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# The Life-Course Perspective and Social Policies: An Issues Note

A.L. Bovenberg

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## Abstract

A number of trends are changing the nature of social risks and increase the importance of human capital, adaptability and flexibility. This paper discusses the usefulness of a life-course perspective in developing proactive social policies that better fit the changing life cycles of individuals who combine formal work with other activities on transitional labor markets. It pays special attention to the accumulation and maintenance of human capital over the life course and stresses that reconciliation of work and family goes beyond child-care facilities and parental leave, and involves the entire life course. In particular, longer and deeper involvement in paid employment allows people to exploit their longer life to reconcile the two ambitions of, first, investing in the next generation as a parent and, second, pursuing a fulfilling career in paid work in which one keeps learning. Greater flexibility of working time over the life course requires more individual responsibility for financing leave. Moreover, rather than shielding older insiders through employment protection, labor-market institutions should enable parents of young children to easily enter and remain in the labor market. Finally, more activating social assistance and in-work benefits should replace the passive income support for breadwinners that results in high minimum-wage floors.

Keywords: life course, human capital, work and family, labor market, retirement, employment protection.

JEL codes:D6, H3, J1, J22, J26.

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<sup>2</sup> Department of Economics, Tilburg University, P.O. Box 90153, 5000 LE Tilburg, The Netherlands, Tel.: + 31 13 466 2912 Fax: + 31 13 466 3066. E-mail: A.L.Bovenberg@uvt.nl.



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## **I Introduction**

Life courses are becoming more heterogeneous in terms of the distribution of time over working, caring, learning and resting. As a consequence of the feminization of work, workers increasingly combine a career in the formal labor market with family obligations. Moreover, in transitional labor markets, workers move between periods of full-time work to periods of voluntary (part-time) absence from the labor market to enjoy leisure, educate themselves, set up a business, or care for children or frail relatives.

These developments are changing the nature of social risks at a time when traditional institutions for insuring social risks are under pressure. In particular, firms can offer less job security to their employees in a dynamic economy with constant innovation and creative destruction. At the same time, governments find that insuring human capital through ex-post income replacements becomes increasingly costly in terms of harming the incentives to accumulate and maintain that capital.

This paper discusses the usefulness of a life-course perspective in developing proactive approaches to social policy that better fit the changing nature of social risks over the life cycle. We pay special attention to the accumulation and maintenance of human capital over the life course as well as reconciliation of work and family. Human capital becomes more and more the key to personal fulfillment, stable personal relationships and social inclusion on a micro level, and to high levels of employment and labor productivity on a macro level. Human capital is produced not only in schools but also in families and firms. Reconciliation of work (including workplace learning in firms) and family (including informal care for young children) is therefore essential for safeguarding durable labor supply and an adaptable labor force generating substantial productivity growth.

The main contribution of this paper is to offer a holistic life-course perspective for exploring various complementarities between social and economic policies that are typically investigated in isolation. To illustrate, this paper points out that the reconciliation of work and family goes beyond child-care facilities and parental leave during the family phase, and involves the entire life course. Since the paper focuses on the interactions and complementarities between various policies, it cannot deal in great depth with each separate policy area and has to refer to the literature for a more elaborate detailed analysis.

Section 2 considers a number of trends that are changing the nature of social risks and call for a life-course perspective. These trends point to an increased importance of human capital, adaptability and flexibility. Section 2 also considers a number of challenges that endanger the level and quality of human capital at a time when corporations and governments are withdrawing from their traditional roles as insurers of human-capital risks. To investigate the role of social policy, section 3 investigates the market and institutional failures that damage human capital accumulation and hamper flexibility and adaptability over the life cycle. Traditional social policies, such as compressed wage scales and job protection, are becoming increasingly counterproductive in generating security. This calls for institutional innovation in developing new proactive approaches to social protection over the life cycle. Section 4 employs the life-course perspective to describe various elements of such approaches. Section 5 concludes by focusing on the political economy of reform.

## II Trends and challenges

### 2.1 Trends

This subsection considers a number of trends that are changing the nature of social risks and call for a life-course perspective, such as increased female labor-force participation, a higher skill premium signaling more scarcity of human capital, increased longevity, and a greater importance of non-cognitive skills shaped early in life. These trends point to the increased importance of human capital, adaptability and flexibility.

#### *Female human capital stronger*

Female labor force participation has increased strongly in almost all OECD countries over the last few decades (see Figure 2.1). A major factor is the increased supply of female human capital as a result of better-educated women, improved birth control, better household appliances, and changing female aspirations (see Golden and Katz (2002)). At the same time, increasing employment shares of the service sector and technological developments have boosted the demand for female labor by facilitating part-time work and by raising the demand for communication and creative skills at the expense of raw muscle power in the industrial sector (see Golden (2006)). The increased potential earnings of women in the formal labor market reduce the scope for specialization in home production between male and female partners and encourage more gender equality (see Jones et al. (2003)). As a direct consequence, both male and female employees combine a career in the formal labor market with family obligations (see Table 2.1). About half of the working European workforce combines paid work with unpaid work of at least 12 hours a week (see Groot and Breedveld (2004)). Moreover, life courses become increasingly heterogeneous in terms of the distribution of time over working, caring, learning and resting, as people are more and more able to construct their own choice biographies (see European Foundation for the Improvement of Living and Working Conditions (2003)).

Large cross-country differences in the levels of female participation exist, especially for low-skilled women. Whereas participation ratios of high-skilled women (with tertiary education) exceed 75 percent in all EU countries, participation ratios of low-skilled women



(with less than upper secondary education) vary substantially from above 50 percent in Nordic countries and France to close to 35 percent in Southern and Eastern Europe (see Figure 2.2).<sup>3</sup> Although the presence of young children depresses the participation rates of women, employment rates of both mothers with young children and other women rise strongly with the educational level, even though high-skilled mothers opt for part-time work much more often than their childless peers (see Table 2.2). Indeed, highly educated women appear to combine work and family by reducing their working time rather than by exiting employment, thus remaining in touch with the labor market. These data bear out the close complementarity between human capital (as measured by the level of education), on the one hand, and the employment level, on the other hand.

#### *Human capital more important*

The importance of the educational level as a crucial determinant of female labor participation points to human capital as the key to a successful career in a modern knowledge-intensive economy. Indeed, several studies indicate that the skill premium has increased as human capital has become scarcer (see Autor and Katz (1999)). The additional demand for skills on account of rapid technological change outstrips the additional supply of skills as a result of a better-educated workforce.

At the same time, work and career are increasingly important for personal fulfillment and development, life-long learning, the maintenance of social networks and (mental and physical) health. This holds true not only for men but also increasingly for women. Indeed, well-educated women aspire to the independence and fulfillment that paid employment brings. Access to employment, and thus workplace learning, prevents not only social exclusion but also depreciation of skills as a result of rapid technological change.

#### *Longer life and rapid innovation call for life-long learning*

Increased longevity implies that human capital has become more durable. Average life expectancy at birth has increased by about 2 ½ years per decennium since 1950 in the OECD

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<sup>3</sup> Portugal is an exception in Southern Europe. These participation ratios are based on participation in the formal sector and thus do not include the participation of low-skilled women in the informal, grey economy (for example, by providing cleaning services).

countries. Life expectancy at age 65, which is more relevant for the costs of pensions, rose by on average one year per decennium (Figure 2.3). At the same time, knowledge and specific skills age fast on account of creative destruction associated with fierce competition and rapid innovation. The combination of a longer life combined with rapid obsolescence of skills and the increased importance of human capital stimulate workers to engage in life-long learning.

*An adaptable labor force enhances the legitimacy of competition*

Also the creative destruction associated with a competitive, innovative economy requires greater adaptability and employability of the workforce to prevent a competitive market economy from losing its social legitimacy. By absorbing the idiosyncratic shocks associated with creative destruction, an entrepreneurial workforce empowered with sufficient skills safeguards the legitimacy of a dynamic market, thereby boosting productivity growth. Moreover, an adaptable labor force can embrace risk, thereby raising the supply of risk-taking capital for additional R&D and risk-taking entrepreneurs who experiment and challenge existing firms. More generally, in a continuously changing and highly competitive environment of a modern economy, intellectual flexibility, emotional resilience and the capacity to work well with others are at a premium.

*Non-cognitive skills are becoming more important and are shaped early in life*

Adaptability and the ability to learn are important components of human capital. The same holds true for non-cognitive skills (such as social and communication skills facilitating stable relationships, self-discipline, self-control and self-esteem, perseverance and other virtues, emotional security, time preference, motivation to learn, openness to change) and values stressing creativity, personal growth, responsibility, and readiness to meet challenges. These skills and values, which enhance adaptability and the ability to learn throughout the adult life, are shaped early in life, mainly in families.<sup>4</sup> Early child development therefore gains in importance in accumulating key skills for successful careers in paid work and stable, supportive personal relationships in two-parent families easing the stresses of life (see CEA (1997)). In order to lay the basis for life-long learning through child development in families,

while at the same time maintaining the marketable skills of parents, workers should be able to reconcile work with family obligations. Indeed, work is important to maintain skills because an important part of skill formation occurs on the work floor through on-the-job training.

### *Aging makes human capital more valuable*

Aging raises the importance of human capital. More funding of pensions raise capital-labor ratios, thereby depressing returns around the world and at the same time raise wages (see Boersch-Supan (2003), Aglietta et al. (2003)). Moreover, if commodities and services are not perfectly tradable, shifts in the real exchange rate and real wages imply that the return on pension saving fall – even in a small open economy that is perfectly integrated in world financial markets. Intuitively, as the older, inactive generations become larger in number compared to the active working generation, a tight labor market raises real wages, thereby depressing the real value of the capital that the older generations have accumulated (see Knaap (2005)). Aging thus makes human capital more valuable. Accordingly, investment in human capital becomes more attractive compared to that in other capital. Aging thus increases the need to not only save more in the form of financial capital but also invest more in human capital. In particular, high levels of human capital and employment ensure that the additional financial savings that result from more funding do not result in low rates of return.

## 2.2 Challenges

This subsection identifies several challenges in the face of the trends described above. These challenges include maintaining the intergenerational contract, stopping the vicious circle of early retirement and rapid depreciation of human capital, protecting investments in the human capital of the young, insuring human capital while at the same time providing incentives to accumulate and maintain human capital, empowering workers to become less dependent on the firm they work for, and protecting social cohesion by empowering disadvantaged groups.

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<sup>4</sup> See Heckman (2000) and Cunha et al. (2005) for the theory and evidence on human-capital formation over the

### *Maintaining the intergenerational contract*

A first challenge is to maintain social cohesion in the face of a population that is aging on account of increased longevity and declining fertility. In particular, aging threatens the intergenerational contract according to which each generation invests in the human capital of the next and is taken care of at the end of its life by the generations in which it has invested. Hence, each generation cares twice (once for the previous and once for the next generation) and is taken care of twice (as a child and in old age). Within a family context, women are the traditional brokers of the intergenerational contract, providing most of the informal care to children and aged relatives.<sup>5</sup> The higher potential earnings of women in the formal labor market have increased the opportunity costs of these activities at a time when most elderly have fewer younger relatives who can care for them as a result of shrinking family size. Moreover, the middle aged face a heavy tax burden as the large baby-boom generation starts to take advantage of pay-as-you-go (PAYG) pensions and health care provisions. This threatens the sustainability of the public intergenerational contract according to which the middle-aged must care not only for the very old but also for the very young.

### *Stopping the vicious circle of early retirement and rapid depreciation of human capital*

The so-called work-age paradox exacerbates this threat. Whereas life expectancy increases and people enjoy better health at 65 years of age than ever before in history, the effective retirement age, in Europe especially, has fallen substantially below 65. Biological aging and social aging have thus moved in the opposite direction. As a direct consequence, the expected retirement span has increased substantially while the working life is being compressed. Indeed, many OECD countries depreciate their human capital quickly. Across the OECD, the number of years that men can expect to spend in retirement has increased from an average of 11 years in 1970 to 18 years in 2004. For women, the corresponding numbers are 14 and 23 years (see Figure 2.4).

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life cycle and the key role of the family as the producer of skills

<sup>5</sup> Time surveys indicate that women in couples still provide the bulk of informal care and work within the household (see Table 2.1). Even women in full-time work spend about twice as much time on these activities as their male partners do.(see also OECD (2001a)). Women older than 50 provide a lot of informal care to aged relatives.

### *Maintaining investments in younger generations*

With increased longevity, earlier retirement and the compression of the working life, the aging European continent risks becoming entangled in a vicious circle of early retirement and lower fertility in which politically strong older generations favor generous passive spending on pensions and health care at the expense of investments in the human capital of younger generations. The decline in fertility in various European countries implies that current generations are investing less in future generations (see Table 2.3).<sup>6</sup> The opportunity costs of raising children in terms of foregone career possibilities seem excessive for many high-skilled women, who opt for a career in paid work rather than raising children.<sup>7</sup> Low-skilled women, in contrast, make the opposite choice. Indeed, highly educated women feature the lowest fertility rates, while more than a quarter of high-skilled women remain childless (see Schoenmaeckers and Lodewijckx (1999)). Moreover, countries featuring the largest increases in female participation rates tend to show relatively large declines in fertility rates (see Chart 4.1 in OECD 2001a)). The low fertility rates of high-skilled women have adverse consequences for the future quality of human capital, because the skill level of children tends to be closely related to that of their parents (see Plug en Vijverberg (2003)).

Families face difficulties in reconciling work with rearing children. In particular, the Employment Options of the Future (EOF) survey carried out in 1998 in EU member states shows that many couples with children under the age of six prefer to work shorter hours, even taking into account the need to earn a living (see Table 2.4). About half of the working population in the EU would prefer to reduce their working hours with a corresponding cut in pay (see EFILWC (2003)). Moreover, European women would like to bear more children

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<sup>6</sup> Actual fertility levels are not a good measure of the true level of fertility because they are sensitive to changes in the timing of births. Also completed fertility, which measures the average numbers of live births at the end of the childbearing years, indicates that fertility has dropped below replacement levels in almost all European countries (see Schoenmaeckers and Lodewijckx (1999)).

<sup>7</sup> Recent research shows that the gender gap in wages is to a large extent a 'family gap.' In the United Kingdom, for example, the gender wage gap (that cannot be explained by other observable factors) for men and women without children is 10 percent, but increases to more than 30 percent for those with children and stays at 25 percent for those whose children have grown up (see Paull (2006)). Similar consequences of motherhood are found for hours worked, with little shrinking of the work gap when children have grown up. Rather than a time when many mothers return to work, school entry of the child is in fact a time of high labor-market turnover -- with mothers both moving into and out of work and changing their working patterns. Indeed, substantial gender

than they actually have. In some countries, the difference between desired and actual number of children is as large as  $-0.7$  (see Schoenmaeckers and Lodewijckx (1999)). When considering options for combining work with other activities, European workers consider flexible working times and time-bank arrangements to save overtime as the most promising options (see Table 2.5).

*Insuring human capital while protecting the incentives to maintain human capital* Various developments increase the dangers of moral hazard and hence make human-capital risks less insurable. As the economy shifts from blue-collar work in industrial sectors to white-collar work in service sectors and knowledge-intensive activities, mental causes of sickness and disability become more prominent. These types of sickness and disability can be less easily verified than physical disabilities. Moreover, an increasing number of workers now moves between periods of full-time work to periods of voluntary absence from the labor market to enjoy leisure, educate themselves, set up a business, or care for children or frail relatives. In such a transitional labor market with a growing diversity of life courses, it becomes more difficult to separate voluntary periods of inactivity from involuntary unemployment. At the same time, individuals can increasingly affect the probability that they become unemployed or sick by investing in their own employability or by the way in which they organize their life. In other words, the dividing line blurs between the contingencies that people are responsible for (the so-called manufactured or voluntary risks) and those for which they are not (the so-called external risks). More and more periods in which people experience a cut in income are in part ‘manufactured,’ increasing the risk of moral hazard in social insurances that protect people against these losses in income.

These changes in the nature of and the responsibility for social risks make it more costly to insure human capital through ex-post income replacements in terms of harming the incentives to accumulate and maintain that capital. At the same time, a more dynamic world economy and a decline of the extended family as an insurance device have increased the demand for such insurance as people experience more substantial economic insecurity.

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wage and work gaps persist 30 years after birth. Motherhood thus substantially harms the human capital of

### *Empowering workers to become less dependent on corporations*

Also corporations can offer people less job security. Fewer and fewer employees work for 40 years for the same company. More intense competition implies that companies exhibit shorter life spans. In a dynamic economy, constant innovation results in substantial creative destruction. Firms can thus offer less security to their employees. Within firms, employees have to update knowledge and qualifications regularly as they move between different jobs on the internal labor market. These developments point again to the importance of continuously maintaining and updating skills in order to guarantee income security. Making workers less dependent on their employer requires more employable workers through more general human capital.

### *Protecting social cohesion*

The labor-market position of unskilled workers (including many unskilled migrants) weakens as a result of technological and other developments. Together with the relatively high minimum-wage floors in European labor markets, this produces structural unemployment yielding social exclusion of the unskilled. These minimum-wage floors are compatible with high levels of employment for vulnerable groups only if expensive and intrusive active labor market policies assist disadvantaged adults in entering the labor market and if early-intervention programs help disadvantaged children to accumulate sufficient skills. By reducing the budgetary room for such activating and preventive policies, the large call of the elderly on public resources threatens not only intergenerational but also intragenerational solidarity protecting disadvantaged adults who lack human and social capital.

## 2.3 A life course perspective

The various challenges described above involve the need to create more room for investments in human capital, particularly those that foster the adaptability of parents and their children. This subsection develops a life-course perspective in order to develop a coherent framework for exploring institutional reforms aimed at addressing the challenges.

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women, especially for high-skilled women (see Anderson et al. (2002)).

### *Reconcile career and family in longer life*

A modern knowledge-intensive economy requires longer periods of learning so that young adults start their working lives later. At the same time, older workers terminate their working careers earlier as effective retirement ages decline or stagnate, even though life expectancy increases. People thus concentrate work effort increasingly in the relatively short life season in which they also raise children (see Table 2.6 and Figures 2.5 and 2.6). At the same time, many parents wish to look after their children, especially immediately after childbirth. The key challenge is to accommodate these preferences by allowing parents to strengthen family life while also maintaining their human capital through continued attachment to the labor force so that they can enjoy long, fulfilling careers.

### *From dividing tasks in breadwinner model to combining work and family*

The traditional breadwinner model relies on a strong division of labor between men and women. In the face of an eroding comparative advantage of men in paid work, young generations increasingly combine various activities by engaging simultaneously in learning, working, caring and relaxing. The relative importance of these activities varies during the life course, depending on family obligations and idiosyncratic and macro-economic shocks.

### *Spring and fall complement summer and winter*

In the modern longer life course, adults spend considerable time in households without young children as a result of delays in family formation and parenthood as well as death. Indeed, in the “spring” of the modern life course (or early adulthood phase or “playtime of life”), young adults first experiment with relationships and jobs before they take responsibility for raising children during the “summer:” the family season when adults bear the responsibility for raising minors. After their children have grown up, adults typically spend considerable time in good health in the “fall” season of their life course (or the active senior phase) before they enter “winter:” the last phase of life in which people suffer from serious health problems. The modern life course is most apparent in Northern Europe. In this region, many people in the age brackets between 20 and 30 and between 50 and 60 live as singles or as couples without



children. In Southern Europe, in contrast, the extended family is still dominant in these age groups. Figure 2.7 illustrates these different household patterns over the life course for Denmark (representing Northern Europe) and Spain (representing Southern Europe).<sup>8</sup>

The summer season in the modern life course is quite hot. The costs of living are high while time is scarce, as parents invest not only in their children but also in their careers. During this so-called “rush-hour of life,” people may experience “combination stress.” Compared to other European household types, families with co-residing children are least satisfied with living conditions, including their work (or main activity), income, housing, and leisure time (see Avramov (2002)). Time pressure can result in broken relationships and burn out. Especially single-parent households face both a “time crunch” and a “money bind.” In the spring and the fall, in contrast, the climate is more moderate. Adults thus do not have to care for young children and enjoy relatively high purchasing power. Figure 2.8 presents the purchasing power (corrected for the number of persons in the household) for the dominant household type for each age group in a typical Northern and Southern European country (the Netherlands and Italy, respectively). The figure clearly shows the relatively affluent spring and fall seasons. In Italy, in contrast, the main transition is between leaving the family of the parents and starting a family with children oneself.

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<sup>8</sup> Kalle, Lambrechts and Cuyvers (2002) provide these data for twelve other EU countries.

### **III Market and institution failures: the need for institutional innovation**

To explore the role of social policy, this section investigates relevant market and institutional failures in the accumulation of human capital over the life cycle.

#### 3.1 Market failures

This subsection investigates various market failures that call for a policy response. These market failures include liquidity constraints, externalities of children and human-capital accumulation, adverse selection in labor market, and lack of forward-looking behavior.

##### *Liquidity constraints*

Agents cannot borrow against the future value of human capital because of adverse selection and moral hazard. Indeed, financial institutions cannot use human capital as collateral to ensure that loans are paid back. Liquidity constraints discourage parents from investing in the human capital of themselves and their children and tends to increasing the time pressure on young parents (see Apps and Rees (2004)).

Capital-market imperfections also prevent agents from smoothing consumption over time in the face of various shocks. This stimulates precautionary saving because the presence of a financial buffer helps agents to optimally diversify temporary risks over time. Indeed, precautionary motives rather than saving for retirement tend to be the main reason why young households save (see Cocco, Gomes and Maenhout (2005)).

##### *Externalities of children*

By socializing the intergenerational contract, PAYG pension and health insurance systems insure against childlessness. Children who have been reared by others support the elderly without children. By bearing children, parents thus generate positive external effects for the childless.<sup>9</sup> This provides an argument for public support of children through family support

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<sup>9</sup> These latter external effects of children are measured by the net tax burden on unborn generations computed by so-called generational accounting (see Auerbach, Kotlikoff and Leibfritz (1999)). These measures account for all public spending and taxation. For a survey of the literature of the effects of family policies (such as parental leave, child benefits and subsidized childcare) on fertility, see Björklund (2007).

and publicly funded primary education and child care (see Sinn (2000)). The case for public support for households with children is stronger if these households cannot finance investments in children because they face capital market imperfections, including liquidity constraints. Table 3.1 reveals how much governments spend on family services and benefits compared to pension spending and other spending on the elderly.

In the case of grants to families, the traditional arguments based on consumer sovereignty in favor of cash grants over in-kind subsidies are modified because children do not have a say in how parents spend cash grants. In order to ensure that the public resources benefit the children, the government may thus want to provide benefits in kind. Indeed, the key market failure is that children cannot choose their parents, are not able to buy services from them, and cannot ensure against being born in a disadvantaged family (see Cunha et al. (2005)).

As regards externalities of parental leave on children, Ruhm (2000) and Tanaka (2005) find on the basis of panel data for 16 European countries (and in the case of Tanaka (2005) also for Japan and the US) that job-protected paid parental leave enhances pediatric health. Parental time thus is an important investment in the human capital of young children. Care responsibilities can be outsourced, for example through formal child care. However, some more personal dimensions involving emotional attachment and care are difficult to contract out, especially in the beginning of a child's life (see Plantenga (2005)). Blau (1999), Cunha et al. (2005) and Currie and Blau (2005) find that the features of the home environment are especially important in shaping the cognitive and non-cognitive abilities and talents of young children.

The relationship between maternal employment and the cognitive development of children has been studied for the United States, which features only limited statutory maternity leave and publicly funded child care. These studies find that maternal employment tends to hurt the child's development during a child's first year. As regards the impact on the mother's employment on older children, evidence is less conclusive and depends on the nature of the work performed by the mother and the child-care and school arrangements<sup>10</sup> (see Blau and Currie (2004)). Ruhm (2002) finds that children appear to perform better when

their mothers work part-time rather than full-time during their second and third years of life. An additional 20 hours per week of mother's employment during the first three years of life harms the reading and mathematics performance of five- and six-year olds by about 0.10 standard deviation.

### *Externalities of human capital formation*

Welfare states protect the living standard of citizens who lack sufficient human and social capital to maintain a minimum standard of living. The implicit income insurance provided by the intragenerational social contract harms the incentives to accumulate human capital, supply labor, and form stable personal relationships. This provides arguments for public early intervention in case of disadvantaged groups and dysfunctional families (see Haveman and Wolfe (1995)) and public support for basic education more generally (see Bovenberg and Jacobs (2005)).<sup>11</sup> These instrument can help to ensure that citizens enter adult life with sufficient human capital and interpersonal skills. These citizens thus do not have to rely on social assistance but are productive enough to earn the minimum standard of living. The welfare state insuring against a lack of human capital makes human capital (including a work ethic) a merit good that yields positive externalities in terms of lower welfare payments for society at large.

Learning is a dynamic process exhibiting increasing returns to scale: learning begets learning, as skills acquired early in life facilitate further learning (see Knudsen et al. (2006)). Empirical evidence indeed suggests that learning is most effective when it begins at a young age: marginal returns on schooling are highest for the young (see CEA (1997)). For elderly workers whose skills have become obsolete and who lack marketable skills, in contrast, in-work benefits rather than public training programs are typically the most efficient way to attach them to the labor market and to build human capital through learning-by-doing in private firms (see Heckman (2000)). Indeed, adults prefer to learn through learning-by-doing

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<sup>10</sup> To illustrate, adolescents tend to suffer as a result of maternal employment if they are left unsupervised after school.

<sup>11</sup> Also other market imperfections, such as monopsony power of employers, a compressed wage structure, liquidity constraints, lack of contractibility of training, may prevent the efficient sharing of costs and benefits of training and thus result in underprovision of training (see OECD (2003), Chapter 5, Section 2). Liquidity constraints may hurt training especially for low-skilled workers. Low-skilled workers may lack funds also to invest in the human capital of children (e.g. by reducing working time).

in a work setting. Heckman, Lochner and Taber (1998) estimate that post-school learning in firms accounts for almost half of all skill formation in modern economies. Indeed, life-long learning is implemented primarily outside the formal education system in firms.

A related market failure involves the impact of the tax system on work. Redistributive taxation harms labor supply and encourages individuals to substitute time away from taxed formal work into untaxed home production (Sandmo (1990)). This is an argument in favor of subsidizing child care. Blau and Currie (2004), however, argue that the best available evidence suggests that the effects of child-care subsidies on labor-force participation tend to be rather small, as formal care crowds out informal care.

#### *Adverse selection in labor markets*

Privately negotiated labor contracts may yield inefficient solutions due to adverse selection. To illustrate, firms may not voluntarily offer socially optimal leave schemes if low-risk individuals who are not likely to take advantage of these schemes signal their status to employers by agreeing to contracts providing little or no leave (see Aghion and Hermalin (1990)). Government mandates forcing firms to offer leave schemes (e.g. parental schemes) combat this adverse selection. The same holds true for collectively negotiated mandates applying to a whole industry. These mandates may encourage the development of more inclusive and flexible workplace cultures in which workers who temporarily work shorter and more flexible hours remain employable and can enjoy fulfilling careers. This, in turn, is likely to strengthen social norms facilitating the combination of work and family obligations.<sup>12</sup>

Most of the recent evidence suggests that public parental leave mandates increase female employment, but that lengthy entitlements depress the relative wages of women. Based on a panel of nine European countries, Ruhm (1998), for example, finds that job-protected leave paid by the government raises female participation by about 3 percent. Apparently, women enter the labor force in order to qualify for leave benefits, while job-protected leave accelerates the return to work of young mothers. Brief leave entitlements (three months) do not affect women's earnings, but lengthier leave (nine months and longer)

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<sup>12</sup> For how changes in work patterns can change preferences and social norms, see Lindbeck (1997).

depresses relative wages by about 3 percent. Indeed, with longer leave entitlements, employers face higher rescheduling costs in replacing young mothers during leave, especially in countries that restrict temporary fixed-term contracts. Moreover, a woman bearing multiple children depreciates her human capital by being away from her job for several years.

### *Lack of foresight*

Behavioral economics is gathering more and more evidence that individuals suffer from myopic behavior and that they have difficulty planning for the future. To illustrate, many individuals believe that they should be saving more for retirement but are unable to do so (Laibson et al. (1998)). People apparently lack the self control that is required to implement a savings plan. Individuals may thus experience an unanticipated drop in consumption when their incomes decline as a result of retirement or the birth of children.

A convenient way to model this behavior is hyperbolic discounting. With this type of discounting, nearby events are discounted more heavily than events that are still far away. These preferences imply time-inconsistent behavior and cause individuals to seek ways to commit themselves by restricting their discretion to reverse earlier decisions. Hyperbolic discounting can explain why women may understate the importance of remaining attached to the labor force in terms of protecting their future earning capabilities.

### 3.2 Institutional failures

This subsection explores various institutional failures that discourage the maintenance and accumulation of human capital over the life cycle: early retirement schemes, lack of wage flexibility, employment protection, malfunctioning housing markets, rigid workplace practices and cultures, high minimum-wage floors and inefficient social insurance schemes.

#### *Early retirement...*

Various schemes encouraging early retirement have resulted in workplace cultures that fail to maintain human capital. Various schemes facilitating early exit from the labor force have also produced an early retirement culture setting in motion a vicious circle: workers retire

early because their skills are obsolete, while human capital is not maintained because people can retire early and thus feature only a short time horizon and a low utilization rate of human capital. Indeed, cross-country data show a strongly positive correlation between spending on training and the effective retirement age (see OECD (2006)). In Europe, additional leisure time after retirement is not used actively but rather for home-centered leisure activities and watching TV in particular (see Avramov and Maskova (2003)).

The waste of human capital as a result of early retirement originates in the erroneous belief that early retirement reduces unemployment because the amount of work is fixed: the so-called ‘lump-of-labor fallacy.’ In fact, early retirement has contributed to unemployment by putting a heavy financial burden on companies and families with young children.<sup>13</sup> Moreover, early retirement has nurtured working place cultures in which careers must be made during the time when people bear family responsibilities for young children, thereby creating time pressures in the family season of life in the age range between 30 and 45. By thus preventing men from taking on more household duties and caring for children, these cultures have fostered gender inequalities in employment and earnings patterns. Indeed, fathers often cite workplace cultures as the key reason why they are not more involved with their families (EFILWC (2003)). This explains why the European countries with the lowest effective retirement age also feature the lowest female participation and fertility rates. In this connection, early retirement has also worsened liquidity constraints in early adulthood by transferring resources away from this early phase in the adult life cycle to the active senior phase of the life course.

*...and lack of wage flexibility*

An important factor explaining the low effective retirement age in Europe is the lack of wage flexibility for elderly workers, which reduces labor demand and thus results in a weak labor-market position of these workers. Since many social benefits (provided by unemployment and disability insurance, for example) are directly linked to previously earned wages through fixed replacement rates, elderly workers who have experienced a decline in their earning

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<sup>13</sup> Indeed, countries with the lowest participation rates (and thus labor supply) feature the highest unemployment rates (see Burniaux, Duval and Jaumotte (2004) and OECD (2006)).

potential are hard pressed to find a job that is acceptable to them, and therefore reduce their search intensities.

Wage rigidity explains the increase in structural, long-term inactivity in Europe following adverse macro-economic shocks and in the face of more idiosyncratic shocks to earning potentials of individual workers due to more creative destruction. Whereas European displaced workers experience smaller income losses than their American colleagues, they face smaller reemployment probabilities, resulting in further rapid depreciation of their human capital rather than restoration of old levels through on-the-job learning (see Ljungvist and Sargent (1998)).

Another factor weakening the demand for older workers is the implicit labor contract according to which workers are underpaid when young and overpaid later on. This contract can encourage young workers to invest in firm-specific human capital and promote workers' effort and cooperation. At the same time, however, it ties older workers with golden chains to their employer. Moreover, it makes older workers dependent on the survival of the firm they work for and discourages entrepreneurship. These workers thus experience a lack of security associated with "fear of falling" in a dynamic economy in which creative destruction causes companies to exhibit shorter life spans. Indeed, the implicit contract creates a gap between the *insiders* who are lucky enough to work for a surviving firm and the *outsiders* whose firms have not survived.

Another drawback of the implicit contract is that it requires a mandatory retirement age at which workers are laid off (see Lazear (1979)). Hence, the speed and extent of phased retirement cannot act as a buffer for absorbing aggregate financial market and aggregate longevity risks. In an actuarially neutral pension system, working one year longer (and thus receiving annuities one year later) tends to raise their pension by about 8 percent. The speed and timing of retirement is thus a powerful instrument for absorbing risks.

### *Employment protection*

Social insurance systems in various European countries protect breadwinners against income shocks through employment protection legislation and social insurance linked to previous earnings. These systems shielded families against poverty at a time when the earning



potential of women was low and men could look forward to a continuously increasing wage profile in a single-track full-time career. In modern economies that rely on creative destruction and feature a large potential labor supply of female skilled workers who aim for careers in paid work, these systems protecting insiders are increasingly costly in terms of wasting human capital of outsiders, tying older incumbents to the fortunes of their employer, and discouraging these insiders from moving into new jobs that better fit their life season. Paradoxically, workers seem to feel more secure in those European countries in which employment protection is lowest (see Cahuc and Kramarz (2004)). One reason is that employment protection discourages not only firing but also hiring, thereby reducing the turnover in the labor market and thus the jobs that are opening up for new entrants to the labor market and those that want to get out of their current jobs. Rather than the difficulty of being laid off from the current job, the ease with which a worker can find a new job is becoming increasingly important in determining the sentiment of security in a transitional labor market.

In addition to preserving the status quo when innovation requires new work practices, employment protection discriminates against outsiders by slowing down turnover in the labor market. The lower probability of finding a good job in a dual labor market depresses the labor supply of secondary workers and raises the opportunity costs of bearing children for young, highly educated women. In countries with strict employment legislation in which workers hold permanent highly protected jobs, women face both higher unemployment risk and the prospect of lower future wage growth (through foregone experience and delayed wage growth) if they temporarily (or on a part-time basis) exit the labor market during the childbearing years. Indeed, worsened future career prospects rather than foregone earnings during the relatively short period spent with the baby account for the bulk of the opportunity costs (in terms of lower lifetime income) of becoming a mother (or of sharing household work and caring for a child as a father). Thus, whereas the literature has traditionally focused on maternity benefits and child care as the key towards reconciling work and family life, an inclusive labor market is at least as important because in such labor markets young workers

do not have to engage in costly rent seeking to acquire highly protected jobs when they build a family.<sup>14</sup>

On the basis of a panel of OECD countries for the last 35 years, Adsera (2004) shows that countries with labor-market institutions facilitating women's exit and entry in the labor market combine high fertility rates with high female labor supply. This third factor of rigid labor markets protecting insiders at the expense of younger workers explains why the cross-country correlation between fertility and female labor-force participation, which has traditionally been negative (conforming to the theoretical predictions), became positive in the mid eighties (see Da Rocha and Fuster (2006)). In particular, fertility dropped in Southern European countries (with traditionally low female participation rates) when structural unemployment rose. In the same vein, Kugler and Pica (2003) find that employment protection in Italy raises employment for men, who are more likely to be insiders, at the expense of women, who are likely to be outsiders. Indeed, employment protection substantially depresses the hiring of young women.

Bertola, Blau and Kahn (2002) show that employment protection and wage compression price women as well as young and elderly men out of employment and into other states (the informal economy, home making, education and retirement).<sup>15</sup> By discouraging employment of young adults and the elderly, these labor-market institutions thus contribute to the compression of the working life. Moreover, young adults stay in full-time education longer than would be optimal. As a direct consequence, social adulthood and the responsibility for supporting oneself is increasingly postponed beyond the age of biological maturation.

Using aggregate evidence for 12 European countries, Becker et al. (2004) find that low job security of children compared to their parents prevents young people from leaving the parental home and starting their own family. In particular, if the 20-30 year olds would have secure rather than insecure jobs, co-residence rates of children with their parents would

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<sup>14</sup> Using the European Community Household panel for 13 European countries, Adsera (2004b) finds that, compared to maternity benefits, flexible labor markets that do not penalize part-time work are more effective in stimulating fertility.

<sup>15</sup> OECD (2006, Chapter 3) also shows a significant negative relationship between employment protection and the employment rate of the population aged 50-64 across OECD countries.

decline by 13 percentage points. For parents aged 50-59, co-residence rates with their children rise by 9 percentage points if they have secure rather than insecure jobs.

### *Housing market: insiders versus outsiders*

Young households often face difficulties entering not only the labor market but also the housing market. To illustrate, rent control protecting incumbent renters typically reduces the rental housing supply for new entrants and results in the rationing of rental properties. As a direct consequence, workers find it difficult to move around. This hurts their job prospects and, more generally, the flexibility of the labor market.

Tax incentives that are not targeted at new entrants may drive up house prices. High house prices reallocate resources from young households who have not entered the housing market towards older incumbents. Imperfect capital markets that prevent young households with insecure jobs from taking out mortgages add to the strain experienced by youngsters. The difficulty of entering the labor and housing markets discourages young people from starting a family. This lengthens the period of social adolescence, thereby postponing the establishment of a durable relationship and parenthood.

### *Internal flexibility of firms*

Workplace practices and cultures in many countries are still oriented towards the full-time male breadwinner who can devote all of his time and energy to his career. Senior male management and unions (often dominated by older male workers) sometimes lack leadership in introducing family-friendly workplace measures. These measures include flexible leave policies (parental leave, emergency leave to care for sick elderly relatives or children); flexible working hours (e.g. school-holiday adjusted working hours; part-time work; flexi-time); flexible working arrangements (like tele-working); support with child-care and eldercare; and provision of training during or after leave so that the allocation of work over the life cycle is better adjusted to the biological clock of women.<sup>16</sup> Even if some of these facilities are present, workers sometimes fail to take advantage of them because they fear that

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<sup>16</sup> Some countries are more successful than others in more fully reintegrating mothers into the labor market when their children have grown older (see Klammer (2005)).

doing so would harm their careers (see Groot and Breedveld (2004)).<sup>17</sup> Indeed, employers may perceive women who take time off for childbirth as less committed to their career than male breadwinners, and are therefore less likely to invest in female career opportunities. This produces a vicious circle, as many women do not pursue a career in view of a limited likelihood to advancement.

Empirical evidence suggests that the career effects of taking parental leave differ substantially across countries, reflecting different workplace cultures. To illustrate, Kunze (2003) finds that taking parental leave substantially reduces future wage growth in Germany. In Sweden, in contrast, women do not experience much smaller wage growth after taking parental leave (see Albrecht e.a. (1999)). Apparently, since taking parental leave is so common in Sweden, it does not signal anything about career commitment. Whereas the Swedish labor market for women is thus the outcome of a pooling equilibrium, the corresponding German market is better described by a separating equilibrium.

### *High wage floors*

Welfare payments and minimum wages in many countries are based on a breadwinner having to care for a dependent adult and young children. The need to provide an income for two adults results in high minimum-wage floors and compresses the wage scale. Moreover, the limited wage flexibility at the bottom of the labor market puts the unskilled out of work, resulting in social exclusion and further loss of skills and morale. Indeed, high minimum wages act as a tax on employers who employ low-skilled labor. The absence of a low-wage sector prevents families (and also the elderly) from contracting-out household services (cleaning and housekeeping, small repairs around the house, child minding, old-age care).<sup>18</sup> Women thus reduce their labor supply as households face more difficulties in reconciling work and family life.

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<sup>17</sup> Employee surveys suggest that workers especially value flexible working hours and short-duration leave schemes (see Table 2.5 but also OECD, 2001a). For an overview of indicators of these arrangements, see OECD (2001a, Table 4.8). Access to part-time work boosts female labor-force participation (see OECD, 2003, Chart 3.3).

<sup>18</sup> High-skilled households and low-skilled agents can get around the minimum-wage floors by contracting household services on the black market, where social protection and quality of service are (very) limited. Moreover, this raises moral issues, as unskilled workers complement social assistance benefits with additional labor income in the informal sector.

The idea that a minimum wage should be sufficient to provide for a dependent adult and young children is increasingly inappropriate for two reasons (see also section 2). First of all, the potential earnings of the secondary earner have increased because of the stronger labor-market position of women. Second, in the modern longer life course, adults spend considerable time in households without young children. In the spring and fall of the modern life course, adults thus do not have to care for young children and therefore can make do with lower incomes and social protection. In any case, a higher minimum wage floor raises the human-capital requirements of those entering the labor force. If agents do not have sufficient capabilities to earn the minimum wage, they risk ending up in welfare schemes.

### *Equity versus efficiency*

Redistribution from rich to poor and social insurance against income losses are basic functions of the welfare state. In modern welfare states, however, a large part of the taxes levied to finance social transfers merely redistributes resources from one stage in an individual's life cycle to another. Hussénius and Selén (1994) estimated that for the average citizen in the early 1990s only about 24 percent of the taxes levied to finance social insurance in Sweden accomplished interpersonal redistribution. Pettersson and Pettersson (2003) recently updated and refined the estimates by Hussénius and Selén, estimating lifetime incomes with the aid of a dynamic micro-simulation model and including the value of important public services such as education, health care and care for the elderly in a comprehensive measure of lifetime income. With this extended concept of income, Pettersson and Pettersson found that only 18 percent of the taxes levied to finance social insurance transfers and social services in Sweden can be categorized as interpersonal redistribution. Falkingham and Harding (1996) found a degree of interpersonal redistribution of almost 50 percent in Australia and about 30 percent in Great Britain. For Ireland and Italy, O'Donoghue (2001) estimated a degree of interpersonal redistribution of 45 percent and 24 percent, respectively. Sørensen et al. (2006) found that the degree of interpersonal redistribution in Denmark amounts to 26 percent across all taxpayers.

These studies show that a considerable part of the tax bill does not redistribute lifetime income from the life-time rich to the life-time poor but is essentially income that the

taxpayer transfers to himself over his own life course. In the absence of an actuarial link between (social security) taxes paid and social transfers received, taxes and transfers inevitably distort labor supply. Moreover, transfer programs often create moral hazard, as taxpayers have no incentive to reduce their reliance on transfers.

In a transitional labor market with a growing diversity of life courses, individuals increasingly experience periods of voluntary inactivity during their life course (to enjoy leisure, educate themselves, set up a business, or care for children or frail relatives). As noted above, the danger of moral hazard increases in such an environment. Moreover, annual incomes (on which many transfers and taxes are based) become an increasingly poor indicator of life-time needs. Indeed, more efficient capital markets allow individuals to smooth their consumption over their life courses themselves without the help of the welfare state.

## **IV Policy recommendations**

The trends and challenges outlined in section 2 and the market and institutional failures in section 3 call for social innovation. Traditional social policies, such as high minimum wages and job protection, are increasingly counterproductive in generating social protection. At a time when corporations and governments are withdrawing from their traditional roles as insurers of human-capital risks, new institutions should be created to offer workers more durable social protection and lasting security. Indeed, a more dynamic world economy and a decline of the extended family and the firm as insurance devices have raised the demand for new ways to absorb social risks over the life cycle. These new institutions should operate in a transitional labor market in which human capital is the key determinant of macroeconomic performance and personal fulfillment. Each country, depending on its history, institutional framework, industrial sector, and worker's preferences, will opt for different solutions. As most countries face similar challenges, however, we can outline some common policy conclusions for the OECD countries. These policy conclusions apply to most countries, albeit not to the same extent.

### 4.1 A longer working life

After describing the case for a longer working life, this subsection considers how this can be accomplished through reforms of retirement systems, social insurance and labor markets, in general, and wage-setting mechanisms, in particular.

#### *Raising retirement age in line with increased longevity*

A higher effective retirement age is crucial for a number of reasons. First of all, it raises the return on human capital by lengthening the horizon for investments in human capital. Indeed, raising the retirement age in line with longevity capitalizes the benefits of increased longevity in terms of more durable human capital. Increased longevity is then turned into an economic opportunity rather than a financial threat. In fact, one can argue that all ages that are used to measure old age should be linked to longevity so that one in fact measures old age from the end rather than the beginning of life. In this way, society ensures that social aging

and biological aging do not diverge further and people age actively rather than passively. Moreover, fulfilling work that provides stimulus and companionship prevents social exclusion of the elderly, while better maintained human capital allows the elderly to bear more risk. Indeed, in many countries, tomorrow's elderly can be expected to be healthier, wealthier and better educated than every before.

Measuring age appropriately stabilizes pension systems, as increased longevity puts financial stress on not only PAYG-schemes but also funded pension schemes if retirement ages are not raised in line with life expectancy. Indeed, funded pension schemes are particularly vulnerable to increased longevity. The reason for this is that the longer life spent in retirement calls for more financial saving, which depresses the return on capital and thus hurts funded pension schemes. Indeed, aging calls for more accumulation, better maintenance and more intense use of human capital in addition to fiscal discipline and additional private saving. With better maintained human capital, effective retirement ages can be raised in line with longevity, thereby protecting long-run labor supply.

Linking retirement ages to longevity also enables the government to issue longevity bonds so that insurance companies and pension funds are better able to provide retirement security to retired generations. This is because linking the age at which citizens first receive their public pension to life expectancy reduces the exposure of the government balance sheet to longevity risk. Hence, it becomes less unattractive for the government to acquire more longevity risk on behalf of younger and future generations. Indeed, these generations are best able to absorb these risks through a longer working life associated with more human-capital investment.

The rule of automatically linking public pensions and tax privileges to life expectancy avoids the political costs of discretionary decisions to limit eligibility to public pensions and tax benefits if longevity increases further. Agreeing on a risk-sharing rule *ex ante* also reduces the political risks associated with collective discretionary decision-making. Moreover, it allows individuals and firms to adapt gradually to a longer working life by better maintaining human capital and adjusting the organization of work to the needs of older workers. An increase in spending on disability pensions and unemployment benefits is thus avoided.



### *Decompressing the working life*

Another benefit of a higher effective retirement age is that it allows people to exploit their longer life to reconcile the two ambitions of, first, investing in the next generation as a parent and, second, pursuing a fulfilling career in paid work in which one keeps learning and applying new technologies. A longer active working life better fits the biological clock of women; whereas some men of about 45-50 years of age already look forward to their retirement, women in the same age group would like to return to work as their children are leaving the household. Indeed, a better reconciliation of work and family goes beyond child-care facilities and parental leave schemes during the family phase, but involves the way the entire life course is organized.

By decompressing the working life, a longer working life facilitates greater flexibility in employment patterns over the life course by loosening the link between age and career progression. This reduces career pressure at the biologically determined time when parents care for young children, thereby promoting gender equality, fertility and child development. Parents of young children can continue to invest in the human capital of their children without having to depreciate their own human capital. Rearing children and reducing work effort somewhat, or taking a career break during the family season thus becomes less costly in terms of depreciated human capital of the parents.<sup>19</sup> In this way, increased longevity can help to bring fertility back closer to replacement levels so that countries do not get entangled in a vicious circle of early retirement and lower fertility in which politically stronger older generations favor generous passive spending on pensions and healthcare at the expense of investments in the human capital of younger generations.

More generally, a longer working life reduces the need to transfer resources from the summer season of life to the fall season either through intergenerational transfers (such as PAYG pension systems) or through the allocation of resources over the life cycle (for example, through forced pension saving). This reduces the time and income squeeze in the hot summer of the modern life course and helps to relieve the liquidity constraints in this life season. Resources are used to proactively to maintain and invest in human capital rather than

to reactively provide additional transfer income as a compensation for the premature depreciation of human capital.

*A higher and more flexible effective retirement age requires actuarially fair systems...*

More adaptability and employability facilitating a longer effective working life requires people to bear more individual responsibility for the maintenance of their own human capital, thereby stimulating life-long learning in firms.<sup>20</sup> To that end, retirement schemes should be actuarially fair. This gives workers also more individual choice about when and how to retire. Indeed, actual retirement ages should be flexible and adjust to individual circumstances and preferences. To illustrate, blue-collar workers who started to work early and exhibit lower life expectancy than others may want to retire earlier.<sup>21</sup>

*...tighter eligibility criteria for passive unemployment and disability benefits,...*

As another way to stimulate the maintenance of human capital, the eligibility criteria for passive unemployment and disability benefits facilitating early retirement and rapid depreciation of human capital should be tightened and should not depend directly on age. Moreover, by no longer allowing firms to shift the costs of reorganizations onto public disability or unemployment schemes, governments encourage firms and social partners to invest more in older workers (instead of getting rid of them) and to adapt work and workplace cultures to the needs of elderly workers. Indeed, for some types of social insurance (such as disability and unemployment insurance), large firms can become the insurer of the first period of inactivity.

*...and flexible wage setting and employment practices*

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<sup>19</sup> A longer working life also helps to spread human capital risks, such as a spell of unemployment, over a longer working career.

<sup>20</sup> See OECD (2006) for a comprehensive three-pronged approach to increasing effective retirement ages: getting labor-supply incentives right; raising demand for older workers by changing employment practices; and promoting employability.

<sup>21</sup> Actuarially fair retirement systems that link pension benefits to longevity not only on a macro level but also on the level of homogeneous group of workers can facilitate retirement ages that are better tailored to the health of workers. Indeed, life expectancy typically differs substantially across various socioeconomic groups with low-skilled workers featuring lower life expectancy than high-skilled workers.

A more flexible labor market for elderly workers ensures that additional demand for older workers matches additional supply generated by improved labor-supply incentives. Together with less employment protection, wages that are more closely related to labor productivity (for example, by diminishing the role of seniority-based pay increments and rigid worker classification systems) reduce the need for mandatory retirement. Hence, workers can use the speed and time of retirement as an instrument to buffer risk. As the elderly become better educated, their human capital is better maintained during the life course and individuals anticipate the possibility of a declining wage, rewarding elderly workers on the basis of their marginal productivity can become socially acceptable.

More generally, if workers are no longer paid more than their productivity when old, the labor-market position of elderly workers becomes stronger so that elderly workers enjoy more discretion to adjust working conditions to their specific needs. More flexible retirement patterns (e.g. part-time and gradual retirement) and more opportunities to change jobs and work patterns (so that elderly workers become less dependent on their current job and the talents of elderly workers can be better used) then become possible.<sup>22</sup> The flexibility to change one's working conditions to better suit changing needs and to find new challenges in fulfilling work can help to extend fulfilling working lives. The positive effect of flexibility on labor-market attachment holds true also for women between the ages of 50 and 70, who often provide informal care to aging, fragile relatives and friends. This informal care is likely to remain important in the future due to shrinking family sizes and budgetary pressures on formal care provided by the public sector.

#### 4.2 More flexibility of working time over the life course

This subsection first argues in favor of a more flexible allocation of working time over the life cycle and then considers how saving accounts can help individuals to achieve more sovereignty over the way they allocate time over their life courses.

*More flexibility of working time over the life course protects labor supply*

More flexibility in allocating working time over the life course can prevent stress and excessive time squeeze when workers bear substantial family responsibilities. Moreover, it helps women, who still carry most of the family obligations (see Table 2.1), to remain attached to the labor force. Their human capital is thus maintained better, thereby strengthening their labor-market position and raising their labor-force participation when the children have grown up. The opportunity to alter one's working patterns to better fit changing private circumstances is thus an important instrument to protect the labor supply of not only older workers but also young parents. Greater flexibility in employment and career patterns can also encourage men to take up more family responsibilities in middle age. Indeed, Europeans show a keen interest in more flexible working-time regimes (see EFILWC (2003) and Table 2.5).

*Savings accounts provide more individual discretion over working times....*

More individual discretion in allocating working time (i.e. time sovereignty) over the life course requires more individual responsibility for financing periods of (part-time) leave. This ensures that more flexibility in selecting work times results in more rather than less hours worked over the life course as a whole. In this connection, tax-favored savings accounts for financing (part-time) parental leave can supplement minimum public income provisions (such as child and child-care benefits and publicly financed parental leave schemes) to protect purchasing power during the summer of the family season without resulting in excessive consumption of leave and childcare and large budgetary costs. In this way, tax incentives help internalize the externalities of children at relatively low costs, while at the same time stimulating the labor supply of younger workers in the spring season of life. Savings accounts that are the property of the individual worker also strengthen the position of the worker vis-à-vis the employer and thus contribute to the emancipation of workers. Whereas the employer creates flexible work arrangements and career paths, the worker can offer to finance (part of) the actual leave taken.

To further protect overall labor supply over the life cycle, personal savings accounts can be integrated with tax-favored (early) retirement accounts. In particular, individuals can

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<sup>22</sup> The health of the elderly seem to benefit from being engaged in a variety of activities (see Avramov and

be allowed to withdraw funds from these accounts before retirement -- for example, to care for children or to update skills.<sup>23</sup> Hence, rather than taking leave only at the end of the working life to facilitate the rapid depreciation of human capital through passive social insurance (and early retirement) benefits, individuals can use the funds already in the stressful and expensive family season of life to invest in the human capital of their children or their own human capital so as to prevent the obsolescence of skills. In this way, individuals save for old-age risks in the form of not only financial but also human capital; by investing in human capital earlier in life, individuals are able to work longer.

By helping agents to take more responsibility for drops in income, savings accounts can stimulate not only a more flexible working life but also a more flexible labor market and better management of human resources. In particular, individuals can self-insure a larger part of the shocks to the value of their human capital by using personal savings accounts. For example, older workers can draw on the account to retire gradually or supplement a reduction in the hourly wage at an advanced age. This facilitates wage flexibility of older workers, thereby strengthening their labor-market position.

#### 4.3 Workplace cultures aimed at employability and flexibility

How can more flexible work places and work cultures that better maintain the talents of workers be achieved? This subsection investigates this question.

##### *More flexible and inclusive workplace cultures aimed at employability...*

Social partners should nurture more inclusive, flexible workplace cultures that reconcile the needs of individual employees who balance work with family obligations with the needs of employers to flexibly respond to fluctuations in demand in increasingly competitive markets. In order to remain competitive in an aging labor market and to promote themselves as good places to work, firms should attune work conditions to the needs of employees who want to remain employable despite substantial family obligations and rapid innovation and creative

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Maskova (2003)).

<sup>23</sup> The government may want to subsidize some withdrawals if these withdrawals are used to finance care activities with positive externalities.

destruction. They should aim to create workplaces in which workers develop and maintain their talents, skills and health. Moreover, firms should help their workers to think and plan ahead about how they can remain productive in fulfilling work when they grow older (e.g. by taking education leave in mid career). Reducing excessive stress or physical strain at an early stage can help to extend working lives. Proactive thinking aimed at preventing human-capital risks later in life is called for in aging societies in which human resources become increasingly scarce and early retirement schemes are being phased out.

*....with wage flexibility*

Employees should accept more wage flexibility, internal flexibility in work practices, less employment protection for full-time male breadwinners, and more personal responsibility for financing leave and their own personal development (including early retirement and the costs of training). Rather than engaging in general, rigid working-time reductions, social partners should allow more flexible working times tailored to the needs of individual workers and firms. This may require changes in the way work is structured. The necessary changes in cultures and organizations aimed at better managing human resources will happen only gradually as many companies still base their working conditions on a male breadwinner who is freed from other duties and can retire early.

#### 4.4 More inclusive labor and housing markets

More inclusive labor and housing markets can help young adults in a crucial phase of their life course. This subsection explores various policy options for achieving better functioning labor and housing markets.

*Protection through flexibility to enter and to adjust*

To allow young adults to build a family, European labor markets should become more inclusive so that workers do not have to be continuously employed full time in order to enjoy a successful career. Rather than shielding insiders through employment protection, labor-market institutions should enable parents of young children, secondary workers and young

people to easily enter and remain in the labor market (e.g. through job-protected parental leave) and adjust their working conditions to changes in family conditions. This helps to reduce the opportunity costs in terms of foregone career prospects of becoming a mother and of sharing household work for fathers. Various privileges for full-time male breadwinners should be replaced by facilities that allow parents to raise young children while maintaining their own employability. Employability is the best employment protection.

*Portable arrangements diversify firm-specific risks*

Basing their security on employability and portable saving, retirement and social insurance schemes rather than on employment protection helps workers to better diversify their human and financial capital; emancipated workers become less dependent on the firm for which they work. Endowed with sufficient human and financial capital, adaptable individuals are empowered to embrace the non-verifiable, idiosyncratic risks associated with creative destruction in a dynamic competitive world economy and a transitional labor market. Moreover, workers enjoy greater flexibility in adjusting working conditions to changing needs during their life courses and in finding fresh challenges from which they can continue to learn.

*Decompressing the working life by shortening social adolescence*

A more inclusive labor market can help reverse the trend towards a compression of the working life and postponement of social adulthood by facilitating the first entry into the labor market. Condensing the period of full-time education, combining learning with work at an earlier state, and spreading learning more over the life cycle by integrating it better with work could also be helpful in shortening the period of social adolescence, decompressing the working life, and bringing forward parenthood.<sup>24</sup> Activating social policies should induce young adults to build up their human capital through education, work or both. Indeed, some form of education (possibly combined with work) could be compulsory until a young adult has achieved some minimum qualification.

### *Role of housing*

Also a well-functioning housing market can reduce the stress that young adults experience in the early reproductive stage of their lives. Moreover, tax facilities for home ownership may have to be targeted better at new entrants into the housing market. Equity in housing can also help the old to supplement their pension -- for example, to pay for their medical expenditures and other consumption needs. Financial innovation (for example, through reverse mortgages) may be needed to turn home equity into an income stream.

### 4.5 From breadwinner support to in-work benefits for parents

Support for families has traditionally been provided through passive income support to breadwinners. This subsection argues in favor of targeting support to parents with young children with an increased emphasis on in-work benefits for vulnerable groups.

#### *In-work benefits and mutual obligations strengthen labor-market position of low skilled...*

Lower minimum-wage floors boost the supply of reliable household services for families and the elderly, while at the same time improving the employment prospects of low-skilled women in the formal labor market. To accomplish this while protecting the income position of vulnerable households, more activating social assistance should be combined with in-work benefits (including child-care benefits) for parents caring for young children. In particular, social assistance based on mutual obligations should be conditional on each adult (including low-skilled women) being available to the labor market --- possibly on a part-time basis while parents care for young children who are not yet of school age.<sup>25</sup> Work and search obligations should thus be credibly enforced for both lone mothers and secondary earners within a two-adult household. In this way, parents would realize that living on passive long-term social benefits (supplemented by black market activities) is not an option. They are thus encouraged to maintain their marketable skills so that they are able to re-enter the labor market in a full-time job when their children are older. This would boost labor supply.

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<sup>24</sup> For early school leavers with few skills, the obligation to either work and/or learn can help to inculcate a work ethic and generate human capital.

<sup>25</sup> Box 3.5 in OECD (2003b) contains some valuable suggestions on how this could be done.



*... by decoupling income policy from the allocative role of wages*

With less wage compression, in-work benefits can be better targeted at low-skilled workers with children whose productivity is insufficient to earn a minimum standard of living, without the phasing-out of these in-work benefits resulting in very high marginal tax rates higher up the income scale. By moving away from breadwinner support (in which the breadwinner needs to earn sufficient wage income to provide for a dependent adult and children) towards targeted in-work benefits for families with young children, governments decouple income policy from the allocative role of wages. This creates more low-wage jobs in the formal sector.

*Subsidized child care can protect human capital*

Subsidized (or publicly provided) child care for households with low earnings helps women (including single mothers) to escape poverty, and alleviates liquidity constraints during the summer season of life. At the same time, school times should be attuned to the needs of working parents, with affordable after-school care for children of working parents with low labor incomes. Subsidies for high quality child care internalize the externalities of child development and alleviate the distortions of the tax system on female participation and human capital accumulation in the formal sector and the production of labor-intensive goods and services in the untaxed household sector. In view of their higher rates of labor-force participation, high-skilled women tend to benefit most from general child-care subsidies. Targeting child-care subsidies and child benefits (and other family benefits) at low-income households alleviates poverty but yields high marginal tax rates and thus disincentives to increase the earnings of the secondary earner in the phase-out range.<sup>26</sup> Hence, governments face a difficult trade-off between poverty alleviation and gender equality. The same trade-off bedevils the choice between household income or individual income as a base for redistribution.

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<sup>26</sup> Targeting may also stimulate the breaking up of families. The associated damage to role of the family as an institution for buffering risk and providing mutual care reduces the effectiveness of targeting in alleviating poverty.

### *Early intervention in disadvantaged families*

Activating policies facilitate social integration of low-skilled migrants and their children, especially if work obligations for women are combined with programs supporting the development of young children. Indeed, early intervention in dysfunctional families is the key to preventing social exclusion, raising the participation rates of unskilled men and women alike, and encouraging durable two-parent families. A proactive social policy aims at creating equal opportunities at the start of life through an equal distribution of human capital. Early interventions aimed at enriching the family environments of disadvantaged children can carry a high economic return in terms of raising school performance in adolescence and boosting wages and labor-force participation in adulthood (see Cunha et al. (2005) and Currie and Blau (2005)). At early ages, therefore, a trade-off between equity (targeting the most disadvantaged children) and efficiency (targeting training at those individuals who yield the highest return on learning) is absent. Once skills have been formed at later ages, returns on schooling are the largest for the most able, so that a trade-off between equity and efficiency exists. Accordingly, social policy can become more efficient by redirecting skill investments in disadvantaged groups from adults to young children.

### 4.6 Shift public support from the old to the young

The aging of the population is due to increased longevity and lower fertility. Whereas both funded and PAYG pension systems are vulnerable to increased longevity, PAYG pension schemes are especially vulnerable to lower fertility because PAYG systems rely on human capital of the young to finance the pensions of older generations. As generations invest less in the human capital of the next generations by reducing fertility, they should invest more in financial capital. Hence, lower fertility calls for gradually shifting from PAYG financing to funded pension schemes (see Sinn (2000)). In this way, public support is gradually shifted away from the fall and winter seasons of life towards the spring and summer seasons.<sup>27</sup> This is consistent with a gradual move from a reactive social policy that provides passive income

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<sup>27</sup> Whereas increased saving and more public support for young parents at the expense of the elderly is the appropriate response to lower fertility, increased longevity calls primarily for a higher retirement age and more investment in human capital.

support to those who have depreciated their human capital to a proactive social policy that helps people to build up and manage human talents better. Stimulating private saving for retirement by shifting public PAYG benefits from the old to young parents is thus not only the appropriate response to declining fertility but also helps to halt the decline in fertility and to internalize the positive externalities of additional children in PAYG pension systems (see van Groezen et al. (2003)).

Countries with large PAYG systems should consider focusing the public scheme on poverty alleviation by gradually reducing earnings-related PAYG benefits for those earning higher incomes. This would yield a better balanced portfolio between funded and PAYG schemes, as workers with middle- and higher incomes substitute private, funded pensions for public PAYG benefits (see also OECD (2001b), Chapter 6). Reducing PAYG benefits for, and increasing the tax payments by, the more affluent elderly is consistent with the trend towards a more heterogeneous older population. When PAYG schemes were established, the economic depression of the 1930's and the second world war had impoverished the older generation. Since poverty was thus concentrated among the elderly, poverty alleviation called for transfers from the younger to the older generation. At present, in contrast, age is generally no longer a good indicator of poverty, as many elderly have accumulated substantial financial wealth and more risks have shifted to the beginning of the life cycle. Hence, information on age should increasingly be supplemented by other information (particularly on incomes and family status) to identify those most in need of income support.<sup>28</sup>

The currently retired generation has not been able to anticipate lower public PAYG benefits. Moreover, this generation cannot adjust easily because it has already depreciated its human capital. Accordingly, a strong case can be made for changing the rules of the game (i.e. reducing PAYG benefits and increasing taxes on the elderly) only gradually.<sup>29</sup> Extensive grandfathering provisions protecting those who are currently old are expensive, however, and would eliminate benefits in terms of enhanced fiscal sustainability. Indeed, grandfathering implies that younger generations have to pay not only for their own private benefits but also for the public benefits of the currently old. The government thus faces a trade-off between

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<sup>28</sup> Dang et al. (2006) argue that social spending (taxation) can be reallocated from the old (young) to the young (old) without compromising the objective of preventing old-age poverty.

<sup>29</sup> Relative PAYG benefits can be reduced gradually by indexing benefits to prices rather than wages.

flexibility and stability. To enhance confidence and trust in a stable social contract while at the same time facilitating timely adjustments, governments should announce as early as possible any prospective changes in the social contract. This would allow the large baby-boom generations to anticipate reduced public transfers in retirement by starting to build up more funded pensions.

#### 4.7 Individual accounts in social insurance

This subsection makes a case in favor of mandatory individual accounts for social insurance that are complemented by liquidity and life-time income insurance. This would enhance the trade-off between equity and efficiency in social insurance.

##### *Self insurance...*

Social security can in part be based on mandatory contributions to individual accounts.<sup>30</sup> These accounts can in fact be viewed as a self-insurance device against human capital risk over the life cycle (due not only to old age, but also to unemployment and obsolescence of human capital during the working life). Agents become stakeholders in their own social security. If individuals bear more financial responsibility for the maintenance of their own employability, they face better incentives to work and train than under regular social insurance. By allowing people to shift the payment of deductibles in social insurance to the periods in which these costs can be more easily afforded, the schemes continue to offer security even though human-capital risks have become less easily insurable.

##### *...with liquidity insurance and life-time income protection ...*

The government in effect provides liquidity insurance and alleviates capital-market imperfections by allowing individuals to make withdrawals from the accounts even if the account balance is negative. Moreover, the government can protect the lifetime poor by bailing out individuals who end up with a negative account balance at the end of their

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<sup>30</sup> See Orszag and Snower (1997) and Stiglitz and Yun (2002), who propose replacing part of unemployment insurance with mandatory individual savings accounts. These savings accounts can also be in the form of so-called notional accounts. The implied PAYG financing avoids a costly transition.

working lives. In this way, the government provides insurance against catastrophic shocks that substantially harm lifetime incomes. Redistribution is thus targeted more closely at the lifetime poor who are suffering a combination of low wage incomes and frequent adverse shocks during their lives.

*...yields more efficient insurance....*

The accounts, in fact, combine a number of risks that occur during different periods of an individual's life in a single insurance contract with a deductible that is conditioned on the aggregate loss during the life course. Gollier and Schlesinger (1995) show that an umbrella insurance policy that adjusts the deductible on each separate loss to the outcome of the other risks in the form of a straight deductible based on the aggregate loss provides the best protection against large aggregate losses for a given insurance budget. Compared to separate insurance policies, the umbrella insurance contract provides better protection in the worst-case scenario of a succession of adverse shocks during the life course in exchange for less protection in other cases.

*...but requires compulsion and active labor-market policies,...*

Lifetime redistribution as well as liquidity and lifetime income insurance still give rise to moral hazard; agents have an incentive to minimize their contributions and maximize their withdrawals. The proposed system thus does not escape the fundamental trade off between actuarial fairness and basic income protection. The government must therefore regulate withdrawals so that they can be made only for pre-specified purposes. Especially the lifetime poor will continue to face high marginal tax rates as a direct consequence of the lifetime income guarantee. Hence, the government should focus its active labor-market policies (including workfare) on this group and employ instruments other than financial incentives to activate the lifetime poor. Savings must also be mandatory -- at least until a specific upper limit is reached. In addition to moral hazard, lack of self control and myopia are other reasons for making saving mandatory. Compulsory savings accounts in effect extend mandatory saving aimed at retirement to precautionary saving aimed at social insurance for individuals of working age.

*...uncorrelated shocks and inclusive labor markets,...*

The potential of individual accounts in improving the trade-off between insurance and incentives depends crucially on the extent to which individuals face correlated shocks during their lifetimes. The potential welfare gains of individual savings accounts are large if various income shocks are uncorrelated across time and among each other. In that case, annual incomes are poor indicators of lifetime incomes, and income shocks are in fact only small in the context of an entire lifetime. If shocks are strongly positively correlated, in contrast, risks do not become much smaller in a lifetime context (compared to an annual context). Risks then remain catastrophic, even when viewed over the entire life course. For each type of human capital risk, another combination between insurance and self-insurance through saving is optimal, depending on the magnitude of the risk in terms of the potential drop in lifetime income and the potential danger of moral hazard because of endogeneity and non-verifiability of the insured risk. Self-insurance should be relatively important for non-catastrophic risks that people can affect through non-verifiable actions (see Stiglitz and Yun (2002)). Hence, individual accounts become more attractive in fast-moving transitional labor markets in which people experience short involuntary unemployment spells in addition to voluntary periods of absence from the labor market. The opposite is true in the presence of dual labor markets in which insiders enjoy high incomes throughout their lives while disadvantaged outsiders must make do with insecure jobs and tend to suffer from frequent and long-lasting unemployment.

*....and equal distribution of human capital*

Mandatory individual savings accounts can thus be a useful component of an overall social policy package that includes policies aimed at creating equal opportunities at the start of life through an equal distribution of human capital and early intervention. It should also provide some form of lifetime income guarantee. By using information on lifetime incomes, redistribution implicit in such an income guarantee can occur at lower efficiency costs. Moreover, actuarially fair links between contributions and expected benefits alleviate the labour-market distortions associated with social insurance for middle- and high incomes.

Finally, by facilitating consumption-smoothing through saving schemes offering liquidity insurance, the government increases the scope for self-insurance, thereby combating moral hazard in social insurance. Through all of these channels, savings accounts support social policy by reducing the costs that are associated with an effective mix of redistribution, social insurance and consumption smoothing.

## V Conclusions

The policy conclusions imply transforming passive benefits compensating the loss of human capital into preventive, proactive social policies that build and maintain human capital. Another common thread in these conclusions is the importance of flexibility in wages and work practices. As workers increasingly combine their work with other activities (caring, resting and learning), new social-protection institutions should facilitate various transitions and changing combinations of activities during the life course. Among other things, an adaptable labor force provides the legitimacy for competitive open markets and the creative destruction associated with rapid innovation and growth. Moreover, substantial human capital contributes to a high level of labor-force participation as the basis for ensuring solidarity with vulnerable elderly, children and disadvantaged adults of working age.

The required reforms confront politicians with a major challenge because these reforms often run against vested interests and the perceived short-term interests of powerful insiders. Moreover, transforming passive, reactive social policies into more proactive policies yields a transitional problem similar to that associated with a shift from a PAYG to a funded pension system. In particular, society still has to pay for passive benefits to the currently old generations; these generations have typically depreciated their human capital because they have not profited from more proactive social policies. At the same time, the human-capital investments in the young generations, which reduce social spending and increase tax revenues only with a lag, must be financed. The combination of passive old-age benefits and proactive spending aimed at especially the human capital of younger generations can create fiscal pressures and gives rise to difficult political choices.<sup>31</sup>

As people gain more discretion to construct their own biographies, they become more responsible for their life courses. A challenge in this respect is to better prepare people for more responsibility for their employability, social insurance and financial planning. Schools, employers and unions can play an important role in helping people acquire the necessary financial competences and life and work skills. This may also make voters more aware of the

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<sup>31</sup> For an elaborate analysis of the political economy of the types of reforms proposed in this paper, see Bovenberg (2007).



fundamental trade-offs in social policy, thereby enhancing the quality of the political debate and policymaking (see Boeri and Tabellini (2005)).

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# DATA ANNEX

## Tables

**Table 2.1. Time spent on 4 different obligations in hours a week working population EU-15, 2003**

	Men					Women				
	Total of all obligations	Paid work	Household and looking after children	Voluntary work	Education	Total of all obligations	Paid work	Household and looking after children	Voluntary work	Education
EU Total	58.4	42.6	13.3	0.8	1.7	59.5	34.7	22.6	0.8	1.8
Finland	55.1	40.8	10.5	1.5	2.4	59.9	37.3	18.3	1.3	2.6
Sweden	56.9	40.4	13.6	2.0	1.2	59.1	37.0	18.9	1.6	1.6
Denmark	57.2	40.8	13.3	1.7	1.2	62.5	36.5	22.4	1.1	2.3
Germany (West)	59.1	42.2	13.3	0.7	2.2	57.2	32.1	22.3	0.8	1.8
Germany (East)	60.6	42.9	13.1	0.5	3.2	59.6	35.4	21.8	0.4	2.2
Netherlands	54.9	39.8	11.6	1.4	1.9	53.4	27.4	23.8	1.8	1.2
Great Britain	57.5	42.2	13.7	0.6	1.6	55.4	28.6	25.9	0.6	1.3
Northern Ireland	54.5	41.1	11.5	0.8	1.2	61.2	32.7	24.6	1.0	2.4
Ireland	56.2	43.7	11.0	0.7	1.0	59.6	33.7	23.8	1.3	2.6
Belgium	59.5	42.3	13.7	0.8	1.3	60.7	36.4	21.5	0.6	1.2
Luxembourg	66.0	43.2	19.0	2.4	1.9	69.4	32.9	32.0	3.5	2.3
Austria	60.3	46.2	11.5	1.3	1.8	62.2	37.7	22.2	0.9	1.4
France	52.7	40.0	10.4	0.9	0.9	55.5	35.9	18.2	0.6	1.6
Portugal	54.1	45.1	8.4	0.4	0.4	64.6	41.9	21.4	0.3	1.0
Spain	59.0	44.0	13.4	0.1	1.7	67.9	39.9	23.8	0.2	3.1
Italy	66.0	45.0	18.0	0.8	1.8	66.3	39.5	25.3	1.1	2.0
Greece	61.5	46.9	13.0	1.0	2.0	69.8	41.2	26.8	1.3	1.7

Source: Eurobarometer 60.3.

**Table 2.2. Female employment rate and the presence of children, 2000 (persons aged 25-54)**

	Total		No children		One child		Two or more children	
	Employment rate	Gender gap <sup>1</sup>	Employment rate	Gender gap	Employment rate	Gender gap	Employment rate	Gender gap
Australia	66.8	20.0	68.4	16.1	55.3	33.3	43.2	47.5
Austria	73.5	16.2	76.0	10.5	75.6	18.5	65.7	29.0
Belgium	67.8	20.1	65.6	17.4	71.8	23.5	69.3	24.7
Canada	74.0	11.8	76.5	6.0	74.9	14.9	68.2	23.6
Czech Republic	73.7	15.6	80.8	5.4	72.3	21.2	59.4	33.5
Denmark (1998)	80.5	7.7	78.5	7.7	88.1	3.5	77.2	12.9
Finland (1997)	77.6	7.0	79.2	0.1	78.5	11.8	73.5	19.7
France	69.6	17.7	73.5	9.6	74.1	18.7	58.8	32.9
Germany	71.1	16.3	77.3	7.2	70.4	21.2	56.3	35.6
Greece	52.6	35.9	53.1	31.1	53.9	40.3	50.3	45.4
Hungary	61.7	16.0						
Ireland	53.1	29.0	65.8	14.1	51.0	33.2	40.8	43.2
Italy	50.7	33.9	52.8	26.2	52.1	40.9	42.4	49.9
Japan (1999)	62.7	31.6						
Luxembourg	63.0	29.8	68.7	21.3	65.8	30.4	50.1	46.1
Netherlands	70.9	21.4	75.3	15.6	69.9	24.3	63.3	30.8
New Zealand (2001)	70.6	17.0	80.7	5.7	66.9	20.2	58.9	30.9
Poland	72.0	9.6						
Portugal	73.9	16.4	72.6	13.4	78.5	16.6	70.3	24.8
Slovak Republic	64.8	13.7						
Spain	50.6	34.8	54.6	26.0	47.6	44.7	43.3	48.6
Sweden	81.7	4.1	81.9	-0.4	80.6	9.8	81.8	9.4
Turkey								
United Kingdom	73.1	14.4	79.9	5.4	72.9	17.1	62.3	28.2
United States (1999)	74.1	14.8	78.6	7.2	75.6	17.4	64.7	29.0
Unweighted average	69.0	18.6	73.7	11.8	70.6	22.9	61.9	32.3

<sup>1</sup> Gender gap: percentage point difference between the employment rates for men and women.

Source: OECD, 2002, *Employment Outlook 2002*, Paris, Table 2.4, p. 77.

**Table 2.3. Fertility, 1980-2004, and mean age of women at childbearing first child, 1980-2003**

	Total fertility rate				Mean age of women at childbearing first child (years)			
	1980	1990	2001	2004	1980	1992	1998	2003
Austria	1.7	1.4	1.3	1.4	26.30	27.30	28.00	28.80
Belgium	1.7	1.6	1.6	1.6	26.60	28.09		
Canada	1.7	1.7	1.5	1.5		28.40		
Czech Republic	2.1	1.9	1.1	1.2		24.82	26.64	28.10
Denmark	1.5	1.7	1.7	1.8	26.80	28.77	29.52	30.10
Finland	1.6	1.8	1.7	1.8	27.70	28.95	29.55	29.80
France	2.0	1.8	1.9	1.9	26.80			
Germany	1.4	1.5	1.4	1.4	26.40	27.93 <sup>1</sup>	28.58 <sup>1</sup>	29.10 <sup>1</sup>
Greece	2.2	1.4	1.3	1.3	26.10	27.55	28.70	29.40 <sup>2</sup>
Hungary	1.9	1.8	1.3	1.3		25.80	26.86	28.00
Ireland	3.2	2.1	2.0	1.9	29.90	30.01	30.30	30.60
Italy	1.6	1.3	1.2	1.3	27.40	29.21	30.30 <sup>3</sup>	
Luxembourg	1.5	1.6	1.7	1.7	27.50	28.58	29.25	29.90
Netherlands	1.6	1.6	1.7	1.7	27.70	29.67	30.25	30.40
Poland	2.3	2.0	1.3	1.2		26.38	27.19	27.90
Portugal	2.2	1.6	1.5	1.4	27.10	27.60	28.40	29.00
Slovak Republic	2.3	2.1	1.2	1.2		25.13	26.39 <sup>3</sup>	27.30
Spain	2.2	1.4	1.3	1.3	28.20	29.25	30.55	30.80 <sup>2</sup>
Sweden	1.7	2.1	1.6	1.8	27.60	28.87	29.73	30.30
Turkey	4.4	3.0	2.5	2.2				
United Kingdom	1.8	1.8	1.6	1.8	26.90	27.84	28.32	28.80
United States	1.8	2.1	2.1	2.1				

<sup>1</sup> Including former East Germany;

<sup>2</sup> 2002;

<sup>3</sup> 1999.

Sources: OECD Social indicators database; Eurostat.

**Table 2.4. Preferences for hours worked, 1998<sup>1</sup>** (Total hours in couple families where the respondent was aged 20-50 years with a child under six)

Perceived financial situation <sup>2</sup>	Hours worked at present time	Hours worked (preferences)	Change in hours needed to meet preferences	Percentage of families in this situation
Austria				
Well off	67	58	-9	64
Just manage	59	48	-11	33
Belgium				
Well off	67	55	-12	64
Just manage	58	52	-7	34
Denmark				
Well off	73	62	-11	80
Just manage	60	51	-9	18
Finland				
Well off	72	56	-16	64
Just manage	60	41	-19	34
France				
Well off	61	49	-12	32
Just manage	60	49	-11	55
Germany				
Well off	62	49	-13	52
Just manage	55	45	-10	42
Greece				
Well off	65	50	-16	30
Just manage	64	47	-17	37
Ireland				
Well off	66	53	-13	28
Just manage	55	37	-18	67
Italy				
Well off	62	50	-12	32
Just manage	55	45	-10	58
Luxembourg				
Well off	56	48	-8	73
Just manage	58	49	-9	26
Netherlands				
Well off	58	47	-11	82
Just manage	47	37	-10	16
Portugal				
Well off	78	57	-21	21
Just manage	68	61	-7	62
Spain				
Well off	61	48	-13	20
Just manage	46	38	-8	68
Sweden				
Well off	70	58	-12	69
Just manage	59	45	-14	27
United Kingdom				
Well off	66	50	-16	29
Just manage	60	45	-15	63

<sup>1</sup>The table provides information on average hours worked and preferred hours, according to the perceived financial situation of a household in 1998. The information about preferred hours is derived from questions about a 'free choice' of hours by the respondents and his/her partner, "taking into account the need to earn your living";

<sup>2</sup>The financial perceptions are responses to the question, "Taking into account the income that the members of your household receive from different sources, would you say that your household is financially well off, that you just manage or that you have difficulties". The proportion of respondents indicating "difficulties" is not shown. It was under 10 per cent in all countries, except France, Greece, Portugal and Spain.

Source: OECD, 2001, *Employment Outlook 2001*, Paris, Table 4.4, p. 138.

**Table 2.5. Opinions on importance and availability of different options for combining paid and unpaid work, % working population, EU-15 2003**

	Importance			Available	Difference important/ available
	Men and women	Men	Women	Men and Women	Men and Women
Which of these options are important to you personally for combining paid work with other activities					
Working more or less hours if needed	59	58	60	44	14
Saving up overtime to take as extra time off	38	38	39	29	10
Carrying over holidays to next year	32	32	31	24	7
Early retirement	25	27	23	9	16
Taking extra paid time off to look after relatives	25	22	28	12	12
Early retirement but with the option of still working part-time	24	23	25	7	17
Taking extra pay instead of holiday	23	25	21	14	9
Taking unpaid leave	21	20	22	19	2
Taking extra paid time off for study	19	18	19	11	8
Childcare facilities at your workplace	15	11	21	4	11
Teleworking	15	16	14	8	7
Taking a sabbatical, career break	15	14	16	7	8
Don't know	7	47	6		
Others	4	4	4		

Source: Eurobarometer 60.3.

**Table 2.6. Changes in lifetime allocation of labor and leisure, 1965-2000 (percentage deviations)<sup>1</sup>**

	Period	<i>Men</i>			<i>Women</i>		
		Childhood & education	Length of working life	Length of retirement	Childhood & education	Length of working life	Length of retirement
Australia	1970-2000	-0.7	-5.5	6.3	-1.8	-1.9	3.7
Belgium	1990-2000	-0.3	-1.8	2.0	0.9	2.1	-3.0
Canada	1980-2000	-0.2	-3.1	3.3	-0.5	-1.9	2.4
Denmark	1990-2000	0.1	-7.1	7.1	2.6	-8.6	6.0
Finland	1970-2000	0.2	-3.9	3.8	-0.2	-2.7	2.9
France	1970-2000	0.8	-6.8	6.1	-1.6	-4.4	6.0
Germany	1975-2000	2.0	-6.5	4.6	0.2	-4.9	4.7
Greece	1990-2000	1.0	-1.0	0.0	1.3	0.4	-1.7
Ireland	1985-2000	0.6	-1.1	0.4	0.7	-3.5	2.8
Japan	1970-2000	-0.3	-3.4	3.6	0.4	-3.8	3.4
Luxembourg	1990-2000	1.5	-4.6	3.1	7.0	-8.6	1.6
Netherlands	1975-2000	-0.3	-2.1	2.4	-0.3	-3.2	3.5
New Zealand	1990-2000	0.2	-0.9	0.7	3.2	-5.7	2.5
Portugal	1980-2000	1.8	-5.6	3.8	0.1	-5.2	5.1
Spain	1980-2000	1.8	-4.4	2.6	1.7	-6.1	4.4
Sweden	1970-2000	0.2	-3.8	3.6	-2.9	-0.7	3.6
Turkey	1995-2000	-0.2	-11.0	11.1	-0.8	-7.2	7.9
United Kingdom	1990-2000	0.3	-3.9	3.6	-2.5	0.6	1.9
United States	1965-2000	-0.4	-4.3	4.7	-2.4	-0.3	2.7
OECD average	1990-2000	0.2	-3.3	3.1	0.0	-2.3	2.3

<sup>1</sup> Changes in lifetime allocation of labour and leisure across OECD-countries, normalised over (several periods) a ten years period.

Source: Burniaux, J.M., R. Duval, and F. Jaumotte, 2004, 'Coping with ageing: A dynamic approach to quantify the impact of alternative policy options on future labour supply in OECD Countries', OECD Economics Department Working Paper Series, no. 371.

**Table 3.1. Public spending on families and on elderly, 1998<sup>1</sup>**

	<i>Public spending on families</i> (1) = (2)+(3)	Cash benefits (2)	Family services (3)	<i>Public spending on elderly</i> (4) = (5)+(6)	Old age cash (5)	Services for the elderly (6)	<i>Spending on families versus spending on elderly</i> (7) = (1):(4)
Australia	2.60	2.19	0.41	5.06	4.30	0.76	0.51
Austria	3.03	1.92	1.11	10.86	9.94	0.92	0.28
Belgium	2.22	2.06	0.16	7.50	7.37	0.13	0.30
Canada	0.76	0.76		5.10	5.10		0.15
Czech Republic	1.61	1.61		6.85	6.37	0.48	0.24
Denmark	3.77	1.54	2.23	9.77	6.82	2.95	0.39
Finland	3.36	1.92	1.44	8.53	6.99	1.54	0.39
France	2.69	1.46	1.23	11.25	10.59	0.66	0.24
Germany	2.73	1.93	0.80	11.21	10.46	0.75	0.24
Greece	1.91	1.18	0.73	10.49	10.22	0.27	0.18
Ireland	1.74	1.58	0.16	2.90	2.54	0.36	0.60
Italy	0.88	0.58	0.30	13.01	12.84	0.17	0.07
Japan	0.47	0.21	0.26	5.98	5.67	0.31	0.08
Luxembourg	2.81	2.40	0.41	8.53	8.02	0.51	0.33
Netherlands	1.21	0.81	0.40	7.51	6.21	1.30	0.16
New Zealand	2.65	2.55	0.10	5.47	5.47	0.00	0.48
Poland	0.93	0.93		8.25	7.97	0.28	0.11
Portugal	0.98	0.65	0.33	6.58	6.31	0.27	0.15
Slovak Republic	2.19	2.10	0.09	5.62	5.20	0.42	0.39
Spain	0.40	0.29	0.11	8.41	8.12	0.29	0.05
Sweden	3.31	1.63	1.68	11.17	7.46	3.71	0.30
Turkey	0.98	0.91	0.07	4.31	4.22	0.09	0.23
United Kingdom	2.22	1.73	0.49	10.58	9.77	0.81	0.21
United States	0.51	0.22	0.29	5.20	5.15	0.05	0.10

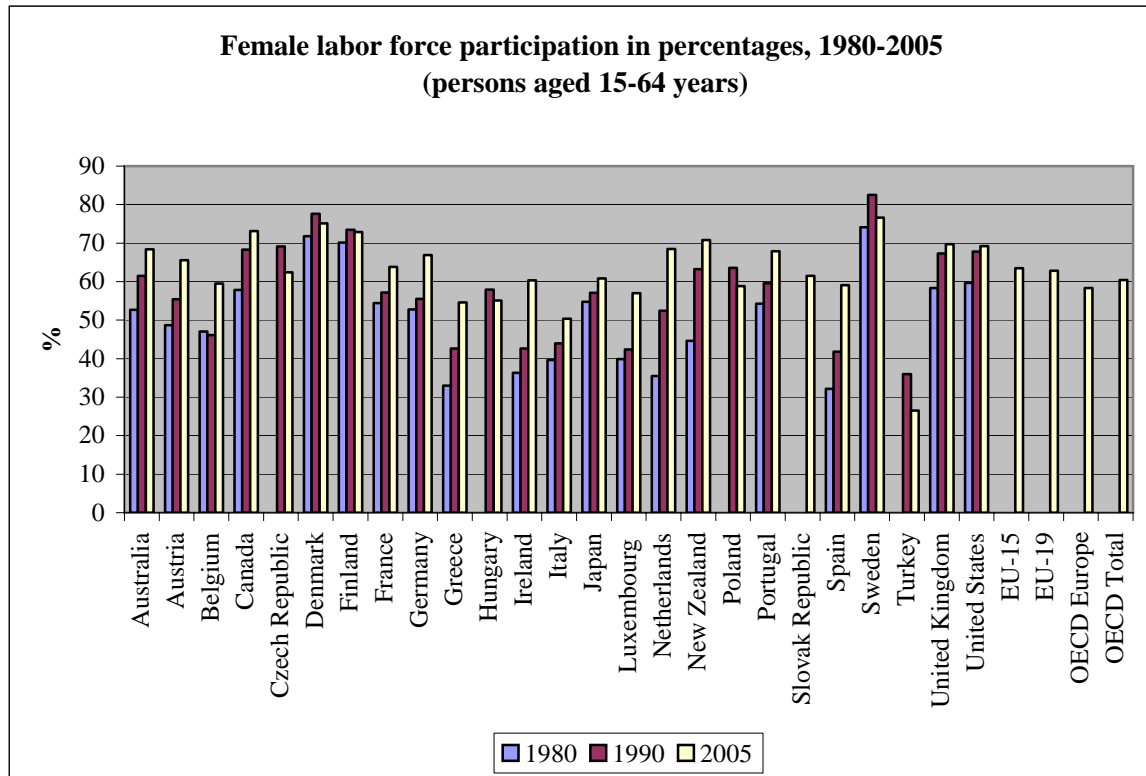
<sup>1</sup> Cash amount for a two-earner family with two children as a percentage of GDP. A blank means that there is no scheme; a '0.00' means that a scheme exists but is not visible as a percentage of GDP.

Source: Own calculations using the OECD Statistical database.



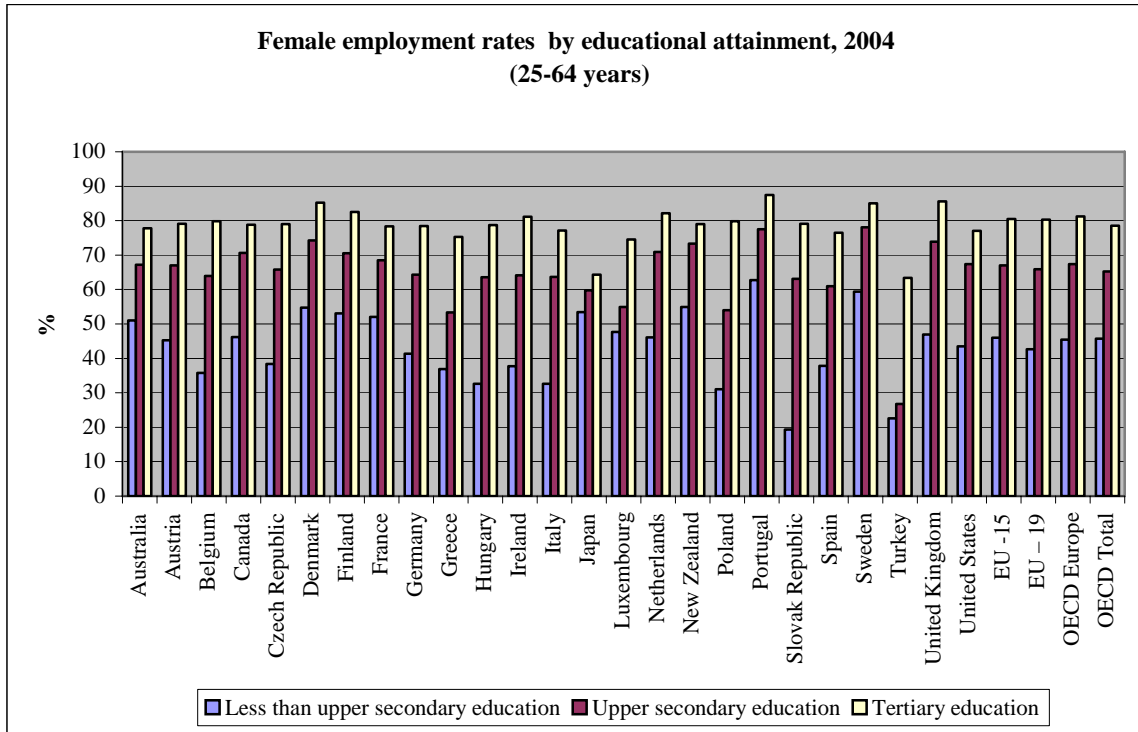
## Figures

**Figure 2.1. Female labor force participation in percentages, 1980-2005 (persons aged 15-64 years)**



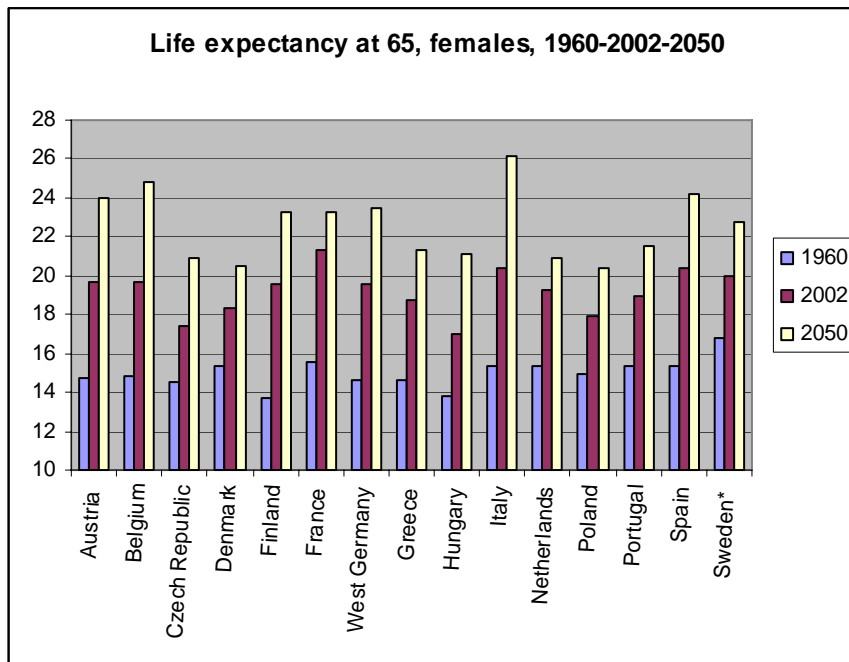
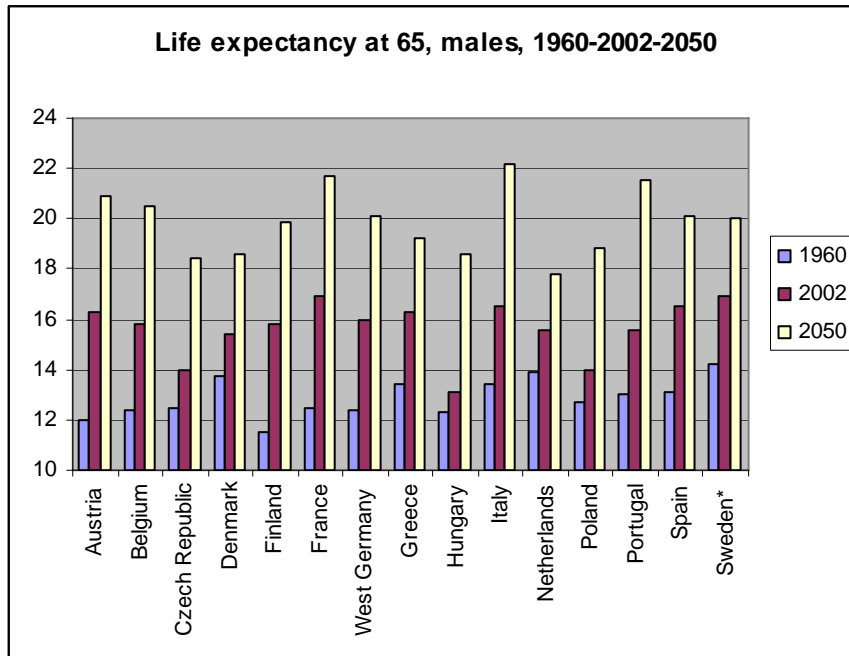
Source: OECD, 2002 & 2006, *Employment Outlook 2002 & 2006*, Paris, Statistical annex, Table B, p. 250. European Union Labor Force Survey. Before 1990: OECD, *Labor Force Statistics*.

**Figure 2.2. Female employment rates by educational attainment, 2004 ( persons aged 25-64 years)**



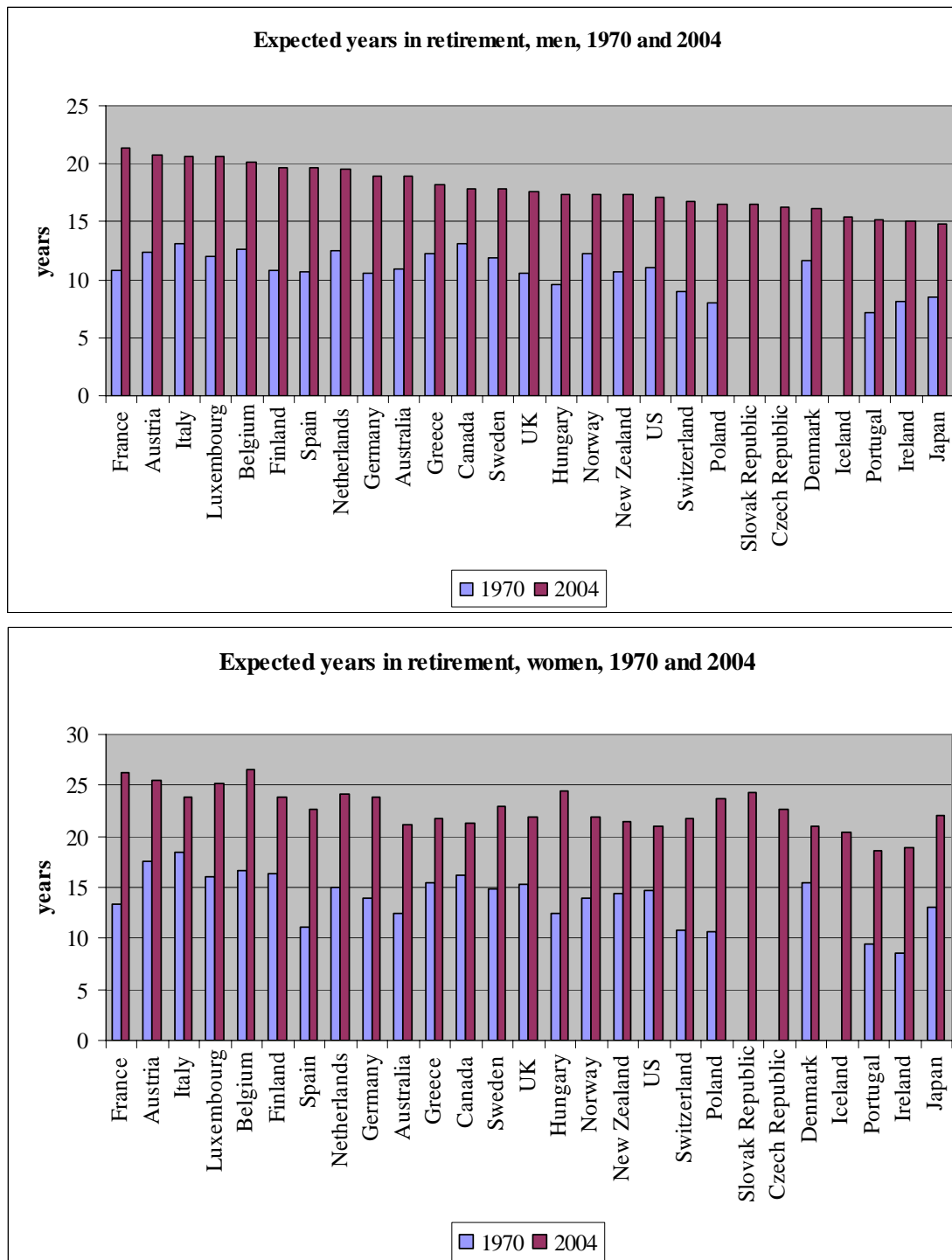
Source: OECD, 2006, *Employment Outlook 2006*, Paris, Statistical annex, Table D, pp. 260-262.

**Figure 2.3. Life expectancy at 65, 1960-2002-2050**



Sources: OECD, 2005, *Society at a Glance, Social indicators 2005 Edition*, Paris; Eurostat Europop 2004, baseline; \* =1970

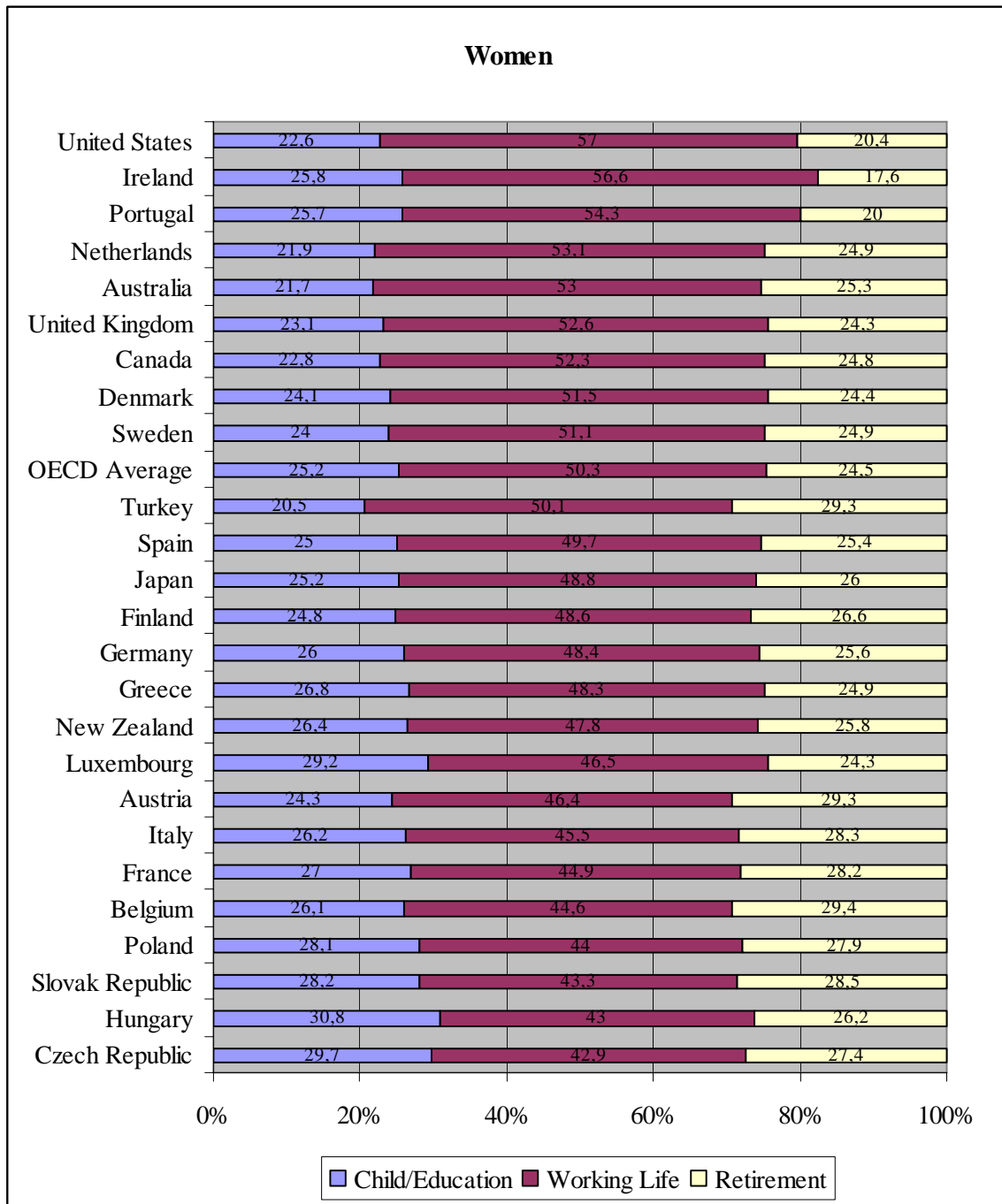
**Figure 2.4. Expected years in retirement<sup>1</sup>, 1970 and 2004**

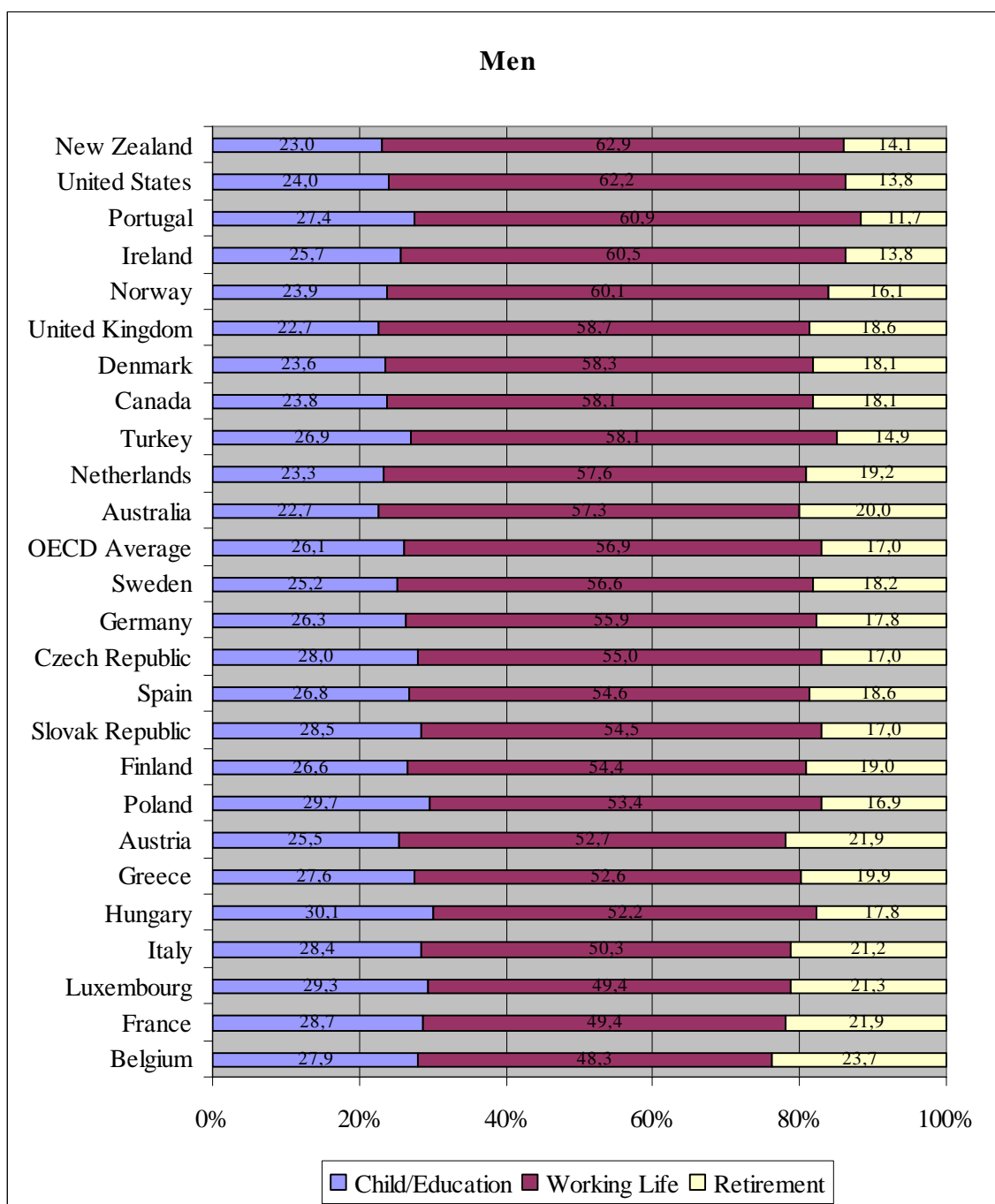


<sup>1</sup>The data refer to life expectancy at the average effective age of retirement.

Source: OECD estimates. See also OECD, 2006, 'Live longer, work longer,' Paris, p. 35.

**Figure 2.5. Lifetime allocation of labor and leisure, 2000<sup>1</sup>**

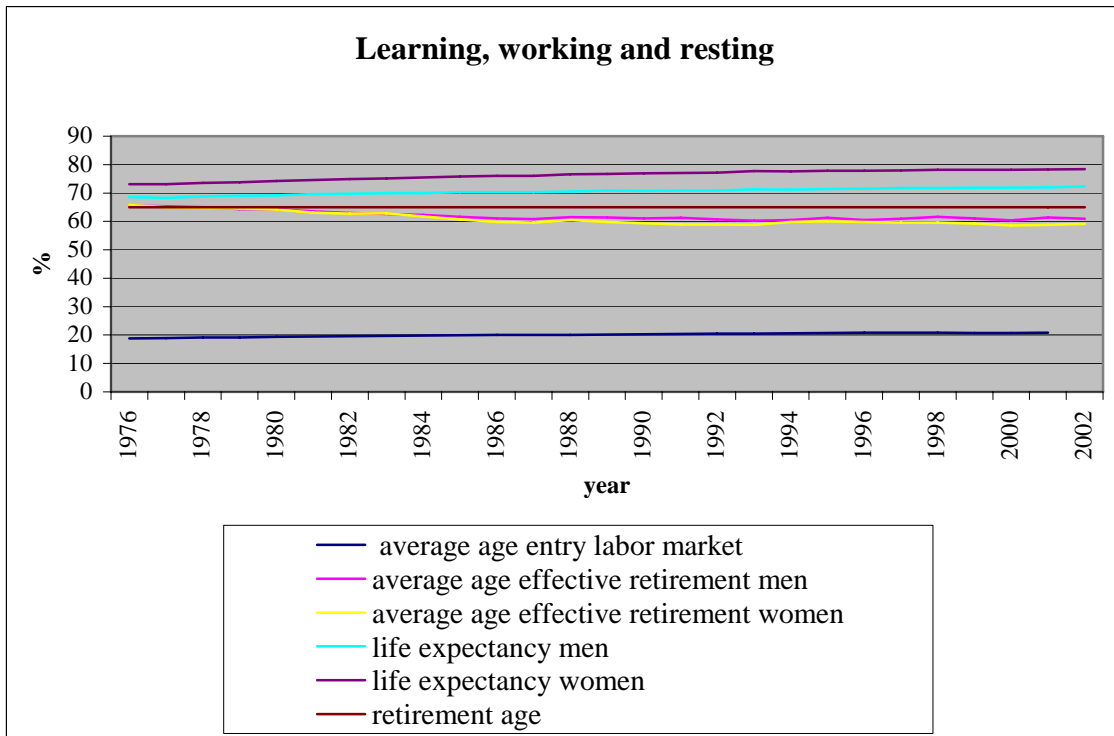




<sup>1</sup> Based on average expected ages of entry and exit in 2000. The three periods (child/education, working life and retirement) amount to 100. Countries are ordered in increasing life-time share of working life.

Source: Burniaux, J.M., R. Duval, and F. Jaumotte, 2004, 'Coping with ageing: A dynamic approach to quantify the impact of alternative policy options on future labour supply in OECD Countries', Economics Department Working Paper Series, no. 371.

**Figure 2.6. Learning, working and resting years in the Netherlands, 1950-2002**

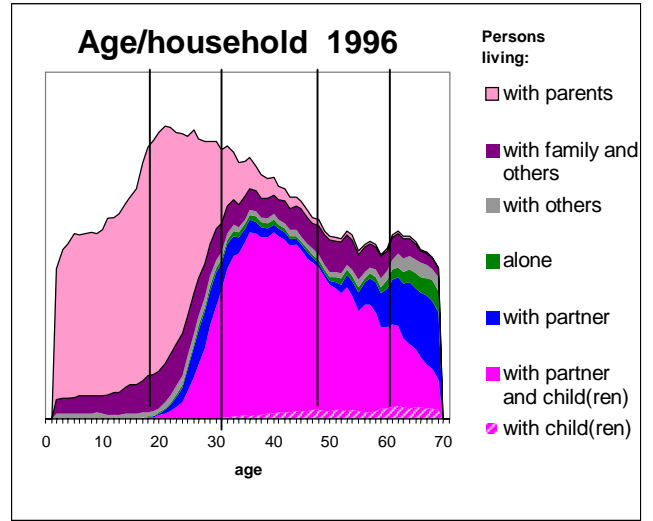
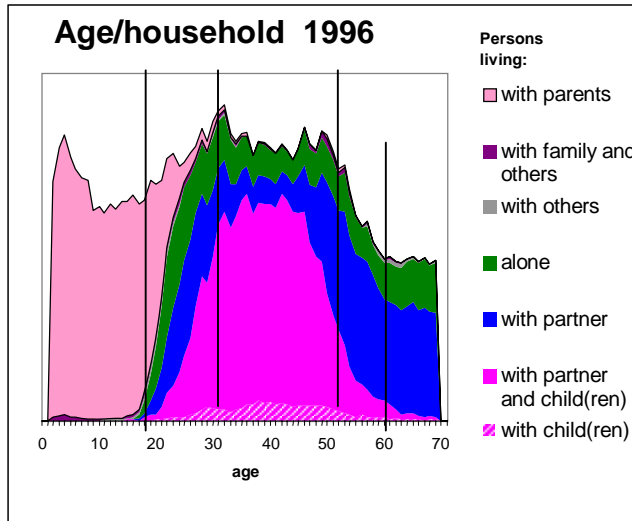


Sources: OECD, 2005, *Society at a Glance, Social Indicators 2005 Edition*, Paris; CBS, 2004, *Nederlanders zijn minder gaan werken (Dutch are working less and less)*, Voorburg.

**Figure 2.7. Age and household composition, 1996**

Denmark

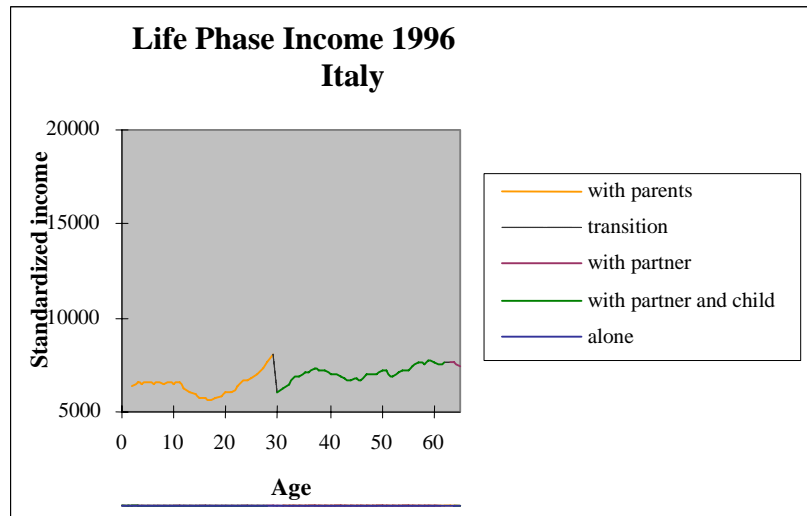
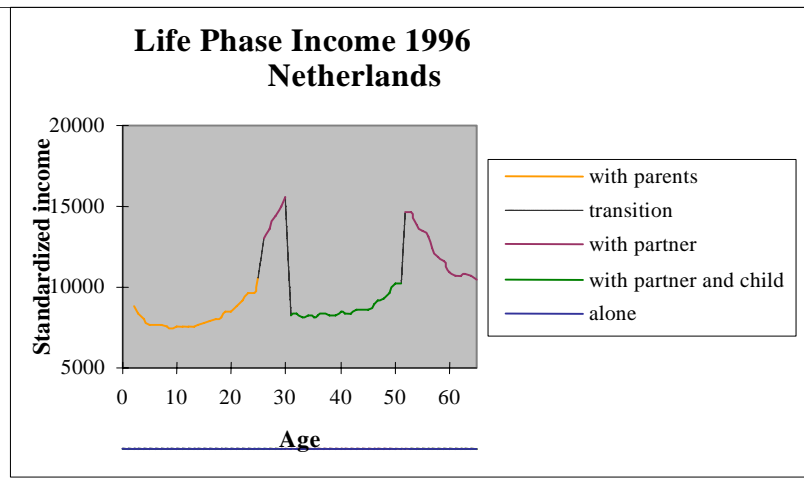
Spain



Source: Kalle, P., E. Lambrechts, and P. Cuyvers, 2002, 'Caring for the Next Generation. Family Life Cycle, Income and Fertility,' European Commission Directorate-General for Employment and Social Affairs Study Series 2002, Brussels.



**Figure 2.8. Age and standardized income, 1996**



Source: Kalle, P., E. Lambrechts, and P. Cuyvers, 2002, 'Caring for the Next Generation. Family Life Cycle, Income and Fertility,' European Commission Directorate-General for Employment and Social Affairs Study Series 2002, Brussels.

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### Summary Findings

A number of trends are changing the nature of social risks and increase the importance of human capital, adaptability and flexibility. This paper discusses the usefulness of a life-course perspective in developing proactive social policies that better fit the changing life cycles of individuals who combine formal work with other activities on transitional labor markets. It pays special attention to the accumulation and maintenance of human capital over the life course and stresses that reconciliation of work and family goes beyond child-care facilities and parental leave, and involves the entire life course. In particular, longer and deeper involvement in paid employment allows people to exploit their longer life to reconcile the two ambitions of, first, investing in the next generation as a parent and, second, pursuing a fulfilling career in paid work in which one keeps learning. Greater flexibility of working time over the life course requires more individual responsibility for financing leave. Moreover, rather than shielding older insiders through employment protection, labor-market institutions should enable parents of young children to easily enter and remain in the labor market. Finally, more activating social assistance and in-work benefits should replace the passive income support for breadwinners that results in high minimum-wage floors.

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