

# MASTER THESIS

## **The impact of demographic challenges on European pension systems: A case study based on a system comparison of Great Britain and Germany**

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### **The impact of demographic challenges on European pension systems: A case study based on a system comparison of Great Britain and Germany**

Do Anglo-Saxon and European continental countries' pension systems face different social inclusion challenges in relation to demographic change?

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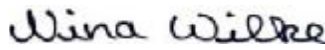
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## 1 Introduction

“Demographic trends are a powerful force for change” (Barroso, 2005). With these words, the President of the European Commission, José Manuel Barroso, alluded to the significant impact of demographic change within the European Union. By 2030, the working population will have fallen by more than 21 million people and the EU-27 will have decreased in their population by losing about twenty million young people. At the same time the number of elder people over sixty-five will increase from less than 3% of the population to more than 20% in total. This will lead to shift a regime of high mortality and high fertility to one of low mortality and low fertility which is going to be the highest in the European Union, apart from Japan. As those developments may have serious economic and social consequences, the labour force will also be faced with an increasing ageing. This causes an increasing number of retired people who will need to be supported by a reduced working-age population. Accordingly, by 2050, there will be a change from four to only two people working for a retiree.

Those unprecedented changes will further have a major impact on the present welfare states in the European Union. Economic growth rates are highly set to decline in future times, as the number of contributors is shrinking with the ageing of the population. As a result, public finances risk will become unsustainable and compromises social security as well as the pension systems in general. Consequently, the demand for developing massive reforms is fairly high, regardless of what kind of pension scheme is currently applied. The main purpose of most of recent pension reforms has been to cut public expenditure and hence to establish financially sustainable pension systems. However, the way countries respond on the pressures varies considerably across the European Union, as it depends on the institutional structure of the current pension system, as demographic changes possess different impacts on the respective pension scheme.

Therefore, this thesis deals with the impact of demographic change on pension schemes in the European Union. Those can be characterised by different institutional and programmatic designs inherited from the past and developed depending on their adopted path. With this, the focus is focus on a theoretical distinction between social insurance countries (mature countries) with a pay-as-you go-system and multipillar countries (latecomers), which generally resulted from the path-dependency. The main difference of those schemes is not only on the sort of benefits that are distributed but also the way in which pension schemes are

financed. Nevertheless, both of those systems are faced with the demographic change, but in different ways.

For this thesis, the basis of the term is to analyse the outcomes of social inclusion with regard to the different natures of pensions systems that are apparent in the European Union. This approach is based on the demographic challenges on European pension systems, which imply certain changes in social inclusion outcomes. This is based on the theoretical distinction between multipillar countries, as it is present in the Anglo-Saxon countries, and social insurance countries, as can be found in European continental countries. With this, the focus is on the performance of the British and the German pension system in light of demographic change, representing the cases of the European continental and the Anglo-Saxon countries. The contrary welfare traditions as well as a differently proceeding demographic change in Germany and the United Kingdom cause unequal challenges for those countries' pension schemes. This thesis outlines the outcomes of social inclusion in pension systems with regard to a strongly defined set of key objectives. With this, it will be analysed how the respective pension system is performing in terms of social inclusion outcomes.

## **2 Research Question**

The central question formulated for this thesis asks if Anglo-Saxon and European Continental countries' pension systems face different challenges in relation to demographic change. With this, the focus is set on the term of social inclusion: What are the countries' outcomes of social inclusion related to the challenges of demographic change?

This approach is based on the theoretical concept of path dependence of pension systems, which will be introduced in the first part of the thesis. The theory of path dependence is in the first line brought up in order to identify the different natures of pension systems that are apparent in the European Union. For this, it is understood as a process that is used as an instrument to understand the reason for different natures of pension schemes. In this context, the thesis will answer in how far path dependence influenced the development of pension system construction. As the theoretical concept is based on the models of Bonoli on the one hand and Myles and Pierson on the other, one important question in this term is: What are the differences between the theoretical models of path dependence given by Bonoli and Myles and Pierson? Furthermore, it has to be questioned which approach is able to account for



converging towards the central research question in terms of social inclusion. Consequently, the theoretical concept of path dependence and with this the diverse structures of pension schemes are mainly used as an instrument to understand the diverse outcomes of social inclusion in the different types of European pension schemes.

In the next step the subject of demographic change is introduced. This is in order to observe changes in the life course approach that have an impact of the nature of pension schemes. Hence, a literature discussion of the latest data provided by the European Union Institutions is set up in order to possess past, current and future developments in this term. Relevant questions to be answered are: Will the population size change? Will the population keep on ageing and, if yes, in how far will this affect the EU? Does EU citizens' life expectancy change and does this have certain impacts? And: What are the trends in fertility rates? By answering those questions, it should be elaborated in how far there are certain changes within the general European life course approach. Additionally, the cases of Germany and the United Kingdom in terms of demographic change will be introduced in order to approach the pension system comparison of Anglo-Saxon and European Continental countries in the further course of the thesis. Those countries will act as representatives in terms of the different natures of pension schemes in the European Union.

The examination given in the previous part is strongly related to the assessment of the demographic changes in labour market. With this, it is possible to outline a changed life course approach, caused by the changes of demographic change. This chapter addresses the questions: What are the changes on the EU labour market? What are the trends concerning old workers, young workers and gender? Is the labour force participation within the EU changing? And: How is the share of age groups changing and are there certain time periods of labour force ageing? Hence, the European life course change is applied to the life course on the labour market and is explained through the changes of labour markets in terms of demographic change. Although this will be done in a rather broad way, containing the overall changes in the European Union, the effects of demographic change highlighted in the subsequent part similarly apply to the specific cases of Germany and the United Kingdom. Again, the overall focus is set on social inclusion, as a changing life course has impacts on the development of pension schemes and might change social inclusion outcomes. To round out this part of the thesis, the findings in terms of life course change have to be translated to the pension challenge. Since this topic is highly related to the economic performance, it has to be questioned: In how far are economic growth rates set to be changes in future times? What is the impact of the developments in life course on age-related public-spending? And: To what

development do those changes lead? The answers given in this context evolve to the changes in social inclusion in terms of changing pension systems.

In order to get a more focused scheme of the changes highlighted in the previous chapter, the next part will introduce a more focused analysis of the different natures of pension systems. This will be done on the basis of the system comparison of the cases of Germany and the United Kingdom, representing the European Continental and the Anglo-Saxon pension system respectively. In the first step, the structure of both pension schemes has to be analysed in order to enable it as an instrument to understand social inclusion outcomes in the following parts of the thesis. Consequently, questions in this context are: Which pension system is present in the respective country and what are its general characteristics? How are the pensions calculated? And: What are the welfare benefits for retirees? In order to understand the outcomes of social inclusion in a more focused way, the respective reforms set up in both countries will be used as an instrument leading to the outcomes of pension systems in terms of social inclusion. In this context, the following questions will be addressed: What reforms are and will be implemented to diminish the challenges of demographic change? A concluding assessment of both pension systems in terms of demographic change is also used as an instrument for the following part in order to lead to the outcomes of social inclusion.

In the overall evaluation of this thesis, the different natures of pension schemes have to be directly set in contrast with each other in order to define their outcomes of social inclusion. A comparison of the institutional structure of the pension schemes in the first step points out in what level institutional arrangements of pension systems do influence and the distribution of old-age incomes among individuals. This question is highly relevant for an analysis the key objectives in terms of social inclusion referred to in the following part. Consequently, it should be answered if the diverse aspects of the respective pension system's nature cause certain effects on the systems' performance with regard to social inclusion. The least part of the assessment will evaluate how the pension schemes are performing with regard to the key objectives reaching social inclusion. Additionally, it is not the aim to analyse which country performs better, but the focus is set on how they perform.

### **3 Theory and Methodology for the paper**

As it was already highlighted in the research question, the aim of this thesis is to analyse the outcomes of social inclusion with regard to the different natures of pensions systems that are apparent in the European Union. This approach is based on the demographic challenges on European pension systems, which imply certain changes in social inclusion outcomes.

The term social inclusion has over recent years been widely used in the context of pension systems. Nevertheless, it is a quite flexible term with lack of general applicability which makes it rather loose as a concept including a variety of approaches. One approach can be found in T.H. Marshall's classic discussion in 1964 about the term citizenship. In his lecture "Citizenship and Social Class" (Marshall, 1999) he divides citizenship in the modern sense into three parts, civil, political and social, which became universalized in different centuries. At this, the term social citizenship can be recognized as a concept of social inclusion. Therefore, the social element includes the whole range to live the life of a civilized being. It is defined as the rights and duties of citizenship concerned with the welfare of citizens, including work, income, education and health. According to T.H. Marshall, social citizenship is the core idea of a welfare state. It involves granting social rights which are connected to a citizen's class position and includes inequality of citizenship. Since a welfare state is not just understood in terms of grants and rights, state activities concerning the market's and the family's role in social provision must also be taken into account. Ralf Dahrendorf goes beyond this approach and includes equal entitlements for all members that are enforced by sanctions and protected by institutions: "The search for a civil society (...) is one for equal rights in a constitutional framework which domesticates power so that all can enjoy citizenship as a foundation of their life chances" (Dahrendorf, 1988: 35). Additionally, Maurice Roche attends in his study "Rethinking Citizenship and Social Movements: Themes in Contemporary Sociology and Neoconservative Ideology" to structural welfare state changes and the effects on social citizenship (Roche, 1995). These changes are associated to a new transnational postmodern social formation, which has to be taken into account in the social and political thinking : "The main development relevant here is the long-term and accelerating breakdown of the standardized family pattern of patriarchally based gender roles and division of labour (...)" (Dahrenforf: 1988: 223).

The approaches of those concepts are recognized in this thesis for the definition of the term social inclusion. Nevertheless, it has to be extended by a definition of the Centre for Economic and Social Inclusion to include the responsibility of both society and individuals:

“Social inclusion is the process by which efforts are made to ensure that everyone, regardless of their experiences and circumstances, can achieve their potential in life. To achieve inclusion income and employment are necessary but not sufficient. An inclusive society is also characterised by a striving for reduced inequality, a balance between individuals’ rights and duties and increased social cohesion” (Centre for Economic and Social Inclusion: 2002).

For this thesis, certain key objectives in terms of social inclusion as disposed by Birgit Mattil in her study “Pension Systems” will be analysed in order to identify social inclusion outcomes. They will constitute the basis for the overall evaluation of the pension systems. Since theoretical, institutional and empirical analyses focus on those aspects with different perspectives, this thesis refrains from a comprehensive approach to personal well-being, which would require elements of personal health and life satisfaction. The five key objectives to analyse the outcomes of social inclusion are as follows:

- (a) Preventing poverty among the elderly: this key objective applies for people aged 65 and over and is generally a mayor objective for pension schemes as well as of social policy. It is based on the definition of a minimum income relative to the prevailing societal and cultural circumstances, since individuals receiving less than this minimum income are at risk to get out of social inclusion. A further indication is the long-term tendency towards increasing or decreasing poverty rates among the elderly.
- (b) Securing a decent standard of living: for maintaining the standard of living in old age, pension systems should provide an appropriate regulatory framework to give individuals the opportunity to build up sufficient pension provisions during their working life. With this, it has to be taken into account that less net income during old age is required due to less family obligations and work-related expenditure, lower taxes and less private saving (Council of the European Union, 2003: 31). An important indicator in terms of the standard of living is a comparison between the income levels of the elderly and the rest of the population. Secondly, the individual replacement rates of old-age income in relation to the income in working-life plays an important role, since it would be an appropriate measurement for evaluating the ability to maintain one’s living standard. However, for both approaches it is important to also consider the inequality in income distribution in order to reflect the whole spectrum of realised living standards of the elderly.
- (c) Equality of men and women: The equality of women and men within a pension scheme concerns the ability to cover every person irrespective of the gender. With this, it is fundamental whether women are able to build up their own pension

entitlements or whether they are dependent from their husbands' provisions. This key objective is important due to the increasing number of divorces and the fact that women still assume the majority of family work, such as raising children, caring for elderly dependants and keeping the house. An evaluation in these terms will be derived from the comparative development of income levels of elderly women and men over past decades and their trends in future times.

- (d) Intergenerational justice: the key objective of intergenerational justice is very important in the light of demographic change, since it refers to the share of the financial burden of population ageing between the generations. This thesis will evaluate the ability of the pension systems to share those burden between the living and future generations. With this, it has to be taken into account that the size of these generations is determined by the retirement age. Secondly, the key objective of intergenerational justice is related to the objective to maintain a descend living standard in old age: "It requires the relative stability of old-age incomes compared to the incomes of the working-age population, which can be achieved by appropriate uprating rules for pension schemes" (Mattil, 2006: 23).
- (e) Financial sustainability: the key objective of financial sustainability can only be evaluated approximately, since it is subject to more or less reliable estimates about influencing factors concerning economic and societal development. This makes it furthermore impossible to judge the effective financial sustainability of a pension system. Accordingly, the analyses in this thesis refers to the concept of economic sustainability, in which a pension system is considered to be financially sustainable if the average net income of the working population and the average old-age income develop similarly in the long run. With this, public pension systems are evaluated in the first line, since private pension schemes cannot be evaluated properly due to limited data availability. However, total contribution and expenditure figures are consulted in order to project the probable relative development of net incomes of the working-age population and the elderly.

Those key objectives can be translated into certain outcomes of social inclusion, both on income distribution and financial sustainability of pension schemes. Therefore, the aim is to evaluate the different natures of pension systems with regard to their ability to achieve financially sustainable system structures while simultaneously providing a fair share of welfare among the elderly and between them and future generations.

In order to get a sharp analysis of the outcomes of social inclusion, the theoretical approach of path dependence is used as an instrument to understand the different natures of pension systems in the European Union. The approach is introduced as a theoretical framework which will further help to understand social inclusion outcomes of different pension systems. As the term path dependence is often invoked with increasing frequency but with little precision, the use of the term in this thesis has to be specified. Therefore, two concepts with reference to path dependence are surveyed, namely the approaches of Myles and Pierson and Bonoli. The latter advances the view that path dependence of pension systems is mainly targeted on the structure of those schemes: “micromechanisms link existing institutional structures to new policies. In particular, policymakers face different incentive structures and political pressures under different pension institutional settings” (Bonoli, 2003: 399). Consequently, his focus is set on the existing structure of pension systems, whereas his idea of path dependence produces this existing structure. Myles and Pierson, on the other hand, consider the concept of path dependence as a process. They rather focus on the history of pension systems, as they state that “(t)iming, place, and sequence – in short, history – matter a lot (...)” (Myles & Pierson, 2001: 312). In addition, their approach of path dependence includes the consideration of former processes that cause the respective nature of pension systems: “each step along a path produces consequences which make that path more attractive in the next round and raises the cost of shifting to an alternative path” (Myles & Pierson, 2001: 312). As this thesis aims to use the term path dependence as an instrument to identify the reasons for different developments as well as for the appearance of different pension system natures, the latter approach is more useful in this context.

However, the thesis will rather refer to the distinction of pension systems as stressed by Bonoli rather than to this given by Myles and Pierson. This is because they emphasize on the process of path dependence, using the terms mature countries and latecomers that already imply the process approach. Their focus is on scrutinizing the dynamics of pension systems, while they divide between the fundamental two paths. Consequently, their distinction of pension systems does not refer to the particular structures of pension systems. In contrast, Bonoli focuses on these structures of pension systems as a result of path dependence, using the terms social insurance and multipillar pension schemes. With this, he closely specifies the differences between these structures: “Social insurance pension systems (...) grant earnings-related benefits to former workers on a contributory basis. (...) Multipillar pension systems are found in countries where state pensions provide only a flat-rate minimum benefit, sufficient to cover basic needs only” (Bonoli, 2003: 400). Such a distinction is in the line of

the further comparison of the cases Germany and the United Kingdom, as this approach is found in those countries, Germany being a social insurance country and the United Kingdom possessing a multipillar pension scheme. For the following analysis, this makes it possible to understand the outcomes of social inclusion, as the structure will be used as an instrument to achieve this goal.

After the theoretical approach of social insurance and multipillar pension schemes, the developments in terms of demographic change will be introduced. These changes play an important role with the outcomes of social inclusion of pension schemes, due to their impact on the different challenges the pension system are facing in terms of demographic change. The developments relevant for this thesis refer to a changing life course approach that provides a basis for analysing social inclusion outcomes. In the first line, this will happen to population size and growth, population ageing, life expectancy and fertility trends, since these changes question the traditional assumptions about societies and labour markets and therefore concern the foundations of social security. Consequently, the trends highly impact social insurance outcomes and are directly related to the operation of pension systems. In order to bring the cases of Germany and the United Kingdom in the line with the context of the European Union, the analysis will begin with a representation of the demographic developments in the European Union which will afterwards be used for the specific cases of Germany and the UK. The effect of future aging that goes along with the demographic change in the European Union also affects the labour market and therefore changes the overall life course approach. Those developments will be analysed in further detail in order to use them as an instrument for understanding possible changes in social inclusion outcomes. Consequently, it will be highlighted that pension systems need to adapt to societal changes such as more flexible family patterns and employment patterns. This is necessary for retaining their capacity of enabling participants to maintain their living standard after retirement.

In the next step, those different natures will be represented by the cases of Germany and the United Kingdom, namely the European continental and the Anglo-Saxon pension systems. For the course of the thesis, this chapter constitutes an empirical analysis that represents the theoretical remarks of the previous part. In this context, the reforms within the countries are used as an instrument leading to the outcomes of pension systems in terms of social inclusion. Thus, they have to be recognized as building a new situation in both countries that is taken into account by analysing social inclusion outcomes. Consequently, the reforms do not constitute as a process in these terms.

The overall concluding chapter will refer to the outcomes of social inclusion in both countries. With this, the strongly defined set of key objectives as defined in this methodology will be consulted. An evaluation in this term will not have the focus and a “better” performance of one country, but on the way “how” they are performing.

This thesis is generally based on literature research as well as on publications from the European Union. Furthermore, both primary and secondary researches are used and analyzed in the overall context of the thesis.

## **4 Path dependence of welfare systems**

The rethinking of the current pension systems within the EU-27 is constrained by different institutional and programmatic designs inherited from the past. Concerning John Myles and Paul Pierson in their study “The Comparative Political Economy of Pension Reform” this fact is a locus classicus for the study of a path-dependent change within the welfare state system (Myles & Pierson, 2001: 306).

In general, path dependence means that choices made in the past systematically constrain the choices open in the future: “The menu of options may include choices that represent novel, even radical, departures from past practice. The point is that particular departures are available only under particular conditions inherited from the past” (Myles & Pierson, 2001: 306). This is because many social models are characterized by increasing returns and self-reinforcement, whereas each step along makes a particular path more attractive and raises the costs of shifting to an alternative path: “Timing, place, and sequence – in short, history – matter a lot in (this) processes (...)” (Myles & Pierson, 2001: 312).

Referring to pension systems, path dependence means the appearance of different pension institutional settings to which policymakers face different incentive structures and political pressures. As Giuliano Bonoli stresses in his study “Two worlds of Pension Reform in Western Europe”, European pension systems possess path dependence, since certain micromechanisms link currently existing institutional structures to new policies (Bonoli, 2003: 399).

In particular, the comprehensive pension systems within the European Union were constructed during the post-war years: “The rudimentary prewar schemes, which offered modest coverage to some sections of the population only, were expanded and combined with



minimum guarantees and supplementary pensions” (Bonoli, 2003: 400). This led virtually every country in Western Europe to the goal of establishing good pension coverage to their resident population by the late 1970s. During this period of the ‘trente glorieuses’ all European pension systems, regardless of the model adopted, were able to fulfill the two fundamental functions of pension provision that secure the status of social inclusion, namely poverty prevention in old age and income replacement during retirement: “Whether they did so with a large social insurance scheme or a means-tested minimum or through a modest basic pension supplement by private or occupational provision did not have a substantial impact on the living standards of older people”(Bonoli, 2003: 402).

However, cross-national differences in the political organization and political capacities concerning the welfare states, such as workers, employers, women, private insurers and public officials, had an important impact on the further development of pension systems (Myles & Pierson, 2001: 306). From the 1990s onwards, the institutional structure of the pension system has mattered significantly concerning its vulnerability to social, economic, and demographic developments. The reform paths taken by the individual countries differed a lot. They mostly resulted from decisions made by the countries at earlier stages of the pension policymaking and were also followed from dependent decisions. With reference to Myles and Pierson an important distinguishing feature of pension reform that appears in uncanny regularity is the negotiated settlement within the governments. While a process of unilateral legislation by the government of the day is rather an exception, all-party agreements as well as corporatist social pacts are mostly used to reform pension policies: “Blame is diffused (...) by bringing other key institutional actors on board as co-signatories on the new ‘social contract’. Outcomes, then, hinge critically on precisely which social actors can be identified as legitimate co-signatories (the ‘people, other political parties, labour) to the new contract, and on the capacities of these actors to successfully negotiate such reforms” (Myles & Pierson, 2001: 306).

The approach of path dependence is pointed out in the context of this thesis, as it clarifies the existence of different pension system natures. For this thesis, the path dependence approach has to be recognized as a process, like it is particularly considered with the concept of Myles and Pierson. In contrast, Bonoli in the first line focuses on the existing structure, whereas the development leading to pension system structures is disregarded. Consequently, path dependence is a theoretical framework used in this thesis as an instrument to understand development as well as the differences of pension systems in the European Union and will help to understand social inclusion outcomes of different pension systems. In the following it

will be referred to those types of pension schemes, first of all by generally analysing the divergence of pension system natures.

## 4.1 Divergence of pension systems

As a result of the path dependence approach, there can be distinguished between two types of pension systems that appear within the European Union: the social insurance countries with a pay-as-you go-system and the so-called multipillar system. Referring to similar studies, the distinction between social insurance and multipillar countries presented in this context roughly corresponds to the distinction between mature systems and latecomers, as stressed by Myles and Pierson. Nevertheless, there are important differences that will be outlined in the following. However, this illustrates that there has not been adopted any consistent terminology to label the two types of pension systems, although a divergence between those two worlds of pensions provision has generally been recognized.

Hence, the approach of Myles and Pierson is setting its overall focus on the process of path dependence: “(...) we emphasize the big shifts that are taking place in systems of retirement provision” (Myles & Pierson, 2001: 308). Their use of mature systems and latecomers for a distinction of pension schemes already implies their approach of a process and therefore involves an emphasis on the concept of old and new pension schemes. Consequently, their approach is rather poorly tailored to the structure of pension systems, which results from path dependence. Their focus is on scrutinizing the dynamics of pension systems, while they divide between the fundamental two paths. Since this thesis aims to use the structure of pension schemes as an instrument to understand social inclusion outcomes of different pension systems, the concept of Myles and Pierson will not be adapted to analyse the natures of pension systems. Although their approach was supportive for the analysis of path dependence, the following will rather refer to the distinction of pension systems as stressed by Bonoli. He focuses on these structures of pension systems as a result of path dependence, using the terms social insurance and multipillar pension schemes. With this, he closely specifies the differences between these structures: “Social insurance pension systems (...) grant earnings-related benefits to former workers on a contributory basis. (...) Multipillar pension systems are found in countries where state pensions provide only a flat-rate minimum benefit, sufficient to cover basic needs only” (Bonoli, 2003: 400). Such a distinction is in the line of the further comparison of the cases Germany and the United Kingdom, as this approach is

found in those countries, Germany being a social insurance country and the United Kingdom possessing a multipillar pension scheme. Since this approach emphasizes the structure of pension schemes as a result of path dependence, it is possible to understand the outcomes of social inclusion in a following analysis.

However, the pension system distinction respectively includes a certain focus that has important implications for pension reform trajectories: “The main difference is that it focuses not only on the sort of benefits that are distributed but also on the way in which pension schemes are financed” (Bonoli, 2003: 400). An explicit example in this context is the future expenditure for public pensions. Having a look at the projections within both systems, a gap between social insurance countries and multipillar countries is covered. According to the data in figure 1, the average percentage of public pension expenditure projections in the social insurance countries (France, Germany, Italy and Sweden) is up to 16-17% of GDP between 2030 and 2050. In contrast, those countries that are built on the multipillar scheme (the United Kingdom, Denmark, the Netherlands and Switzerland) are not expected to exceed 9-10% of GDP during that period.

<b>Public Pension Expenditure Projections (Percent of GDP)</b>				
	<b>2000</b>	<b>2010</b>	<b>2030</b>	<b>2050</b>
<b>Social insurance Countries</b>				
Germany	11,5	11,8	16,5	17,5
France	9,8	9,7	13,5	14,3
Italy	12,6	13,2	20,3	21,4
Sweden	11,1	11,8	16,3	16,9
Average	11,2	11,8	16,3	16,9
<b>Multipillar Countries</b>				
United Kingdom	4,5	5,2	5,5	4,1
Denmark	6,4	7,6	10,9	11,5
Netherlands	5,7	6,1	11,2	11,4
Switzerland	7,1	8,4	11,7	Na
Average	5,9	6,8	9,8	9

Figure 1: Public pension expenditure projections

Although those projections need to be looked at with caution and should be considered as indicators of trends rather than precise measurements, an expenditure gap around 7 % of GDP suggests that demographics will affect these pension schemes in a different way. Those

demographics will be closer analysed in the following of the thesis, but in general they are related to the synonym of Europe being a greying continent, whereas population ageing is invoked as a major motor of necessary reforms. However, Bonoli as well as Myles and Pierson note further important developments in the context of demographic change that have an impact on the pension system: “It is not population ageing alone that is the problem, (...) rather, it is the design of the typical old age security system in interaction with population ageing and slow wage growth” (Myles & Pierson, 2001: 308). This is particularly true for the large pay-as-you-go defined benefit schemes, which are basically financed with a tax on labour market earnings (see chapter 6.1). In this case, rising pension costs fall disproportionately on lower, mostly younger, wage earners, for whom covered earnings are often limited.

Furthermore, Bonoli refers to new career profiles that have emerged throughout the transition of post-industrial labour market structure. In general, all European pension systems were mostly designed with regard to the typical male career profile of the post-war period, being optimal in their sort of coverage for someone who has worked without interruptions, full-time and from an early age. Today’s labour markets, however, include a much wider variety of career profiles due to a new life course approach, as it will be stressed in subsequent chapters: “To a large extent, this change has been the result of the gradual but massive entry of woman into labour markets since the 1960s. Very often, women’s career profiles are characterized by relatively long interruptions and by part-time employment” (Bonoli, 2003: 407). Additionally, the proceeding knowledge-based economies that are emerging across the EU (see chapter 6.1.1) require an increasing skill updating and upskilling, especially for older workers who do not want to be left behind the younger generation. Accordingly, such activities may result in additional career interruptions. Generally, all of those new career profiles will generate entitlements below the previous standard level, regardless of the institutional structure of the pension scheme.

In theory, it is often assumed that social insurance countries face the biggest sustainability problems in relation to population ageing that go along with changes in social inclusion outcomes. Nevertheless, both natures of pension system are seriously affected by those changes. As Bonoli puts it, “funded pensions, in fact, are also likely to be affected by population ageing, and, all other things being equal will deliver lower benefits than today” (Bonoli, 2003: 402). Additionally, Myles and Pierson ask: “Will all these changes result in a return to the not so distant past when large numbers of the elderly found themselves in a state of relatively abject poverty?” (Myles & Pierson, 2001: 305).

In the following, the two types of social insurance and multipillar pension schemes will be discussed in theory in order to understand their respective structure. Through this analysis, the pension schemes' structures can be used in the following as an instrument to understand social inclusion outcomes of both systems.

## 4.2 Social Insurance Countries

Most of the affluent countries within the European Union, primarily those of Continental Europe and the Nordic countries, possess an earnings-related pension system based on one single pillar, which was already mature by the mid-1970s. Those social insurance schemes are based predominantly on the Bismarkian inspiration that grant earning-related benefits to former workers on a contributory basis. Therefore, the main characteristic of these pay-as-you-go (PAYG) countries is that contributions are paid out immediately as benefits to the current retirees. Typically, those benefits depend on the contributions made while working. Additionally, social insurance countries include a means-tested minimum pension for those who become retirees without ever or just partially having paid contributions. This implicates that there is no storing of funds, but each generation pays the pensions of the preceding generations: "Current pensions are financed by current contributions" (Bonoli, 2003: 400). As can be seen in figure 2, the monetary flows within the PAYG system of social insurance countries differ sharply from the funded system of the multipillar countries, that also include a funded pillar: "It shows that monetary flows are within one period between generations in a pay-as-you-go scheme, in contrast to intertemporal monetary flows within one generation in a funded scheme" (Mattil, 2006: 37).

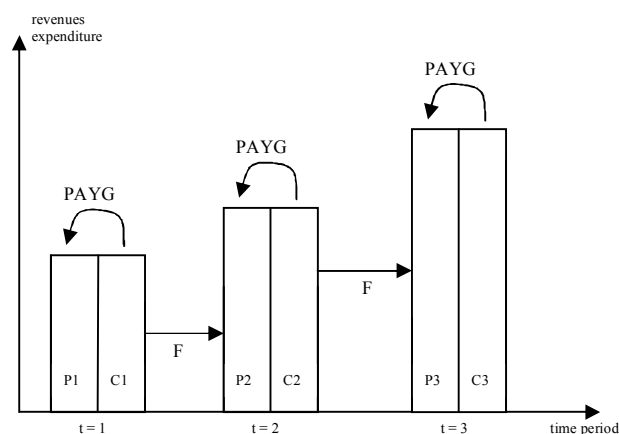


Figure 2: The PAYG system

Furthermore, there did not significantly develop an additional pillar for private pension provision, at least until very recently. Mostly, the generosity and encompassing nature of those pension systems have crowded out a private provision (Bonoli, 2001: 400).

The reasons for setting up a social insurance pension system in post-war times where in the first line the values of rising wages and a growing workforce. Indeed, most industrial democracies opted for a PAYG design, partly because this pension system offered additional advantages: “It pre-empted objections to state control over large capital pools and sidestepped widespread public distrust of capitalized pension schemes in countries where depression and war had devastated pension funds in the first half of the century” (Myles & Pierson, 2001: 310). Additionally, the social insurance pension system offered enormous ‘front-end’ political benefits in the first phase of set-up, since there was no preceding generation of entitled pensioners at the beginning. Accordingly, politicians were able to immediately offer a potent combination of modest payroll taxes, ‘unearned’ benefits for people near retirement as well as generous promises for future pensions.

During the 1960s and 1970s social insurance pension schemes were significantly reinforced by intense wage pressures in all advanced industrial countries. As Myles and Pierson highlight, “current real wage increases could be trade off in exchange for promises of higher real pensions in the future” (Myles & Pierson, 2001: 310). Consequently, pensions more and more became a ‘deferred wage’ that was used by politicians to purchase labour peace and political popularity.

However, by the 1990s most of the advantages to set up a social insurance pension system have changed dramatically. Demographic factors in pre-war times, such as rising wage rates, full employment and comparatively high fertility rates, were transformed to, if at all, slowly raising real wages and an increasing labour force.

As will be highlighted in chapter 6, those shifts are expected to increase in future periods. In particular, problems will significantly boost when the aggregate number of retirees will exceed contributors, as the large cohorts of the baby boom generation reach the age of retirement between 2010 and 2030. Concerning population ageing the PAYG based social insurance countries are expected to face substantial increase in public pension expenditure as well as in higher contributions and payroll taxes. This will lead to a powerful dilemma which is explained by Myles and Pierson: “(...) how to reconcile the income needs of retired workers with the downward pressure on take-home pay of active workers while non-wage income is comparatively immunized from such pressures (Myles & Pierson, 2001: 311). Furthermore, payroll taxes raise the cost of labour, especially at the lower end of the labour

market. Here, the social safety net, minimum wages, or industrial relations systems make it far difficult for employers to pass such costs on to employees (Scharpf, 1997: 57).

As a result, governments have to decide whether to increase contributions for current workers or to reduce the benefits for retirees and therefore face political difficulties in both measures. On the one hand, current workers are likely to resist contribution increases since those would reduce their disposable income but not necessarily result in better pension benefits for them. On the other hand, cuts in current pension benefits are virtually impossible to implement. The only possibility in this case might be to curtail future pension benefits, which of course do not agree with the current workers' interests.

Reforms in social insurance countries were and still are barely implemented: "Because of political prohibitive transitional costs, radical shifts towards funding are precluded" (Myles & Pierson, 2001: 307). Therefore, the path of reform has been one of adoption to austerity. Nevertheless, the main reform objective in all social insurance countries was to guarantee the sustainability of public pension systems in the face of demographic ageing.

### 4.3 Multipillar Countries

The second cluster of countries within the EU-27 is the multipillar countries. Those nations never or only belatedly came up with a significant benefit scheme based on the pay-as-you-go system which is financed by payroll taxes. Instead, they only established a flat-rate minimum benefit within their pension system which was only sufficient to cover the basic needs of retirees: "Typically, the objective of this sort of provision is not income maintenance during retirement, but the prevention of poverty among the older population" (Bonoli, 2003: 401).

In past decades the multipillar countries generally tried to build up a novel form of pension system by approximating in varying degrees to the multipillar system as it is described by the World Bank (Myles & Pierson, 2001: 330). The limited role of the state in terms of pension provision made it possible and necessary to develop further pension provisions; "Typically, these nations began with means-tested programmes for the elderly poor, then shifted to universal flat-rate benefit schemes with an additional tier of PAYG earnings-related benefits coming only much later" (Myles & Pierson, 2001: 316). For that reason, the multipillar countries focus on more than just one pillar, but composed a combination of at least two pillars. The first pillar contains a contributory system that is linked to the varying degrees of

earnings. However, multipillar countries spend a far lower proportion of their national income on pensions, but have larger private pensions. Therefore, a second pillar is built up as an essentially individual saving system which can be constructed in a variety of ways (Holzmann & Hinz, 2005: 9). As well, the presence of a multipillar also including a third, occupational pillar in the pension scheme is quite common. The World Bank in its study “Old-Age income support in the twenty-first century: an international perspective on pension systems and reform” (World Bank, 2005) even highlights five different pillars, which might emerge within a multipillar pension scheme: “(a) a non-contributory or “zero pillar” (in the form of a demogrant or social pension) that provides the minimal protection; (b) a “first pillar” contributory system that is linked to varying degrees of earnings and seeks to replace some portion of income; (c) a mandatory “second pillar” that is essentially an individual savings account but can be constructed in different ways; (d) a voluntary “third pillar” that can take any forms (individual, employer sponsored, defined benefit, defined contribution) but are essentially flexible and discretionary in nature; and (e) informal intrafamily or intergenerational sources of both financial and nonfinancial support to the elderly , including access to health care and housing” (World Bank, 2005: 9f). According to this approach, a multipillar system that incorporates as many of these elements as possible will, through diversification, deliver retirement income more efficiently and effectively. However, the ample room left for the development of private and / or occupational pensions were often set up on a compulsory or quasi-compulsory basis.

In general, the latecomers containing this multipillar system spend a lower amount of their national income on public pension and just finance the basic pensions concerning the PAYG type. They rather focus on a larger appearance of private pension systems whereas their private and occupational pensions are generally fully funded (Bonoli, 2003: 401).

Concerning the impact of population aging, the latecomer countries are expected to suffer less than in PAYG-based pension systems. Nevertheless, those countries are still likely to be affected by the demographic change and will bring cuts for pension entitlements in the future: “Funded pensions, in fact, are also likely to be affected by population ageing, and, all other things being equal, will deliver lower benefits than today” (Bonoli, 2003: 402). But since governments in the multipillar countries are responsible for a relatively small part of the overall intergenerational transfer, the impact of increasing costs of old age security is smaller, more manageable and therefore less politically damaging. Increases in contributions in order to preserve the current benefit level are not necessarily decided by governments but by the governing structures of occupational pension funds and are therefore much less politically



damaging. To preserve the current levels of pension benefits may only require increased contributions to funded pensions. Furthermore, the direct link between higher contributions and better pensions leads to a better perceiving of compulsory payments to a funded pension than a tax payment (Bonoli, 2003: 403). Population ageing may also result in lower benefits of occupational pensions, but in none of those countries do governments bear direct responsibility for meeting such earnings-related pension obligations: “Beneficiaries bear all of the risks and future benefit changes can be ‘blamed on’ (or credited to) markets rather than governments” (Myles & Pierson, 2001: 317). This fact includes that in some multipillar countries (such as the Netherlands and in some instances in the UK) responsibility for meeting future obligations lies with the employers and plan sponsors, not government. Furthermore, as these capitalized systems begin to mature over the next decades, demand for means-tested benefits is expected to decline and the pressure on the tax revenues required for their financing is reduced.

However, even the multipillar countries may be faced with several problems caused by demographic change. At first glance, it seems as if changes in the relative size of generations do not have an impact on the multipillar system, since there are no intergenerational transfers as they are present in the PAYG system. During the last few years it became apparent that even multipillar countries are affected by the impact of longer life expectancy and annuity prices on the one hand and the effects on financial markets on the other hand.

In particular, the accumulated capital in pension funds must be converted into an annuity which depends on the life expectancy of the relevant cohort at the time conversion takes place. Rising life-expectancy at the age sixty or sixty-five means smaller annuities for the same capital. As can be seen in Western Europe, the increasing life expectancy increases the price of annuities by 18% (Lynch, 2000: 32).

Concerning the impact of population aging on financial markets the serious development will happen when the aggregate number of the baby boomer retirees will exceed contributors. This will face a problem because pension funds traditionally have been a major source of savings for market economies. Generally, there have not yet paid out a large scale of pensions since they were essentially developed during the post war period. With an increasing number of retirees pension funds will be forced to sell off some of their assets in order to meet their obligations. This development might further lead to a decreasing price of asset and lower expected returns of pension (Bonoli, 2003: 404 f.).

On the basis of this distinction of social insurance and multipillar pension schemes it will be possible to understand social inclusion outcomes of different pension systems in the following

parts of the thesis. Nevertheless, the changes in demographic terms play an important role with the outcomes of social inclusion of pension schemes. This is due to their impact on the different challenges the pension system are facing in terms of demographic change. In order to get a sharp idea of the demographic changes within the European Union, the following part will identify specific demographic developments that are relevant for this thesis. Those refer to a changing life course approach that provides a basis for analysing social inclusion outcomes in the course of the thesis.

## 5 Demographic change in the European Union

### 5.1 General overview

Having a look at the old age dependency ratio in the world from 1970 to 2030, it can be seen that the world population is in the midst of an unprecedented demographic change, which is going to be a global challenge in the future. Besides Japan, the shift from a regime of high mortality and high fertility to one of low mortality and low fertility is going to be the highest in the European Union.

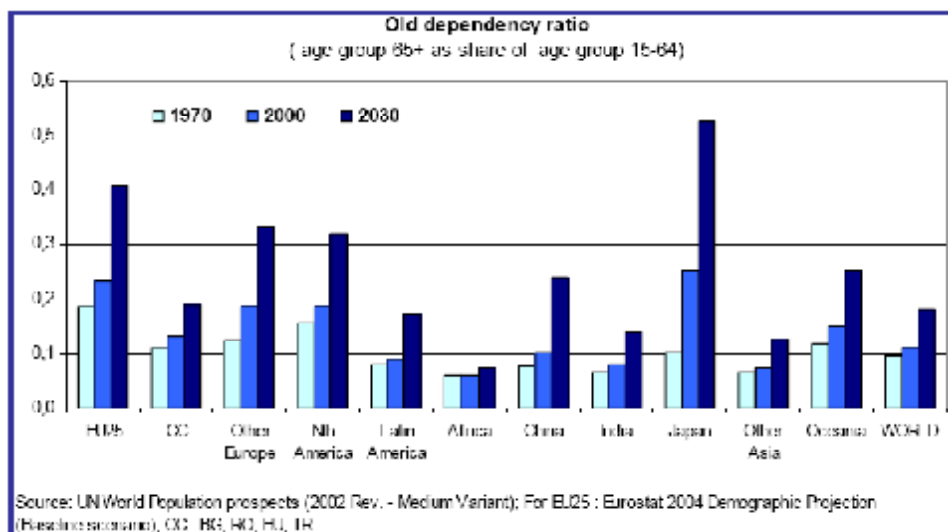


Figure 3: Old age dependency ratio

This transition indicates a certain process, as it is observed by the United Nations Population Division: “The demographic transition starts usually with a reduction of mortality, which results in longer survival, particularly of children who typically benefit the most from the reduction of the very high risks of death that they experience when mortality is high. As a consequence, population growth accelerates and the proportion of children in the population increases, leading to a rejuvenation of the population’s age structure. Partly in response to these changes, fertility decreases because parents realize that they can have fewer children to ensure the survival of the number they desire. Sustained reductions of fertility slow down population growth and produce eventual reductions in the number of births and hence in the proportion of children in the population, thus triggering the process of population ageing. As time elapses, if the reductions of fertility and mortality continue, they reinforce the ageing process because, over time, sustained fertility decline leads not only to decreasing numbers of births and declining proportions of children but also of young people and eventually of adults of working age. Furthermore, increases in longevity accelerate the growth of the proportion of older persons more than those of young people or adults (United Nations 2006: 1).”

As can be observed in figure 3, most countries of the world are already well into the demographic change. On the one hand, it is the result of fundamentally positive developments. Significant economic, social and medical progress led to very good living conditions and health care within the European Union, which make it possible to live a long life in comfort and security.

Nevertheless, demographic change is one of the biggest challenges facing the European economies and societies and needs to be urgently addressed. Therefore, it is necessary to analyse in detail the different demographic trends that are responsible for the changes within the European Union. According to the Commission of the European Communities (COM 571, 2006: 3), there are interactive demographic trends whereas their magnitude and rhythm may vary from one country or even region to another: population ageing, life expectancy and fertility trends. Furthermore, the demographic change has a certain impact on population size and growth, since it is responsible for the rapid and accelerating increase of world population during the twentieth century as well as for the slowing down of that growth and for the changes in the age distribution associated with those developments. A further analysis of those factors approaches the development of a changing life course that is caused by demographic changes by changed structures of societies and labour markets. These changes question the traditional assumptions about societies and labour markets and therefore concern

the foundations of social security. Thus, the trends highly impact social insurance outcomes and are directly related to the operation of pension systems.

In order to bring the cases of Germany and the United Kingdom in the line with the context of the European Union, the analysis will begin with a representation of the demographic developments in the European Union.

## 5.2 Population size and growth

As mentioned in the previous part, in the course of the 20th century significant demographic developments all over the world caused considerable changes in the world population size. From 1900 to 2000, the overall population increased from 1.6 to 6.0 billion and is expected to further increase in the coming 50 years.

Compared to the world population size, the European Unions' population size possesses smaller population growth than other regions. As the graphs given below indicate, the European Union, represented 11% of the world's population, whereas by the year 2030 the share of the EU-25 in the total world population will be less than 6% (European Commission, 2004: 94).

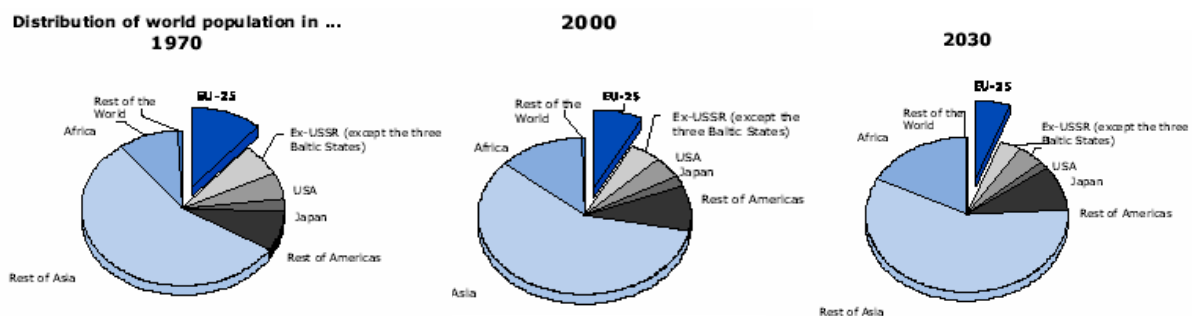


Figure 4: Distribution of world population, 1970, 2000, 2030

Nevertheless, these demographic shifts in the world do not change the current ranking of the major world regions according to population size, where the EU-27 ranks third after China and India. This ranking will still be the same in 2050, whereas it is only the European Union's total population that is projected to decline. In contrast, Africa is likely to become one of the new giants in the world. Other regions like Asia are also expected to rise in future. As a result,

the increasing demographic size of those regions could increasingly diminish the EU's influence in the world.

Concerning population growth within the EU-27 it has to be noted that the Member States possess different developments. In the period between 1960 and 2004 the EU always witnessed yearly population increases, even when adding the ten new Member States that entered in 2004. However, several member States already faced population declines during this period, whereas those countries saw population increases more recently (NIDI, 2005: 34). Throughout the 1990s, population growth was stagnant and in some of the Member States it even became negative.

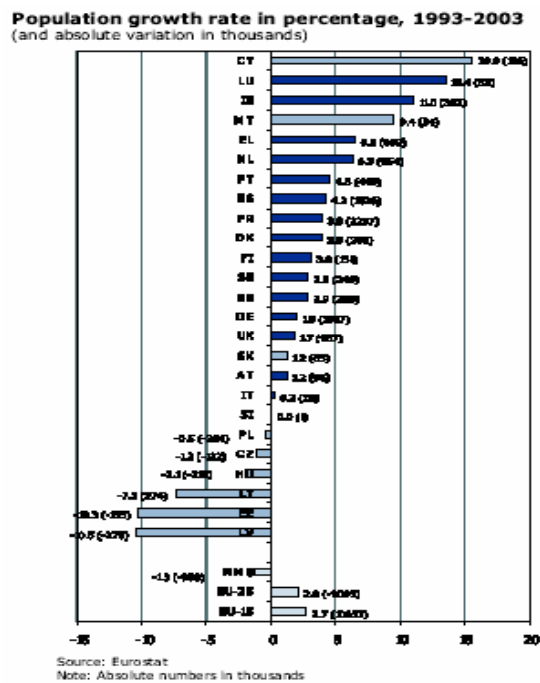


Figure 5: Population growth rate in percentage, 1993-2003

As can be seen in figure 5, there is an enormous variation in population growth within the EU-27. This trend will continue in the coming decades. According to the EUROPOP 2004 baseline population projections (Eurostat, 2004), nearly all Member States will be faced with population decline in the coming decades.

In social terms a declining population denote difficulties in supplying essential public goods and services, such as housing, health care, urban planning, transport and tourism services. This indicates that regions with a declining population will also be reflected the environmental balance (COM 571, 2006: 4).

### 5.3 Population Ageing

The slowing down of population growth results in shifts in the age structure of a population: “Today, the major areas find themselves at very different stages in the path of population ageing” (DESA, 2007: 1). Nevertheless, the phenomenon of a rising old age dependency ratio can be observed all over the world, where the number of persons aged 60 or over will likely surpass the number of children by 2045. This trend of ageing is inevitable if the population size is to remain within reasonable limits (DESA, 2006: 3).

The number of older persons within the EU already surpassed the number of children in 1995. This indicates that under the median variant, the average age of the population in the European Union will go beyond 47 years by 2050. These shifts in the ageing structures are particularly stressed by the ageing pyramid, which will considerably change over the coming decades.

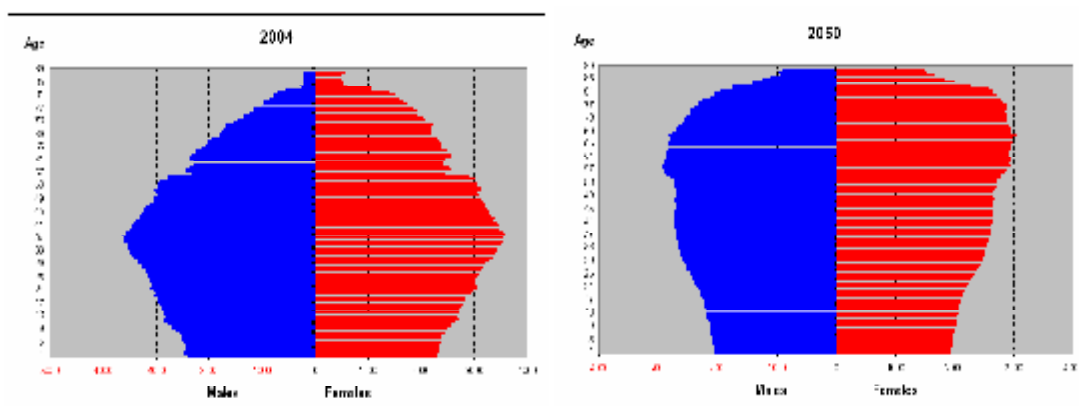


Figure 6: Age pyramids for the European Union population in 2004 and 2050

As can be surveyed in figure 6, lower shares in the younger age groups will increase, while the upper part of the pyramid will significantly expand. Hence, the ageing pyramid is going to nearly overturn by the year 2050.

Nevertheless, the degree of population ageing varies across the European Union, which will be even more evidenced in future decades. Currently, for the EU-15, the group aged 40-54 is the largest, whereas the younger age group 25-39 already started to decrease. In contrast, the situation is rather different in the new Member States, still possessing younger cohorts. The age group 25-39 recently presents the largest fraction, but future trends display that it will be taken over by the age group 40-54 in the 2020s. The overall trends can be observed by looking at figure 7.

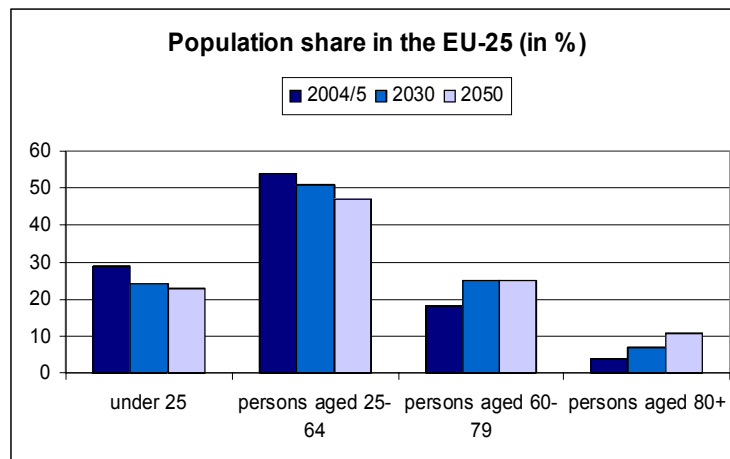


Figure 7: Population share in the EU-25

Concerning future decades, the main ageing trend in the young age group (0 to 14) across the European Union is a continuing decline. The variation between the Member States in these terms is significantly shrinking over the decades. The share of the potentially active population of 15 to 64 represents the most numerous group in the year 2010. Afterwards, this group will experience a decline to about a quarter of a billion by the year 2050. The share of young persons between 15 and 24 as a proportion of the total population will shrink considerably in future years. Like in the young age group, the variation between countries within the EU will diminish over time. The share of young adults between 25 and 39 will hardly be changed over time but will start to decline from now on. On average, this age group will lose 15%. Concerning adults between 40 and 54, a small loss of about 3% is foreseen across the EU, whereas Germany shows the largest loss in this age group.

In the group of the oldest workforce aged 55 to 64 the shares are substantially increasing about 26%” (NIDI, 2006: 39). The population of elderly people aged 65 and over will further increase by the year 2050. This increase is labelled as the grey population pressure, since the relative share of the working age population to the group of elderly people has increased from 20% in 1975 to currently 25% and is expected to increase further to 51 by 2050. Furthermore, a notable aspect of population ageing is the progressive ageing of the older population itself: “In most countries, the population aged 80 or over (oldest-old) is growing faster than any other segment of the population” (DESA, 2006: 8). As a result, this group is expected to almost triple across the EU by the year 2050. In this context, the most aged nations within the European Union are Sweden, Italy, France, the United Kingdom and Germany.

The developments stressed above will certainly have an impact on social inclusion outcomes, since they affect the overall life course. Such a process is highlighted by the Commission of

the European Communities: “Demographic change is also accompanied by profound social changes affecting the composition of families, particularly evident in the growing number of elderly persons living alone. The increase in the number of very old dependent persons also raises new problems of an economic, social or even ethical nature” (COM 94, 2005 final: 4). Consequently, those changes will be highly relevant for the analysis of social inclusion outcomes in the further thesis.

## 5.4 Life expectancy

Changing mortality patterns have become a further root cause of population ageing. The decline of mortality results in the extension of life span, which is usually measured by the average life expectancy at birth: “(...) the number years of newborn babies may expect to live after going through the different stages of the life cycle at the currently prevailing mortality rates for each of these stages” (SEC(2007) 638:24).

In this context, infant mortality rates, which result from the number of newborn babies that die before they turn one year, used to have a significant impact on the average life expectancy level. However, these rates possessed an enormous decline over the years, due to progress in medical research and care (European Commission 2007: 109). As a result, only 1% of all newborn children in our times die within one year after birth, whereas the majority of those deaths occur in the first month of life.

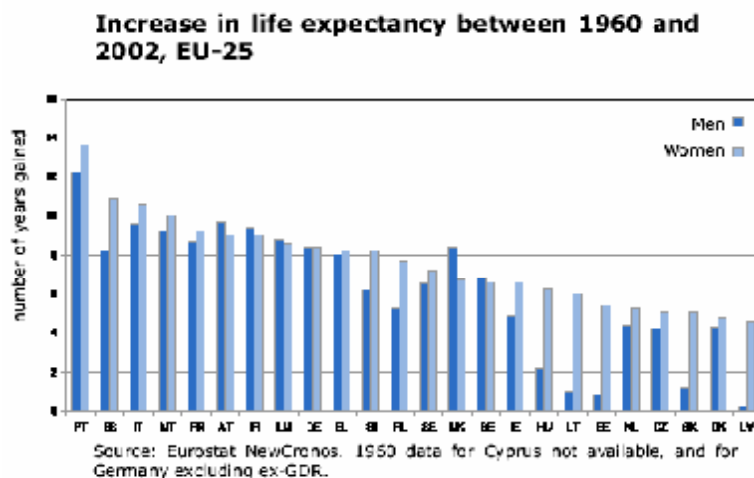


Figure 8: Increase in life expectancy between 1960 and 2002, EU-25



The decline in infant mortality as well as the fact that these rates became much more similar over the time across the European Union considerably contributed to the increase of the average life expectancy at birth in the European Union. Those rates have significantly risen over the past 25 years. In 1980 female life expectancy at birth was around 77 and has risen considerably to currently about 81 years. For men the increase was from around 70 years to about 75.

For future decades, a further increase in life expectancy in the European Union is expected. By the year 2050, this will be 86.8 years for women and 81.7 years for men. This future increase of life expectancy will primarily depend on declining mortality at higher ages. This can be evidenced by the increasing life expectancy a European has at age 60, given the age-specific mortality rates in a specific year. As a matter of fact, the gender gap is larger at birth than at age 60: “Around 1980 males had about 16 more years to live, females around 21, i.e. a difference of 5 years” (NIDI, 2005: 43).

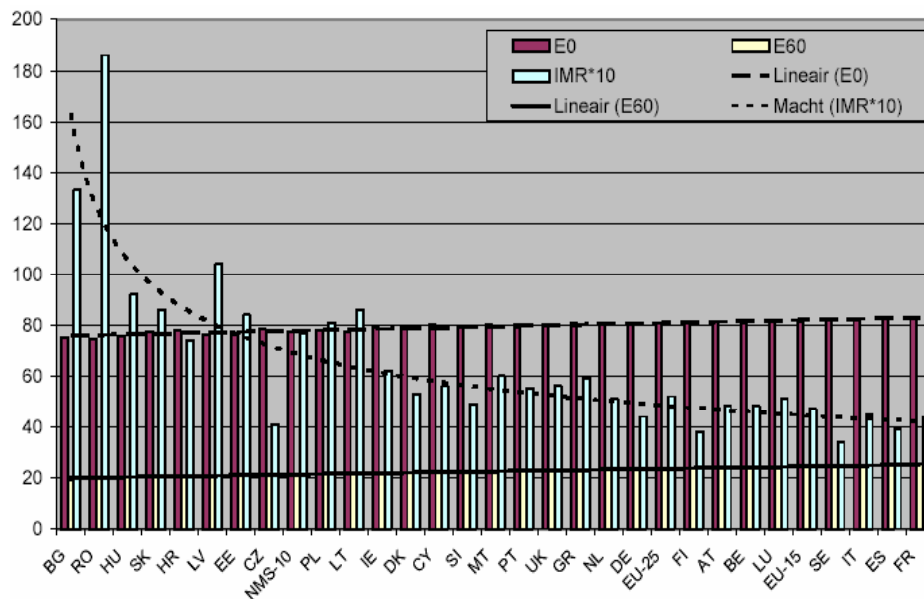


Figure 9: Relationship between life expectancy at birth (E0), life expectancy at age 60 (E60) and infant mortality rate (IMR), women, year 2000

As can be observed by the data given above, life expectancies at birth and at age 60 are almost perfectly correlated. Figure 9 shows the relationship between those rates: “The higher the life expectancy at birth, the higher the life expectancy at age 60” (NIDI 2005: 43). Comparing those data it means that, in terms of life expectancies, not-dying is much more beneficial for European men than for European women.

However, it has to be noted that life expectancy at age 60 mainly depends on the successful combat of bad health conditions in old age. The past decades imply a positive management of medical and other treatments, as the life expectancies at age 60 increased throughout the years. Nevertheless, there are important longevity differences that can be observed between the different social-economic groups across the European Union. The biggest difference is still present between the genders, where the motto “men die quicker but women are sicker” (SEC(2007) 638: 27) continues to apply as women have lower mortality risks but higher risks of disability in the course of lifetime.

The main causes of death EU citizens face shows variation across the Member States. In general, persons with a lower socio-economic status, which often goes along with a lower education, have on average a lower life expectancy. This can to a large extent be explained by a stressful and unhealthy lifestyle. By contrast, good health at old age is the result of a far healthier way of life: it is “the result of genetic predisposition as well as lifestyle factors such as healthy diet, refraining from smoking, engaging in physical exercise and avoiding excessive alcohol use” (SEC(2007) 638: 72).

In social terms, a rising life expectancy will bring sharp increases in public spending on health and long-term care, even if it much depends on future improvements in the state of health of the elderly. This will indeed lead to greater pressures on public spending related to pensions, health and services for elderly: “Overall public finances risk becoming unsustainable in many countries, thereby compromising the future equilibrium of pension and social security systems in general. Allowing public spending linked to ageing to create budget deficits would lead to an intolerable spiral of debt” (COM 94, 2005 final: 6). In this context, social inclusion outcomes of pension systems would be highly changing, as it will be stressed in the course of this thesis: “Such consequences would undermine the potential for economic growth and compromise the functioning of the single currency, thereby requiring pensions and health benefits to be seriously called into question, with considerable negative impact on the future wellbeing of pensioners and taxpayers” (COM 94, 2005 final: 6).

## 5.5 The Cohort Effect of the Baby Boom Generation

As was stressed in the previous chapter, the current demographic situation is characterized by a “high population momentum” (NIDI, 206: 186). These developments are strongly influenced by variations in cohort sizes: “The large cohorts that were born between 1945 and 1965, in what is known as the ‘baby boom’, form a large bulge in the population that is gradually working its way through the overall age structure” (SEC(2007) 638: 32). This post-war baby boom generation caused a significant decline in the old-age dependency ratio at the beginning of the 1980s when they started entering the working age population. By now, the baby boom cohorts are still part of the working age population, which consequently represents a large share of the total population. As a result, the proportion of the working age population across the European Union is supposed to peak at 67% by the end of the year 2010: ”The fact that large cohorts boost the working age population has been described as a demographic dividend” (SEC(2007) 638: 32).

Nevertheless, the baby boom generation will reach retirement in the coming decade and, as a result, significantly compound the increase in the old-age dependency ratio. This effect particularly results from the rising life expectancy as well as from the low fertility rates in the EU-27. Therefore, the differences in the annual growth rates of the total population and the population of working age will turn negative by 2010 in most countries in the European Union. However, there are certain differences between the parts of Europe. First of all, the baby boom in Southern Europe emerged later than in the North and the West. In addition, the baby boom in the Central European Member States occurred somewhat later than in the other regions and turned out to be more subdued.

Those developments lead to an even more rapid development in demographic terms and clarify the need for early reforms: “Delaying reforms until public spending on pensions and health has risen would be missing an opportunity to ensure that every generation, including the baby-boomers, contribute to the necessary process of adjustment” (COM 94, 2005 final: 6).

## 5.6 Fertility trends

For the last decades, the European Union benefited from a large span in the working age population compared to its total population. This was caused by the two or three previous decades of high fertility, resulting in the large cohorts of the baby boom generation. However, the subsequent situation is characterized by a significant downswing and stagnation of fertility at historically low levels for many years. In order to define those developments, the most commonly used indicator for fertility is the Total Fertility Rate (TFR): “It gives the average number of children per woman, assuming that all women are going to give birth according to age specific fertility rates observed for a given period” (SEC(2007) 638: 16).

In these terms, the European Union currently denotes a TFR of 1.5 children per women, which is one third lower than the 2.1 level that is required for the replacement of generations. The baby boom generation occurred in the 1960s, as the average number of children per women was about two to three. Since 1970 the overall trend in the European Union was fertility decline for the last quarter of the 20<sup>th</sup> century. With the beginning of the new century, none of the Member States featured a TFR above 2.0.

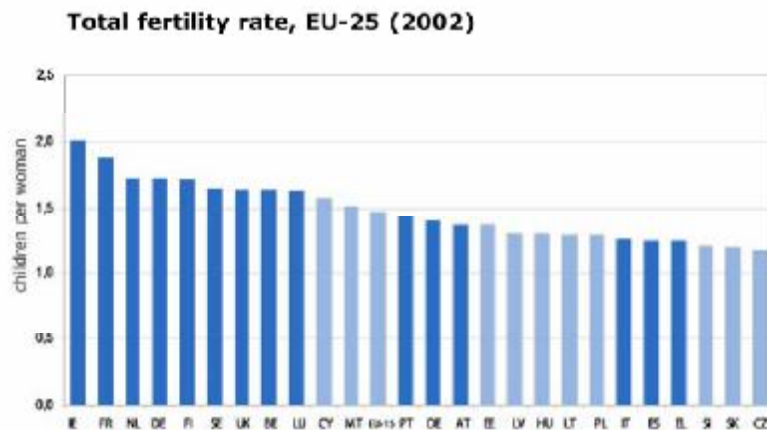


Figure 10: Total Fertility Rate EU-25, 2002

Those data goes along with the trend of postponement, as there is a relative change that occurs in the mean age of the mother at first birth. In these terms, the eastern part of Europe possessed a low TFR, while the western part experienced a shift to later marriage and later childbearing: “Even in 1960, the difference for the mean female age at the birth of their first child showed a two year gap: close to 25 years for the EU-15 countries whereas it was close to 23 for the eastern countries” (European Commission, 2004: 101).

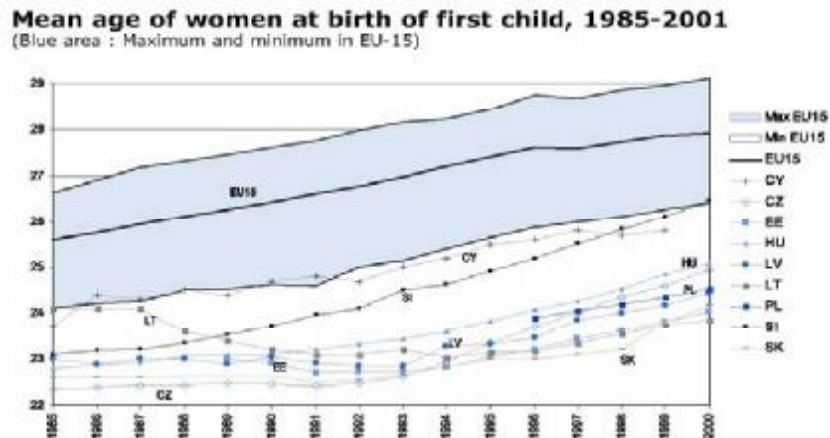


Figure 11: Mean age of women at birth of first child, 1985-2001

This may be an indicator that the timing of postponement within the European Union contains different phases, as they were defined by de Beer: “In the first stage of the postponement process the average age at childbearing rises due to a decrease of fertility rates at young ages. In the second stage fertility at young ages continues to decline, whereas fertility at older ages starts to rise, i.e. the recuperation phase begins, and as a result the average age at childbearing continues to increase. In the third stage the decline in fertility at young ages comes to an end, whereas the rise at older ages continues and gradually slows down, and as a consequence the rate of increase in the average age at childbearing continues but will slow down” (De Beer, 2006).

The reasons for these variations are mostly linked to a combination of national socio-economic differences, culture and, in particular, policies that have influence on the decision-making at the family level: “Most of the Member States at the higher end of the fertility range also have a much more developed set of policies and provisions that support and facilitate family formation, child bearing and child rearing. In other words, differences in policies clearly matter“ (European Commission, 2004: 100). This may be an indicator in terms of social inclusion, since a higher fertility rate constitutes a higher constancy of pension systems due to lower replacement rates.

## 5.7 Demographic change in Germany and the United Kingdom

Concerning Germany and the United Kingdom it can be seen that those countries will experience a continuously increasing life expectancy on the one hand and lower birth rates on the other hand. However, most of the important changes in the demographic structure are more pronounced in Germany than in the UK.

This can be seen with the change in population size for both countries. Having a look at the long-term population projections of Germany and the United Kingdom from 1975 until 2050 it is indisputable that the number of inhabitants has already increased considerably until the year 2000: “Population growth was about 4.6% in Germany and about 7.4% in the UK over this period” (Mattil, 2006: 76). Throughout the period until 2025, population size is projected to be almost stable in Germany, whereas the population in the UK will continue to increase. Afterwards, both countries are projected to possess decreasing rates in population growth. In this context, Germany will reach its turning point in population size before 2020, the United Kingdom will reach its peak around 2035.

As already mentioned, the major reasons for demographic shifts are changes in life expectancy and fertility trends. Figure 12 gives an impression of the latter for the past as well as for future decades.

### Fertility rates in Germany and the United Kingdom, 1975 – 2050

Year	Germany	United Kingdom
1975-1980	1,5	1,7
1990-1995	1,3	1,8
2000	1,4	1,7
2025	1,5	1,8
2050	1,5	1,8

Figure 12: Fertility rates in Germany and the United Kingdom, 1975 - 2050

As can be observed, both countries were at a historically very low level in 2000, i.e. 1.4 births per women in Germany and 1.7 in the UK. Although the Economic Policy Committee assumes that they will approach 1.5 and 1.8, respectively, from 2025 onwards, both countries cannot reach a fertility rate of 2.1, which is needed to replace the existing population.

Given that fertility rates are too low to guarantee a stable size of population, improvements in life expectancy have the opposite effect, since they lead to increases in the total population as well as in the average age. Concerning life expectancy, Germany and the United Kingdom

possess equal developments: “Life expectancy at birth has increased considerably from 1975 until 2000, from less than 70 years to about 75 years for men in Germany and the UK, and from slightly more than 75 years to more than 80 years for women in both countries” (Mattil, 2006: 77). These figures are assumed to rise by about five more years until 2050.

The developments as described above lead to significant shifts in the age structure, since the absolute number as well as the relative proportion of children is permanently decreasing over time. Germany possesses a much more significant reduction of inhabitants aged under 15 which drops by 42% from 1975 to 2050, compared to a reduction by about 26% in the UK. In contrast, the working-age population (aged 15 – 64) grew in both countries by about 12% but will decrease in future. This will happen in Germany by more than 21% from 2000 to 2050, while the UK face a smoother reduction by only about 5% during this time period.

The most important changes in both countries concern the elderly population (65 years and older) who will sharply increase in future. While this age-group had a share of total population of less than 15% in 1975 in both countries, the post-war baby-boom generation will cause dramatic increases when they reach retirement age during the next decades. As a result, the fraction of the oldest age-group is projected to nearly double with a rise of 29% in Germany and 25% in the United Kingdom by 2050.

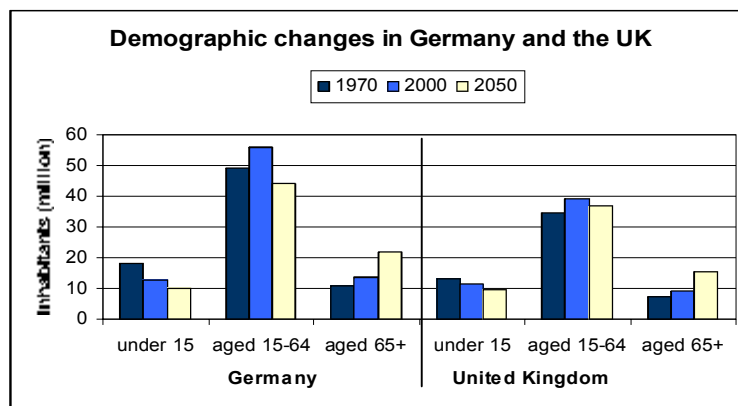


Figure 13: Demographic changes in Germany and the UK

As it will be outlined in the following, such a development between the working-age population and the elderly is crucial for the composition of life course as consequently for the operation with pension systems. Therefore, it is important to analyse certain changes on the labour market that are caused by demographic change. This will be done in a rather broad way, containing the overall changes in the European Union. Nevertheless, the effects of demographic change highlighted in the subsequent part similarly apply to the specific cases of Germany and the UK.

## **6 The impact of demographic change on life course**

The effect of future aging that goes along with the demographic change in the European Union may have serious economic and social consequences that change the overall life course approach and therefore impact social inclusion outcomes. Concerning the labour force, an increasing ageing of this cohort which results of population ageing as well as of declining participation rates of young people can be seen. These changes will cause a shift to an increasing number of retired people who will need to be supported by a reduced working-age population. With a dependency ratio which is set double and will reach 51% by 2050, there will be a change from four to only two people working for a retiree. This development will be observed by closer examining certain trends that have an impact on the European labour market. With this, the changing life course approach will be outlined, which is crucial for the operation with pension systems and might change social inclusion outcomes, which will be referred to in the further course of the thesis.

### **6.1 Trends by age**

Concerning the labour force participation, the developments among the specific age groups have to be observed separately, as past trends and future prospects differ for each group. Nevertheless, population ageing has certain effects on the overall age structure of the labour force: “Several years before a country will experience population decline its working-age population will start to diminish” (NIDI 2005:14). Besides, the decline in the size of the working-age population, ageing leads to an increase of the average age of the labour force, older generations are replaced by less numerous younger workers.

This development is in the first line a result of more people completing secondary education and enrolling in tertiary studies: “During the last three decades, most industrialized countries have experienced a remarkable increase in the educational attainment of their labour force, which is expected to continue over the coming decades” (NIDI 2005:17). Nevertheless, the current educational performance significantly diminishes with succeeding age cohorts.



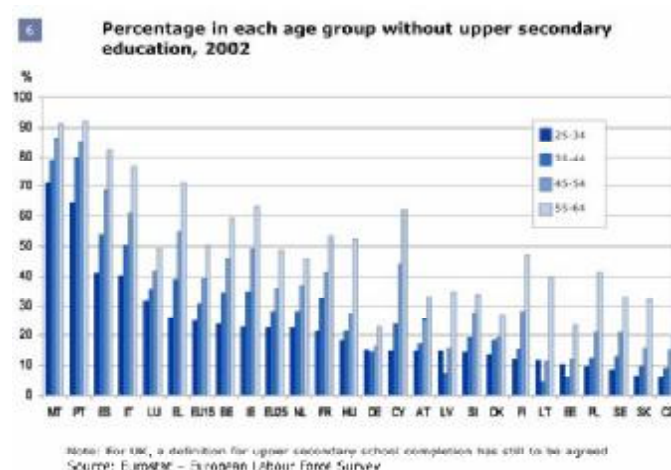


Figure 14: Percentage in each age group without upper secondary education, 2002

As it is highlighted in 14, there is a relatively short supply of newly skilled entrants to the labour market, whereas the stock of workers with lower skills and employability is considerably high. This illustrates the need for further training and skills-upgrading among middle-aged and older workers: “These two factors result in shortages at the top- end of the labour market and redundancies at the bottom-end, which underlines the need for lifelong learning to tackle inadequate vocational qualifications” (European Commission, 2004: 18).

Accordingly, recent projections indicate that the average level of educational attainment as measured of completed years of schooling of the potentially active population in the old Member States will increase from 11.1 years of schooling in 2000 to 13.8 years by 2050, which is an increase of 2.7 years.

The employment rate of older workers aged 55 to 64 is projected to sharply increase over the coming decades. However, the current development within this age group still remains decreasing, as there was a reduction in the average age at retirement in the last decade. Furthermore, the Commission of European Communities points out that the number of older workers is still limited within the EU-25: “(...) many countries still employ only a relatively small number of older workers owing to excessive recourse to early retirement, insufficient financial incentives to work offered by tax and social systems, and poor management of age-related issues in the workplace” (COM 271 final, 2006: 5 f.).

Nevertheless, growing concerns among governments about the impacts of an ageing population on the sustainability of pension systems leads to a rise in policies which foster labour force participation of older workers and make early retirement less attractive: “These reforms have, inter alia, curtailed access to early retirement schemes, raised statutory retirement ages (including minimum ages when pension income can be drawn) and

strengthened financial incentives to remain in the labour force” (European Economy, 2005: 26). Hence, the average retirement age in 2003 was at 61.0 years, which already mirrors the trend of an increasing labour participation of older workers (NIDI, 2006: 72).

Additionally, the baby boom cohorts are still of working age at present, but within a few years they will start retiring. This will lead to a further decline in the population in working age as well as to a rapid increase in the number of pensioners. However, this development is likely to be offset in the short run, as the total employment rate within the European Union will continue to increase. According to the Commission of the European Communities this phenomenon will “tend to create a “window of opportunity” permitting the implementation of reforms before the effects of population ageing make themselves fully felt” (COM 251 final, 2006: 5). Nevertheless, in the long run the burden of the demographic change would subsequently appear since the total number of persons in work will decrease by 30 million between 2010 and 2050, as it appears in the labour force participation in the European Union. The overall trend across the European Union implies that younger and better educated generations will gradually replace older and lesser educated generations on the labour market. For the reason of a lengthening of the educational career, the labour career across the European Union will be shorter, unless it would be accompanied by a corresponding increase in the effective age at retirement. This is also related to social inclusion outcomes of pension systems, since the relation between younger and older workers has an impact on the sustainability of pension systems. This will be analysed in the further course of the thesis.

### 6.2 Trends by gender

Akin to the increasing employment rate of older workers, projections show rising rates in female employment from just 55% in 2004 to almost 65% by 2025 and remaining stable thereafter: “This increase, which would enable the 60% Lisbon employment target to be reached in 2010, can be attributed to the gradual replacement of older women with low participation rates by younger women who have a much stronger attachment to the labour force (Carone et al, 2005: 25).

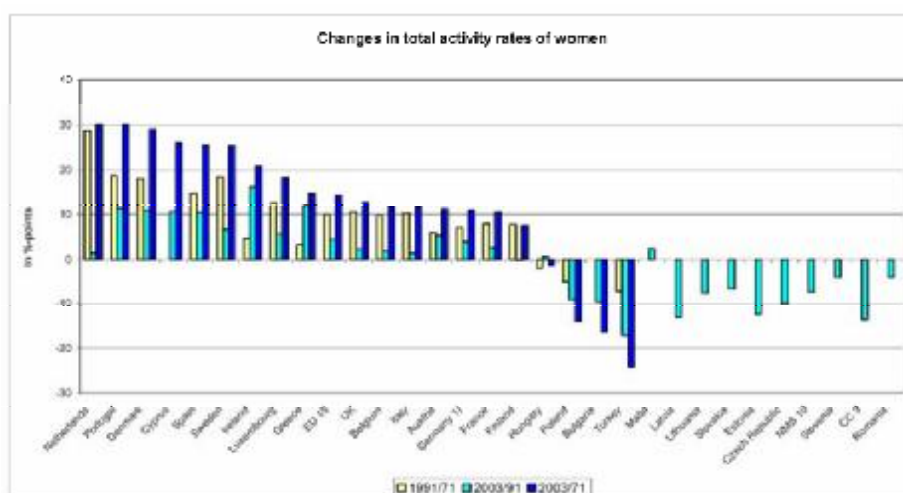


Figure 15: Changes in total activity rates of women

In the new Member states, the participation rate of women in the labour market has been traditionally high, due to the former soviet system. However, during the last decade the activity rates declined as a result of changes in the economic and political situation, on average about 7% points (NIDI, 2005: 98).

Additionally, the share of female part-time working is notably high: “In the EU-25, 31.4% of women in employment were working part-time in 2004 against only 7.0% of men” (European Commission, 2006: 71). This trend can, besides in the Netherlands, particularly be observed in the United Kingdom, where it presents 43.9% of female employment.

Besides, the labour force participation of men declined due to the developments in the younger and older age groups. Three decades ago, the labour force participation of men aged 15 to 24 years was around two thirds in the European Union. Those rates declined on average to nearly 50% and are largely explained by rising educational attainment and changing socio-cultural factors which accordingly led to significant decreases in the gender gap: “In 2004, the gender gap in employment rates in the Union went on narrowing, standing at 15.2 percentage points, compared to 15.8 in 2003 and 18.1 in 1999” (European Commission, 2006: 71).

Concerning educational attainment, the share of women attending in higher education or university also decreased significantly and led to a decrease in activity rates in the age group 15 to 19. This “educational effect” (NIDI, 2006: 99) caused a decline in the average activity rates of young women in the European Union, on average by 6% since 1970.

In terms of the labour force participation of higher educated people, differences are significantly higher for women: “In 2001 the labour force participation of men aged 25-64 varied between 77% (below upper secondary level) and 93% (tertiary education type A),

while the activity rate of women lay on average between 50% (below upper secondary education) and 83% (tertiary education type A) in the OECD countries” (NIDI, 2005: 99).

Nevertheless, the projected increase of female labour force participation may in part depend on supportive policies or collective agreements, such as the availability of affordable child care and other family-friendly measures to reconcile professional and private lives and to achieve gender equality. Those policies may further have certain effects on fertility rates and working hours, although the magnitude of those effects and the sense of causality remain uncertain. In the context of social inclusion of pension systems, the increasing labour force participation of women impacts certain key objectives, such as equality of men and women.

### 6.3 Labour force participation

Concerning the potential of the overall labour force participation in the European Union, a continuing increasing trend can be observed, whereas the new Member States possess a lower degree in the overall activity rate. According to EUROSTAT (Eurostat, 2006), the current overall activity rate in the EU is 70%.

Concerning the overall activity rate of people aged 55 to 64 there can still be observed significant increases in their labour force participation up to 44.5% across the European Union. Regarding the gender gap, the trend within the activity rates of older people goes along with the overall trend: “The rise in activity rates was higher for women than for men in the old Member States as well as in the NMS10 and therefore in the EU as a whole” (NIDI, 2006: 64).

A converse trend can be observed by looking at the labour force participation of younger people aged 15 to 24. The longstanding development in this category was marked by a significant downward trend during the 1990s, which continued in the new century: “In 2004, the activity rate of people aged 15-24 averaged 45% for the EU (...)” (NIDI, 2006: 64).

Future projections show that in 2050, 178 million people will be active in the labour force in the enlarged European Union, which marks a decrease of 36 million compared to 2004.

Accordingly, the overall activity rates are also expected to decline, although the age-specific activity rates have been held constant.

### 6.3.1 Share of age groups

Three indicators illustrate the developments stressed above: the declining share of young people (aged 15-24), the increasing share of older workers in the labour force (55 and older), as well as the mean age of the labour force. Concerning the European Union, the age group of 15-24, from which entrants into the labour market are drawn, has been rapidly decreasing over the last decades, averaging 11.6%. At the same time, the share of older persons active on the labour market constitutes an increase and average 12.2%. Accordingly, the average age of the European labour force has started to increase since 1995, although it had remained quite stable at around 40 years (Fotakis, 2000: 3). “In 2004, the mean age averaged 40.1 years (...)” (NIDI, 2006: 65).

Having a look at the absolute size of young and old age groups in the EU it can be seen that around 2009 the oldest cohort will be over the size of the youngest cohort. In addition, there are expected to be about 66 million people aged 55 to 64 and only 48 million people of the young group (COM 94 final, 2005: 20).

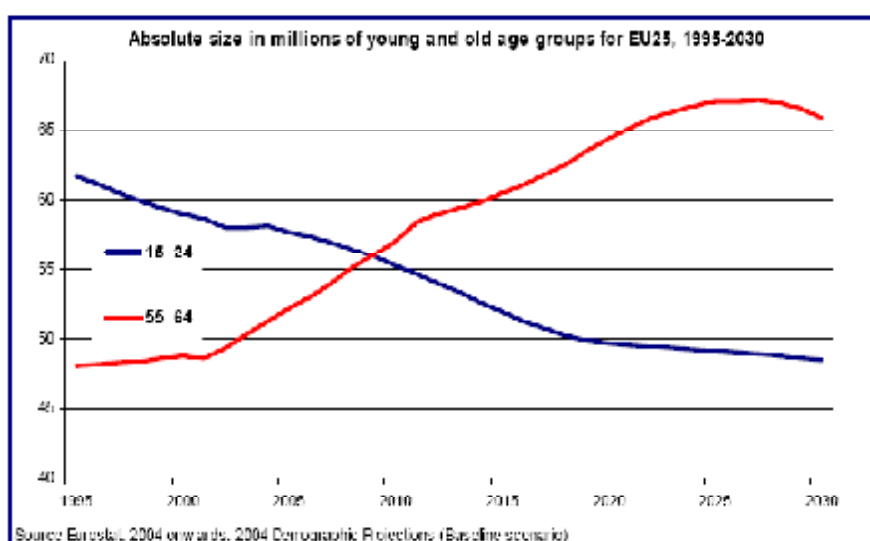


Figure 16: Absolute size of young and old age groups for EU25, 1995-2030

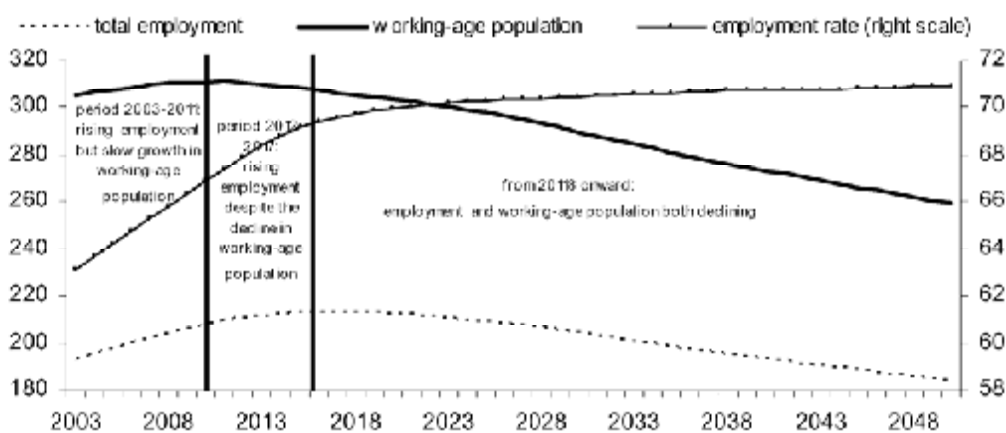
Furthermore, the expected demographic change will further increase the share of older active people (55-64) in the total labour force by 4.3% up to 16.5% in the EU by 2050.

While the share of older active people will significantly increase over future decades, the changes in terms of the mean age of the active population will fail moderate. Until 2020, the mean age across the European Union will rise up to 41.3 and afterwards it will be more or less

constant. Those developments clearly highlight the impact on pension schemes, as the proportion between young and old workers changes the distribution of responsibilities, as it was and still will be outlined in the course of the thesis. Consequently, social inclusion outcomes are affected by changed proportions of age groups, as the key objectives in terms of intergenerational justice and financial sustainability will significantly change.

### 6.3.2 Time periods of labour force ageing

The developments observed in the previous part include certain projections that lead to different phases over the coming decades. Those constitute a new approach of life course that has changed through the demographic developments. Accordingly, the European Commission (SEC(2007) 638: 49) distinguishes three different phases, in which the impacts of the demographic change are drawn according to a time scheme.



Source: EPC and European Commission (2005).

Figure 17: Projected working-age population and total employment in the European Union

As can be surveyed in figure 17, the first phase is already in progress, as it is set between 2004 and 2011. This current phase leaves scope for significant employment and economic growth as the working-age population as well as the number of persons in employment are expected to further increase during this period. Therefore, this period is viewed as the window of opportunity, as it was explained in the previous part. Both demographics and labour force trends are supportive of growth and make it favourable to invent structural reforms more favourable during this period than in subsequent years. Nevertheless, the rate of increase

slows down at the end of this period, indicating that the ageing population is starting to take hold although not being visible in aggregate terms.

In the second phase between 2012 and 2017 the rising employment rates can offset the decline in the size of the working-age population. In the first step, the baby-boom generation starts entering retirement during this period. Afterwards, the projected increase in female employment rates and older workers will cushion the demographic factors and the overall employment rate will continue to increase. Nevertheless, this will happen by much smaller cohorts and therefore cause a slower pace. Besides, this phase is characterized by tightening labour market conditions: “From 2012 onwards, the tightening labour market conditions (lower labour force growth together with unemployment down to NAIRU) may increase the risk of labour market mismatch” (European Economy, 28).

The third phase after 2018 will be dominated by the ageing effect. This is caused by the working out of the trend of increasing female employment rates by the year 2017. Afterwards, there is projected to be only very slow additional increase in the period 2018 to 2050 and will even put a higher pressure on active measures to include employment rates among women. Besides, in the absence of further reforms to increase the labour force participation of older workers in order to increase the effective retirement age, the employment rate of this age group is also projected to a steady state. Consequently, further declines in the working-age population must be translated into a declining overall employment rate and reduced growth prospects: “Having increased by some 20 million between 2004 and 2017, employment during this last phase is projected to contract by almost 30 million, i.e. a fall of nearly 10 million over the entire projection period of 2004 to 2050” (European Economy Reports and Studies, 2006: 28).

### 6.4 The pension challenge

Of course, those developments on the labour market as stressed above will highly have an impact on life course and therefore on social security as well as on public finances: “The age structure impacts on the “economic structure” of societies particularly with regard to the balance between economically active and non-active persons. Whereas economically active persons generally contribute to social security funds, economically non-active persons are mainly benefit recipients” (NIDI, 2005: 165). Consequently, economic growth rates are

highly set to decline in future times with the ageing of the population. According to the Economic Policy Committee and the European Commission projections, the annual growth rate of GDP for EU-27 is projected to decline from 2.4% over the period 2004-2010 to only 1.2% between 2030 and 2050 (European Economy Reports and Studies, 2006).

Furthermore, on the basis of current policies the age-related public-spending will rise about 3-4 GDP points until 2050, which is an increase of 10% (COM 574 final, 2006: 3). Those upward pressures will be felt from 2010 onwards and will particularly be pronounced between 2020 and 2040 (COM 251 final, 2006: 6). Having a look at the data published by EUROSTAT, the number of GDP already increased from 8.6 % in 1990 to 9.6 % in 2002 (Schuh 2005: 166). As a result, public finances risk may become unsustainable and compromises social security as well as the pension systems irrespective of their path dependence. Nevertheless, the impacts will produce different outcomes, which will be closer analysed by looking at the cases of Germany and the United Kingdom in the following part of this thesis. Especially public spending linked to the demographic change would lead to an intolerable spiral of debt in the long run. According to the Commission of European Communities, this development would have an enormous impact on several sectors: “Such consequences would undermine the potential for economic growth and compromise the functioning of the single currency, thereby requiring pensions and health benefits to be seriously called into question, with considerable negative impact on the future wellbeing of pensioners and taxpayers” (COM 251 final, 2006: 6).

Concerning the public old-age pension expenditure, the recent development shows increasing rates within the European Union. In 2002 it ranged from 1.6% to 11.4% in the EU-15 and in 2001 from 5.4% to 8.5% in the new Member States (NIDI, 2005: 166). This development is mostly affected by the proportion of the working population in relation to those in retirement and will begin to affect pension expenditures significantly as the post-war baby boom generation reaches retirement age over the coming decades. As Christopher Pierson puts it, “(...) the key argument in relation to ageing societies is that at some point in the next fifty years in all developing countries the costs of supporting a growing elderly population out of current production of a much smaller active workforce will place on the latter burden which is either unsustainable or (...) politically unacceptable (Pierson, 2001: 91). Hence, the burden of raising old age dependency ratios bring along the fear that the variety of arrangements that are designed to increase security in old age cannot be sustained economically. As international organizations such as the World Bank and the OECD point out, the pension systems within the European Union impend a crisis: (...) the contributions of a shrinking working population



will be insufficient to sustain large numbers of economically inactive older people, together with the further observation that the costs of providing public support for the latter group will not only escalate, but, in doing so, will 'crowd out' private and voluntary alternatives to state-provided security in old age" (Ellison, 2006: 129).

Therefore, it is necessary not to postpone reforms until public spending on pensions has risen, since it has to be ensured that every generation contributes to the necessary process of adjustment but the future sustainability of welfare state provisions must be a key concern in the EU-policy (Soede, 2004: 9). This is due to the key objectives that are aimed to be reached in terms of social inclusion outcomes of pension systems.

It can be seen that those reforms already initiated by EU-governments begin to pay off in terms of social inclusion, as evidenced in particular by the rising employment rate for older workers since 2000 as well as transferring more responsibilities from government to company and individuals (COM 251 final, 2006: 6). However, the way countries respond on the pressures varies considerably across the European Union, as it depends on the institutional structure of the current pension system: "Population ageing, labour market changes, and stronger financial market integration generate different political demands and policy responses depending on whether countries have a pension system based on the social insurance model (...) or a multipillar system" (Bonoli, 2003: 399). In fact, it is important to distinguish between those different pension systems that come along with path dependence, as already explained in chapter 4.

## **7 The European continental and the Anglo-Saxon countries' pension systems**

The following chapter will introduce a comparison of the pension systems in Germany as a social insurance country using the PAYG scheme and the United Kingdom as a multipillar country. Those pension schemes represent the two different types that are present in European Continental countries (Germany) and in Anglo-Saxon countries (the United Kingdom). Certainly, both of those countries are faced with the demographic change, which has a direct impact on the countries' welfare system: "These changes concern the foundations of social security because they question the traditional assumptions about societies and labour markets" (COM 7165, 2003: 88). Thus, they are sources of risk for old-age security and have a direct

impact on the operation of pension systems. Although this section focuses on the cases of Germany and the United Kingdom, the named trends can be observed similarly in all of the EU-27 member states. Consequently, the demographic trends in the EU as described in chapter 4 similarly apply for the cases of the European continental and the Anglo-Saxon countries, as it was outlined in chapter 4.7.

In order to get a more focused scheme of the changes highlighted in the previous chapter, the next part will introduce a more focused analysis of the different natures of pension systems. This will be done on the basis of the system comparison of the cases of Germany and the United Kingdom, representing the European Continental and the Anglo-Saxon pension system respectively. For the course of the thesis, this chapter constitutes an empirical analysis that represents the theoretical remarks of the previous part. In this context, the reforms within the countries are used as an instrument leading to the outcomes of pension systems in terms of social inclusion. Thus, they have to be recognized as building a new situation in both countries that is taken into account by analysing social inclusion outcomes. Consequently, the reforms do not constitute as a process in these terms.

## 7.1 Germany

### 7.1.1 Pension System

The German pension scheme was the very first formal pension system in the world. It was designed by Bismarck almost 120 years ago and it became a model for many social security models all around the world. Hence, this pension system has been very successful in providing a high and reliable level of old-age income in the past: “It has been praised as one of the causes for social and political stability in Germany, has survived two major wars, the Great Depression, and more recently, unification” (Börsch-Supran, 2002: 3). Overall, the German pension system is called ‘retirement insurance’ rather than ‘social security’, since it was from the start designed to extend the standard of living that was achieved during work life also to the time after retirement.

As it is common for a PAYG scheme, the German pension system is very monolithical. It covers almost all workers and provides almost all retirement income within a single pillar

system with relatively transparent rules (OECD, 2003: 16). Therefore, this single predominant component covers 78% of the benefits for retirees. More than 80% of the working population are covered by the Statutory Pension Insurance (Gesetzliche Rentenversicherung, GRV) as the most important public pension scheme. Other public pension schemes are much less important, whereas 4.6% of the working population are covered by the civil servants' pension scheme. Besides, there exist independent public pension schemes for miners, sailors and boatmen, farmers as well as for employees of the (former public) railway company, which are much less important in terms of contributors and benefit volume. Participation on this public part of the system is mandatory for all types of employees in the private and public sectors, for several groups of the self-employed as well as for some others that are attached to labour force. Most of self-employed are covered by other voluntary profession-specific schemes instead of the GRV.

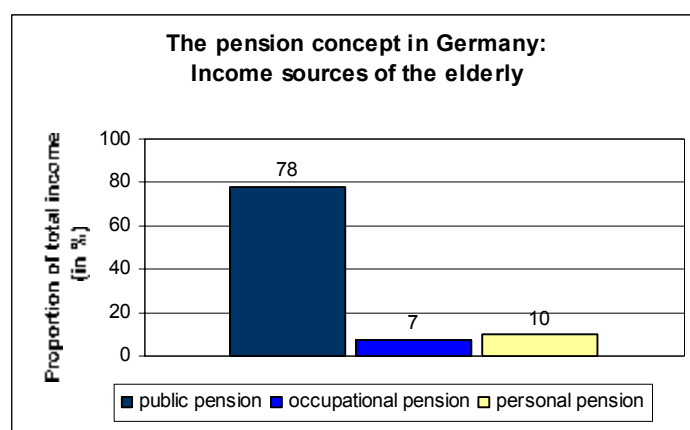


Figure 18: The pension concept in Germany

Moreover, the German pension system includes a lower earnings limit (Geringfügigkeitsgrenze) which provides contribution for persons with earnings below a certain level, which is currently fixed at 400 Euro. Employees as well as persons who are not obligatory ensured (18% of the workforce) are allowed to voluntarily participate in the lower earnings limit and they are not subject to the mandatory pension coverage.

Concerning longevity, old-age benefits in Germany are paid from retirement date until death. The legal retirement age for men as well as for women is 65 years. This date can be reduced to the age of 62 at the cost of a reduced pension benefit. The average retirement age is 63 years, due to former early retirement policies in Germany (Bundesregierung, 2008). Retirement after the legal retirement age is possible, with the intention to allow workers adjusting their retirement date to their circumstances of life.

Besides old-age pensions, the German pension scheme provides disability benefits for workers below age 60 and survivors' benefits for spouses and children (Börsch-Supan, 1997: 3). Concerning invalidity insurance, a full earning incapacity pension (Erwerbsunfähigkeitsrente) is paid if a person is not able to work a capacity over three hours per day. In this case, the pension is calculated in adding fictitious contribution years to the personal contribution record for the missing years until the earliest possible retirement age (Mattil, 2006: 94). If a retiree is able to work between three and six hours a day, there exists a halved earning incapacity pension, where payment is reduced if other income exceeds income limits. Apart from those incapacity pension payments, the GRV provides rehabilitation measures to reintegrate people into the labour. Regarding survivors' benefits, the German pension system provides insurance for widow(er)s and children if the insured person deceases during the contribution period or after retirement. Nevertheless, those entitlements have considerably been cut: "Within the scope of the pension reform 2001, widow(er)s' pensions have been reduced from 60% to 55% of the old-age pension of the deceased if the survivor is either aged 45 and over or educating at least one child. Supplements are granted according to the total number of children the survivor has brought up" (Mattil, 2006: 96). Widow(er)s aged under 45 without and without any children are only paid for 24 months with pension entitlements.

The occupational as well as the personal pension sector is far less important, since both are not obligatory in Germany. However, these parts of pension schemes are partly supported by the German State. In 2001 the government set up a pension reform, with which the Riester Rente (named after Walter Riester, the minister of labour and social affairs at the time) was introduced. The objective of this pension component has been to reduce public pension liabilities by providing profound public support for voluntary contributions to the occupational and personal pension sector (see chapter 7.2.3).

To sum up, the German welfare state, and in particular its pension scheme, is widely recognized as a strong male breadwinner model that supports the traditional division of labour and low female labour force participation. This is a result of certain variables that are characteristic for the German social insurance pension system: "Firstly, the taxation system is household based, not oriented towards the individual; tax reductions for single-earner marriages are high, a tax-splitting system within marriage creating disincentives for wives to be employed (...). Secondly, the level of derived rights for spouses in this system [still] is high; social insurance benefits like pensions and health care provide for dependants, and the entitlements to welfare benefits depends on household income" (Meyer, 1998: 2).

### 7.1.2 Calculation of Benefits and Financing

In Germany a minimum of five insured years is required to achieve pension benefits at all. Figure 19 shows the minimum retirement age for all pension types as it was until the late 1990s. This complex system was introduced in 1972 and was changed by the social security reform in 1992. However, one of the most important changes is the raise in early retirement age to 65 until 2017.

Pension type	Retire- ment age	Years of service	Additional conditions	Earnings test
A Normal	65	5		No
B: Long service life („flexible“)	63	35		Yes
C: Women	60	15	10 of those after age 40	Yes
D: Older disabled	60	35	Loss of at least 50 percent earnings capability	(Yes)
E: Unemployed	60	15	1.5 to 3 years of unemployment (has changed several times)	Yes

Notes: This legislation was changed in the reform of 1992. Changes became first effective between 1997 and 2001 (for the different pension types) and will be gradually phased in until 2017. Almost all changes will be effective by 2011.

Figure 19: Old-age pensions

GRV pensions are strictly work-related and quite close to actuarially fair and free from redistribution: “Benefits are computed on a lifetime basis and adjusted according to the type of pension and the retirement age” (Börsch-Supan & Wilke, 2004: 13). They are calculated on the basis of four elements: (a) earning points (Entgeltpunkte, EP); (b) the employee’s years of service life (SY); (c) adjustment factors (AF) for pension type and retirement age; (d) the current pension value (aktueller Rentenwert, PV) which is the macroeconomic reference in this term.

The earning points are earned during the working time of participants and therefore reflect the employee’s relative earnings position: “One point equals the payment of contributions for the average income of all contributors in one year” (Mattil, 2006: 98). With this, the annual maximum in 2005 has been more than 2 earnings points, corresponding to the upper earnings limit contributions (Sachverständigenrat, 2004: 226).

With retirement, the total of earning points is multiplied by the current pension value (aktueller Rentenwert), which is upgraded every year according to the pension formula

(Rentenformel) that is valid for the initial and the current pensions. This pension formula has been reformed in 2004 by implementing a sustainability factor (Nachhaltigkeitsfaktor) which implies demographic changes, such as the relation between contributors and beneficiaries (Commission, 2003: 84). The annual value of a pension, using the initials as explained above, is as follows:  $P_{t,i} = EP_i * SY_i * AF_i * PV_t$ .

Additionally, a second factor that was introduced in 2006 takes into account changes concerning contributions, such as the development of the employees' gross earnings in the private sector below the upper earnings limit. According to the 'Sachverständigenrat zur Begutachtung der gesamtwirtschaftlichen Entwicklung', the new pension formula will cause an adjustment by about 0.7% below earnings growth (Sachverständigenrat, 2004: 238).

Concerning financing pension benefits, the GRV mainly uses contributions. The contribution payments cover about 76% of total pension funds, while the rest is derived from the state budget. This budget is financed by contributions that are administrated like a payroll tax, levied equally on employees and employers (Börsch-Supan & Wilke, 2004: 11). In 2005, 19.5% was used for pensions: "Income is only considered between a lower and an upper earnings limit, where the upper limit equals about 2.3 times the average income of all contributors" (Mattil, 2006: 97). In 2005, this limit in the upper class was 62,400 Euro per year in West Germany and 52,800 Euro per year in East Germany. The contribution rate has been steadily rising since the late 1960s, using the upper earnings threshold as an additional financing instrument.

Furthermore, public subsidy accounts for a considerable part of pension payments and has to be characterised as a mix of contributions and taxes: "The remaining approximately 30 percent of the social security budget are financed by earmarked indirect taxes (a fixed fraction of the value-added tax and the new "eco-tax" on fossil fuel) and a subsidy from the federal government" (Börsch-Supan & Wilke, 2004: 11). The government subsidy is also used to fine-tune the PAYG budget constraint, because the system only has a reserve of about 1 days worth of benefits expenditures.

Public funding is also used to cover payments that are based on credits for certain periods: "Pension periods are inter alia assigned for each child (three earning points per child), for periods of unpaid private nursing care and for educational periods (up to three years). Additionally, people in military service or community service receive credits for this period" (Mattil, 2006: 102).

Benefits of private sector pension are essentially tax-free, as those pension beneficiaries do not pay contributions to the pension system and to employment insurance. Nevertheless,

private pensioners have to pay the equivalent to the employees' contribution to the mandatory long-term care and health insurance. This equivalent is paid by the pension system.

### 7.1.3 Reforms and further development

As carried out in previous chapters, the PAYG system, as it is present in Germany, is highly faced with consequences of demographic change. Therefore, the government implemented certain pension reforms after 1972, namely in 1992, in 1999, in 2001 and a further strengthening in 2004.

Concerning population ageing, the most important reform implemented in 1992 was to anchor benefits to net rather than to gross wages: "This implicitly has reduced benefits since taxes and social security contributions have increased, reducing net relative to gross wages" (Börsch-Supan & Wilke, 2004: 27). This mechanism implies an implicit instrument to share the burden between generations, when demographic changes will speed up.

The 1999 reform was supposed to lower the replacement rate. A demographic factor, a function of life expectancy plus several correction factors, was already implemented but revoked after the change of government in 1998. However, a side-effect of this reform was not revoked, namely the gradual change of eligibility age for pensions for women and unemployed from age 60 to age 65: "This change will be fully implemented by 2017 and effectively leave a "window of retirement" for healthy workers only if they have at least 35 years of service" (Börsch-Supan & Wilke, 2004: 28). As opposed to figure 19, there will be no distinction between men and women after the year 2015, unemployment-retirement as well as part-time retirement were brought to an end after last year. In General, those changes were installed in order to change the effective retirement age by around 2 years from about age 60 to age 62.

The most important pension reform was implemented on May 11, 2001. As mentioned before, it is popularly referred to as the Riester reform, named after the then labour minister Walter Riester. This reform accounts a major change in the Germany pension system, since it will change the monolithic character of the PAYG old-age provision to a genuine multipillar system: "The objective of the German pension reform 2001 was to reduce the public pension payments to participants in the GRV as well as to members of the civil servants' pension

scheme and in turn to improve pensioners' entitlements to occupational and personal pensions" (Mattil, 2006: 105).

This change in the pension scheme aimed three objectives that go along with the transformation. First of all, the key objective of the Riester reform was to provide stable and sustainable contribution rates. This should further limit increases in non-wage labour costs and lead to a fairer balance of intergenerational burdens. The law actually states that contribution rates must stay below 20% until the year 2020 and below 22% until 2030 while the net replacement rate must stay above 67%. The second objective is to secure the long-term stability of pension levels. For this, pensions will be gradually reduced from the current level of 70% of average net earnings to 67-68% by 2030. Furthermore, the Riester reform changed the computational procedure for the reference earnings by subtracting a fictitious 4% of gross earnings that are invested in new supplementary private pensions: "In comparison with the definition of net earnings which applied prior to the reform, this means that actual PAYG pension levels will fall by a larger margin (by some 10 percent to about 63.5 percent) than suggested by the new definition" (Börsch-Supan & Wilke, 2004: 29). Thirdly, the decline in public pensions is expected to be offset by supplementary pensions. Those pensions can be either occupational or private and have to be subsidized by tax deferral and tax deduction, or by direct subsidies to individual and occupational pension plans. However, those supplementary pensions are not mandated.

To achieve these goals, the 2001 reform introduced certain core elements that denoted the shift to a multipillar pension scheme in Germany, as it is illustrated in figure 20.

Measure	Content	Pillar
Introduction of a needs-oriented basic income	Minimum social security guarantee for old age; reduction in earning capacity secured by means of needs-oriented basic income	0
New adjustment formula	Reduction in pension level by about 10 percent	1
Abolition of occupational incapacity pensions	Discontinuation of occupational incapacity pensions; replacement by two-tier general invalidity pension	1
Reform of women's and survivors' pensions	Modification of income rules for survivors' pensions; introduction of "pension splitting for married couples"	1
Reformed framework for occupational pensions	Introduction of a legal right to convert salary into pension contributions; relaxation of investing rules; introduction of pension funds; DC-plans permitted	2
Establishment of funded (voluntary) supplementary pension provision	Introduction of individual retirement accounts; rules for the recognition of financial services products eligible for state subsidies (Retirement Pension Contracts Certification Act); provision of state subsidy; introduction of deferred taxation	3

Figure 20: Overview of the core elements of the Riester reform



As can be observed in this figure, the PAYG pillar is intended to be reduced to a minimum social security that provides for basic income needs. Therefore, the Riester reform introduced a rather complex new adjustment formula, which aims to keep the contribution rate below a fixed level and to keep the redefined standard replacement level above 67% until 2030.

Further changes in the PAYG-pillar contain the abolition of occupational incapacity pensions as well as reforms in terms of women's and survivor's pensions, that are affected by the new pillar model.

As already mentioned, the most crucial component of the 2001 reform is the introduction and significant promotion of supplementary funded private pensions to fill the gap created by the changes in the PAYG pillar. Consequently, the 2001 reform also introduced pension funds that were not legally embodied in Germany before. The most important set up within this reform was probably the introduction of components that should reduce liabilities of the public pension by providing profound public support for voluntary contributions to the occupational and personal pension sector: "The objective is to offer incentives for people to take out supplementary private pension cover which, in the long term, should compensate for the future cuts in public pensions" (Börsch-Supan & Wilke, 2004: 32). Those incentives can either be occupational or individual pensions, whereas there will be no legal mandate for people to invest in additional private schemes. Instead, the government hopes that those incentives given by the high subsidies would be strong enough to incite people's interest in supplementary pensions (Mattil, 2006: 105).

However, an increasing part of labour income, which will increase from 1% in 2002 to 4% in 2008, should be voluntarily invested into occupational and personal pension components. This is supported by the public sector by tax reductions or direct public grants (Old-age provision bonus), which are especially set up for low-income earners and families. Nevertheless, the government decided that incentives will only be available for investment vehicles which guarantee payment of a life annuity that is payable from the date of investment: "Investment vehicles which provide for lump-sum disbursements are not subject to state subsidies" (Börsch-Supan & Wilke, 2004: 32).

Moreover, the government introduced a law for the improvement of occupational pension provision (§1a Gesetz zur Verbesserung der betrieblichen Altersversorgung), which gives employers the right to convert up to 4% of their pre-tax earnings into an occupational pension scheme.

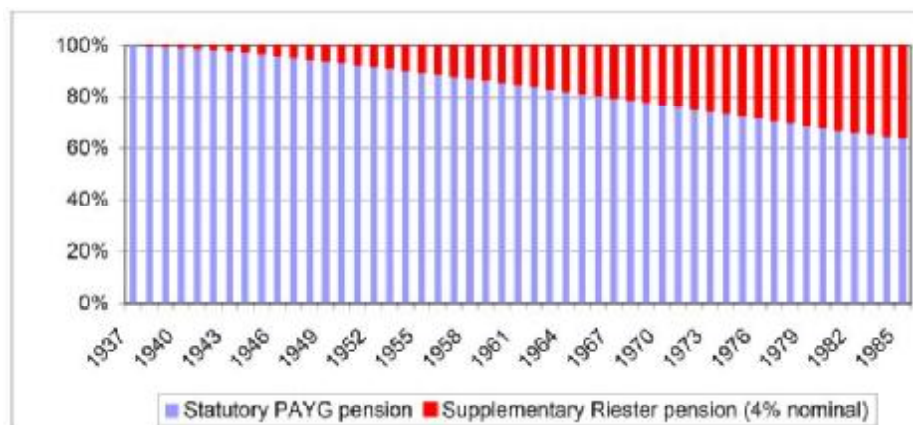
Resulting from the reformed framework for occupational pensions, employers have the right to demand for occupational pension out of their income (Entgeltumwandlung) since 2002.

This applies regardless of whether the contributions are paid by the employee or the employer and those arrangements may be based both on gross or net pay: "If they are based on net pay, there is a large implicit subsidy since the so-converted salary may not only be subject to deferred taxation but can also be exempt from social security contributions, at least until 2008. If they are based on gross pay, contributions may enjoy the same direct subsidies or tax relief as contributions to individual accounts, as long as the occupational pensions meet certain criteria which are less restrictive than the criteria for individual pension plans" (Börsch-Supan & Wilke, 2004: 36). Which contribution rules apply to this conversion depends on the chosen investment vehicle as well as to the incentives they attract.

When the 2001 reform was passed, the providers of private pensions were very enthusiastic and expected that up to three quarters of the 26.5 million people entitled to the Riester pension would take up a subsidized provision contract. This would have meant 18-10 million new contracts (Deutsche Bank Research, 2001: 15). However, the response to this voluntarily system was much lower than expected. Only 16% of the eligible persons had signed for the Riester reform by the end of 2002: "3.5 million people had signed a private pension provision contract, two million had entered an occupational scheme. Total occupational pension coverage increased from 35% in 2001 to 42% at the end of 2003" (Schnabel, 2003: 14). Unsurprisingly, parents have significantly higher take-up rates than people without children, since they benefit more from those subsidies. Additionally, it turned out that those who have taken up a Riester contract do not contribute the subsidized maximum amount per year, i.e. the total volume of contributions per annum is even smaller than the rate given above (Berner, 2005: 11). The reasons for that are the complexity of the products as well as the unawareness of people concerning the impact of demographic change to their pension system (Raffelhüschen: 6). Nevertheless, this development brings remarkable changes for the whole pension system in Germany. First, voluntarily entitlements are becoming mandatory, whereby occupational pension should become an additional pillar of the German pension system. Second, the method of deferred compensation leads to building up a fund and includes explicit decreases in wage-drift (Hegelich, 2006: 89).

Although the 2001 reform already marked a turning point in the German pension system that reduced the most extraordinary burdens, further reforms will be implemented to carry on with the current development. According to the federal government, the component of public pension will be most important for the German pension system (Bundesregierung, 2008). This is also observed in figure 21 which outlines the development of the retirement income by birth

cohorts in the year of their retirement under the assumption that insured cohorts have adhered to the Riester reform.



Source: MEA calculations based on the Rürup commission's demography and labor market projections.

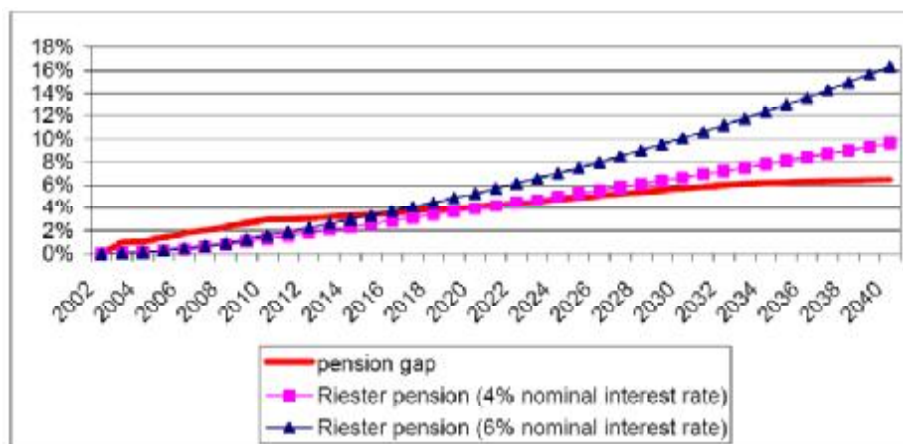
Figure 21: Composition of retirement income by birth cohort

The implemented reforms should achieve four main components. First of all, the current government will not decrease pensions in this legislation period. Until 2011, feasible decreases will be halved in order to compensate for the current pay freeze. Nevertheless, because of generation settlement, pensions are not expected to increase at the same level as wages. Secondly, pension contributions should further stay under 20% of gross wages, which is nowadays at 19.9%. Although all of these reforms should save expenses, supplementary payments by the government will be expanded by benefits from the environmental reform (BT- Drucksache 14/9503: 16) in order to keep those conditions. About 78 billion Euro, i.e. one third of the federal government budget are needed for sustainable pensions (Bundesregierung, 2008). Thirdly, the government decided to slowly and gradually rise the retirement age to 65 from 2012 to 67 in 2035. As a result, retirement age will be raised by one month per year from 2012 until 2024 and afterwards, it will be raised by two months a year. Retirees born in 1964 will be the first ones that have to work until they are aged 67. With this, better employment situation will come along with the increase of retirement age. As a fourth component, the government started the initiative "50 plus" in order increase the number of elder employers from currently 45 % to about 50% until 2010 (Bundesregierung, 2008).

### 7.1.4 An assessment of German pension system in terms of demographic change

As it was highlighted in the previous chapters, demographic change leads to an increasing ratio of pensioners to workers, only slightly dampened by an increase in labour force participation (Börsch-Supan, 2000: 4). Therefore, those changes are a serious threat to the stability of the German pension scheme; alarmists even pre-calculated that it will not be possible to maintain a PAYG system in times of demographic change at all. Nevertheless, the increasing ratio of female labour force participation as well as the raising number of older workers contributes to the PAYG preservation (Ginn et al, 2007: 26).

In addition, a collapse of the PAYG system should have been abandoned through the above mentioned reforms. This intends that it is necessary observe whether and to what extend those reforms solve the problems of the German public pension system. Although it still is open in how far the new voluntary supplementary private pensions will be accepted by the German workers, general assumptions concerning reform performances can be made. In this context, the most important question is whether the reforms, in particular the 2001 Riester reform, its main objective: “Main point of introducing the Riester pensions was to compensate for the reductions in the pay-as-you-go public retirement insurance scheme” (Börsch-Supan & Wilke, 2004: 42). Model calculations show that an envisaged savings rate of 4% of gross income is principally sufficient to close the pension gap which will open up in old age provision resulting from the cuts in public pensions.

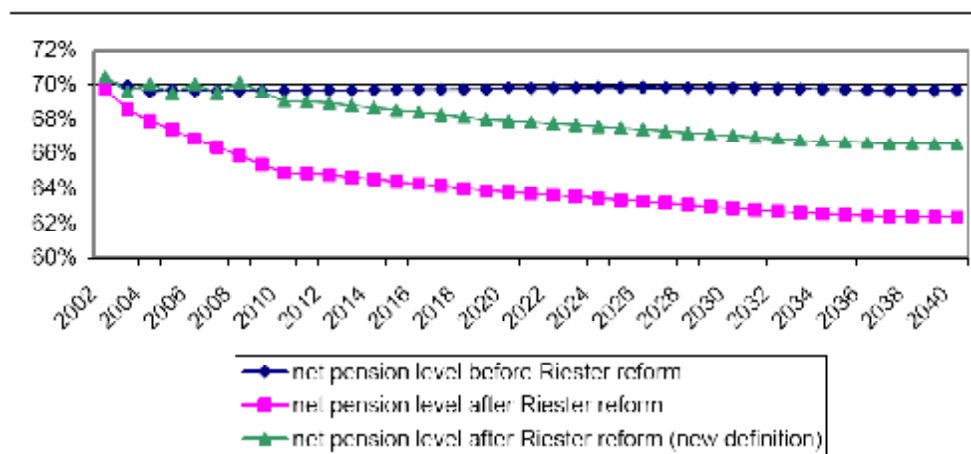


Source: MEA calculations based on the Rürup commission's demography and labor market projections.

Figure 22: Filling the pension gap

As figure 22 illustrates the pension gap, namely the difference between current and forecasted future gross pension levels, is raising over time. The level of additional benefits of the Riester pension based on different assumptions regarding rates of return can obviously fill the pension gap in the long run, but they are not sufficient for the older cohorts: “Younger cohorts born after 1970 will be in a position to build up even higher pension entitlements than was previously the case, thanks to their supplementary pension savings. Older cohorts, however, will need to save more than the envisaged maximum saving rates (...) in order to close this gap entirely during the time still available to them (Börsch-Supan & Wilke, 2004: 42). Consequently, initial saving rates would have to be tailored to each cohort instead of keeping the slow increase of a fixed 4% of gross income.

Moreover, intergenerational equity may have considered at risk until recently in Germany. This is because the financial burden of demographic change seemed to be disproportionately borne by contributors (Mattil, 2006: 109). Accordingly, it has to be examined whether the shift from a PAYG to a partially funded pension system will stabilize contribution rates for the younger generation with providing adequate replacement rates for the older generation. As outlined in the previous chapter, the Riester reform wrote quite courageously that the pension replacement level must not fall below 67% and at the same time the contribution rate must not go beyond 20% until 2020 and 22% until 2030. However, taking into account the demographic factors as they are outlined in the previous chapters, it can be observed that in the long term, future pensions will fall more than first predicted by the government, namely below 67% very quickly and eventually reach 62%.

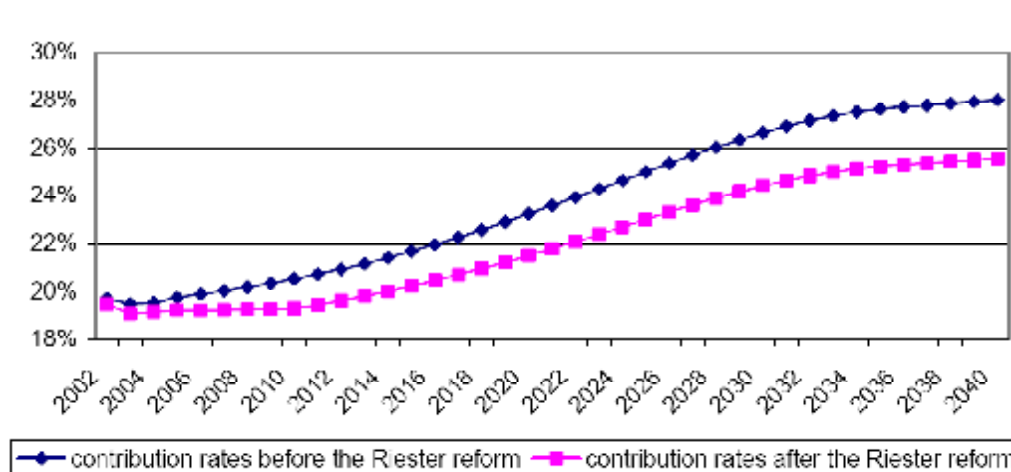


Source: MLI calculations based on the Rürup commission's demography and labor market projections.

Figure 23: Development of pension levels prior and after the 2001 reform

Hence, figure 23 unambiguously indicates that the governmental promises can not be kept in the long run: “The scale of this reduction also clearly demonstrates that the pension benefits provided by the PAYG public retirement insurance scheme will not be sufficient in themselves – that is without supplementary pension provision - to safeguard pensioners’ standards of living in old age” (Börsch-Supan & Wilke, 2004: 45). Such a development might lead to a higher and considerable poverty risk for pensioners as well as to the risk to fall back to public subsistence benefits, if they cannot rely on further income sources. This is preferably true for low-income earners, because they are unable to pay for supplementary pension provision during their working life. Additionally, those risks are increasing over time with the gradual reduction in public benefits, what indicates that younger age cohorts are relatively more concerned. The age cohorts currently being near retirement have a further dilemma: “[They] are severely affected by unemployment, but cannot profit from the very generous early retirement regulation of their processors” (Mattil, 2004: 200). As those individuals have not anticipated such unemployment risk in their pension planning, those unemployed have no means to compensate for the loss in public pension benefits, as unemployment insurance (ALG I and ALG II) only pays minor contributions to the public pension scheme.

Concerning contribution rates, there will be the most dramatic difference between governmental promise and current projections.



Source: MFA calculations based on the Rürup commission's demography and labor market projections.

Figure 24: Contribution rates prior and after the 2001 reform

As figure 24 depicts, the contribution rate will exceed the 20% line by 2014, even with the implementation of the Riester pension and will be 22% by 2022. This represents the risk of unsustainable finances that are still existent with the Riester reform.

The assessment indicates that certain reforms have come very late to limit the problems of the German pension scheme concerning demographic change. This is due to the structure of this social insurance pension system that was highly in the need to build up reforms as soon as possible. Because of the absence of more than one pillars, demographic changes impacted the system without absorbing any effects through other pension pillars and therefore do not impede changes in social inclusion outcomes. Nevertheless, the failure of the reforms – stabilization of the contribution rate at acceptable pension benefit levels – was not accidental: “As a matter of fact, the overoptimistic demographic and economic assumptions were chosen in a fragile political compromise between reformists and unions that enabled the Riester reform package to pass the parliamentary hurdles” (Börsch-Supan & Wilke, 2004: 45).

## 7.3 The United Kingdom

### 7.3.1 Pension System

The United Kingdom was one of the first countries in the world that has developed formal private pension arrangements in the 18<sup>th</sup> century. According to the Beveridge report of 1942, the UK social security model should in the one hand provide with a minimum old-age income and on the other hand bring forward a maximum of occupational and private pension security (Ginn et al, 2007: 5). Furthermore, the UK government already has taken measures in the beginning of the 1980s to reduce systematically unfunded state provision in favour of funded private provision: “These measures have involved making systematic cuts in unfunded state pension provision, and increasingly transferring the burden of providing pensions to the funded private sector” (Blake, 2002: 330). Hence, the country again was one of the first to begin with such a transformation in order to prevent a pension crisis developing (Blake, 2000: 223).

The developments outlined above made the UK pension system become a typical multipillar scheme, including more than just one fundamental pillar. Civil servants and other public sector employees, constituting 18% of the British workforce, are covered by separate pension schemes that are based on government acts. Since the majority of people is employed in the private sector, the multipillar pension scheme is the most important one in the UK.

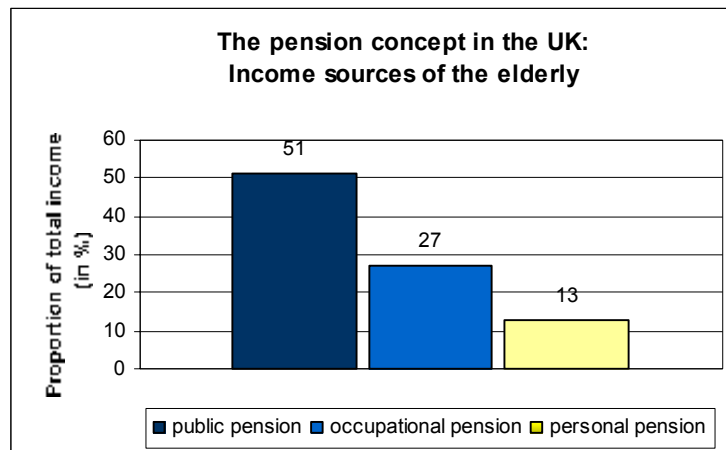


Figure 25: The pension concept in the UK

The British statutory pension system, which is mandatory for employers in the private sector and for all self-employed, is split into two levels. This partial scheme is based on labour market participation with the first level of a Basic State Retirement Pension (Basic Pension). The supplementary second tier provided by the state is the State Second Pension (S2P): “Employees in the UK in receipt of earnings subject to National Insurance contributions (NICs) will build up entitlement both to the BSP and, on ‘band earnings’ between the lower earnings limit (LEL) and the upper earnings limit (UEL), to the pension provided by the State Second Pension Scheme (S2P)” (Blake, 2002: 331).

The Basic Pension provides a flat-rate old-age pension on a level lower than social assistance, which in 2004/2005 was 79.60 Pound per week for a single person. Additionally, married women are automatically insured through their husbands by receiving 60% of his entitlements (Mattil, 2006: 94).

On top of the Basic Pension the United Kingdom has set up an additional pension scheme for employees. In April 2002 the S2P has replaced the State Earnings-related Pension Scheme (SERPS), which was introduced in 1978, and it is compulsory for those who have not chosen to contract out into an approved occupational or personal pension scheme: “On 6 April 2002, the State Second Pension reformed SERPS to provide a more generous additional State Pension for low and moderate earners, and to extend access to additional State Pension to include certain carers and people with long-term illness or disability” (The Pension Service, 2008). Self-employed are not entitled to the S2P, whereas employees with earnings in excess of the lower earnings limit automatically belong to this pension, unless they have taken the opportunity of contracting out to an approved employer’s occupational pension scheme or to a personal or stakeholder pension scheme. This measure is also state supported, as participants



in contracting out schemes are given a rebate on the employer's and employee's National Insurance contributions, namely 1.6% of earnings for the employee and 3.5% for the employer.

Because of the above mentioned possibility of contracting out of the SSP, the occupational and personal component is a very important income source for retirees in the UK. Since nearly 73% of those for whom participation in the S2P is mandatory (about 75% of the workforce) had contracted out, a variety of reforms has led to a consecutive replacement of state pension benefits with privately organised pensions. "The aim of the British government is to reach a 60/40 ratio of private and public pension income until 2050" (Mattil, 2006: 92). However, there is no obligation for employers to build up their own pension scheme, nor, since 1988, there is any contractual requirement for an employee to join the employer's scheme if one is apparent.

In particular, the occupational sector is very important in the United Kingdom, since about 15% in the private sector and 80% in the public sector were already covered by this scheme in 2000. To compare, only 12% of the employees and 44 % of the self-employed were insured in the personal pension schemes. Thus, there is a wide range of private sector pension schemes, especially the following occupational pension schemes provided by the employer: (a) the contracted-in salary-related scheme (CISRS); (b) the contracted-in money-purchase scheme (CIMPS); (c) the contracted-out salary-related scheme (COSRS); (d) the contracted-out money-purchase scheme (COMPS); (e) the contracted-out mixed-benefit scheme (COMBS); and (f) the contracted-out hybrid scheme (COHS). As an alternative, individuals have the opportunity to choose the following pensions that are independent of the employer's scheme: (a) the personal pension scheme (PPS); (b) the group personal pension scheme (GPPS); and (c) the stakeholder pension scheme (SPS).

Old-age benefits in the UK are paid from the legal retirement age, which is 65 years for men and 60 years for women, with longevity until death. Retirement after legal retirement age is also possible, due to the intention to allow people adjusting their retirement date to their circumstances of life. However, retirement before the legal date might be possible: "In the UK, public pensions cannot be received before the legal retirement age, but occupational pension schemes often bridge the period until this age is reached (Casey and Yamada, 2002: 7).

Besides old-age pensions, the United Kingdom provides incapacity as well as survivor's benefits. Concerning incapacity insurance, there are two different types, both payable by the National Insurance. With temporarily incapacity, people receive an Incapacity Benefit which

depends on their age and duration of incapacity. For disability caused by industrial injuries, they are entitled to Disablement Benefits, depending upon age and degree of disablement. Besides, there is a means-tested Disability Living Allowance for all disabled persons under State Pension Age and the Attendance Allowance for those how have achieved this age. Nevertheless, contracted out pensions usually do not cover working incapacity.

Regarding survivor's benefits, widow(er)s receive 100% of their partners pension entitlements to Basic Pension. However, since 2002, the SSP entitlements that can be inherited are cut from the full amount to only 50%. For contracted out pension schemes, there are different regulations: "Defined benefit occupational schemes are required to pay widow(er)s pensions, whereas defined contribution schemes do usually not provide survivor's benefits because annuities are purchased for a single person only (Mattil, 2006: 96).

To sum up, the United Kingdom pension system has been positively recognized for its multipillar scheme, as it has not been faced as serious as other countries by demographic changes in past decades. Certainly, the reasons for this are straightforward: "state pensions (both in terms of the replacement ratio and as a proportion of average earnings) are among the lowest in Europe, the UK has a long-standing funded private pension sector, its population is ageing less rapidly than elsewhere in Europe and its governments have taken measures to prevent a pension crisis developing" (Blake, 2002: 330).

### 7.3.2 Financing and Calculation of Benefits

In the United Kingdom it is required to accumulate 44 years for men to receive the full Basic Pension of currently £87.30 per week. For women, the necessary number of qualifying years currently lies at 39, but it will be adjusted with retirement age from 2010 to 2020. Then, women will also need 44 years to receive the full Basic Pension. The overall amount is calculated proportionally, whereas a minimum of one forth is required to receive a pension benefit at all.

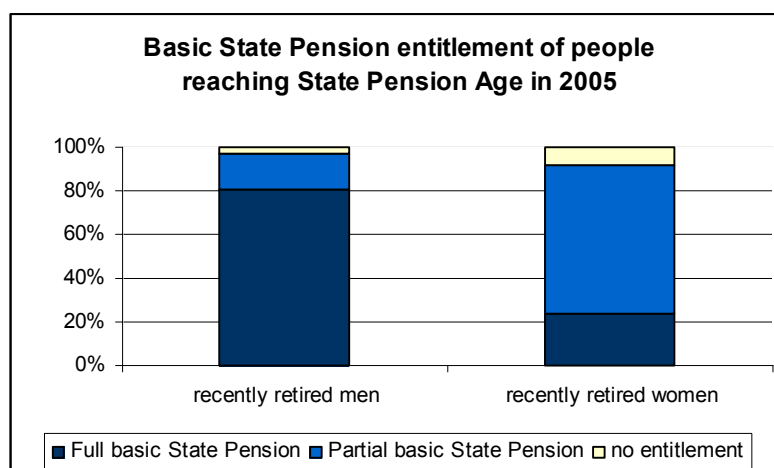


Figure 26: Basic State Pension entitlement of people reaching State pension in 2005

However, every retiree aged 80 or older receives at least 60% of the Basic Pension, which is supposed to prevent poverty among elder people (MISSOC, 2006: 58). Although it is impossible to get pension payments before the legal retirement age, people may postpone their retirement and gain an additional pension amount of about 10.4% per year.

To achieve SSP benefits as the second level of the UK's pension system, there is no minimum number of insured years required. Those pension payments are calculated by multiplying the earned income during the contribution years by the average increase in wages, which is upgraded annually (Mattil, 2006: 101). The limit of SSP benefits is 20% of the personal average income during working life except for low-income earners: "The State Second Pension gives employees earning up to a certain amount £30,000 (in 2007/08) a better pension than SERPS, whether or not they are contracted out into a private pension, with most help going to those on the lowest earnings (up to around £13,000 in 2007/08)" (The Pension Service, 2008). Consequently, the State Second Provision rules will treat an employee that earns at or above the National Insurance Lower Earnings Limit (£4,264 in 2005/06) but below the statutory Low Earnings Threshold (£12,100 a year in 2005/06) as if he or she had earned £12,200.

Concerning financing, the Basic Pension and the SSP benefits are contributions financed, as it is common for PAYG systems. The contributions are paid to the National Insurance (NIC) and also cover the entire social security system in which pension is included. Consequently, more than 10% are transferred directly to the National Health Service Fund that provides health insurance (Daykin, 200: 22), whereas the rest is managed by the National Insurance Fund which covers risks such as longevity, unemployment and long-term illness. Contribution rates for employers and employees are progressively increasing with their income and were

about 11.9% for the employer and 10% for employees in 2003. Since there is a progression, the add-on costs for low-income labour are relatively low, while high-income labour is charged relatively more.

Contracted-out occupational and personal pension benefits have to be at least at the same level of SSP. Moreover, defined benefit occupational schemes (DB) have to index their benefits to prices, at maximum 5% per year. Most DB schemes in the United Kingdom are arranged by companies and are known as occupational final salary schemes. This is because the pension is some proportion of final salary which depends on years of service in the scheme: "A typical scheme in the UK has a benefit formula of one-sixtieth of final salary for each year of service up to a maximum of 40 years' service, implying a maximum pension in retirement of two-thirds of final salary, and with the pension indexed to inflation up to a maximum of 5% per annum (i.e. limited price indexation)" (Blake, 2002: 351). Workers who remain with the same employer for their whole career can expect to enjoy a standard of living in retirement that is related to their standard of living at working time. However, this is only the case for 5% of workers in the UK, as the average employee changes jobs about six times a lifetime (Burgess & Rees, 1994: 85). In these terms, there is a portability loss in respect to the pension entitlement, because employees will have to move to a new employers' scheme when switching a job.

In contrast, personal pension schemes, which are defined contribution (DC) have the advantage of complete portability when changing jobs. They do not upgrade benefits with prices or wages, but tend to have much higher operating costs than occupational DB schemes: "Individual DC schemes in the UK take around 2.5% of contributions in administration charges and up to 1.5% of the value of the accumulated assets in fund management charges" (Blake, 2002: 353). According to the Institute of Actuaries (IA, 2008) this constitutes running costs between 10% and 20%, compared to 5% and 7% in the DB scheme.

Regarding financing, contracted-out occupational and personal pension schemes are funded, whereas the contribution rates have to be at least at the same level as the contracted-out NIC rebate. "On average, employees in the private sector contributed 4.6% and employers 12% of gross wage to occupational pension schemes in 2001, with contribution rates being significantly higher in the case of defined benefit compared to defined contribution schemes" (Matti, 2006: 98).

### 7.3.3. Reforms and further development

Since the British pension system was based on the public as well as on the occupational and personal scheme, the impact of demographic change on the pension system is not as massive in the United Kingdom as it is in Germany. Nevertheless, the United Kingdom did not escape from the European impending pension crisis: "The UK is not entitled to be complacent, however, since there remain some serious and unresolved problems with the different types of private sector provision" (Blake, 2002: 330).

Therefore, certain reforms have already been implemented since 1980, starting with the Thatcher Conservative Government and continued by the succeeding Major Government. The most important implementations were to reduce the cost to the state of public pension provision, and of transferring the burden of provision to the private sector through the introduction of a stakeholder pension scheme. Those activities were continued by the Blair New Labour Government that came into power in 1997. However, this government had a more radical agenda for reforming the welfare state and put more emphasis on redistributing resources to poorer members of society than was the case with the Conservatives: "Shortly after the publication of the Green Paper, the Treasury issued a consultation document on the type of investment vehicles in which stakeholder pension contributions might be invested" (Blake, 2002: 335). In short, the key objectives contain (a) a reduction of the complexity of the UK pension system by abolishing SERPS; (b) introducing a minimum income guarantee in retirement; (c) providing more state help for those who cannot save for retirement; (d) encourage those who are able to save via an affordable and secure second pillar.

According to the British Department of Work and Pensions, the first priority of a pension reform is to tackle pensioner poverty, which is generally connected to demographic change. Consequently, several actions have been implemented since 1997, namely establishing Pension Credit, Winter Fuel Payments (an annual payment for people age 60 and over to help them with the costs of keeping warm in winter) and real terms increases in the value of the basic State Pension. By introducing a minimum income guarantee for retirees, which was raised from £68.80 a week in 1997 to over £114 today, more than 2 million people have been lifted out of the poverty.

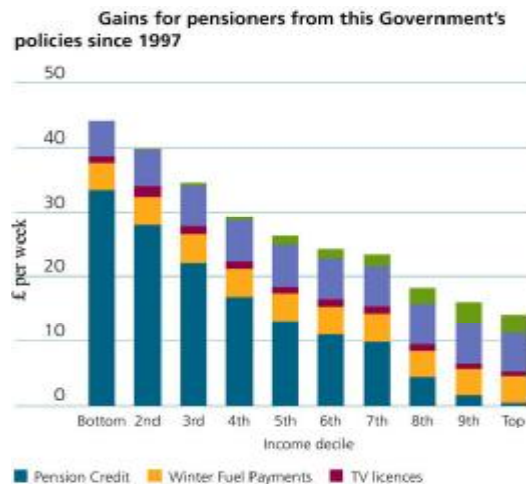


Figure 27: Gains for pensioners from this Government's policies since 1997

As mentioned above, the Labour government introduced low-cost stakeholder pensions to the public in April 2001: “This was an attempt partly to encourage more people to save for their old age, and also because wide mistrust over pension mis-selling in the 1980s and 1990s had seen many people shy away from pensions as a way to save for the long term” (pensions.co.uk, 2008). With this, the government accepted exorbitant costs of private pensions which were just limited available for workers (Ginn et al, 2007: 11). They are designed to be particularly suited to self-employed, low-to-medium earners, or anyone not in work still receiving income. Fees for this pension are only 1.5%, whereas there are hidden costs that are not limited to a certain amount and the Stakeholder pension costs are likely to rise in future: “Although the original running charge was capped at one percent or less, the financial services industry complained to the government that such a slender profit margin made them unattractive to promote” (pensions.co.uk, 2008).

Additionally, the governments' commitment to invest in Jobcentre Plus and the New Deal made the country become the country with the highest employment rate of any of the G8 countries, which also brought significant benefits for pensioners. “The high rate of employment has given more people the opportunity to save for their retirement, and has helped contribute to stable growth in the economy” (DWP 2, 2006). As a result, it is very important for the United Kingdom to maintain this macroeconomic stability.

Furthermore, the British government set up an independent Pensions Commission in 2002 “to review the longer-term challenges faced by the pensions system and make recommendations for reform” (DWP 1, 2008). It published its conclusions in 2005, setting out its proposals for meeting the challenges that are faced in providing a fair and adequate retirement income for all retirees. After having finished those reviews as a solid basis, the Pensions Commission has

been disbanded, as the Department for Work and Pensions is going further in implementing these approaches.

A further reform concerning the pension system was implemented on 6 April 2006, a day known as A-day which is following the Pensions and Finance Act of 2004. However, this significant reform will not have a big impact on the problems caused by demographic changes (BBC, 2006), since it is intended to make the pension system easier to understand and to invest in. As the state will not be able to support an increasingly number of retirees, another aim of this reform is to encourage people to take control of their own pension provisions (Pensions.co.uk, 2008).

The latest pension reform was initially set out in the May 2006 White Papers "Security in Retirement. Towards a new pensions system" and "Personal Accounts: to a new way to save" which should again deliver increased financial security for an ageing population. The first phase of these reforms was completed with the Pensions Act which became law in July 2007. The second phase, in the Pensions Bill, was introduced into Parliament on 5 December 2007 (DWP 3, 2008). By now, the key act only applies to Great Britain, but it is intended that Northern Ireland will make corresponding provision for its costumers in due course.

As it is highlighted by the Department for Work and Pensions, the aim of the first phase is to "make the state system more generous, fairer to women and carers, and more widely available" (DWP 3, 2008). It should improve people's outcomes in retirement and provide a firmer foundation upon which people can plan for their retirement. These reforms to the state pensions system only cover the Basic State Pension as well as the State Second Pension by changing some of the qualifying conditions for both.

First of all, the number of qualifying years needed to receive a full BSP will be reduced from 2010. Until than, it will be 39 years for women, 44 years for men and 30 years for both. Additionally, any number of qualifying years will give entitlement to at least some BSP: "people who have fewer than 30 qualifying years will get 1/30 of full basic State Pension for each qualifying year they have" (DWP 4, 2008). Together with changes in contribution conditions for BSP (both paid and credited National Insurance contributions will count towards BSP in the same way) this should make it easier for everyone to build up some entitlement.

Moreover, annual costs of living should increase the BSP in line with earnings rather than prices. This change is subject to affordability and the fiscal position, which means that it should rise more quickly than it currently does. However, this reform will start 2012 at the

earliest and by 2015 at the latest by also applying to people currently getting their state pension or who reach State Pension age before 6 April 2010.

Additionally, the system of Home Responsibilities Protection (HRP) will be replaced by a new weekly National Insurance credit which converts past years of Home Responsibilities Protection into years of credits. This credit refers to caring for children up to the age of 12 and for those who spend at least 20 hours a week caring for severely disabled people.

Regarding the State Second Pension, it will be made easier for those with long-term disabilities and people with caring responsibilities to build up some additional entitlement.

Concerning retirement age, the Pensions Act 2007 provides for the State Pension age for both men and women to rise from 65 to 68 in stages between 2024 and 2046. This is due to the increasing longevity in society and is implemented to make the state pension affordable in the long term.

The 2007 reform also implements changes in terms of equality: "Working and caring will be recognised equally in the reformed State Pension scheme, with more women and carers being eligible for a full basic State Pension and for State Second Pension" (DWP 4, 2008). This is essentially rooted through the changes in pillar 1, as highlighted above. Additionally, a married or separated man or woman who needs to use the partner's National Insurance contributions for his or her pension will be able to claim this as from having reached retirement age. From 6 April 2010, the individual won't have to wait until the partner has actually claimed his or her pension.

The Pensions Bill as the second part of the package builds on the firm of foundation on a set of reforms and is in the first line aimed at enabling and encouraging greater private pension saving in the UK to supplement that is received from the state. Therefore, the Bill will provide access to private pensions "to all eligible employees between 22 and State retirement age, who are not currently enrolled in a workplace pension scheme" (DWP 5, 2008).

The most important reform of the Pensions Bill is that from 2012, all eligible employees should be automatically enrolled into either a good quality workplace pension scheme or into the personal accounts scheme. With this, a worker will not longer choose whether to join a workplace pension scheme provided by the employer but he or she will have to actively decide not to be in a scheme, if for any reason they feel saving in a scheme isn't right for them. Additionally, all qualifying employers will have the duty to provide a workplace pension scheme and to contribute a minimum of 3% (on a band of earnings) to the employee's pension: "This will sit alongside 4% from the employee (on the same band of earnings) and around 1% from the Government in the form of tax relief" (The Pension Service, 2008).



Furthermore, personal accounts scheme as a trust-based occupational system will be introduced from 2012. It constitutes a low-cost pension saving scheme aimed at median to low income workers who do not have access to a good quality based pension scheme. The key features of this scheme are low charges, simplicity and a trust based occupational pension scheme that runs in the best interests of its members. Consequently, the contribution limit will be £3,600 per year (based on 2005 earning levels) and a general ban on transfers in and out the scheme in order to focus the scheme on the target market.

### 7.3.4 An assessment of the Anglo-Saxon pension system in terms of demographic change

As already highlighted in previous chapters, the three pillar character of the UK pension system helped to absorb the effects of the demographic change: “The UK pensions system appeared in the past to work well because one of the least generous state pension systems in the developed world was complemented by the most developed system of voluntary private funded pensions (Pensions Commission, 2004: 12). Consequently, the United Kingdom is not facing a pension crisis and will be less affected than other EU countries due to its less rapidly ageing population. Even so, the UK pension system suffers from reforms that were implemented by the British government in the 1980s and that pursued the strategy of drawing back public involvement in the field of pensions: “The consequences are high poverty rates among the elderly, a comparatively unequal distribution of old-age incomes and relative income positions of the elderly considerably beneath the population average” (Mattil, 2006: 220). In these terms, the demographic change constitutes a speed up of negative effects in the pension system. Whereas on average the system worked, inadequacies in the pension scheme are mostly related to specific groups of individual people.

Nevertheless, reform options in the UK are rather straightforward compared to the EU average. With the 2007 reforms, the state tries to counteract the demographic challenge in a more appropriate way than it happened in previous times: “(...) a proposed package of measures, designed to deliver increased financial security for an ageing population, underwent an unprecedented national consultation process in order to build a genuine, broad based consensus around the way forward“ (DWP, 2008).

However, one of the biggest challenges is the complexity of the overall pension system. Even the 2007 reforms do not provide with a less complex system, but lead to confusion through further elementary changes instead of keeping certain key features. Both the complexity as well as the frequency of change makes it almost impossible for individuals to understand the overall pension system, as the survey illustrated in figure 28 highlights.

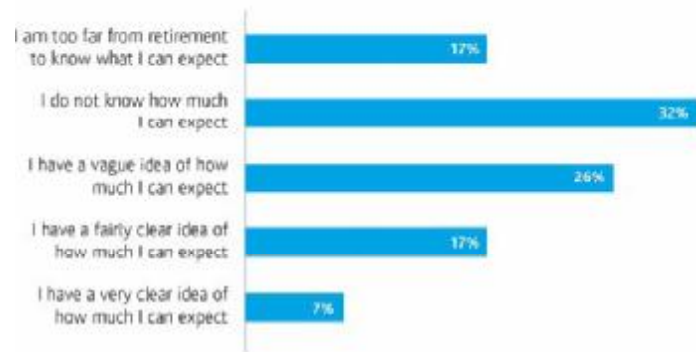


Figure 28: Do you have a clear idea of how much state pension you can expect in retirement?

Consequently, any those reforms will hardly be accepted by the public and will therefore have less impact on the demographic challenges. This phenomenon might particularly appear with the British governments aim to improve private pensions, as many savers are unaware of the risks for their well-being in old age and incapable to profit from the large choice of private pensions. Even the recently introduced new form of personal pension, the stakeholder pension, could not induce many individuals to provide more for their old age (Pensions Commission, 2004).

Moreover, the replacement of SERPS by the State Second Pension has poorly reached its goals in terms of being more transparent. Although the governments' intention of helping those with lower incomes was mainly reached by spending £19 billion on this pillar, this aspect of the system is poorly understood: "Few people are aware of it at all, and even fewer of how their entitlement to it builds. Many people are building entitlement to the State Second Pension without even being aware that they are doing so" (DWP, 2006: 116). For this reason, the 2007 pension reform set up reinforcements in order to focus to a flat-rate top-up benefit in S2P.

With this, the government will keep public expenditure roughly flat as a percentage of GDP, although the UK pension scheme is not at risk in terms of financial sustainability. However, model calculations show that the increases in the number of pensioners are greater than the increases in state spending.



Figure 29: Projected state spending per pensioner indexed in constant 2004 price terms

As figure 29 illustrates, the pension gap, namely the difference between current and forecasted future gross pension levels, is raising over time. This will mainly impact a reduction at middle and higher income levels, as the percentage of earnings replaced by non-means-tested state pensions will remain roughly constant for lowest income earners, but will fall significantly between now and 2050 for moderate and high earners. People up to about average earnings are significantly offset by this effect, as the reforms provide with means-tested payments. However, if future pensions want to experience a level of well-being comparable to the current level despite the demographic change, then private savings would have to increase from 4.3% of GDP in 2000 to about 8.5% in 2030. Such an expansion will not even be reached through the 2007 reform: “It is improbable that private provision will increase on this scale” (Turner, 2003: 29).

According to distributional equity of the British pension scheme, it seems likely that old-age incomes will be more unequal in future times: “On average, pensioners could maintain their accustomed standard of living, but there were significant differences in individual replacement rates” (Mattil, 2006: 202).

This progress further indicates a high risk of poverty in old age, which is caused by the decreasing replacement rate of public pension benefits. However, the situation of the elderly has already improved in the 1990s with a continued fall until recently. It fell from 17.6% to 17%, representing 2.2 million poor retirees in the UK, which is still higher than the EU average (Brewer et al, 2007: 41). With the 2007 reforms, there might be a raising risk for old-age poverty especially for low-income groups in the UK. Such a development might be caused through the increasing implementation of means-tested benefits for British pensioners

and will lead to even more claimants for social benefits: "Since the introduction of the Pension Credits in 2003, more than 50% of pensioners have been eligible to means-tested benefits and the numbers will presumably increase further" (Ginn, 2004: 188).

Additionally, the Equal Opportunities Commission pointed out that the money build up in a personal accounts pension system might bar some retirees from claiming means-tested benefits. Therefore, some people, in particular women who earn less than men on average, might be worse off under this system, losing more in benefits than they gain through personal accounts (BBC, 2008). This will further develop the fact of gender inequality that is still apparent in the UK due disproportional benefits for women from the elements of social redistribution. However, the 2007 reform will implement certain reforms (see chapter 7.3.3) which in the long run will increase equality.

Overall, the assessment indicates that the United Kingdom's pension system is rather straightforward and does not need to be completely transformed. Although there are huge gaps in coverage, the structure of the pension system helps to absorb changes in demographic terms by dividing the effect on more than one pillar. Consequently, the government needs to counteract the problem of poverty risks for pensioners. However, despite the good underlying ideas of the institutional setting, its implementation still remains rather poor (Rechmann, 2001:343). This also emerged through the overall distrust in new implications. Consequently, certain reforms might not prevent from the challenges the UK pension system is already facing in terms of demographic change: "Unless new government initiatives can change behaviour, it is unlikely that the present voluntary system combined with the present state system, will solve the problems we face" (DWP, 2006).

## **8 Comparison of the pension systems' performance**

### **8.1 Institutional structure**

As elaborated in previous chapters, old age pension schemes in Germany and in the United Kingdom are based on contrary traditions concerning the welfare composition, featuring different institutional structures. Both countries are using the PAYG system with financing their pension payments. Nevertheless, the British pension system is to a much smaller extent

working on a PAYG basis but has higher concentrated on funded schemes. Concerning coverage of the population however, it can be observed that both countries' pension schemes cover the majority of retirees with over 90%, whereas the UK only provide with a minimum level: "Obviously, the public schemes, which are composed of several partial schemes, amount to a nearly universal coverage" (Mattil, 2006: 182).

On the other hand, there are sharp differences concerning the coverage of other pension components. Occupational and personal pension schemes are covered to a significantly higher amount in Great Britain than in Germany. In Germany, only 29% of men and 22% of women received a private pension in 1999, whereas in the UK 75% of men and 66% of women were participating in this sector. In these terms, a private pension refers to individual pension provision through additional pension supplies, such as the Riester pension in Germany. Obviously, these differences result from the institutional structure, since a private component in the pension scheme is voluntary provisions in Germany, but part of the statutory system in the United Kingdom.

Accordingly, the calculation of pension benefits differs sharply between the UK and Germany. In Great Britain, there is no targeted benefit for the Basic Pension, whereas the SSP aim a replacement rate of 20% of the average income over the whole working life. Although those benefits as well as the contracted out benefits are supposed to increase, there is a larger spread of lower and upper quintile of replacement rates in Great Britain than in Germany. In Germany, an institutional regulation is implemented and had obvious effects on the level of pension benefits. "The existence of a policy objective for the replacement rate of public pension payments to long-term insured (...) is reflected in the pension formula, including the intrinsic adjustment rules" (Mattil, 2006: 183). Therefore, German pensioners achieve income positions around 1.0, which is the overall median income. If measuring an equivalent old-age income ratio of pre-and post-retirement, the UK retirees are reaching higher median levels than German pensioners, due to the considerable improvement in the private pension sector during the late 1990s because of good financial market performance and the maturation of the occupational sector. Nevertheless, the spread of lower and upper quintile of replacement rates is significantly larger in the UK than in Germany.

Concerning financing of pension benefits, there is a higher proportion of tax financing in the UK, whereas 87% of German pension payments were PAYG financed in 1999 and only 13% were funded. This development in Great Britain partly results from the fact that the tax financed subsistence benefits are worth more than a full Basic Pension (Mattil 2006: 183). In contrast to Germany, British governments have not formulated a targeted level of pension

payments for the public pension component. "The reason is that the public pension payments are not aimed at securing a former living standard as in Germany" (Mattil, 2006: 101).

Therefore, the poverty risk in the UK is higher than in Germany because a higher proportion of people rely on public transfers. This is also observed by looking at the subsidiary benefits by the British state, as the reduction of old-age poverty can just be attributed to the Minimum Income Guarantee, which is higher than the full Basic Pension. Compared to Germany, where less than 2% of retirees receive social assistance, up to 50% in the UK are expected to benefit from the recently introduced Pension Credit.

Those differences in financing certainly imply differences in the income sources of elderly in Germany and the UK. The dominating source of German old-age income certainly is the public pension scheme, accounting about 70% of total income. Private pensions from occupational and personal schemes added up to 4.7-6.8% of total income. In contrast, the relative importance of the income resources in the UK is much more balanced, with public pension and private pension being almost equal parts.

Despite of numerous differences in those pension schemes, Germany and the UK also possess common components. First of all, longevity in both countries is adjusted similarly. As already highlighted, the legal retirement age for men is 65 as well as for women in Germany, whereas the retirement age for British women will only be raised to 65 years in a transition period between 2010 and 2020. In addition, both countries possess some flexible retirement rules in order to allow people adjusting their retirement date in a more individual way: "Retirement after the legal retirement age is possible in both Germany and the UK; additional months are rewarded by an increase of pension benefits in the public schemes" (Mattil, 2006: 95).

Secondly, both pension systems provide with an invalidity (or long-term incapacity to work) as well as with survivors' benefits. For both countries, the importance of those insurances can be observed through the high coverage of the elderly population by public pension schemes. Since only 60% of British and 78% of German women have their own pension entitlements, the remaining difference of the found recipient rates of more than 30% of women in the UK and about 20% in Germany obviously rely on widows' pension.

The above analysis implies that the institutional arrangements of pension systems do in fact influence the level and the distribution of old-age incomes among individuals and, with this, on social inclusion outcomes. Consequently, the diverse aspects of both schemes cause certain effects on the systems' performance with regard to their key objectives reaching social inclusion. Those have to be analyzed in more detail in order to evaluate the overall performance of the German and the British pension system in terms of social inclusion.

## 8.2 Assessment of compliance with the key objectives of the pension system

By comparing the performance of the German and the British pension system, it is important to differentiate between the demographic developments in both countries. As highlighted in chapter 7.1, both countries will experience further changes in terms of population size and growth, population ageing, life expectancy and fertility. With this, Germany will show a more pronounced demographic change than the United Kingdom. Nevertheless, both countries will have to deal with future changes concerning their particular pension system, since demographic change is crucial for the operation with pension systems. As displayed in previous chapters, demographic change will cause an increase in pension expenditure: “(...) total pension expenditure is going to increase due to population ageing (...)” (Mattil, 2006: 197). As a matter of fact, those changes will stronger affect the stability of the German pension scheme, as it is even pre-calculated that it will not be possible to maintain the current pension system.

This progress goes along with the construction of both countries' pension schemes. Although the British pension system was based on the public as well as on the occupational and personal scheme, the United Kingdom did not completely escape from the European impending pension crisis: “The UK is not entitled to be complacent, however, since there remain some serious and unresolved problems with the different types of private sector provision” (Blake, 2002: 330). Therefore, both countries are faced with certain impacts on the systems' performance with regard to the formulated key objectives like preventing poverty, enabling people to provide adequately for their old age, treat women and men equally and aim for intergenerational justice and financial sustainability.

Overall, the UK's experiences in old-age security differ considerably from Germany's. This is particularly true for the factor of poverty: “According to the empirical findings about old-age incomes and their distribution, the British pension system has not been able to prevent old-age poverty throughout the last decade” (Mattil, 2006: 202). This points to a failure in intergenerational equity, since old-age incomes have been distributed considerably less equal than in Germany. In Germany, this may have been considered at risk until recently, although intergenerational equity has been largely achieved. Nevertheless, in the face of demographic change, recent pension reforms reduced the pension benefit level in order to improve the financial sustainability. Therefore, pensioners face a reduction in replacement rates, as benefit reductions display a transformation of the financial burden from the generation of working

age (contributors) to the generation of the elderly. Whereas people of working age up to 50 years still are able to revise their pension planning accordingly, current pensioners and those near retirement do not have the opportunity to compensate for this loss in the value of their pension entitlements by building up additional income sources. A continuously lower adjustment of pensions relative to earnings tends to shift the intergenerational balance in favour of the younger generation. However, on an aggregate level this can be viewed as fair, since public pension entitlements were assigned under different assumptions of demographic conditions.

In Contrast, the intergenerational equity in the United Kingdom failed, because Basic Pensions and contracted-out pensions are not indexed wages and the relative income position of retirees decreases over time. Such a progress is not a problem per se, but there is a high amount of people that has to live on a very low income level in old age. Consequently, the pension system has not been able to prevent old-age poverty. This goes along with unequal distribution of old-age incomes, which led to significant differences in individual replacement rates. However, the low level of Basic Pension benefits, with a full pension being worth less than 20% of average labour earnings, is projected to even shrink to less than 10% of average earnings by 2050. The Pensions Commission further projects the shrinkage of Basic Pension together with a full entitlement to the State Second Pension from about 30% in 2000 to about 20.5% in 2060 (Pensions Commission, 2004: 132). Thus, the risk of old-age poverty will increase and a higher number of pensioners will rely on public subsistence benefits that were worth about 30% of average earnings nowadays (Mattil, 2006: 203). Moreover, a large part of British pensioners faces investment risk in their contracted-out pension scheme. "The global slowdown of financial markets since 2000 has reduced projected pensions of both personal and occupational schemes about 10% each year" (Mattil, 2006: 204). Furthermore, the Pensions Commission finds that more than 50% of people in working age do not save enough to reach the target replacement rate. This is mainly because most of the savers are unaware of the risks for their well-being in old-age and incapable to profit from the large choice of private pension provision, as the government does not provide with sufficient knowledge about old-age provision and underlying financial issues in the UK system (Ring, 2003: 77). Consequently, if future pensioners want to experience a level of well-being comparable to that of nowadays' retirees despite the demographic change, then private savings would have to increase to a scale that is improbable to reach, what implies a rather more unequal distribution of old-age incomes and hence an even higher risk of poverty. Accordingly, the number of social benefit claimants is rather high in the UK and is further determines to rise considerably:



“More than 50% of pensioners have been eligible to means-tested benefits and the numbers will presumably increase further” (Ginn, 2004: 188).

In terms of equal distribution of old-age incomes, Germany possesses a better performance than the UK, since it is more equal due to the higher proportion of the public pension benefit including elements of social redistribution. As a result, most individuals can secure their standard of living after retirement, if they are not affected by unemployment: “Those unemployed immediately before retirement may be able to maintain or improve their standard experienced during the spell of unemployment, but probably not the living standard achieved on average throughout their working life” (Mattil, 2006: 200). This is because these cohorts have not anticipated an unemployment risk in their pension planning and therefore have no means to compensate for the loss in future public pension benefits, as they cannot profit from the very generous early retirement regulation of their predecessors.

Although unemployment is an individual problem, high unemployment rates have an adverse impact on total output as well as on overall public finances as a result of unemployment benefit expenditure and hence affect the pension scheme sustainability. This remarks a further pressure on the German pension system which already is at high risk of unsustainable finances: “Due to the adverse effects of demographic change on pay-as-you-go-financed pension schemes, the German public pension scheme faces a significant risk of unsustainable finances” (Mattil, 2006: 110). With this, the 2001 to 2004 reforms taken by the German government managed to significantly reduce the risk of financial unsustainability (Commission, 2004: 47). As observed in previous chapters, this was mainly caused by a shift of the pension system from almost entire PAYG system to a partial funding. Nevertheless, this partial transition brings along a rise in contribution rates to the pension system, which particularly reflects the working-group. As already highlighted, those people have to pay for the present pensioners as well as to provide for their own retirement. “However, in comparison with the situation before reforms, this age group presumably profits on average from the reductions in future public pension spending, though with different individual net effects according to age and other characteristics” (Mattil, 2006: 201). Accordingly, recent reforms have improved the financial sustainability of the public pension scheme, though with an uncertain net effect on sustainability of overall public finances due to probably increasing expenditure for public subsistence benefits in the long run. This implies that the improvement in sustainability has been at the cost of an increasing poverty risk for retirees as well as less gender equality. In general, both countries possess a gender income gap among the elderly, in terms of total income. Those differences usually result from a lower coverage of women by the

respective pension scheme or type of income and not from the lower amount received from an income source. By now, German women are closer to equitable pensions relative to men than British women. This is because women benefit disproportionately from the elements of social redistribution in public schemes, what implies a higher proportion of benefits for German women, since public benefits are higher than in the UK. Consequently, a reduction in social redistribution elements is especially disadvantageous to women, as they tend to benefit more from such solidarity elements. This leads to a raising risk of old-age poverty for women, which are in Germany as well as in the UK more exposed to poverty than men. Although those rates have already declined during the 1990s, there are still high poverty rates among certain problematic groups like single women: "In 1999, poverty rates for women were 11% in Germany and 20% in Great Britain, compared to 7% and 14% of men, respectively" (Mattil, 2006: 186).

Concerning the United Kingdom, the financial burden caused by the demographic change seems to be borne by the present elderly generation and those retiring within the next three decades. The British pension policy failed to provide a reliable framework for old-age provision. Frequent changes in the pension system misled people about their entitlements and led to less confidence in the system and a shift to the private sector became apparent.

Additionally, there is no shift in pension policy towards a higher Basic Pension. Consequently, British retirees will probably gain less old-age income, since there was also a considerable reduction in the value of occupational pension schemes visible. A large number of employers have closed their defined benefit schemes and shifted to the defined contribution component, being faced with the prevailing financial risk.

### 8.3 Concluding evaluation

Germany and the United Kingdom possess contrary welfare traditions that result in divergent old age pension schemes. While Germany is a social insurance country using the PAYG system in the first instance, the UK's pension scheme is based on more than just one insurance pillars, as it is common for multipillar countries. The British pension system is to a much smaller extent working on a PAYG basis but has higher concentrated on funded schemes. Despite those differences, both countries are faced with increasing problems caused by the proceeding demographic change, which causes a shift in the overall structures of

pension schemes. It can be seen that Germany as well as the United Kingdom will experience a continuously increasing life expectancy on the one hand and lower birth rates on the other hand. However, most of the important changes in the demographic structure are more pronounced in Germany than in the UK. Together with the more improved structure in terms of demographic change, the multipillar pension system seems to perform better at large. Nevertheless, there are certain components which are less improved in the UK. Hence, both systems include certain advantages as well as disadvantages caused by the respective pension system structure.

The German pension system faces extensive financial consequences of demographic change and was found in a difficult macroeconomic situation including the highest unemployment rates in decades. Therefore, it was inevitable to implement widespread changes in the overall pension scheme structure. The government decided not to build a new pension system in a systematic and comprehensive way. Instead, the implemented reforms have focused on the objective to cut public expenditure in order to improve sustainability of pension insurance rather sooner than later. Those reforms have come very late, by what the German population has partly lost its confidence in the public scheme. Nevertheless, most of the people do not seem to have understood yet that they are already requested to assume a higher amount of responsibility for providing sufficiently for their old age by themselves (FAZ, 2004). This confusion is at last partly the fault of the German politicians who have promised adequate pension provision, according to the famous quotation of the former Federal Minister of Labour and Social Affairs, Norbert Blüm, "The (public) pensions are secure".

In contrast, the UK has already implemented reforms to rebuild their pension system more than 20 years ago: "British governments have started a strategy of drawing back public involvement in the field of pensions as early as in the 1980s" (Mattil, 2006: 220). However, the consequences have been far from positive, as the outcomes were and still are high poverty rates among the elderly, a comparatively unequal distribution of old-age incomes and relative income positions of the elderly considerably beneath the population average. This situation was of the elderly on the whole improved during the 1990s, as further reforms aimed to improve subsistence benefits and thus to relieve old-age poverty. Therefore, most of the British retirees were able to maintain their standard of living after retirement despite the low level of mandatory old-age insurance. Accordingly, there is evidence that most people provide adequately for their old-age independently of the scope of compulsory insurance (Yamada and Casey, 2002: 18). Nevertheless, recent developments in private pension components raise concerns about the pensions scheme's ability to prevent poverty initially. This is due to the

fact that yet not all people are able to build up sufficient old-age insurance, a fact that is shown by the comparatively high poverty rates among the elderly in the UK.

On the whole, it seems that the German and the UK pension systems are approaching in their structures: "On the one hand, the UK government asked an independent commission to examine whether it is necessary to 'move beyond the voluntary approach'. On the other hand the latest pension reforms in Germany reduced the replacement level of public pensions considerably, switched from a purely expenditure-oriented to a more revenue-oriented approach and introduced funded elements of pension provision" (Mattil, 2006: 221). Accordingly, recently introduced pension reforms in both countries are attacking the structure of the PAYG pillar by focusing on private pensions. For both countries, this increasing shift from the public to the private pension sector is caused by the demographic changes, particularly ageing. Nevertheless, even experts question this fundamental change, as certain surveys found that a public PAYG system performs better in providing equal distribution between generations (Schokkaert & Van Parijs 2003). In addition, the private component will also be negatively affected by demographic change, as there are high poverty rates and increasing intergenerational inequality due to a relatively high number of tax deficits (Ginn et al, 2007: 30). Such a development can already be observed with the pension system in the United Kingdom; hence it would be useful for Germany to learn from the experiences with its pension policy approach. However, past experiences are completely ignored by the German government, due to the proceeding multipillar approach: "Apart from the choice of sensible reform measures, it seems to be an increasing challenge for governments to 'sell' the necessity of pension reforms" (Mattil, 2006: 221). This does not only concern the general public, but the intentions and implications of reforms need also be shared and understood by the public administration that has to bring those measures into effect (Barr, 2000: 35). For both countries there seems to be a tendency of shrinking solidarity among the population on the whole and with respect to the elderly. Consequently, before implementing further measures to rebuild the pension scheme, both countries have to face the challenge of public perception in terms of prevailing values and intergenerational justice: "(...) the issue of old-age security in the future will not only be a question of the *ability* of the younger generation to assume the financial burden of ageing, but also of their *willingness* to bear the burden" (Mattil, 2006: 221). Accordingly, both countries have to outline the importance of old age security in order to be able to comply with the key objectives that are relevant of social inclusion outcomes.

## 9 Conclusion

As it is developed in the first part of this study, the demographic change in the European Union is proceeding further. Chapter 4 sets out, that compared to the world population size the European Union possesses smaller population growth than other regions. Furthermore, the shift from a regime of high mortality and high fertility to one of low mortality and low fertility is going to be the highest in the European Union, apart from Japan. This will lead to an overturn of the old-age pyramid, caused by an increasing life expectancy, the continuing growth of the work force aged 60 and over and a declining fertility that results in continuing low birth rates across the EU. Those developments will lead to significant increases in the old-age dependency ratio, which will be compounded when the cohorts born after will reach retirement in the coming decade.

The effect of the future aging that goes along with the demographic change in the European Union may have serious economic and social consequences that also affect the labour force. Consequently, an increasing ageing of this cohort as well as declining participation rates of young people can be observed. This development will cause a shift to an increasing number of retired people who will need to be supported by a reduced working-age population, namely a change from four to only two people working for a retiree.

Therefore, chapter 5.4 highlights that demographic change has a major impact on the pensions systems in the EU-27, regardless of the respective structure implemented. However, chapter 6 elaborates that the way the countries respond on the pressures varies considerably across the European Union as it depends on the institutional structure of the current pension system. Therefore, it is important to distinguish between those different pension schemes that come along with path dependence. According to this assumption, chapter 6 further introduces the theoretical distinction of path dependence in order to explain the existence of different pension systems within the European Union. In general, path dependence means that choices made in the past systematically constrain the choices open in the future. Consequently, this leads to the appearance of social insurance and multipillar countries, as they are set up in the work of Giuliano Bonoli as well as of John Myles and Paul Pierson. Those concepts are explicated in the further part of chapter 6, since they are essential for determining the current performance of the Anglo-Saxon and European continental countries' pension systems. With this, it is discovered that the nations covering the multipillar scheme never or only belatedly came up with a significant benefit scheme based on the pay-as-you-go (PAYG) system which is financed by payroll taxes. Instead, they only established a flat-rate minimum benefit within

their pension system which was only sufficient to cover the basic needs of retirees. In contrast, the social insurance countries possess an earnings-related PAYG pension system which was already mature by the mid-1970s. Concerning demographic change, it is not population ageing alone that constitutes a problem, but the design of the typical old age security system in interaction with population ageing and slow wage growth. This is particularly true for the large pay-as-you-go defined benefit schemes, where rising pension costs fall disproportionately on lower, mostly younger, wage earners, for whom covered earnings are often limited.

The next part of this study has brought together the theoretical and actual analyses of pension systems in the European Union. In chapter 7 the performances of the Anglo-Saxon and European continental countries' pension systems are compared, introducing the cases of the United Kingdom as the Anglo-Saxon model and Germany as a representative of the European continental countries. This is observed by their current performance on the one hand and their assumed performance in the future on the other hand.

Concerning the present pension systems in the UK and Germany, the thesis firstly refers to the differences within the pension schemes. The components of both pension schemes are pointed out in detail, in order to clarify the presence of the theoretical concept of Bonoli and Myles and Pierson. With this, the British system is revealed as a multipillar country, although including the component of the PAYG scheme. In contrast, the German pension system is a common PAYG scheme, including one predominant component which covers 78% of the benefits for retirees. Concerning those starting points, it might be assumed that the UK as a multipillar country will not be faced with the same impact of demographic change as Germany, since the impact of increasing costs of old age security is smaller and more manageable. However, the comparison shows that the United Kingdom is highly more faced with the danger of old-age poverty than Germany. This is basically caused by the low level of the Basic Pension, which will not even be shifted to a higher amount of benefits.

In contrast, Germany's performance in reforming the pension system is observed as positive. By implementing instruments that cause a shift to additional components for the pension system. In this point, the German system seems to approach to the British concept, since the reforms reduced the replacement level of public pensions and introduced funded elements of pension provision.

Accordingly, old age pension schemes in Germany and in the United Kingdom are based on contrary traditions concerning the welfare composition that do in fact influence the level and the distribution of old-age incomes among individuals. Consequently, the diverse aspects of

both schemes cause certain effects on the systems' performance in terms of demographic change. This thesis evaluates those performances carefully with regard to the formulated key objectives like preventing poverty, enabling people to provide adequately for their old age, treat women and men equally and aim for intergenerational justice and financial sustainability. This is in order to get a sharp answer to the central question, Do Anglo-Saxon and European continental countries' pension systems face different challenges in relation to demographic change?, as the performance directly mirrors the respective challenges the pension schemes are faced with.

Chapter 8.3 provides with a concluding evaluation of the German and the UK's pension systems' performance and therefore directly refers to their respective challenges. Firstly, it is highlighted that most of the important changes in the demographic structure are more pronounced in Germany than in the UK, but there are certain components which are less improved in the UK. Hence, both systems include certain advantages as well as disadvantages caused by the respective pension system structure. Overall, the German pension system faces extensive financial consequences of demographic change what makes it inevitable to implement widespread changes in the overall pension scheme structure. In contrast, the UK has already implemented reforms to rebuild their pension system more than 20 years ago the outcomes were and still are high poverty rates among the elderly, a comparatively unequal distribution of old-age incomes and relative income positions of the elderly considerably beneath the population average.

Consequently, it seems that the German and the UK pension systems are approaching on the whole. In both countries, currently implemented reforms to slow down demographic changes are attacking the PAYG-pillar in favour of the private pension provision. Nevertheless, even experts question this fundamental change, as certain surveys found that a public PAYG system performs better in providing equal distribution between generations and highlight that the private component will also be negatively affected by demographic change. Such a development can already be observed with the pension system in the United Kingdom, but is completely ignored by the German government. By now, this already occurs by increasing information problems that are a crucial element of old-age provision in both countries which goes along with a shrinking solidarity among the population on the whole and with respect to the elderly. Consequently, the biggest challenge for both, Germany and the United Kingdom, will be change public percipience in terms of prevailing values and intergenerational justice.

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