

Policy challenges of population aging: the Netherlands

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Abstract

The paper presents and discusses the major challenges policy makers in the Netherlands face as a result of an ageing population. The social security challenge depends only indirectly on the proportion over 65, the old-age dependency ratio, or the life expectancy at 65; it depends directly on how people live and organize their lives. I argue that the public debate and the reforms should emphasize and promote *life cycle risk management*. Modern life cycle risk management is not restricted to payments and benefits (financial capital), but encompasses physical capital (e.g. home equity), business capital, human capital (education and health) and social capital (social support networks). It distinguishes several life contingencies and involves all domains of life. In the paper, the life cycle risk management perspective is operationalized by following two fictitious individuals growing up and growing old in the Dutch welfare state.

1. Introduction

The *retirement time bomb* and the *health care crunch* are expressions that indicate the public concern for an ageing population and a sense of urgency. Many fear that an ageing population leads to the collapse of the welfare state because the lack of financial sustainability of social policies. They also point to the risks and uncertainties involved and our limited ability to deal with losses, in particular losses of what we consider to be acquired rights. Traditional risk sharing mechanisms are based on many contributions and few payments. When contributions decline and payments increase, the risk sharing mechanism collapses. It is not of primary importance who manages the risk sharing (the public sector through a social security programme or the private sector selling insurance products or implementing social security programmes for the public sector), how contributions are collected (through premiums or taxes), whether participation in risk sharing is voluntary or mandatory, and whether the contributions are accumulated (and invested) to cover payments later (capitalization scheme) or used to cover current payments (pay-as-you-go scheme). Of prime importance for any scheme that involves the transfer of risk to other individuals, institutions or the collective and the payment of a compensation or premium is the actuarial principle that the current value of payments equals to the current value of contributions. That is where the uncertainties come in and the risks need to be managed. It is the main concern of a pension fund worrying about its solvency and an individual concerned about outliving his money. It is also central to the question of how much risk sharing there really is in social security programmes and other programmes designed to share risks. Studies show that social security and taxation

schemes offer financial protection more by life cycle smoothing than by redistribution between individuals (Falkingham et al., 1993; de Mooij, 2006, p. 124)¹.

In this paper I argue that life cycle risk management should occupy a more central place in the public debate and the political process. The discussions may benefit from a wider use of the actuarial principle to clarify the distribution of risks in social security and private insurance schemes and the redistributions that are implicit in these schemes. Life cycle risk management should however not be restricted to the payment of taxes and premiums and the accrued financial rights or the accumulated financial capital. Modern life cycle risk management incorporates different types of wealth: physical capital, business capital, human capital and social capital. It also distinguishes several life contingencies and considers accumulation and de-accumulation stages of wealth. The most important physical capital that people accumulate in their life is home equity. That capital may be used as a safety net and to cover expenses during the last stage of the life course when long term care is required, at least in countries where elderly long-term care is not a collective duty (Davidoff, 2010). Business capital is accumulated in the ownership of a successful business. Human capital is accumulated by training, either formal education or informal training on the job, and maintaining a good health. Social capital is the extent to which one can rely on members of a social network for assistance and support in case of adverse events and periods in need. The support goes from instrumental aid and the sharing of resources to emotional support and guidance. A focus on the accumulation and de-accumulation of capital during the life course provides an innovative approach to social protection schemes that are comprehensive (include different domains of life) and sustainable. People may substitute one type of capital for another. For instance persons with adequate social capital may have guaranteed social support when in need whereas persons who lack social capital must purchase support from the formal care sector. Some people purchase long-term care insurance whereas other people rely on reverse mortgages to pay for long-term care expenses. An unforeseen loss of capital is a risk that needs to be managed. It can be the loss of health, source of income, home equity or social network. Life course risk management involves all domains of life.

The structure of the paper is as follows. In section 2 I give a brief overview of the Dutch welfare state from a life course risk management perspective. A major trait of the current reforms is a transfer of risks from the collective back to the individual, while maintaining a safety net to accommodate catastrophic expenditures. That trait is not unique to the Dutch reforms; it is a global feature of reforms. It results in a system of individual accounts. Reforms differ in the instruments used to transfer risks from the collective to the individual, the risks covered by pre-funded social insurance schemes, and the residual risks carried by the collective, i.e. the degree of solidarity. Welfare programmes smooth out income over the life cycle, tame risks by risk sharing mechanisms and redistribute funds between the haves and the have-nots. Section 3 I adopt a life-course perspective on social policy and consider individual life planning in the presence of a multitude of public welfare policies and programmes as a life-course risk management project. Section 4 concludes the paper.

¹ A study of the Netherlands Bureau of Economic Policy Analysis suggests that between 60 and 80 percent of the welfare state actually concerns intrapersonal reallocation of income over the life cycle, rather than redistribution between rich and poor (de Mooij, 2006, p. 137).

2. The Dutch welfare state

The aim of social security is to provide a guaranteed income for all those for whom it is not possible, or no longer possible, to support themselves independently by working. The underlying principle is that people who are afflicted by job loss, health hazard or old age, must be put in a position to exercise their political and civic rights on an equal footing. The main social security programmes cover unemployment, illness and disability, and old age. In addition, there is a safety net, the Work and Social Assistance Act (WWB), for persons who do not qualify for the other social programmes or are entitled only for a benefit too low to live a decent life. All persons legally residing in the Netherlands and all persons who work in the Netherlands and pay income tax are insured under the National Insurance Schemes. People residing in the Netherlands illegally have no entitlement to national insurance and welfare benefits. The money required to do this is generally provided by the working population on the basis of the philosophy of solidarity or shared risk. Social security in the Netherlands can be subdivided into social welfare benefits (*sociale voorzieningen*) and social insurance benefits (*sociale verzekeringen*). In addition, there are other arrangements which by tradition are not classed as social security but which provide financial assistance, such as the housing subsidy or statutory funding of higher secondary and university education. Social welfare benefits are intended as a basic provision and are means-tested. They supplement insufficient (family) incomes, bringing them up to the minimum guaranteed income level for a particular domestic situation². The social provisions include the Work and Social Assistance Act (WWB)³, Work and Employment Support for Disabled Young Persons Act (Wajong), the Act on Income Provisions for Older or Partially Disabled Unemployed Persons (IOAW), the Act on Income Provisions for Older or Partially Disabled Formerly Self-employed Persons (IOAZ), Regulations governing Contributions towards the Upkeep of Disabled Children living at Home (TOG) and the Work and Artist Income Act (WWIK). They are financed from government funds. The WWB Social insurance is primarily funded from the contributions paid by employees, and the system is compulsory: all employees are automatically insured and also pay a contribution. Two types of social insurance exist: national insurance (*volksverzekering*) and employee insurance (*werknemersverzekeringen*). National insurance applies to all residents of the Netherlands; benefits are not related to pay and comprise the state old-age pension (AOW), survivors' pensions (ANW), child benefit (AKW) and benefit under the General Act on Exceptional Medical Expenses (AWBZ). All employees are compulsorily insured under the insurance schemes for employees. Benefits are related to the pay. Benefits are received in the event of loss of pay because of illness (after

² In all social security legislation, two unmarried persons living together are ranked on a par with married couples. This also applies to two brothers or sisters who live together and to a grandparent and a grandchild who live together. Married persons who are permanently separated are also regarded as single persons, unless they live with someone else.

³ The WWB was introduced on 1st January 2004. It replaces the National Assistance Act (ABW) (*bijstand*), which was introduced on 1st January 1965 with major changes introduced in 1996. The ABW was a social provision for financial support to people who did not have the means to support themselves. In the Dutch social security system it is the last recourse. The ABW replaced the Poor Law (*Armenwet*), which was introduced in 1854, following article 195 of the Constitution of 1848, with minor changes in 1912. In the early law churches and private institutions were responsible for helping the poor. In the ABW it became the mandate of the government.

two years), permanent disability (WAO and WIA) and unemployment (WW). On 29 December 2005, the Disability Insurance Act (WAO) was replaced by the Work and Income according to Labour Capacity Act (WIA). The Health Care Insurance Act (ZVW) regulates health insurance to cover the costs of medical care. The current act came into effect on 1st January 2006. By virtue of the ZVW, everyone in the Netherlands is obliged to take out health insurance. The government determines the contents of the basic package. In addition, it is possible to take out supplementary healthcare insurances on an individual basis. Insurers are required by law to accept anyone who registers for the basic insurance. Insurers are compensated by the state if their recruitment area includes a concentration of high-risk cases. The amount of the fixed (nominal) healthcare contribution is not determined by public authorities but by the healthcare insurers. The monthly contribution can therefore differ per insurer. No contribution is required for children under the age of 18. In addition to the contribution to the healthcare insurer, an income-related contribution is paid to the government. This contribution is automatically withheld from wages/the benefit by the employer or benefits agency, but is also, in large part, reimbursed by them. Persons with a low income are eligible for an allowance (the care allowance) to be paid by the tax authorities. The AWBZ is a National Insurance Scheme against the risk of exceptional medical expenses (catastrophic health expenditures) for which people cannot be insured on an individual basis. Everyone who resides or works in the Netherlands has AWBZ insurance and is entitled to AWBZ care reimbursement. AWBZ insurance provides cover against major medical risks not covered by the healthcare insurances. An example in this respect is admittance to an AWBZ institution (such as nursing and care homes), including receipt of the necessary care. An insured party automatically receives AWBZ insurance from its healthcare insurer. The healthcare insurers have delegated the administration of AWBZ insurance to regional healthcare offices. The AWBZ contribution is income-related and is withheld from wages or benefits by the employer or benefits agency respectively. The social security legislation is implemented by several institutions, the most important being the Social Insurance Bank (SVB) (www.svb.nl) and the Institute for Employee Benefit Schemes (UWV) (www.uwv.nl).

Statistics Netherlands (CBS) estimates the cost of social protection in 2009 at €169 billion, which is about 30 percent of the national income or 10,000 euro per capita⁴. The cost of social protection increased steadily from a little over € 90 billion in 1994 to the current € 169 billion. In 2009, the health expenditures amounted to 56 billion euro and the expenditures for state pensions (AOW and ANW) was 58 billion. The expenditures for state pension (AOW) amounted to 28.2 billion euro in 2009, whereas the total contributions were 17.2 billion euro. The difference was paid by the state from general revenues (see later). State pension reforms are aimed at a sustainable old-age pension system. A number of instruments exist to increase the financial sustainability. One is to increase the retirement age. By increasing the age at retirement, the working population pays contributions longer and receive benefit for fewer years. The government estimates that an increase in retirement age from 65 to 67 reduces the pressure of AOW on the state budget by 4 billion euro per year (Ministry Social Affairs, 2010). The current government proposal is to increase the retirement age from 65 to 66 on 1st January 2020 and to 67 on 1st January 2025. On 4th

⁴ Population in September 2010: 16.7 million.

June 2010 the Social Partners (employers and employees) reached an agreement to increase the retirement age 66 and to make the retirement age flexible. Retirement before the age of 66 implies a lower state pension (6.5 percent reduction). Retirement after the age of 66 implies a higher pension (6.6 percent per year postponement). They also agreed that, starting in 2011, pensions schemes are responsive to changes in the life expectancy. The decision is left to the next government.

The welfare state (social security) is under a number of threats (see e.g. Pestieau, 2006). Some are related to information, other to financing. Moral hazard and adverse selection belong to the first class of threats. Moral hazard exists when, in the presence of protection schemes (e.g. social security and insurance), people alter their behaviour, e.g. reduce self-efficacy. The behavioural change may result in eligibility for a protection programme or a change in risk level in an insurance programme. It may result in a culture of benefit dependency, which undermines the protection scheme. Adverse selection arises in voluntary insurance programmes, when those at high risk sign up and those at low risk do not (opt for self-insurance). The answer to adverse selection is to make participation in protection programmes compulsory. Systemic risks (also referred to as aggregate risks and social risks) belong to the second category. They are too big to insure. A war and a natural disaster are examples. Reinsurance is an outcome. An ageing population is a systemic risk of the welfare state if eligibility for social protection is determined by age rather than means-testing or another form of needs assessment.

In *Reinventing the welfare state*, the Netherlands Bureau for Economic Policy Analysis (CPB) lists four reasons why the Dutch welfare state is under pressure (de Mooij, 2006). First, public expenditures on pensions and health will rise in the light of ageing while the tax base is being eroded because of a.o. globalization. Second, skill-based technological change deteriorates the position of low-skilled workers on the labour market. International economic integration increases the pace of that process. Third, welfare state institutions are slow to adapt to new realities, such as individualization, smaller families, increased labour force participation of women and lives that have become less predictable, less collectively determined, less orderly, more flexible and more individualized, in short life courses that have become de-standardized (Brückner and Mayer, 2005). The slow response undermines the legitimacy of welfare institutions. Fourth, the welfare state creates sustained inactivity among a number of groups. The CPB names social benefit recipients, elderly workers, low-skilled people, and women. These reasons indicate that people change their lives in response to intrinsic and contextual factors relatively rapidly and that the public institutions that provide social protection by generating and redistributing income are not equipped to change at a comparable pace. In addition, the institutions may not be adequately equipped to deal with problems of non-compliance and moral hazard. The institutions include programmes for pensions, disability, survivor and unemployment insurance, sickness insurance and perhaps even education.

3. Life-course risk management

The welfare state is designed predominantly to deal with life-course or life-cycle risks, i.e. the risks associated with life contingencies. Life contingencies are random events that have major impacts when they occur and the impact is usually a loss with long-term consequences. The financial impact is only one of the consequences. Other losses may relate to the ability to function independently or to participate in society.

The loss of a social network and the loneliness that results may also be serious consequences of life events. The welfare state addresses mainly the financial consequences whereas institutions of civil society, such as community organizations and the church, and family members, neighbours and friends (social network) address the other consequences. In some instances different providers of assistance share responsibility, i.e. share risks. The Netherlands has 1 million paid caregivers and an estimated 2.4 million persons care for others for more than 8 hours per week or a duration of more than 3 months without being paid (WRR, 2006). The boundary between formal and informal care is becoming fuzzy because the formal and informal sectors are becoming more complementary. The availability of a Personal Budget provided by the state, introduced in 1995 and currently part of the Social Support Act (WMO) introduced in 2007, enables caretakers to purchase care from the formal or informal sector, including family members. Since 2003 patients can decide themselves whether they opt for a Personal Budget or use regular care. The Personal Budget aims at empowering those in need of care and offers informal caregivers recognition via wages (Kremer, 2006). The interest in the programme exceeded expectations and the budget is insufficient to cover the demand.

In this paper I adopt the perspective of an individual citizen in the welfare state. The approach is inspired by Hicks (2007, 2008) who developed the Olivia framework to document the interface between social policy and individual citizens and to document the interaction of individuals and families with social policies, and to obtain insight in how these interactions vary over the life cycle. Olivia is a fictitious individual, a case study developed to assist in the analysis of social and labour market conditions and policies and their impacts on people. In a recent article, Marshall and McMullin (2010) trace back the antecedents of the life course perspective in public policy to Rowntree (1901), who introduced the perspective in an attempt to understand the persistence of poverty in England. Rowntree found that poverty was most prominent in three stages of the life course: early childhood, childbearing years and old age. The life course consists of stages separated by transitions. Differences in sequences and timing of transitions give rise to a multitude of life courses. Transitions are outcomes of choice and chance (life contingencies). Risk management involves the identification of unwanted transitions or events, preventive strategies that reduce the likelihood of unwanted events and insurance against losses incurred once an unwanted event occurs. Life-course risk management is based on the premise that people are adequately informed to determine the likelihood of events and the nature and magnitude of their consequences. The aim of the description is to illustrate the individual life-course perspective and the difficulties of quantifying risks and their consequences in an ageing society.

For ease of presentation, I consider two fictitious individuals, a boy and a girl, Oliver and Olivia. They live in a welfare state, contribute to welfare programmes, such as old-age pensions and universal health care insurance during certain stages of their life, and benefit from the programmes during other stages. The contributions and benefit schemes have a triple purpose: to smooth out income over the life course, to tame risks by sharing it and to exercise solidarity. Oliver and Olivia do not know what part of their contributions or benefits is smoothing out income, taming risks or solidarity because the information provided by the welfare state and its institutions does not allow it. That surprises them because research shows that when a clear relation exists between contributions, through taxes and premiums, and accrued rights and benefits,

the contributions have fewer distorting effects on the functioning of the welfare state (Goudswaard et al., 2006). Oliver and Olivia enjoy the welfare state and are concerned about its sustainability. They believe that the public support for the welfare state and its institutions depend on being able to make informed choices. Being rational persons they like to manage their own risks in the context provided by the welfare state. They perceive inadequate transparency, however, as hindering informed choices and as a barrier to fully participate in the system (Rubenson and Desjardins, 2009).

Suppose Oliver and Olivia are born in 2010 in the Netherlands. Social support is always near, from cradle to grave. Throughout their life support is available, although at varying degrees. Support is provided by a range of institutions of the welfare state, by community organizations, and by the social network. Support is generally affordable because the collective pays part of the cost, in cash or kind. Oliver and Olivia learn that in order to receive support they must be eligible, which means that they must meet certain conditions. Their social network is an important source of information on what these conditions are. The internet is another significant source.

When Oliver and Olivia get involved in life-course risk management, the first question to answer is: how long do they live? The length of life depends on many factors such as the genetic constitution, lifestyle, living conditions, random events and other intervening factors. Some genes are beneficial and enhance longevity. For example, a FOXO3A gene can triple the chances of a person living past 100. Some genes interact with lifestyle and it is the combined effect that determines the length of life. Oliver and Olivia are therefore likely to live longer if their parents and grandparents survive to old age. If they are born in a family with a history of heart disease, they are at elevated risk. If they are born in a poor neighbourhood with substandard housing, they live shorter lives, suffer more impairments and suffer them longer than those born in upper-class neighbourhoods. If Oliver and Olivia ever smoke, their expected lifetime declines substantially, by about seven years. Because of the substantial life shortening effect of smoking, the expected number of years with chronic diseases and disability also declines (Mamun et al., 2004; Reuser et al., 2009). If they do not watch their weight and become obese, irrespective of whether the cause is genetic constitution, early life experience or lifestyle, Oliver and Olivia will spend more years with disability than persons with normal weight. Obesity plays a major role in disability at all ages and increases health care costs more than smoking or drinking (Rand, 2007). Mild obesity at higher ages (55) shortens disability-free life expectancy by 3 years for males and more than 4 years for females compared to persons with a normal weight. Severe obesity (Body Mass Index over 35) shortens the disability-free life expectancy by 6 years for men and 8.4 years for women (Reuser et al., 2009). The effect of obesity on disability and mortality is an active area of research (Ferruci et al., 2009). Oliver and Olivia are disabled if they need help with at least one of the basic activities of daily living (ADL) (walking, bathing, dressing, toileting, and feeding)⁵.

⁵ ADL disability differs from disability defined in terms of Instrumental Activities of Daily Living (IADL). The IADL are basic activities that someone must be able to perform in order to live independently in a community. They include doing light housework, preparing a meal, shopping, managing money, etc.

If they are given the opportunity to attend and complete higher education, Oliver will live about 7.3 years longer than his contemporaries who leave school after primary education and Olivia 6.4 years (RIVM, 2010). The life expectancy is 74 years for men with lower education and 81.3 years for men with higher education. For women it is 78 years and 84.4 years, respectively. The difference in life expectancy at birth by level of education has not changed much since 1997. The differences also persists throughout the life course. When they reach 65, Oliver may expect to live another 16.9 years if he had completed lower education and 17.5 years if he finished higher education (16.6 years on average). For Olivia the life expectancy at 65 is 18.2 years if she completed lower education and 21.4 years if she finished higher education (20.0 years on average). At 65, men with higher education outlive men with lower education by 5.9 years. For women the figure is 5.7 years.

In the year Oliver and Olivia are born (2010), close to 200 thousand children are born in the Netherlands (185 thousand in 2009). Most are born to mothers with medium and low education, for two reasons. First, there are more women with medium or lower education. Of women born in 1965-79, a little over 50 percent have medium education, a little over one out of five has lower education and the rest (27 percent) has higher education. Second, women with higher education are more likely to remain childless (currently 27 percent of women aged 45+) compared to women with low education (10 – 15 percent). Women with higher education who do have children, have about the same number of children than women with medium or lower education. For details, see van Agtmaal-Wobma and van Huis (2008). The size of birth cohorts and their socio-economic composition are important variables in welfare state reforms. What is good for an individual may have counterintuitive effects on society. For instance, although smoking cessation is desirable from an individual and public health perspective, smoking cessation leads to increased health care costs because non-smokers live longer, but spend also more years with disease and disability (Barendregt et al., 1997). Using the Chronic Disease Model developed by the National Institute for Public Health and the Environment (RIVM) and Dutch Costs of Illness data, Rappange et al. (2009) come to the counterintuitive finding that a prevention of obesity will result in substantial additional costs for long-term care with important consequences for the sustainability of the health care system.

How long will Oliver and Olivia live? The scholarly literature gives conflicting signals making it quite difficult to predict the length of life, which is a basic first step in life-course risk management in a welfare state. The length of life depends on a multitude of factors. The impact of genetic predispositions, lifestyle factors and living conditions on the life expectancy remains poorly understood. Olshansky et al. (2005) predict that in the United States the rise in life expectancy will soon come to an end because of the *obesity epidemic*. Oeppen and Vaupel (2002), on the other hand, defend the claim that the life expectancy is not approaching its limit but will continue to increase because over the past 160 years life expectancy in “record holding countries” increased at a pace of almost 3 months per year. Recently, Christensen et al. (2009), in an article co-authored by Vaupel, assert that half of the children born today in countries with high life expectancies may expect to live beyond age 100. The figure is based on evidence and educated guesswork. In the most recent (2009) life table of Japan, which has the highest life expectancy in the world, only 1.8 percent of males and 7.8 percent of females live past 100 years. That means that with the mortality level of 2009, few would survive to past 100. To come to their assertion, the authors make relatively strong assumptions about continued mortality decline. The 50

percent survival assertion is more than 10 times greater than the current figures of Japan.

The Netherlands is not part of the group of the “best practice life expectancy” countries. Based on the mortality data of 2009, 1.2 percent of males and 3.6 percent of females may expect to reach between 98 and 99 years. The life expectancy is 78.3 years for males and 82.3 years for females. It is only slightly (0.5 years) higher than the life expectancy in the 15 (Western) countries of European Union. Will the Netherlands do better in the future? Instead of looking at the current survival data we must look at projected survival probabilities and the associated life expectancy. The projections include assumptions about changes in lifestyle, living conditions and health care. Both Statistics Netherlands (CBS) and the National Institute for Public Health (RIVM) project the life expectancy. Statistics Netherlands (CBS) expects that in 2050 the period life expectancy (i.e. the life expectancy based on age-specific mortality rates in 2050) will be 83.2 years for males, about 5 years higher than the 2008 figure, and 85.5 years for females, a little over 3 years higher. The RIVM expects a little higher increase for males (to 83.8 years in 2050) but a considerably higher increase for females (to 88.1 years). The difference is due to different assessments of the effects of lifestyle factors, in particular smoking. The proportion of the population smoking is 27 percent, only a little higher for males than for females. In the late 1950s almost all males and about 30 percent females were smokers. Smoking is an important lifestyle factor to explain the lower life expectancy in the Netherlands than in the surrounding countries. Refrain from smoking is an important message for Oliver and Olivia if they would be born in the Netherlands. How long will Oliver and Olivia live? If we adopt the RIVM expectation that life expectancy will increase about 6 years in a little over 40 years and assume that the gain continues throughout this century, then Oliver and Olivia may expect to live about 12 years longer than the survival probabilities of the 2009 life table indicate. Hence Oliver’s life expectancy is 90 years and Olivia’s 94 years. This illustrates a key feature of ageing populations; namely, that children born today live considerably longer than the life expectancy today indicates. The life expectancy today is based on contemporary mortality patterns, whereas the expected lifetime of children born today is based on mortality patterns in a distant future. That feature leads to an important policy issue. If pension benefits depend on the life expectancy, as is the case in several countries and may soon be the case in the Netherlands, what life expectancy should be used: the period life expectancy, which is based on contemporary empirical evidence, or the cohort life expectancy, which is based on evidence and educated guesses? In the Netherlands the intention is to link pension benefits to the period life expectancy at 65, adjusted for the difference between period and cohort life expectancy. The adjustment implies an addition of 0.85 to 1.15 years to the period life expectancy (CBS, 2009). The impact of the life expectancy at 65 or the retirement age on the annual pension after retirement depends on the calculation of the annuity divisor. In the Netherlands the details are not known yet.

To predict their life expectancy, e.g. to determine their pension, Oliver and Olivia must account for their smoking behaviour. But there is another, puzzling factor. Whether they smoke or not, they live shorter lives than their contemporaries in neighbouring countries, if past evidence is extrapolated in the future. That is particularly the case for Olivia and less for Oliver. Since 1980, the life expectancy in the Netherlands stagnated whereas it continued to increase in other countries of Europe. To explain that astonishing observation, scientists pointed to the high

prevalence of smoking, in particular among women. But in 2002 the life expectancy started to increase again and gained a momentum that was highly unexpected. In a recent study by the U.S. National Research Council Panel on Understanding Divergent Trends in Longevity in High-Income Countries, Mackenbach and Garssen (2010) propose the hypothesis that the recent increase is related to the more and better care since the beginning of the 21st century. The recent official public health forecast, issued earlier this year, underlines the plausibility of that hypothesis by pointing to research showing that at least half of the increase in life expectancy in the second half of the 20th century can be attributed to medical care and prevention (RIVM, 2010, p. 16). At the turn of the century, the Netherlands was confronted with long waiting lines in the health care sector. The public unrest resulted in additional public funds resulting in a rapid decrease of the waiting lines. The impact of the health care system on the life expectancy is one of the effects that are not well understood because of inadequate data and research.

Oliver and Olivia are likely to grow up as only child or with one brother or sister and with mother and father employed. It is also likely that the mother or both the mother and father work part-time while the children are not yet in school. In the Netherlands, the majority of women have a job, but most work part-time. In the Emancipation Monitoring Report 2008 (data 2007), the Netherlands Institute for Social Research (SCP) (2009) reveals that among couples with children at home, more than half (53 percent) have one partner working full-time and one working part-time and 7 percent work have both partners working full time. Among couples without children at home, 40 percent have both partners working full-time and 37 percent have one partner working full-time and the other working part-time. Among women below 35, less than half (40 -44 percent) work full-time. That proportion declines after 35 and when there are children, women further reduce the hours worked. The popularity of a part-time job in the Netherlands is related to children, but it is also a result of other factors.

At age four or five Oliver and Olivia enter school. Oliver has a 4 percent chance to drop out of school without a degree before his 23rd birthday. Olivia is a little less likely to drop out, 3 percent. To obtain an adequate position on the labour market, they need to complete at least secondary education that gives them an initial qualification (*startkwalificatie*). In 2009, the unemployment among persons aged 15-25 without qualification was 14.7 percent, compared to 8.6 percent for those of the same age but with a qualification. If Oliver or Olivia have a chronic disease or are handicapped or become impaired before age 17 or as a student before age 30, they are entitled to receive an allowance under the Work and Employment Support for Disabled Young Persons Act (Wajong). The Wajong provides an income to persons of 18 and older who became handicapped at younger ages and who, as a result, are not or only partly able to engage in paid work. In 2005 about 10 thousand persons entered the programme, and about 8 thousand was aged 18-24. It implies that in 2005 roughly 4 percent of those 18 to 24 years of age entered the Wajong programme. Today, about one in 20 18-year olds enter the Wajong programme at that age or later. At the end of 2009, a total of 192 thousand persons received an allowance and the number is increasing rapidly. In 2009, 17.6 thousand entered the programme and 4.3 thousand left the programme. The allowance is 75 percent of minimum wage (minimum youth wage until the age of 23 and legal minimum wage between 23 and 65; the latter was € 1,416 gross per month in July 2010) and in principle lasts until the age of 65. The state programme is funded by general revenue. The total expenditure exceeds 2 billion euro per year. In the period 2002-2006 the number increased

substantially. Part of the reason is that municipalities (local councils) prefer to provide an income under the Wajong act rather than an income under the WWB act because Wajong is funded by the central government funds whereas since 2004 WWB is funded by local council funds (Suijker, 2007; CPB, 2008). Another reason is an increased diagnosis of autism and ADHD. The Netherlands Bureau for Economic Policy Analysis (CPB) and the Socio-Economic Council (SER) expect that the number of programme participants continue to increase to 400,000 in 2040. That is twice the size of the Wajong population today. It does not mean that the rate of entry into the programme will increase since persons who enter the programme are likely to stay.

An important reason for leaving the labour market early, i.e. before retirement, is health. How many years will Oliver and Olivia spend in good health and how many years without functional disabilities? Although that information is essential in the context of life-course risk management, a prediction is met with many difficulties. Their health expectancy and the disability-free life expectancy depend on their genetic constitution, early life experiences, life style, living conditions, and the health system, but also on how health and disability are defined and measured. Health is often self-reported health and the outcome differs between males and females and between cultures. According to the World Health Organization, health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity. Based on self-reported health, the health expectancy of men and women in the Netherlands is about the same, 63.7 and 63.5 years, respectively (RIVM, 2010). Women spend about four years more with health problem than men; most of the differences are minor health problems. The picture is more pronounced when we look at chronic diseases. Men expect to live 48.4 years in the absence of chronic illness and women 42.5 years, meaning that women spent almost half of their life with a chronic disease and men almost 40 percent. The RIMV estimates that the number of persons in the Netherlands with a chronic disease is 4.5 million, which is slightly more than a quarter of the population. Many participate normally in society. Chronic disease management developed rapidly in the past decade and most people with a chronic disease are only mildly impaired. For instance, although the incidence of a heart infarct and other coronary heart diseases increased since 1980, the fatality decreased substantially. Deaths from acute heart infarct declined by 70 percent for males and 63 percent for females and that of other coronary heart diseases by 34 percent for males and 33 percent for females. Interesting is that the fatality of other coronary heart diseases declined in the 1970s and late 1990s and not in the period 1980-1996. People with chronic conditions use a large part of health care resources. The World Health Organization has identified that such conditions will be the leading cause of disability by 2020 and that, if not successfully managed, will become the most expensive problem for health care systems. Early detection and treatment are part of that management. With medical progress, people may not die from a chronic disease in the presence of adequate care. That is part of the reason that experts consider the rise of health care costs a more serious problem than pension benefits.

The life expectancy without disability is considerably higher than the life expectancy without disease. It is 70.9 years for males and 69.5 years for females (RIVM, 2010). Women spend more years with disability and also more years with severe disability than men. As discussed before, the number of years Oliver and Olivia may expect to live without disability depends to a considerable extent on their life style and education, which is an indicator of socio-economic status. If the highest educational

attainment is primary education, Oliver may expect 61 years without disability and Olivia 60 years. If they complete higher education, both Oliver and Olivia may expect to spend 75 years without disability, a difference of 14 years for Oliver and 15 years for Olivia. RIVM (2010) reports that the difference increased slightly over the years. The difference persists through the life course. Education is the best strategy for taming the life-course risks.

When Oliver and Olivia enter employment they start paying social security contributions and income tax, between 33 and 52 percent of their income⁶. At low income, most of these payments are social security contributions, of which 17.9 percent is a contribution to the statutory old-age pension scheme (AOW) and is used by the Social Insurance Bank (SVB) to pay basic pensions to retirees (pay-as-you-go system). In the Netherlands, the basic universal pension is not paid from taxes but from contributions by the working population. There is no link between contributions and accumulation of entitlements. The AOW is not an instrument to smooth income over the life course and it is not a real social insurance programme. It is a programme designed for social solidarity (Goudswaard, 2009). The contributions are collected by the tax office as part of the collection of income tax. The contributions are not sufficient to cover the costs of the basic pension. In 2009, the SVB paid € 28.8 billion to 2.8 million persons aged 65+. Since the beginning of the 21st century the income from contributions is not sufficient to cover the expenses, due to changes in the tax law in 2001 (Helleman et al., 2008; Sol-Bronk and Vleeming, 2009). The changes implied a smaller taxable income resulting in a decrease in social security contributions including the AOW. Social security contributions are flat rates applied to the taxable income. Because of these changes the state contributions to the AOW expenditures were resumed in 2002 after many years without state contributions to the basic pension scheme.

Oliver and Olivia contribute almost 18 percent of their gross income to the state pension scheme (AOW), which is the first pillar of a three-pillar pension system. The second is the occupational pension and the third pillar consists of voluntary savings. In the Netherlands, the occupational pension is an important part of the pension system⁷. In occupational pensions, contributions result in accrued rights. The occupational pension is often considered a deferred labour income, subsidized by the government because contributions are tax-exempt and benefits are taxed. In the first quarter of 2010, the Netherlands had 560 pension funds with a total asset of € 770 billion. The specifics of the occupational pension are determined jointly by employers and employees. Oliver and Olivia are likely to be covered by a defined benefit (DB) scheme since 94 percent of the employees in pension funds are covered by such a

⁶ If the taxable income is below € 18,218, they pay 33.45 percent (most of which is social security contribution and 2.3 percent is income tax). Between that amount and € 32,738 it is 41.95 percent (of which 10.8 percent is income tax). For the income that exceeds that amount, they pay 42 percent on the above the amount but below € 54,367 (all income tax) and 52 percent on the income over € 54,367 (all income tax). Note that income tax starts essentially at an income over € 30,000. The social security contribution goes to the state pension scheme (AOW) (17.90 percent), social insurance for exceptional medical expenses (AWBZ) (12.15 percent) and survivor's pensions (ANW) (1.1 percent). In addition there are WAO/WIA (about 6 percent), WW (about 3 percent) and ZW (about 8 percent) contributions paid by the employer.

⁷ That is why experts seem to agree that the Netherlands has one of the best pension systems in the world (<http://www.marketwatch.com/story/which-countries-offer-the-best-pension-benefits-2009-09-23>)

scheme. It is likely that their lifetime earnings and not their final earnings will determine their pension entitlement because it is the earnings measure for 77 percent of the employees in DB schemes. Most accumulate pension rights at an accrual rate of between 1.75 and 2 percent of the pensionable salary per year of service. What Oliver and Olivia should realize when they assess the significance of the occupational pension in the management of their life-course risks is that (a) the pensionable salary is less than the taxable salary because the use of franchises in the pension arrangements, (b) the old-age pension replacement rate⁸ is likely to be less than the commonly accepted 70 percent of final salary and (c) most pension funds have no guaranteed indexation of the pensions for increased prices or wages. The franchise is that part of the wage that is exempted from premium payments *and* from benefit calculations. The idea behind this franchise is that to low-wage workers the basic state pension (AOW) offers a sufficiently high replacement rate, so that it is not necessary for them to build up a supplementary pension benefit. The higher the franchise, the more employees are excluded from accruing occupational pension rights. Most pension funds use a franchise that is between the AOW benefit for singles (70 percent of the minimum wage) and couples (100 percent of the minimum wage). On 1st August 2010, the largest pension fund, which is the pension fund for employees in the public sector, applied a franchise of € 10.500 and a total contribution rate of 21.30 percent of the pensionable salary (14.91 percent is paid by the employer and 6.39 percent by the employee). Both the pension benefit and the contribution rate depend on the solvency of the pension fund. On 1st August the contribution rate increased by 1 percentage point from 20.3 percent to 21.3 percent as a consequence of the low interest rate and its negative effect on the solvency of the pension fund. It is very likely that Oliver and Olivia are not able to estimate their accrued occupational pension benefits, although it is essential in the context of life-course risk management. The benefit depends not only on the solvency of the pension fund, but also on the valorization of earlier years' pay in an average-salary scheme and the indexation applied to pensions in payment. Nearly half of the pensions in payment are indexed to wage growth and about one fourth are indexed to prices (inflation). When Oliver or Olivia change jobs and pension funds, they can transfer the accrued pension rights but these rights do not need to be indexed before retirement in the same way as pensions in payment are indexed. Although transparency has increased, there is still a long way to go to meet the standard set by the Swedish Pensions Agency in their annual report, known as the Orange Report⁹.

In case of job loss, Oliver and Olivia are entitled to receive unemployment insurance, which may start at 75 percent of the last salary but is limited in time (38 months). If they are unable to find a job, the WWB is the last resort. The social assistance amounts to 70 percent of the net minimum wage if they live alone and 100 percent of the cohabit. An important aspect of unemployment is that the contribution to the occupational pension scheme is interrupted during unemployment episodes. It implies that less pension rights are accumulated.

⁸ The replacement rate is the ratio between retirement income (AOW + occupational pension) and income prior to retirement.

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<http://www.pensionsmyndigheten.se/download/18.259bcdf51293c13203c80004574/Orange+Report+2009.pdf>

During their working career, the contribution to the occupational pension scheme is not the only regular saving scheme Oliver and Olivia have. They may also have a private pension saving scheme, although it is much less popular in the Netherlands than in some other countries. They may also purchase a home. In the Netherlands home ownership is relatively low compared to other countries in Europe. It increased from 40 percent in 1980 to 56 percent of total housing stock in 2006. The proportion of people living in owner-occupied housing is higher (61 percent) because households in owner-occupied housing are a little larger than households in rented housing. Home ownership is higher in rural areas and lower in cities (21 percent in Amsterdam and 30 percent in Rotterdam). The government stimulates home ownership with two major programmes (<http://international.vrom.nl/pagina.html?id=37439>):

(1) Full deductibility of mortgage interest from personal taxable income. It allows home owners to reduce their taxable income by the interest paid on the loan secured by the principle residence

(2) Subsidy for promotion of home ownership. The subsidy is enacted in the Act on Promotion of Home Ownership (WEB), which has been in force since January 2001. Its purpose is to help people in lower income-categories and who have not previously owned a dwelling to acquire an owner-occupied dwelling for themselves by means of monthly tax-free contributions to help pay for mortgage repayment costs. The budget has a ceiling. In 2005 the state budget was about € 5 million. The 2010 budget was already spent in March 2010 and no new applications were admitted.

In addition, the National Home Mortgage Guarantee Fund (NHG) guarantees home mortgages resulting in a lower interest rate. Most persons in the Netherlands have a mortgage of the self-amortizing type, meaning that mortgage payment includes rent and part of the capital. With the payments housing wealth is accumulated. Recently the Netherlands Bureau for Economic Policy Analysis (CPB) revealed that the tax deductibility of mortgage interest implied a government subsidy to home owners of € 11 billion in 2005 (CPB, 2010). Today the amount is probably higher since in 2005 the total outstanding mortgage (all households) was € 452 billion. It increased to € 609 billion in 2009. Since the total housing value is estimated at € 906 billion, the mortgage is two-third of the housing value (<http://huizen.prijzverloop.nl/algemeenstatistieken/>). A recent committee of experts (CSED) of the Social and Economic Council of the Netherlands (SER) recommended a discontinuation of the full deductibility of mortgage interest from personal taxable income (SER, 2010). Home owners accumulate considerable wealth, partly subsidized by the collective. Discussions about de-accumulation of that wealth at higher ages in the context of life-course risk management and financial planning are only beginning.

At what age Oliver and Olivia retire is difficult to predict. Persons who retired at the beginning of the 21st century, retired at a median age of 60 years, which is at a much younger age than the statutory retirement age of 65. About 70 percent retired before or at age 61 (Bruggink, 2007). The current government policy is aimed at increasing the labour force participation of persons 55 - 64 and to increase the statutory retirement age to 66 in 2020 and 67 in 2025. When Oliver and Olivia retire the statutory retirement age is likely to be closer to 70 than to 65, provided the statutory retirement age still exists. Some feel that the concept of retirement is outdated

(Dychtwald et al., 2004). If current conditions prevail and Oliver and Olivia retire at or after the statutory retirement age, they obtain an AOW income, which is funded by those employed at that time, and draw a pension benefit from the occupational pension scheme. In addition, they may have a home and private savings.

After retirement, Oliver and Olivia may expect to spend several years without severe disability. They may be involved in several activities, including volunteer work. In the last stage of life, they may need long-term care (LTC). Recently researchers at the Netherlands Bureau for Economic Policy Analysis documented the Dutch system of LTC (Mot, 2010). The study is part of a large European project involving 20 institutions around Europe aimed at assessing the future need for care in Europe (www.ancien-longtermcare.eu). The underlying philosophy of the Dutch system for LTC is that the state bears the responsibility for the elderly and others who are in need of long-term care. “The Dutch consider the care of the elderly mainly to be the responsibility of the state.” (Mot, 2010, p. 66). While informal unpaid care given by family members and others does play a role, there is no *obligation* to provide this care—save for the usual care that members of a household give each other. The system of LTC insurance has been in place since 1968. It is part of the insurance for catastrophic expenses, the Exceptional Medical Expenses Act (AWBZ), although in 2007 some parts of long-term care (home help) moved to the new Social Assistance Act (WMO). The LTC insurance covers at-home care and care in institutions. Mot estimates that currently between 700 and 800 thousand elderly are in need of LTC, which is about a third of the population 65 and over. Researchers from the Netherlands Institute for Social Research (SCP) come to a comparable figure (800 thousand) (Woittiez et al., 2009). The estimate is based on IADL limitations. Mot estimates that the number of older persons who use permanent formal care is at most 650 thousand. The SCP researchers arrive at 600 thousand (2005 figure). Two thirds of them receive care in their own homes as personal care, nursing, support or home help. The one third that receives care in nursing homes (*verpleegtehuis*) or care homes (*verzorgingstehuis*) is largely over 75. The age at which persons enter institutions increases since people are able to live independently longer in the absence of severe disabilities, increased domiciliary care (home care) and other forms of assisted living. The SCP estimates that in 2005 200 thousand persons were cared for by family and friends without public support. Most of these persons may not qualify for publicly funded care since the SCP study shows that only 4 percent of persons do not receive publicly funded care “even though this would be expected on the basis of their profile” (Woittiez et al., p. 102). The long-run sustainability of LTC is a growing concern among policy makers, not only because of funding problems but also because of lack of LTC workers. Important weaknesses in the system have to do with determination of the entitlements and the lack of incentives for efficiency (Mot, 2010, p. 64). For instance, persons who need only small amounts of care are also entitled to publicly funded care. Mot qualifies the system as completely egalitarian. All quality improvements that were introduced in the past years are available to all users under public insurance. That makes expenditures difficult to contain. The SCP researchers predict that the number of users of publicly funded nursing and care services increases by 1.2 percent per year between 2005 and 2030 and that expenditures increase by 3.4 percent per year, 1.9 percentage-points due to price increases (price effect). The share of the nursing and care sector in the GDP will increase from the current 2 percent to 3 percent, provided the economy grows at 2 percent per year. The government wants to separate the home care and nursing care parts of LTC and give private health insurers

a larger role and financial responsibility. Although LTC is accessible and affordable today, the situation may soon change.

4. Conclusion

The ageing of the population is changing society. Welfare programmes designed in the 1950s or during periods when contributors were many and beneficiaries few are no longer sustainable when the number of contributors declines and the number of beneficiaries rises. The basic ingredient of any welfare programme, solidarity, is changing too. With the emancipation of the individual came the call for self-efficacy, self-reliance and self-help cumulating in systems of individual accounts replacing traditional welfare programmes. In this paper I followed Oliver and Olivia, two fictitious individuals growing up in the Netherlands and exhibiting a considerable degree of self-efficacy with their interest in life-course risk management in the context of the welfare state that exists today. To manage properly they need information and that is often lacking. The call for more transparency and accountability is growing but the good practices remain few. The annual uniform pension overview that was introduced in 2007 and since 2008 must be used by pension funds and pension insurers in the Netherlands is an important step to provide the necessary information but it is still a large distance from the practice adopted by the Swedish Pensions Agency that provides the information “to make it easier for many more people to calculate their total pension, and to enable pension savers to make sound financial decisions in various phases of their lives” (Westling Palm, 2010).

The new welfare state with conscious individuals calls for programmes that enhance and complement individual life-course risk management strategies. Different groups of individuals are likely to respond to life-course risks differently, with major consequences for social policy (OECD, 2007; D’Addio, 2008). Some people accumulate considerable human capital (e.g. by engaging in lifelong learning), while others accumulate social capital, financial capital or physical capital (e.g. home equity). The welfare programmes are generally not sufficiently flexible to take these different life strategies into account. For instance, by defining human capital as the present value of future earnings, human capital is by definition depleted at retirement age in case of mandatory retirement at a given age. If human capital would be defined in terms of skill level, health, and productivity, some people have considerable human capital left at the statutory retirement age while others have their human capital depleted at an earlier age. While some invest in human capital, others invest in social connectedness and social support networks as a risk management strategy. Sociological research tells us that personal networks are important means to guarantee and improve life chances. The project “The social management of risk” of the Canadian Policy Research Institute is one of the several examples of a new comprehensive approach to life-cycle risk management in the context of the welfare state. The project identifies the risks Canadians encounter over the course of their lifetime, determines the ability and willingness of different social actors to provide support, and assesses the relative efficiency and effectiveness of direct and indirect government support¹⁰.

¹⁰ www.policyresearch.gc.ca/page.asp?pagenm=pr_sc_risk_index

Ageing is changing society. In *Reinventing the welfare state*, the Netherlands Bureau for Economic Policy Analysis (CPB) observes that welfare state institutions are slow to adapt to new realities. The new reality is that more people are ready, willing and able to manage the risks they encounter in life and to support others in case of catastrophic events. People invest in more than one type of capital to control risks. A welfare system that takes advantage of that new reality by providing a public infrastructure for life-course risk management involving different types of capital is a sustainable system. It requires insight in the complementary nature of the welfare state, civil society and social networks in the assurance of welfare and wellbeing.

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