

Chapter 1

Employment and Health at 50+: An Introduction to a Life History Approach to European Welfare State Interventions

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1.1 A New Approach to Analysing the European Welfare State

Health and employment are key determinants of our well-being. They are major objectives of the European welfare state, e.g. of the Lisbon agenda. Yet, health and employment vary tremendously across Europe. This variation is particularly large at older ages when the sum of influences over the entire life course expresses itself.

One example is “healthy life expectancy”, a statistic computed by the World Health Organization (WHO 2004) which describes the years from birth to a major disabling health event. It varies by more than 10 years in the European Union. It differs to an astounding extent even across the most highly developed countries. For example, the Swiss enjoy more than three more healthy years of life than residents in Great Britain.

Well known are also the large differences in the share of older individuals who still participate in the labour market. That share, referring to those aged between 55 and 64, varies between 37.2% in Belgium and 74.0% in Sweden (OECD Employment Outlook 2010). Similarly, the share of employed women in all ages varies between 51.1% in Italy and 77.3% in Denmark. That variation has been even greater in the past such that the share of women with their own pensions varies greatly within Europe.

Why are these differences so pronounced? To what extent have these differences been created by policy interventions? The first aim of this book is to shed light on the specific mechanisms through which welfare state interventions may be responsible for these large international differences in health and employment at older

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ages. More ambitiously, a second aim is to translate such findings into improved policy design in the European welfare states.

This is actually not a new topic. Meters of shelf space have been filled with analyses of the welfare state and their policy implications. This book, however, presents an innovative and eye-opening approach to those still most important questions. The common main innovation of the 23 analytical chapters in this book is a combination of life-history micro data with a macro data base of historical welfare state interventions. All chapters are based on the new third wave of one of the most promising cross-national longitudinal data bases currently available, the data of the Survey of Health, Ageing and Retirement in Europe (SHARE; see Börsch-Supan et al. 2005, 2008).

We will first explain why our methodological innovations open new roads to welfare state analysis. The then following section gives an executive summary of each analytical chapter. The final section of this introduction draws our main conclusions.

1.2 Combining Life History Micro Data with Macro Data on Welfare State Interventions

All of us face welfare state interventions at almost every point in the life course. In early childhood, financial support was given to our parents; education laws affected our adolescent lives; during midlife, we may benefit from unemployment compensation and other income support; and once we retire, pension payments determine our income. Throughout the entire life course, health care provision and housing policies shape our daily life. Of course, each of these interventions does not stand alone – an investment in child health care may reduce sickness later in life, increase productivity and thus reduce the need for unemployment insurance take-up. Identifying the effect of these many welfare state interventions, i.e. establishing a causal link between a specific intervention and a specific outcome is therefore a complex enterprise and a methodological challenge.

Our common methodological framework is based on three powerful features:

- First and foremost, we take a *life history approach*, as we believe that the full effect of welfare state interventions can only be assessed over the entire life course and not by comparing concurrent policies and outcomes (e.g., Mayer 2009). Specifically, we have 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. Some interventions offset, others amplify each other, and they may have cumulative effects over the life course.
- Second, we use a *multidisciplinary approach* that explicitly accounts for the *interactions between health, work conditions and employment*. Analysing health

or employment in isolation ignores the interactions between health care and labour market policies. These interactions are long-term but we believe that they are crucial in creating different health and employment outcomes.

- Third, we base our analyses on *cross-national comparisons*, in particular an innovative combination of life history, cross-sectional micro and *institutional macro data* that take account of general policy differences as well as the large heterogeneity of life circumstances in EU member countries which make similar policies work differently in different life circumstances.

We collected 28,000 individual life histories in 13 European countries: two Nordic countries: Sweden and Denmark; six Central European countries: Netherlands, Belgium, France, Germany, Austria and Switzerland; two Eastern European countries: Poland and the Czech Republic; and three Mediterranean countries: Spain, Italy, and Greece. The data – called “SHARELIFE” data – were collected between October 2008 and August 2009 with computer-aided personal interviews making use of latest technologies, covering the five most important domains of the life course:

- *Children* (e.g., number of children, maternity leave decisions, pregnancies),
- *Partners* (e.g., number of partners, history for each serious relationship),
- *Accommodations* (e.g., place of birth, amenities during childhood, number of moves),
- *Employment* (e.g., number of jobs, job quality, history of work disability), and
- *Health* (e.g., childhood health, current health, health care usage).

An important feature of our life histories is linkage among these domains. For example, we asked when children were born and then linked this to the employment and income situation at the same time. Similarly, we linked changes in health to changes in marital status and changes in accommodation, to name just two examples.

The collected life histories are part of a larger concept: the Survey of Health, Ageing and Retirement in Europe (SHARE). Since 2004, SHARE has collected data on *health* (e.g., self-reported health, physical functioning, cognitive functioning, health behaviour, use of health care facilities), *psychological status* (e.g., psychological health, well-being, life satisfaction, control beliefs), *economic status* (e.g., current work activity, job characteristics, job flexibility, opportunities to work past retirement age, employment history, pension rights, sources and composition of current income, wealth and consumption, housing, education), and the *social support network* (e.g., assistance within families and social networks, transfers of income and assets, volunteer activities).

The combination of all three data collection efforts gives a detailed picture of the status of each individual in 2004, 2006, plus a view across the entire life course in 2008, ranging from career steps, economic conditions, family history, health development, and housing back to childhood living conditions. The data thus provide a fascinating account of the life in Europe over the past century – a century not only characterized by wars and oppression but also dramatic changes in the extension and influence of the welfare state on individuals’ lives.

Collecting retrospective life histories is not easy since memory fails as we all know. We were helped by neuro-psychologists and survey methodologists in developing a sophisticated electronic questionnaire underlying the face-to-face interview to make recollection easier. Each domain was depicted as a graphical time line. The respondents could jump between these time lines, thereby linking events that are easier to remember (such as the birth of a child) with events that are harder to remember (such as a spell of unemployment). The reader is referred to the detailed descriptions in the supplementary volume on the SHARELIFE methodology (Schröder 2011).

One may still be sceptical about the quality of such retrospective data. Recent studies, however, such as Smith (2009) and Haas and Bishop (2010) have validated retrospective data with objective records. Their results suggest that, while caution is clearly warranted and has been applied to the chapters in this book, there is valuable information in retrospective measures that supports a judicious use in population-based research.

In parallel, we have built up a *contextual data base* that describes how welfare state interventions have changed over time and across countries. Typical interventions are education (e.g., years spent in school), medical care (e.g., vaccinations, density of doctors), income support (e.g., unemployment insurance, maternity benefits), pensions (characterized by, e.g., generosity of public and occupational pensions, as well as early retirement age), and work place characteristics (e.g., regulations on work place safety). This information was drawn from a multitude of sources at three levels. First, we used existing synopses at the European level (e.g., the MISSOC data on social services: European Communities 2008). Second, we spliced information from national sources together (e.g., the characterization of educational systems by Garrouste 2010). Finally, we exploited our own SHARE data to create variables describing the environment in which people have lived and worked (e.g., features of the work place).

In addition to a common data base, the analyses in this book are also guided by a common theoretical framework linking welfare state interventions to health and employment, taking – as an important innovation – interactions between health and employment into account which is now possible at the micro level due to the very detailed SHARE data (Fig. 1.1).

Some welfare state interventions affect health and employment *directly*. Early retirement, for example, is directly and often immediately influenced by the rules of the pension, disability and unemployment systems. Health is directly affected by the health care systems. In addition, there are long-run interventions of the welfare state – such as education, preventive health care and work place regulations – which have complex *indirect and interrelated* effects over the life course on both health and employment. Preventive health care, for instance, not only increases health but also employment at older ages. High work place standards do not only improve employment at older ages by reducing early retirement, they also tend to enhance physical and mental health.

Finally, welfare state interventions may have accumulative effects over the life-course as each intervention builds upon earlier interventions. Understanding the *accumulation of direct and indirect* welfare state interventions and their

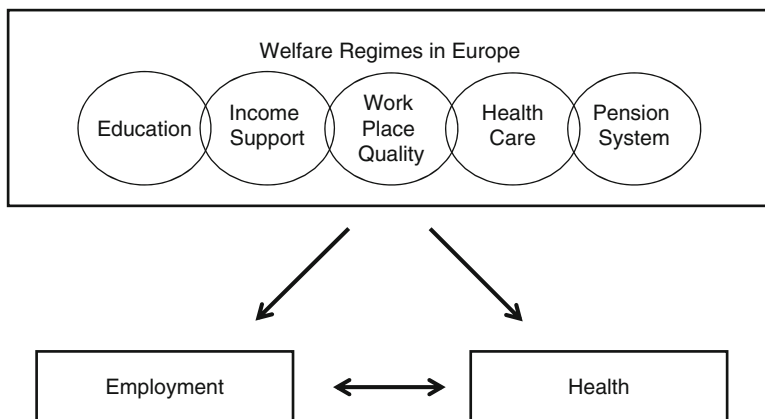


Fig. 1.1 General framework

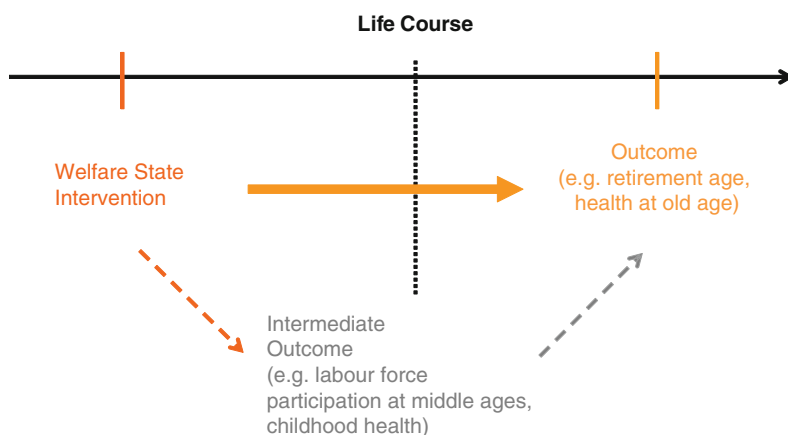


Fig. 1.2 Paradigm 1

interactions over the life cycle in shaping health and employment outcomes is a recurring theme in this volume.

More precisely, the chapters in this book used two common paradigms, depending on the specific mechanism under research.

In paradigm 1, we observe some early or mid-life life welfare state intervention, e.g., education or access to health care, and relate it to later-life outcomes, especially health and/or employment at older ages. In order to isolate the effects of welfare state interventions, we need to carefully correct for other influences over the life course, reaching from childhood health over labour force participation at middle ages to marital status at the time of interview (Fig. 1.2).

In paradigm 2, welfare state interventions modify the influence of early life conditions on later-life outcomes. For example, childhood socio-economic status

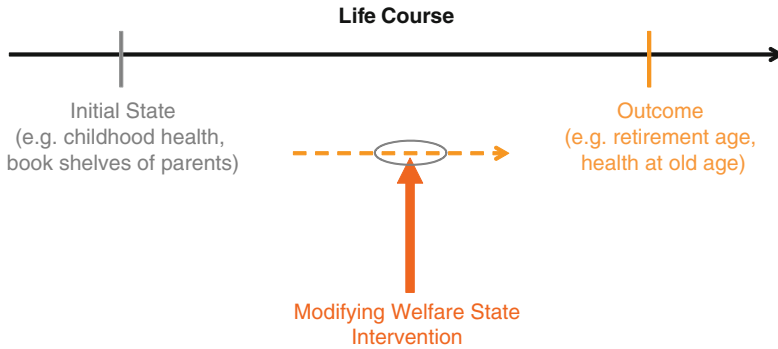


Fig. 1.3 Paradigm 2

is well known to affect later-life health, but the healthcare system in a country may moderate or amplify this inter-temporal link. One benevolent hypothesis to be tested is whether the inter-temporal link is weakened through health-related welfare state interventions by giving extra attention to individuals with a background of childhood poverty. A more cynical hypothesis would claim that state-provided healthcare services will amplify this link because the wealthy have better access to them (Fig. 1.3).

The 23 analyses presented in this book are examples of what the SHARE life history data can uncover, using the above framework. They are kept short and succinct, and are targeted to an audience who wants to see without too much analytical effort how the multitude of welfare state interventions are reflected in the SHARE life histories, and which policy conclusions suggest themselves. We hope that they ignite many more research papers to come.

Some caveats should be kept in mind. First, the analyses in this book are based on the very first data released in spring 2010. They are preliminary in so far as later data releases may correct data errors. Second, since the chapters are kept short and succinct, they cannot employ the full apparatus of modern theory and econometrics, and we therefore apply great care to distinguish associations from causality. Firm policy conclusions, of course, can only be based on the latter. For example, our respondents have survived until the interview. This may create a “survivor bias” since these respondents may be healthier and have been living under luckier circumstances than those who have passed away earlier.

1.3 How the Welfare State Has Shaped Health, Employment and Many Other Aspects of Our Lives at Older Ages

The 23 welfare state analyses are structured by four broad themes. They look at outcomes in later life such as income, housing, wealth, retirement age, volunteering activities, and health status and how these outcomes have been affected by

welfare state interventions such as public spending on social protection – from poverty relief over housing subsidies to maternity support – as well as education policies and access to health care over the life course. Finally, we investigated the long-term effects of a very sad chapter of “interventions” in the early lives of many Europeans, namely persecution, especially during the Nazi and Communist regimes.

1.3.1 Part I: Income, Housing, and Wealth

Poverty is one of the most dreaded events in an individual’s life, and many political ways have been thought of to reduce poverty. Especially poverty at older ages is problematic, as it relates to poorer health, fewer social contacts and bad economic conditions. *Platon Tiniou, Antigone Lyberaki and Thomas Georgiadis* (Chap. 2) look at how childhood deprivation translates into later life poverty. While they conclude that there are persisting effects, i.e. those deprived early on continue to have a higher risk of poverty in old age, they also find that these effects are soothed by welfare state interventions such as *spending on social protection*.

The transition across different socio economic groups is one of the concerns of policy makers. Do children not only inherit their parents’ genes, but also their social status? *Danilo Cavapozzi, Christelle Garrouste and Omar Paccagnella* (Chap. 3) explore this question by relating the parental financial and educational background with educational attainment and income inequality later in life. They conclude that *education policies* fostering access to education and increasing the number of years spent in full time education might qualify as a possible strategy to reduce income dispersions.

The demographic changes make government pension income more volatile and insecure. For this reason, more and more countries aim at increasing the private pillars of old age provision. But how can people be brought into investing, and how is the investment decision determined by differences in the population? This question is tackled by *Danilo Cavapozzi, Alessio Fiume, Christelle Garrouste and Guglielmo Weber* (Chap. 4). They document that age of entry into financial markets varies widely across European countries, with some of these differences relating to income, gender, demographics, and family background. A large part of the variation is also due to human capital accumulation, particularly the accumulation of mathematical skills. The remaining fraction is likely due to institutional differences in access to financial markets. An important policy implication of their analysis is that promoting *better education in mathematics* is likely to reduce differences in access to financial instruments.

Dimitris Christelis, Loretta Dobrescu and Alberto Motta (Chap. 5) investigate in a similar direction: their paper is concerned with how childhood health and cognition relates to the individual’s portfolio choice later in life. Not only is bad childhood health an indicator for fewer investments, the same holds for lack of a usual source of health care during childhood. In addition, performance during school

relates positively to the amount of investments, which leads the authors to stress the necessity of welfare policies to intervene early in life to increase access to health care and improve educational attainment.

Housing market interventions are ubiquitous in Europe. They include social housing supply, rent control, and tax subsidies for homeownership, to name only the most prominent ones. Many housing policies are geared specifically to the older population. What are the side effects to the younger generation in an aging society? *Viola Angelini, Anne Laferrère* and *Giacomo Pasini* (Chap. 6) investigate the “nest leaving behaviour” across Europe, i.e., the age at which individuals leave their parental home. While it is well-known that Mediterranean children stay longer with their parents than Scandinavians, less is known about how that is affected by housing policies. Angelini, Laferrère and Pasini find that *rent control and tax subsidies for homeownership* increase the nest leaving age, while the *provision of social housing* lowers it.

Besides insuring housing consumption, a home may be seen as a secure asset in case of need. It is also a family asset that may be transmitted to the next generation. *Viola Angelini, Anne Laferrère* and *Guglielmo Weber* (Chap. 7) document in their paper the changes in home-ownership rate and age patterns across the European countries and cohorts. They related these changes to *housing policies and credit market development* and show a clear positive relationship between a well developed credit market and the stock of home owners in a country. In addition, the better the housing market, the less likely people are to transfer their housing assets to their kin.

What happens when people are house-rich but cash-poor? This issue is looked at by *Viola Angelini, Agar Brugiavini* and *Guglielmo Weber* (Chap. 8), using price data on home purchases and sales. They argue that the importance of trading down as a form of equity release depends on *financial and mortgage markets access*, as well as on the availability of public housing and long term care accommodation. In most European countries financial instruments that allow equity release are unavailable, and cheap public housing is scarce, so trading down is the only way to generate a cash flow out of the available home equity. They show that in those countries where mortgage markets are less well developed, lower fractions of home-owners trade down by selling and buying, and higher fractions of home-owners report financial distress, suggesting that to avoid illiquidity for the elderly across Europe, developing mortgage markets is imperative.

Wealth in later life is typically negatively influenced by family events such as divorce. This effect depends on *divorce laws* which differ across Europe. *Caroline Dewilde, Karel Van den Bosch* and *Aaron Van den Heede* (Chap. 9) investigate how marital separation influences later life wealth, a question particularly important as divorce rates are increasing all over Europe in recent years. They find a negative effect over all European countries for divorced women who have remained single. This can be taken as evidence that although women have become more independent through the years, especially the group of today’s elderly women are vulnerable to separation from the husband they economically depend on.

1.3.2 Part II: Work and Retirement

Martina Brandt and *Karsten Hank* (Chap. 10) investigate the so-called “scarring effects” of early unemployment on later life employment opportunities. Welfare state interventions, one would hope, should minimize these effects in order to prevent downwards spirals. Their analysis provides clear evidence for scarring effects even among older workers, though. Differences in individuals’ unemployment risks across welfare states suggest that *labour market institutions and educational systems* bear in them the potential for significant (positive and negative) interventions affecting people’s employment opportunities across the entire life course.

Active labour market policies aim to keep unemployment spells short and labour mobility high, in order to maximize earning capabilities over the life course. However, retirement outcomes are open to debate: one position states that the policies should be reflected in higher retirement income replacement rates, while the other side argues that the Anglo-Saxon model of high job mobility creates low paid jobs and thus lowers pension income. *Agar Brugiavini, Mario Padula, Giacomo Pasini and Franco Peracchi* (Chap. 11) shed light on this debate. They do not find a direct translation of job mobility into cross-country differences in retirement income, provided it is tempered by policies that limit long-term unemployment.

Antigone Lyberaki, Platon Tinios and Georgios Papadoudis (Chap. 12) document the complexity of women’s employment patterns and how these have been shaped by the interaction of individual family experiences with specific welfare state institutions, such as *employment protection and maternity leave regulations*. In younger cohorts, and almost everywhere in Europe, more women exhibit adaptive careers, leaving and re-entering the labour market. The family-work patterns, which used to follow very polarized patterns, thus have somewhat converged, and welfare state policies are shown to have played an important role in this still ongoing development.

One aim of maternity leave provisions is to make sure that maternity does not precipitate a permanent exit from the labour force. Does this welfare state intervention achieve this aim? *Agar Brugiavini, Giacomo Pasini and Elisabetta Trevisan* (Chap. 13) compare the labour market participation of women in countries with different *maternity leave provisions*. They then evaluate the resulting retirement income replacement rate which can be interpreted as a measure of life-time earnings. The results by Brugiavini, Pasini and Trevisan are sobering in so far, as countries with generous maternity leave provisions have higher exit rates and lower retirement income replacement rates.

The implications of childbearing history for individuals’ labour force participation in later life are not well-investigated yet. *Karsten Hank and Julie Korbmacher* (Chap. 14) investigate how men’s and women’s entry into retirement is associated with parental status and whether this varies across *welfare regimes (with different employment opportunities and pension entitlements for parents)*. They find that mothers are more likely than childless women to exit the labour force early, whereas

fathers tend to retire later than other men. The association between childbearing and earlier retirement appears to be particularly strong among women living under a social-democratic or post-communist welfare state regime, that is, in countries exhibiting relatively high levels of female labour force participation.

Avoiding early exits from the labour force is an important policy goal in the European Union. The association between quality of work, health, and early retirement is investigated by *Johannes Siegrist* and *Morten Wahrendorf* (Chap. 15), who also look into the potential role of labour market and social policies in mediating this association. A main finding is that quality of work was generally higher in countries with pronounced *active labour market policies, such as training programmes for older adults*. Similarly, continued employment into old age was more prevalent in countries with high expenditures *in rehabilitation services*.

Older people may contribute to society in productive ways even after retirement, e.g. as volunteers. *Morten Wahrendorf* and *Johannes Siegrist* (Chap. 16) show that elders' propensity to serve as a volunteer today is negatively associated with poor mid-life working conditions, stressing the need to take a life course perspective. Moreover, the authors find the extent of volunteering in early old age to be influenced positively by *policy measures aimed to improve the quality of work and employment*, the extent of *lifelong learning* and the amount of resources spent on *rehabilitation services*.

1.3.3 Part III: Health and Health Care

Does unemployment cause bad health or does bad health lead to unemployment? *Mathis Schröder* (Chap. 17) investigates the association between unemployment and long-term effects on health, using information on business closures to have a causal relationship between unemployment and health. He finds negative health effects of unemployment even up to 40 years after the business closure. In an additional analysis he explores whether the welfare state can mitigate some of the effects of unemployment on health, and finds that especially for women, there are strong positive effects of *unemployment benefits* on long-term health.

In most European countries, long-term illness is associated with earlier exit from the labour market. This well known – but can higher public health investments ameliorate this association? This is the key question posed by *Mauricio Avendano* and *Johan Mackenbach* (Chap. 18). Their results do not generally suggest a strong correlation of the level of public health investments with the prevalence of long-term illness. However, they find that investments in curative health care are strongly (and negatively!) associated with the prevalence of long-term illness. They also find that larger investments in unemployment benefit programmes are associated with a larger impact of illness on labour force participation, suggesting that higher unemployment benefits may potentially work as incentive towards earlier exit from the labour market due to illness.

Disability insurance is an important part of the European welfare state. It insures individuals who are unable to work due to physical or mental health problems at relatively early stages in life against falling into poverty. Striking, however, is the huge variation of individuals receiving disability insurance across Europe. *Axel Börsch-Supan* and *Henning Roth* (Chap. 19) exploit the health histories in the SHARELIFE data to understand whether these international differences are due to bad health at childhood and/or long-term health problems during adult life. While life-course health problems do indeed increase the odds of receiving a disability pension within each country, they do not explain the large international variation. Börsch-Supan and Roth explain this variation with differences in the generosity of the *national disability insurance programmes*.

Adverse selection is still one of the largest problems in the health care markets all over the world. *Philippe Lambert, Sergio Perelman, Pierre Pestieau* and *Jérôme Schoenmaeckers* (Chap. 20) investigate if there is a relation between health risk and insurance coverage, thereby uncovering possible adverse selection. They measure health risks through life course variables such as childhood health and long lifetime illnesses. They relate this to *the health insurance coverage*, but find little evidence of adverse selection across the SHARELIFE countries. Although this may be suggestive to not take policy actions, they argue that further work is needed to actually claim that.

Health as an adult is always related to health care and accessibility of health care throughout one's life. Specifically *dental care* is an important aspect of our daily life, which has changed considerably over the last 50 years. *Brigitte Santos-Eggimann, Sarah Cornaz* and *Jacques Spagnoli* (Chap. 21) take into account the density of dentists when investigating how much dental care older Europeans have received throughout their lives. They report a clear cohort effect – older Europeans suffered more from undercoverage of dental care, although rates are decreasing over the life span. The direct policy implications seem to already be in place – a higher density of dentists will lead to better use of care and improve well-being in later life.

Nicolas Sirven and *Zeynep Or* (Chap. 22) take a more general view on the problem by looking a wide array of *preventive health care measures*, e.g. *blood pressure tests, vision tests, or mammograms*. They report a shift toward more regular care among all countries, however, differences remain between countries and social classes: the higher the education, for example, the higher the propensity to engage in preventive care. Relating the tests to density of doctors, they obtain a similar result as the previous paper: the more the better. Given the dispersion of medical expertise in Europe, these results suggest that there is significant room for public health policies for reducing disparities in regular use of health services within and across European countries.

The question of how childhood conditions affect later life does not only apply to education or social class, but also – and maybe even more so – to health. In the current light of increasing health care costs across the world, this may be especially important. In their paper, *Karine Moschetti, Karine Lamiraud, Owen O'Donnell* and *Alberto Holly* (Chap. 23) show that poor health, parental smoking and limited

access to health care during childhood are associated with greater utilisation of, and payments for, health care in middle and old age. Interestingly, the association operates mainly through reduced health in adulthood, and less through socioeconomic status. The results are suggestive for policy: improving childhood health in populations now will lead to future cohorts costing less in old age than do their current counterparts.

1.3.4 Part IV: Persecution

The SHARE generation in Europe has experienced many major historical events – among them World War II and the rise and fall of the Communist regimes. However, the population affected by these events is rapidly shrinking, as age takes its toll. In this sense, *Radim Bohacek* and *Michał Myck* (Chap. 24) provide us with a unique analysis: they look at the consequences of *persecution* on people's life, especially on their health and employment careers. They find – even now – strong effects for those who have suffered from persecution and come to the conclusion that while thankfully, in today's Europe, persecution is absent, all the more effort needs to be taken to protect those in other countries suffering from it.

1.4 Conclusions

The SHARE life histories have provided a fascinating account of the life in Europe over the past century. While this century was characterized by wars and oppression, as the last chapter has shown, it has also generated dramatic changes in the extension and influence of the welfare state on individuals' lives. They have, arguably, improved our lives tremendously, and this is reflected in our life histories. First and foremost, health has become much better and life expectancy increased to an extent unprecedented in history. Education has vastly improved. Employment patterns have changed with an enormous increase in female labour force participation and generally later entries into the labour force combined with earlier exits.

The main challenge for the 23 analyses in this book was therefore to isolate specific effects generated by the welfare state in an environment in which many life circumstances dramatically changed. Many of these analyses were indeed able to identify significant and quantitatively important effects of welfare state interventions on later-life outcomes. Education policies, e.g., achieve quite clearly higher retirement incomes and better health in old age. We also find some evidence that long-term policies such as health prevention and life-long learning had positive effects on activity levels and health in old age.

Other analyses find, also quite strikingly, no or ambiguous effects. One example are active labour market policies which do not seem to have influenced labour mobility to an extent that results in higher life-time incomes. Another example were

maternity benefits which apparently have reduced rather than increased life-time income and thus resulted in lower public pension benefits to women who have received maternity benefits compared to other women with children. Further research will have to sharpen the analysis until final conclusions can be drawn; in particular, they have to investigate potential counteracting mechanisms.

Some of these findings will be controversial. Some are certainly preliminary and require the apparatus of a more refined statistical methodology. Hopefully, the 23 analyses will inspire our readers to follow up our work with their own analyses by using the SHARE data, especially the newly collected life histories.

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