European Commission

Population ageing in Europe

Facts, implications and policies

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Outcomes of EU-funded research

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Foreword

Longevity is one of the biggest achievements of modern societies. In the last 20 years, people all over the world have, on average, gained 6 years of life expectancy. Children born after 2011 have a one in three chance of reaching their 100th birthday. Europeans are living longer than ever before and this pattern is expected to continue due to unprecedented medical advances and improved standards of living. By 2020, a quarter of Europeans will be over 60 years of age. Combined with low birth rates, this will bring about significant changes to the structure of European society, which will impact on our economy, social security and health care systems, the labour market and many other spheres of our lives.

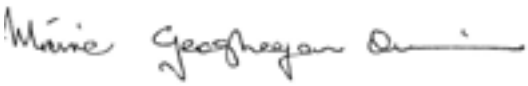
Research on ageing has and will continue to be a vital part of the EU's framework programmes for research. Hundreds of millions of euros have been invested over recent years in health-related ageing research, neurodegenerative diseases, including Alzheimer's, as well as in socioeconomic dimensions of ageing. The challenge-based approach of Horizon 2020 — the EU's new programme for research and innovation — fits perfectly with the pressing need to address issues resulting from demographic change and ageing. We have proposed that of the seven societal challenges addressed by Horizon 2020, the largest budget should be allocated to the 'Health, demographic change and well-being' challenge. At the same time, research related to ageing will also feature prominently on the agenda of the societal challenge 'Europe in a changing world: inclusive, innovative and reflective societies'.

Major research and innovation investments are only part of the story. Making active and healthy ageing a reality by keeping older people healthy, independent and fulfilled is a challenge we need to address comprehensively. Indeed, this also creates huge opportunities for Europe to think creatively and innovate in terms of new technologies, improved services and new business models. This approach to the ageing of society is at the heart of the Europe 2020 strategy and its flagship initiative 'Innovation union'. This is also the thinking behind the 'European innovation partnership on active and healthy ageing' that the Commission launched in 2011 with the aim of enhancing Europe's innovation potential for tackling the challenges and embracing the opportunities brought about by demographic change. The partnership seeks to translate innovative ideas into tangible products and services that really respond to the needs of older Europeans and thus boost the EU's competitiveness, growth and potential for job creation through generating new opportunities for our businesses.

This publication, which I have the pleasure to place in your hands, aims to address the question of how Europe is prepared for advanced population ageing. Can it face the challenges? Can it seize the opportunities? To answer this, the document first gives the broader context by analysing the European approach to demographic change and presenting population ageing from different perspectives. Consequently, it looks into a number of key questions related to economic growth, labour market, well-being, transition to retirement and other issues. The analysis is concluded by an exploration of public policies supporting smart, sustainable and inclusive growth in the times of population ageing.

This publication is primarily addressed to policymakers at all levels of public governance as well as all other stakeholders. However, because of the way it combines a comprehensive overview with a detailed analysis of the issues, I believe it should be of interest not only to specialists working in this field but also to a broader audience.

Máire Geoghegan-Quinn
Commissioner for Research, Innovation and Science
European Commission



1. The European approach to demographic change

Europeans are living longer and healthier lives, and subsequent generations can benefit from longer lifespans lived together. This spectacular achievement of European societies is accompanied, however, by fertility rates below replacement levels and, in a remarkably large number of countries, far under that level. As a result, population growth is slowing down while population ageing accelerates. In particular, rapid increases in the elderly population are predicted for the coming decades due to the ageing of post-war baby boomers. In addition, persistent low fertility rates lead to a marked reduction in the labour force in the near as well as more distant future. These developments reflect the deep transformations in the age composition of European populations. Along with changing family and household structures, they set a largely new demographic scene for development prospects in Europe.

Challenges posed by demographic change have increasingly been a focal point of debates on the future of the EU. Population and labour force ageing in particular, accompanied by a shrinking of the work force, raise concerns about future economic growth. The Europe 2020 strategy for a smart, sustainable and inclusive growth emphasises the need to promote active ageing policies. Relevant priorities are included in the flagship initiative 'An agenda for new skills and jobs', designed to achieve the employment goal defined as three out of four Europeans aged 20–64 working. To meet this goal, a better use of older Europeans' potential is crucial. This group is in good health and can contribute to economic growth with their skills and experience.

Reforms of social protection systems in Europe, particularly pensions, health care and long-term care arrangements, are considered an important component of the constructive response to population ageing. In addition, the financing of these schemes is also affected by the current economic crisis which has led to high public finance deficits and debt levels. Hence, one of the most important issues is how to restore sound public finance and assure the sustainability of social protection schemes without excessively burdening younger generations in the future.

This summary of the research agenda on population ageing is timely: 2012 has been proclaimed the European Year for Active Ageing and Solidarity between Generations. Its main goal is to raise awareness about what population ageing means for individuals, families, the economy and society, and to demonstrate how older people can contribute to the economy and society. The European year 2012 seeks to encourage policymakers and relevant stakeholders at all levels to take action aimed at creating better opportunities for active ageing and strengthening solidarity between generations ([1]). European research can feed into these goals with evidence that can stimulate smart policy developments. Such evidence-based policies should foster solidarity, cooperation and understanding between generations, and bring younger and older people closer together in their work and private lives, contributing to the concept of smart and inclusive growth.

This report presents an overview of the outcomes of ageing-related projects funded under the seventh framework programme in socioeconomic sciences and humanities. Its aim is to identify research results of particular significance from the perspective of European and national policies. It also seeks to identify common issues and themes emerging from the EU-funded research that may

([1]) http://europa.eu/ey2012/ey2012main.jsp?catId=971&langId=en

support decision-making and policy formulation at different levels: from individuals and civil society, through employers and local and regional governments, to national and European policymakers. The review highlights the policy-related outcomes and recurring themes of the research under two broad thematic areas:

- multidimensional aspects of population ageing, and
- prospects of human capital development and economic growth under population ageing.

The conclusions of our overview are also formulated in the context of the priorities set forth in the Europe 2020 strategy.

1.1. Development of EU policies in the context of population ageing

Demographic change in Europe is seen as a challenge for many policy areas: from family policy; through education, lifelong learning and labour market policy; to social protection systems, and pensions, health and long-term care in particular. As many of these areas involve a significant share of public finance expenditure, population ageing is also subject to examination from the perspective of fiscal sustainability. The 1994 EU summit was the first to underscore the need to improve employment opportunities for older workers. This short overview of EU activities over the past 10 years documents how much effort has been made to reorient EU policies to cope with the challenges posed by a new demographic regime.

A wide scope of policies addressing population ageing was advocated already in March 2001 by the Stockholm European Council, which agreed on the overall framework with a three-pronged strategy of:

(i) reducing public debt at a fast pace;
(ii) raising employment rates and productivity; and
(iii) reforming pension, health care and long-term care systems — with a view to coping with the challenges posed by ageing populations.

For the first time, the Stockholm European Council defined a quantitative and highly ambitious target in this respect: a rise in the employment rate of older workers to 50 % by 2010 (from 26.3 % in 2000) (European Council, 2001). At the Barcelona European Council, it was clearly stated that responsibility for addressing issues arising from an ageing population will need to be shared between generations: ‘A progressive increase of about 5 years in the effective average age at which people stop working in the European Union should be sought by 2010’ (European Council, 2002). The 2004 assessment made in the Commission communication ‘Increasing employment of older workers and delaying the exit from the labour market’ showed that the progress achieved was insufficient and the Member States were asked to take drastic action and develop comprehensive active ageing strategies, including moving away from the culture of early retirement policies (Employment

Taskforce, 2003; European Commission, 2004). The agenda set at the beginning of the century remains valid and continuous progress on each of the three pillars is still needed.

The EU Green Paper on demographic change (European Commission, 2005) comprehensively addresses the nature of the challenge Europe is facing and the urgency to take action. It uses expressions like 'unprecedented … change' (p. 2), summarises that 'the structure of society is … changing radically' (p. 3) and concludes that we are dealing with '… urgent issues of common interest to which all the Member States need to respond' (p. 4).

In parallel, the Commission communication 'Common actions for growth and employment' (European Commission, 2005a) describes population ageing combined with a shrinking working-age population as a challenge that needs to be addressed, as it will affect Europe's economic and social future. Furthermore, the promotion of active ageing is seen as contributing to the European Commission's overall objective of improving living standards.

The strategy set forth by the Council resulted in further work on policy responses at the European level. In 2006, the European Commission stated in its communication 'The demographic future of Europe — from challenge to opportunity' that 'In view of the complexity of the challenges of ageing, an overall strategy appears essential. Both at EU and at national levels it will be necessary to review existing policies to determine whether they need to be adjusted to take account of the changing demography of the EU' (European Commission, 2006, p. 7). The document strived to turn challenges into opportunities by designing and implementing adequate policies to manage demographic change. The core policy directions were identified as follows:

1. support demographic renewal through better conditions for families and improved reconciliation of working and family life;
2. boost employment — more jobs and longer, better quality working lives;
3. raise productivity and economic performance by investing in education and research;
4. receive and integrate migrants into European society;
5. ensure sustainable public finances to guarantee adequate pensions, health care and long-term care.

A resolution of the Council on 'The opportunities and challenges of demographic change in Europe: the contribution of older people to economic and social development' adopted on 22 February 2007 emphasised the need to increase opportunities for active participation by older people, including voluntary work, and the new economic prospects ('the silver economy') created by the growing demand of older people for certain goods and services, as well as the importance of a positive public image of older people.

The growing importance of the adequacy and sustainability of social protection systems in the context of demographic change poses a challenge for national governments, which need to design and monitor policies aiming at modernising and developing these systems. The open method of coordination (OMC) was developed to help national governments in designing such policies and strategies. The method is a voluntary process for political cooperation based on agreed common objectives and common indicators which show how progress towards these goals can be measured.

It also aims to develop a mutual learning process involving scrutiny of specific policies, programmes or institutional arrangements presented as good practices. The Social Protection Committee ([2]) serves as a forum for cooperative exchange between Member States and the European Commission in the framework of the 'social' OMC on social inclusion, health and long-term care as well as pensions. The objectives of the OMC, formulated in the communication from the Commission to the Council, the European Parliament, the European Economic and Social Committee and the Committee of the Regions, 'Working together, working better — a new framework for the open coordination of social protection and inclusion policies in the European Union' (European Commission, 2005b), include the creation of adequate, sustainable and modern pension systems, as well as affordable, accessible and high quality health and long-term care services.

Population ageing is also evaluated and monitored from the economic policy perspective. Economic analysis and evaluation, carried out at both the micro and the macro level, aims to contribute to an understanding of the real and potential impacts of demographic change, as well as to provide policy advice on possible responses. The European Commission (DG Economic and Financial Affairs) analyses the performance of European welfare states with a special focus on analysing and projecting the economic and budgetary implications of ageing populations. The age-related expenditure projections cover pensions, long-term health care, education and unemployment transfers, and feed into a variety of policy debates at the EU level. In particular, they are used in the assessment of public finance sustainability carried out as part of economic governance and coordination at the EU level, including the European Stability and Growth Pact, the European semester and the so-called 'six-pack' of rules for economic and fiscal surveillance. Projections are prepared every 3 years and presented in the 'ageing reports'. The last ageing report was published in May 2012 (The 2012 Ageing Report, 2012). Its projections show that between 2010 and 2060, pension expenditure in the EU-27 could rise by 1.5 percentage points (pp) to 12.9 % of GDP. A breakdown of this increase shows, consistently with the 2009 report (The 2009 Ageing Report, 2009), that changes in the age composition could contribute to an 8.5 pp increase in expenditure. This influence is offset by rising coverage as a result of increasing retirement ages (– 2.9 pp), employment effects (– 0.8 pp) and reductions of benefit promises (– 2.7 pp). Projection results clearly indicate that population ageing is one of the main drivers of increasing pension expenditure, but its impacts can be mitigated to a large extent by relevant pension policies.

As noted in the 2010 joint report on pensions (European Commission, 2010), 'Adequacy and sustainability are two faces of the same coin. In general, people need to work more and longer to ensure both. There is no one-size-fits-all solution to pension delivery: all systems have pros and cons and all need to adapt to long-term demographic and economic trends. The challenge for policymakers is to aim for a good balance between sustainability and adequacy. The crisis and possible lower economic growth will make this harder and more urgent. It is therefore vital to strengthen awareness of available routes to adequate income in retirement' (p. 7).

The priorities of adequate and sustainable pension systems are also reflected in the White Paper 'An agenda for adequate, safe and sustainable pensions' (COM(2012) 55 final), which was presented by

([2]) SPC is a treaty-based committee of the European Council established by Council decisions in 2000 and 2004.

the European Commission in February 2012. Recommendations formulated in the White Paper are based on consultations related to the Green Paper on pensions launched in July 2010.

The White Paper presents the current pension challenges, which are seen mainly in the context of population ageing. These include:

1. secure the financial sustainability of pension systems, which in light of the financial and economic crisis makes the demographic changes harder to cope with;
2. maintain the adequacy of pension benefits, which are the main source of income for a growing part of the EU population;
3. raise the labour market participation of women and older workers, which to a large extent can neutralise the effects of population ageing on the weight of pensions in the GDP.

In order to meet these challenges, the White Paper recommends:

(a) linking the retirement age with increases in life expectancy;
(b) restricting access to early retirement schemes and other early exit pathways;
(c) supporting longer working lives by providing better access to lifelong learning, adapting work places to a more diverse workforce, developing employment opportunities for older workers and supporting active and healthy ageing;
(d) equalising the pensionable age of men and women; and
(e) supporting the development of complementary retirement savings to enhance retirement incomes.

Among the EU policies, those focused on mobilising human resources to boost employment and economic growth as well as measures aimed at better reconciliation of work and family life have been increasingly recognised. Since the late 1990s, work–family reconciliation has been integrated into the European employment strategy. The importance of these policies was confirmed in 2000 in the Lisbon strategy. Its relaunch in 2005 with a stronger emphasis placed on growth and jobs clearly underlined women's strong potential to contribute to employment growth. Furthermore, the March 2005 European Council stressed the possible positive impact of reconciling work and family life measures on participation in the labour market. Since 2005, in addition to stimulating employment growth, two important dimensions of the reconciliation policies have been clearly acknowledged at the European level: their impact on demographic renewal in Europe and on the work–private life balance. An increase in the labour force in the short term and demographic renewal in the long term are among the five strategic policy goals outlined by the EU to counteract the negative consequences of population ageing and the parallel shrinking of the working-age population (European Commission, 2006, 2007, 2008a, 2008b, 2008c and 2009a). Moreover, balancing the competing demands of work and family life coupled with growing individual aspirations and expectations makes such a reconciliation an important component of life satisfaction and quality of life. This evolution reflects an important change in the conceptualisation of reconciliation policies, which can be summarised thus: 'Reconciliation policies are key responses to long-term economic and demographic challenges, and should therefore be reinforced to stimulate growth' (European Commission, 2009a, p. 8).

The strategy for equality between women and men, which represents the work programme of the European Commission on gender equality, also highlights both the economic and social impacts of reconciliation policies, supporting the objectives of the Europe 2020 strategy (European Commission, 2010a). Moreover, reconciliation policies address key issues related to the work and care redistribution in ageing societies, increasingly raised in discussions on work and welfare. Care provision arrangements inadequate to both labour market requirements and care demands may be considered obstacles to a better use of human resources and may hamper economic growth.

To summarise, population ageing is one of the most important phenomena influencing policy directions in the multidimensional context of social, labour market and economic transformations. The reform focus is on tapping the potential of all generations, and of the growing elderly population in particular, to contribute to economic development and welfare in the EU and its Member States.

1.2. Research projects in the light of EU policies

The EU framework programmes are a significant source of multidisciplinary social research addressing the challenges faced by European societies and social policies. As stated earlier, demographic ageing affects many policies and activities of individuals, employers and governments. The research projects reviewed feed well into these policies, as they focus on cross-cutting themes, both across different policies and across time.

The projects reviewed here are ([3]):

— ASPA — Activating senior potential in ageing Europe;
— Demhow — Demographic change and housing wealth;
— LEPAS — Long-run economic perspectives of an ageing society;
— Maggie — Major ageing and gender issues in Europe;
— Multilinks — How demographic changes shape intergenerational solidarity, well-being and social integration: a Multilinks framework;
— Sharelife — Employment and health at 50+: a life history approach to European welfare state interventions;
— SPReW — Generational approach to the social patterns of relation to work Recwowe — reconciling work and welfare in Europe.

The relevant research ranges from assessing the role of the senior generations' potential in an ageing Europe, through the impact of demographic changes on shaping the generational approach to social patterns or relations to work, to a life history approach to European welfare interventions, including employment and health.

([3]) For details see appendix.

The research agenda also takes into account multigenerational and gender perspectives, by looking at the role of demographic changes in shaping intergenerational solidarity, well-being and social integration, as well as reconciling work and welfare.

Last but not least, as population ageing intensifies with time, the research focuses not only on current developments, but also looks at the long-term economic perspectives of an ageing society.

2. Multidimensional aspects of population ageing

2.1. Population ageing: theories and research approaches

The ageing process appeared at a certain stage of development of the human population. It is the result of a simultaneous drop in fertility rates, longer life expectancies and a shift of the post-war baby boom generations to the top of the age pyramid. These changes in age composition were predictable; however, their magnitude and speed may be surprising. In parallel to their advancement, different theories and ideas were formulated.

Initially, negative views were in the majority. Concerns about economic and social progress were expressed especially in the 1950s. Notestein's (1954, p. 38) idea that 'viewed as a whole, the "problem of ageing" is no problem at all. It is only the pessimistic way of looking at a great triumph of civilization' was one of the exceptions. Optimistic assessments became more frequent in the 1960s and the 1970s. They included that of Polish demographer Edward Rosset (1978), who noted that the most rapid social and economic development was achieved by countries with a significant share of older people.

At present, when one of the key determinants of population ageing is longer life, the ageing process is treated as inescapable (see for instance Lee, 1994) and global. Lutz and Skirbekk (2005, pp. 703–704) point out that 'the current age structure is a given, and as to mortality, only policies aimed at increasing life expectancy and hence reinforcing population aging are politically feasible and ethically acceptable'. Thus, the changes are irreversible. Population ageing influences the stability of the pension, health care and social care systems. It shapes the conditions on labour markets, affects the markets of goods, services and capital, influences people's living conditions and their life courses (see Börsch-Supan, 2002; Cutler, Potreba, Sheiner and Summers, 1990; Kotowska, 2006; Prskawetz, Fent and Guest, 2008). Hence, without adequate adjustments, i.e. suitable interventions of social, economic and demographic policies as well as changes in people's behaviours, the process can trigger certain negative consequences in the long term.

Given the pace and permanent character of population ageing, new theoretical perspectives are being developed ([4]) to better understand the nature of population ageing and its underlying interplay of fertility and mortality. Kuhn and Prskawetz (2012) present the 'classical' evolutionary theories of ageing and new concepts, which aim to explain the phenomenon, especially in developed countries. Evolutionary theories define life histories as subsequent stages of maturation, fertility and mortality and ask why ageing may (or may not) occur. Some explanations offered by these theories enrich our knowledge of mechanisms underlying increasing age at childbirth and decreasing mortality in old age, both of which contribute to advanced population ageing. Following Partridge and Barton (1993, pp. 56–59), they discuss the theory of ageing and the perception of ageing, looking at optimal life histories in terms of an optimal trade-off between fertility and mortality within the constraints of available resources. These resources are both internal (including psychological factors) and external (such as environment). According to this theory, biological ageing occurs when reproductive value declines with age. More specifically, when the relative change in mortality is

([4]) Cf. the LEPAS project dealing with long-run economic perspectives of an ageing society.

greater than the relative change in fertility at a specific age, the mean age in the total population increases (Kuhn and Prskawetz, 2012, p. 58). Lee (1994) discusses similar findings derived from the stable population model based on different assumptions on mortality and fertility.

Classical theories are not able to explain decreasing mortality at young ages or post-reproductive survival. Kuhn and Prskawetz (2012) propose new concepts, which incorporate transfers to children. They examine two parts of a human life course: childhood and the post-reproductive period. Mortality during early childhood implies that the loss of investments accumulated in a child is relatively small and remaining transfers can be used for improving the quality of surviving offspring. In the case of adolescent mortality, no additional resources are freed, as a person becoming an adult does not anticipate any more transfers. Thus, the quality–quantity trade-off can, indeed, explain decreasing mortality over the period of childhood up to the point of adolescence. By the same token, overly high fertility may imply a quality disadvantage. Extended periods of post-reproductive survival are explained through the concept of transfer givers: mortality should decrease if older individuals are still able to contribute towards transfers. Lee (2003) takes the same perspective in a study on net population growth and the quality of individuals enhanced by intergenerational transfers, stating that 'transfers, not births, shape the process of ageing in social, i.e. transfer-giving, species' (Kuhn and Prskawetz, 2012, p. 63).

However, some drawbacks of these new concepts need to be pointed out. For instance, the macro-scale approach, with its strong assumptions about the key relationships between mortality, fertility and reproduction, and the quantity–quality trade-offs cannot explain optimal allocation of resources on an individual level. In such cases, the optimal life history models based on the trade-off between reproduction and survival are more useful. Consequently, several models are proposed and discussed to demonstrate how the patterns of ageing are shaped by different assumptions about the trade-off between survival and reproduction.

These approaches to the ageing process allow some of its principal aspects to be identified (Kuhn and Prskawetz, 2012, pp. 71–72). First, the intensity of ageing measured by changes in mortality depends on the remaining reproductive value, the degree to which adult individuals invest in their descendants, and productivity and losses in the productivity of individuals. Second, from a life history perspective, the process of ageing can be understood only together with the process of fertility and investments during childhood. An analysis of the late stages of life is incomplete unless it draws, at least to some extent, on early life processes. This also leads to a discussion on the quantity–quality trade-off, which is an important issue in evolutionary theories. The main hypothesis that parents with fewer children may have higher biological fitness than those having more children (see Hagen, Barrett and Price, 2005) is also discussed in economics: 'some economists have argued that the negative relation between quantity and quality often observed is a consequence of a low substitution elasticity in a family's utility function between parents' consumption or level of living and that of their children' (see Becker and Lewis, 1974, p. 81), leading to decisions to maintain higher consumption rather than have more children.

The different concepts and theories underlying the ageing process discussed above responded to the advancement in population ageing, particularly in developed countries. At the beginning of the 20th century, France, with 13 % of its population aged over 60, was the only 'old' country in Europe

and remained the leader in this respect until the end of World War II (Pressat, 1966, pp. 319–321). Today, population ageing is a typical feature of the demographic landscape in many countries and regions. Subsequent population projections for Europe ([5]) show small differences in foreseen changes of population size, while future shifts in age composition consistently indicate advanced population and labour force ageing, and a shrinking working age population (Van der Gaag and Van der Erf, 2008; The 2012 Ageing Report, 2011; UN, 2011). Europe's population prospects are distinctive, not only due to a considerable decline in population growth as compared to other continents, but especially due to the combination of advanced ageing and labour force shrinking.

The interplay between fertility, mortality and migration determines the extent of changes in the age composition in different European countries. It has a common direction but its pace, diversified across countries, determines how advanced population ageing is. This can be observed in population projections. Accelerating population and labour force ageing accompanied by labour force decline are consistently projected. Predictions from 2008 and 2010 show that the EU-27 population should rise by some 5 % by 2050 and 2040 respectively and start to decline thereafter. The difference between the projections results from slight increases in fertility rates and further improvements in mortality compared to the levels assumed previously. According to the latest projections, in 2060 the EU population will be 517 million, i.e. 16 million higher than in 2010. Yet, population decline is projected for about half of the EU Member States while the others will experience population growth.

The age composition of the EU-27 population is also going to change significantly. The most pronounced changes are predicted in the share of old-age and working-age groups in the population. A significant decline in the share of people between 15 and 64 is predicted (from 67 % in 2010 to 56.2 % in 2060). This means that over the next 50 years, the working-age population is expected to decline by nearly 42 million. Until 2030, that change will be accompanied by intensive population ageing, which will lead to an increase in the proportion of people aged 65 and over from 17.4 % to 25.6 %. After 2030, population ageing will continue at a lower intensity: in 2060, the elderly are expected to account for 29.5 % of the total population in the EU-27. Altogether, the population of elderly people will almost double from 87.5 million in 2010 to 152.6 million in 2060. It is also expected that the share of the oldest-old (aged 80 and more) will rise from 5 % to 12 %.

The predicted changes in population size and its age structure will impact the lives of individuals and families as well as regions, countries and Europe as a whole. Following the theoretical approaches developed, the ageing process is studied both at the population level (macro perspective) and household and individual levels (micro perspective). The multiple contexts of population ageing are expressed, among others, through multiple levels (regions, countries), units (families, individuals) and historical developments. Both the context of ageing and its multifaceted and complex consequences require a multidimensional approach ([6]).

([5]) Prepared by Eurostat (EUROPOP2004, EUROPOP2008, EUROPOP2010) and the Population Division, UN Department of Economic and Social Affairs.

([6]) This perspective is particularly highlighted in the Multilinks, Maggie and Sharelife projects.

In striving to understand the causes and consequences of population ageing, especially for individuals, families and kinship networks, the life-course perspective is very useful from both theoretical and empirical points of view. Life-history analysis is especially suitable in a multidisciplinary approach imposed by the multidimensional nature of the ageing process and its consequences. Provided that relevant observations (either retrospective or panel data) are available, the life-course perspective makes it possible to study long-term interactions between ageing, health, work conditions and employment ([7]). Such a framework is extremely useful for studying heterogeneous populations and examining diverse contexts of individual life courses. European-wide projects allow the effects of similar policies to be monitored in different countries and the identification of policy and social contexts that lead to differing outcomes ([8]).

To summarise, European research provides both theoretical concepts and empirical approaches which significantly contribute to our knowledge about the ageing process and a better understanding of its nature and possible future consequences. The research questions are formulated in an innovative way, frequently in opposition to common beliefs. They concern:

- the theoretical aspects of research on the ageing process (evolutional concepts, the life-history perspective, macro–micro approaches);
- measurement (prospective and cognitive measures of ageing);
- extensive empirical research based on rich databases.

2.2. Intergenerational perspective on population ageing

Population ageing cannot be considered as a process that concerns only the elderly. It affects people at all ages because it generates significant changes in family structures and a rising imbalance between young and old cohorts (see also *Childbearing Trends and Policies in Europe*, 2008). The young become a numerical minority who coexist with several older generations. In such circumstances, the interdependencies between generations and genders should be treated as critical. These interdependencies are shaped to a large extent by social policies; however, they are also deeply rooted in social contexts.

The determinants of the driving forces and main features of social integration and intergenerational solidarity in European societies are among the most important areas of investigation ([9]). Although a significant body of research findings has been accumulated, it does not sufficiently explain the nature of the processes that have been observed. Hence, the research shift from the macro-societal perspective to the micro-interpersonal level offers a better understanding of the social context of ageing and provides better empirical evidence regarding the consequences of demographic

([7]) Such an approach is presented for example in the Multilinks and Sharelife projects.
([8]) The Sharelife 'Employment and health at 50+: a life history approach to European welfare state interventions' project uses panel data from the third wave of a survey conducted in 20 European countries.
([9]) These are investigated in the Multilinks and Sharelife projects.

change for European family constellations (***Childbearing Trends and Policies in Europe,*** 2008, p. 3). Interestingly, some research findings provide evidence that contradicts many common views on the impact of ageing on family networks ([10]).

If we look at family structures, vertically extended families with four or five generations alive at the same time are not yet a norm. The majority of adults are members of three-generation families. However, the traditional 'generations' approach does not show the age gap between the youngest and oldest members of families from those being very old (80 and more) to those being very young (below 10). The situation is frequently unclear as a person might be part of a three-generational lineage on the paternal side, and five-generational lineage on the maternal one. In addition, international similarities should be interpreted with caution as underlying processes leading to the same outcomes may be completely different (for example, almost identical proportions in one-, two-, three- and four-generation families can be found in France and in Russia).

In addition, the 'sandwich generation' concept is becoming more ambiguous. Longer life and delayed childbearing enhance the gap between generations. In general, care-givers occupy middle-generation positions in the family. They are typically aged between 30 and 60. Nowadays, this is not a period in life during which both young children and elderly parents are likely to need care. Those who have young children rarely have parents who are at risk of frailty, while those who are caring for their parents have children who already live independent lives.

Findings on intergenerational transfers also reveal that some common beliefs about receivers and givers should be revised ([11]). Evidence contradicts common beliefs regarding the directions of transfers. The existing view that the elderly living with adult children receive more assistance than they give is proved wrong. It has been found that over 60 % of co-residing elderly parents (which is more common in central and eastern Europe) give support and help to their adult children. Thus, multigenerational living arrangements seem to be a response to the needs of adult children rather than older parents. The elderly living with adult children are net beneficiaries of help or support when they are at least 80 years old. As regards family support in non-co-resident families, transfers of time and money are less frequent in northern than in southern Europe. The east–west gradient occupies an intermediate position. Older parents also frequently support their adult children financially during purchases of housing ([12]).

The OECD assessment of time and money transfers shows that people aged 50 and over are much more likely to be givers than takers. Children account for two thirds of cash transfers made by older people. However, if people 50 and over receive money, the transfer comes mainly from their children, although their own parents are also a substantial source of financial support. Very few financial transfers are made upwards from children to parents and horizontally, i.e. to siblings or spouses (OECD, 2011).

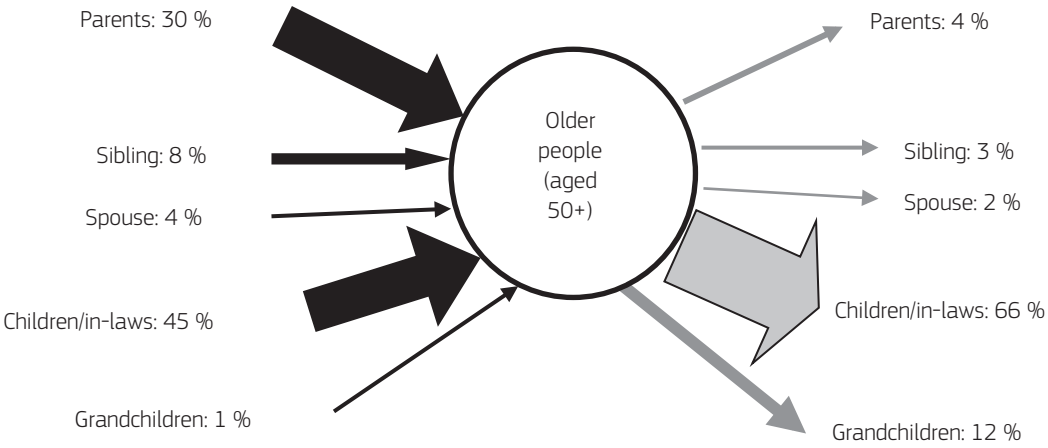
([10]) The findings presented are based on micro data from the generations and gender survey (GGS) performed within the Multilinks project.

([11]) Based on the data and evidence collected in the Sharelife and Multilinks projects.

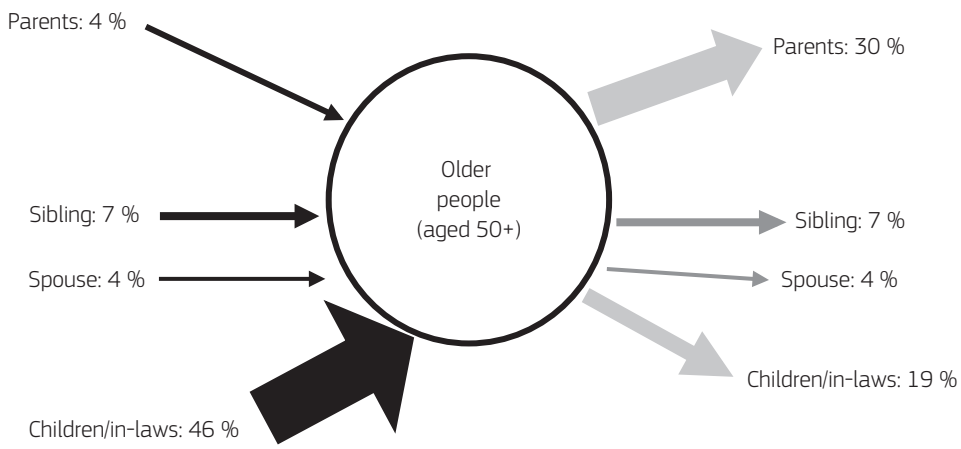
([12]) One of the results of the Demhow project.

Figure 1. Transfers of money and time between generations

A. Transfers of money — percentage of total receiving or giving



B. Transfers of time — percentage of total receiving or giving



NB: The percentages in the chart represent the average across the countries participating in SHARE. Other relatives account for 8 % of time transfers both given and received and 5 % and 4 % of money transfers respectively. Other non-relatives comprise 32 % of receipts and gifts of time and 7–8 % of monetary transfers. These categories are not shown in the chart.

Source: OECD analysis of SHARE data, OECD, 2011, p. 11.

In terms of various aspects of intergenerational solidarity, different patterns of living arrangements and family networks in Europe can be categorised into four types of late-life families from the perspective of older generations (Table 1).

Table 1. Types of late-life families from the perspective of intergenerational solidarity

	Geographic proximity	Frequency of contacts	Norms of family obligation	Exchange of support
Descending familialism	High probability of living near a child	Frequent contacts with at least one child	Strong norms of family obligation	From parents to children
Ascending familialism	High probability of living near a child	Frequent contacts with at least one child	Strong norms of family obligation	From children to parents
Supportive at distance	Low probability of living near a child	Frequent contacts with at least one child	Refutation of family obligation norms	Mainly financial support from parents to adult children
Autonomous	High probability of not living near a child	Little contact	Refutation of family obligation norms	Few support exchanges

Source: The Maggie project.

Family arrangements and the directions of transfers affect many decisions at the household level, which should be taken into account when designing social policies with regard not only to older people, but also to families and children.

An important policy concern is the increasing number of generational solos: childless individuals who will have no offspring providing care in old-age, those who have no children and grandchildren or any surviving parents and grandparents. Generational solos (the vertically deprived) become more frequent due to broken family ties resulting from increases in divorce and separation rates (more likely for men than for women). Such people have nobody to receive transfers from or give transfers to, which increases the risk of social exclusion.

The notion of population ageing as a process affecting the entire population allows the development and enrichment of approaches to analysing intergenerational dependencies and the design of appropriate policies. On a country level, intergenerational dependencies are shaped by legal norms, public policies and the cultural context. Caring responsibilities (both for children and for the elderly) are shared between the family and the state, as well as the market. There are also interrelations between public and family support. Public support may both create incentives and reduce the burden of care on families. Welfare state interventions affect individual life courses at all their stages. These impacts may be identified and evaluated using the life-course approach. This allows an investigation to be made of the cumulative effects of various policies over the life course as well as to establish how some interventions offset or amplify each other.

The ways the abovementioned sharing of responsibilities is developed can be categorised into three types of legal and policy frameworks, as illustrated in Figure 2.

Figure 2. Familialism policy frameworks

Familialism by default	*Supported familialism*	*Defamilialisation*
• Few or no publicly provided alternatives to family care and financial support.	• Policies exist, usually in the form of financial transfers, which support families in keeping up with their financial and caring responsibilities.	• Care needs are partly addressed through public provision (services, basic income, pensions).

Source: Childbearing Trends and Policies in Europe, 2008, pp. 7–8.

A better understanding of population ageing, particularly in the context of life courses and intergenerational transfers, provides evidence which helps to redesign both national and EU policies aiming to prepare European societies for a demographic regime that has not been experienced before.

2.3. Well-being at older ages

Individual well-being (both objective and subjective) and its determinants are not only broadly discussed in the literature (Gerdtham and Johannesson, 2001; Blanchflower and Oswald, 2004 and 2008; Böhnke and Kohler, 2010; Helliwell, 2003; Clark 2007), but quality of life has also become a crucial component of the overall evaluation of economic and social progress (Stiglitz et al., 2009; European Commission, 2009b).

Among the determinants of well-being, individual characteristics such as health, education, marital status, living arrangements (in particular housing possession) and a favourable financial situation are considered the most important. At the macro level, the type of welfare state regime and the socio-cultural context also play a role. Generally, it may be assumed that the well-being of the elderly is lower than that of the whole population due to poorer health status and lower educational levels. Hence, many research questions attempt to identify the main factors influencing older people's quality of life. As more women survive until old and very old age, an important research area covers the determinants of differences between men and women in living conditions and life satisfaction across European countries ([13]).

([13]) This is a particular focus of the major ageing and gender issues in Europe (Maggie) project.

Evidence shows that apart from the individual characteristics mentioned above, the quality of relationships between members of family networks has a significant impact on well-being in old age. On the other hand, the older adults who are dependent on someone else's support are (and feel) worse off. However, how all these factors influence the well-being of men and women depends on the life course of the individual. Life-course developments are the most important driver of well-being at old age, especially (i) childbearing and marital history, (ii) how employment careers have been reconciled with family life and (iii) how life events that take place at later stages of the life course are experienced, in particular: the transition to retirement, widowhood, health deterioration or living in old-age institutions. Their socioeconomic impact is often mediated by social support and health-related factors ([14]).

Single factors affecting the well-being of the elderly population are also investigated. Among them, health plays a prominent role. It has been shown that the prevalence of severe disability and functional limitations among the elderly has been declining over the recent decades. The causes for this include the promotion of healthy habits, better medical treatment and preventive measures, and improvements in education and living conditions. Interdependencies between life events at different life-course stages and health show that life events at early stages and in young adult life mainly influence the transition to disability, while their impact on mortality is minor. Conversely, late-life events affect both disability and mortality. Investments focused on improving childhood health lead to a healthier future elderly, highlighting again the importance of investments over the whole life course to reducing the health-related costs of ageing ([15]).

The health improvements observed, however, depend on socioeconomic status — gender, behavioural factors and educational attainment being the most important. As the level of education is improving and gender differences in human capital are declining, one may also expect further health improvements among the future elderly and, in particular, a healthier female elderly population.

Gender differences in health status and mortality risk contribute remarkably to the quality of life of men and women. When health deteriorates, the probability of death increases more rapidly for men than for women. As a result, the male population is healthier while women, who live longer, more often experience serious illnesses, frequently leading to several concurrent chronic conditions (co-morbidity or multimorbidity).

Another important factor affecting individual well-being is the family environment. Living in a multigenerational household is perceived as a strategy aimed at organising physical, emotional and financial support for individuals. Hence, one can expect older people in multigenerational living arrangements to be more satisfied with their lives. However, some research findings seem to suggest that this is not always the case.

([14]) See final reports of the Maggie, Multilinks and Sharelife projects.
([15]) This is particularly highlighted in the outcomes of the Sharelife project.

An east–west division in terms of the level of older people's well-being may be observed in Europe. In general, despite the greater prevalence of multigenerational households, the elderly in eastern Europe seem to feel lonelier and more depressed than their western European counterparts. These findings are in line with the fact that the inhabitants of former socialist countries are of poorer self-rated health and are less satisfied with their lives than those in the EU-15. These differences stem not only from the culture-related specificity of self-rated health or well-being; there is much evidence of a divide between eastern and western parts of Europe manifested in several dimensions, such as the socioeconomic context, wealth, advancement of market economy and social services as well as social policy. However, it is still necessary to examine and better understand the determinants of (subjective) well-being from a comparative perspective in order to reduce the existing differences in well-being of the elderly between countries.

The subjective well-being is lower among older women than men. Having a partner has a positive effect on life satisfaction irrespective of gender, as does having children. In general, the existence of family networks increases the level of subjective well-being. Frequent contacts with children and other family members are very important both for men and women also due to the higher likelihood of receiving help or support when in need. All else being equal, older women's satisfaction with life is much more affected by the socio-cultural context than that of men. Women living alone are less satisfied with life mainly due to less favourable health and the socioeconomic status (they mostly have low incomes and education).

Generally, ***descending familialism*** is linked to the highest life satisfaction, while ***ascending familialism*** is associated with the lowest well-being. This is also due to the fact that informal care, provided mainly through family networks, is the predominant form of care for older people ([16]).

Finally, well-being also depends on the economic status of the elderly. While adequate pension benefits play the most important role, it should be stressed that home ownership is also an important factor in the quality of life of the elderly, not only from the financial perspective, but also from the emotional one ([17]). Home ownership does not only secure a place to live: housing assets are also seen as a source of financial income at older ages. In countries where social security systems are not protective enough and pension benefits do not allow retired people to maintain the same standard of living as during the working phase of life, the proportion of household wealth kept in the form of home ownership is the highest.

However, using housing to secure income in old age is not perceived as a preferred solution. Taking a life-course perspective, personal wealth (housing and other forms of wealth) increases over the life course (up to the late 60s), and then declines at an increasing rate ([18]).

([16]) It is reported, among others, in findings of the Demhow project on demographic change and housing wealth (see Elsinga et al., 2010).
([17]) This aspect is investigated in the Demhow as well as the Sharelife and Maggie projects.
([18]) This is illustrated in particular in the results of the Demhow project, which focuses on the housing wealth and financial situation of older people in eight countries.

We can broadly define the sources of financing consumption after retirement as transfers received from pension systems (public, employer-based or individual retirement savings) and consumption financed from other sources (accumulated wealth (other than pension plans), financial support received from the family (most importantly children) and housing wealth). Mandatory pension systems and, in some cases, voluntary pension savings play the most important role. Other sources of income at retirement are complementary.

Though the majority of older people are home owners, this real estate is not considered a potential source of income in old age. The bequest motive prevails. Retired people first spend their non-housing wealth, such as savings or voluntary retirement plans, treating housing as a last resort. Despite the development of new financial instruments, such as the reverse mortgage, they are not perceived as an attractive source for increasing income in old age. This is not only a result of the bequest motive, but also of a lack of trust in the financial institutions offering such products.

It should be noted, however, that people without children were more open to using their housing wealth by taking out a reverse mortgage. Therefore, in the future, when pension systems are expected to be less generous, using housing property as pension wealth may attract some interest among Europeans.

The potential of housing wealth for improving the financial situation of the elderly in Europe is substantial, though still unexplored, as mentioned above ([19]). However, if this source of financial support at older ages becomes more heavily used in the future, it would broaden the inequalities between different social groups as home owners would have more opportunities to supplement their income at the late stage of their life course.

Well-being and the quality of life at older ages depend on many factors that result from the life courses of individuals, their health and family environment, as well as the socioeconomic environment and social policies. Under this complex set of determinants, the following groups of elderly are exposed to a higher risk of dissatisfaction with their lives:

- people of poor health (living alone or as a couple);
- childless individuals (both men and women);
- persons not engaged in any social/leisure activity.

They should be paid special attention by public authorities at central and local levels, going beyond the traditional approach of providing financial support in the form of old-age pensions or other kinds of benefits.

([19]) This issue is accentuated in the Demhow project.

3. Human capital development and economic growth in the light of population ageing

The changing relationship of time spent on the labour market and outside it during an increasingly longer lifespan is one of the key issues debated from both the macro and the micro perspective. Prolonging working periods and involving more people in the labour market are crucial policy responses to ageing. However, their effective implementation is conditioned not only by the political will to introduce relevant measures to labour market policies and reforms of pension systems: to adapt the economy and society to a new demographic regime in Europe, a fundamental redistribution of work between generations and genders is needed, along with the redistribution of care. Comprehensive transformations of work, care and other welfare-enhancing activities should be undertaken at macro, mezzo and micro levels within an integrated framework.

Improving communication between different stakeholders such as researchers, governments, policymakers at various levels, employers and individuals is crucial to understand the economic and social transformations imposed by demographic change. Such communication is vital to the development of an integrated approach that would involve all relevant stakeholders, creating synergies for the best policy outcmes from the perspective of both national and European strategies.

3.1. Generations on the labour market

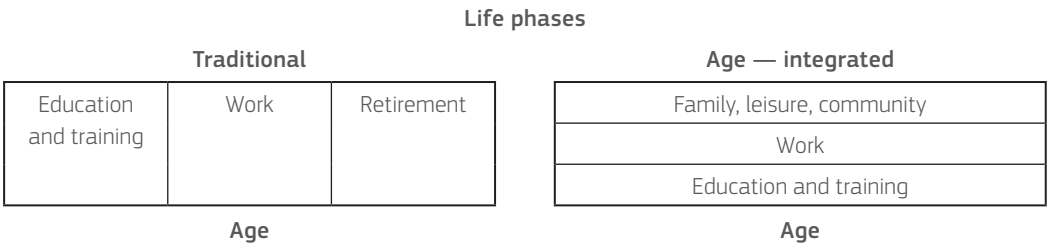
Population ageing affects inflows to and outflows from the labour force. Cohorts entering the labour market are smaller due to the low fertility levels in the last decades of the 20th century. Older workers constitute an increasingly significant share of the labour force due to longer lifespans and the post-war baby boomers reaching the relevant age. Consequently, the generations leaving the labour market are gradually becoming more numerous. Population and labour force ageing as well as shrinking of the working-age population make employment a key issue in policy responses to demographic change.

As in the Lisbon strategy, the high usage of labour force potential is a very high priority in the Europe 2020 strategy. Obviously, it is also a focal point of the ageing research agenda.

One of the means for achieving a more efficient use of existing human resources is a longer stay in the labour force. Different positive effects of prolonged economic activity are broadly discussed, including better economic performance, stability of public finance and improved living standards of the elderly (e.g. European Commission, 2010b; OECD, 2011; Komp, van Tilburg and Broese van Groenou, 2010; Prskawetz, Fent and Guest, 2008; Whitehouse, 2007; Börsch-Supan, 2002).

To address the coming challenges, the labour market for older workers is examined both from supply and demand sides, as well as in the wider context of work and family life reconciliation, including sharing of public–private care responsibilities and moving from a traditional to an age-integrated concept of life phases over the life course (see Figure 3).

Figure 3. Active age — integrated life course



Source: Reday-Mulvey, 2005.

It is clear from the age-integrated life-course perspective that different activities in life cannot be attributed to a single stage of life: instead, they have to be reconciled over the whole life course.

One of the arguments often voiced in debates on extending working life is that working longer due to deferred retirement reduces employment opportunities of younger generations. This 'lump-of-labour' fallacy is frequently disproved by comparing the employment rates of younger and older workers (e.g. OECD, 2011). As Figure 4 shows, this pattern is persistent and does not change through the economic cycle.

These results indicate a persistent positive relationship between employment of the youngest and oldest labour market participants. Efficient labour markets make use of the entire workforce potential, which means that high employment rates of the generations up to 24 years of age also lead to higher employment rates of those aged 50 and over. Therefore, different age cohorts co-exist on the labour market and do not compete with each other.

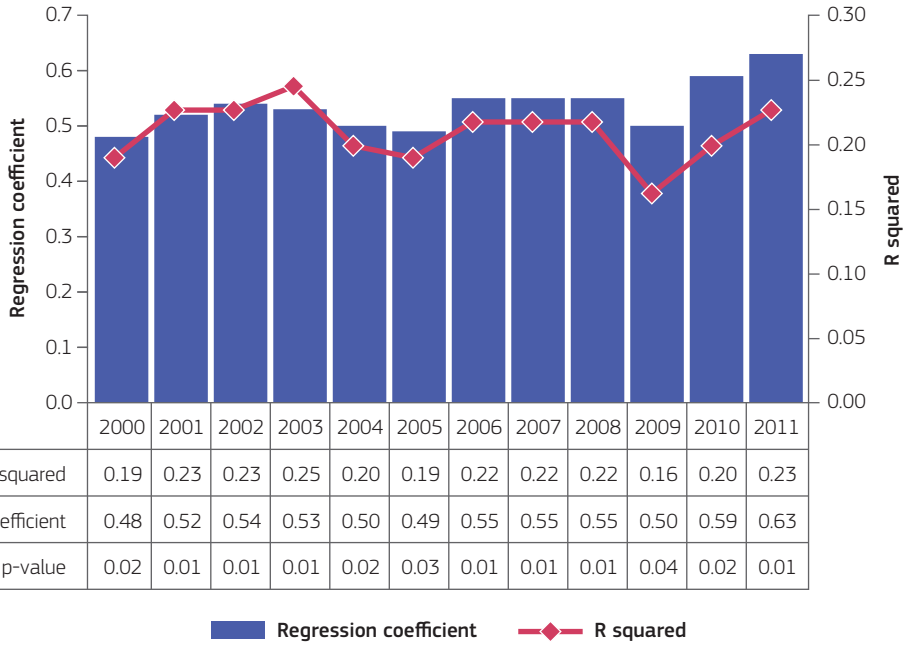
There are, however, some differences between generations in terms of labour market risks as well as expectations and attitudes related to paid work. In general, young people (aged below 30) are more exposed to precariousness and unemployment, but benefit from human capital accumulation ([20]). Persons in prime age (from 30 to 50) are usually in more stable positions on the labour market but are also more exposed to difficulties in meeting both professional career expectations and family obligations, which mainly affect women. Those aged over 50 frequently have higher wages due to seniority and enjoy relatively high job security during times of economic growth and a stable labour market situation. However, during economic slowdowns and restructuring, older workers are at a higher risk of job loss, mainly because of deskilling and the guarantees provided in social security systems (such as pre-retirement benefits).

In addition, different generations also display different attitudes and expectations towards work. The young generation expects more social protection and higher incomes on the one hand, and more autonomy and opportunities for self-development on the other. The adult generation focuses on support for reconciling work and family life, and expresses interest in lifelong learning measures

([20]) According to the results of the SPReW project.

from an ageing worker's perspective. The older workers expect more recognition of experience and, at the same time, demand improvements in working conditions ([21]).

Figure 4. Basic parameters of employment rates of persons aged 55–64 years regressed linearly on employment rates of persons aged 15–24, EU-27



	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
R squared	0.19	0.23	0.23	0.25	0.20	0.19	0.22	0.22	0.22	0.16	0.20	0.23
Regression coefficient	0.48	0.52	0.54	0.53	0.50	0.49	0.55	0.55	0.55	0.50	0.59	0.63
p-value	0.02	0.01	0.01	0.01	0.02	0.03	0.01	0.01	0.01	0.04	0.02	0.01

Source: Own calculations based on LFS data (Eurostat) ([22]).

Reconciling work and family life

A need for better reconciliation of work and family life is increasingly recognised in research ([23]). It is also important from a policy perspective in the context of population ageing. A good balance between professional and private lives allows to meet two important policy goals: higher labour market participation of both men and women (particularly mothers) and higher fertility rates.

There are different types of tensions that make it difficult to reconcile work and family obligations. They are caused by labour market-related factors (time spent working, job characteristics and

([21]) Conclusions from the SPReW and Recwowe projects.

([22]) The regression coefficient shows how changes in employment rates of older workers are interrelated with changes in employment rates of young persons. For example, a value of 0.5 means that an increase in the employment rate of young workers by 1 percentage point leads to an increase in the employment rate of older workers by 0.5 percentage points on average. This positive impact of youth employment on employment of older workers is considered to be statistically significant (p-value below 0.05). According to the R-squared values, changes in the employment rate of older workers are explained from 16 to 25 % by changes in the employment rate of younger people.

([23]) This issue is mostly covered within the Recwowe project.

working conditions), family obligations, institutional settings and cultural contexts, and especially by gender norms. Tensions between paid work and private life are the source of a new dimension of job quality in contemporary societies. Along with progressing economic development and welfare state provisions, aspects of job quality that are becoming increasingly important are: time pressure, intensity of work and difficulties in reconciling employment and family obligations.

Job quality is usually different for men and women; however, there is considerable variation across countries (Drobnič and Guillén (eds), 2011). Results of comprehensive empirical studies show that cross-national differences in work–family life conflicts can be explained by policy differences, including:

- the overall degree of development of 'reconciliation regimes' defined predominantly by family policies;
- the construction of gender and equality policies.

Policymakers should bear in mind that parents spend a significant amount of time with their children, irrespective of other work and household obligations. Therefore, a substantial part of parental time devoted to children cannot be easily substituted. Given that the number of dual-earner couples is growing, reconciliation of work and family becomes an important issue for a growing share of the European population, affecting both working men and women ([24]).

In a comparative perspective, as in the case of other aspects of policies related to population ageing, there are significant geographical differences, mainly between Nordic countries, and southern and eastern European countries. There are also changes over time in cross-country correlations between women's employment and fertility rates which signal that tensions experienced by families are context dependent. In countries with better 'reconciliation regimes', both women's employment rates and fertility levels are higher (Knijn (ed.), 2012). Moreover, the impact of the labour market situation (including labour mobility, labour market flexibility, self-employment and the rising share of temporary work arrangements) on starting an autonomous household, family life and fertility rates are highly underestimated by policymakers. In particular, young adults from southern and eastern Europe experience far greater difficulties due to uncertainty and new social risks than their counterparts in other Member States, which leads to observed lower fertility rates. Thus, it is important to strengthen policy interventions in order to facilitate a reconciliation of work and family.

Until now, policies designed to ease the work–family conflict were aimed mainly at families with children and usually neglected care provision for other dependants. As a consequence, they diminished tensions mostly among the young. Evidence shows that there are rising imbalances between supply and demand for care for the elderly and disabled adults ([25]), especially in central and eastern European countries. More advanced population ageing, and especially double-ageing (the rapid increase in the size of the population aged 75 and over), leads to a rising demand for the care for older and disabled family members. This is accompanied by shrinking family care resources

([24]) Which is underlined, among others, in the SPReW project findings.
([25]) This is addressed in the Recwowe project.

due to declining fertility rates, migration and increasing employment of women. As a result, the supply of care, especially on an informal basis, is decreasing (Drobnič and Guillén (eds), 2011; Pfau-Effinger and Rostgaard (eds), 2011). This leads to a 'care deficit' that poses a major challenge to most European societies.

The OECD (2011) points out that care responsibilities towards dependent adults are unpredictable in both duration and intensity of need. Thus, greater flexibility is desirable in order to allow carers to spread their leave or change their working hours to accommodate their changing needs and those of their dependants (p. 18).

Although most countries are faced with similar challenges regarding the provision of elderly care, the policy responses vary. While in some countries public care provisions are maintained and combined with new management strategies, other countries implement various forms of cash-for-care programmes. A comprehensive overview of existing care models along with theories about care, provided by Pfau-Effinger and Rostgaard (eds) (2011), accentuates new tensions related to the organisation of care in society and the risks caused by marketisation and consumerism in care provision, especially in the case of elderly care. These risks are: social exclusion of the elderly, the predominance of the autonomous family model and rising defamilialisation. To avoid these risks in modern societies, the redistribution of care in terms of gender, formal–informal arrangements and diversity of care services is a key issue of reconciliation policies.

The effective implementation of policies supportive to work–family balance is also dependent on employers' approval of appropriate changes in human resources management. There are, however, signs that employers' preferred response to the shrinking labour force is to increase employees' working time volume. The employers' proposed remedies for the shrinking labour force problem is to increase work intensity by encouraging part-time workers to work full-time (preferred by more than 60 % of employers) and to increase the number of legal weekly working hours (35 %) (Connen et al., 2011) ([26]). At the same time, they see the need to encourage people to have more children (46 %).

Employers' preferences for higher fertility rates are inconsistent with their expectations of higher work intensities. These responses show the potentially rising pressures on the work–life balance from employers. In order to reduce the risk of rising work–life tensions, it is crucial to promote reconciliation policies among employers, as they are important stakeholders in this area.

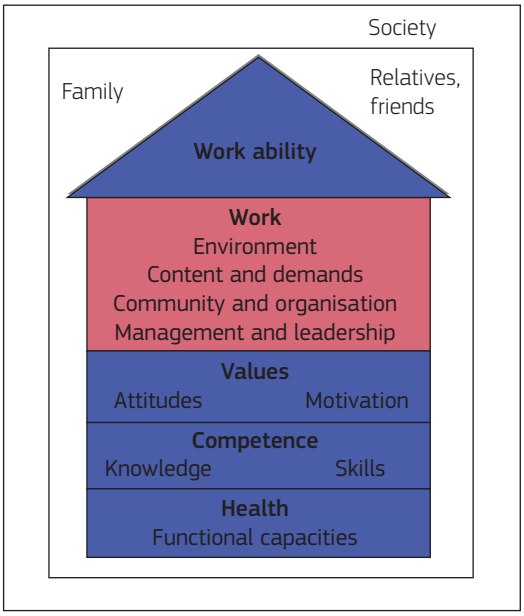
Employability of the ageing workforce

Another way to increase labour participation is to extend working lives. Longer labour market participation requires the high employability potential of the ageing workforce to be maintained. Ilmarinen (2007) identifies employability as a combination of work ability and policies (employment and deactivation policy, education and social protection measures) that affect employment, economic well-being and quality of life. Work ability is, in turn, a combination of factors starting with

([26]) According to the employers' survey run within the ASPA project.

health, through competences and values, ending with the work environment. All these aspects are set in the context of close networks of family, relatives and friends, as well as of society as a whole.

Figure 5. Domains of work ability



Source: Ilmarinen, 2007.

The research projects discussed focus on all of the abovementioned domains of work ability. With regard to health, competence and values, as already indicated, the health status of people over 60 does not decline with age. Moreover, it improves with time at all ages, a trend we can expect to continue in the future. Hence, the potential exists for an extending working life in Europe.

However, some population groups, particularly those with a low socioeconomic status, suffer from a worse health condition, which affects their work ability. Higher education levels and greater wealth are associated with healthier lifestyles (Börsch-Supan et al., 2008). Leopold and Engelhardt (2011) found that health inequalities by education show a divergent trajectory: the gap between individuals with high or low education increases with age.

Evidence supports the concept of employability presented above. A worsening of health, particularly measured through subjective self-assessment, increases the probability of transition to retirement. This relation is weaker if measured more objectively by grip strength ([27]). Thus, there is a justification bias in self-assessed health (Börsch-Supan et al,. 2008, p. 17).

([27]) As indicated in the Sharelife results.

Some research results indicate that health does not play a predominant role in work ability. Barnay and Debrand (2006) show that health status does not explain differences between European countries in male employment rates: they result from other domains of the work ability framework. Cognitive abilities (knowledge and skills) play an important role in explaining work ability. Mazzona and Peracchi (2009) ([28]) show that those with a higher educational attainment also tend to maintain higher cognitive abilities throughout their adult lives. Their decline with time is less dynamic compared to that of people with lower education levels. Results by Adam et al. (2007) demonstrate that professional and physical activities help to maintain cognitive abilities. These findings show the importance of values and attitudes in preserving work ability at later ages. Lifestyle choices and maintaining a high activity level (including physical activity) are crucial.

Skill obsolescence is commonly considered one of the factors which reduce older workers' work ability. In fact, many studies indicate that workers over 50 hardly participate in skills-upgrading programmes (Fourage and Schills, 2008; Lindley and Duell, 2006; Elias and Devies, 2004). Participation in formal and non-formal learning decreases with age in all European countries, as indicated by the adult education survey (AES) conducted in 2004. There is also a significant cross-country variation in this area. Educational activity at older ages remains at a relatively high level in Scandinavian countries, which are renowned for a long tradition of 'employability' practices in organisations (Antikainen, 2001).

After retirement, cognitive abilities decline at an increasing rate because of the lack of market incentives to invest in them (Mazzona and Peracchi, 2009). A significant negative impact of early retirement on the cognitive ability of people in their early 60s, both in quantitative and qualitative terms, is confirmed by Rohnweder and Willis (2009).

Values, attitudes and motivations of individuals are affected by job quality, measured by job security and wage setting. Chung and van Oorschot (2010) ([29]) predict that older workers are less likely to be employment-insecure than younger workers. They also observe that women are more likely to perceive employment insecurity due to human capital issues or differences in attitudes.

Poor job security in the current job is a major predictor of early retirement. This can be due to partly involuntary transitions into early retirement because of job loss at a later stage in working life. Even in the late 1990s this was particularly common in the case of women, who were expected to retire earlier than men. Between 1990 and 1999, the acceptance of gender differences in early exit due to the scarcity of jobs declined significantly (Fernandes et al., 2011) ([30]). Currently, only few countries in Europe still have different retirement ages for men and women: a significant majority have taken measures to equalise them.

Wage setting also affects retirement decisions and motivation. In the absence of other reforms, a reasonable growth in wages can be expected to increase the age of retirement (Dalgaard and

([28]) Using the SHARE results, which allow investigation of the change in cognitive abilities of people aged 50+.
([29]) Research carried out within the Recwowe project.
([30]) As indicated in the Maggie project.

Strulik, 2012) ([31]). This supports the findings of the OECD study (2011) that retirement decisions are affected not only by changes in pension wealth, but also by its level. If the level of an accrued pension is high, individuals are likely to retire earlier.

Overall, job satisfaction plays an important role in maintaining older workers' work ability. This is mainly determined by job quality and the situation in the workplace ([32]). Poor job satisfaction is the strongest predictor of early retirement and leads to a pronounced exit from work, in particular for females (Schnalzenberger et al., 2011).

An insufficiently challenging job can also cause early withdrawal from employment. Job dissatisfaction due to low quality of work, effort–reward imbalance and little influence on the work performed and environment experienced by older workers predicts a higher prevalence of depressive symptoms and a higher proportion of subjects reporting lower self-perceived health 2 years later (Börsch-Supan et al., 2008).

The quality of work differs across social strata and European regions. The evidence collected ([33]) reveals a persistent social gradient in all countries as well as a south–north and east–west gradient in job quality, with the relatively lowest job quality in southern and eastern Europe. This is a factor that leads to a high propensity to retire in these countries. In particular, of SHARE respondents still working, over 60 % in Spain and Poland and over 50 % in Greece and Italy express the wish to retire as soon as possible ([34]).

There are also pronounced gender differences in job quality and job satisfaction ([35]). Despite steady progress in educational attainment, women still hold jobs positioned lower in the occupational structure and experience the 'glass ceiling'. They also still have lower wages for similar work (Fernandes et al., 2010). This set of factors playing against women during the entire life course will result in lower pensions of women compared to those of men. Chłoń-Domińczak and Strzelecki (2010) show this risk in the case of Poland. Due to shorter working lives and lower wages combined with a lower retirement age, women are at a much higher risk of receiving minimum pension benefits in the future. The equalisation of retirement ages for men and women is one of the measures leading to the reduction of gender differences in pension levels. From the life-course perspective, it is important to promote equal treatment on the labour market of men and women at all ages.

The second set of work ability determinants is related to the work environment. The way employers shape this environment depends on a set of external and internal factors, such as views on ageing and its foreseen consequences (including a sense of urgency to undertake measures aimed at

([31]) Modelling in the LEPAS project, assuming endogenous determination of longevity and retirement.
([32]) As shown in results of the Sharelife project.
([33]) In the SHARE survey.
([34]) It should be noted that over 50 % of workers who responded to the SHARE survey in France and Austria also want to retire as soon as possible, but not due to low job quality.
([35]) Revealed in the Maggie project.

accommodating the needs of an ageing workforce), government policies, globalisation and prospects of using migrant workers, as well as the levels of available human capital (Connen et al., 2011) ([36]).

Most employers perceive that labour force ageing is likely to cause some labour market problems in the future and do not feel urgent reforms are necessary. Only a minority is convinced that ageing requires responses from their human resource management (HRM). Awareness of necessary HRM adaptations is observed among employers in Denmark, Germany and France. Moreover, employers tend to see the perspective of longer working lives in a double standard. While they think that working longer may well become necessary in the future in general, they expect it less in their own organisations (Connen et al., 2011; Van Dalen et al., 2010). Similar attitudes are also seen among older workers ([37]). There is a mismatch between the approaches suggested and taken at the macro level, which include those recommended in research, and their perception at the mezzo and micro levels. As a result, no major adjustments related to age management are being implemented.

Employers express many beliefs related to the costs and benefits of employing older workers, and their productivity and cognitive abilities. Older workers are perceived as lacking new technology skills and a willingness to learn, lower physical health, stamina, creativity, flexibility and productivity. As a result, the expected negative consequences of workforce ageing most often include (Connen et al., 2011):

- increased labour costs, particularly due to high use of sick leave;
- resistance to efficiency-enhancing organisational changes and new technologies;
- small increases in labour productivity;
- generational conflicts in the organisation.

On the other hand, older workers are seen as more loyal and reliable, and having greater social and management skills. Thus, the positive effects of ageing are associated with:

- growing knowledge stemming from work experience;
- higher managerial abilities;
- higher social capital.

There are also some areas, such as coping with stress, where employers do not see significant differences between age categories.

As a result, older workers or retired persons are not perceived by employers as a valuable source to increase the labour supply (Connen et al., 2011). Employers prefer to recruit other groups of

([36]) According to results of the employers' survey under the ASPA project. This large-scale comparative survey on employers' attitudes towards ageing and the ageing workforce was carried out in eight Member States (Denmark, Germany, France, Italy, Netherlands, Poland, Sweden and United Kingdom), covering over 6 000 employers in a sample stratified by size (small, medium and large) and sector (NACE C-F, G-K and L-O).

([37]) As indicated by the Sharelife results.

workers: women or generally workers in prime age ([38]), attracting them with high wages (nearly one fifth of respondents for each of the two mentioned groups). Only nearly 1 in 10 employers reports employing older workers when experiencing recruitment problems.

As discussed above, actual productivity decline related to age is much smaller than the decline perceived by employers in many cases. Posthuma and Campion (2009) show that stereotypes regarding a steep productivity decline with age reduce chances of re-employment and increase risks of job loss for people in higher age categories. Employers' stereotypes are also confirmed by the Eurobarometer survey on active ageing, which shows that employers' influence is one of the major reasons behind retirement decisions (European Commission, 2012a), which in turn leads to reduced labour supply.

Employers' actual policies towards the ageing workforce are studied in terms of measures aimed at (i) development, (ii) maintenance, (iii) utilisation and (iv) accommodation, following the categories adopted in research on age-conscious personnel policies in organisations (Remery et al., 2003).

Development measures, such as continuous career development or training plans for older workers, are offered by around one fifth of employers. The former is most frequently noted in Germany and France, the latter in France, Poland and the United Kingdom. With respect to the employers' role in developing human capital and encouraging lifelong learning of workers, on-the-job training is viewed as an important way of learning. In particular, mentoring by older workers is an important way of learning for 88 % of employers. They also acknowledge the importance of other forms of learning, including education and formal courses, but the actual implementation of training plans for older workers is lagging.

The most popular maintenance measures adopted by employers include introducing flexible working hours (declared by 30 % of employers, particularly in Germany and Sweden) as well as ergonomic measures, such as adapting the workplace and work tools to the needs of ageing employees (most often implemented in Poland and Sweden).

Utilisation measures are applied to reduce the demand for new employees. These measures are used by employers who indicate that they seek to retain workers by encouraging them to work up to the statutory retirement age, particularly in countries that used to have widespread early retirement policies (such as France and Poland). One quarter of employers also seek alternative combinations of capital and labour by investing in labour-saving technologies (Connen et al., 2011).

With regards to accommodation measures, around one fifth of employers reduce working time before retirement or offer part-time retirement (this is most popular in Denmark, the Netherlands and the United Kingdom) and promote internal job mobility (most popular in France and Sweden). Retirement as a gradual transition is most common in Denmark, the Netherlands and Sweden, and significantly less frequent in France, Italy and Poland. The least popular measures include reduction of tasks and salary or demotion. Cuesta and Guilló (2012) also suggest that part-time employment

([38]) These groups are, of course, not exclusive.

can be a policy tool to increase the labour force participation of older workers who can smooth over the transition from full-time work to retirement, especially among men.

Results presented by Connen et al. (2011) show significant variations between countries. In particular, Italian employers implemented very few measures, despite having one of the most acute ageing progressions.

Employers' views are in line with citizens' perceptions. In the special Eurobarometer survey focusing on active ageing, the lack of part-time retirement possibilities and exclusion from training at the workplace were two of the most frequently indicated reasons for retirement decisions among Europeans (European Commission, 2012a).

While the majority of employers are not preparing for demographic change, they expect governments to implement policies towards ageing. The state is perceived to be the major actor in this area, as many policy tools are beyond the direct influence of employers. The range of policies should aim to:

(i) make better use of existing staff;
(ii) increase the workforce through migration or family policy; and
(iii) extend working lives.

The latter is the least preferred, contrary to the common view of experts. Only one third of employers support legal measures promoted by government policies aimed at retaining workers in employment by cutting back early retirement programmes and raising legal retirement ages. Nevertheless, employers consider workers between 57 and 58 (with a standard deviation of around 5 years) to be too young to retire, while the indicated upper age limit for retirement is 66–67 years of age (also with a standard deviation of 5 years). This implies that, in general, raising statutory ages beyond the age of 65 could be acceptable from the employers' perspective (Connen et al., 2011). However, when employers face the necessity of downsizing, they reveal a strong preference for the early retirement of older workers.

The most desirable policy is to offer workers incentives to combine work and retirement. This is seen as a way of maintaining some kind of employment activity in older age groups, even if such workers are less healthy or productive. Employers would also like governments to promote best practices in personnel policies and lifelong learning, as well as introduce wage subsidies for older workers. Surprisingly, frequently applied measures such as media campaigns combating stereotypes about older workers among employers and the public, laws preventing age discrimination and lowering early retirement benefits are less desirable.

In summary, evidence shows a gradual change in policies and measures applied to prepare for an ageing workforce. Workers and employers are becoming more aware of these processes and necessary measures, though their behaviour still lags behind compared to the advancement of state policies implemented or promoted at EU or national levels. However, not all popular policies are seen as efficient and helpful in addressing demographic change, which indicates that there is room for improvement. The crucial challenge is to involve all stakeholders, in particular employers, in actively implementing the necessary policies for using an ageing workforce's potential.

3.2. Transition to retirement

The determinants of older workers' withdrawal from economic activity are viewed from micro, mezzo and macro perspectives ([39]) and taking into account the interrelations between health, work conditions and employment arrangements.

Studying welfare state interventions over the life course makes it possible to evaluate the effectiveness of policies introduced in different periods of life. Interdependencies between education, family and labour market careers affect retirement decisions, which are life-course dependent. This means that policies aimed at prolonging working lives should focus on life courses of generations, as only such interventions can effectively support the postponement of retirement and increase the labour market activity of older generations in a long-term perspective. Highlighting the nature of push factors (such as poor working conditions, the need for care activity in the family or poor health) and pull factors (such as generous pension systems or early retirement opportunities) is crucial in implementing effective policies leading to longer labour market participation.

A rich range of empirical findings confirm that both labour market and education systems can potentially shape people's risks of inactivity over the life course. For instance, the experience of early unemployment influences employment opportunities in later life (the so-called scarring effect). Good working conditions, preventive health services and access to training not only improve job quality, but also help postpone retirement.

Decisions about retirement are also influenced by family biography and intergenerational relations. Childless women exit the labour market later than mothers. By contrast, fathers stay on the labour market longer than childless men ([40]). Care for grandchildren may speed up retirement, especially among women. However, receiving a grandparent's help, which often comes at the price of exiting from employment, may encourage young people to have another child ([41]). This confirms that intergenerational relations play a role in family and labour market-related decisions, in particular transitions to retirement. The need to provide care as a factor pushing people out from the labour market cannot be neglected. Persons aged 65–75 (especially women) are carers of grandchildren, but also of other elderly family members and older friends and neighbours, which is rarely considered in a policy context.

It should be noted that retirement from paid work does not mean withdrawal from all types of activity. Unpaid work of the population aged 50–70 is also becoming more and more visible ([42]), in particular involvement in care activities and volunteering. Those who retire from work are becoming increasingly involved in such activities. Such behaviours are common in many European countries despite diverse attitudes towards volunteer work and voluntary organisations, not only among the elderly, due to different cultures of volunteering, different welfare states, etc. The need for an

([39]) This is an approach shown in the Sharelife and ASPA projects.
([40]) Based on the evidence from the Sharelife project.
([41]) As investigated in the Multilinks project.
([42]) As investigated in the ASPA project.

intergenerational balance is visible in the development of civic initiatives and the non-governmental sector oriented both towards older and younger individuals.

Approaches towards older volunteers, as towards older workers, are ambiguous in many European countries. They are valued as being more available and having more time at their disposal compared with younger people (who have jobs and children). What is more, their life experience, skills and knowledge can be used in the typical activities of voluntary organisations. On the other hand, older people are perceived as resistant (unwilling) to change and innovation. Additionally, such individuals frequently hang on to the leadership role they played in their working lives, which makes them less easy to manage as voluntary workers. Another important aspect is intergenerational conflict, which is reflected in the lack of trust from the older to the younger generations. Despite this, voluntary organisations do not declare any specific formal age-related barriers to volunteering at older ages. In some countries (e.g. Poland), the activity rate of the elderly as well as their level of knowledge about volunteering are very low, as is participation in other activities (such as social or cultural activities).

In general, older people who have retired from their labour market activity are potentially a rich source of third-sector volunteers. The evidence collected ([43]) allows recommendations to be formulated both for non-governmental organisations and for policymakers regarding the promotion of such activities among the elderly. First of all, in designing types of voluntary activities oriented towards older people, the given welfare state, non-profit regime and cultural context of the country should be taken into account. Furthermore, in order to increase older people's participation rate in voluntary work, it is very important to involve them in such activities earlier in the life course. Moreover, some information on volunteering opportunities after retirement should be provided during the last stages of working life.

To conclude, it seems that a part of the potential of the elderly remains unused, especially in some European countries. This may lower their well-being as it has been proved that older people who are socially and culturally active report a greater satisfaction with their lives than others who are less active (see also Lim and Putnam, 2010). Thus, the different possibilities of engaging the elderly in activity should be taken into account when searching for improvements, as it would contribute not only to greater social cohesion between generations, but also to a better use of their potential in the development of the 'silver economy'. Last but not least, engagement in volunteer activities can also lead to improvements in the quality of life and life satisfaction of older generations, reducing the risks of social exclusion and inactivity after retirement.

([43]) Among others, through the ASPA project.

3.3. Human capital, labour market and economic growth

The Europe 2020 strategy aims to achieve smart, sustainable and inclusive growth. How can this be done under advanced population ageing, which affects both the accumulation and levels of human capital, a fundamental component of economic growth? The expected shortage of the potential labour force along with population and labour force ageing may strongly affect the economy by reducing the productivity potential of the labour force. This would result from the lower work performance of individuals, which decreases in the latter half of working life due to age-related deterioration in several cognitive skills, poorer health status and lowered motivation (e.g. Skirbekk, 2008). Therefore, shifts in the size and age structure of the work force may negatively affect economic growth.

One of the prerequisites for building a competitive knowledge-based economy, which is the main objective of the strategy, is to invest in human capital, defined as 'the knowledge, skills, competencies and attributes embodied in individuals that facilitate the creation of personal, social and economic well-being' (OECD, 2001).

The Europe 2020 strategy's goals of improving societies' education levels, with the targets of school drop-out rates reduced to under 10 % and 40 % of the population aged 30–34 completing tertiary-level education, are important in the process of human capital development. A higher level of human capital affects employment positively: better educated and healthier people are more likely to participate in the labour market because they achieve higher returns from previous investments in their capital. Moreover, higher education tends to be positively associated with a higher preferred retirement age (Skirbekk et al., 2012). Thus, the target of a 75 % employment rate of the population aged 20–64 years is also related to developments in human capital. An increase in research and development (R & D) investment (targeted at 3 % of the EU GDP by 2020) must go hand in hand with the building of human capital capacity in order to generate significant economic effects in Europe.

Perez-Sebastian (2010) defines human capital as 'a complex product that changes with age, augments through investment in nutrition, education and training, and endogenously decays influenced by the environment, usage, and maintenance'. In economic theories, human capital stock is divided into two main components: physical health and skills, with the latter composed of cognitive and non-cognitive abilities. Biological ageing, defined as 'the intrinsic, cumulative, progressive, and deleterious loss of function that eventually culminates in death' (Arking, 2006; Masoro, 2006), strongly impacts human capital stock because it affects all the elements mentioned above. Deterioration in human capital becomes a particularly important phenomenon in populations experiencing advanced ageing. Populations growing older can result in a significant decrease of human capital stock at an aggregate level due to the possible impacts of decreasing factors on human capital development, and consequently would lower the productivity potential of society. Thus, a deep and multidisciplinary analysis of this issue is needed to increase our knowledge about human capital development in ageing societies and to design evidence-based policies aimed at maximising the level of human capital in the future.

At the macro level, measures aimed at increasing the level of human capital can be divided into the quantitative, such as increasing workforce size through migration, and the qualitative, including the development of competences in society, i.e. through lifelong learning.

Migration policy is perceived by many policymakers as a panacea to circumvent the consequences of population ageing. But it is also sometimes seen as a burden, since migrant workers can depress the wages of low-skilled nationals and reduce the economy's productivity. Guilló et al. (2012) investigate the influence of migration on human capital development. They conclude that migration does not universally increase the wage gap, nor necessarily does it deteriorate the economy's average productivity. This depends on the economy's initial condition. Hence, migration may be a valuable tool for supporting pension system sustainability. However, more research is needed to explore how migration impacts the pension system itself and how it influences capital accumulation.

Topics related to human capital, the labour market and economic growth in the context of population ageing are discussed in several projects from both the theoretical and empirical perspectives ([44]). One of the topics addressed is health and the deterioration of human capital. It is argued that the evolution of human capital during the life course is poorly described by existing economic theories that treat depreciation (ageing) as purely exogenous. Research suggests that there is heterogeneity in ageing which impacts physical health and skills. Harper and Marcus (2006) argue that physical deterioration is affected by human decisions and environment. Similarly, a decrease in cognitive abilities is not universal. According to the dual-component theory of intelligence, mental abilities can be divided into two groups: fluid intelligence and crystallised intelligence (Horn, 1982). Fluid intelligence is the ability to think and reason abstractly and solve problems (e.g. information processing, attention, memory). It is more related to genes and is independent of knowledge and education. Fluid abilities change over the life course. They increase with age into the mid-20s and start decreasing in the 30s. Crystallised intelligence is the ability to use skills, knowledge and experience accumulated over a lifespan (Baltes et al., 2012). It consists of mental skills acquired through learning and experience (Park et al., 2002; Skirbekk, 2005). Crystallised abilities rise to their maximum level at the age of 40 and do not decline until the age of 70 (Baltes et al., 2005). Empirical findings show that the deterioration of cognitive abilities can be delayed through education in young age, parental influence during childhood, living in a stimulating environment, and occupational and leisure activities in older age (e.g. Mazzona and Perachi, 2009; Gribbin et al., 1980; Knudsen, 2004; Cunha and Heckman 2007). Schooler et al. (1999) find that the degree of job complexity is positively associated with mental functioning at older ages. Several studies prove that cognitive training reduces or even reverses the decline of some mental abilities, such as inductive functioning, spatial orientation, memory and reasoning (Schaie and Wills, 1986; Ball et al., 2002). Abrassart (2011) suggests that cognitive skills play an increasingly large role in modern economies which require complex jobs ([45]). Hence, there is a need for strategies focusing on the reduction of inequalities in developing cognitive skills. In order to sustain or increase the future productivity potential of workers, investments must be made in the first stage of life even before the period of schooling, because cognitive skills play a dominant role in pupils' educational achievements.

([44]) For instance in the LEPAS, Sharelife, and ASPA projects.
([45]) Abrassart conducted her research under the Recwowe project.

Heckman (2000) emphasises that governments should implement policies towards improving the well-being of children and developing their cognitive skills in order to stimulate their future life opportunities. This is also supported by recent evidence from the PISA 2009 survey. Participation in pre-primary education is particularly strongly associated with reading performance at age 15. In particular, an additional year of pre-school education is associated with an increase in the literacy score by 10 points, taking into account differences in socioeconomic status (OECD, 2011b).

Human capital development can be stimulated by policy actions. They can both affect human capital building through investments in nutrition, education and training, and also decrease the speed of its deterioration by creating better living conditions, investing in health and stimulating the usage of cognitive abilities during life, particularly at older ages. Strategies of investments in human capital should focus not only on populations in the labour market, but on individuals at all stages of life, starting as early as possible in order to achieve significant and positive effects on productivity in the future.

There is strong evidence that longevity is also an important factor in human capital development ([46]). Longevity is thought to be determined by two main groups of factors: pre-birth and post-birth. The evidence suggests that about 50 % of the variation in longevity across different populations might be explained by pre-birth determinants, such as genetic factors and environmental influences *in utero*. Another part of the variation is explained by post-birth factors, such as environmental and behavioural determinants as well as biomechanical constraints limiting the lifetime of a species (Dalgaard, 2010).

The hypothesis based on the human capital theory and the life cycle of earnings suggests that an increasing life expectancy leads to more investments in human capital (education) and more labour supply, and consequently to faster income growth (e.g. Becker, 1964; Ben-Porath, 1967). The crucial factor in human capital development and labour supply is not the lifespan of an individual per se, who makes decisions on human capital investments based on expectations about life duration, but the relation between active and inactive periods (stages) of life. The active stage is time spent on the labour market. The inactive stage is defined as a period in which an individual cannot participate in the labour market but is vigorous enough to enjoy utility of consumption. When life expectancy increases, the crucial factor is which period of the life course is expected to be longer. If people expect to be inactive and frail longer, they work harder during the active period of life in order to accumulate more resources for the inactive period. But if they expect the active and healthy period to be longer, they are more likely to reduce labour supply per time increment in the active period and spend more time on leisure (Strulik and Werner, 2012). This mechanism also affects human capital development. In the first case, the period of investments in human capital (education) has to be compressed and located in the first stage of life in order to achieve expected returns on investments in the relatively short period of active life, which enables individuals to have a good standard of living in the inactive period. Conversely, in the second case, individuals are more likely to invest in human capital during the active life stage in order to decrease the speed of human capital deterioration with age, which positively influences their productivity potential

([46]) Proved in the LEPAS project.

at a later stage of active life. Moreover, a longer active life means longer periods of collecting returns from investments in human capital. This creates additional incentives to invest during the active period. For example, an individual can combine labour market activity with education. Thus, it seems that lifelong learning can be more successfully implemented when people expect to remain active and healthy longer.

Over the last century, increasing longevity brought more years of healthy and potentially active years of life than unhealthy years. According to the developed theory ([47]), an increase in life expectancy leads to more time spent in education and less in labour supply if labour supply elasticity is sufficiently high. The link between life expectancy and education is crucial for stimulating economic growth, for example via an increase of individual productivity and technological progress. Concerns about the de-stimulating impacts of ageing and a shrinking labour force on economic growth are grounded in many studies in the field. The reports of the Working Group on Ageing Population and Sustainability of the Economic Policy Committee (The 2009 Ageing Report, 2009; The 2012 Ageing Report, 2011; The 2012 Ageing Report, 2012) show that the assumed increase in labour force participation rates and improvements in productivity (via investments in education, health, etc.) are not sufficient to support economic growth in a period of advanced ageing and shrinking labour force. A better use of available human resources requires — inter alia — older workers' economic activity to be promoted. However, such a policy, adopted at the macro level, cannot be easily implemented at the company level. In fact, European employers are not prepared to face challenges caused by population ageing ([48]), as there is little action encouraging investments in older workers, postponement of retirement or hiring older workers. Despite an overall awareness among governments as well as public and private organisations that increasing the labour force participation of older people and raising the retirement age is necessary, employers are not taking action to accomplish this, and are rather waiting for government activity in this area. The EU Member States are not homogenous in terms of implementing strategies related to older workers. Countries with 'inclusive' labour markets such as the Scandinavian countries are more successful in raising labour force participation rates of older people and postponing retirement than those with 'exclusive' labour markets focused on high productivity. Moreover, organisations that are more oriented towards diversity among workers and recognise that individual productivity has several dimensions and varies over the life course are more successful in integrating older workers and benefiting from their potential than organisations focused on a single image of an 'ideal worker'. Furthermore, surveys show that even if there is some activity towards older workers in companies or other institutions, it is usually accompanied by a lack of mainstream decision-making that guarantees the success of long-term strategies. It has also been found that the economic crisis of the last few years is having a negative impact on actions towards older workers as such issues are becoming less important among employers facing financial difficulties.

Empirical findings suggest that increasing the mandatory retirement age will likely have only limited results if not combined with changing employers' policies towards older workers. The crucial point

([47]) See the LEPAS project.
([48]) As the ASPA survey of employers reveals.

is to invest in the human capital of employees to counteract the deterioration of productivity potentials at older ages.

The impact of population ageing on economic growth, studied within theoretical frameworks, is not clear. Prettner (2010) ([49]) constructed a model of economic growth with endogenous technological change that nests the Romer (1990) and Jones (1995) frameworks. He found that processes leading to demographic change (mortality and fertility) influence long-term economic growth. A decrease of mortality positively affects long-term growth, whereas decreasing fertility rates negatively influence economic growth. But the overall effect of population ageing is not clear in the models used. In Romer's framework, population ageing positively affected economic growth in the long run; on the other hand, it hampered growth in Jones' framework.

([49]) Within the framework of the LEPAS project.

4. Supporting policies for smart, sustainable and inclusive growth

Sustainable and inclusive growth means reconciling economic, social and environmental goals and diminishing socioeconomic inequalities. Moreover, these activities have to be performed smartly to increase the EU's competitiveness in more complex and demanding business environments, susceptible to financial and economic shocks. These ambitious goals of the Europe 2020 strategy seem even more demanding when taking into account population change in Europe.

The reviewed projects clearly show that population ageing is an irreversible policy context that must be taken into account in designing economic and social policies in Europe. Ageing should not be treated as a factor hampering growth, rather as a source of potential growth. To that end, policies in Europe should focus on exploiting the 'second demographic dividend' ([50]) (Lee and Mason, 2006) associated with population ageing. With a higher share of the population in non-productive ages, the number of consumers increases relative to the effective number of producers, sometimes referred to as the development of a 'silver economy'. This consumption potential translates into increased wealth and possibly assets, if consumers and policymakers are forward-looking and respond effectively to the coming demographic changes. Future consumption can be maintained through the accumulation of wealth in some form. The second demographic dividend may be permanent if capital deepening and a growth of per capita income is maintained.

In order to make this happen, European policies should be mutually integrated. This means that their design should take into account not only the potential direct effects, but also the interactions with other policy domains. In this context, we propose to look at policies from two perspectives. The first involves a focus on developing and using opportunities stemming from demographic change in Europe. The second is related to maintaining a balance between and within generations as a necessary condition for maintaining sustainable and cohesive growth in the long run.

The research findings summarised in this review clearly show that in order to keep Europe on the path of smart and inclusive growth under the new demographic regime, deep transformations of work, welfare and care are necessary. Moreover, they should cover changes at different levels (micro, mezzo and macro), affect both the supply and demand sides of the labour market and involve different social actors. Until now, the employer's role seems to have been underestimated in debates on how to share responsibilities between individuals/families, firms and the state for rearrangements of the social and economic domains of life in ageing European societies. In addition, despite the growing pressures of labour supply constraints on economic growth as well as pension-fund sustainability and incompatibilities between work and family, individuals, employers, trade unions, etc. are still to a large extent unaware how urgent the relevant reforms are. The 'not in my backyard' attitude, demonstrated by both individuals (employees) and employers, reveals the discrepancy between the aims and policies formulated at the macro level (the EU and Member State levels) and an understanding of how this translates into individual behaviour, recruitment policies and management of age-diversified human resources in organisations. The research projects analysed also show that while designing effective policies is important, coalitions must be built for their implementation in order to fully reach their goals. Thus, one of the most important

([50]) The inspiration for the term came from the theory of second demographic transition, formulated by Van de Kaa and Lesthaeghe (see Van de Kaa and Lesthaeghe, 1986; Van de Kaa, 1987 and 1994).

challenges for public policies is developing communication between researchers, governments, employers and societies to bridge the knowledge gap between various stakeholders. This, in turn, would lead to understanding and agreement among European societies and policy stakeholders regarding the pursued policies.

4.1. Demographic change in Europe — transforming challenges into opportunities

Demographic change in Europe involves not only radical shifts in the age composition of European populations, characterised by population and labour force ageing and a shrinking working-age population. Its equally important aspects include: the changing proportions between generations (between young people, adults and older persons); transformation of family structures and kinship networks; and the changing contributions of men and women to the family, accompanied by increasing life duration and spatial mobility. Families are becoming smaller (with fewer siblings), increasingly de-institutionalised (non-marital unions) and non-co-resident, with 'tall and lean' kinship networks (Saraceno, 2008, p. 5). In addition, family dissolution and reconstitution patterns make families and kinship increasingly complex, diversified and fluid.

The increasing labour force participation of women, which is one of the major social and economic developments of recent decades, brings not only positive effects for their economic independence and household welfare, but also the redistribution of time allocated to paid and unpaid work. Therefore, sharing responsibility between men and women for economic provision for the family on one hand and for domestic chores and care duties on the other is becoming an inherent component of family life. Under growing uncertainty related both to family life and the labour market, which seem to influence women's life course more, women's economic activity should also be seen as supporting risk management and reducing possible negative consequences in both the short and the long runs.

The life-course approach, adopted in most of the projects under review, also offers an integrated perspective on ageing and relevant policies. Different life activities should be considered jointly over the life course; hence, policies need to focus on ways to reconcile these activities at subsequent life stages. Combining work and family life is not only an important issue for young and middle-aged persons, it also concerns older persons expected to stay longer in paid work. In addition, education and training are no longer associated with young age only; they are becoming lifelong activities. This means that social and economic policies should extend beyond the usual boundaries. Consequently, problem-oriented policies should be reformulated into a policy framework where their links with subsequent stages of the life course are addressed. Such a framework should also include measures responding to the evolving interrelationships between and within generations, between men and women, and between different stakeholders, especially the state, family and labour market.

The relevance of the context for life-course experiences, defined by institutional settings, economic structures, social policy, as well as social and cultural backgrounds, has been visibly demonstrated.

Life-course events affect well-being at older ages. Therefore, preparation for ageing in Europe requires an integrated perspective taking into account the individual and societies in the context of their entire life course, as well as the interactions of life courses of all generations together.

This means that different stakeholders need to pay more attention to designing policies. In particular, employers, trade unions and local governments should be more involved in their implementation. The discrepancies revealed between the aims of policies designed at the macro level and their perception at both the mezzo and micro levels signal a lack of understanding as to why these policies are needed. Undoubtedly, in addition to promoting corporate social responsibility, individuals' responsibility in managing opportunities related to a lengthier co-existence of different generations should also be highlighted.

An increasing lifespan for growing numbers of people accompanied by fertility rates well below the replacement level in relatively many countries translates not only into imbalances between young and old cohorts, which in itself gives rise to concerns; it also causes shifts in the duration of subsequent life stages, especially between periods of labour force participation and being outside of the labour market. Both empirical and theoretical studies show that the late stage of life cannot be understood without taking into account processes in early life. They also demonstrate how investments before conception and during childhood influence health and cognitive abilities in old age. These findings show the opportunities of benefiting from population ageing in individual, economic and social terms, conditioned on making investments in people starting before birth and continuing during childhood. They also confirm that research on ageing and policies addressing this process should include the population at all ages, the multidimensional and multilevel effects of changes in family and kinship structures, and diverse life courses on development prospects and both objective and subjective well-being.

The deep changes in the age structure expected in the next decades, especially labour force decline accompanied by advanced ageing, give rise to concerns about the reduction of human capital at the population level, despite a steady improvement of its qualitative aspects (health, education, skills, cognitive abilities, etc.). Hence, demographic renewal might be considered at the macro level not only as a measure for reducing the imbalances between the young, adults and the elderly, but also for stimulating human capital growth by increasing its quantity.

If we look at qualitative measures of human capital, policies should aim to increase healthy life expectancy, an important determinant of active ageing, longer working lives and well-being. Health and wealth are related. Inequalities in health and economic wealth between and within countries are persistent, and vigorous action is needed to decrease them. Health challenges also include those associated with ageing, such as the expected rise in chronic diseases and cognitive decline. Investing in health and maintaining and raising the health status of European populations will contribute not only to increased well-being, but also to economic stability and growth (Ståhl et al., 2006).

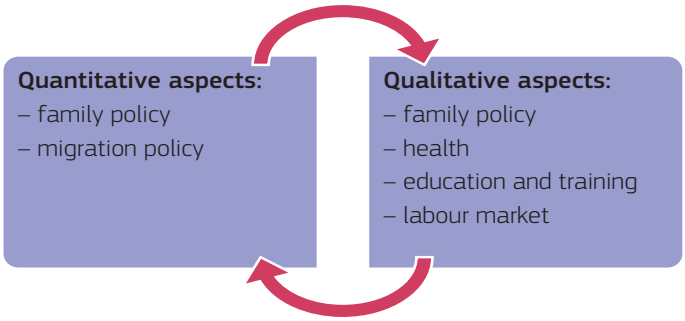
Another important policy issue refers to the accumulation of knowledge and skills over the life course. Increasing the educational attainment of young people not only results in a higher level of their human capital, it also contributes to increasing the human capital gap between the young

and other generations. Educational efforts and lifelong learning initiatives which cover adult ages, necessary to increase the proportion of the skilled and trained workforce, should also be seen as measures reducing that gap and improving the intergenerational exchange both in the family and the workplace. Last but not least, wage policies which offer appropriate earnings to less privileged groups of older workers might also be seen from this intergenerational perspective.

Migration and its impact on demographic change and labour market performance was not the subject of this review. However, both intra-EU and external migration flows increasingly contribute to the population and the labour market. Therefore, it is important to create conditions which allow migrants to further strengthen the human capital potential in Europe.

In summary, policies aimed at developing the human and social capital in Europe should combine quantitative and qualitative dimensions which should complement and support each other, as shown in the figure below.

Figure 6. Quantitative and qualitative aspects of developing human and social capital



Source: Own proposal.

Within the general policy framework, designing social protection systems is essential. Properly designed benefit (in particular pension) systems can encourage longer activity if benefits increase due to retirement postponement. On the other hand, badly designed policies will lead to increased pressures for early retirement and loss of human capital potential. Research shows significant diversity of policies and approaches in Europe, with some countries and regions being more 'inclusive' both from the perspective of the labour market and social integration, while others still facing significant challenges. Developing a knowledge base as part of the European research agenda, as well as through the open method of coordination on policy levels, should be continued to reach the goals of smart, inclusive and sustainable growth.

4.2. Policies for managing inter- and intra-generational balance and supporting economic growth

Population ageing is an issue that requires a multidimensional approach. It affects the life courses of each generation, now and in the future. However, it also has implications for the intergenerational perspective. Policies developed in the EU and in individual Member States should take into account both of these perspectives. For example, prolonging working lives requires the issue of work ability to be approached from the life-course perspective, but supporting care that needs to be provided for the oldest and youngest generations should also be taken into consideration. Therefore, an adequate policy framework should focus on division of work, welfare and care between the state, family and labour market, between and within generations, and between men and women. Research confirms that it is feasible to take advantage of the economic potential of all generations in Europe, including the wealth that they have accumulated.

Studies on intergenerational relationships and family well-being, performed in the context of population ageing, show that vertically extended families with more than three generations are not frequent yet; however, the expected 'double ageing' in the near future might change the picture. Contrary to common views, older generations are more likely to be givers of transfers (financial, care) than takers. This intergenerational exchange is influenced by existing networks, norms about family and kinship support, and social policies. The developed typologies of sharing responsibilities for the old and the young between the state and family (care models) and of patterns of supporting the elderly allow the diversity of intergenerational exchange models across the EU countries to be evaluated.

Moreover, studies clearly show that the ageing process cannot be reduced to shifts in the age composition. Such age shifts impose changes in family and social structures, which are not only important from the macro perspective but also have a decisive influence on the economic and subjective well-being of individuals. Consequently, individual life courses are also influenced, which in turn determine well-being at older ages.

The increasing relevance of reconciliation of work and family in EU policy debate is reflected, inter alia, in the gradual reformulation of their scope. Originally aimed at equal treatment of men and women at work, their stimulating influence on employment, especially women's, has become widely acknowledged.

Care leave and flexible work arrangements would help care providers address the balance between their workplace obligations and care responsibilities. This could lead to a greater supply of care provided by those in work and a greater labour supply of people who would otherwise have to give up work to be caregivers (OECD, 2011, p. 18).

Policies should also look beyond the issue of productivity and work ability. The potential of the 'silver economy' should also be considered. Efforts are needed in order to achieve a more homogeneous (and high) level of work quality across European regions, both with respect to legislation and to its implementation and practice, particularly in the Mediterranean region and in the post-communist

countries. Special attention should be directed towards target populations characterised by low qualification levels and low incomes.

Project outcomes consistently present a comprehensive picture of older people's living conditions and life satisfaction in the countries under study. Detailed findings about the main determinants of well-being among the elderly reveal in general that the situation in the last stage of life is dependent on the whole life course. Having children and living in a relationship, human capital investments, health status and participation in the labour force positively affect economic well-being and life satisfaction. These factors also allow to identify fragile groups: people of poor health (living alone or in a couple), childless persons without kinship networks and persons not engaged in any (social or leisure) activity. In particular, voluntary activities at older ages are especially rarely recognised as a component of the quality of life.

Social integration and maintaining the quality of life of the elderly, in particular women, should be taken into account not only at the national but also at the regional and local levels. Involving different generations in multigenerational dialogue and using their potential to pass on local traditions and culture to the younger generation is an important component of building cohesive local societies.

Conclusion

In conclusion, population ageing is a multidimensional process which sets a new policy context for the upcoming decades. Ageing is not a 'tsunami' that comes quickly and fades away leaving nothing behind. Therefore, it does not have to be an obstacle to social and economic development in Europe.

The rich evidence from research shows that in all areas which are important from the ageing perspective, the desired policies should be life-course oriented with a focus on generations and their life histories as well as on the interlinked life courses of multiple generations at a given moment in time.

Some policy areas require special attention. A shrinking labour force increases pressures to maintain work–life balance in the future, especially as demand for the female labour force is likely to increase. If such a balance is not reached, it may hinder fertility levels and further accentuate population ageing.

It is also important to adopt a wide perspective to ensure the good quality of life and well-being of the elderly, including health, life satisfaction and social activities, particularly in the case of 'generational solos'. Retirement from work should not be treated as retirement from all forms of activity. Using the potential of the elderly is essential in efforts to reach the goal of smart, sustainable and inclusive growth in Europe.

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Appendix

ASPA — Activating senior potential in ageing Europe

The ASPA project examined in an exhaustive manner the forces and mechanisms behind employers', civil society organisations' and governments' behaviour and attitudes regarding the process of ageing society.

The aims of the project were threefold. The first aim was to assess the influence of organisational behaviour and public policies on the use of senior potential in Europe. The second was to get insights into activity rates of people aged between 50 and 70, both in paid labour and unpaid activities (in particular care and volunteer work). The third was to identify effective strategies for organisations (firms and civil society organisations) and governments to stimulate the participation of older adults and foster human capital investments over the life course.

Project implementation

The project used large-scale surveys for the analyses of employers' behaviour, and desk research and interviews to map government behaviour.

In order to achieve the first aim, the project used written questionnaires that were distributed among organisations in all of the eight participating Member States. For larger countries like Germany, France, Italy, Poland and the United Kingdom there were about 1 000 questionnaires, whilst for those less populated such as Denmark, the Netherlands and Sweden there were about 500 questionnaires. The sample of organisations was taken from the available and most reliable sources, based on the information of the national experts participating in the project.

To achieve the second aim of the project, ASPA's endeavour concentrated on desk research and interviews with national experts on policy issues and government programmes and a series of focus group meetings with retired people.

The third and final goal was approached through a number of case studies. The outputs of this research enabled ASPA to develop a portfolio of good practice examples which promote the recruitment, retention, and employability of workers as they age.

Project coordinator

Joop Schippers, Utrecht University, Netherlands.

Further information about ASPA and all outcomes of the project can be found at:
http://www.aspa-eu.com

Multilinks — How demographic changes shape intergenerational solidarity, well-being and social integration: a Multilinks framework

The project investigated how changing social contexts affect social integration, well-being and intergenerational solidarity across different European nations. Moving away from past debates predominantly focused on the circumstances of the old, the Multilinks approach started from three key premises. First, that the ageing process affects all age groups: the young, the middle-aged and the old. Second, that there are critical interdependencies between family generations and between men and women. Third, that a number of analytical levels should be considered. In particular, the project examined multiple linkages in families, multiple linkages across time and multiple linkages between, on the one hand, national and regional contexts, such as policy regimes, economic circumstances, normative climate and religiosity, and, on the other hand, individual behaviour, well-being and values. By identifying intergenerational care regimes and their shortcomings, Multilinks explored the risks of becoming socially isolated and lacking necessary support.

Project implementation

The Multilinks work plan was organised according to six interconnected work packages. First, a database of comparative indicators was developed for all EU-27 Member States plus Georgia, Norway and Russia on legal and policy frameworks shaping financial and caring responsibilities in families. The second work package focused on the dynamics of changing living arrangements, family obligations, the balance between formal and informal care, and the way these factors affect life satisfaction and loneliness. The third work package charted how kin networks are affected by demographic changes, such as delay of marriage and parenthood, decline in birth rates and increasing instability of partner relationships. It tried to investigate how contemporary family constellations vary across Europe and how 'new' family constellations influence patterns of intergenerational dependencies and solidarity.

Further, regarding family obligations, the project investigated whether the relationships between values, attitudes and behaviour vary according to individuals' educational levels and gender role orientation or couples' divisions of responsibilities. The fifth work package addressed the relationship between intergenerational transfers, labour force participation and social integration for men and women in different age groups.

Finally, the project integrated all the findings from the Multilinks framework to draw new insights on the different dimensions of demographic change.

Project coordinator

Pearl Dykstra, Netherlands Interdisciplinary Demographic Institute and Erasmus University Rotterdam, Netherlands.

Further information about Multilinks and all outcomes of the project can be found at:
http://www.multilinks-project.eu

Demhow — Demographic change and housing wealth

Demhow investigated the ways in which, across Member States, ageing populations and housing wealth are linked, how housing wealth has been used in the past and how attitudes to its use in old age are changing. The project also assessed the characteristics of housing assets as a form of pension and investigated the developments in policy and in financial markets that may enable and encourage its use in this way. In addition, it identified opportunities and risks associated with potential pension systems based partially on housing assets.

Project implementation

The project presented comprehensively the different aspects of using housing assets as a contribution to income in old age. For households, these concerned the way they view housing in the context of other forms of saving; their willingness to use housing assets as a pension, rather than leaving them as a bequest for children. The overall approach to meeting this objective was to undertake in-depth interviews with individuals — in different age cohorts, including those with and without children — about different strategies with respect to the accumulation and use of wealth and inheritance.

From the perspective of governments, the analysis concerned whether they see housing wealth as a potential alternative to provisions of the social security system. The project also assessed the consequences of such an approach to welfare, for example for younger people trying to become home owners and for those who will never come to that. In order to investigate the market for equity release products and its characteristics, the project gathered a wealth of information from many, often quite disparate, sources to provide a comprehensive review of current and likely future developments.

To enrich its analysis and maximise its outreach, the project engaged in a comprehensive dialogue with stakeholders throughout the research work as well as when developing policy recommendations.

Project coordinator

John Doling, University of Birmingham, United Kingdom.

Further information about Demhow and all outcomes of the project can be found at:
http://www.demhow.bham.ac.uk

LEPAS — Long-run economic perspectives of an ageing society

The project aimed at extending the framework of ageing, senescence and frailty to analyse aspects related to key European policies within the ageing European society. These aspects included retirement age and policy, migration flows and country coordination policies, innovation, technical change and economic growth policy as well as health status and health policy.

The project emphasised that in order to fully understand the effects of ageing on the economy, it is necessary to develop an economic theory of ageing that takes into account the endogenous evolution of human frailty and disability, because only if we understand both the biological and economic forces behind the changes in the functional capabilities of human beings during their lives will we be able to analyse the economic determinants of successful ageing. To achieve this, the project integrated into modern dynamic macroeconomics a biologically founded process of individual ageing, i.e. ageing understood as a gradual deterioration of the functioning of body and mind.

Project implementation

LEPAS consisted of a complex search within the biology of ageing with the aim to extract those concepts and methods that can be imported into economics. As a result, the project developed an economic life-cycle model in which individuals are subject to physiological ageing. Inlaying sophisticated econometric methods, LEPAS investigated theoretically and quantitatively how ageing affects health and productivity. In particular, using multi-country models it analysed how ageing influences human capital formation and migration flows in Europe. With models of optimal retirement decisions it investigated how ageing impacts on the contribution and employability of older workers and how this feeds back to issues of intergenerational solidarity. Finally, with models of endogenous R & D it also explored how ageing interacts with technological progress and assessed how ageing will affect the EU's capacity to innovate and to develop.

Project coordinator

Holger Strulik, University of Hanover, Germany.

Further information about LEPAS and all outcomes of the project can be found at:
http://www.lepas-fp7.de

Maggie — Major ageing and gender issues in Europe

Maggie identified and analysed indicators of quality of life among the population aged 65+ to reveal gender gaps and their factors. It focused on changes due to renewal of cohorts, taking into account cohorts of older people and of those who will reach old age in 25 years to forecast trends in gender differentials and an evaluation of actions likely to reduce these gaps.

The project measured the impact of the quality of life on health conditions, economic resources, family situation and social integration. On each, objective indicators of living conditions were confronted with perceptions of people's own situation.

Project implementation

The project consisted of three stages.

1. 'Sex differentials in later life', now and in the coming decades, were assessed. Starting from a comparative database devoted to the elderly people (located in nine countries) and their living conditions, the project analysed a variety of living conditions (mortality and disability, family situation and relationships between older parents and adult children, educational and economic resources, living arrangements and needs for care) with a gender perspective.

2. 'More in-depth studies' evidenced the gender dimension of sex differentials in the main fields of quality of life (health conditions, family and social integration, economic resources) at older age. They were based on a combination of objective and subjective indicators of the quality of life at older ages.

3. 'A prospective view on gender gaps and their cross-national diversity'. For the third part, the project answered some typical questions: 'Do indicators of actual living conditions in later life evidence the same cross-country contrasts as more subjective indicators?'; 'Can countries be ranked according to gender equity at older age?'; 'What role for national and EU policies in European diversity (or homogeneity)?'

Project coordinator

Joëlle Gaymu, Institut National d'Etudes Demographiques, France.

Further information about Maggie and all outcomes of the project can be found at:
http://cordis.europa.eu/projects/rcn/79918_en.html

Sharelife — Employment and health at 50+: a life history approach to European welfare state interventions

The overarching objective of Sharelife was to shed light on the mechanisms through which welfare state interventions affected the health and employment outcomes observed among individuals aged 50 and over, and in particular at which intervention points during their lifetime and through which policy channels these effects have come into place.

Sharelife was based on three features that allowed the setting up of an innovative analysis of past and current welfare state interventions in Europe.

First, it takes a life history approach, as the full effect of welfare state interventions on individuals can only be assessed over their entire life course and not by comparing concurrent policies and outcomes. Specifically, the project collected life history micro-data to identify intervention points at which welfare state policies, such as education, income support programmes, work place regulations, health care systems, old-age and disability pension systems, affect women and men at various points in their lives.

Second, it used a multidisciplinary approach that explicitly accounts for the interactions between health, work conditions and employment.

Finally, Sharelife based its analyses on an innovative combination of life history, cross-sectional micro- and institutional macro-data that take into account general policy differences as well as the large heterogeneity of life circumstances in EU Member States, which make similar policies work differently under different circumstances.

Project implementation

To achieve its objectives, the project collected and analysed retrospective data on European citizens over the age of 50 from 13 European countries (two Nordic countries: Denmark and Sweden; six central European countries: Austria, Belgium, France, Germany, the Netherlands and Switzerland; two eastern European countries: the Czech Republic and Poland; and three Mediterranean countries: Greece, Italy and Spain) and effectively linked them with the data of the survey of health, ageing and retirement in Europe (SHARE).

Project coordinator

Axel Börsch-Supan, University of Mannheim, Germany.

Further information about Sharelife and all outcomes of the project can be found at:
http://www.share-project.org/sharelife

Recwowe — Reconciling work and welfare in Europe

The paramount objective of Recwowe was to create a new, tightly integrated and durable European research network capable of overcoming the chronic fragmentation of existing research on questions of work and welfare, because these two domains are often investigated in isolation from each other.

A particular aim of the project was to analyse how to reconcile work and welfare and thereby maintain and renew the European social model, briefly characterised as the capacity for combining strong economic growth and competitiveness with a commitment to a high level and quality of employment and social protection. To achieve this, four main tensions were identified: between employment flexibility on the labour market and a need for security for the citizens; tensions between family life, work and welfare regimes; tensions between the quality and the quantity of employment; and tensions between old welfare states and new types of employment.

Project implementation

In order to meet its objectives, Recwowe used horizontal and vertical integrative activities. The horizontal integrative activities included micro- and macro-level data collection and the integration of ongoing research activities related to the topic of each tension. Three vertical integrative activities ensured a strong degree of collaboration and a proper integration of results across the entire network. The mechanisms used included the centralisation and harmonisation of data collected within strands within a new European Data Centre for Work and Welfare which installed and operates an indicators bank (macrostatistical, aggregate level social indicators), a values bank (individual level data of work and welfare values) and a policy bank (systematising qualitative data on work and welfare policies in policy maps).

In order to achieve a long-lasting integration of research portfolios, a range of activities was implemented including plenary conferences, a publication and a dissemination centre, a training centre and a dialogue centre.

Project coordinator

Denis Bouget, Maison de Sciences de l'Homme Ange-Guepin, France.

Further information about Recwowe and all outcomes of the project can be found at:
http://www.recwowe.eu

SPReW — Generational approach to the social patterns of relation to work

SPReW analysed the intergenerational dimensions of changes in the relation to work. Understanding these changes has both a scientific and a pragmatic relevance. Types of relation to work shape a vision of work, expectations towards work, a vision of careers and management, a relation to knowledge and learning, and specific expectations towards public policies.

The key objectives of the project were to identify social patterns of the relation to work for different generations, including the gender dimension, to study articulations with other societal fields (family formation and lifestyles, intergenerational relations, social cohesion) and to develop awareness of policymakers on the generational dimensions in relation to work and employment.

Project implementation

In order to understand the various aspects of the relation to work of the younger and older generations, the project first developed a conceptual framework which was used for the construction of a structured model of hypotheses that were then tested in the empirical phase.

In this stage, SPReW investigated the societal consequences of a changing relation to work focusing on both qualitative and quantitative information, collected from existing data but also through interviews and group interviews organised in six Member States (Belgium, Germany, France, Italy, Hungary and Portugal). The purpose of the narrative interviews was to give an in-depth biographical vision of the relation to work, taking into account the various events that can occur in a life story, such as unemployment, mobility or other inflexions of trajectories. In addition, during this phase, the project provided a selection and a comparison of 'good policy practices' in the field of youth policies, ageing policies and employment policies.

The main aim of the empirical phase was to develop an in-depth cross-national comparative analysis by underlining the links of the whole empirical phase with the different institutional frameworks of each country in order to assess to what extent similar social and psychological processes concerning young people and intergenerational relations are likely to have different impacts depending on different institutional contexts.

Project coordinator

Patricia Vendramin, Association pour une Fondation Travail-Université, Belgium.

Further information about SPReW and all outcomes of the project can be found at:
http://www.ftu-namur.org/sprew

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This publication focuses on the challenges and opportunities of population ageing in Europe. Reviewing the outcomes of EU-funded research in social sciences funded under the sixth and the seventh framework programmes, it aims to address the question of how the EU is preparing for advanced population ageing and what type of public policies it should pursue.

In order to set the stage, the document first gives the broader context with an analysis of the European approach to demographic change by presenting the main EU policy initiatives in this area. In the second chapter, the book discusses the many dimensions of population ageing, presenting first the different theories and research approaches, then analysing the intergenerational aspects of ageing and finally considering the issue of well-being at older age.

The third chapter focuses on the impacts of population ageing on economic growth and the labour market. It presents the current situation and future trends regarding the labour force in the EU, considering also the challenges of reconciliation of work and family life as well as employability of the ageing workforce. The chapter then provides an analysis of the processes underlying the transition to retirement and closes by exploring the links between human capital in an ageing society, labour markets and economic growth.

The book concludes with an exploration of public policies supporting smart, sustainable and inclusive growth in the times of population ageing. This final chapter provides insights into how to transform ageing-related challenges into opportunities for the EU and how to manage the inter- and intra-generational balance in support of economic growth and well-being.

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