Changing Demographics

The Transformation of the Developed Countries

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CHANGING DEMOGRAPHICS

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Christiane Scheifhacken

ABSTRACT

This paper deals with the changing demographics in the developed countries and with their consequences for society. It elucidates the transformations these countries will be faced with, focusing especially on social, economic and political changes.

By taking a closer look at the nature and sources of the demographic development, part one sets the basis for further elaboration. Subsequently, the effect on old-age benefits and problems arising in the labor and product market are presented.

Finally, several approaches to improve the situation are discussed.

KEY WORDS

demographics
birth rate
life expectancy
immigration
1. INTRODUCTION

“Demographics are the single most important factor that nobody pays attention to...”

– Peter Drucker¹

Today’s developed countries are collectively growing older. While most of these countries are declining in population, all of them are experiencing an increase in the share of older people. This transformation, however, is not the only one they will be faced with. As a result of the changing demographics, a new society will emerge.

What are the reasons for this development? How will future life in the developed countries change? Which social, political and economic consequences can already be conjectured?

This paper attempts to answer these questions by taking a closer look at current and future demographics. In the course of explaining the demographic trend in those countries, birth rates and life expectancy will be examined.

Furthermore, possible social, political and economic consequences will be presented, focusing especially on the impact on pensions and health care expenses as well as on the implications for the labor and product market. In the last section a selection of possible measures will be examined, in order to find out which of them might bring about an improvement in the situation.

¹ Schlender, B. “Peter Drucker takes the long view”. Business 2.0. Sep 1998
2. THE NATURE AND SOURCES OF THE DEMOGRAPHIC TRANSFORMATION

A prerequisite for being able to analyse the impact of changing demographics on future life in the developed countries is to understand how and why they are changing.

Many studies and forecasts are aimed at exploring and explaining past, current and future demographic developments and their causes. Regarding future demographics, difficulties arise due to the fact that their development can only be estimated based on past and current data, but cannot be predicted with certainty. Past experience reveals that key factors such as the birth rate may change very quickly in an unexpected way.

The United States, for instance, has experienced several unanticipated changes in the birth rate. Due to the fact that the number of births had been declining significantly from 1925 to 1930, experts predicted this trend to continue in the future and to lead to a decrease in population starting in 1945. Instead, the birth rate suddenly rose from 1.8 births per woman to 3.7 between 1947 and 1957. During this period, the number of babies born each year increased from 2.5 million to 4.1 million. For this reason, this decade is often referred to as the “baby boom” period. The next unexpected change in the birth rate immediately followed when average births per woman suddenly decreased from 3.7 to 1.8 between 1961 and 1975. As a result of high immigration, another unexpected increase in the number of births took place in the late 1980s and early 1990s. Many of the immigrant women entering the country had much higher birth rates than American women. This caused the average birth rate to rise.²

As this example shows, demographic developments cannot be predicted with certainty. This should be kept in mind throughout this text, since the arguments presented in this paper are based on current estimations of future demographic developments. As these demographic trends might be subject to unexpected change, so might the impact they will have on future life.

Nevertheless, we can try to forecast trends for the next few decades, because everybody who will be retiring within the next 50 years is already alive, as are those people who will constitute the workforce in 2020. Therefore, only projections until 2050 will be considered in the following.

While forecasts of the change in the demographics of developed countries greatly differ in the magnitude of the numbers estimated, they all predict the same trend:

- The overall population will be declining and
- The share of older people will be increasing

### 2.1 The decrease in population

With the exception of the United States, all developed countries are expected to shrink in population over the next 50 years.

According to more pessimistic expectations (Table 2.1, appendix), Germany’s population will decline from currently 82 million to 57 million in 2050. Similar developments are being predicted for Italy, Spain and Japan. Even more optimistic forecasts (Table 2.2, appendix) estimate the population of Western Europe to fall from 184 million to 172 million within the next 50 years. While, during the same period, the number of people living in Southern Europe is predicted to decrease by 23 million to 122 million, Europe as a whole is expected to experience a decline in population from 728 million in 2000 to 642 million in 2050.

### 2.2 The increase in the share of older people

The share of people aged 65 and above has been increasing continuously. This trend is expected to carry on at an even faster pace in the future.

While in 1900 only 4% of the people living in the United States were older than 65, this age group now accounts for 13% of the US population, a share which is estimated to rise to 25% by 2040. Forecasts project the number of people between 65 and 74 years of age to
grow by 74 % from 1990 to 2020. In 1998, the median age in the United States was as high as 35.2, a level which had never been reached before.³

Similar trends can be observed in many other developed countries as well. In the UK, Italy and Spain the share of people older than 65 is currently 16 %, while 15 % belong to that age group in Germany, France and Japan. For Germany, this number is expected to rise to 28% by 2050.⁴

In order to understand the impact of those demographic trends on future life, it is not only important to estimate the size and direction of those changes, but furthermore, to examine their causes. Many different factors may influence the composition and size of a country’s population. However, only two key determinants will be considered here:

- Birth rates
- Life expectancy

### 2.3 Birth rates

The number of children born per 1,000 inhabitants of a country per year or, alternatively, the number of live births per woman, is known as the birth rate.

With the exception of the “baby boom” period, birth rates have been declining continuously over the past few decades. While in 1965, births per 1,000 inhabitants amounted to 18 in Germany, 22 in Spain, 19 in Italy and 24 in the US, they were as few as 10 in Germany, Italy and Spain and 16 in the United States in 1995 (Table 2.3, appendix). In the European Union, the number of children born each year decreased from 5.8 million in 1960 to 4.2 million in 1992 and to less than 4 million in 1995.⁵

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³ internet source: usembassy.de “U.S. society > Census & Demographics”, August 2001
⁴ Internet source: www.planetgeog.com
⁵ Microsoft Encarta
According to Peter Drucker, the replacement rate, i.e. the number of live births per woman needed to maintain the size of the population, amounts to 2.2, and birth rates in every developed country fall short of this figure.\(^6\)

In Germany, the birth rate is currently 1.25, while it is as low as 1.19 in Italy and 1.21 in Spain. Even the United States, with a birth rate of 2.07, lies below the replacement rate. (Table 2.4, appendix). This number would be even lower if there were not so many immigrants entering the country. Studies suggest that immigrants and their children have birth rates, which are still close to that of the country of their origin. A large share of the immigrants arriving in the US each year comes from countries with much higher birth rates than that of the US. These women on average give birth to more children than an average American woman does and therefore raise the average birth rate.\(^7\) As a matter of fact, the increase in population in the United States is only being sustained by immigration itself.

### 2.4 Life expectancy

The life expectancy in developed countries, i.e. the number of years a person in such a country is likely to live, has been increasing continuously.

When the US was founded in 1776, average life expectancy was 35 years. By 1900, this number had risen to 47.3, and in 1998 it was as high as 76.1. Forecasts estimate this figure to increase to 82.6 by 2050.\(^8\) The situation in Europe is similar (Table 2.5, appendix). People living in Germany had an average life expectancy of 67.5 years in 1950, 77 years in 1998 and are predicted to live for 83.1 years by 2050.

This increase in life expectancy is due to various reasons: better health care, medicine, education, nutrition and fewer physically demanding jobs. The share of people working in the latter fell from 20.3 % in 1950 to 7.5 % in 1996. With continuing education, people become

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\(^{6}\) ibid. nt. 2  
\(^{7}\) ibid. nt. 2  
\(^{8}\) ibid. nt. 3
more aware of their health and are more concerned about maintaining it. Various movements such as anti-smoking and anti-drug campaigns are contributing to this awareness.⁹

The decline in population and the rise in the share of older people are primarily due to the combined effect of low birth rates and increasing life expectancy. If this development continues, the population structure and size of the developed countries will change drastically.

Given that the current tendency persists, experts expect the share of people in Germany who are younger than 35 to decline “twice as fast as the older population will grow”. Furthermore, the working-aged population is predicted to fall by 25 % to 30 million in 2030. This trend is also being observed in many other developed countries such as France, Italy, Portugal, the Netherlands, Japan and even in developing countries like China.¹⁰

Having attained an understanding of the nature and sources of changing demographics, we can now turn to the effects they might have on future life.

3. POSSIBLE CONSEQUENCES FOR SOCIETY

The ageing of the population will alter life in the developed countries in many ways. Despite the fact that precise predictions of the impact of this demographic development on future life cannot be made, it is still possible to conjecture some of the changes that lie ahead of us. In the following, some of the possible social, political and economic consequences will be presented.

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⁹ The Economist. “Ageing workers”, Sep 4, 1999 (Author not stated)
¹⁰ ibid. nt. 2
3.1 Social consequences

The rapid increase in the share of older people might have its most significant impact on health care and pensions systems.

In most developed countries the current official retirement age is 65. Once retired, most people receive generous pensions, which are being financed by the payroll taxes of the labor force. This “contract between generations” can only be upheld, if the taxes raised cover the benefits being paid out. As the workforce declines and the number of beneficiaries as well as the average number of years spent in retirement rises, this system loses its balance.

While many politicians are still ignorant of this fact, action has to be taken immediately in order to avoid a crisis. With more and more older people going into retirement and fewer and fewer young persons entering the labor force, the burden on the working population will soon become unbearable.

The same will be true for health care costs. Since the need for medical treatment rises with age, health care expenditures are bound to increase significantly in the future. If no action is taken, governments will soon have to pay out more benefits than they will receive in taxes.

Researchers estimate that the US will have to face this situation by 2014. In 1960, each person over the age of 65 was supported by an average 5.1 workers. Today this ratio is as low as 3.4 and is projected to fall to 2.1 by 2030. This development is expected to cause a government deficit, which will increase to 120 trillion dollars within the next 75 years.11 While the situation in the United States is already quite alarming, it will probably be worse in Europe which, in contrast to the US, is additionally experiencing a decline in population.

Adjustments will be necessary in all developed countries. Measures that might be taken include:

- increasing taxes
- lowering benefits
- prolonging working life
- encouraging immigration
- promoting higher birth rates

Governments will have to examine these alternatives carefully, as each of them would bring about difficulties itself.

The latter three will be dealt with in more detail in the next section of this paper. For now, the first two will be examined.

**Increasing taxes**

The government could decide to raise more money by increasing payroll taxes. This increase, however, would have to be quite substantial. Experts conjecture that the US government would have to raise taxes by 50% to avoid the above-mentioned deficit\(^\text{12}\). This would put an unbearable burden on the young generation as well as do harm to the economy.

An increase in payroll taxes by that amount would decisively lower the living standard of the young. They would have less money for themselves and their family and would probably be discouraged from having more children, because they could not “afford” them. This would again worsen the situation, due to the fact that further declining birth rates would cause further decreases in the number of people entering the workforce.

Additionally, labor costs would rise in proportion to the increase in taxes. This would induce companies to move to countries where costs are lower and would discourage investors from

\(^{12}\) ibid. nt. 11
starting new businesses. Again, the situation would be worse than before, as this would cause a recession and would therefore also lower the government’s tax revenue.

**Lowering benefits**

Another way to avoid a deficit would be to lower benefits. This measure will probably be unavoidable. Returning to the example of the USA, the same experts as before estimated that with taxes remaining at their current level, benefits would have to be reduced by 30 % to avoid the predicted deficit. This would imply a lower living standard for the older population.

Today, seniors living in the developed countries are richer than ever before and are often even wealthier than the younger generations. In the US, people aged 50 and above own “half of the country’s disposable income, 75 percent of its financial assets (worth more than $ 8 trillion) and 80 percent of its savings and loan accounts”. Therefore, it might be possible to reduce benefits to some extent without substantially harming the elderly. A 30 % cut, however, would not be appropriate nor is it likely to be implemented.

Pensions are a regular elections issue and some politicians still promise to raise benefits. This is mainly due to the fact that older people vote more regularly than younger ones. Since politicians strive to be re-elected, winning the support of the voters is important for them. Therefore, it is unlikely that, with increasing numbers of older people, politicians would cut benefits drastically.

This leads us to the political implications of the new demographics.

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13 ibid. nt. 11
14 ibid. nt. 2
3.2 Political changes

Studies of voting behaviour reveal that older people participate more actively in elections than younger generations, both as voters and as candidates.\textsuperscript{15} Consequently, it is reasonable to assume that an increase in the share of older people will have a substantial impact on the political landscape in all developed countries. As the number of senior citizens grows, politicians will become more aware of the need to win their support. Today’s political parties will be faced with the competition of emerging old-peoples parties. In order to sustain their position, they will have to adjust their policies to meet the desires of the older population. For this reason, age-related topics as well as the values and needs of the elderly are likely to play an increasingly important role in future politics.

3.3 Economic consequences

The economy will most likely experience changes in both the labor market as well as the market for goods and services.

The declining number of people entering the labor force will eventually lead to a shortage in the labor supply. Companies will have difficulties hiring the workers they need. This will especially be the case for professional workers with specific skills. Some countries, like Germany, for instance, are already facing this situation in the computer industry where specialists are scarce. Special regulations have been implemented to enable companies to “import” computer professionals from other countries such as India.

The scarcity of workers will force the economy to search for solutions. One alternative will again be immigration. Furthermore, continuing education will become increasingly important. Productivity is one of the key factors affecting economic growth. To avoid a loss in productivity due to a decline in the number of workers, each worker will have to become

more productive. In achieving this, continuing education will play an increasingly important role.

Additionally, it will be imperative to encourage the older generation to keep working past retirement age. This will increase the labor force, reduce the number of pensioners and preserve the skills of the experienced elderly workers for the economy. Jobs that suit the needs of senior citizens will have to be found. This will change the structure of the labor market. The elderly will probably work part-time or from home, while the young will have longer workdays.

The market for goods and services will change as well, transforming from a youth oriented mass market to one that targets both young and old. With an increasing number of older people, there will be a rise in the demand for products that satisfy their needs and wants. The preferences and requirements of the older generation differ in many ways from those of the young. Companies will have to face the challenge of satisfying the needs and wants of the elderly if they want to stay in business, not only because senior citizens are growing in number, but also because they are often wealthier than the young generation.

The ageing of the population will affect all sectors of the economy. The housing sector, for instance, will have to provide an increasing number of apartments, which are easily accessible for people in wheelchairs and for those with walking difficulties. The T.V. industry will probably “discover” the elderly as a new target group and might offer fewer cartoons and action movies and more documentaries, travel shows and music hall programs.

Compared to the younger generations, older people often have different preferences when it comes to clothing, entertainment and many other areas. Therefore, it is likely that, for instance, mail order firms will change their catalogues and that theatres and museums will experience a renaissance.
Furthermore, the demand for services such as “meals on wheels” and home-care as well as for old-people’s homes will rise, due to the fact that it becomes increasingly difficult for many people to take care of all aspects of life by themselves as they grow older.

As illustrated, the current demographic development will change future life in many ways. Despite the fact that only a few of the many possible changes lying ahead of us were considered here, it becomes clear that action has to be taken soon to avoid problems such as labor shortages and government deficits. If this is not done, living standards will decline. According to the OECD, living standards in the developed countries will slow their growths if the current the demographic trend continues. By 2040, Japan’s living standards are expected to fall short of “the level they might have reached otherwise” by 23%. While, for the United States, this cut in living standards is estimated to amount to 10%, it will be as high as 18% in Europe.\(^\text{16}\)

In the following, possible solutions to this “dilemma” will be examined.

4. APPROACHES TO IMPROVE THE SITUATION

As the consequences of the demographic development become more evident, more and more people will realise that action has to be taken. The difficulty lies in coming up with measures that will improve the situation. In the following, three approaches will be examined:

- Increasing immigration
- Promoting higher birth rates
- Prolonging working life

\(^{16}\) ibid. nt. 9
4.1 Increasing immigration

One alternative to stop the decline in population and work force is to increase immigration.

Immigration is a highly debated and very complex issue. On the one hand, it will be needed to maintain the labor force. Researchers estimate that by 2020, Germany, for instance, will need 1 million immigrants of working age to enter the country every year in order to maintain its labor force.\(^{17}\) On the other hand, immigration is associated with various problems such as

- Xenophobia, Discrimination and Racism and
- Integration problems

which will be outlined in the following. There are many different opinions on how to handle these issues. Discussing them would go beyond the purpose of this paper.

**Xenophobia, Discrimination and Racism**

Cultural and ethnic differences between immigrants and the native population often lead to tensions. As the number of immigrants increases, these tensions become larger.

Instead of accepting and trying to learn more about the life style of these people, many nationals react xenophobically. They distrust the new arrivals, thinking that they are potential criminals and terrorists, cause unemployment and rely on welfare.

Evidence shows, however, that immigrants contribute to the creation of jobs by opening up new businesses and that many of them do not even qualify for welfare benefits. In Berlin, Germany, for instance, 5,000 Turkish businesses have been established, employing 20,000 workers.\(^ {18} \) Furthermore, even after the terrorist attacks on the World Trade Center in New York City, it cannot automatically be concluded that every Muslim is a terrorist.

Besides those prejudices, immigrants often have to face discrimination and racism.

\(^{17}\) ibid. nt. 2
Evidence reveals that the number of people belonging to right-wing extremist groups and the number of racist crimes are increasing in all countries of the European Union. The European Monitoring Center of Racism and Xenophobia (EUMC) has recently published its annual report for the year 2000\(^\text{19}\). According to this report, neo-Nazi organisations are rapidly growing in size in many European countries, and the number of racist crimes committed by these groups and their supporters are drastically increasing and becoming more serious and violent in nature. Between 1995 and 2000, the total membership in neo-Nazi organisations in Spain quadrupled from 2,300 to 10,400. In Germany, homepages with right-wing extremist content increased from 330 in 1999 to 800 in 2000.

The total crime rate in Germany increased by 59% in that same period. As part of this, the share of violent crimes committed by right-wing extremists rose by 34% while the share of propaganda offences grew by 25%. The most serious racist incident in 2000 took place in El Ejido, Spain, where at the beginning of the year, hundreds of Spanish nationals attacked the Moroccan immigrant population. This riot went on for 4 days.

The report furthermore states that immigrants from Islamic countries as well as Jews are the most likely to become targets of racist attacks. In France, 43 synagogues and 3 Jewish cemeteries were defaced in the year 2000. On April 20, 2000, a Jewish synagogue in Erfurt, Germany, was set on fire.

In addition to violence, immigrants often fall victim to racial and ethnic discrimination, with the majority of incidents occurring in the labor market. In most European countries, immigrants and their children have much higher unemployment rates than the native population. The EUMC considers this to be evidence for the still existing prejudices against immigrants.

\(^{19}\) All data in the following section from: internet source: www.eumc.eu.int
Integration problems

The successful integration of immigrants depends on the effort of both immigrants and nationals. Even highly motivated immigrants cannot integrate into the society of their adopted country if the society will not let them.

Evidence suggests that for many immigrants in the developed countries, integration has not yet taken place. Being able to speak and read the language of the adopted country is a prerequisite for successful integration. Yet, many immigrants have great difficulties in acquiring this capability. In the United States, 75 percent of all immigrants speak a language other than English at home.\cite{20} Considering that the term “immigrant” includes foreign born residents from English speaking countries, one can conclude that this percentage is even higher for people from non-English speaking countries.

This is mainly due to a lack of appropriate language classes available to them. Furthermore, immigrants often live in ethnic communities, allowing them to maintain the culture, life style and language of their home country. This can especially be observed in the United States, which is a country of immigrants. In the US, most major cities have a China Town, and Italian and Mexican communities are very common as well. Those neighbourhoods are often small towns themselves, containing stores, schools, places of worship and many more. There, it is possible to participate in every day life without being able to speak a single word of English. The situation in Europe is similar. In Berlin, Turkish people make up 90 percent and more of some residential districts. The composition of school classes in those areas is analogous.\cite{21}

As the number of immigrants increases, these communities grow in size, which makes integration very difficult and maybe even impossible. To successfully integrate these people one would have to break up those communities and prevent the formation of new ones. Opinions on whether or not this would be appropriate differ. Some people criticise this saying that this would jeopardise pluralism while others support this idea.

\cite{20} Brouvier, L. “Embracing America”. Center of Immigration Studies.
\cite{21} Süssmuth, R. “Interview mit Rita Süssmuth”. magazine-deutschland.de. June 2000
As one can see, immigration is a very complex issue associated with many problems. With increasing numbers of immigrants, these problems become more serious. It is therefore not advisable to increase immigration to overcome labor market deficiencies without setting the basis for a successful integration of the new arrivals. Measures to be taken should include offering language classes as well as appropriate housing away from ethnic communities. Furthermore, the native population will have to overcome its prejudices against foreigners. Integration will have to be mutual and reciprocal to be successful. This implies that discrimination and racism will have to be eliminated, enabling immigrants to live without fear. Considering that racial violence has been found to be increasing, it is doubtful that this will be possible.

**4.2 Promoting higher birth rates**

To stop the decline in population, governments could also try to encourage higher birth rates. Whether it will be possible to induce birth rates to rise above the replacement rate of 2.2 is debatable.

As already illustrated, birth rates are projected to decline continuously. Studies additionally suggest that more women decide to remain childless. In Germany, for instance, the number of childless women has increased from one in ten for those women born between 1930 and 1950 to one in three for every woman born after 1965. Research furthermore revealed that the age at which women on average give birth to their first child is increasing. In Italy, for example, the average age of first birth has risen from 25 in 1980 to 28.4 in the mid 1990s.

Moreover, there is evidence that higher educated women on average postpone having their first child longer and are more often childless than less educated ones. (Table 4.1, appendix). In 1999, the average age of first birth for highly educated women was 28.7 in Germany, 28.3 in France, 30.3 in the Netherlands and 29.1 in the UK. For women with a low level of

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22 Ehrenstein, C. “Frauen werden immer später zu Müttern”, Die Welt, June 1, 2001
education this average age was 25.3 in Germany and France, 26.2 in the Netherlands and 26.3 in the UK.

Considering that the societies of the developed countries are transforming into knowledge societies in which continuing education will play an essential role\textsuperscript{23}, it is reasonable to assume that future trends will probably be towards later first birth and more childless women.

It will be difficult to reverse this tendency. Governments could, however, try to weaken this development by making children more “attractive”. One possible measure would be to reduce the cost of having children. To achieve this, more day-care centers would have to be established in order to enable mothers to go back to work without having to pay for expensive baby-sitters. Educated mothers will probably want their children to be well educated. To encourage these women to have children, it would be appropriate to offer free education. This, however, might prove to be just another “can of worms”, since this in turn will have to be financed.

4.3 Prolonging working life

One very effective measure to reduce the burden on the working population would be to increase the retirement age. By doing so, the number of pensioners would fall and tax contributions would rise.

More important than increasing the official retirement age, however, will be to reduce early retirement. Currently, early retirement is very popular. While “in the United States only half the men aged between 60 and 64 are still in the labour force”, this figure is as low as one-third in Germany and one-fifth in France and the Netherlands\textsuperscript{24}.

Among the reasons for early retirement is, that the elderly often encounter great difficulties in finding a job that suits their needs. Furthermore, companies often encourage older people to go into early retirement. By doing so, they hope to reduce labor costs, since these workers

\textsuperscript{23} ibid. nt. 2
\textsuperscript{24} ibid. nt. 9
often receive higher wages than young ones. Sending experienced workers into retirement, however, implies losing their valuable skills.

Due to the demographic developments, companies will soon have to deviate from this strategy. It will become essential to preserve the skill and experience of the elderly for the workforce. For this reason, several ways have to be found to persuade senior citizens to continue working. Possible measures might include employing them in new ways by offering them part-time jobs or temporary employment.
5. SUMMARY AND CONCLUSION

The collective ageing of the developed countries is mainly due to declining birth rates and increasing life expectancy. As this trend continues, the consequences will grow more severe. The economy will have to face labor deficiencies as well as a transformation of the market for goods and services. In order to be successful, companies as well as politicians will have to be attentive to the needs and preferences of the elderly. With the number of older people increasing, pensions and health care expenses will rise substantially. Possible measures that could be taken to improve the situation include increasing immigration. This, however, is in turn associated with many problems such as xenophobia and integration difficulties. Before this measure can be implemented, it will be necessary to reduce those problems as far as possible to avoid further tensions between the new arrivals and the native population. Additionally, lowering old-age benefits to some extent as well as prolonging working life will probably be unavoidable.

The impact collective ageing will have on future life in the developed countries cannot be predicted to its full extent yet. It is, however, already possible to perceive some of the problems that will arise. Large government deficits and lower living standards are just a two of them. To avoid a crisis, immediate action will be crucial. Any further delay will worsen the situation. It is therefore imperative that especially governments and companies start paying attention to the changing demographics. Only if measures are implemented before the problems grow too severe, will society have enough time to adjust to the changes lying ahead of it.
6. APPENDIX

Table 2.1  
Total Population Projections for 8 Developed Countries

<table>
<thead>
<tr>
<th>country</th>
<th>2000</th>
<th>2025</th>
<th>2050</th>
</tr>
</thead>
<tbody>
<tr>
<td>Germany</td>
<td>82,081,365</td>
<td>75,372,295</td>
<td>57,428,546</td>
</tr>
<tr>
<td>Spain</td>
<td>39,200,000</td>
<td>36,841,084</td>
<td>29,404,835</td>
</tr>
<tr>
<td>Italy</td>
<td>56,686,568</td>
<td>50,351,674</td>
<td>38,290,137</td>
</tr>
<tr>
<td>UK</td>
<td>59,247,000</td>
<td>59,984,961</td>
<td>54,115,710</td>
</tr>
<tr>
<td>US</td>
<td>274,943,000</td>
<td>335,359,714</td>
<td>394,240,528</td>
</tr>
<tr>
<td>Japan</td>
<td>126,434,470</td>
<td>119,864,560</td>
<td>101,333,742</td>
</tr>
</tbody>
</table>

Table 2.2  
Total Population Projections for Europe

<table>
<thead>
<tr>
<th>Region</th>
<th>2000</th>
<th>2050</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eastern Europe</td>
<td>304,624,393</td>
<td>247,037,796</td>
</tr>
<tr>
<td>Northern Europe</td>
<td>94,942,547</td>
<td>92,858,322</td>
</tr>
<tr>
<td>Southern Europe</td>
<td>145,033,341</td>
<td>122,685,797</td>
</tr>
<tr>
<td>Western Europe</td>
<td>184,381,718</td>
<td>179,864,935</td>
</tr>
<tr>
<td>Total</td>
<td>728,981,999</td>
<td>642,446,850</td>
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</table>

Table 2.3  
Birth Rates Development (births per 1,000 inhabitants)

<table>
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<tr>
<th>Country</th>
<th>1950</th>
<th>1965</th>
<th>1994</th>
</tr>
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<tbody>
<tr>
<td>Germany</td>
<td>16</td>
<td>18</td>
<td>10</td>
</tr>
<tr>
<td>Spain</td>
<td>20</td>
<td>22</td>
<td>10</td>
</tr>
<tr>
<td>Italy</td>
<td>18</td>
<td>19</td>
<td>10</td>
</tr>
<tr>
<td>UK</td>
<td>16</td>
<td>18</td>
<td>13</td>
</tr>
<tr>
<td>US</td>
<td>24</td>
<td>22</td>
<td>16</td>
</tr>
<tr>
<td>Japan</td>
<td>24</td>
<td>17</td>
<td>10</td>
</tr>
</tbody>
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Table 2.4  
Average Birth Rates (per life)

<table>
<thead>
<tr>
<th>country</th>
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<th>Spain</th>
<th>Italy</th>
<th>UK</th>
<th>US</th>
<th>Japan</th>
</tr>
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<tbody>
<tr>
<td>birth rate</td>
<td>1.25</td>
<td>1.21</td>
<td>1.19</td>
<td>1.7</td>
<td>2.07</td>
<td>1.46</td>
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</table>

Table 4.1  
Age at first birth (1999), women aged 25-59 by level of education

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<thead>
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<th></th>
<th>Germany</th>
<th>France</th>
<th>Netherlands</th>
<th>United Kingdom</th>
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<tr>
<td>Low</td>
<td>25.3</td>
<td>25.3</td>
<td>26.2</td>
<td>26.3</td>
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<tr>
<td>Medium</td>
<td>26.5</td>
<td>25.9</td>
<td>27.6</td>
<td>26.4</td>
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<tr>
<td>High</td>
<td>28.7</td>
<td>28.3</td>
<td>30.3</td>
<td>29.1</td>
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<tr>
<td>Total</td>
<td>26.5</td>
<td>26.2</td>
<td>27.5</td>
<td>27.0</td>
</tr>
</tbody>
</table>

---

25 Microsoft Encarta Weltatlas 2000
26 Encylopaedia Britannica CD 2000 deluxe edition
27 ibid. nt. 27
28 ibid. nt. 26
29 Vlasblom, V.D. „Increases in female labor supply: less children of less effect of children“. January 2001
### Table 6.1 Demographic Data for 6 Developed Countries

<table>
<thead>
<tr>
<th></th>
<th>1995</th>
<th>2000</th>
<th>2010</th>
<th>2020</th>
<th>2030</th>
<th>2050</th>
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<td>104.8</td>
<td>113.0</td>
<td>119.8</td>
<td>124.7</td>
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<td>19.2</td>
<td>19.0</td>
<td>20.4</td>
<td>27.6</td>
<td>36.8</td>
<td>38.4</td>
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<td>75+ as % 65+</td>
<td>42.7</td>
<td>46.3</td>
<td>45.8</td>
<td>40.5</td>
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<tr>
<td>Total dep. Ratio</td>
<td>52.7</td>
<td>52.0</td>
<td>50.5</td>
<td>57.4</td>
<td>68.0</td>
<td>68.8</td>
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<tr>
<td><strong>Japan</strong></td>
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<td>81.3</td>
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<td>106.1</td>
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<td>24.6</td>
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<td>39.1</td>
<td>43.5</td>
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<tr>
<td>75+ as % 65+</td>
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<td>43.4</td>
<td>49.6</td>
<td>41.9</td>
<td>48.8</td>
<td>56.6</td>
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<td>51.2</td>
<td>59.6</td>
<td>67.9</td>
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<td>48.3</td>
<td>60.0</td>
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<tr>
<td>75+ as % 65+</td>
<td>38.5</td>
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<td>47.9</td>
<td>48.4</td>
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<td>58.8</td>
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<td>Population</td>
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<td>101.0</td>
<td>102.2</td>
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<td>Old age dep. Ratio</td>
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</tbody>
</table>

Population in % of 1995

Old age dependency Ratio
- Population over 65 as percent of population 15-64
- Population over 75 as percent of population over 65

Total dependency Ratio
- Population 0-14 and 65+ as percent of pop. 15-64

---

Figure 2.1  Population aged 65 or older (2000)

Figure 2.2  Population aged 60 or older (2050)

31 ibid. nt. 4
32 ibid. nt. 2
Figure 2.3\textsuperscript{33} Birth Rates (per 1000 population)

\textsuperscript{33} ibid. nt. 4
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