could develop population complementarities considering that EU is facing a rising share of old-aged people, whereas these neighbouring regions are experiencing an expansion in the working-age population (see e.g. Holzmann and Münz, 2004). First, we explore the evolving EU and global labour migration policies and the

potential for cooperation with source countries. Second, we discuss the concepts of migration pressure and capacities to control different migrant categories. Finally, we situate this discussion within the context of previous periods of relaxed labour migration regulations in Europe and draw some lessons regarding future migration pressures towards the EU from Sub-Saharan Africa.

13.2 The European Union and the labour migration policy agenda

Due to the demographic developments within the EU, there will be a decline in the number of employed people of some 20 million in the period 2010-30. Already now, 80 per cent of the limited total population growth that takes place in the EU consists of migrants – so far though mainly asylum seekers and their families. Migration is however merely one of several options to remedy such developments. The guiding principle for EU action so far has been to give priority to the existing human resources, including nationals and already present third country nationals so that new labour migrants do not compete with but complement the existing labour force (European Commission, 2005a). A better management of economic migration and the integration of immigrants were though included among the main policy challenges and conclusions of the Lisbon Strategy mid-term review (European Council, 2005).

A common approach to labour immigration in the European Union has been emerging since the early 2000s. Some of the first EU Commission proposals were considered as too far-reaching from the part of Member States. Referring to the principle of subsidiarity, Member States still prefer to decide on the level and composition of labour migrants as a national issue. The EU-level is nevertheless important as common analysis of labour market needs and effects of labour migration could be used as the basis of policy development. The Commission is also keen on linking labour migration to labour market and integration issues (European Commission, 2005b).

The current process is based on a Commission Green Paper on an EU approach to managing labour migration (European Commission, 2005c). The Green paper raises a number of topical issues which Member States as well as a broad range of other stakeholders and the general public responded to during the course of 2005. The EU Commission's Policy Plan on legal migration presented in December 2005 in response to the Hague Programme, heralds a number of legislative initiatives in the period 2006-09 (European Commission, 2005a). These include a general framework directive on the basic rights of all immigrant workers admitted to the EU and four specific directives on the modalities concerning entry, residence and employment conditions for various categories of economic migrants. The objective is to arrive at procedures capable of responding promptly to fluctuating demands for migrant labour in Member States' labour markets.

The Policy Plan also announces initiatives aimed at improving exchange and coordination of information on immigration; offering information packages and civic and language courses to migrants in both host and source countries; and enhancing cooperation with source countries to limit negative brain drain effects and to encourage circular migration. The Commission has also recently issued a Communication on addressing the crisis in human resources for health, which is of direct relevance to issues of brain drain in developing countries (EU Commission, 2005d).

13.3 The potential of circular migration to benefit both source and destination countries

Non-permanent, circular migration on a global level has increased substantially in the last decade (Hugo, 2003). The ILO estimated in 2000 that there were about 86 million migrant workers worldwide (including economically-active refugees). There are no reliable data on

the relative share of temporary and permanent migrants. However, the temporary migration of foreign workers into the high income countries (OECD member states) has grown by 4-5 percent per annum since 2000. Manolo Abella (2006) has pointed out a number of reasons why the interest in temporary migration programmes has increased and they include a wish for more flexibility in labour markets, compensation for ageing workforces as well as perceived benefits over permanent immigration and its associated difficulties with acceptance and integration. While most EU Member States seem to prefer future circular migration rather than permanent settlement, the economic effects on the country of origin from return mobility differs depending on if the returnees are highly skilled migrants or low-skilled migrants. Other factors that influence the effects include gender; the period of time spent abroad; whether migration was forced or voluntary; whether the migrants had been working within their own profession or not; and if they had been well integrated in their host country (see Long and Oxfeld, 2003; Iredale, Guo, and Rozario, 2003).

On the beneficial side, it is noteworthy that many highly skilled labour migrants do return temporarily or permanently from abroad to their country of origin with new technological and entrepreneurial skills. A number of them also make related investments at home. They often take advantage of their networks in the international science and technology fields (Lucas, 2001). Returning migrants have e.g. played an important role in the expansion of high-tech industries in Chinese Taipei, South Korea and Ireland (OECD, 2002; see also Kapur, 2001). A third of Silicon Valley's highly skilled in 2000 were foreign-born, and their mobility patterns have been described as brain circulation rather than brain drain. Many of those from China and India have returned to boost the information technology in their home countries (Saxenian, 2005).

Policies should facilitate such benefits for more migrants. Many educated migrants work – legally or illegally – in less skilled jobs, the dirty, dangerous and degrading jobs that nationals usually avoid. More possibilities for legal employment in host countries matching migrants' education and skills levels, based on validation of qualifications, would also prepare migrants better for their return and reintegration in local labour markets. Moreover, diasporas could be engaged in distributing information about legal migration opportunities as well as the risks and costs of illegal migration.

Programmes that facilitate the spontaneous return and circulation of skilled migrants, are more sustainable and cost-effective than those geared towards permanent return to the countries of origin. Some of the programmes targeting highly skilled have been rather successful, but sometimes at high administrative cost. Programmes to ensure return after forced migration and the return of unsuccessful asylum seekers show more ambiguous results as well as many failures (See e.g. IOM, 2004; Ghosh, 2000). Such experience makes the case for introducing multiple entry- and residence visas to facilitate circular migration.Also, in order to facilitate circular mobility it would be necessary to make provisison for the portability of social benefits and entitlements (see Holzmann, Koettl and Chernetsky, 2005).

13.4 A global need for reformed labour migration policies

The preparations of reformed labour migration policies in the European Union reflect the growing worldwide trend – demand for migrant labour is on the increase (Taran and Geronimi, 2003). Orderly migration flows are increasingly viewed as something that can bring new vitality to the labour markets and economies. As the demographic changes with ageing populations and emerging labour force shortages become increasingly apparent for the economies of developed countries, further expansion in such flows are likely (Niessen and Schibel, 2002).

While the total population in developed countries is forecasted to remain around one billion in 2050, the share of the working-age population will decrease. The population in

developing countries will during the same period increase from five billion to about 7.7 billion and particularly the share of people of working age will grow. These changes may also lead to growing migration pressures. The OECD has therefore argued for a better and more equal integration of developing countries into the global economy (OECD, 2004a: 8).

From the perspective of developing countries, both improved access to export markets and more legal options for labour migration would ease another type of pressure, namely the one exerted by unemployed and underemployed on domestic labour markets (Nassar, 2006; Fargues, 2005). Tunisia and Morocco have e.g. called for facilitated EU visa procedures for temporary migrants. This may be related to factors such as the consequences of lifting the Multi-Fibre Agreements in January 2005 and the subsequent potential difficulties to absorb surplus labour domestically (Fargues, 2005: 25).

Employer organisations in several EU Member States and OECD countries are pressuring governments to liberalize regulations, while many labour unions are thus far divided and undecided. Already a number of EU Member States not hitherto regarded as immigration countries have started to open up labour markets for (so far mainly) highly skilled migrants in order to ease labour shortages, e.g. the UK, Ireland and Germany (United Nations, 2005). A growing number of OECD countries are entering into bilateral labour agreements (OECD, 2004b). As such recruitment becomes a general trend, there may be increasing global competition for labour migrants. This also highlights the responsibility of the EU Member States and the global community not to contribute to a drain of human capital from poor countries. Both long-term strategic alliances and global mechanisms are needed to ensure well-functioning legal systems for labour migration.

Within this context, the GCIM[119] report has encouraged states to practise more realistic and flexible policies on labour migration, recognizing the potential for migrant labour to respond to labour market needs. It argues for the introduction of temporary migration programmes to meet economic needs both in countries of origin and of destination. While acknowledging the demand for labour in developed countries, the report also makes quite a clear link to development in developing countries. It argues that parallel to opening up more international labour migration, stakeholders should strive towards job creation in developing countries so those who leave are not compelled to do so, but can leave by their own choice (GCIM, 2005). This would be one of the most important population complementarities, with the potential of bringing both sustainable development and probably also more balanced migration patterns (and pressures).

As the European Union and its Member States consider opening up their labour markets, including for the purpose of labour market complementarities, they will need to base their policies on available research and evaluations. There are a growing number of policy-oriented studies on labour immigration systems (Ruhs, 2005, 2003; Straubhaar, 2002; McLaughlan and Salt, 2002). However, most research on migration management and regulation of migration flows is produced in and funded by governments in migrant receiving developed countries. To some extent this bias leads to a lack of understanding of the mechanisms behind irregular migration and the developmental impact in developing countries. There may also be related policy failures due to inadequacies in international cooperation between emigration and immigration countries (Østergaard-Nielsen, 2003). Thus, the EU needs to invest more efforts in understanding the dynamics from the source country perspective, ideally through more interaction between research and policy communities (Tamas and Palme, 2006).

[119] Global Commission on International Migration.

13.5 Cooperation between migrant labour source and host countries

Since many labour emigration countries pursue active "migrant export" policies, e.g. the Philippines, Malaysia, Pakistan and Bangladesh (Waddington, 2003), the setting up of cooperative mechanisms regarding recruitment and return could be facilitated. Viable mechanisms need to be based on the principle that all stakeholders should gain. Bilateral agreements regulating temporary migration could be an efficient way to ensure the rights of the migrant workers (OECD, 2004b). Such a framework may facilitate information to migrants about their rights as well as the monitoring of adherence to rights by recruiters, transporters and employers (Sriskandarajah, 2005: 11).

The European Parliament has emphasised the role of cooperation between source and host countries to facilitate circular mobility. It has also encouraged the EU Commission to open a dialogue with the source country governments towards a balanced legislation enabling migrants also to develop their professional experience. Finally, also strengthened cooperation between countries in the South is important in this regard, e.g. among ACP-countries and those within the framework of the European Neighbourhood Policy (European Parliament, 2005).

Novel approaches could be explored to accommodate needs and interests in both migrant source and host countries, and including labour market parties and other actors (Pritchett, 2002; Ellerman, 2003). Philip Martin suggests e.g. that employers could contribute with fees to ensure a properly and adequately functioning selection system (Martin, 2004).

Some of the traditional immigration countries – Canada, Australia and the UK – have recently emphasised the relevance of a human capital approach instead of selection to match labour market openings with specific individual migrants. This is based on the realisation of the demographic challenges. As a general population increase in active working ages will be required rather than only labour force for specific skills, this approach seems to be better adapted to the future needs. Moreover, a human capital approach might be less costly, more flexible and needs less administrative capacity. One way to gear polices towards a human capital approach would be to open up for larger possibilities for foreign students with a view to let them remain and work – temporarily or permanently.

A Council Directive was recently issued to facilitate the admission of third-country nationals carrying out scientific research in the EU (OJEU, 2005ab; see also European Commission, 2004f). The initiative is linked to the Lisbon process objective to increase the share of Member States' GNP invested in research and development to 3 per cent by 2010. This would mean an additional 700,000 researchers. Many developing countries could benefit from the possibilities of intensified research networks with research institutes in the EU.

Such student programmes need to take into account the risks of brain drain for certain developing countries. If student mobility is considered to be part of the future EU labour immigrant policies, there would be a possibility to link programmes to existing scholarship schemes and exchange programme for students and teachers from developing countries. Student exchange programmes could be further extended and used in order to ensure continued exchange within migrant diasporas of benefit to the countries of origin. One way of linking researchers and research institutions in Europe and in developing countries could be through mentoring and twinning and the promotion of Centers and Networks of Excellence in various developing regions (Tamas and Palme, 2006; Adepoju, 2006).

13.6 Capacities to control various migrant categories

Labour immigration is so far not primarily linked to measures to reduce irregular migration, but is promoted by the Commission *per se* – as a means to cater for labour demand in Europe in the future. However, the European Commission has been concerned with the links between legal and illegal migration, posing the question whether allowing for

legal labour migration could reduce the pressures for illegal migration. In a recent study on this topic, the Commission did not find any such linkages – it should though be noted that the study was a very rudimentary summary of experiences in selected countries (European Commission, 2004). One example is the US, which allows for large-scale labour immigration, but still battles with illegal border-crossings at its border to Mexico, at Rio Grande.

In the discussion about migration pressures and ways to prevent or manage illegal migration, there are relevant human rights and protection concerns, raised by UNHCR, various right advocacy groups and other stakeholders. In its comments to an early EU Commission proposal for a community immigration policy, UNHCR (2001: 6-7) argued that:

> *Today, more than ever, refugees are part of a complex migratory phenomenon in which people are prompted to leave their own country by a combination of fears, hopes and aspirations that are often difficult to unravel. The immediate causes of refugee flows are, of course, readily identifiable: serious human rights violations, persecution, violent political, ethnic or religious conflict, or international armed conflict. However, these causes often overlap with, or may themselves be provoked or aggravated by, such factors as economic marginalisation and poverty, massive unemployment, environmental degradation, population pressure and poor governance.*

The complexities suggested in this quote, point towards the difficulties to predict migration patterns and to shape policy tools that could influence various kinds of flows of people and their composition. This is even more so the case when we consider possible trends and patterns several decades ahead. The various migrant category labels – whether refugees, asylum seekers, family members, or workers – are usually attached by government authorities and these labels are changing in tune with legislative reforms. Migrants may fit into several categories at one point in time, or to different ones over an extended period. The introduction of legal labour migration channels will most likely not crowd out all other unwanted categories of migration and irregular flows. The issue boils down to the question to what extent liberal democratic states or in this case, the European Union as a more or less unitary actor, are capable of controlling migration.

One scholar, Gary P. Freeman (1994) has argued that there is "considerable capacity to regulate migration" – a capacity that has increased over the past decades but that differs among liberal states. Geographic location obviously affects capacity. The capacity to control is also differing to a large extent among four main categories of migrants and related control areas: a) the management of legal immigration, b) the control of illegal migration, c) the administration of temporary workers' programmes, and d) management of asylum seekers and refugees. The capacity and ability to control each category also varies according to the political "salience" and "effort" put into it (Freeman, 1994: 17). On the whole, argues Freeman, liberal states have not been unable to control migration (Freeman, 1994: 18).

In contrast, Jim Hollifield (1992) has argued that Western liberal democracies can not efficiently control immigration. This conclusion is based on the failure to reduce and keep the numbers of immigrants low in post-war Western European countries as intended with the stop policies putting an end to the era of active labour recruitment in 1973/74. The humanitarian costs would have been too high not to act according to the principles of human rights. Labour migrants by this time had been settled for considerable time, the right of family reunification had to be respected and forceful expulsion of large numbers of people was unthinkable, according to Hollifield.

Control of refuges and asylum seekers face somewhat different challenges and also Freeman agrees that states are restrained in controlling asylum seekers due to international norms such as the Geneva Convention. The non-refoulement principle prevents states from sending back asylum seekers if there is a risk of persecution. Control is contingent on

various constraints then, and geographical location in terms of accessibility, is particularly crucial for spontaneous asylum seekers. Foreign policy considerations are also often important towards various refugee groups, as a rule more important than in labour migration (Freeman, 1994: 27).

Since the labour migrant doors were closed in the early 1970s, there have been subsequent phases in Europe dominated by flows of mainly family members, asylum seekers and finally irregular migrants (Brochmann and Hammar, 1999). While migrants between the 1960s and early 1980s came mainly from within Europe, there has been a diversification of migrant source countries to many developing parts of the world since. This makes it dubious to talk about one and the same abstract migrant flow chosing a new door when one door is being closed. Migrant flows are mostly heterogenous and the links between various categories is not always very clear-cut. What is clear however is that migrants are actors who respond to changes in control policies.

Cornelius, Martin and Hollifield (1994) argue that there is an increasingly large gap between the goals of control policies and the effects and outcomes of such policies (based on case studies of nine countries). They also claim that in general, the efficiency of control is declining in all major industrialised democracies, partly explaining the surge in public anxiety in relation to migration (ibid, 1994: 3). This lack of control, moreover, also emanates from administrative, political and economic problems which make it difficult to follow through laws and regulations as labour markets and economies are increasingly open globally and can not be secluded or isolated from the global markets (Sassen, 1988).

Reminiscent of the dual labour market theory, Cornelius et al also argue that there appears to be an increase in the demand for cheap labour force among employers in most economies, and this increase takes place notwithstanding the cyclical fluctuations of the economy at large and regardless of general unemployment. Employer sanctions have been far between and unsuccessful in most cases (Cornelius, Martin and Hollifield, 1994: 4-5).

In a section above we have noted the expanding and more recent literature on migration control policies. The purpose of this discussion of some main arguments in this literature has been to point to the difficulties to identify any concrete links between various categories of migration. This observation might be worth considering now when there are hopes in Member States that opening up for legal labour migration may stem some of the unwanted illegal flows.

13.7 The notion of migration pressure

In the case of the EU and its internal market, compensatory measures to reinforce the common external borders are currently regarded by European policymakers as absolutely essential. The basic assumption is that an unspecified migration pressure beyond the Member States would convert into much higher levels of immigration if there was nothing to stop would-be migrants from coming to Europe. But what could be expected to happen if labour migration regulations in European countries would be relaxed or made more liberal? Could such reform provide the European Union Member States with needed work force in the long-term at the same time as it would ease the migration pressure, e.g. across the Mediterranean or in the Caucasus?

One of the most recent accounts of the migration pressure has been suggested by Lant Pritchet (2006) when arguing that a number of *irresistible forces* in developing countries create growing pressures for increased mobility of people across national borders looking for better economic opportunities. Such pressures are held back by various *immovable ideas* in the developed countries which use coercive measures to control and reduce international mobility.

These irresistible forces include the global disparity in wages for unskilled labour; differing demographic futures; globalization of all production factors but labour; the growth of

employment in the nontradable low-skilled service sectors; and declining labour demand due to technological change in agriculture or resources. The immovable ideas are about coercive border controls; negative attitudes to immigration; discrimination on the basis of nationality and culture; development thinking based on nation-states, and not individuals; myths about labour mobility being unimportant for attaining higher living standards and that more migration of unskilled labour would lower wages or take resident's jobs or lead to higher tax costs; as well as fears about notions of security and crime (Pritchett, 2006).

The debate about migration pressure was however more intense in the early 1990s and it is instructive to look at some of those arguments. Back then, George Tapinos suggested that migration pressure constitute those potential emigrants in developing countries whose departure is only held back by the existing control policies in the destination countries, i.e. persons:

> *whether economically active or not - who believe that the gap between their aspirations and present and future perspectives can be bridged only by emigrating and who have in one way or another expressed a desire actually to carry out their wishes. The appreciation of the gap is subjective.[...] The individual must have expressed a desire to depart: he must be able to leave his country and have the resources to finance the direct and opportunity cost of the move. He may be considered a candidate for departure, or a potential emigrant, if the only obstacle to his departure comes from the possible restrictions imposed by the country of destination (Tapinos, 1992: 4).*

Defined in this way, there are no serious estimates available to date on migration pressure to Europe from e.g. sub-Saharan Africa. In the early 1990s, however, when migration pressure was a more common notion among policymakers, various scholars wrote speculatively about possible outcomes. They argued that of course, even if regulations were liberalised, it would take some time before the news reached all those who already might have considered migrating. New categories of individuals would probably also join the first groups of migrants as the option would become obvious. It is likely that all persons who were preparing to depart would speed up their decision to go. However, it is not certain that departures would remain at high levels in the long run. According to Tapinos, the possibility of being able to settle in another country might alter the factors behind the decision to emigrate, leading to a postponement of a choice that is known to be ever present (Tapinos 1992: 5-6). The current low mobility within the EU internal market could to some extent be explained by such a mechanism, although in this context there are also quite different factors at play.

Put in a different way, there are two major problems connected with attempts to estimate the intensity of migration pressure on a given country or region. Firstly, it is important to note that migration pressure is not an objective concept. It is more based on the needs and demands of the potential destination countries, than on the situation in the source countries. Perceived migration pressure in a given country varies according to the demand for immigrants in the formal or informal labour markets and the tolerance towards immigrants in the resident population. If the economy is growing, the country might actively pursue a policy to attract foreign workers, while in times of recession and social insecurities, migrants may present an extra burden in the eyes of many nationals. Both the category of migrants and the expected length of stay affect the perception of the migration pressure (Schaeffer, 1991:13-14). Secondly, there is a serious problem of measurement. As the intensity of migration pressure depends on both the present and potential numbers of aspiring immigrants to a country, the major part of the target population in an analysis, being either clandestine or potential, would be invisible and thus incalculable. Still, if the term migration pressure is going to have any analytical value, it must be possible to serve as an instrument with which to measure potential volumes of emigration.

The alternative term *migration potential* might have certain appeal as it sounds more neutral, but it could also be criticised as a subjective and inadequate notion, as it appears to mainly

refer to conditions in the source countries. Thomas Straubhaar has suggested that migration potential is the potential of people willing to migrate from one country to another and that this potential is related to migration demand – the demand for immigration in the destination country. It is the difference between migration potential and migration demand that, according to Straubhaar, constitutes the migration pressure (Staubhaar, 1991: 36-37).

Thus whether migration pressure or migration potential is applied in studies about future migration flows and population complementarities, the migration phenomenon needs to be understood as a dynamic, adaptive process which is influenced both by factors in source and destination countries, as well as by migrant networks and conditions en route. Moreover, there is a vast theoretical and empirical multidisciplinary literature on the causes of international migration that may be helpful, but which is beyond the scope of this study (see e.g. Hammar et al. 1997; Brettell and Hollifield, 2000).

It is sufficient in this context just to mention one attempt to link the analysis of migration potential with demographic change and development. It might be worth to further elaborate upon Appleyard's (1992) proposal to use Wilbur Zelinskys' Mobility Transition model from the early 1970s for the study of the developmental effects on migration flows (Zelinsky, 1971). Zelinsky's model discusses various stages of modernisation or economic development and associated international migration patterns. While the model did not take into consideration the role of migration control policies, it could offer a framework for the analysis of historical, as well as future long-term changes and processes (Appleyard, 1992: 6-7) related to population ageing and demographic dividends in the next couple of decades. Such a model would however need to be modified and made more dynamic to remedy the critique that has been raised against it as being evolutionary and deterministic.

13.8 Experiences of relaxed labour migration regulations

There is a large literature in which attempts are made to measure or predict migration potential and future flows. Forecasts based on various methodologies were especially used before each EU-enlargement. Major efforts were put in during the years before the most recent and largest enlargement in 2004 (e.g. Bauer and Zimmermann, 1999; Boeri, Brücker et al., 2001; Fertig, 2001; Dustmann et al., 2003a; Krieger, 2004). Some of these forecasts and projections used representative surveys among potential migrants. Other methods included econometric models drawing on the trends at previous enlargements and related migrant flows. Most of the methodologies are however burdened by some level of uncertainty as surveys as well as models are always constructed to simplify a more complex reality (see Boeri and Brücker, 2005: 12-13; Fassmann and Münz, 2003).

Instead of applying "guesstimates" or erratic surveys on migration intention, which often prove unrealistic (see e.g. Layard, Blanchard, Dornbusch and Krugman, 1994), it is more useful to look at the outcome of actual migration flows from less developed to more developed countries that at some point opened up their labour markets after a period of closure. The experiences from the regional Nordic labour market have shown that, at least for neighbouring countries with similar cultural and economic standards, the rate of migration is rather low despite the possibility of free movement (Fischer and Straubhaar, 1996).

The introduction of free movement of labour within the EC did not lead to emigration flows as expected from Italy to other EC countries beyond and above the average within the EC during the 1960s. Neither did the accessions of subsequent new Member States result in mass movements of labour migrants, in the cases of Ireland, the UK, and Denmark in the 1970s, Greece, Spain and Portugal in the 1980s (Werner, 1994), or the ten new member states that joined the EU in 2004 (Tamas and Münz, 2006).

Nevertheless, the much larger economic gap between the EU and the Maghreb area and further afield, give sufficient reasons to believe that actual migration from the South (as

well as the East) to the EU area would increase with a more lax control (Werner, 1994). It is therefore not realistic to expect even in the long-term that opening up of rather limited legal gates of labour migration, would dramatically reduce emigration pressures from developing countries in the European neighbourhood.

Moreover, a common concern today with liberal or lax migration regulations would be that massive and uncontrolled levels of immigration could undermine the very sovereignty of Member States in Europe and their ability to protect or maintain the welfare state and the objective to further a better atmosphere for integration (Brochmann, 1993). On the other hand, the welfare state and its social provisions do also constitute a major pull-factor that attracts potential migrants. Both these considerations will most probably be on the political agenda also in 20 or 30 years from now, even in countries where the welfare state is less developed.

The welfare state argument is linked to questions about who should have access to the collective goods in a community (see e.g. Bauböck 1992; Walzer, 1983). The collective goods of the welfare states, such as social security, government transfers, education, health care, political rights and so on, can be regarded as scarce goods. The public may regard the question of new arrivals to a community as problematic for questions of the distribution of these scarce goods, and this is particularly significant in times of economic recession or unemployment. Hammar (1992) has argued that migration control, therefore, is closely linked to the welfare states of liberal democracies and the idea that the common goods should be protected. Welfare states can be regarded as "closed systems" where large-scale immigration would undermine standards of social rights, as well as the trade unions' standards for wages and working conditions (see Faist, 2000).

Migration patterns in Europe during the guestworker era

A number of useful parallels could be made between current and future migration pressure to the EU from African countries and migration pressure in Southern Europe some decades ago. The emigration of workers from Yugoslavia, Greece, Turkey, Spain, Portugal and Italy to North-Western Europe between the 1950s and 1970s, had all similar preconditions. The process of mechanisation was reducing job opportunities in the agricultural sector, while the industrialisation in these countries was insufficient to absorb the surplus labour. Additional pressure on the labour markets came about as a result of population growth (Meznaric and Caci-Kumpes, 1993).

The labour importing countries in North-Western Europe at the time thus had a large potential of aspiring migrants from which to recruit. The situation in Greece can exemplify the general economic and demographic conditions in Southern Europe at the time. Birth-rates had increased sharply in Greece before the onset of this labour emigration. The population expanded from about 5 million in 1921 to more than 7.3 million by 1940 – an increase of almost 50 per cent in less than 20 years. By the 1960s, though, the growth of the Greek population had slowed down notably to half of the growth rate of the previous decade (Papademetriou and Emke-Poulopoulos, 1991).

Parallel to the demographic changes in Greece there was a high rate of rural-urban migration due to limited amounts of arable land, inequitable distribution of land, slow mechanisation and subsequent low rates of return on labour in agriculture. Furthermore, a lack of balance in the country's regional development was leading to rural stagnation and deterioration in many regions while there was an inability of the main urban areas to effectively absorb the internal migrants (ibid, 1991). The situation was comparable in the other Southern European countries in this period. At present, very similar conditions prevail in many of the sub-Saharan African countries.

Another parallel is that emigration both now and then was viewed as an alternative for the developing countries in relieving the economic and social pressures from large-scale unemployment. The idea in the 1960s was that "excess labour force" from Southern

European countries would go abroad to avoid unemployment, still contribute to the economy via remittances, and return in brighter economic times with newly gained skills as important inputs into the development of the home countries' economies (see e.g. Lianos, 1993).[120]

In respect of relieving the pressures of unemployment, this ideal picture turned out to be unrealistic. In most Southern European countries, those who predominantly chose to emigrate were not those within the category of "excess labour force", i.e. those who were predominantly unskilled and/or unemployed people. Instead, it was mainly the young, ambitious and highly motivated people already in employment, who emigrated in search of better income opportunities abroad. As a large number of them were educated or skilled workers, brain drain and skills drain were negative effects of emigration that brought constrains on the economic development of the labour source countries (Pastor, 1985).

According to the 1971 population census in Yugoslavia, the proportion of Yugoslavs in employment prior to their emigration was 40 per cent. Almost half of the emigrants were workers with a background of qualified vocational training. At the same time, less than a third of the emigrants were unskilled (Holm, 1984; see also Meznaric and Caci-Kumpes, 1993). Similarly, it has been estimated that almost 17 percent of Turkey's skilled workers emigrated between 1964 and 1971 (Abadan-Unat, 1993). During the period between 1955 and 1977, about 13 per cent of the total Greek population emigrated (Lianos, 1993), and Greek migrants had significantly higher levels of education than the average in the non-migrant population (Papademetriou and Emke-Poulopoulos, 1991).

Employers in source countries started complaining about labour shortages. In Greece, employers protested in 1972 that further economic development of the country was being threatened by the shortage of skilled labourers. In order to replace the skilled Greek emigrants and to improve the situation, Greek employers strongly supported a policy of importation of labour from African and Asian countries (Lianos, 1993) i.e. a type of successive, chain migration which is already present in many of today's EU neighbourhood countries.

13.9 Migration potential from sub-Saharan Africa

What are the lessons from this European experience when looking at the current EU's neighbourhood and developing countries in sub-Saharan Africa? Although the above description does not give a full or even balanced picture of the European migration experience during the guest worker era, it indicates that the outcomes of labour migration were not always as beneficial for the source and receiving countries as hoped for. This section particularly discusses sub-Saharan Africa, since in the perspective of the next decades this is the region where demographic trends are expected to provide labour force which could be the basis of future cooperation and complementarities.

Current pressures to emigrate are based on a number of different factors in African countries. From some countries, available surveys on migration intentions indicate a high migration pressure, e.g. in Ghana and Senegal. General push and pull factors of African migration concern the positive image among potential migrants about the gains from migration. Many emigrants who go from African countries to Europe are young men with relatively more "modern" values than those who prefer to stay. From countries such as Ghana and Senegal, many migrants are more well educated as a consequence of "positive self-selection", while there appears to be a more "negative self-selection" in terms of educational levels of Moroccan emigrants. Also, effects of migrant networks seem to be

[120] In some countries, like in Turkey, the option of labour emigration has been reported as having eased some of the burdens in respect to the unemployment problems (see Sayari, 1986).

unevenly distributed and are likely to be stronger in some countries (e.g. Ghana and Egypt) than in others (Senegal and Morocco) (van Dalen, Groenewold and Schoorl, 2003).

Since the mid-1990s, there has been an increasing flow of migrants from African countries to Europe and North America. More than an annual 110,000 African migrants have left to these destinations in the period 1995-2001. The numbers have grown from 93,000 in 1995 to almost 140,000 in 2001 (Black, 2004: 6). Despite the tendencies towards growing global migrant flows, there are still much larger migrations within Africa than out from the continent. According to recent data (2005) there were about 17 million international migrants within Africa, while some five million Africans resided in OECD countries (Economic Commission for Africa, 2006).

Migration is a historically firmly rooted phenomenon in Africa and is still part of everyday life of many Africans. According to one source, there may be up to 50 million African migrants but data are scarce to verify such numbers. Migrants in Africa – both internal and international – are however definitely a very heterogeneous group and a large part of them remain unregistered. Mobility patterns are very complex and encompass a wide variety of migrant categories in Africa. Migrant motives differ widely with both highly skilled doctors and engineers as well as young, low-skilled workers migrating to Europe, refugees and internally displaced, short-term migrants fleeing poverty across borders and migrants who move due to family or ethnic ties. Economic downturns as well as structural adjustment programmes have had effects on migration patterns (Black, 2004: 11).

Part of the problems faced by African countries in terms of underdevelopment and migration pressures are linked to the high fertility rates and low life expectancies. Such demographics are contributing to lower levels of savings and investments and reduce economic growth (van Dalen, Groenewold and Schoorl, 2003; Bloom and Sachs, 1998). Some observers therefore argue that the lack of expected economic growth in Africa will reinforce emigration pressures. However, these:

> *'guesstimates' are primarily based on aggregate statistics and not much is known about the microeconomic causes and incentives that trigger migration in Africa, although not much is needed to imagine that the pressure to emigrate is real. This lack of knowledge is troubling as governments of destination countries are increasingly thinking about how to keep migrants out, without turning to the actual source of the emigration pressure. Migration and development policies might have a better chance of succeeding if both sides of the migration story – the circumstances in both the countries of origin and of destination - are taken into account (van Dalen, Groenewold and Schoorl, 2003).*

There are some recent attempts to reinforce research on actual and potential migration between Northern Africa and the European Union within the framework of the Euro-Mediterranean Consortium for Applied Research on International Migration (CARIM). This research network, which is financed by the Europe Aid Cooperation Office, has attempted to set up data bases which include stocks, flows as well as estimates of population, legal and irregular migration. Such efforts might be extended to sub-Saharan Africa to improve our knowledge about migration patterns as well as potential migration for the benefit of population complementarities.

Several African countries are planning to conduct population and housing censuses in 2010. This would present a good opportunity to include migration and development related questions in the censuses in order to build a better understanding of the linkages with a view to future policy measures and cooperative initiatives. There is scope in this regard for the European Union to work closely together with the UN Economic Commission for Africa and its Member States (Economic Commission for Africa, 2006).

In addressing potential migration from sub-Saharan Africa to Europe, a key question is indeed the role of cooperation. So far, African governments have placed relatively low priority on migration policy issues. Only a few African countries have adhered to or

implemented existing international conventions and legal norms on migration, including the rights of migrants and their families. It is only in recent years that migration has been addressed within the framework of national development plans and strategies or within the context of poverty reduction strategies. The African Union has recently suggested a policy framework to counteract brain drain through efforts to create employment opportunities and to offer a more active role in development to diasporas (Economic Commission for Africa, 2006). While this is still an initiative in its early stages, there would certainly be room for implementing this and other cooperative frameworks through joint efforts between the EU and Africa.

Finally, there is a related and additional challenge in cooperation between Europe and sub-Saharan Africa. Development assistance has been estimated to contribute with about US$ 4 billion on replacing African professionals with expatriate experts (Black, 2004: 10). Much more could be done to utilize skilled Africans to reverse the brain drain, or to attract back Africans from the diaspora. There are an estimated 100,000 non-African experts in sub-Saharan Africa, most of them active in development assistance and humanitarian aid. A share of these might probably be possible to replace by the equally numerous Africans who work in various professions in EU and North America (European Commission, 2002: 24). As an issue of population complementarity thus, a broad range of domestic and external policies should strive towards a better match between labour market needs and human resources planning in both developing countries and in EU Member States.

13.10 Summary

During the coming decades, the EU Member States will need to open up their labour markets for somewhat more labour immigration to cater for their labour needs as a consequence of population ageing. During the same period, migration pressures from developing regions, including sub-Saharan Africa, are likely to increase. While the European ageing societies could cater for the increasing labour market needs, developing countries could provide such needs and reap the benefits – such as remittances, brain gain and upgraded return of skills – without loosing needed skills through brain drain.

Expectations in Europe and elsewhere in this regard feed the current debate on circular labour migration. A common approach to labour immigration in the European Union has been emerging since the early 2000s. But Member States still prefer to decide on the level and composition of labour migrants as a national issue. There has already been a substantial increase in circular migration on a global level in the last decade and in the future there will be increased competition for attractive skilled migrants.

Many highly skilled labour migrants return temporarily or permanently from abroad to their country of origin with new skills and continue to take advantage of their international networks. To some extent, such mobility can be described as brain circulation rather than brain drain. Policies should facilitate such benefits for more migrants. From the perspective of developing countries, both improved access to export markets and more legal options for labour migration would also ease the pressure exerted by unemployed and underemployed on domestic labour markets. Temporary migration programmes could meet economic needs both in countries of origin and of destination. More international cooperation is needed in order to set up cooperative mechanisms that facilitate recruitment and return and ensure the rights of the migrant labour as well as caters for the interests of both source and host countries. This would constitute one of the most important population complementarities, with the potential of bringing both sustainable development and probably also more balanced migration patterns (and pressures).

The European Union has been concerned with the links between legal and illegal migration. However, the complexities of mixed migration flows makes it very difficult to predict migration patterns and to shape policy tools that could influence various kinds of flows of people and their composition, especially when we consider possible trends and patterns

several decades ahead. The introduction of legal labour migration channels will most likely not crowd out all other unwanted categories of migration and irregular flows. Studies on migration control suggest that the capacity to control migration flows differs in relation to the category of migrants involved. While liberal democracies are bound by international human rights norms in their exercise of control, also geographical position in terms of accessibility plays a role. Moreover, migrants are actors who respond to changes in control policies. Some research suggests that administrative, political and economic problems as well as more open, global labour markets create an increasingly large gap between the goals of control policies and the effects and outcomes of such policies. This has also contributed to the surge in public anxiety in relation to migration.

There are no serious estimates available to date on migration pressure to Europe from e.g. sub-Saharan Africa and more research is needed in this regard. More lessons could be learnt from the past European experience of the guest worker era when considering policies of population complementarities with the neighboring regions of Europe. Similar conditions prevailed in the 1960s in Southern European countries as currently in many parts of the European neighbourhood. One useful conclusion from the guest worker era is that outcomes of labour migration were not always as beneficial for the source and receiving countries as hoped for. More concerted and comprehensive planning and cooperation is needed to avoid shortcomings experienced in the past.

Current pressures to emigrate from sub-Saharan Africa are based on a number of different push and pull factors as well as the effects of already established migrant networks. Migration is a historically firmly rooted phenomenon in Africa and is still part of everyday life of many Africans. Since the mid-1990s, there has been an increasing flow of migrants from African countries to Europe and North America but there are still much larger migrations within Africa than out from the continent. Part of the problems faced by African countries in terms of underdevelopment and migration pressures are linked to the high fertility rates and low life expectancies. Such demographics are contributing to lower levels of savings and investments and reduce economic growth. The lack of expected economic growth in Africa might reinforce emigration pressures.

Therefore, in addressing potential migration from sub-Saharan Africa to Europe, a key question is indeed the role of cooperation. Policies to counteract brain drain through efforts to create employment opportunities and offering diasporas a more active role in development need to be established and implemented through close cooperative frameworks and joint efforts between the EU and Africa.

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14 Assessing the Qualitative Aspects: Qualification and Skills

In the absence of dramatic changes in the labor force participation in EU 25, Russia and most other European countries total labor force would be substantially reduced at a rate of some 0.5 per cent per annum, or even more. Such a labor force reduction would have direct effects on the economic growth rate (for a fixed labor productivity per worker) and would further increase the gap between Europe and the USA, which labor force is expected to increase in the range of 0.5 to 1 per cent per annum until 2050.

Our scenarios, however, show that even an aggressive policy encouraging higher labor force participation and later retirement may not be sufficient to stabilize Europe's resident labor forces and to compensate for the full economic consequences as an aging labor force may exhibit a lower productivity growth per worker. Such an age-structure dependency of productivity suggests that migration could help as migrants are typically younger than the average labor force, and in case of a major share of temporary migration may contribute permanently to keep the labor force structure younger than otherwise. But such reasoning also suggests that the migrants will need to have sufficient skills to be able to create such effects of stabilizing or even enhancing productivity levels.

But there are other reasons why it is important to look beyond quantities when investigating the costs and benefits of migration. First, economic considerations and emerging empirical evidence suggest that the skill mix matters for the benefits of migration in both receiving and source countries. Second, if this is the case, what lessons can we draw from skill mix management in traditional immigration countries? Third, would this suggest giving manpower planning (again) more prominence, or what are the alternatives? This sub-section sketches these questions and tentative answers without claming to be comprehensive or even less final. These are definitely areas which require further investigation.

14.1 Does skill mix matter for the benefits of migration?

Economic considerations suggest that the (net) benefit of migration and their distributive effects between countries and within countries depend on the skill composition of migrants as well as that of the labor force in the source and receiving countries. A main difference in the overall result is suggested by the framework of analysis – static or dynamic. While much of these considerations are still based on model-type introspections, there is an

increasing albeit still limited body of qualified empirical evidence to support some of the main conjecture.[121]

The main conclusions about the overall benefits of migration and their distribution among factor owners can be derived from the basic and static Heckscher-Ohlin-Samuelson model and constitute a useful benchmark. First, in this model, trade in goods and services, capital movement, and migration are fully substitutive and lead to factor price equalization. Second, migration changes the relative scarcity of production factors leading to (wage) gains for resident workers in source countries and losses in receiving country while the capitalists in receiving country gain and those in the source country loose. Third, as in trade of goods, migration leads to an overall gain of the participating countries, but the "immigration surplus" in a static setting and with typical parameters assumptions is likely to be very modest (Borjas, 1995).

Broad estimations of the wage effects in source and receiving countries for the "Great Migration" of 1850 to WW I, seem to support the wage increasing effect in source countries (such as Italy) and wage decreasing effect on the receiving country (such as Argentina). More recent estimates exploiting better data and more sophisticated approaches seem to support these conclusions. Borjas (2003) estimates for the US that immigration lowers the wage of competing workers: A 10 percent increase in labor supply reduces wages by 3-4 percent. Using a similar approach to estimate the effects of emigration on the Mexican labor market, Mishra (2003) concludes that the emigration loss to Mexico is about 0.5 per cent of its GDP, resulting from major gains by the workers who have stayed behind of about 5.9 per cent of GDP at the detriment to the owners of fixed factors of about 6.4 per cent of GDP.

Moving from a homogenous to a heterogeneous labor market framework with skilled and unskilled labor changes the outcome, but not yet dramatically. First, it may increase the "immigration surplus" for the receiving country as immigration of high-skilled workers suggests a larger surplus. Second, the effects of migration on the resident population depends now on the complementary or substitutability of migrant workers. Hence the skills mix of the migrants matter. Last but not least, the potential loss of skilled labor in source (developing) countries may lead to a brain drain with main negative impacts on development.

Empirical work in a number of countries seemingly confirms the effects of heterogeneity of labor and the differential impact from migration. If migration is mostly driven by low skilled labor, the high skilled labor in receiving countries is positively impacted both with regard to wage levels and employment probabilities. The reverse seems true for low skilled resident labor as their wage rate and employment chances are negatively affected (see, for example, Winter-Ebmer 1996). While the estimated quantitative effects are small, they nevertheless seem to be reflected in voters' behavior in a variety of migrant receiving countries.

The results about the impact of migration in both source and receiving countries, however, seem to be largely reversed if the analytical framework moves from static to dynamic considerations. This includes the introduction of migration into endogenous growth models or the taking into account of feedbacks between receiving and source countries such as remittances.

The introduction of dynamic aspects into the migration framework tends to reduce the negative effects, in particular as far as skilled workers are concerned (see Drinkwater, 2004). In a dynamic setting it is possible that only winners are created (see Chart A). But the same may not be true for the effects on unskilled workers. The results by Bretschger

[121] For recent surveys of this topic see Drinkwater et al. (2003), Commander et al. (2002) and Borjas (1998).

(2001), for example, suggest positive effects in the host country of high skill migration and negative impact of unskilled labor on growth.

Chart 14.1: Winners and Losers of Skilled Migration: Static and Dynamic Aspects

Groups	Static Analysis	Dynamic Analysis
Northern Capitalist	Winners	Winners or Losers
Northern Workers	Losers	Winners
Southern Capitalist	Losers	Winners
Southern Worker	Winners	Winners
Migrant	Winners	Winners

Source: Drinkwater et al. (2003).

The corollary of the above results is that migration of high skilled negatively effects growth in the source economy. This is in line with mainstream literature findings on the effects of brain drain. However, more recent work has questioned the general validity of such statements as migration may also lead to brain gain and brain circulation. Brain gain is argued to emerge through the enhanced incentives to accumulate human capital in source countries in view of the perspective of migration (and higher rates of return). Brain circulation happens through the return of now more skilled labor to the host country which is typically accompanied by prior sending of remittances or repatriation of accumulated savings. And it is the combination of capital cum skills of returning migrants which may be highly advantageous for the resource countries (Rapoport and Docquier, 2005).

Summing-up, the benefits of migration and their distribution in source and destination countries seem closely related to the skills level of migrants and the complementarity or substitutability with resident labor force. While the negative effects may be diluted in more dynamic frameworks, the positive effects of skill migration on destination countries and, perhaps, even source countries on growth are strengthened. This calls for an investigation how traditional immigration countries have been faring in this regard.

14.2 Lessons from Traditional Countries of Immigration

Australia, Canada, New Zealand, and the United States are the most important Traditional Countries of Immigration (TCIs).[122] In 2001–02, they had a combined total foreign-born population of some 46.4 million people. The United States had by far the largest foreign-born population (35.0 million), followed by Canada (5.8 million), Australia (4.7 million), and New Zealand (0.9 million). But the share of the foreign-born was the highest in Australia (24.3 percent), followed by New Zealand (22.2 percent) and Canada (18.6 percent; Table 14.2). In the United States, this share is only 12.4 per cent, a size comparable to the foreign-born population of several European countries (Table 14.1).[123]

In 2001, these four countries admitted some 1.45 million permanent legal immigrants altogether (Table 14.2). In relative terms, the admission was highest in New Zealand (12.7

[122] Several other TCIs (for example, Argentina, Brazil, Chile, and South Africa) are no longer attracting large numbers of immigrants or have become source countries.
[123] For example: Austria, Belgium, Germany, Greece, Spain and Switzerland.

per 1,000), followed by Canada (7.3 per 1,000) and Australia (5.3 per 1,000). The United States had the lowest admission rate (3.7 per 1,000).

In contrast to many parts of Europe, these four countries see immigration as a permanent process. Therefore, each country has created an immigration system that admits temporary migrants and permanent immigrants in a deliberate fashion that takes into account managed migration, balancing economic considerations, family reunion, and international humanitarian obligations. All four countries admit the majority of their immigrants through procedures and criteria that are clearly defined in advance, relatively transparent, and from time to time up for review. In Australia, Canada, and New Zealand, the proactive migration regimes are designed to screen and admit a certain proportion of new immigrants (see Table 14.3) to augment their labor force with skills valued by the receiving country. But immigrants admitted for other reasons—to rejoin family or as refugees—are usually also expected to become economically active.

All four countries distinguish between temporary residence permits and permanent immigrant status. Temporary visas are granted to foreign students and certain categories of labor migrants. Permanent status is granted to the core group of labor migrants, rejoining family members, and people admitted for humanitarian reasons (refugees, recognized asylum seekers). Recruitment of economic migrants is organized through employment-based admissions,[124] labor market testing, selection via a points system,[125] or change of status from temporary to permanent residence.

Admission of permanent migrants based on economic considerations plays a very prominent role in Canada (63 percent of all permanent immigrants) and New Zealand (54 percent), but is somewhat less important in Australia (37 percent) and the United States (21 percent; Table 14.2). Australia, Canada, and New Zealand implement selection via a points system. These systems award points to applicants according to their individual and socio-demographic characteristics—mainly for education and training, professional experience, linguistic skills,126 and age—and to a lesser extent for prior studies or work experience or both in the destination country, family members already residing in that country, and some other criteria. Additional points are awarded if the applicant has a job offer from a domestic employer (Table 14.3). In 2003, the passing mark for successful applications through the points system was 75 percent (of all points possible) in Canada, 63 percent in Australia, and 59 percent in New Zealand (Table 14.3). Such differences may reflect differential preferences of potential migrants for these three countries.

The United States has no admission via a points system. In the past, however, the US selected some of its economic migrants (up to 50,000 per year) through a diversity lottery. Eligible applicants for this lottery had to demonstrate a certain level of education.[127] The US university system, however, serves as a main attractor both for qualified students and scientists, many of whom remain in the US after several years of study or research.

Appropriate selection of migrants increases their chance of labor market (and subsequent social) integration. Longitudinal data on recent permanent immigrants in Australia clearly show that 18 months after arrival, those admitted for their skills (employer-sponsored or through the points system) displayed much lower unemployment rates and earned on average much more than those admitted under the family reunion program or for

[124] Canada does not admit permanent immigrants sponsored by particular employers but, like Australia and New Zealand, awards additional points if somebody applying within the framework of the points system has a job offer from a Canadian employer.

[125] The United States does not have a points system for admission.

[126] This applies only to Australia (for English) and Canada (for English and French).

[127] Meanwhile the US diversity lottery has been abolished.

humanitarian reasons (Figures 14.1 and 14.2).[128] Macroeconomic forecasts project additional fiscal gains from taxes and social security contributions of migrants in the order of $A30 billion by 2014, generated to a large extent by the skilled immigrants.[129]

Most European countries also have programs regulating admission of qualified third country nationals. But the number of people admitted under these programs is relatively small. Originally, the most ambitious program was introduced in 2000 as so-called German "Green Card" for IT specialists and software developers. It was assumed that under this program some 10,000-20,000 people would be admitted annually and given a work permit for a period of five years. But the end of the New Economy "boom" and administrative hints that the permit might not be renewable have led to a relatively small take-up rate. Between 2000 and 2004 only some 15,000 German "Green Card" permits have been issued.

An even more ambitious pro-active selection of immigrants via a skills-based point system was planned as a core element of Germany's new immigration law (in effect since January 2005). But this core piece of the original immigration law was lost on the chopping block during the mediation process between the two houses of German parliament. As a result, for the foreseeable future, there will be no selection of economically attractive migrants according to a point system.

Nevertheless, the law has opened three new possibilities to admit qualified and/or ambitious migrants: First, foreign students will be able to stay in the country for one year after graduating from a German university if they choose to search for employment in Germany. Second, newly arriving top-ranking scientists and managers may receive the right to take up permanent residence upon arrival (instead of being granted renewable temporary residence permits).[130] Third, foreign self-employed individuals are able to obtain a limited residence permit. This is provided, however, that in the view of the public authorities, there is an economic interest in their activities; that they invest at least 1 million euros in an existing or new venture; or that they create at least 10 new jobs. These entrepreneurs, however, will only obtain an unlimited residence permit after three years of residence. It is unclear whether or not this will be enough of an incentive to attract talent and capital.[131]

14.3 Prospects and Limits of Manpower Planning

The importance of skill mix for the net benefits of migration in both destination and source countries, and the capacity of source countries to apply skill selection criteria suggests that there is room and potential for planning and management of migration streams. More specifically, the demographic development in the North suggest that aging and a fall in labor force will lead to increased demand or reduced supply of some skill categories and of manpower in general. In the South the rising labor force potential driven by strong youth cohorts of school-leaving age suggests that there is room for targeted skill training for use at home, i.e. in source countries and in potential immigration countries. Bridging both demand and supply side through appropriate policy coordination between source and destination countries appears like a welfare-enhancing policy proposal, at least at first sight.

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[128] See Australian Department of Immigration and Multicultural and Indigenous Affairs (2003).
[129] See Econtech (2004).
[130] German nationals and other EU citizens, however, will continue to enjoy preferential treatment at hiring processes.
[131] In the United States and Canada, such individuals receive permanent residence status from the beginning and may file for citizenship as early as three (Canada) to five (US) years after taking residence.

As formulated above, the proposal sounds like manpower management, a planning device which has been put to bed a couple of decades ago in both North and South, and for good reasons. While the proposal of trying to achieve a skill matching of future labor force seemingly makes sense, the uncertainty on both supply and demand side are simply too large to deliver the expected outcomes at detailed skill levels.[132] On the demand side, for example, it is impossible to predict the demand of, say, software specialist in a country or even region in 5 or 10 years down the road. The technology changes too rapidly or allows the coverage of demand through other means, such as outsourcing. There are, of course, other professions where the future demand can be more easily determined as it is more directly related to demographic phenomena, such as for doctors and nurses. But in this case no special planning needs to take place as demand stability and market signals are seemingly strong enough to create the external supply. On the supply side, the time lags between demand signaling, education decision and final output are in many cases simply too long. In addition, if done, such a manpower planning is bound to create expectations and political obligations which can be quite costly, such as experienced in many countries in the case of graduates from teachers' colleges. These and further actual or perceived weaknesses of the manpower planning model led to major criticism and essentially its abandonment in its originally envisaged form.

The criticism of the then dominant model – the manpower requirement approach – is capsulated by Psacharopoulos (1991): "The art of manpower planning is certainly in disarray. After decades of manpower forecasting practices, it has come under repeated and sustained criticism. Those still practicing the art might rightly be confused of the mandate, methodology and overall usefulness of what they are doing". Such a severe critique may go to far as more modern labor market information systems use heuristic projections to ensure data consistencies and explore the broad balancing of supply and demand by broad educational levels and occupations (Hopkins, 2000). Exploring the usefulness of such approaches for skill matching of migration flows should be envisaged as it would also allow getting a better quantitative understanding of the skill profile of current migrants.

Hence what could be done in order to improve the skill composition or at least skill information of and about migrants for the benefits of source and destination countries, and the migrants themselves? We suggest that the "Bologna process" designed to improve international "transparency" and facilitate academic and professional recognition of qualifications is (1) extended to secondary (professional) qualifications, i.e. covers fully mid-skills and not only higher education skills,[133] and (2) extended to the south of the

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[132] It is interesting to note the manpower planning approach came to wide-spread prominence in the OECD's Mediterranean Regional Project in the early 1960s (Hopkins 2000).

[133] The Bologna Declaration of 19 June 1999 involves six actions relating to:
- a system of academic grades which are easy to read and compare, including the introduction of the diploma supplement (designed to improve international "transparency" and facilitate academic and professional recognition of qualifications);
- a system essentially based on two cycles: a first cycle geared to the employment market and lasting at least three years and a second cycle (Master) conditional upon the completion of the first cycle;
- a system of accumulation and transfer of credits (of the ECTS type already used successfully under Socrates-Erasmus);
- mobility of students, teachers and researchers;
- cooperation with regard to quality assurance;
- the European dimension of higher education.

As such, the process is geared towards higher education and in our understanding leaves out the more difficult issues of professional qualifications and certification of mid-skills level. For more information about the process, see: http://europa.eu.int/comm/education/policies/educ/bologna/bologna_en.html

Mediterranean to cover at least the key migrant source countries in Middle East and North Africa.[134]

Such an approach should provide various benefits for all involved. At the level of destination countries, the experience in traditional countries of immigration (TCI's) suggests that they substantially underutilize the skill level of migrants due to information problems and uncertainties about the values of skills, including academic training, received abroad (for the Canadian experience, see for example, Reitz 2005). A credible certification process a la Bologna should help to reduce these uncertainties and hence lead to a better use of migrant skills to their benefit and that of the host country. At the level of the migrant source country such a process would create a form of peer review of the existing education system, and create incentives for these countries to rethink their education structure and curricula which at the end may lead to enhanced educational outcomes. Hence both channels would improve the skill match not by quantity planning but by enhanced information and signaling effects.

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[134] 40 countries are now involved in the Bologna process. Four Western Balkan countries – Albania, Bosnia-Herzegovina, Macedonia and Serbia and Montenegro – joined the Bologna process at the Berlin Conference, along with the Principality of Andorra, the Holy See and Russia. The Commission will look at the adoption of specific support measures for countries covered by the Tempus-Cards and Tempus-Tacis programs. A joint Socrates-Tempus call for proposals is being prepared.

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Table 14. 1: Foreign-national and foreign-born population in Europe, 2005

Countries	Foreign-national and foreign-born population			
	Foreign nationals[i]		Foreign born[ii]	
	in 1000	%	in 1000	%
EU-25	**23.837**	**5,2**	**40.501**	**8,8**
Austria	777	9,5	1.234	15,1
Belgium	871	8,4	1.186	11,4
Cyprus[iii]	65	9,4	116	13,9
Czech Republic	254	2,5	453	4,4
Denmark	268	4,9	389	7,2
Estonia	95	6,9	202	15,2
Finland	108	2,1	156	3,0
France	3.263	5,6	6.471	10,7
Germany	6.739	8,9	10.144	12,3
Greece	762	7,0	974	8,8
Hungary	142	1,4	316	3,1
Ireland	223	5,5	585	14,1
Italy[iv]	2.402	4,1	2.519	4,3
Latvia	103	4,3	449	19,5
Lithuania	21	0,6	165	4,8
Luxembourg[v]	177	39,0	177	37,4
Malta	7	1,6	11	2,7
Netherlands	699	4,3	1.736	10,6
Poland	49	0,1	703	1,8
Portugal	449	4,3	764	7,3
Slovakia	22	0,4	124	2,3
Slovenia	37	1,9	167	8,5
Spain	2.984	6,9	4.790	11,1
Sweden	463	5,1	1.117	12,4
United Kingdom	2.857	2,9	5.553	9,3
EU Member States of 2007				
Bulgaria	26	0.3	104	1,3
Romania	26	0.1	103	0,6
Total EU 27				
EU Candidate Countries				
Croatia	18	0.4	661	14,5
Macedonia	:	:	101	5,2
Turkey	1	1,8	1	1,9
Other EEA and Switzerland				
Iceland	:	:	23	7,3

Liechtenstein	:	:	12	33,9
Norway	213	4,6	344	7,4
Switzerland	2	20,2	2	22,9

Notes:

(i) EU citizens from other EU Member States and third country nationals in 2004; most countries according to OECD Data Base; UN Data Base and national sources for Cyprus, Estonia, Italy, Latvia, Lithuania, Malta, and Slovenia).

(ii) Intra-EU migrants from other EU Member States and migrants born in third countries in 2005; most countries according to UN Data Base; OECD Data Base for Belgium and the Netherlands).

(iii) Greek part of Cyprus only.

(iv) Foreign nationals for Italy: ISTAT 2006.

(v) Foreign nationals for Luxembourg: Census Data 2001.

Source: Foreign-born population: OECD Data Base (2006), UN (2005); Foreign national population: OECD Data Base (2006), UN (2005), Eurostat; national sources (see notes); Münz et al., 2006.

Table 14.2: Population and Migration in the United States, Canada, Australia, and New Zealand, 2001

	US	Canada	Australia	New Zealand
Permanent Legal Immigr. 2001[a]	**1.064.318**	**250.346**	**119.525**	**47.314**
Among them:				
Family reunion	**675.178**	**66.644**	**33.470**	**12.671**
Economic migrants	**179.195**	**152.939**	**44.730**	**25.768**
Lottery	**42.015**	**-**	**-**	**-**
Free movement[b]	**-**	**-**	**25.165**	**3.602**
Humanitarian immigration	**124.507**	**27.894**	**13.740**	**4.026**
Refugees	97.305	12.263	4.000	777
Asylum seekers	11.201	11.891	5.580	714
Other humanitarian	16.001	3.740	4.160	2.535
Others	**43.423**	**2.869**	**2.420**	**874**

Notes:
a. Foreign students, seasonal workers, other persons with temporary status; estimates for Canada.
b. Without foreign students, seasonal workers, other persons with temporary status.

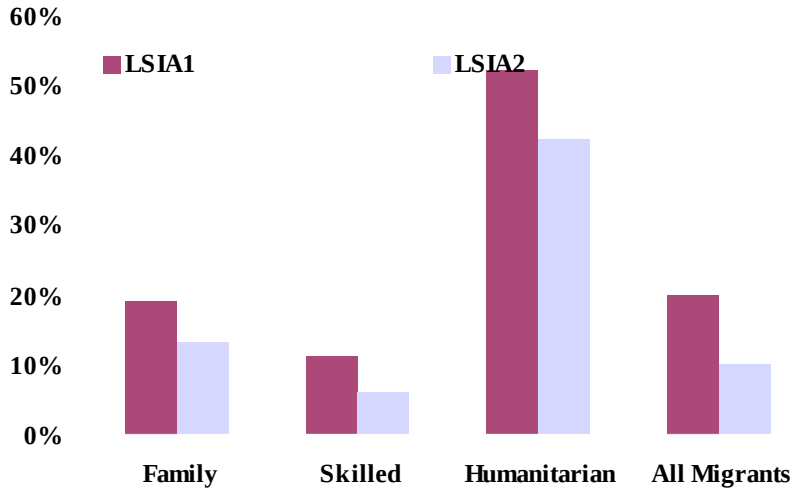
Source: U.N. Population Division (2005); Holzmann and Münz (2004); Papademetriou (2003); New Zealand Immigration Service (2003); Citizenship and Immigration Canada (CIC; 2001); Australian DIMIA (2000, 2001); U.S. Census Bureau (2000, 2001).

Table 14.3 Permanent Immigration to the United States, Canada, Australia, and New Zealand 2001

Selection Criteria	Canada %	Australia %	New Zealand %
Education/Training	25	34	24
Professional experience	21	6	20
Age	10	17	20
Family member already in the country	5	9	6
Language skills English/French[b]	24	14	0
Job offer[c]	10	4	16
High priority occupation	0	9	0
Prior work or studies in the country	5	11	8
Other aspects	5	6	8
Pass mark as % of possible points[d]	*75*	*63*	*59*

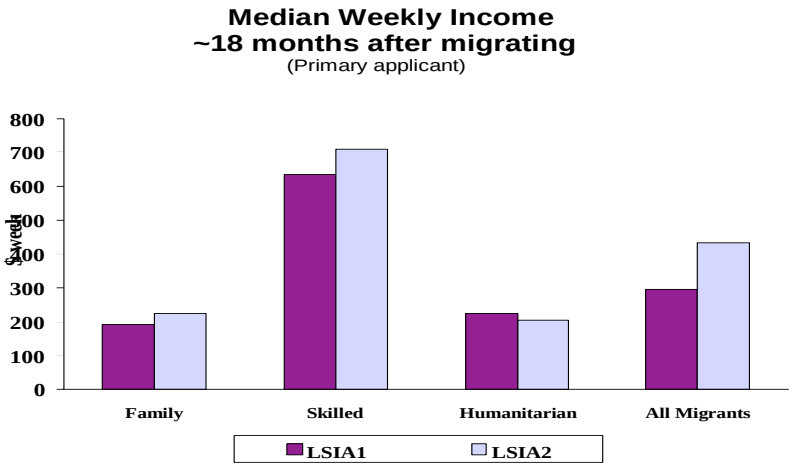
Source: Holzmann and Münz (2004); Papademetriou (2003); New Zealand Immigration Service (2003); Citizenship and Immigration Canada (CIC; 2001); Australian DIMIA (2000, 2001); U.S. Census Bureau (2000, 2001).

Figure 14.1 Unemployment Rates of Australian Immigrants 18 Months after Arrival, by Category of Admission



Note: Longitudinal Survey of Immigrants to Australia (LSIA): LSIA1 refers to immigrants who arrived between September 1993 and August 1995, LSIA2 refers to immigrants who arrived between September 1999 and August 2000.
Source: Australian Department of Immigration and Multicultural and Indigenous Affairs/DIMIA (2003).

Figure 14.2 Weekly Income of Australian Immigrants 18 Months after Arrival, by Category of Admission



Note: LSIA1 refers to immigrants who arrived between September 1993 and August 1995, LSIA2 refers to immigrants who arrived between September 1999 and August 2000.
Source: Australian Department of Immigration and Multicultural and Indigenous Affairs/DIMIA (2003).

15 A Way Forward: skill formation, manpower planning and migration policy development

International migration is caused by major economic, demographic, labor market and social security gaps between source and destination countries. But international migration is also a process with the potential to reduce such gaps. Therefore, source and destination countries should explore win-win solutions that allow the countries and economies involved as well as the migrants to gain from geographic mobility of labor and skills.

For EU 25 it is clear that labor market related reforms leading to higher labor force participation rates – in line with the Lisbon targets and beyond – are unavoidable. At the same time such reforms will probably not be sufficient to fully counterbalance shrinking resident work forces. On the other hand North Africa, the Middle East and Central Asia will not be able to solve their employment problems by just "exporting" surplus labor. Europe's neighboring regions also need economic and labor market reforms to cope with rapid increase of working age populations.

In this context migration should only be seen as a partial answer to aging and eventually shrinking domestic societies in Europe and growth of working age populations in neighboring regions. Migration can play such a role only if Europe is able to attract migrants with needed skill levels and these migrants have access to formal labor markets and the possibility to establish their own businesses. Availability of people, however, is not enough. Availability of qualifications and skills matters to a great extent.

Europe will have to develop a comprehensive migration policy that balances economic and humanitarian aspects and incorporates selection and admission procedures for people who qualify for economic reasons as temporary migrants or as permanent immigrants. Experiences of traditional countries of immigration (TCI's) in particular, Australia, Canada, and New Zealand—should be analyzed and adapted. In this context, the EU and its member states also have to review and improve integration policies and arrangements regulating claims of migrants to social security benefits (including the portability of such claims in case of remigration) and services such as education and health care.

A permanent dialogue between the EU and neighboring countries should explore the possibility of cooperation in various migration-related fields. Among them are visa regimes, residence and work permits, living and working conditions of migrant workers and permanent immigrants, brain drain and skill formation, co-financing of educational systems, transferability and portability of acquired rights/claims toward social security. Such migration-related issues should also become elements of future formal agreements between the EU and its neighboring regions.

In light of these findings and conclusions we would like to suggest the following policy measures:

- Developing a platform for institutional dialogue between source and destination countries
- Extending the Bologna process to MENA and CIS countries
- Extending certification and peer review process to vocational education and technical training (VET)
- Improving portability of social benefits and acquired rights for migrants
- Exploring the possibility for joint development of skills
- Exploring the possibility for joint recruitment strategies
- Exploring the possibility for capacity building and co-financing
- Developing "package deals" between source countries and EU 25+ that would allow for "give and take"

No sound policy advice can be given and no knowledge base can be expanded in the fields of international migration, cooperation between source and destination countries and the identification of win-win solutions without accurate data and information. Therefore further research and analytical efforts are necessary in the following areas:

- *Improvement of data quality*. Today research and policy making are restricted due to the poor quality and scarce availability of data on certain crucial aspects of migration, particularly the most basic data on the quantity and composition of migration flows and financial data on remittances.
- *Learning from traditional countries of immigration.* Australia, Canada, New Zealand and – to a somewhat smaller extent also – the USA have a long tradition of pro-active recruitment of immigrants. Comparative analysis should focus on these experiences and help to identify pro-active strategies that could be of relevance to Europe.
- *Labor market effects*. The effects of international migration on the labor markets are of major concern to both source and destination countries. Research is needed on the implications of temporary versus permanent migration, skilled versus unskilled migration with the goal of deriving best practices and policy recommendations for migration issues associated with regional agreements on migration and free-trade negotiations. In this context it would also be important to learn to what extent skills and/or flexibility of migrants enhance economic integration.
- *Brain drain vs. helpful export of labor and skills.* The emigration of highly skilled workers has been accelerated by the introduction of selective policies in various destination countries. This is a topic of great concern to low-income and middle-income countries. Further research should help identifying under which circumstances labor-source countries suffer from the outflow of human capital and under which circumstances the associated remittance flows and skill transfers benefit source countries. Further research should explore what kind of export of labor and skills can be helpful for a country with rapid increase of working age populations.
- *Access to social services and transferability of social benefits and entitlements*. From a research point of view social protection of international migrants is a largely unexplored field. Among the core issues are labor standards, the access of migrant workers to such social services as health care and education, and the transferability of such social benefits as health insurance and entitlement for old-age pension.
- *Development impact and poverty reduction.* Migration could be seen as an important tool to cope with demand shocks and economic depressions. For a few developing countries, no substantial development may be possible without significant out-migration. Under such circumstances it is desirable to explore best practices of migration management ideally based on cooperation and agreements between source and destination countries.

16 Policy recommendations: migration aspects

1. The European Union would have a clear advantage of elaborating robust, long-term external policies that take into account global population ageing and migration. While population ageing is expected in developed countries as well as in many current middle-income countries, the share of people of working age will grow in sub-Saharan Africa. These changes may both increase global competition for labour migrants and cause growing migration pressures in the coming decades. So far, national and external policies of the EU have slowly started to include migration in development cooperation considerations. Much less has however been done in concrete terms to link external policies to global population ageing issues, or to trade and environment issues.

2. So far, there has been mainly a negative linkage between migration and development. This negative linkage has been limited to exploring the option for conditionality of development and other cooperation. Proposals have been centred on finding novel approaches to curb irregular migration and to compel developing countries to implement readmission of their nationals who fail to acquire proper residence or work permits in EU Member States. The shortcomings of the increasingly restrictive and one-sided control policies have opened up such avenues to explore anew the linkages between migration and development.

3. However, there are very meagre prospects of achieving a drastically reduced volume of unwanted migration, asylum seekers and prospective labour migrants, by merely inserting migration control instruments in development cooperation. Moreover, this approach has contributed to the current failure in arriving at a coherent coordination between migration and development policies. Aid is not sufficient to reduce emigration pressures in the medium-term perspective and should not be used as a means to reduce or control migration.

4. Since migration control policies and development cooperation have had fundamentally different objectives (combating irregular migration vs. poverty reduction), the starting point must be to identify shared interests and then to develop shared methodologies and policy instruments. As EU Member States increasingly acknowledge the need for orderly labour migration due to population ageing, there is a window of opportunity to re-link migration and development policies in a more positive way. Indeed, the recent upsurge in the international community in policy-relevant research on the benefits of migration for development point to this direction.

5. Much of this new research draws attention to the benefits of remittances for developing countries. Previous eras of more pessimistic research, have been replaced by the notion that although remittances are being spent mainly on consumer goods, they can contribute to development through multiplier effects. There is now sufficient evidence indicating that migration through remittances can reduce poverty. Remittances, moreover, can generate

income that exceeds the loss incurred by brain drain. This research also highlights brain gain and the potential role of diasporas as agents of development in countries of origin.

6. Circular labour migration is a positive new notion that could be of potential benefit to both source and destination countries. Migration in this regard is not mainly seen as detrimental, disturbing and disorderly, but something which is needed from the perspective of both industrialised and developing countries. With such an approach, there would be several options to achieve population complementarities between the EU and developing regions. Migration control policies are however not able to fundamentally block out unwanted migration just by opening more legal doors. Efficiency of control is often a combination of political will and priorities, the significance of human rights and the influence of market forces.

7. If the EU would identify strategic partners for long-term cooperation on circular labour migration and population complementarities, policies would need to address a number of basic concerns and shared interests. These include the need to improve the economic conditions in emigration countries by making remittances more efficient; ensuring the rights of the migrants; avoiding brain drain; addressing the links between unbalanced trade conditions and migration; and fostering legal well-managed alternatives to irregular migration.

8. These policies would need to address the specific conditions in each particular partner country. Therefore, the inclusion of migration in Regional and Country Strategy Papers on development is a positive step forward from the perspective of the EU. Also, developing countries need to incorporate migration into their national development strategies and poverty reduction strategies.

9. Much stronger linkages are needed between education and labour market policies. Current deficiencies in the matching between educational output and labour market needs among employers in developing countries, explain some of the brain drain flows and irregular migration targeting the EU. The incorporation of labour market policies in mainstream development cooperation is a positive sign. This could be utilised to a much larger extent than currently as an inroad to policies linking migration with developing country labour markets.

10. Cooperation on active educational policies and active labour market policies; brain circulation policies and joint funding to cater for skilled migration needs in both migrant source and destination countries, are some of the available policy options. EU aid could especially target job creation and decent working conditions to improve the social and economic environment in developing countries and thereby making it more attractive to remain or return.

11. Brain drain particularly affects key sectors such as health personnel in smaller countries in sub-Saharan Africa and elsewhere. The EU and its Member States need to work closer together with international organisations, such as the World Bank and WHO, and like-minded states that are engaged in issues of brain drain. To reverse the brain drain, there is a need for better mapping of the causes, mobility patterns and effects in specific countries. Codes of practice should be encouraged so that countries and recruiting agencies recruit in a responsible way.

12. Assistance could be offered to co-finance education in sectors where there is a skilled labour shortage, e.g. health care. Mutually funded, conditional student grants could ensure that the needed human capital is being trained in developing countries and that students, before or after emigrating, agree to work for a number of years at home to compensate for the costs invested in their education.

13. Moreover, migration patterns and remittance habits differ between women and men. Women and children are especially vulnerable to people traffickers, smugglers and to employer abuse. Policies linking migration and development therefore need to be gender-

sensitive and support frameworks of international rights that offer protection to women, children and vulnerable groups.

14. The notion of migration as an integral part of poor people's alternative livelihood strategies should be incorporated into mainstream development thinking. Most poor people have no access to South-North migration. Instead they are engaged in seasonal, internal or regional migration within poor regions. From a development perspective such migration is of vital importance. Therefore, the EU should reconsider its current South-North bias and the linking of development cooperation within the Neighbourhood policy to readmission agreements. Governments in the South need assistance and transfer of knowledge to establish rights-based migration policies and legislation. Moreover, work towards attaining the Millennium Development Goals need to take into consideration the links to migration more explicitly.

15. Polices on population and migration complementarities also need to take into account the down-sides of migration for developing countries. Migration may lead to increased inequality if remittances strengthen feelings of relative deprivation among the excluded poor. Remittances can also create dependence among migrant households.

16. Remittances could be put to more efficient use to benefit development. The EU needs to ensure that this asset is not used to justify lower levels of development assistance. More competition should be encouraged in the European and global money transfer business. This could bring down transaction costs; attract more remittances from informal into formal channels; and increase efficiency and speed of the transactions. Financial literacy training should be made available to both remittance senders and receivers.

17. The EU needs to work towards an improvement in the general investment climate in developing countries. The common lack of access to credit for entrepreneurs in developing countries could be remedied through encouraging financial intermediaries (e.g. micro finance institutions) to attract migrant remittances and direct them towards existing micro-businesses and productive investments. Mandatory schemes to attract remittances need to be avoided as remittances are private assets. Migrants' savings could instead be attracted through repatriable foreign currency accounts or foreign currency denominated bonds. Partnerships with money transfer organisations or banks could divide costs and risks.

18. The EU Commission's proposal to map and analyse the role and activities of existing diaspora groups in Europe, is commendable. Diasporas have a potential to play a more direct role in development cooperation. As migrant organisations often contribute to the welfare of their countries of origin through their own aid projects, they can be regarded as agents of development. Diasporas could e.g. be consulted during the formulation of Country Strategy Papers and be encouraged to exchange information and best practice regarding project management.

19. Professional, ethnic networks can be efficient in bringing innovation, investments and business contacts to developing countries. The downside of strong ethnic networks is however that they sometimes reflect a lack of integration. A development policy focus on diasporas should thus be coordinated with integration policy. Improved validation of qualifications and more efforts to match migrants' education and skills levels to employment in EU Member States, would prepare migrants better for their return and reintegration in local labour markets. Diasporas could have a role in distributing information about legal migration opportunities as well as the risks and costs of irregular migration.

20. Members of diasporas who have settled permanently in EU Member States, could be offered scholarships to work in their countries of origin for brief periods of time in key sectors of the labour market. Such exchange may benefit both source countries and the EU in terms of facilitating future investments, trade relations and cultural exchange.

21. The EU needs to place more emphasis on achieving true coherence between policies on migration, population, development, trade and environment. The EU and its Member

States also need to take into account the perspective of its partner countries to a larger extent than currently within the remit of their external relations. The “ownership” of making migration work for development needs to be firmly based both within EU Member States and within the partner countries.

22. Finally, the EU should also work towards strengthened national and international capacity for analysis, monitoring and evaluation. Such improvements could facilitate the comparative and systematic analysis of the links between migration and development and contribute to the ability to predict and manage migration flows that emerge in relation to population changes, conflicts and underdevelopment.