Long-term socio-economic consequences of insecure labour market positions

EXCEPT Working Paper No. 16
November 2017

Edited by Dirk Hofäcker, Sina Schadow, Janika Kletzing

Contributing authors (in alphabetical order):
Dirk Hofäcker, Janika Kletzing, Gintare Malisauskaite, Rowena Merritt, Valentina Moiso, Olga Nikolaieva, Olena Nizalova, Sina Schadow, Jędrzej Stasiowski, Mattias Strandh, Marge Unt, Hanna Vakhhitova

www.except-project.eu
twitter.com/except_eu
www.facebook.com/excepteu

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 649496

EXCEPT Working Papers are peer-reviewed outputs from the http://www.except-project.eu/ project. The series is edited by the project coordinator Dr. Marge Unt and by the project co-coordinator Prof. Michael Gebel. These working papers are intended to meet the European Commission's expected impact from the project:

i. to advance the knowledge base that underpins the formulation and implementation of relevant policies in Europe with the aim of enhancing the employment of young people and improving the social situation of young people who face labour market insecurities, and

ii. to engage with relevant communities, stakeholders and practitioners in the research with a view to supporting relevant policies in Europe. Contributions to a dialogue about these results can be made through the project website http://www.except-project.eu/, or by following us on twitter @except_eu.

To cite this report:

Hofäcker, D., Schadow, S. and Kletzing, J. (Eds.) (2017). *Long-term socio-economic consequences of insecure labour market positions*, EXCEPT Working Papers, WP No 16. Tallinn: Tallinn University. http://www.except-project.eu/working-papers/

© Authors

ISSN 2504-7159
ISBN 978-9949-29-350-6 (pdf)

About the editors

Dirk Hofäcker – http://www.except-project.eu/our-team/id/59

Janika Kletzing – http://www.except-project.eu/our-team/id/159

Sina Schadow – http://www.except-project.eu/our-team/id/162

Acknowledgements

Responsibility for all conclusions drawn from the data lies entirely with the authors.

Table of Content

1. Introduction and theoretical framework 5

2. A retrospective view: The effects of youth unemployment on late life risk of poverty in Europe 10

2.1 Introduction 10

2.2 Literature 14

2.3 Data 17

2.4 Methodology 17

2.5 Results 21

2.6 Conclusions 32

Appendix 33

3. A prospective view: Early unemployment uncertainty and long-term-socio-economic consequences for youth 36

3.1 Demand side perspective: Young people's attitudes towards old age security and actual savings behaviour 36

Quantitative Evidence (I): General importance of later life savings 36

Quantitative Evidence (II): Own readiness to save 37

Qualitative Evidence: Attitudes towards savings 40

Demand-Side Factors: Summary 41

3.2 Supply Side Perspective (I): The treatment of early career uncertainties in public pension systems 42

3.2.1 Analytical Approach 42

3.2.2 Analysis 45

3.2.3 Summary 48

3.3 Supply-Side Perspective (II): the treatment of early career uncertainties in occupational and private pension systems 50

3.3.1 Analytical Approach 50

3.3.2 Data and Methods 51

3.3.3 Country case studies 53

3.3.3.1 Germany 53

I. The general structure of country-specific pension scheme 53

3.3.3.2 United Kingdom 64
3.3.3.3 Sweden 73
3.3.3.4 Italy 79
3.3.3.5 Poland 89
3.3.3.6 Estonia 105
3.3.3.7 Ukraine 117
3.3.4 Summary 124
4. Synthesis and Policy Conclusions 129
References 132
Appendix: Guidleine for Expert Interview 141

1. Introduction and theoretical framework

Dirk Hofäcker, Institute for Social Work and Social Policy, University of Duisburg-Essen, Germany

This report focuses on the socio-economic consequences of unemployment as well as atypical employment (such as fixed-term employment, mini-/mid- or zero hour jobs or even informal "grey" employment) for the economic situation of youth in Europe *in the long-term, i.e. when leaving the labour market and transitioning into retirement*. In doing so, this report complements earlier work from the EXCEPT project on the immediate *short-term* socio-economic consequences of employment uncertainty for youth (Rokicka and Klobuszewska 2016) respectively on the *medium-term* socio-economic consequences of unemployment and fixed-term employment for youth within a time-span of five to ten years (Hofäcker et al. 2017). At first sight, these two foci of research are apparently plausible: From a political standpoint, it is highly relevant to investigate the *immediate* effects of employment uncertainty for youth. Knowledge about these effects may provide helpful guidance to policy makers to implement effective policy programs that prevent young people in such positions (unemployed or atypically employed) from falling into material poverty or ending up in a state of objective respectively subjective deprivation. At the same time, it is obviously important to understand how salient these effects are over individual life courses respectively employment careers. Does employment uncertainty resemble just a temporary state from which youth can escape over time, or which they may even use as a stepping-stone into financially safe employment in the primary labour market (Scherer 2004, Gash 2008)? Do experiences of employment uncertainty and/or atypical work "scar" young people, so that even after they leave these states, they still face less secure employment prospects and/or lower wages (Möller and Umkehrer 2014, Schmillen and Umkehrer 2013)? Or do young people even become "trapped" in such states and thus are faced with increased risks of permanent poverty and/or deprivation? Based on such knowledge, effective policies may be developed to attenuate the negative socio-economic consequences of employment uncertainty for youth in the medium-run or to facilitate upward labour market mobility into well-paid and stable jobs (Rokicka et al 2017).

While the motive of researching the short- and medium-term consequences of employment uncertainty thus is apparently plausible, the case for researching long-term consequences is clearly less evident. This particularly holds for late periods in life – such as retirement and pensions – that are temporarily very distant both in terms of *individual* life planning as well as in terms of political intervention, which is often – for obvious reasons – oriented at rather short-term time horizons.

The reason why it still may be important to look additionally at the long-term socio-economic consequences of employment uncertainty rests on three interrelated arguments:

- **The increasing importance of multi-pillar pension plans:** Driven by the foreseeable consequences of demographic ageing in many developed societies, the World Bank issued a report in 1994 entitled "Averting the Old Age Crisis: Policies to protect the old and promote growth" (World Bank 1994.). The report

argued for the establishment of multi-pillar pension systems, combining standard public pensions with additional savings into occupational and private pension plans. Up to that point, many countries had relied on strong public pension systems that were responsible for the 'lion's share', if not the entirety, of old age income. The World Bank report argues that mere reliance on a publicly financed pension will not be sustainable in ageing societies, given the increasing imbalance between a declining number of (employed) contributors and a rising number of (retired) pension recipients, particularly in pay-as-you-go-pensions systems, which are particularly widespread among European countries. Given the expected decline in public pensions, it was argued that employer-based savings into occupational pension plans as well as individual savings into private funds should supplement public pensions to secure old age income in the decades to come. Consequently, many countries nowadays have moved towards the recommended three-pillar-systems, though with significant cross-national variations in the relative importance of the three pillars. Given the long period of implementation of such reforms, current cohorts of pensioners are still retiring with strong public pensions. Young individuals, however, that are entering employment and social security systems just now, will almost fully retire under the new "three pillar" regime. Their future pension will increasingly depend on having made contributions to various types of pension funds, in order to prevent poverty in old age effectively.

- **Increasing labour market uncertainties for youth:** As previous research has shown (e.g. Blossfeld et al. 2005, 2011), throughout recent decades, labour market careers of youth have become more unstable and employment uncertainties among young people have become widespread. Young people in Europe frequently find it difficult to enter the labour market, and often are faced with unemployment very early in their careers. Even when entering the labour market, young individuals more often are found in atypical employment forms, such as fixed-term employment, (false) self-employment or low-paid jobs. This disproportional affectedness of youth by employment uncertainties for youth – which correspondingly have been termed the "losers of globalization" (Blossfeld et al. 2005) – decreases their capacity to make savings for old age. On the one hand, wages from atypical employment may not be high enough to put money aside for anything other than immediate consumption. Furthermore, the unpredictability of future employment careers may make it difficult for young people to incur a commitment into long-term binding financial investment plans, such as life insurances or pension funds, which frequently require continuous contributions. While the changing structure of pension systems thus increasingly requires young people to invest into additional old age saving plans, increasing labour market uncertainty less and less allows them to do so.
- Another reason to consider the consequences of labour market uncertainty among youth in a long-term perspective is **that the negative socio-economic effects of labour market uncertainties for youth may be cumulative in the long run**. Previous analyses of short-term or medium-term consequences of employment uncertainty have shown that not all types of employment uncertainty may cause severe socio-economic disadvantages. Short-term analyses, for example, demonstrated that fixed-term employment might be related to receiv-

ing lower wages; yet, the wage difference as compared to permanent work is not large enough to cause an increased risk for young people to fall into poverty or deprivation (Rokicka and Klobuszewska 2016). Similarly, it was shown, that in the medium-term, fixed-term employment might act as a stepping-stone into the primary labour market (Hofäcker et al. 2017). Yet, for long-term investments into pensions, the situation may be more critical. Pensions can be regarded as a "balance sheet" of the previous employment career. Contributions are paid during times of employment and accumulate over time, in the end building up an individual's pension rights. However, gaps in the employment trajectory may result in lesser funds that are accumulated (unless there are no compensatory mechanisms). Similarly, lower (or no) contributions due to atypical employment may decrease one's later pension revenues. These negative effects of employment uncertainty may accumulate over time. Only modest wage differences in the short term, e.g. due to fixed-term employment, may accumulate into substantial pension gaps in the long-term if youth remain in such employment.

It is thus of utmost importance to consider the effects of employment uncertainties for youth also in the long term. In this report, we will do so considering all three types of pension systems: public, occupational and private pensions.[1]

- **Public pensions** refer to state-administered pension programs, where national or local governments collect pension payments through social contributions or taxes, and are primarily responsible for paying out these pensions to individuals once they satisfy the necessary eligibility conditions for pension receipt. A notable feature of **public pension** systems, which differentiates them from the other two pillars, is that public pensions are usually mandatory and cover virtually all citizens, aiming to ensure income levels between basic security (e.g. UK) and allowing for the continuation of previous living standards (Germany). Only specific groups, such as self-employed or migrants, are not always fully included in these universal systems.
- **Occupational pensions** refer to payments by employers into a fund that is paid out to individuals in addition to public pensions, and which is occasionally jointly operated with **unions** that co-mandate such schemes. In some countries, such programs have become mandatory supplements to public pensions while in most of the countries they are based on voluntary agreements between employers and employees. As occupational pensions are based on an existing employment relationship, the unemployed are automatically exempt from such schemes, as well as self-employed. Furthermore, coverage of such programs may differ across sectors.
- **Individual pension accounts** are accounts that are being operated by private financial institutes based on direct agreements with individual clients. Usually, there exists a broad array of savings schemes, which individuals can choose. In

[1] Though it may be interesting to look at further long-term outcomes of employment uncertainty – e.g. on career progression, acquisition of porverty or physical or mental health, we restrict ourselves to an analysis of consequences within different types of pension systems. This is so either because these asspects are covered in other parts of the EXCEPT poject (physical/mental helath) or are very diifcult to trace empirically given their large variation across countries (property owning) or firms (carreer patterns).

some countries, the state has financially fostered investments into such savings schemes. Most prominently, Germany has fostered the introduction of the so-called "Riester pensions" – a category of state-regulated private savings plans – through generous public subsidies granted to potential recipients.

In the following, this report will provide an outline of the socio-economic consequences of uncertainty for youth. In doing so, it will consider the respective effects on all afore mentioned pillars of old age income. While the majority of the report will focus on the long-term socio-economic risks of *today's* youth, it starts with a contribution on *previous* labour market cohorts and the ways in which for them, early career uncertainties have affected their socio-economic situation in later life. Based on data from the Survey of Health, Ageing and Retirement in Europe (SHARE), *Nizalova et al.* investigate in Chapter 2 the impact of unemployment experienced at young age on the risk of poverty and deprivation at age 50 and beyond. The rationale behind this **retrospective focus** is that young individuals experiencing labour market uncertainties may compare their own experience with that of previous cohorts, e.g. that of their parents. Such inter-cohort comparison may, on the one hand, help them to evaluate their situation in relative terms (e.g. as being in an unprecedentedly precarious state or in a "normal" situation that also previous cohorts have experienced). On the other hand, comparisons with previous cohorts may also give youth the opportunity to 'learn' from these cohorts, e.g. by adapting strategies how to deal with such types of situations. In addition, retrospective analyses provide the only opportunity to measure effectively the long-term effects of employment uncertainty based on existing empirical data.

The following Chapter 3 shifts the attention to **current cohorts of youth** and the ways in which employment uncertainties may affect on their later-life socio-economic outcomes, considering all three pillars of old age income. These three pillars are being looked at both from a demand as well-as a supply side perspective.

- The **demand-side** perspective focuses on youth themselves and their savings behaviour. Do young people already think about making savings for old age even in younger years? Are they aware of the increasing need to make savings beyond the public pension system into either occupational or private pensions? If so: Are they actually making savings into these programmes? And if not: What keeps them from making savings into such programmes? The focus on youth's own savings behaviour (and its reasons) is vital as it defines the potential rate of coverage of youth in existing pension programs, i.e. the degree to which they are actually included in different income plans for old age. In Chapter 3.1 by *Hofäcker*, we use evidence from both qualitative and quantitative data to investigate the attitudes of young people towards additional pension plans and their actual investments into them.
- Assuming the young people are interested in such programmes, the **supply side** perspective focuses on the degree to which young people are, on the one hand, actually being *granted access* to such pension schemes. On the other hand, it looks at *how the different schemes treat periods of employment uncertainty in early career* and the ways in which these affect later life pension incomes. Chapter 3.2 and 3.3. will look at these issues for the different pension pillars.

- Chapter 3.2 by *Hofäcker and Heinrich* starts with an investigation of *public pension programmes*, which are largely universal. Combining institutional data from various cross-national databases, they look at how public pension are calculated and how they treat different types of employment uncertainties. Results for different dimensions then are combined into an index that allows comparing all EU-28 countries.
- While information on public pension systems is widely available through international literature and databases, the situation is much more restricted for both *occupational as well as private pensions*. As most of these plans are being decentrally agreed upon in bilateral negotiations between employers and employee/unions (occupational pensions) or between financial institutes and individuals (private pensions), little countrywide and comparable data is available. The methodological approach used in Chapter 3.2 – comparing key indicators from large-scale databases– thus cannot be applied here. In order to receive valuable information about these types of pension systems, interviews with experts from both academia as well as financial institutions were conducted in selected country cases – Germany, the UK, Sweden, Italy, Poland, Estonia and Ukraine – that focused on aspects of both overall coverage as well as the treatment of employment uncertainties in the calculation of benefits. Chapter 3.3 by *Hofäcker, Schadow and Kletzing* presents the results of this comparison in both national reports as well as in a synthetic overview.

The fourth chapter finally draws together the evidence from the previous analyses and provides some policy recommendations to minimize negative socio-economic consequences of employment uncertainty for youth in the long-term perspective.

2. A retrospective view: The effects of youth unemployment on late life risk of poverty in Europe[2]

Olena Nizalova and Gintare Malisauskaite, University of Kent, United Kingdom; Olga Nikolaieva and Hanna Vakhitova, Kyiv Economics Institute (KSE-KEI), Ukraine

2.1 Introduction

According to the European Anti-Poverty Network (EAPN), the overall relative poverty – state of inadequate income and resources to maintain an acceptable standard of living in the society they live - rates in Europe have remained quite high in the past few decades. In the mid-1990s, on average, the at-risk-of poverty rate was 17% in older EU member states and it decreased to 15% in 2001[3]. During the crisis years of 2008-2009 the poverty rate for the EU-27 was around 16.5% for total population and about 18.4% for the population aged 65+[4]. In 2014 – 2015, the poverty rate for the EU increased to 17.3% for total population while for the older age population it decreased to 14%[5]. Although on average the situation in Europe may seem not to be so bad, Eurostat[6] indicates that for the overall population and for people aged 65+ the risk of poverty rates vary a lot across the different countries (see Figure 1).

Being unemployed does not necessarily mean being poor. According to Podesta and Marzadro (2017), the highest proportions of unemployed individuals that are above the poverty line[7] are in Ireland (65.5%), Belgium (64.5%), Portugal (62.5%), and the lowest – in the UK (38.8%), Finland (28%) and Germany (29.7%). Although poverty is estimated to be more widespread in countries with higher working-age unemployment, it is significantly smaller in countries with higher social protection spending (Chzhen 2017), Figure 2 illustrates the point. Family support (Julkunen 2002) or cultural differences

[2] This paper uses data from SHARE Waves 2, 3 (SHARELIFE), and 5 (10.6103/SHARE.w2.500, 10.6103/SHARE.w3.500, 10.6103/SHARE.w5.500), see Börsch-Supan et al. (2013) for methodological details.

The SHARE data collection has been primarily funded by the European Commission through FP5 (QLK6-CT-2001-00360), FP6 (SHARE-I3: RII-CT-2006-062193, COMPARE: CIT5-CT-2005-028857, SHARELIFE: CIT4-CT-2006-028812) and FP7 (SHARE-PREP: N°211909, SHARE-LEAP: N°227822, SHARE M4: N°261982). Additional funding from the German Ministry of Education and Research, the U.S. National Institute on Aging (U01_AG09740-13S2, P01_AG005842, P01_AG08291, P30_AG12815, R21_AG025169, Y1-AG-4553-01, IAG_BSR06-11, OGHA_04-064) and from various national funding sources is gratefully acknowledged (see www.share-project.org).

[3] Data on poverty for the rest of Europe is not available and not directly comparable for this period.

[4] Data taken from Eurostat website, EU-SILC survey, at-risk of poverty rate, cut-off point: 60% of median equivalized income, this is the preferred measure and is used in the reported estimations in this study; estimations using 50% and 70% cut-off point measures are available in Tables as sensitivity checks.

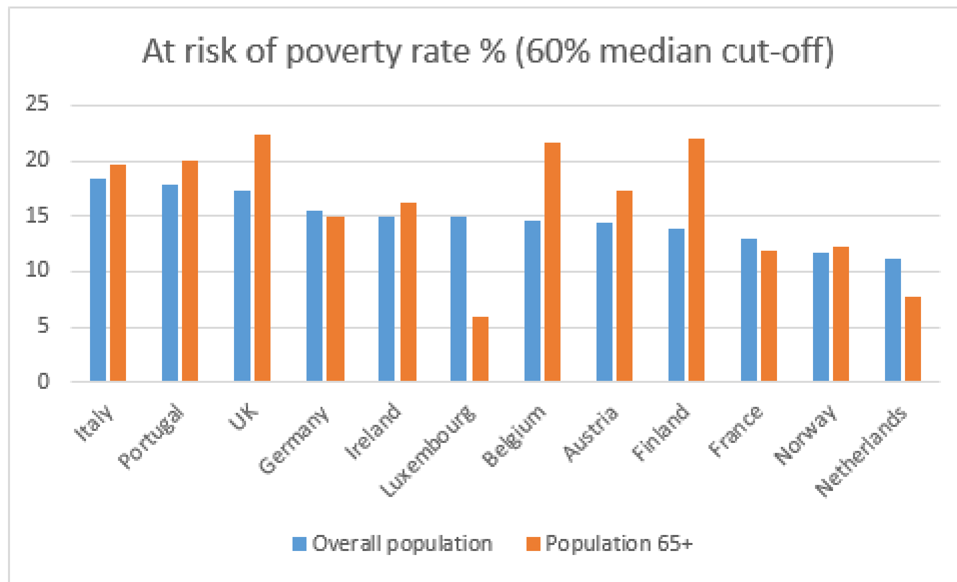
[5] Eurostat, EU-SILC survey.

[6] Eurostat, EU-SILC survey.

[7] Referring to calculations made using at-risk-of-poverty rate, cut-off point: 60% of median equivalized income, 2009 wave of the EU-SILC.

(Podesta and Marzadro 2017, Aassve et al. 2006) in particular, with regards to savings and risk of poverty can mitigate to some extent the consequences of unemployment.

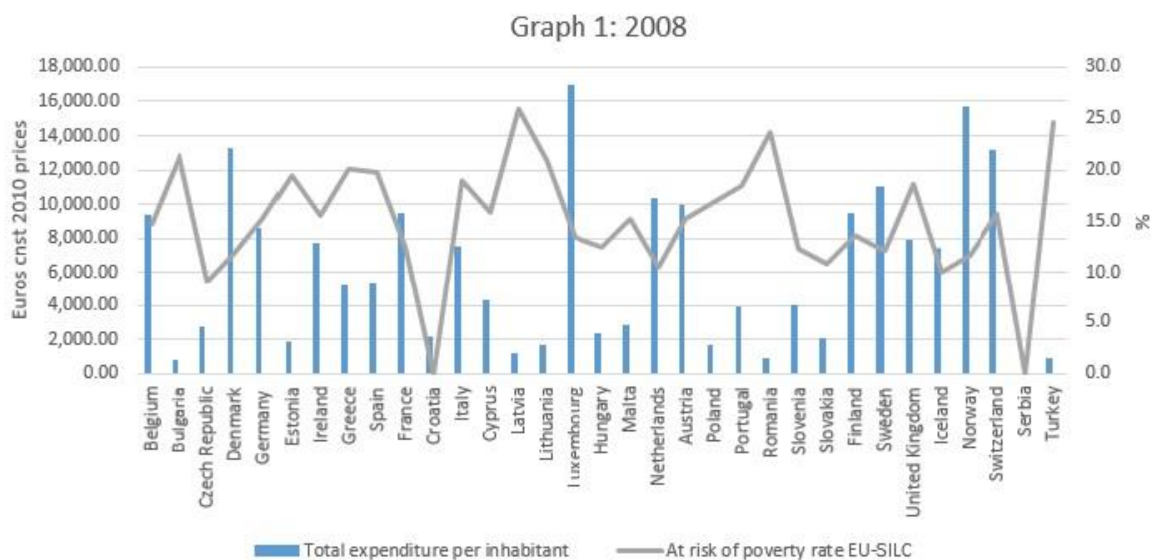
Figure 1 **At risk of poverty rate (%) by poverty threshold (60% of median equivalized income) in decreasing order by overall population poverty rates.**

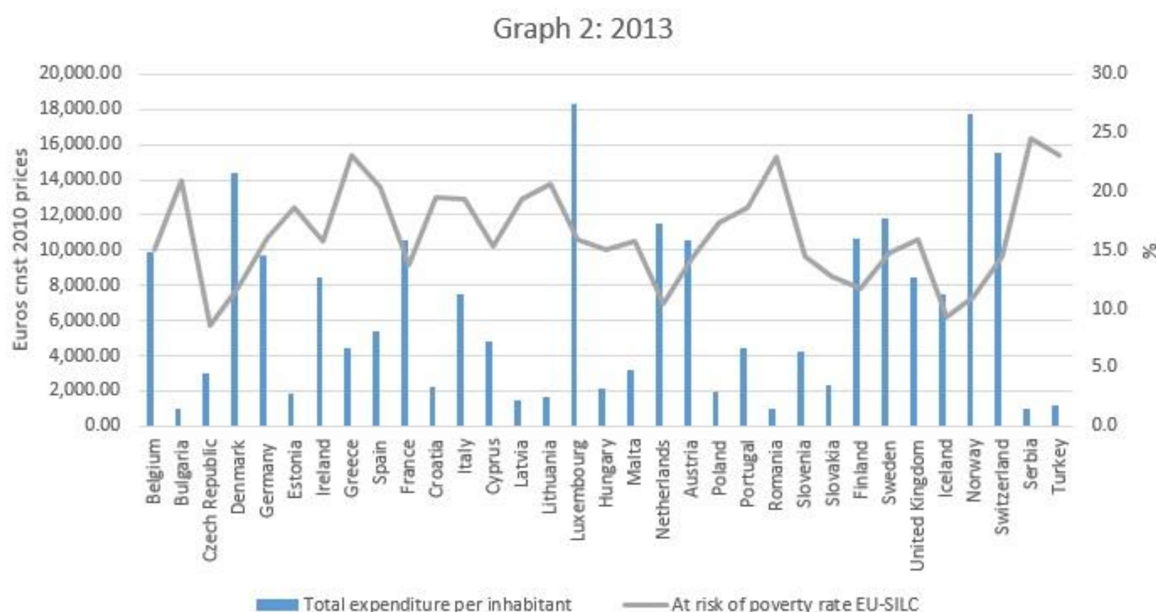


Source: Eurostat, EU-SILC

Note: Data represented here corresponds to countries listed and discussed in Podesta and Marzadro (2017).

Figure 2 **Social protection expenditure and risk of poverty, countries' means**





Source: Eurostat, EU-SILC

Note: Data used includes total social protection expenditure per inhabitant and at risk of poverty rates. For the year 2008 data on risk of poverty rate was not available for Croatia and Serbia

Poverty in old age is an even more detrimental issue than earlier in one's life considering the circumstances the elderly are in – they are much less capable of participating in the labour market, so they need to rely on the generosity of their relatives and the welfare system, making them more prone to poverty. This then relates to the increased risk of not being able to meet one's healthcare needs (Park et al. 2016). Ending life in poverty is more likely for the elderly, especially women (Oris et al. 2017, Nygard et al. 2017).

The extent of economic vulnerability has decreased significantly amongst the retired over the past decades (Oris et al. 2017, Rodrigues and Andrade 2014), but this decrease is not homogenous amongst the older age groups. People 75+ who live alone are still particularly economically vulnerable (Rodrigues and Andrade 2014), as are those with lower educational attainment (Oris et al. 2017).

The connection between poverty and unemployment at the individual level in modern employment-based economies may theoretically seem to be quite clear. However, the major caveat is the compounding complexity as one goes from the consideration of the short-term consequences to the medium-term and to the long-term ones. In the short-term, a loss of one's job immediately leads to a decrease in the standards of living due to the loss of income, which can potentially result into poverty if this person does not have access to needed assistance either through the family and community or through the social safety net. However, the effect does not stop there. The loss of a job or inability to quickly find a new one can set on a vicious cycle of insecure employment (unstable employment, informal employment, fixed contracts and/or part-time). This cycle

is fuelled up by a related depreciation of human capital (Gorlich and de Grip 2009, McFadden 2008, Polonskyi and Shapovalova 2010) and signalling effects of unemployment status supporting statistical discrimination (Bonoli 2014, Karren and Sherman 2012, Skibitsky 2103). This may lead to a further socio-economic disadvantage in the medium term. Finally, because of the afore-mentioned short-term and medium-term effects, one faces higher risk of poverty due to inability to save and/or invest to improve financial situation in the future. These are the direct effects. The indirect effects can exacerbate them. In particular, an experience of unemployment can have a negative effect on mental (Huegaerts et al. 2017) and physical (Vaalavuo 2016) health. It can increase the risk of negative change in health related habits such as more frequent drinking (Nizalova and Norton 2017, Mossakowski and Krysia 2008), reduce self-control (Bernheim et al. 2015, Carvalho et al. 2016, Spears 2011), and negatively affect future employment (Biewen 2009).

The described mechanism of the impact of unemployment on an individuals' socio-economic situation is applicable to individuals of any age, but may substantially differ across age groups. On the one hand, the effects of unemployment when young can be largely buffered by the family. On the other hand, without access to material support by the family (which is common for disadvantaged groups) the effect may be especially detrimental if unemployment is experienced at young age. There are three main reasons for this. First, young people have worse access to resources to buffer the effect of unemployment either due to lack of knowledge about available sources of support or due to being ineligible as someone who has contributed insufficiently into the relevant systems can directly lead to poverty. Second, labour market exclusion during the formative stage of life can exacerbate the viscous cycle of insecure employment because of the formation of poor work habits and socialisation with similarly excluded individuals. Finally, poverty at early age directly translates into inability to invest and start saving for the future. Indirectly, employment disadvantage at the beginning of the career may have a spill over effect for further employment opportunities, and thus, have consequences throughout the life course (Oris et al. 2017). The existing literature, however, does not say how long this negative effect lasts and to what extent old-age poverty can be affected by unemployment during youth years. If, indeed, youth unemployment extends its damaging effects even beyond 25-30 years, policy measures to alleviate these consequences become even more important for the well-being of current and future generations.

In summary, the matter requires an empirical investigation to identify the long-term effect of youth unemployment. Our paper contributes to the existing literature by directly focusing on *youth* unemployment and poverty in an *old age*. We consider one summary outcome, which describes an individual's socio-economic situation – poverty at old age – using various subjective and objective measures. Controlling for numerous variables describing childhood socio-economic and developmental circumstances, as well as individual ability measures, we find that youth unemployment does have a negative effect on the risk of poverty at old age. It increases the degree of material deprivation, decreases household's net worth at the time of retirement, as well as leads to people feeling less economically secure (feeling unable to make ends meet, and lacking money to afford things they would like to do). We find that part of the effect indeed works

through the marital and education channels, as well as lower uptake of the private pension schemes.

2.2 Literature

This paper is related to two streams of literature – poverty studies and youth studies. Most research on poverty focuses on poverty measurement issues, behavioural and health consequences of poverty among children, adults as a general group or, the most relevant, – elderly as a subgroup. The papers described in this section first discuss the existing measures of poverty to motivate our choice of outcomes. Then we report findings of other researchers concerning the determinants of unemployment and poverty during young years to explain the potential link to the old age poverty.

Poverty measures

There is no unanimous agreement of how poverty is supposed to be measured. Which is probably a reason why there are quite a few studies focused entirely on this question. Absolute poverty lines for cross-country comparisons are being challenged by Delamonica (2016). The conceptual meaning of poverty is ever changing being based on changing consumption and production patterns, so an absolute poverty line that changes with time is proposed, and this approach could be used to take into account a matrix of social deprivations instead of a monetary poverty line only. Relative poverty, on the other hand, tells more about the living conditions in a specific country describing conditions in which people lack sufficient income to afford an average standard of living (Zheng 2001).

Arunachalam and Shenoy (2017) design a new method to detect household poverty traps in India. Their findings suggest that income in poorest households grew the fastest, but households of higher castes converge to a much higher steady state, so the convergence is conditional. The authors suggest that poverty traps could be caused by different reasons for different situations or countries and this needs to be taken into account. Mendola et al. (2011) recommends paying more attention to the sequence of spells of poverty, severity of chronic poverty, sequence of the spells, and distance from the poverty line and how probable the persistence of poverty is.

Continuing their previous work, Mendola and Busetta (2012) propose a Poverty Persistence Index (PPI), which assigns a higher degree of poverty to those who experienced it in consecutive rather than separate periods and if the poverty years are consecutive or recent. They also offer an Aggregate Poverty Persistence Index (APPI) in order to measure the distribution of persistence of poverty in a society. Podesta and Marzadro (2017) find de-commodification (stopping work) and de-familisation (living alone) important to take into account when considering relative poverty, since all of these concepts are based on an acceptable standards of living, and also offer going beyond the monetary perspective when measuring poverty.

In 2010 Oxford Poverty and Human Development Initiative (OPHI) and the United Nations Development Programme developed the Global Multidimensional Poverty Index (MPI). It uses other factors to determine poverty that are not only based on income and

takes into account a number of deprivations a person is experiencing (Alkire et al. 2017, Alkire et al. 2015, Alkire and Santos 2014).

Gradín et al. (2017) offer a measure for wellbeing which is based on three elements of employment deprivation: incidence, intensity and inequality. It is calculated using a household dimension, i.e. incidence measures for a number of households in population that are deprived, intensity measures for how far the households are from being non-deprived from employment, and measure of inequality increases if unemployment is concentrated only in the few households.

Ayllon and Gabos (2017) distinguish between income poverty (an input indicator) and material deprivation (more of an output indicator as it includes resources beyond income and shows their adequacy), which are closely related but different in nature. For example, a decrease in household income could increase the likelihood of material deprivation, while the reversed relationship is less clear; thus these phenomena should be considered as separate and should require different policy interventions.

It is also possible to make a distinction between subjective and objective poverty. Literature mostly addresses the latter as it is defined through some objective measures, but it is also relevant to discuss subjective poverty as it reveals either who in general is considered to be poor in a specific society or considers self-assessment of own position in the system of inequalities (Nandori 2014).

Acknowledging the debate regarding poverty measures in the literature, this paper uses several poverty-related measures that include both subjective and objective poverty indicators. Our key objective measure is an indicator for being poor identified for households with the equalized household income being below the 60th percentile of the national median equalized disposable income. In addition to this standard Eurostat definition, we perform the sensitivity analysis for 50th and 70th percentiles. Another objective measure used in this study is an index of material deprivation, which aims to extend the picture by capturing non-monetary aspects of poverty. The objective indicators are complemented by two subjective measures of poverty to reflect the self-assessment of the household's situation. These measures include an indicator for whether a household is able to make ends meet, and a personal perspective on shortage of money. Finally, to investigate how unemployment influences savings behaviour we use household net worth and an indicator for having individual retirement account.

Youth studies

A large proportion of research concerning young people focuses on the impact of unemployment on health, well-being and autonomy (McKee-Ryan et al. 2005, Paul and Moser 2009, Wanberg 2012, Voßemer and Eunicke 2015). Relatively little literature discusses youth poverty. Most youth poverty studies focus on Scandinavia and Germany (Julkunen 2002, Aassve et al. 2006, Schels 2013). While unemployment among youngsters attracts substantial attention from policy-makers, very few studies formally examine directly the effect of youth unemployment on poverty (Julkunen 2002, Aassve et al. 2006, Aassve et al. 2013). There is no study considering the long-term effect of youth unemployment.

Several authors consider poverty among youth in general without focusing on unemployment. Family support is found to play an important role in preventing youth poverty, which cannot be achieved with the welfare system alone (Julkunen 2002, Popp and Schels 2008, Majamaa 2011). In poverty permanence studies no gender effect is found in Social Democratic countries, which defies stereotypical thinking of females being supported financially by males and in this way avoiding poverty, but being female has a protective effect against long-term poverty in Mediterranean and Liberal welfare systems (Mendola et al. 2009). Higher levels of education also tend to be associated to lower levels of poverty persistence, this mostly being significant in Mediterranean countries and less important in Liberal and Conservative countries (Mendola et al. 2009). This finding can partially be explained through the relationship between education and employment and its link to earnings and, thus, poverty.

Determinants of youth poverty and links to the old-age poverty

Another strand of related literature looks into the determinants of poverty. Here our paper brings together two important results from the literature. Unemployment is found to be related to poverty in the short-run for the youth (Julkunen 2002, Aassve et al. 2006). The literature also suggests high state dependence – experiencing poverty is associated with experiencing it again (Skare and Druzeta 2016, Anand and Lea 2011). Even though it would be difficult to claim a direct causal relationship between poverty from period one to period two, but it is, however, likely that a set of circumstances determining poverty are present at both periods. In addition, it might be difficult to capture all such circumstances as separate explanatory control variables (like habit, attitudes, preferences, etc.), but they might be very important nonetheless. Hence, experience of poverty during the early years could help explain an increased likelihood of being poor later in life. However, there is no evidence yet as to whether this effect may last as long as 25 years and beyond.

For youth, leaving the parental home is associated with an entry into poverty, especially in Scandinavian countries (Aassve et al. 2007, Ayllon 2015, Mendola et al. 2009). However, this dependence is short-lived in Scandinavia, while it takes longer in Southern and Continental Europe. In Spain and Italy, some young adults do not even leave home until much later in order to avoid poverty (Ayllon 2009, Ayllon 2015, Mendola et al. 2009).

A strong social security system is found to help to reduce the negative effect of higher rates of working age unemployment on poverty after the great recession: In countries with higher levels of social protection spending a negative effect of unemployment was lower even after controlling for other possible factors (Chzhen 2017). In contrast, Schels (2013) shows that claiming social benefits in Germany increases the risk of prolonged or repeated receipt of benefits, which is frequently associated with long-term unemployment, low qualifications and having children when young.

Poverty can have an effect on a person's further life by diminishing self-control (Spears 2011, Bernheim et al. 2015, Carvalho et al. 2016), which makes economic-decision making more difficult. Ayllon and Gabos (2017) look into three segments of poverty: At-risk-of-poverty, severe material deprivation, and low work intensity rates. Out of these

material deprivation is least affected by the long-term scarring effect, i.e. negative consequences towards future employment possibilities, while low work intensity is the most affected by it. This suggests poverty has spill over effects into the future, and thus tackling the problem at the present state could reduce the problem in the future.

2.3 Data

We draw on data from the Survey of Health, Ageing, and Retirement in Europe (SHARE 2002-2013: Börsch-Supan 2016). SHARE is a multidisciplinary cross-national panel study that includes five waves of data and provides information about 157,000 individuals of age 50 years and over from 20 European countries (including Israel). SHARE offers a detailed picture of the socio-economic situation, well-being, and health of elderly Europeans (see Börsch-Supran et al. 2013 for a detailed overview).

In 2008-2009, in place of the regular SHARE survey the SHARELIFE survey was implemented collecting retrospective life histories of about 28,000 individuals from 14 European countries. This information is used to build job market histories. Poverty outcomes are derived from the wave 2 data. We also use wave 5 for poverty outcomes not available in wave 2 or when the sample size is a critical issue. In general, descriptive statistics is very similar across all samples.

2.4 Methodology

Poverty Outcome Measures

Following the literature, we consider a number of poverty outcomes, both objective and subjective. Objective measures include an indicator for being poor and an index of material deprivation. Subjective measures include an indicator for whether a household is able to make ends meet, and a personal perspective on shortage of money. In addition, we aim to investigate some potential channels though which unemployment influences poverty, such as savings behaviour. With that in mind, we consider two additional measures: Household net worth and an indicator for having individual retirement account.

To construct an **indicator for being poor** we compare the equalized household income to the 60th percentile of the national median equalized disposable income (based on the EU-SILC data). SHARE provides two measurements for total household income. One of them is a sum of all the incomes of individuals in the household from all sources in the previous year and another is based on a one-off question on average monthly household income. The choice between these two alternative measures is not obvious. As indicated in De Luca G. et al. (2015) asking about disaggregated income components may lead to a more accurate measure of total household income. However, this approach tends to result into a very restrictive sample due to a larger amount of missing data. Fortunately, SHARE provides multiple imputations for the financial variables. We use both of these two variables given that “none of the two measures of total household income could be strictly preferred to the other” (De Luca G. et al. 2015). The share of respondents identified as relatively poor in our sample is equal to 15% based

on a one off question and 23% using the sum of all individual incomes in the household. It is the same for both genders.

The index of **material deprivation index** is available only in wave 5 of the SHARE data, while the SHARELIFE contains observations on wave 1 and wave 2 respondents only. Though the combination of these two datasets limits the sample, we find the measure important for the purpose of this research. The index of material deprivation index is a continuous variable with values distributed between 0 and 1. The sample average value of the index is 0.087 for males and 0.095 for females.

This index is based on eleven items in two groups:

i. Whether a person can afford to:
   - eat meat, fish or chicken at least three times per week
   - eat fruits or vegetables at least three times per week
   - regularly buy necessary groceries and household supplies
   - go for a week long holiday away from home at least once a year
   - afford to pay an unexpected expense without borrowing any money.

ii. In the previous twelve months, to keep living costs down, respondent did the following:
   - continued wearing clothing that was worn out
   - continued wearing shoes that were worn out
   - put up with feeling cold to save heating costs
   - gone without or not replaced glasses needed
   - postponed visits to the dentist
   - could not go to see the doctor when needed because of cost

There are two subjective measures of poverty. The first one is based on the following question: “Thinking of your household's total monthly income, would you say that your household is able to **make ends meet**...”. The answers to the question are grouped into the binary variable: 1 for “with great difficulty” and “with some difficulty” and 0 for “fairly easily” and “easily”.

Another subjective measure of poverty is taken from the personal question “How often do you think that a **shortage of money** stops you from doing the things you want to do?” The answers are grouped into a binary variable. The value equals 1 for “often” and “sometimes” and 0 for “rarely” and “never”.

Subjective measures reveal much higher level of poverty among our respondents. Each third individual found it difficult to make ends meet. Almost half of the respondents (47% of males and 49% of females) experienced a shortage of money.

In addition, we consider **household net worth** that is an aggregated variable provided by SHARE. It summarizes real assets net of any debts and net financial assets. SHARE provides financial variables in Euro. In order to use the measure in the cross-country analysis we adjust data using purchasing power parity conversion rates from the OECD. The average household net worth is USD 335,374 PPP for males and USD 304,021 PPP for females.

An **individual retirement account** means a retirement plan that enables a person to set aside some money away each year, to be (partially) taken out at the time of retirement. Financial respondents answer the question for him/her and his/her partner. The share of people with individual pension accounts equals 18.1% among men and 15.2% among women in our sample (difference is significant at 1% level).

Unemployment measures

The key variables of interest are youth unemployment defined as the cumulative years in unemployment between the ages 15 and 29 years. In addition to "total years of unemployment" measures, we also consider an indicator variable for whether one had been unemployed during the respective period. Unemployment is self-reported ("Which of these best describes your situation?") and irrespective of respondents being registered unemployed or in benefit receipt. It is reported only if the gap between the two jobs was six months or longer. Moreover, we do not know the exact duration of unemployment, so it would be more accurate to say that the "total years of unemployment" refer to the total number of years in which an individual was unemployed at least for 6 months. In a similar way, we define other statuses such as "housework", "education", and "other" for all other activities, which are neither in the mentioned categories nor in paid employment. If a respondent reported a gap between jobs but indicated that she was employed during this gap, we define it as "other" category. We also include an indicator for an involuntary job loss and an interaction of the latter with unemployment, aiming to test whether involuntary job loss has an additional negative effect on poverty and whether it deepens or mitigates the effect of unemployment.

Overall, several decades ago females stayed out of labour market substantially more often than males. Every other woman reports looking after home or family at the age 15-29 while only 1-2% of men do so. However, in terms of unemployment the difference by gender is not as sharp. About 5-7% of respondents, both males and females, had ever been unemployed when young and a similar share of respondents experienced involuntary job loss (do not have to be the same persons though). Yet, on average females experienced slightly more years of unemployment (4.3) compare to males (3.99), the difference is statistically significant at 10% level. Women have slightly higher incidence of training and education received after entering the job market (5.5-7.2% for females and 4.6-6% for males, the difference is significant at 5%).

Other controls

We divided our rich set of controls into three groups. Basic controls include age cohort dummies, whether or not an individual was a child or youth during the war times, and a set of dummies for the countries of residence. As for age, we define three age intervals, such as of 50-59 years, which is pre-retirement age, 60-69 years, which is around retirement age and 70 years and above. The sample mean is no different for both genders and falls into the second age interval. Two war control variables help account for individuals whose entrance into the job market could have been affected by the world wars. The first indicates whether an individual was aged 13 years or younger during the World War I or World War II. About half of the sample has this characteristics (53% of males and 49% of females). The second world war variable indicates whether an indi-

vidual was 14-29 years old during the same periods (3-5% of respondents are affected, with no difference by gender).

The next group of variables describes important aspects of childhood and family background, used to control for any disadvantage either in health or developmental opportunities which could have affected both the probability of becoming unemployed when young and the chances of ending up in poverty when old. Childhood health measures include indicators for fair/poor self-perceived childhood health, for whether an individual stayed in a hospital for one month or longer during childhood and an indicator for having a serious health conditions[8] during childhood. These variables are considered as important controls for early health problems, which could have affected an individuals' labour market performance. We also control for other childhood conditions, such as the number of persons per room (categorical variable less than one, from one to two, and more than two), the number of accommodation facilities (the sum of points for each of the following: fixed bath, cold running water, hot running water, inside toilet and central heating), the number of books at home at age 10. Parents' characteristics included indicators whether parents smoked, drank heavily or had a mental health problems during the respondent's childhood, and skill occupation of the breadwinner. Finally, we control for math and language abilities of a person relative to other children in class at age 10.

Finally, we include two more indicators: getting married prior to age 30 and having achieved higher education prior to age 30. On the one hand, people may have issues in the labour markets because of lack of education and/or personal problems. Therefore, it is important to control for these variables. On the other hand, anticipating or having faced labour market exclusion they may choose to invest in additional education and/or focus on their prospects in the marriage market, which may lead to a better economic situation in the long term. Hence, we restrict the measure of the two variables for the period prior to age 30. The share of the sample females married prior to age 30 is 10% higher relative to males (85-88% vs. 75-77% respectively) while males were 4-6% more likely to receive higher education by that age (22-26% vs. 16-22% respectively). Therefore, we estimate all models with and without controlling for higher education and marital status prior to age 30 in order to test for the sensitivity of our findings.

Empirical strategy

We use linear models for continuous variables such as household net worth and the material deprivation index; Probit models for binary dependent variables, including the risk of being in poverty, ability to make ends meet, and an indicator whether a shortage of money prevents respondents from doing things they want to do. For the main analy-

---

[8] Serious health conditions include polio, asthma. respiratory problems other than asthma, allergies, severe diarrhoea, meningitis/encephalitis, chronic ear problems, speech impairment, difficulty seeing even with eyeglasses, severe headaches or migraines, epilepsy, fits or seizures, emotional, nervous, or psychiatric problem, broken bones, fractures, appendicitis, childhood diabetes or high blood sugar, heart trouble, leukaemia or lymphoma, cancer or malignant tumour (excluding minor skin cancers), other serious health condition

sis, we use cross-sectional data from wave 2[9], which occurred prior to the SHARELIFE interview. This is supplemented by the analysis of the material deprivation index that is derived from wave 5, as it does not appear in wave 2.

Since the main poverty measures are related to the financial variables, we rely on the SHARE provided imputations for these variables (De Luca et al. 2015). We use multiple imputation estimations for the household risk of poverty, net worth, and ability to make ends meet.

We restrict the sample to individuals aged 50 years and over, performing separate analyses for men and women. With each dependent variable, we begin the analysis estimating a simple model where the basic controls are included. Next, following the *persistence* hypothesis (Lewis 1966) we augment the basic model with the characteristics of one's childhood and family background. Finally, we test whether the impact of unemployment on poverty outcomes at an older age is sensitive to the inclusion of marital status and attained higher education prior to age 30.

Although we do have concerns with respect to endogeneity regarding the youth unemployment measure, we think that we are getting close to the population parameter estimates for at least two reasons. First, we consider a clear sequence of events (first youth unemployment and then old age poverty) with at least a 30-year period in between. Second, we are including a number of controls, which could have affected the onset of youth unemployment and lead to poverty. Finally, we check our estimates for robustness by including marital and education outcomes achieved prior to turning 30 years old.

2.5 Results

Considering poverty in old age, we would like to start with a comparative analysis of the phenomenon across the countries in our sample. As one can see from Figure 3, there is significant variation by country. Yet, in most countries, poverty is similar between men and women, with the exception of Austria and Ireland for the risk of poverty measure and France and the Czech Republic for the material deprivation measure, when women are worse off. The share of the elderly population in poverty is lowest in Denmark at 11-14% and highest in Spain at 42-43% (followed by Italy at 34-35%), which is a striking variation. However, if one looks at the index of material deprivation, the difference reduces considerably. Although some of the countries change their place in the ranking when shifting towards material deprivation index, Italy and Spain are consistently showing the highest poverty among the considered countries, while Denmark, Sweden, and the Netherlands – the lowest. When attention is turned to subjective measures of poverty, the situation is qualitatively similar at the lowest end of the distribution. However, Spain and Italy no longer have the highest poverty. It is Greece and Portugal where older people feel most difficulty making ends meet (60-70%), followed by Spain and Italy (50-60%).

---

[9] Wave 1 is omitted because it provides only gross income variables, while poverty indicators are based on net measures.

Figure 3 Risk of poverty and material deprivation index, countries' means

Risk of poverty[1]

0,5 0,4 0,3 0,2 0,1 0

DK FR SE NL CZ DE AT BE PL IE EL IT ES

Males Females

Material deprivation index[2]

0,3 0,2 0,1 0

SE DK NL BE CH AT DE FR CZ ES IT

Males Females

Making ends meet with some difficulty or great difficulty[1]

0,8 0,6 0,4 0,2 0

SE DK NL CH AT DE BE FR IE CZ ES IT EL PL

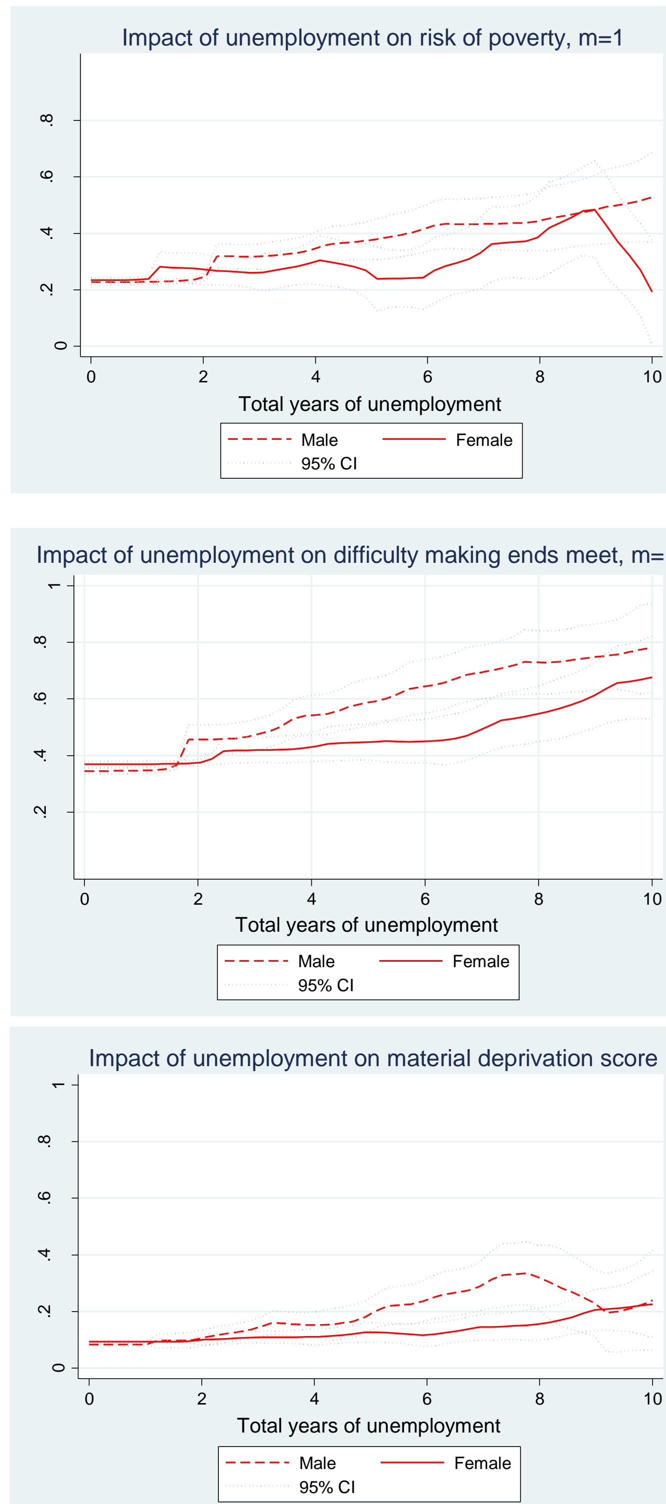
Males Females

Note:[1] estimations based on the wave 2 sample used in this research; [2] estimations based on the wave 5 sample used in this research.Source. Own calculations based on SHARE.

Figure 4 presents the results from the simple non-parametric kernel density estimation for the three measures of poverty. As can be seen, there is a clear upward slope in this

relationship and it is more pronounced for men than it is for women. Albeit the difference is not statistically significant.

Figure 4 Impact of cumulative unemployment on selected outcomes, a non-parametric graphs



Note: Graphs for imputed variables are displayed only for imputation 1 (m=1) since graphs for other individual imputations shows similar results.Source. Own calculations based on SHARE and SHARELIFE

Table 1 Summary statistics of selected variables, based on wave 2 SHARE

	Male		Female	
	mean	sd	mean	sd
Risk of poverty based on the sum of all sources of HH income	0.234		0.238	
Risk of poverty based on 1 question	0.153		0.152	
Household net worth, at PPP	335374	449567	304021	441464
Difficult to make ends meet	0.181		0.152	
Having Individual pension account	0.356		0.373	
Shortage of money	0.466		0.487	
Material deprivation index (based on wave 5 SHARE)	0.087	0.152	0.095	0.155
Total number of years unemployed at age 15-29	0.257	1.231	0.299	1.407
Ever been unemployed at age 15-29	0.0637		0.0693	
Total years in training/education after entering LM at age 15-29	0.180	0.960	0.205	1.043
Ever been in training/education after entering LM at age 15-29	0.0453		0.0525	
Total years looking after home or family at age 15-29	0.119	0.939	3.087	4.273
Ever been looking after home or family at age 15-29	0.0245		0.455	
Total years out of LM for other reason at age 15-29	1.251	2.478	0.674	2.356
Ever been s out of LM for other reason at age 15-29	0.306		0.121	
Ever experienced Involuntary job loss at age 15-29	0.0653		0.0640	
Number of observations:				
Risk of poverty based on sum of all incomes	9155		9730	
Risk of poverty based on 1 question	9155		9730	
Household net worth	9533		10243	
Having Individual pension account	8886		9247	
Difficult to make ends meet	9624		10323	
Shortage of money	9533		10243	
Material deprivation index	5482		6359	

Source. Own calculations based on SHARE and SHARELIFE

Table 2 The impact of youth unemployment on probability to live in household with net equivalised income below risk of poverty threshold, mi probit, average marginal effects

	Male			Female		
	Cumulative measures (total years)			Cumulative measures (total years)		
	(1)	(2)	(3)	(4)	(5)	(6)
Youth unemployment measures	0.013**	0.011**	0.011**	0.008**	0.006*	0.006*
	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)
Youth in training/education after en-	-0.005	-0.003	-0.001	-0.006	-0.004	-0.003

tering LM						
	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)
Youth looking after home or family	0.016**	0.013**	0.013**	0.007**	0.005**	0.005**
	(0.004)	(0.004)	(0.004)	(0.001)	(0.001)	(0.001)
Youth out of LM for other reason	0.002	0.001	0.001	0.007**	0.006**	0.005**
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
Age 50-59	0.039*	0.044*	0.041*	0.091**	0.097**	0.098**
	(0.019)	(0.019)	(0.019)	(0.020)	(0.020)	(0.020)
Age 70 and above	-0.001	-0.012	-0.015	0.031*	0.023+	0.019
	(0.013)	(0.013)	(0.013)	(0.014)	(0.014)	(0.014)
Fair poor self perceived childhood health		-0.014	-0.014		-0.014	-0.013
		(0.019)	(0.019)		(0.016)	(0.016)
Childhood: In hospital for 1 month or longer		0.029	0.028		-0.000	-0.001
		(0.020)	(0.020)		(0.018)	(0.018)
Illness listed in SHARE questionnaire		-0.017	-0.017		-0.025+	-0.026+
		(0.012)	(0.012)		(0.014)	(0.014)
Persons per room when 10		0.016*	0.015*		0.015*	0.014+
		(0.008)	(0.008)		(0.007)	(0.007)
Accommodation conveniences when 10		-0.010**	-0.009**		-0.004	-0.003
		(0.003)	(0.003)		(0.003)	(0.003)
Number of books when 10		-0.018**	-0.014*		-0.015**	-0.011*
		(0.005)	(0.005)		(0.006)	(0.006)
Occupation of the breadwinner when 10		-0.004	-0.005		0.011*	0.009+
		(0.005)	(0.005)		(0.005)	(0.005)
Parents smoked		-0.034**	-0.035**		-0.005	-0.005
		(0.010)	(0.010)		(0.010)	(0.010)
Parents drank heavily		0.022	0.021		0.001	0.002
		(0.017)	(0.017)		(0.016)	(0.016)
Parents had mental problems		-0.003	-0.007		-0.003	-0.001
		(0.038)	(0.038)		(0.028)	(0.028)
Relative position in math when 10		0.025**	0.021**		0.023**	0.020**
		(0.006)	(0.007)		(0.006)	(0.006)
Relative position in language when 10		0.011+	0.007		0.019**	0.016*
		(0.007)	(0.007)		(0.006)	(0.006)
Aged 0-13 during the world wars	-0.079**	-0.087**	-0.089**	-0.011	-0.013	-0.013
	(0.020)	(0.020)	(0.020)	(0.021)	(0.021)	(0.021)
Aged 14-29 during the world wars (but not 0-13)	-0.030	-0.039	-0.044	0.047+	0.041	0.038
	(0.029)	(0.029)	(0.029)	(0.027)	(0.027)	(0.027)
Married prior to age 30			-0.034**			-0.030*
			(0.011)			(0.015)
Higher education prior to age 30			-0.064**			-0.074**

			(0.013)			(0.013)
Observations	9,155	9,155	9,155	9,730	9,730	9,730

Standard errors in parentheses

** p<0.01, * p<0.05, + p<0.1

Table 2 presents the estimates from the analysis of the impact of the cumulative youth unemployment experience on the risk of poverty based on the summary measure of income from all sources over the past year. All three specifications (basic, with additional childhood and family background variables, and with all controls) give very similar results it terms of the direction of the effect and the significance of estimates. However, adding more controls reduces the effect of unemployment: from the most parsimonious specification in Columns (1) and (4) to the one including all of the controls in Columns (3) and (6) the reduction is by 23% for men and by 25% for women. Hence, in further analysis we use the final specification where all controls are included as the preferred one.

Although we cannot interpret the results on our control variables as factors determining later life poverty, the coefficients are of the expected signs and are significant statistically at 5% level. They are in general consistent with economics arguments and findings of relevant studies, showing that early life parental family socio-economic conditions are related to regional economic development across Europe later (Tabellini 2010) and can help explain poverty persistence in individual's life (Tinios et al. 2011). For example, it is higher for individuals who lived in a crowded housing, while lower for those who had more books, grew in an accommodation with more amenities, and whose breadwinning parent had a higher occupational status (for women only). In terms of indicators for childhood health, poverty is more likely among women who stayed in hospital for 1 month or longer. The parental smoking tends to be negatively associated with the risk of poverty for men but not for women. The risk of poverty is lower among more able women as measured by a higher relative position in math and language at age 10, while only a relative position in math is influential for men. Controls for the wartime experiences have almost no bearing on the risk of poverty for women while being a child for men has a negative correlation. As expected, being successful in the marriage market and achieving higher education prior to age 30 is indeed negatively associated with the risk of later poverty.

Table 3 summarises estimates from the preferred specification for all the poverty measures, as well as savings behaviour for two different measures of unemployment – the cumulative unemployment experience when young and an indicator for ever being unemployed when young. Overall, youth unemployment significantly increases the risk of poverty. The result holds for almost all outcomes – the likelihood of relative poverty increases[10], material deprivation is larger, difficulty to make ends meet increases, household net worse is lower, and individuals more often experience shortage of money. For instance, youth unemployment increases the probability of being short of money in older age by 3.8% for women and 5.7% for men. Each year when a youngster was unemployed during at least six months increases the probability of being poor after 50 by 0.6% for females and 1% for males. Moreover, household net worth after reach-

[10] Only for the measure based on the sum of all sources of HH income. See further discussion below.

ing 50 years old is lower by USD 87,500 for males and by USD 48,380 for females compared to individuals who did not experience unemployment while young. There is a negative effect on the probability of having a private pension account, albeit only for men.

The results are quite similar for both genders, although they are more pronounced for males. The magnitude of the effect is typically smaller for women and it is the duration of unemployment that matters rather than a mere fact of being unemployed, while for males both measures of unemployment affect poverty.

We found quite an interesting result for relative poverty. When respondents are asked one question about their household total average monthly income, the unemployment does not have a significant effect on the risk of poverty. However, when such a measure is constructed by carefully summing up all the individual incomes in the household there is a strong and significant effect. This result may suggest that individuals with larger cumulative youth unemployment experience tend to have relatively more fluctuating income. However, this merits further investigation.

Table 4 shows the estimates from the specifications with additional controls for having lost a job due to a plant closure or a layoff, and its interaction with the youth unemployment indicator. We have chosen the latter rather than the cumulative years of unemployment experience to ensure proper comparison with the impact of the involuntary job loss indicator. Inclusion of involuntary job loss indicator and its interaction with an unemployment dummy does not change the coefficients for youth unemployment in a drastic way, while in many cases it gets even more pronounced. F-test on the joint significance of the main effect (job loss) and the interaction effect shows that there is no effect of involuntary job loss on all the outcome measures for women. However, there are two exceptions for men to this worth noting. First, there is an independent impact of involuntary job loss on one of the subjective poverty measures, i.e. the likelihood of experiencing shortage of money, on household net worth, and the probability of having private pension. These effects are statistically significant at the 10% level and comparable to the effect of unemployment. The second exception relates to the impact on the material deprivation index. Both the direct indicator of the job loss and its interaction term are significant. Thus, if a man experienced unemployment longer than 6 months and an involuntary job loss, the resulting total effect of unemployment on material deprivation becomes insignificant (-0.009=0.025-0.037). To summarise, with one exception the youth unemployment effect on poverty is not mitigated by an involuntary job loss experience. While the latter variable has its own effect on selected outcomes, including it into regressions does not reduce the effect of unemployment.

Table 3 The impact of youth unemployment on various poverty measures

	Male				Female			
	Total years unemployed		Ever been unemployed		Total years unemployed		Ever been unemployed	
A. Objective poverty								
Risk of poverty[1] based on the sum of all sources of HH income	0.010**	(0.003)	0.038*	(0.019)	0.006*	(0.003)	0.011	(0.017)
Risk of poverty[1] based on one shot question on HH income	0.002	(0.003)	0.016	(0.018)	0.002	(0.003)	0.002	(0.014)
Material deprivation index[2]	0.010**	(0.002)	0.024**	(0.009)	0.008**	(0.001)	0.021**	(0.007)
B. Subjective poverty								
Difficult to make ends meet[1]	0.012**	(0.004)	0.063**	(0.019)	0.007*	(0.003)	0.017	(0.017)
Shortage of money[3]	0.007+	(0.004)	0.052**	(0.020)	0.013**	(0.003)	0.047*	(0.019)
C. Savings								
Household net worth[4]	-15,924**	(3859)	-87,500**	(20206)	-10,428**	(3109)	-48,380**	(18148)
Probability to have individual pension account[3]	-0.012*	(0.006)	-0.041*	(0.017)	-0.005	(0.003)	-0.015	(0.014)

Source. Own calculations based on SHARE and SHARELIFE.

Notes: Standard errors in parentheses, ** p<0.01, * p<0.05, + p<0.10

All models included controls for age (groups 50-59, 60-69, 70 and above), childhood health measures (fair/poor childhood health, indicators for being in hospital for one month or longer during childhood, and indicator for having illness listed in SHARE questionnaire), other childhood controls at age 10 (number persons of per room, accommodation conveniences, number of books) relative math and language abilities and family controls, such as occupation of the breadwinner, indicators for parents smoking, drinking heavily, mental health problems), indicators for receiving higher education prior to age 30, indicators for getting married prior to age 30, dummy variable for being a war child and war youth, and country fixed effects.

[1] marginal effects from probit model, multiple imputations, [2] OLS results, [3] marginal effects from probit model,, [4] OLS results, multiple imputations

Table 4 The impact of youth unemployment controlling for involuntary job loss

A. Objective poverty		Risk of poverty[1] based on the sum of all sources of HH income			Risk of poverty[1] based on one shot question on HH income			Material deprivation index[4]		
Male	Ever been unemployed	0.039*	0.040*	0.043*	0.017	0.017	0.023	0.024**	0.021*	0.028**
		(0.019)	(0.019)	(0.021)	(0.018)	(0.018)	(0.021)	(0.009)	(0.009)	(0.010)
	involuntary job loss		-0.005	-0.001		-0.001	0.006		0.019*	0.025**
			(0.018)	(0.020)		(0.015)	(0.016)		(0.008)	(0.008)
	Ever been unemployed			-0.020			-0.042			-0.037+
	x involuntary job loss			(0.047)			(0.043)			(0.021)
	Observations	9,155	9,155	9,155	9,155	9,155	9,155	5,482	5,482	5,482
Female	Ever been unemployed	0.011	0.012	0.024	0.002	0.001	0.004	0.021**	0.020**	0.021*
		(0.017)	(0.017)	(0.019)	(0.014)	(0.014)	(0.017)	(0.007)	(0.008)	(0.009)
	involuntary job loss		-0.009	0.004		0.006	0.009		0.007	0.008
			(0.019)	(0.020)		(0.014)	(0.016)		(0.007)	(0.008)
	Ever been unemployed			-0.067			-0.013			-0.007
	x involuntary job loss			(0.048)			(0.038)			(0.018)
	Observations	9,730	9,730	9,730	9,730	9,730	9,730	6,359	6,359	6,359

B. Subjective poverty		Having individual pension account[3]			Shortage of money[3]		
Male	Ever been unemployed	0.063**	0.060**	0.072**	0.052**	0.044*	0.057*
		(0.019)	(0.019)	(0.021)	(0.020)	(0.020)	(0.022)
	involuntary job loss		0.019	0.030		0.063**	0.075**
			(0.018)	(0.020)		(0.019)	(0.021)
	Ever been unemployed			-0.065			-0.076
	x involuntary job loss			(0.045)			(0.052)
	Observations	9,624	9,624	9,624	9,533	9,533	9,533
Female	Ever been unemployed	0.017	0.015	0.018	0.047*	0.041*	0.038+
		(0.017)	(0.017)	(0.019)	(0.019)	(0.019)	(0.021)
	involuntary job loss		0.010	0.013		0.034+	0.030
			(0.018)	(0.020)		(0.019)	(0.021)
	Ever been unemployed			-0.014			0.017
	x involuntary job loss			(0.044)			(0.048)
	Observations	10,324	10,324	10,324	10,244	10,244	10,244

C. Savings		Household net worth[2]			Having individual pension account[3]		
Male	Ever been unemployed	-87,500**	-81,531**	-74,360**	-0.041*	-0.034+	-0.033
		(20,206)	(20,478)	(21,749)	(0.017)	(0.017)	(0.020)
	involuntary job loss		-47,039*	-40,636+		-0.030*	-0.029*
			(20,052)	(21,035)		(0.013)	(0.014)
	Ever been unemployed			-43,977			-0.007
	x involuntary job loss			(51,528)			(0.043)
	Observations	9,624	9,624	9,624	8,886	8,886	8,886
Female	Ever been unemployed	-48,388**	-45,099*	-37,570+	-0.015	-0.013	-0.022
		(18,147)	(18,399)	(20,397)	(0.014)	(0.014)	(0.016)
	involuntary job loss		-20,908	-12,917		-0.007	-0.015
				(20,223)		(0.014)	(0.015)
	Ever been unemployed			-41,924			0.043
	x involuntary job loss		(18,268)	(44,412)			(0.039)
	Observations	10,324	10,324	10,324	9,247	9,247	9,247

Source. Own calculations based on SHARE and SHARELIFE.

Notes: Standard errors in parentheses, ** p<0.01, * p<0.05, + p<0.10

All models included controls for age (groups 50-59, 60-69, 70 and above), childhood health measures (fair/poor childhood health, indicators for being in hospital for one month or longer during childhood, and indicator for having illness listed in SHARE questionnaire), other childhood controls at age 10 (number persons of per room, accommodation conveniences, number of books) relative math and language abilities and family controls, such as occupation of the breadwinner, indicators for parents smoking, drinking heavily, mental health problems), indicators for receiving higher education prior to age 30, indicators for getting married prior to age 30, dummy variable for being a war child and war youth, and country fixed effects.

[1] marginal effects from probit model, multiple imputations, [2] OLS results, [3] marginal effects from probit model, [4] OLS results, multiple imputatio

Table 5 The impact of youth unemployment on risk of poverty based on summarised income at different thresholds

	Male			Female		
	Share of poor in the sample	Total years unemployed[1]	Ever been unemployed[1]	Share of poor in the sample	Total years unemployed[1]	Ever been unemployed[1]
Risk of poverty with threshold at 50% of median equivalized disposable income	0.179	0.007*	0.025	0.177	0.005+	0.008
		(0.003)	(0.019)		(0.003)	(0.015)
Risk of poverty with threshold at 60% of median equivalized disposable income	0.234	0.011**	0.039*	0.238	0.006*	0.011
		(0.003)	(0.019)		(0.003)	(0.017)
Risk of poverty with threshold at 70% of median equivalized disposable income	0.300	0.013**	0.043*	0.313	0.007*	0.023
		(0.004)	(0.020)		(0.004)	(0.021)

Source. Own calculations based on SHARE and SHARELIFE.

Notes: Standard errors in parentheses, ** p<0.01, * p<0.05, + p<0.10

All models included controls for age (groups 50-59, 60-69, 70 and above), childhood health measures (fair/poor childhood health, indicators for being in hospital for one month or longer during childhood, and indicator for having illness listed in SHARE questionnaire), other childhood controls at age 10 (number persons of per room, accommodation conveniences, number of books) relative math and language abilities and family controls, such as occupation of the breadwinner, indicators for parents smoking, drinking heavily, mental health problems), indicators for receiving higher education prior to age 30, indicators for getting married prior to age 30, dummy variable for being a war child and war youth, and country fixed effects.

[1] marginal effects from probit model, multiple imputations

Sensitivity analysis

In our main analysis, we define a household to be at risk of poverty if equivalized household income after social transfers is below 60% of the national median equalized disposable income. In addition to this basic definition, we also apply a 50% and a 70% thresholds to see whether results still hold. The results for risk of poverty outcome based on summarized income and different thresholds are presented in Table 5. The model presents the preferred specification controlling for higher education and marriage prior to age 30. They show that the impact of unemployment at age 15-29 is similar in all three definitions, though the magnitude of the impact increases when the threshold shifts up. For males, a cumulative measure of unemployment remains significant in all cases, while the effect of the binary indicator for being unemployed goes down in size and loses its significance at 50% threshold. For females, cumulative measures are significant and the effect of the binary variable does not hold in some

cases. These results suggest that the contribution of youth unemployment to the later life poverty is especially pronounced for households near the poverty threshold rather than to the severely poor households.

Similar estimations were performed for the risk of poverty outcome using our second definition of income based on one shot question on the total household income. Like in the main analysis, we do not find any significant results for this measure.

2.6 Conclusions

A decade-long spike of unemployment in European Union raises serious concerns about its effect on the current and future population wellbeing. The situation is particularly severe for youth. Not only does this cohort is experience the highest unemployment and labour market insecurity right now. But also the consequences of such insecurity at young age may have a substantial long term impact.

This paper exploits a unique opportunity provided by the retrospective module of the Survey of Health, Aging and Retirement in Europe to investigate the impact of unemployment experienced at young age on the risk of poverty and deprivation at age 50 and beyond. We carefully control for alternative uses of time by having separated not only unemployed persons, but also those individuals looking after home or family and staying out of the labour market for other reasons.

We document that more than 30 years after the unemployment episode(s), there is still a substantial effect on a variety of poverty measures. In particular, youth unemployment increases the probability of being short of money in older age by 3.8% for women and 5.7% for men. Household net worth for individuals around the age of retirement (65-70) is lower by USD 87,500 for males and by USD 48,380 for females, compared to individuals who did not experienced unemployment when young. The probability of having difficulty to make ends meet or of being poor after 50 increases by 0.6%-1% with each year when a young male or female was unemployed during at least six months. Such persons also experience higher material deprivation at age 50 and beyond.

The magnitude of the effect is typically smaller for women despite that, on average, between the ages 15-29, they were equally likely to become unemployed and accumulated greater youth unemployment experience. We found that for women the duration of unemployment has a more detrimental effect than a mere fact of being unemployed, while for males both aspects of unemployment affect poverty. We find that partially, the effect of youth unemployment on poverty in old age can be explained via the savings channel: people who experienced unemployment at young age approach retirement with lower net worth and low likelihood of having a private pension account.

These results are very robust to different specifications. They have not vanished after we control for for the country of residence, age, numerous disadvantages either in health or developmental opportunities which could have affected both the probability of becoming unemployed and poverty, involuntary job loss experience, higher education and marital status prior to age 30. Such a rich set of controls and a clear sequence of

events (first youth unemployment and then old age poverty) with at least 30-year period in between make our results less sensitive to a potential endogeneity problem.

Our findings suggest that without additional efforts to mitigate the negative consequences of unemployment the current cohort of youth is at higher risk of poverty in older years.

Appendix

Table A 1 Summary statistics

	Wave2				Wave5			
	Male		Female		Male		Female	
	mean	sd	mean	sd	mean	sd	mean	sd
Risk of poverty based on sum of ind incomes	0.234		0.238					
Risk of poverty based on 1 question	0.153		0.152					
Household net worth, at PPP	335374	449567	304021	441464				
Having Individual pension account	0.181		0.152					
Difficult to make ends meet	0.356		0.373					
Shortage of money	0.466		0.487					
Material deprivation index					0.087	0.152	0.095	0.155
Total number of years unemployed at age 15-29	0.257	1.231	0.299	1.407	0.183	0.984	0.260	1.254
Ever been unemployed at age 15-29	0.0637		0.0693		0.053		0.065	
Total years in training/education after entering LM at age 15-29	0.180	0.960	0.205	1.043	0.248	1.126	0.284	1.240
Ever been in training/education after entering LM at age 15-29	0.0453		0.0525		0.060		0.072	
Total years looking after home or family at age 15-29	0.119	0.939	3.087	4.273	0.050	0.599	2.870	3.999
Ever been looking after home or family at age 15-29	0.0245		0.455		0.012		0.447	
Total years out of LM for other reason at age 15-29	1.251	2.478	0.674	2.356	1.082	2.260	0.648	2.233
Ever been s out of LM for other reason at age 15-29	0.306		0.121		0.290		0.125	
Ever experienced Involuntary job loss at age 15-29	0.0653		0.0640		0.069		0.073	
Age	64.10	9.077	63.31	9.331	69.39	8.38	68.33	8.88
Fair poor self-perceived childhood health	0.0659		0.0846		0.082		0.091	
Childhood: In hospital for 1 month or longer	0.0599		0.0634		0.066		0.063	
Illness listed in SHARE questionnaire	0.839		0.883		0.880		0.920	
Persons per room when 10 (1 - one person or less, 2 - one - two persons, 3 - more than 2 persons)	1.995	0.725	1.992	0.723	1.866	0.699	1.859	0.699
Accommodation conveniences when 10	1.926	1.738	2.046	1.758	2.279	1.770	2.413	1.775

	Wave2				Wave5			
	Male		Female		Male		Female	
	mean	sd	mean	sd	mean	sd	mean	sd
Number of books when 10 (1 "0-10 books", 2 "11-25 books", 3 "26-100 books", 4 "> 100 books")	2.008	1.067	2.127	1.075	2.163	1.105	2.292	1.099
Occupation of the breadwinner when 10 (7 "no breadwinner" 6 "no skill level"... 1 " Legislator, senior official or manager")	3.984	0.982	3.987	1.005	3.962	1.036	3.953	1.062
Parents smoked	0.658		0.623		0.667		0.638	
Parents drank heavily	0.0813		0.0852		0.077		0.090	
Parents had mental problems	0.0189		0.0281		0.023		0.036	
Relative position in math when 10 (1. Much better 5. Much worse)	2.602	0.854	2.712	0.833	2.540	0.869	2.688	0.839

Table A 2 continued

	Wave2				Wave5			
	Male		Female		Male		Female	
	mean	sd	mean	sd	mean	sd	mean	sd
Relative position in language when 10 (1. Much better 5. Much worse)	2.753	0.830	2.549	0.833	2.727	0.853	2.519	0.844
Aged 0-13 during the world wars	0.533		0.488		0.536		0.476	
Aged 14-29 during the world wars (but not 0-13)	0.0505		0.0523		0.026		0.029	
Married prior to age 30	0.750		0.857		0.765		0.852	
Higher education prior to age 30	0.234		0.196		0.255		0.215	
By country:								
Austria	0.0324		0.0416		0.038		0.044	
Germany	0.0792		0.0824		0.078		0.076	
Sweden	0.0658		0.0806		0.085		0.094	
Netherlands	0.0820		0.0873		0.102		0.106	
Spain	0.0638		0.0493		0.085		0.067	
Italy	0.105		0.0801		0.126		0.096	
France	0.0844		0.0950		0.099		0.107	
Denmark	0.0903		0.0972		0.120		0.123	
Greece	0.111		0.0698		-		-	
Switzerland	-		-		0.058		0.067	
Belgium	0.115		0.111		0.140		0.132	
Czech Republic	0.0727		0.0918		0.070		0.088	
Poland	0.0714		0.0814		-		-	
Ireland	0.0273		0.0325		-		-	
Number of observations:								
Risk of povery based on sum of ind incomes	9155		9730					
Risk of povery based on 1 question	9155		9730					
Household net worth	9533		10243					
Having Individual pension account	8886		9247					
Difficult to make ends meet	9624		10323					
Shortage of money	9533		10243					

	Wave2				Wave5			
	Male		Female		Male		Female	
	mean	sd	mean	sd	mean	sd	mean	sd
Material deprivation index					5482		6359	

Source. Own calculations based on SHARE and SHARELIFE.

3. A prospective view: Early unemployment uncertainty and long-term-socio-economic consequences for youth

3.1 Demand side perspective: Young people's attitudes towards old age security and actual savings behaviour

Dirk Hofäcker, Institute for Social Work and Social Policy, University of Duisburg-Essen, Germany

In the following, we focus on young people's old age security from a demand side perspective, i.e. we investigate the savings attitudes and behaviour of youth in Europe. Are youth at all recognizing the need to make savings for the future? Do they actively save? And if not, what reasons or motivations keep them from saving? These savings intentions by youth represent a necessary condition for old age security in multi-pillar pension systems, as no old age insurance – unless it is universal or compulsory – will be established when young people do not decide to make such investments.

Given the topicality of the issue, it is surprising that until now, there is relatively little cross-nationally comparative research about young people's savings behaviour respectively intentions. There have been some national studies that investigated individual savings, like the German SAVE study (Börsch-Supan et al. 2009). Cross-national quantitative surveys such as the ISSP regularly have investigated the abstract attitudes of the population towards pension systems, particularly its overall legitimacy and their extent (e.g. Bechert and Quandt 2010). Yet, they did rarely include indicators on actual savings behaviour. There are only very few exceptions, namely from the Eurobarometer European Social Survey, where single indicators on savings behaviour were included, though with a focus on the overall population rather than youth. We will analyse these quantitative data in the following, and subsequently compare its main findings to that of selected qualitative research conducted within the EXCEPT (see also Deliyanni-Kouimtzi et al., forthcoming) project to check for the general robustness of findings.

Quantitative Evidence (I): General importance of later life savings

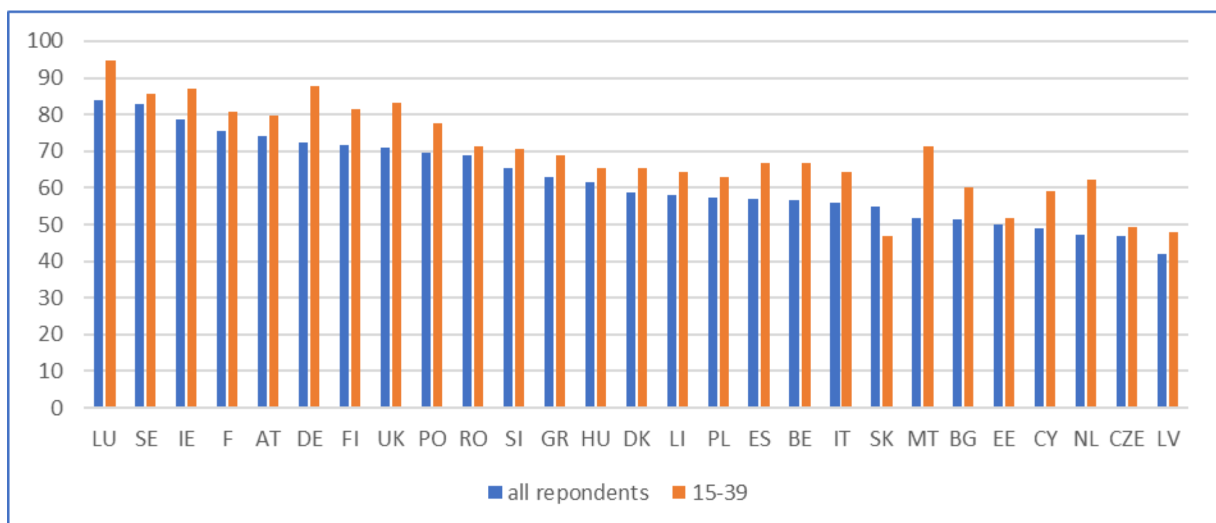
Figure 3.1 displays results from the Flash Eurobarometer 2008 study, covering all EU member states and candidate countries by that time – where respondents were asked whether "*thinking of the time when [they] retire, would [they] consider saving money or taking up insurance in case that [they] become dependent*".[11] Respondents could choose to answer "yes" or "no". Figure 3.1 contrasts figures for the entire (non-retired)

[11] The item was asked as part of a larger item battery focusing on post-retirement behavior without a clear temporal focus of the proposed behavior, which makes it somewhat difficult to link the item directly to individual savings behavior of non-employed persons now. Yet, in the absence of alternative indicators, this item is used in the following as a rough proxy indicator of the importance that is attributed to savings for old age beyond mere pension savings.

sample with that of respondents aged up to 39 years in order to investigate the importance attributed to savings.[12]

As Figure 3.1 indicates, the general readiness to make additional savings for old age is comparably high in European countries, ranging from 80-90 percent in countries like Luxembourg, Sweden, Ireland and France to between 50 and 60 percent in some Eastern European countries (Czech Republic, Latvia, Estonia and Bulgaria), but also the Netherlands and Cyprus. These country-specific differences in the readiness to save may be traced back to differences in old age benefits, support from the family and/or nations-specific wage levels. Yet, what is striking is that the consent among the younger respondents not only reaches that of the overall population, but also often even surpasses it by a few percentage points. This suggests that younger people are generally well aware of the need to make additional savings for old age, even though this life phase is still comparatively distant for them.

Figure 3.1 General importance attributed to savings in European countries, young people (15-39 years) vs. full (non-retired) sample, 2008



Source: Flash Eurobarometer 247 (own calculations)
Question Wording: "Thinking of the time when you retire, would you consider saving money or taking up insurance in case you become dependent" (Yes/No/Don't know)

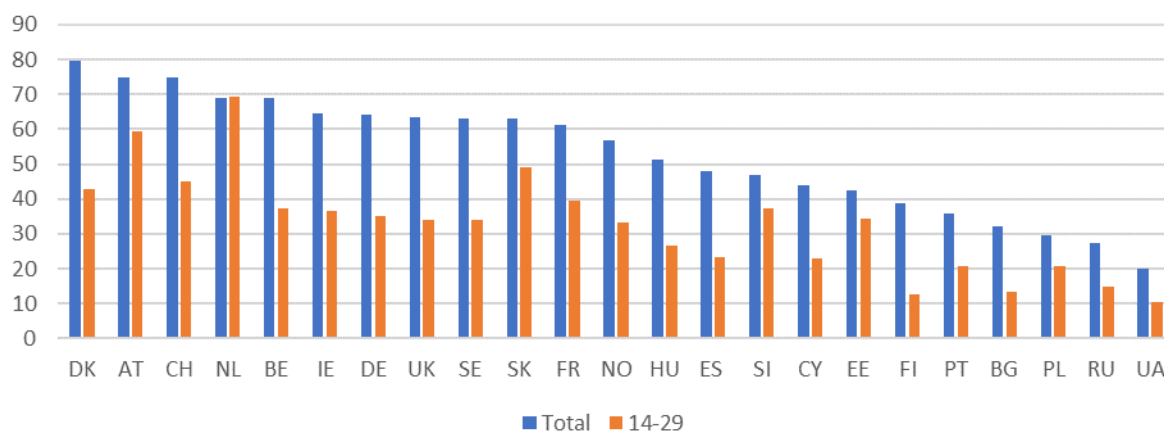
Quantitative Evidence (II): Own readiness to save

While the Eurobarometer indicator in Figure 3.1 allowed to assess the general *readiness* to save, Figure 3.2 shifts the attention to the actual savings *behaviour*, assuming that not all intentions to save will (or can) be put into practice? Data are taken from the third wave of the European Social Survey 2006, again covering all EU countries. Here respondents were asked to "*think about all types of savings such as bank accounts, investments, private and company pensions as well as property. Are you currently saving or have you saved in the past specifically in order to live comfortably in your old*

[12] Given small sample sizes at the national level, the age window had to be opened up to 39 years, though a somewhat narrower age band would have been preferable

age?" Again, respondents could answer with "yes" or "no".[13] Figure 3.2 displays the relative number of respondents confirming to make own savings for the entire population and those respondents aged up to 29 years.[14]

Figure 3.2 Owns savings to live comfortably in old age, young people (15-29 years) vs. full (non-retired) sample, 2006



Source: European Social Survey Round 3/2006 (own calculations)

While there were virtually no age differences in general attitudes towards savings in general, Figure 3.2 indicates a clear gap in actual savings between younger people and the general population. In most countries, less than 50 percent of the younger population is reporting to make savings for old age, particularly again in Eastern and Southern European countries.

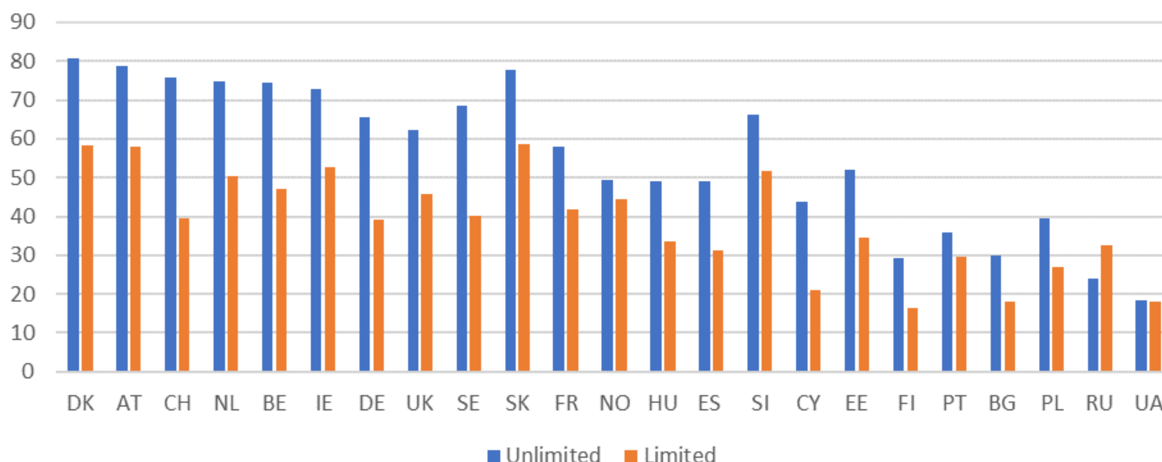
Part of this result may be explained by simple life course influences: Younger individuals are still engaged in educational activities or have competing commitments, e.g. for family expenses or housing. Yet, a more detailed decomposition of actual savings behaviour suggests that part of the lower savings investments by youth may be attributable to existing difficulties of youth to establish themselves on the labour market. The following two figures break down the results from Figure 3.2 according to selected risk characteristics of youth identified earlier in the EXCEPT project (Rokicka et al. 2015): the *type of contract* (Figure 3.3.) and the *level of education* (Figure 3.4).

Figure 3.3 clearly indicates that in the vast majority of countries, the relative share of young people making monetary savings is clearly higher among those with an unlimited contract than for those with a limited contract. Apparently, the lower earnings that are frequently connected with fixed-term employment (see Rokicka and Klobuszewska 2016) as well as the lack of a long-term income perspective keeps young people in such employment from making savings for older age.

[13] While the dichotomous design of this question serves well to identify the *incidence* of savings, it fails to investigate its *amount* that may vary considerably from person-to-person. To that end, a more differentaited (metric or categorical) idnidcator would be required which unfortunately has not been implemented in cross-national surveys yet.

[14] Higher sample sizes allowed the use of a narrower age bracket for this indicator.

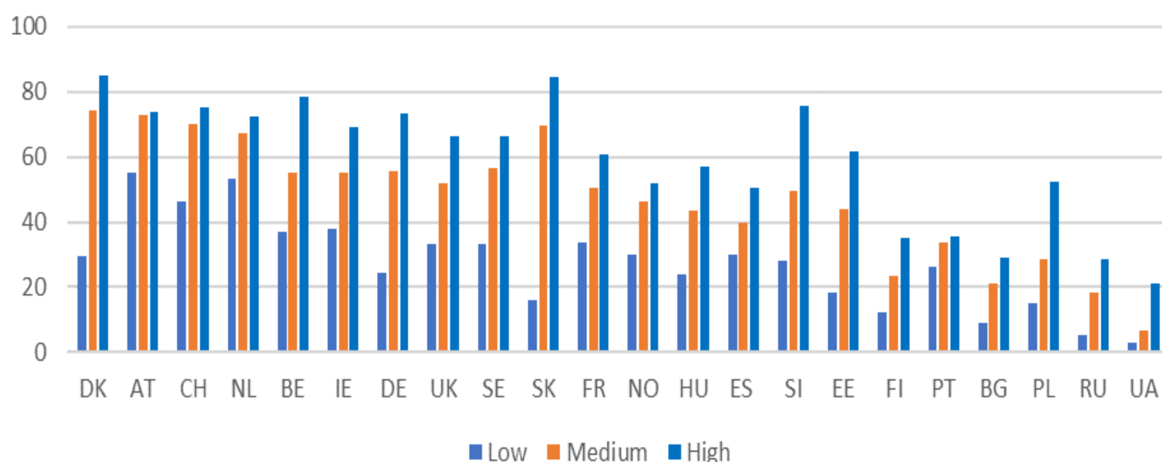
Figure 3.3 Owns savings to live comfortably in old age, young respondents (18-39 years), according to type of contract



Source: European Social Survey Round 3/2006 (own calculations)

Figure 3.4 complements this picture by differentiating between young people with different educational attainment. As shown in earlier EXCEPT research, particularly lower-educated youth are a potential risk group of (long-term) unemployment, atypical employment and low earnings (Rokicka et al. 2015, Rokicka and Klobuszewska 2016). Figure 3.4 demonstrates that it is also particularly the lower educated that are unable to make savings for older age, while savings have a clearly higher incidence among the higher educated.

Figure 3.4 Owns savings to live comfortably in old age, young respondents (18-39 years), according to educational level



Source: European Social Survey Round 3/2006 (own calculations), Educational level: Low = ISCED 0-2, Medium= ISCED 3-4, High: ISCED 5-6

Qualitative Evidence: Attitudes towards savings

These findings from international survey data can be backed up by qualitative findings from the EXCEPT project. Box 3.1 displays selected quotes from the qualitative interviews conducted with youth within the EXCEPT project (see also Deliyanni-Kouimtzi et al., forthcoming, for a more detailed review). The questionnaire guideline for these interviews also included questions about the saving plans respectively behavior of interviewed youths. The quotes displayed below are examples for the responses that were given.

Box 3.1 Savings Plans and Behaviour of Youths, Examples

"Uh and yes, **I can't afford** to save money. **If I could I think I would** […] Of course I wouldn't save all of my money, have a hoard of money, but definitely I would make some savings. **I can't do this thing right now so I don't do it**." (Male, Greece)

"You **hear very often** about it, that **your future isn't save regarding the pension system** and so on. I think, I will try to save money as good as I can to have a personal backup." (Female, Germany)

"I do not think that I am a person, who wastes money, but… **I don't have the opportunity to save** (…) It is difficult." (Male, Bulgaria)

"Yes, **I have been thinking** about saving some money, but since actually at the moment **my income is not that big** for that then sadly **this is only a thought** at the moment. **Of course it would be good** if in future you would have a certain amount of money, which you have saved, so in case you have unexpected expenses then you can use that." (Female, Estonia)

Source: EXCEPT interviews with youths (selected examples; see Deliyanni-Kouimtzi et al. 2017 for details)

The exemplary quotes presented here largely confirm the findings from the previous quantitative analysis. Young people appear to be quite aware of the necessity to make savings for old age ("*You hear very often about it, that your future isn't save regarding the pension system*"), and investing into these plans is considered as a realistic option by them ("*Yes, I have been thinking about saving some money"; "If I could I think I would [save money"]; "I will try to save money as good as I can to have a personal backup*"). At the same time, their financial or labour market situation apparently does not allow them to make respective savings *("my income is not that big"; "I can't afford to save money"; "I don't have the opportunity to save"*). The qualitative interviews thus confirm the impression from the quantitative survey data that irrespective of the country considered, there is a notable discrepancy between a high awareness of the need for additional savings, on the one hand, and the limited capacity of disadvantaged youth to invest into such savings, on the other hand.

Demand-Side Factors: Summary

Considering both findings from the qualitative as well as the quantitative part, it thus can be summarized that

- youth **are (at least) as aware than the older population** of the increasing **need to save money for old age**
- Yet as compared to the older generation, **youth are saving less** into private pension plans
- Even though this may partly be due to an age effect, more detailed decompositions of the readiness to save show that it **declines with human capital and the stability of the employment relationship**.

The situation of youth in terms of the affordability of private savings thus is problematic, given their frequently insecure labour market situation, despite a notable awareness to make such savings. Yet, the ability of youth to make savings is just one aspect of the actual savings behaviour. In order to invest into savings, young people will need to be offered savings plans. Furthermore, the question remains in how far such savings plans – if they are accessible to youth – actually take account of the often unstable and/or interrupted employment careers of youth. This will be the focus of the subsequent chapters 3.2 and 3.3.

3.2 Supply Side Perspective (I): The treatment of early career uncertainties in public pension systems

Dirk Hofäcker and Katharina Heinrich, Institute for Social Work and Social Policy, University of Duisburg-Essen, Germany

3.2.1 Analytical Approach

The following chapter will look at *public pension systems* and the ways in which these treat employment uncertainties throughout the life course, in order to assess what consequences such early life course instabilities will have for youth old age income in Europe. Among the three pension pillars considered (see Section 1), public pension systems have the longest history and in virtually all welfare states, they account for the lion's share of old age income (Ebbinghaus and Gronwald 2011). Public pensions aim to cover the entire population, and to account for at least a basic income sufficient for sustainable living in old age. Only very few groups sometimes are only partially included in public pensions – particularly the self-employed (see Choi 2009, DICE 2015) or migrants (Bridgen and Meyer 2017). Given this almost universal coverage, we will in the following not investigate issues of public pension coverage for youth (as in the later parts of this report), but assume that public pension will practically cover all youth.

Instead, our focus will be on the ways in which public pension systems treat periods of employment uncertainty or employment interruptions. We assume that employment uncertainties impact on future pension income negatively, if such periods (directly or indirectly) reduce the amount of pensions to be paid out when reaching retirement eligibility, or even endanger the eligibility to pensions as such. In line with this analytical strategy, we consider four major characteristics of pension system to be of key importance for youth: i) the assessment basis of pensions, ii) the qualifying period for receiving pensions, iii) the credits for periods of unemployment in the calculation of pension benefits and iv) the credits for periods of childcare in the calculation of pension benefits.

For each of these dimensions, we investigate in how far the country-specific regulations consider early career uncertainties of youth and/or to compensate for them. Like earlier approaches in comparative welfare state research (e.g. Esping-Andersen 1990), we code the "youth-friendliness" of the aforementioned dimensions qualitatively into a tripartite classification, differentiating between measures being favourable for youth (3), partly favourable (2) and unfavourable (1). In the below paragraphs as well as in Table 3.1, we explain the respective coding in more detail. To finally arrive at a cross-nationally comparable measure for the "youth-friendliness" of public pension systems concerning future pension outcomes, we sum up the values of each of the four dimensions into a new aggregate and unweighted index, ranging from 3 to 12 points, which then allows assessing and comparing single European countries on an ordinal scale.

- The **assessment basis** for public pensions refers to the basis upon which pensions are being calculated. On the one extreme, future pensions can be almost directly proportional to the *amount* of contributions and the *length* for which they were paid. On the other hand, contributions could be almost entirely decoupled

from a contribution logic, e.g. in the case of an unconditional basic pension, paid out as a flat rate to everybody. It can be assumed that the stronger the link between contributions and later annuity payments, the more such systems will penalize youth that have employment interruptions, e.g. due unemployment or other reasons (due to no contributions/a shorter *duration* of contributions). Youth with periods of lower (or less stable) wages will also suffer from the use of a strictly contribution-based logic, given that the lower earnings will imply a *lower level* of pension contributions. In contrast, systems granting an unconditional basic pension, irrespective of the previous employment history may be rather favourable for youth experiencing employment uncertainties. Following this line of argument, we classify countries where pension systems depend entirely on the number and level of previous contributions as being unfavourable (1), those where means-tested minimum pensions are targeted at specific individuals as partly favourable (2) and those where later benefits are not means-tested and entirely independent of previous working life as being favourable (3).

- The **qualifying period** of a pension refers to the minimum number of years in employment (subject to social insurance contributions) that are required to become eligible for pension benefits. Apparently, for those people without employment interruptions throughout their career, this minimum number of years is achievable more easily than for those with longer employment interruptions or with many periods of (long-term) unemployment. It thus can be assumed that the longer the qualification period for public pensions, the less favourable this system will be for youth experiencing employment uncertainty. For calculating the aggregate index, countries were clustered into three groups based on their actual distribution within Europe: those that have no minimum qualifying period or just a short one one of less than five years were considered as being favourable for youth (3), those with an intermediate period of between 6 and 15 years as being partly favourable (2) and those with a comparatively long qualifying period of more than 15 years or more as being unfavourable (1).

- Beyond the general logics of pension calculation discussed above, countries can also directly factor in employment interruptions in the calculation of pension benefits. One possible opportunity to do so is that employment interruptions are considered in the calculation of pension benefits, e.g. by ensuring that even without wage income, pension contributions are being made through the state. The more such interruptions are being considered in pension calculations, the more flexible pensions will be with regard to early career uncertainties for youth. Credits made for **periods of unemployment** are of specific importance in this respect and thus are included in the aggregate index. Countries where considerations do not exist at all or are considered only for minimum pension entitlements were considered to exhibit unfavourable conditions for youth (1). Those where pension benefits were considered only for a first period of unemployment and/or were made at a rate of up to 80% of previous contributions were considered as being partly favourable (2): Finally, those where pension benefits extended beyond a first period of unemployment or were paid at higher rates were considered to be “favourable” (3).

Table 3.1 Classification criteria for countries according to main criteria

Dimension	Low youth-friendliness (1)	Medium youth-friendliness (2)	High (3) youth-friendliness
Assessment basis	Countries where the state pension system only depends on the number and the level of contributions during the working life.	Countries where - a means-tested minimum pension/social pension is paid or - a non means-tested basic pension is paid which is extremely low or - a flat-rate benefit which depends on the number of contribution years (reduced proportionately) is paid or - those with low earnings receive a pension increase by a conversion coefficient before retiring	Countries where a flat-rate/basic pension is paid which is not means-tested and independent from working life.
Qualifying period	More than 15 years	From 6 to 15 years	0 to 5 years
Periods of unemployment	Periods of unemployment are - unconsidered or - only credited for the minimum insurance period but not for the pension calculation or - only credited for the basic pension but not for the earnings-related pension scheme (UK).	During the first period of unemployment benefits, contributions are paid. They are based on the unemployment payment or on up to 80% of former earnings.	- Contributions are paid in the first and in a second period of unemployment, benefits (labour market programs in Sweden or social assistance benefit in Denmark). - Periods of unemployment are credited with a very high contribution rate (contributions paid at the double rate when receiving unemployment benefit in Denmark)
Periods of childcare	Periods of childcare are - credited up to one year or - only considered for the minimum insurance period but not for the pension calculation or - credited for more than one year but only based on a very low notional income (e.g. 25% of the national income salary in Romania).	Periods of childcare are credited for more than one year but not longer than three years.	Periods of childcare are - credited with a very high contribution rate (for maternity/ paternity/parental benefits, double the amount of contributions is paid in Denmark) - credited for more than three years or - credited for up to three years but in addition to that there are also credits for childcare up to age 10 (e.g. Germany).

Source: own illustration

- An analogous logic was applied for **periods of childcare, which** represent another major reason for employment interruptions, particularly for women. Countries which did not consider such periods for the calculation of benefits, which

provided only very low levels of pension contributions (between 25% of normal contributions) or which paid contributions for a duration of only up to one year were considered as being unfavourable (1). Those which credited childcare breaks for between one and three years were considered as being partly favourable (2), while those with longer periods of consideration or at particularly high contributions were considered as being favourable (3).

Table 3.1 summarizes the categorizations for all three dimensions and the numerical values that were assigned accordingly.

3.2.2 Analysis

In order to assess countries regarding the four analytical dimensions, data from various cross-national institutional data bases such as the Mutual Information System on Social Protection in Europe (MISSOC 2016) or the OECD Pension at a Glance Report (OECD 2015) were examined systematically and values were assigned to the different dimensions depending on the respective national regulations. The classification considers existing regulations for the period of 2014/15 where possible.[15] These single values subsequently were added up to a composite index value (without any weighting of the dimensions).

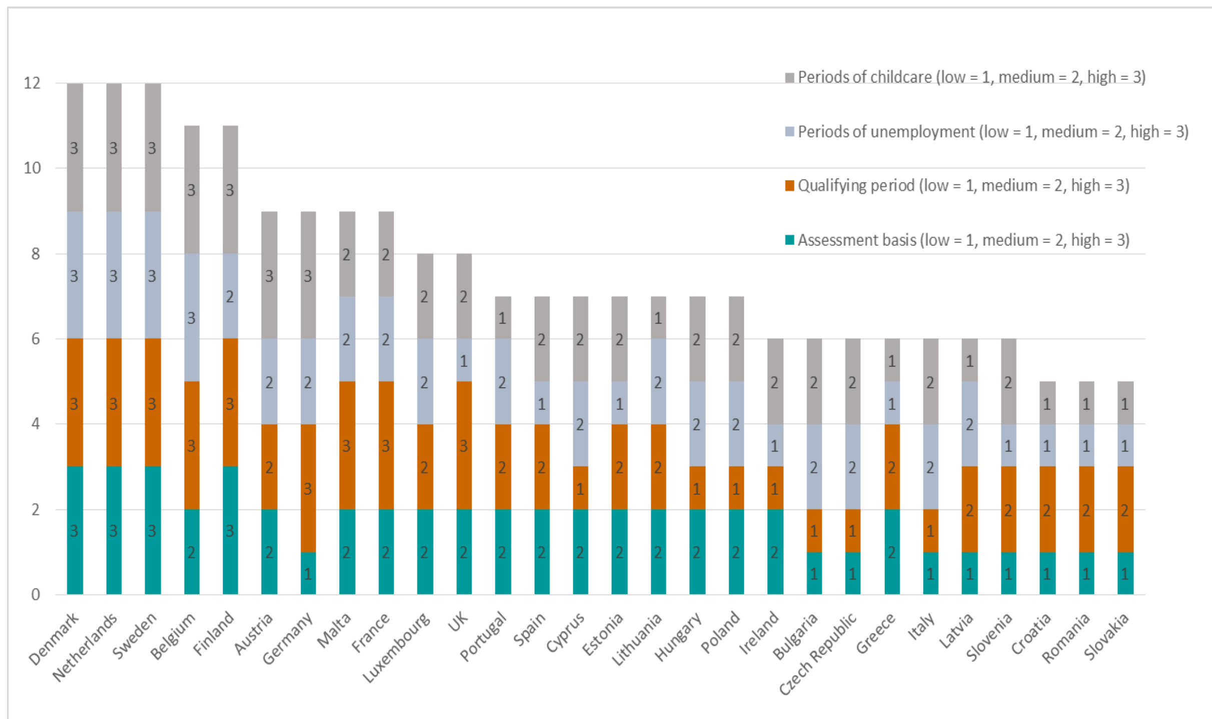
Figure 3.5 below displays the results of this classification for both the overall index value as well as the single sub-dimensions of the index. Countries are ordered according to their overall index value from the highest (left) to the lowest value (right).

As Figure 3.5 shows, there is a remarkable variation in the consideration of employment uncertainties for the calculation of public pension benefits across European countries. On the one hand, there are a number of mostly Central and Northern European countries (with the single exception of Malta) which score (near to) the highest index value of 12, indicating that in these countries, various characteristics of the national pension system positively account for labour market uncertainties of youth. In *Denmark*, for example, there exists a strong basic pension, which has no connection to previous earnings from working life (Score of “3” for assessment basis). Furthermore, there is no minimum insurance period either in the Danish basic pension system or in the Danish Labour Market Supplementary Pension (Score of “3” for qualifying period). For periods of unemployment, contributions are paid even at the double rate (though when receiving benefits from the subsidiary social assistance the normal rate is paid; Score of “3” for consideration of unemployment). The same applies to benefits for childcare: for maternity, paternity and parental leave, double the amount of contribution is paid. (Score of “3” for consideration of childcare).

At the other extreme, there are a number of particularly Eastern European countries where index values are only minimal, suggesting a particularly unfavourable situation of youth facing employment uncertainties with regard to their future public pensions rights.

[15] There were only minor exceptions e.g. for Malta where occasionally older data needed to be used.

Figure 3.5 Consideration of Employment Uncertainty in Public Pension Systems, Composite Index



Source: Own illustration based on MISSOC 2016, OECD 2015, EGGSI 2011. Index values ranging from 3 (minimum) to 12 (maximum), see Table 3.1 for details.

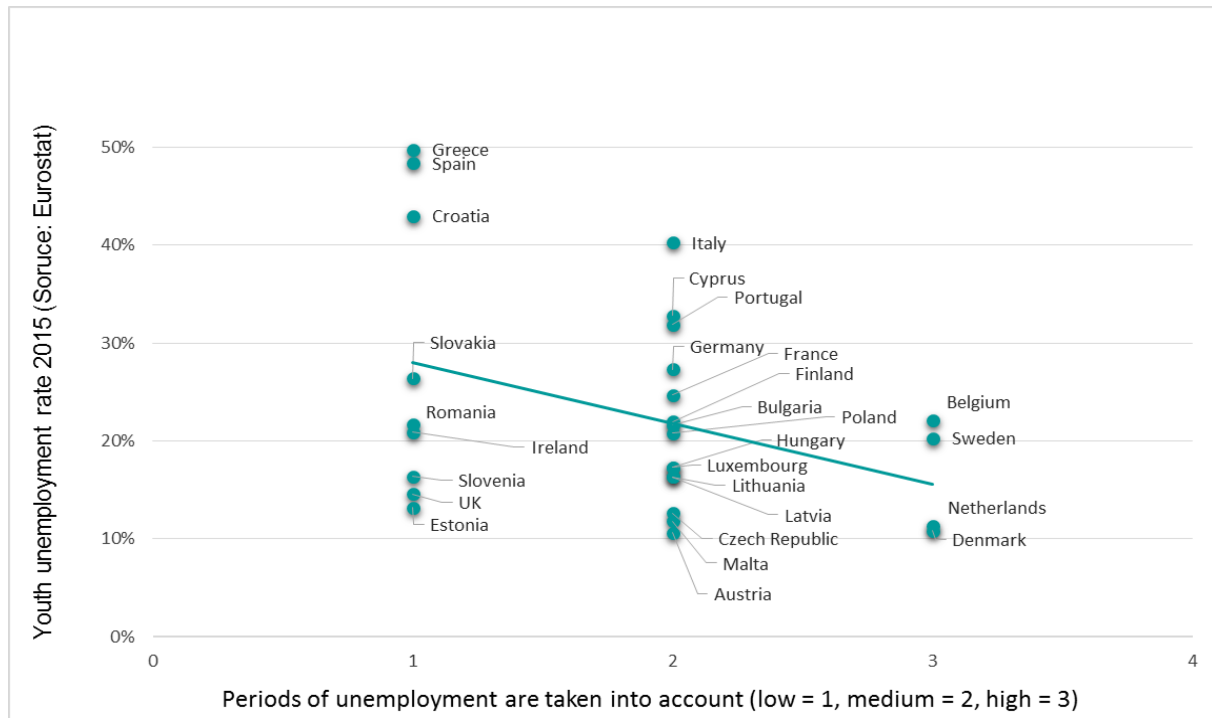
In *Slovakia*, for example, pension benefits entirely depend on the number and the level of contributions during the working life (Score of “1” for assessment basis). The qualifying period for public pensions stands at 15 years (Score of “2” for qualifying period). Periods of unemployment are not credited at all (Score of 1) while periods of maternity and parental leave are taken into account as periods actually worked, yet only with contributions related to 18-60% of previous earnings. Furthermore, women caring for dependents before 2005 were not insured and this period thus is not included in pension calculations (Score of 1).

It needs to be noted that the inadequate consideration of employment uncertainties in various aspects of the public pension system may not necessarily have a negative impact on the future pension income of a country’s youth as a whole. If certain types of employment uncertainties – such as, for example, unemployment or fixed-term employment – have a low incidence within a given country, negative effects may only emerge for a small group of young people.[16] In order to investigate the relationship between pension-specific considerations of employment uncertainties with their actual incidence within European countries, Figure 3.6 below contrasts the previously intro-

[16] Possibly, the low incidence of employment uncertainties may even be the reason behind the lacking consideration of it in pension systems, assuming that it is not a widespread problem.

duced three-step indicator of the consideration of unemployment in public pensions (see above) with the actual youth unemployment rate in the year 2015.[17]

Figure 3.6 Consideration of unemployment in public pension systems and actual rate of youth unemployment



Source: Own illustration based on MISSOC 2016, OECD 2015, EGGSI 2011, Eurostat 2015.

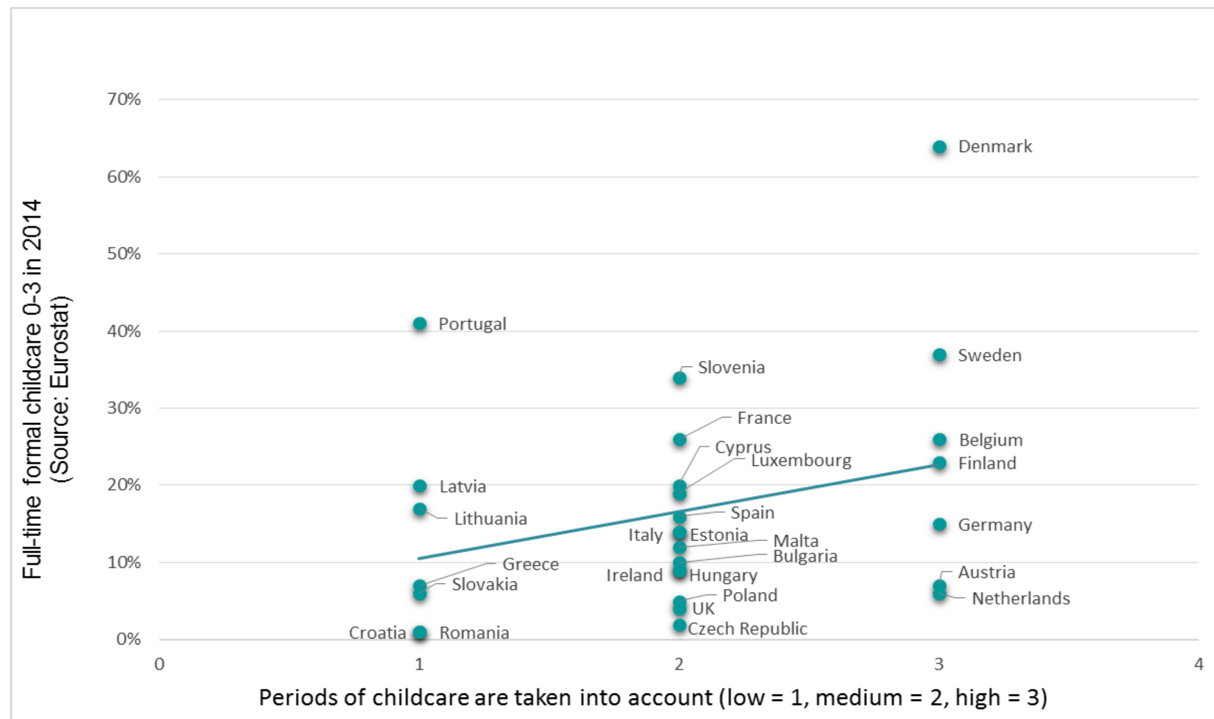
Figure 3.6 shows that there is a considerable cross-national variation in youth unemployment rates, both within the overall sample of countries, but also within the different groups of institutional considerations of unemployment in public pensions. However, a notable feature of Figure 3.6 is that within the group of countries where institutional regulations for unemployment are rather generous, youth unemployment rates are only modest, ranging between around 10 to 25 percent. At the same time, highest youth unemployment rates of up to 50 percent are found among those with least favourable regulations. Results thus are indicative for a negative relationship between the consideration of unemployment uncertainties and its incidence among youth. This suggests that in contexts where unemployment is a major problem among youth, it will have severe consequences for later life income due to insufficient regulations. In contrast, in countries where youth unemployment affects only a smaller segment of the labour force, it is comparatively well compensated for.

Figure 3.7 supplements the picture by plotting the consideration of childcare within the public pension system against the full-time childcare provided through public institutions for children up to the age of three (in percentage of all children of this age group).

[17] This cross-sectional measure naturally may only serve as a proxy variable for the actual importance of unemployment among youth. Wjhile a longitudinal measure of the average individual length of unemployment would be preferrable, this is unfortunately not available in existing data sets.

Again, it can be assumed that in countries where least childcare is provided through the state – thus aggravating the reconciliation of childcare duties and employment – considerations of such “forced breaks” within the pension system would be needed most.

Figure 3.7 Consideration of childcare in public pension systems and actual coverage rate of formal childcare for 0-3 year olds



Source: Own illustration based on MISSOC 2016, OECD 2015, EGGSI 2011, Eurostat 2015.

Again, however, the results from Figure 2.3 point to an opposite relationship. In countries, where the coverage rate of public childcare is low (such as Croatia, Romania, Slovakia and Greece); adequate considerations of childcare breaks for pensions are missing. In contrast, in countries where early public childcare is comparatively widespread – such as in Denmark or Sweden – career breaks due to childcare are generously compensated for in the public pension system. Again, the picture emerges that in countries where the risk of career breaks is high, institutional regulations still are insufficiently attuned to consider these in the calculation of public pensions.

3.2.3 Summary

Taken together, our analysis of public pension systems and their consideration of early career uncertainties has shown that there are **considerable variations between European countries in the degree to which these consider early career uncertainties**. A number of countries, particularly that of Eastern Europe, include only few or virtually no institutional regulations that allow considering periods of unemployment, atypical employment or low earnings in the calculation of public pension benefits. For youth in these countries, this means that contributions to the public pension system are

lacking or are significantly lower than for standard employees. ***In consequence, particularly in Eastern Europe, young people experiencing employment uncertainties nowadays are being faced with high poverty risks in old age.***

This finding is even the more critical given that **insufficient considerations of employment uncertainties in public pensions are disproportionately found in countries where the relative incidence of employment uncertainties is high**, while in countries where these are less prevalent, they are often compensated for quite generously. This finding may not necessarily be surprising from a political perspective, given that introducing considerations of employment uncertainties in countries where they are very common will impose a considerable burden on public finances. From a social perspective, however, the present situation means that there exist not only inequalities within countries – e.g. between youth with different levels of labour market capital – but that there also will be considerable **cross-national inequalities in the degree to which youth in insecure labour market positions nowadays will be able to draw sufficient pensions in old age**.

The previous analyses have focussed on public pension systems only. Given the increasing move towards multi-pillar pension systems, these may increasingly be not the only source of old age income for young people in the future. Additional savings, e.g. into occupational or private pension plans, potentially may be able to compensate for deficiencies in public pension systems. In the following part, we shall thus focus on these additional pillars and the ways in which they treat early career employment uncertainties of youth.

3.3 Supply-Side Perspective (II): the treatment of early career uncertainties in occupational and private pension systems

Dirk Hofäcker, Sina Schadow and Janika Kletzing, Institute for Social Work and Social Policy, University of Duisburg-Essen, Germany

Since the implementation of the three pillar system in most of the European countries due to demographic ageing, the importance of additional savings from occupational and private pension arrangements has increased (Ebbinghaus 2011). Particularly youth will be affected by pension reforms related to these additional pillars when they will retire. Young individuals are frequently advised to save in private and occupational pension schemes as early as possible to compensate their future lower retirement income from declining public pensions. Yet, at the same time, younger cohorts also experience the highest impact of employment flexibilisation in the last decades (Rokicka et al. 2015). Thus, the effects of employment uncertainty of the entitlements in occupational and private pension arrangements becomes an important issue for young people's old-age pension provision. The following part thus will concentrate on the structure and characteristics second and third pillar schemes, and how they are suited to the needs and labour market situation of youth.

3.3.1 Analytical Approach

In existing research, most available information has focused on how employment uncertainty effects future entitlements from *public* pensions. Typically, old-age pension entitlements in the public pension are strongly connected to one's employment biography. Thus, employment uncertainty usually decreases retirement income because of the tight link between pension benefits and paid contributions (OECD 2015), though the extent of this link is related to various compensatory mechanism include in public pension systems (see section 3.2 for a more extensive discussion).

In contrast, there are only few existing studies, which analyse the decisions for engagement in private pension schemes under increasing labour market uncertainty. Existing studies (e.g. Paskov 2011; Wilke 2016) suggest that people in fixed-term contracts or other atypical employment tend to invest less in private pension plans. In other words: There is a strong effect of employment uncertainty on young people's ability to engage in long period saving plans.

Even if youth decide to join occupational and/or private pension arrangements, little is known about how these treat employment uncertainty, such as periods of unemployment, fixed-term contracts and job mobility This section aims to fill this research gap partly by providing a prospective view on the socio-economic-long-term consequences of labour market uncertainty for youth in Europe, especially with regard to the second and third pension pillar.

This task, however, is faced with a number of methodological challenges. The general problem of comparison between systems of old-age provisions across countries is widely known (Deutscher Bundestag 2016). Quantitative data, which allows an adequate comparison between different countries, is scarce. This particularly applies to

occupational and private pension plans. The general structure as well as the specific management type of such schemes differ widely among European countries (Ebbinghaus 2011). Furthermore, national data is often not sufficiently available, given that occupational or private retirement provisions are often individual negotiated contracts and the fact that employers and insurance companies often have no interest in publishing this information.

Qualitative interviews with experts from different fields and professions in each country can provide a means to tackle this problem of comparison. Experts can take the role of an "informant" which has specific knowledge about structures and processes (Gläser & Laudel 2010).

In the following, we shall look at the design of occupational and private pension programmes in selected European countries. The selection of case studies is driven by the well-known fact that basic pension system principles across Europe differ between specific welfare systems (Esping-Andersen 1990). While conservative welfare states tend to maintain social status, social democratic welfare systems provided a universal social security system and liberal welfare systems provided just a basic social security and rely more on individual responsibility. These paradigmatic differences could themselves may promote an institutional "path" dependency (Myles & Peirson 2001) in the structure and recent reforms of the three pillar system (Ebbinghaus 2001). Hence, the country reports in this study reflect different types of welfare states:

- Conservative (Germany),
- South-Europe (Italy),
- Liberal (United Kingdom),
- Social-democratic (Sweden),
- different types of East-European welfare systems (Poland, Estonia and Ukraine)

In addition to welfare regime variations, differences between the established old member states and the relatively new welfare states of Eastern Europe can be analysed with this sample.

3.3.2 Data and Methods

National reports for the selected countries were provided by the national teams of the EXCEPT project (see section 3.3.3. for details). Each national team was asked to conduct interviews with at least three experts. The group of experts should cover one professional engaged in the administration and/or management of occupational pensions; one professional engaged in the administration and/or management of private pensions and one scientist from the field of social policy and/or pension system research. Deviations from this general pattern were allowed, depending of the relative importance of the different pillars in each country. In countries where second and/or third pillar pensions played only a negligible role, no expert interview for these pillars needed to be undertaken, and the respective interviews were shifted to those parts of the pension systems, which played a more prominent role.

The reasons for grouping experts into the aforementioned categories was that, on the one hand, *professional experts* can provide a more detailed view on the specific man-

agement of private or occupational pension schemes and also possess knowledge about the “daily” routines and problems working with it. On the other hand, *scientists* can complement this perspective with a more objective and generalist view on old-age pension provision, without any direct individual interest being involved. The final sample of experts consisted of scientists from universities specialising in pensions systems and social policy research, economist from public and private research institution, academics and stakeholder from occupational and private pension’s funds, as well as sales manager from insurance companies (more detailed profiles of experts are provided in the national reports, see section 3.3.3.).

Expert interviews followed a structured questionnaire guideline, focusing on various aspects of national pension systems.

i. The current structure of the country specific pension scheme and recent reforms
ii. The relative importance of the different pension schemes and coverage rate and the flexibility
iii. Access conditions to different old-age pension provisions, particularly for youth
iv. The impact of pension entitlements regarding employment interruptions, low income, unemployment and job mobility

First, experts were asked to describe the current general structure and most recent reforms of the country specific pension schemes. Afterwards, experts were asked to rate the importance and the coverage rate of the different old-age pension pillars. How far are these pillars spread among the population and do they provide a stable and reliable source of old age income? Are youth aware of these pillars and are they investing into them? And to what degree? Next, the experts were asked to describe the access conditions to different old-age pension pillars, especially for youth. Finally, interviews focused on the effects of employment interruptions, low income, unemployment and job mobility for later pension entitlements. Experts should highlight how flexible second and third pillar pensions are and whether there are e.g. opportunities of portability if someone is very mobile in his/her working life. Finally, experts were asked to estimate the long-term consequences of labour market uncertainties for the socio-economic situation of youth in old age, taking into account the current conditions for old-age savings. They were also asked what advice they would have for young people to arrange their old-age pension provisions in an optimal ways. The full interview guideline can be found in the appendix to this report.

To analyse the expert interviews for this report, content analysis was used, first summarizing the gathered information from the experts according to a categorical schema and then comparing them to each other in a final step (Hsiu-Fang & Shannon 2005).

If in some cases, when expert interviews did not provide sufficient information about young people’s attitudes towards saving and their actual savings behaviour, country teams were offered the possibility to supplement this part by using evidence from the qualitative interviews of the EXCEPT-Project, which also included several question related to this issue (e.g. whether and if so, how young people save money, if they would like to do so in the future and in which way they are currently thinking about their own retirement.

As a matter of fact, the country case study presented in the following vary in length, given the heterogeneity in nation-specific pension systems.

3.3.3 Country case studies

3.3.3.1 Germany

Sina Schadow, Institute for Social Work and Social Policy, University of Duisburg-Essen, Germany

We interviewed experts from different fields and professions, in summary eight interviews were conducted, because of the high complexity of the German pension system and the highly diversified second and third pillar. In our sample are included two sociologist from universities (EXS01 and EXS03), one political scientist from a research institute, which is connected to trade unions (EXS04), one economist from a research institute (EXS07) and one economist from an insurance company (EXP02). Furthermore, interviews were conducted with one lawyer from an occupational pension insurance company (EXP05) and one manager of a multi-stakeholder-group for occupational pensions (EXP06), also one sales-manager from an insurance company (EXP08).

I. The general structure of country-specific pension scheme

Germany's pension system consist of three pillars. The public pension is a compulsory insurance, while the occupational and private pension are voluntary insurances.

The **public pension**[18] in Germany is based on a pay-as-you-go-scheme and is also based on the principal of equivalence: Employees collect individual pension entitlements, which are equal to the level and years of contribution (EXS01). To receive the full state pension, 45 years of contribution are required. The actual gross pension replacement rate is about 45-46% of previous earnings, but it will decrease to 42% in 2030 (EXS04). The normal retirement age is 65 years today and will gradually increase to 67 years in 2029. Moreover, in Germany, there exists a needs-based minimum benefit system, for those, whose retirement income will be below the minimum threshold. However, individuals have to contribute to the public pension insurance for at least five years, as otherwise they will have no pensions entitlements and instead will receive SGBII. The income from SGBII could be lower as the income from the minimum pension and is also combined to prerequisites, such as the level of additional earnings or the allowed amount of rental, which are lower than for the minimum pension. Additional incomes, from example from private pension provision, will reduce the income from SGBII. Also, the income of children's will be taken into account by calculating the entitlements of SGBII. Early retirement is possible at 63 years or 35 years of contribution, but it will reduce the pension income (0,3% per month of early retirement), except they have fulfilled 45 years of contribution.

[18] Civil servants and military personell in Germany have their own pension fund, whose methods of calculating the entitlements or qualifing periods differ from that of public pensions. However, these pension funds just aplly to a small part of the German population. One expert suggest that maybe 4% of the working population are civil servants, and that this proportion will decrease in the future (EXS01).

The **occupational pension** in Germany is older than the state pension and was originally implemented by employers to cover biometrical risk - such as illness, disability or death - of their employees (EXP06). With the implementation of the state pension, the occupational pension increasingly has developed into a human resource policy instrument for the employers (EXP06, EXS01). The taxation treatment of retirement income from occupational pension depends on the kind of insurance plan: When it is a state-subsided Riester pension (see below), its taxation is treated like a private pension plan, which means a lower tax load[19]. At least, every employee in Germany has the right to join a deferred compensation pension scheme[20] for occupational pensions (EXP06, EXP08). However, the employer will decide which occupational pension provision plans are available in his/her company. There are also tax benefits for employees and employers, 4% of the income from the employee are tax free, while the employer save wage cost, if they have established or joined an occupational pension plan. Furthermore, the occupational pension in Germany is linked to collective agreements with unions. They are more common in the industrial sector, while medium-sized and small companies are underrepresented in the occupational pension arrangements (EXS04, EXP05, EXP06). Nowadays the occupational pension covers about 60% of Germany's employees[21].

In Germany, there are many opportunities to invest in **private pension** insurances, like life insurance plans, pension funds or building loan contracts (EXP08). Furthermore, in Germany the "Riester pension" represents a specific state-subsidised private pension plan with tax benefits that was implemented in 2002. The state funding consists of supplements of the state (178€ from 2018 on per year for each contract and 300€ per year for every child born from 2008) and tax benefits (the contributions to the Riester pension are tax-free).[22] To receive the full state funding from the Riester pension, 4% of the cross income from the previous year has to be invested into it. If someone invest less than 4%, the state funding will decrease in equivalent (EXP08). At least five € per month has to be contributed. Actual about 40% of all households in Germany have at least one Riester pension contract (EXS07). But also about 20% of the Riester pension contracts are inactive (EXS03)[23].

15 years ago (around 2002), Germany's pension system underwent a general paradigm shift. Given decreasing pension entitlements in the public pension pillar due to demographic ageing, the importance of the second and third pillar was increased to

[19] The taxation of retirement incomes from the occupational pension was recently reformed in 2017.

[20] The deferred compensation scheme is a life-insurance or building-loan contract, which the employer concludes for his employee. Therefore, the deferred compensation scheme for occupational pensions is more likely "*a private pension provision within the company*" (EXS04).

[21] This includes also employees from the public service sector, were different conditions for the occupational pension existing (see Ch. III.I). In the private labour market sectors, about 40% of all employees have an occupational pension provision (EXP05).

[22] From 2002 to 2017 the state funding per year was 157€ for each contract, and for children born before 2008, the state funding is 185€ for each child per year.

[23] There exists no reliable empirical evidence on why people decide to discontinue their Riester pension contract. Existing studies refer to the impact of the finicial crisis which has reduced the trust in the effectnivess of private savings for old-age-security, its underperforming revenues or the the very criticial reception of tehse pensions in German media and political discourse (see OECD 2013).

ensure a sufficient standard of living after retirement. "*Until then, it was the general aim, that this can be achieved from the public pension insurance alone*" (EXS01). To fill in the pension gap, people were increasingly asked to additionally invest into the second and the third pillar "*People will need both*" (EXP06). This will concern all groups in Germany, regardless of their social-economic status, but it concerns especially youth who will be most affected by recent policy changes. "*Those who will experience the strongest impact [of the pension reforms] are those, who will retire in 20 or 30 years*" (EXS04).

II. Demand-side

Against the recently used argument, that young people don´t think about their pension, youth in Germany is at least aware of the need to save money for old age, and they also know that the retirement income of the public pension is decreasing „*Young people regard their income in old-age [as being] very problematic*" (EXS03). Yet, young people often do not have the resources to invest into private or occupational pension schemes, because they need to invest in other fields first. "*Young people are occupied with their labour market investments. Human capital, networks, professional entry, that is what they need to invest into*" (EXS01), to improve their employability, which is an important predictor for future pension entitlements. Additionally they often have a low income at the start of their career.

II.I Actual savings behaviour

Youth often don´t save money for their later life and when they do, it is often not enough to fill the pension gap. To fill in that gap, actual models has calculated, that people need to invest at least 4% of their income every year into private and occupational pension schemes (EXS03, EXS04, EXP06). But often the investments especially from young people are not even close to those 4%, because „*they only save the money, which they have left over*" (EXS03). Additionally, experts mention, that the investment in private or occupational pension schemes starts only, when they have established their own household and found regular employment, which happens ever later, for nowadays youth "*First, they need to establish themselves professionally and also want to start a family. That is [typically] not the stage where someone has much money left over for old age savings. This is so unfortunate, if they would start earlier, that would be much better*" (EXP05). Also due to the long timeframe for young people until they reach retirement ages, they often postpone their investment decisions. This means, that saving for old-age starts in Germany normally only in later life, when they are about 45-55 years and approaching retirement age (EXS03), which is "*too late*" (EXP02). On the on hand, they won´t benefit from the compound interest effect and on the other hand, people then have to invest a huge amount of resources to compensate the late saving start.

Furthermore, the kind of employment contract seems to have a high impact of actual savings behaviour. People in fixed-term contracts save less, in comparison to people in regular employment (EXS03). Especially youth are more frequently in fixed-term-contracts, which influence their savings behaviour and could also mentioned as a reason, why they tend to postpone their investment decisions (EXS03). Our Experts claim,

that the fact that young people need to spare money for transition times, this often prevents them from participating in private or occupational pension schemes. "*When I´m in temporary employment, I do not know whether I will need the money in five years*" (EXS03). "*That's why there are two contrasting goals, on the one hand I need liquidity now [...] [and] on the other hand, the pension products need to somehow block the money that you paid*" (EXP02). Liquid schemes for private pension arrangements wouldn´t be a solution for companies and for individuals, because long-term investments wouldn´t be possible, which would decrease the investments returns even more (EXP02).

Not only the employment status, also has the level of income seemed to be a strong predictor for savings behaviour. High earner´s have a high tendency to invest more often in private and occupational pension schemes. "*The former basic conditions*[24] *of the occupational pension was especially interesting for high earner´s*" (EXP06) due to the favourable tax treatment. The tax load in Germany is higher for high earners, and therefore high earners can reduce their tax load through an occupational pension scheme. Thus, they have to pay taxes from the income from the occupational pension in retirement, but the retirement income is often lower, which also means, that the tax load would decrease accordingly (EXP06). For low earners, the occupational pension was not overly attractive, not only because they didn´t benefit from tax returns due to their low tax load, but also because of the fact, that as pensioners they will also have to pay taxes for the retirement income from occupational pension. Additionally, if low earners get the minimum pension, the income from occupational pension schemes would be deducted from the minimum pension.

The same applies for private pensions "*We observed problems of distribution, that the use of the Riester pension follows [the level] of income*" (EXS04). Like in the occupational pension, the Riester pension is frequently used from high earners, than from people with lower income. Against the background, that the Riester-Pension originally was implemented especially for low earners to prevent them from old-age-poverty "*It is definitely a problem, that those people who wouldn´t need [the Riester pension] use it, and that those who will need the Riester pension don´t participate*" (EXP02). Particular in the Riester pension there is an "indirect double funding" (EXP02) for high earners, because they benefit from the tax return and the state funding.

II.II Financial literacy

The financial literacy of youth in Europe is low in general, and this applies in Germany (EXP02). Yet, as two experts highlighted, that people need to be financial literate to make old age savings plans and chose the right product. "*It´s a problem that many people, especially young people - no matter which country you look at –, are not well prepared to make financial decisions*" (EXP02). In consequence, it will be harder for youth "*to notice the pension gap and act accordingly*" (EXS07).

Furthermore, the financial literacy often is linked to the family background. Young people from lower-educated family backgrounds have the lowest finical literacy "*It strongly*

[24] The basic conditions for the occupational pension were recently reformed in 2017 (see Ch. IV.), to make it more attractive for low earners.

depends on the family" (EXP02). In addition, the financial literacy is also related to educational background, which could also become an additional problem for those groups, as one expert argued: Young people with a lower educational level tend to enter the labour market early in comparison to well-educated youth and additionally have often a low income. Thus it would be important to start early to benefit from the compound interest effect, yet, they don´t dispose about the knowledge to make such financial decisions (EXP02).

III. Supply-side

The pension provision market in Germany has strongly diversified since the strengthening of the three-pillar model in 2002. Yet, it also has reached a high level of complexity "*Nobody has expected that the market for the Riester-Pension would diversify that much*" (EXS07). Only for the Riester-Pension, there exist more than 5000 different products on offer "*A single person can´t analyse and evaluate that. […] There are incredibly many components, e.g. for cost items, which make it very complicated to compare the different contracts*" (EXS07). Our experts agree, that the private pension insurance market reached a high lack of transparency "*as a product it´s very untransparent*" (EXP02); "*a complete lack of transparency*" (EXS03). At the same time, there are even more possibilities for private pension provision besides the Riester-Pension. Therefore, youth have many opportunities for investments, but our experts agree that this high complexity of the insurance market leads to further problems for them.

On the one hand, due to this complexity the vast majority of Germans often just take the first offer they are being presented "*You could say, that they give themselves into the hands of the consultant […] 'do what you want with me'*" (EXS03). On the other hand, complexity may prevent people to join a private pension scheme "*Many people shy away to invest in those products, because it´s very hard to understand what kind of products I get presented*" (EXS07). Therefore, the current complexity and untransparency of the insurance market "*overstrained*" (EXS03) young people to make rational savings plans for old age.

Furthermore, also the market for occupational pensions has become very complex. There are five different ways to establish an occupational pension insurance, which can be combined with three different possibilities of benefits and taxation (EXP06). In addition, they differ with respect to sector-specific collective agreements. "*Especially the occupational pension is incredibly complex, because there are so many different ways to set them up and ultimately every employer does it in a way that best suits him*" (EXS07).

"*The occupational pension has a high complexity and due to the last reform, this complexity will raise again*" (EXP06). In the future, there will be six different ways to set up an occupational pension, which will also differ according to collective agreements.

In sum, a rational comparison of the offered products for both occupational and private pensions is effectively impossible "*even for our experts*" (EXP06).

III.I Access conditions for different types of pension schemes

Public Pension:

To contribute to the public pension, someone has to work in employment subject to compulsory insurance, which means people who are working in mini-or midi-jobs[25] are not automatically insured in the public pension system or pay lower contributions. This also applies to the self-employed. In principle, there are some possibilities to make voluntary contributions to the public pension insurance for self-employed and for people who working in mini- or midi-jobs. In 2016 the voluntary contribution system was reformed. Yet, as one expert highlights, "*they are still very restricted and tied to prerequisites, which are complicated to understand*" (EXS01). In addition, the voluntary contributions are often lower than the regular level of the pension contribution, which will result in lower future entitlements, due to the principle of equivalence to contributions.

Private Pension:

Also for the state subsidised Riester pension, there are certain restrictions of existing access. The state funding is linked to employment subject to compulsory insurance of either the client, or the insurable employment of his/her spouse (EXS07). Contributions are also possible for long time unemployed if they contribute at least five € per month. Self-employed cannot join a Riester pension scheme, but they could invest in the so called "Rürup pension", which is also state subsidised, but only consist of tax benefits, which are particularly higher than in the Riester pension. For other products of the private pension insurance, there are no general access conditions foreseen, they rather tend to depend on the individual resources "*It´s legally possible [to impose such restrictions], but the question is more, if someone has the resources to invest*" (EXS01). Our experts suggest, that the access to sufficient material resources will more often be critical for those in atypical and fixed-term contracts, "*because those atypical employment contracts are often connected to an lower income*" (EXS01).

Due to the financial crisis in 2008, „*the guaranteed returns has more than halved*" (EXS03) in general and people who presently decide to join an private pension scheme, will have worse contracts than those, who concluded a contract in 2002. Therefore, young people are in the problematic situation concerning their old-age pension provision. Thus youth are is increasingly independent from additional incomes from private pension plans in later life, yet, due to the financial crisis, youth don´t receive sufficient private pension provision contracts to ensure their standard of living in old-age "*For [the young generation] this whole pension […] provision situation is the most problematic*" (EXS03).

[25] People are employed in mini-jobs when their income is not above 450€ per month, while neither the employer nor the employee make social insurances contribution. As midi-jobs are called those, whose income is between 450€ and 850€ per month. In midi-jobs, the social insurances contributions gradually increases with the level of income. Above 850€ per month, the normal level of social insurance contribution are paid from both, employer and employee.

Occupational Pension:

The occupational pension in Germany more and more has developed into a human resource management measure in recent decades, "*it has always been like that, and it will remain like that*" (EXP06). Employers frequently use occupational pensions as a financial incentive to "bind" employees to their companies, thus it´s disproportionately offered to well-experienced employees and 'high-potentials'. Hence, the occupational pension has an antagonistic logic as compared to employment flexibilisation, which brings the possibility to exclude employees from the company fast and without conflicts (EXS01). Nevertheless, especially youth is more affected from employment flexibilisation and due to this fact - despite some privileged groups – it´s improbably that employer will offer them an occupational pension insurance.

In addition, the occupational pension is linked to collective agreements and thus is more common in larger companies, particularly in the industrial sector. For smaller companies, setting up such a pensions is more difficult: Small businesses must offer insurance contract to at least 50% of their workforce and a total minimum amount of contribution of at least 1000 € per year (EXP05). Also, the type of product offered by insurance companies to smaller companies will depend on their rate of illness and mortality. "*This capital orientation of the insurance makes it very unattractive for small businesses*" (EXP05). Which means, that for young people working in small or middle-sized companies, the access to such schemes becomes an additional challenge.

Furthermore, for those who working in the service sector, they nearly have no possibility to join an occupational pension scheme, because the companies are often smaller and the employees can often be easily replaced "*the classic industrial worker is more secured than anyone in retail, which are rather precarious employed and are also not in these larger company structures*" (EXS04). In the consequences, often women aren´t covered by occupational pension schemes, as they often work in the service sector and are more often in atypical and precarious employment. Also self-employed are naturally excluded from occupational pension schemes.

One major exception to this rule is the public service sector, where the occupational pension has nearly a 100% coverage rate (EXP06). In the public service sector existing different conditions for the occupational pension, than in the private labour market sectors. First, in the service sector exist just one way to set up an occupational pension, which is offered from just one insurance company (VBL). Furthermore, the occupational pension in the service sector is an opt-out-model. Therefore, every employee will automatically be enrolled (EXP06).

Like private pension schemes, also occupational pension were affected by the financial crisis and "good schemes" with high benefits were closed for new members, which has reduced their incidence. "*Previously, there were more promises for occupational pension and also higher promises*" (EXP06).

In sum, the access conditions for the private an occupational pension schemes has deteriorate for Germans youth due to employment flexibilisation and the financial crisis.

III.II Effects of employment uncertainty

Public Pension:

The impact of **unemployment** on future entitlements from the public pension strongly depends on the duration and frequency of unemployment periods. In case of unemployment, contribution to the public pension will continue for at least 12 months paid by the unemployment insurance (ALGI), yet only if a person was in employment for at least 12 month in the last two years beforehand. Otherwise, or after a duration of 12 months, contributions to the public pensions insurance will stop, and recipients will start to receive means-tested ALGII benefits. In ALGII benefits social insurance contributions to the public pension insurance are not foreseen since 2011, thus people that receive this benefits don´t get any further entitlements in the public pension[26]. Unemployment thus will always have a negative effect on public pension entitlements, because the contribution from ALGI to the public pension are lower. Especially falling into long-time unemployment and benefit dependency will increases the risk of old-age poverty (EXS01, EXS07).

Fixed-term employment – in principle – has no direct consequences for public pensions, if people have no “”gaps” in between employment contracts. Nevertheless, our experts suggest, that such periods of unemployment are frequently for fixed-term employed, which are highly common among youth in Germany, particularly at the beginning of their careers (EXS03, EXS04). It could be argued, that - as the retirement age was increased –youth have more years to contribute to the public pension and thus to increase their future pension benefits. Yet, as our experts highlight, those additional years can be easily “*eaten up by those fragile entries into employment*” (EXS01).

Furthermore switching from dependent employment to self-employment or to not insurable employment and even changes in the level of income can reduce the entitlements from the public pension, as pensions in Germany are equivalent to the lifetime income. Employment biographies, where people frequently switch from dependent employment to self-employment and vice versa have a higher risk for old-age poverty “*When we are looking at those who get the minimum pension in old age, they are very often people who frequently have changed their employment status*” (EXS07).

One expert mentions, that also international **job mobility** may results in insurance problems in old age “*because the public pensions are not portable*” (EXP02). Frequent international job mobility increases the risk to have many little pension entitlements or not to full fill the qualifying periods, which differ between European countries. Even higher educated and successful youth thus may face socio-economic challenges in later life.

So far, the public pension system has hardly adapted to employment flexibilisation. “*Because of the orientation of equivalence and the assumption of an uninterrupted [fulltime] employment, you have to work long to get a good retirement*”. For Youth it will

[26] Between 2005 and 2011, also from ALGII public pension contributions were paid. Due to that, people also gain entitlements for the disability pension, which occurs in 2011 to a social political problem, because every forth retirement about disability came from the unemployment insurance ALGII (HARTZ4). Therefore, the social insurance contribution to the public pension from ALGII where “*cut off*” (EXS01).

be also harder to full fill the qualifying period for the full state pension, due to the longer periods of education and the frequently interruptions of their careers "*I would suggest, that it will hard to fulfil this long employment careers*" (EXS04).

Private Pension:

Employment uncertainty can also have negative impacts on private pension provision. One problem for example could be, that the level of contribution are calculated on 4% of the gross income from the previous year, which can be hard to achieve in times of **unemployment**, when the income is lower than in the last year. As mentioned earlier, also **fixed-term employed** often need liquidity for transition times. In principle, many contracts indeed include the possibility to reduce the level of contribution or even pause them. But this will also result in lower entitlements in the future and in case of a Riester pension, it will also affect the value of the state funding. In case of no or lower contributions to Riester pensions, "*I will miss the state funding, that I would have received […]. The Funding is lost and in the end, this will impact on what I will have on my account*" (EXP02). This is particularly so, as subsequent payments are only possible in the same year.

Concerning **job mobility** the private pension is more flexible than the public one and our experts don´t envision negative effects from that. But changing employment status can be problematic for the state subsidised Riester pension. Like in the public pension changing from dependent employment to self-employment will have negative effects, because self-employed are not eligible for the Riester pension "*For those people it can be dangerous or could be a barrier […], because I almost never know whether I'm eligible or not*" (EXS07). In the consequence, this means, that young people have to forecast their own future to choose the right products under increasing labour market uncertainty "*they have to bet on their own future*" (EXS04).

Occupational Pension:

In occupational pension plans, **unemployment** frequently isn´t ensured. Only one type of occupational pension insurance can be continued without an employment contract. For all other occupational pension plans, contributions will end with employment.

Also, **job mobility** on a national or international level is rather problematic in occupational pension plans, due to the limited portability of these schemes. Changing employers or sectors could result in a situation, where people have three or four occupational pension provision at the end of their career. Even though there exists possibilities to transfer the savings in a new occupational pension scheme, it´s often connected with high transaction cost, therefore people will lose a high amount of money. Thus, as mentioned by one expert, "*permanently moving money around will make no sense*" (EXP06). The problem of portability will concern youth in general, because of their high job mobility. In addition, high job mobility or **fixed-term employment** will increase the risk not to fulfil the qualifying period for occupational pensions. "*The irregularly employed and interrupted careers are not unproblematic in the occupational pension*" (EXP05).

An additional problem, which concerns especially women, is that contribution to the occupational pension will also stop in times of **childcare** (EXP05). During employment

interruptions or periods of short time work no contributions will be paid. Furthermore, subsequent payments are only possible in a time span of 6 month.

Taken together, all three pillars are based on the assumption of „*continuous employment*" (EXS03) and continuous contributions. „*Your retirement income will reflect your employment biography*" (EXS04). Therefore, career interruptions will *always* have a negative impact on future pension entitlements "*I would very strongly assume that […] labour market problems in young years will directly translate into old-age pension problems*" (EXS03). That close relationship with employment career increases the importance of continuous and successful employment for youth "*You can save as much as possible […] but when your career turns out bad, in the end you can´t rescue much*" (EXP02).

IV. Recent and actual Reforms

In 2017 Germany reformed the occupational pension and attempted to increase the coverage rate and make it more attractive for small and middle companies. In addition, the recently introduced "Sozialpartnermodell" tries to solve the portability problem in occupational pensions. In particularly, the "Sozialpartnermodell" provides a new possibility to establish an occupational pension arrangement, which will be industry-wide. Therefore, the portability of the occupational pension between employers could be much easier than today (EXP05, EXP06). Nevertheless, the portability problem between sectors will remain. Furthermore, the "Sozialpartnermodell" includes the possibility for trade unions to implement an opt-out-model for occupational pensions in companies. In Addition, for contracts which will be closed at 2019, the employers hast to pay at least 15% of the contribution from the employees to the occupational pension provision[27] (EXP05).

Youth can benefit from those reforms, but the outcome still will depend on the collective agreements between unions and employers. Furthermore, the reform changed the occupational pension from a defined benefit scheme to defined contribution scheme[28] and released the employers from the liability risk, which should it make more attractive for smaller and middle sized companies, but it also shifted the risk of the financial market on individuals.

V. Summary

In contrast to many other European countries, youth in Germany are faced with a rather privileged labour market situation, due to the low unemployment rate. Nevertheless, their future pension entitlements are lower as compared to previous generations (EXS01, EXS04). While the German labour market remained largely stable throughout the financial crisis, it reduced the effectiveness of private and occupational pension

[27] In Germany existing ways of occupational pension, where only the employee contribute to it.

[28] In defined benefits schemes existing guaranteed profits of investment returns. If the financial market is in a bad situation and interest rates are low, companies and employers have to pay the guaranteed profits from their own capital. While in defined contributions schemes, such guarantees and promises aren´t existing and people will just return the same amount what they have contributed, without inflationary adjustment.

schemes dramatically, due to historical low interest rates, which becomes an additional challenge for Germans youth in general “*Even if they save those 4% of their income every year, it won´t be enough*” (EXP06).

Moreover, the actual pension system in Germany also prolonged social inequality and results in patterns of cumulative disadvantage “*There is a high correlation of risk. If someone is unemployed or irregular employed and due to that not insured [in public and occupational pension schemes], they also can´t save money in private pension schemes*” (EXS01). The current pension system thus could extrapolate present disadvantages into old age.

3.3.3.2 United Kingdom

Rowena Merritt, University of Kent, United Kingdom

We interviewed three experts from different fields and professions, including: Two pension lawyers (EXP01 and EXP02) and one academic (EXS03) based at a university business school. All interviews were conducted over the phone.

I. The general structure of country-specific pension scheme

As with many other European countries, the UK's pension system consist of three pillars (public, occupational and private pensions) – although the term 'pillar' is not often used in the UK. However, as one of the experts explained at the start of their interview:

> "*The [pension] rules are all quite complicated [in the UK]*". (EXP02)

The **public pension** in the UK (called 'state' pension) is currently £122.30 per week, which is approximately 23% of average salary (Income Tax Calculator 2017, based on own calculation). In order to eligible for the basic full state pension, you need 30 years of National Insurance contributions. The age at which you can claim the state pension is likely to increase and our experts warned that young people may opt to save money in private pension plans like for example ISA which gives them greater flexibility.

The age at which people can take their state pension in the UK is changing. The age at which you can claim your state pension benefits has been 65 for men and 60 for women. However, due to the increased life expectancy, the age at which women qualify for the state pension is in the process of rising from 60 to 65 by November 2018, with the exact date depending on the month you were born.

Between October 2018 and October 2020, both men and women's state pension age will increase to 66. And between 2026 and 2028, it will rise again to 67. However, other pensions (private and occupational) can be drawn earlier (from 55 years old).

> *"The younger population might not be able to get it until they are 69/70. But if they have other pensions, they can get them from 55 [years old]."* (EXP01)

> *"If you go into a Money Purchase Scheme, which a lot of young people will be doing, you build up this pot of money and you can´t access it until you are 55. They would rather save it somewhere a bit more accessible."* (EXS03)

The **occupational pension** in the UK is called a 'workplace' pension, which is jointly run by employers and employees. These pensions are usually classed as private (personal) pensions and follow the same rules. When people can take money from their pension pot will depend on their pension scheme's rules, but it is usually after 55. However, people may be able to take money out before this age if either:

- They are retiring early because of ill health
- They had the right under the scheme they joined before 6 April 2006 to take your pension before you are 55.

Also, if someone's life expectancy is less than a year, they may be able to take their whole pension pot as a tax-free lump sum.

The scheme most employers are using are Money Purchase or Defined Contribution Arrangements. In Defined Contribution Arrangements pensions, what individuals get out at the end is equal to the invested value of what they put in. This is what "*most employers use and they like it*" as it means what they put in is a certain quantity and they are not agreeing to a fixed pension of, for example a £1,000 a year; instead only the contributions of x% of one's salary is fixed, which marks the end of the employer's commitment.

There are still people in employment on Final Salary or on a Defined Benefits Scheme. With the Defined Benefits Scheme, what the employee gets at the end of the scheme is set and the employer just has to pay it, whatever it might cost and "*that is why you get a lot in the press about the death of defined benefits scheme as employers are keen to get rid of them*".

Final salary scheme is the old civil service scheme but a lot of private companies still have people on them. The actually scheme will have been closed years ago, so "*if you were in the scheme in say 2000 you may have been able to stay in it, but any after that and you wouldn't be allowed.*" Therefore, young people do not have access to such good schemes.

> "*Tesco's, British Airways, BT a lot of the big UK companies still have schemes like that but they are closed to new members but people who are in them are still allowed to be claiming the big benefits but no one else can join them or sometimes they just close it completely and say you can keep what you have already earned but you can´t earn more pension in future*." (EXS03)
>
> *"The civil service had final salaries but bought in career average and you build up a percentage of the last years salary. The reason employers don't like final salary is it costs a lot of money, but also down to what you earn when you retire. "But if you have 40 years say on a low paid job and then you get a big promotion for the last year of employment, then the pension is just on that final year's salary for example, you become head master then pension based on that even if your pension contributions have been much lower than that. But the career average is a fairer system."* (EXP01)

In the UK, there are many opportunities to invest in **private pension**s (known as personal pensions). Personal pensions are pensions that people arrange themselves. They are sometimes known as defined contribution or 'money purchase' pensions. People usually get a pension that is based on how much was paid in. Some employers offer personal pensions as workplace pensions instead of the "normal" workplace pension plans. The money people pay into a personal pension is put into investments (such as shares) by the pension provider. The money people get from a personal pension usually depends on amount of contributions paid into, how the high the revenues are, which depends on the performances of the fund´s investments and also how people decided to take their money off from the pension plan.

Private pension contributions are tax-free up to certain limits. This applies to most private pension schemes, for example:

- workplace pensions
- personal and stakeholder pensions
- overseas pension schemes that qualify for UK tax relief'

Tax is paid only when money is taken out of the pension.

If you leave a company, accruals remain, but the employer won't pay into the fund any more. Such pensions can then be accessed when reaching the age of 55. Many pensions are not with private companies, such as Scottish Widows or AVIVA so you are more likely to be able to combine (EXP01). Often when you start with an organisation, you get to choose which company you invest with, but not always the case.

II. Demand-side and youth

A growing number of young people in the UK are on fixed and even increasingly now, zero-hour contracts. For fixed term contracts, the employer usually would need to enrol them into the pension scheme if the contract is for more than three months. But for zero-hour contracts, it is not as clear cut and as these are often for lower paid jobs, and less than fulltime hours, those on such contracts might not earn over the necessary threshold, and therefore not be enrolled in the pension scheme.

All in all, the experts felt that pensions was not a "*sexy topic*" for young people and that they were not engaged in the topic area.

> *"The main problem we see in pensions with young people is that they are not interested in pensions are they are 18, 19, 20s they have other thing they want to spend their money on and retirement seems an awfully long way away and you sort of think, I'd rather go out and have a few beers tonight. It's too far away to be of interest."* (EXP02)

The compulsory scheme of occupational pensions, although important to ensure young people at least start a pension at a young age, it was felt that the rate for youth on low-paid jobs might be seen as high:

> *"If your employer is having to put in 3% but if you are having to put in 5% it is a lot."* (EXP01)

In 2017, the UK government bought out this financial product called a *Life Time ISA*[29]*,* which are private saving accounts where people can engaged themselves voluntary*,* aimed at young people and that is something that young people can invest in and use the money either for their retirement or to buy their first home and in the UK "*it makes more sense to get on your property ladder*".

[29] https://www.gov.uk/government/news/lifetime-isas-available-from-6-april-2017

The experts talked about the benefits of having flexible products:

> "*Products like that are more appealing to young people. Yes your employer is not paying into it but its such a small amount anyway and I think a lot of people think what the point but they shouldn't as it is free money from their employer*." (EXP01)

Despite the progress made in the UK, with the introduction of the automatic enrolment for occupational pension scheme, the experts feared that those youth on low wages, would still end up with small pension pots for their retirement.

> "*The main problem with it, even when they are in these pension arrangements, they are nowhere near enough if you spend your lifetime on a really low income and your employers contributions are a minimum amount, you won't have enough in their to retire on and people don't really realise it or they do realise it and then think no point having the pension and will rely on the state."* (EXP02)
>
> *"It's something like, for every £100,000 you have in your pensions pot (and bearing in mind most people will not get anything near £100,000 in their pension pot) that might end up with a pension of £2,500 per year, £3,000 if you are lucky."* (EXP01)

Interestingly the experts did not think it was the youth on low-paid wages who would necessarily experience poverty in old age, due to the way poverty in retirement is calculated.

> *"Ironically the lower paid will be better off when we look at poverty in retirement we look at what ratio of your salary you will get as a pension and what ratio you need to meet your ongoing costs. For people in lowest income groups, if you are earning £12,000 a year you might end up with a state pension of £8,000 a year so not much different in what you are earning*." (EXP01)
>
> *"You get the highest paid who are putting money away so they tend to be OK but the people who suffer are the people in the middle and they are earning £30,000-50,000 per year as they are the ones that will end up in poverty. As the replacement salaries they will get in retirement are high. Say you are on 60,000 per year, say you need 50% of your income in retirement that is 30,000 per year and to build that up is difficult – you need a pension pot of close to £1 million pounds. If earning £60,000 never have that in your pension pot."* (EXP02)

II.I Advice for young people

When the experts were asked what advice they would give to young people, the first piece of advice was to join a scheme at your first opportunity and contribute to it for as much as you can for as long as you can and maximise what your employers pays.

> *"A lot of employers have continuation structures, for example, if you put in 2% we will put in 4% if you put in 4% we will put in 8%. Young people should take advantage of this. Maximum might be if you put in 5 and they put in 10, but it is worth it as you get free money from your employer."* (EXS03)

The experts also stressed that thinking about retirement early, although not often easy for a young person, is important.

> "*You can't start thinking about retirement when you are 45 you have to think by 25 year olds but they don't want to think about it and it is difficult if you have credit card debt with high interest rate, I can see why people would rather clear their debt than pay for a pension, but it is a massive issue just getting people engaged as it is not a sexy topic. No one is interested but they should be as 40-50 year olds will retire in poverty as first generation that hasn't had the final salary pension and maybe this might make the younger generation think twice*." (EXP01)

Despite the introduction of the compulsory enrolment, it was still believed that the younger generation would still be in the same financial retirement mess as older generations.

> "*Yes, as the contributions are not enough! Maximum stator is only 5% of employee and 3% of employer so discussion whether the government should change the law and make the contributions higher but if they do there is a massive impact on businesses especially the small and medium type employers which make up a lot of the UK workforce now. If they cant afford the employment costs, they just take on less people and pushing up the employee costs, just means more opt out. It's a very difficult balance."* (EXP02)

III. Access conditions for different types of pension schemes

Public Pension:

State pensions are not means tested but since last year, they are not means tested but one needs to be paying NI contributions for at least 30 years to get the pension. If people have had career breaks, they might not get the full state pension as if not working, they were not paying NI contributions usually .

The new state pension, when it started in 2016, normally increases with national earning, or 2.5% (whatever is more), however our experts warned that "*it does go up each year but not a huge amount to live on and not everyone will get that if you haven't worked*."

> *"It all goes on the basic that you have paid your mortgage off but now people are on 35 year mortgages they get when they are 35 or 40 and now you get quite a lot of parents taking out mortgages when they are older to help their kids out. Before you did not get pensioners paying mortgaged, but now it is common. Mortgages are so high in the UK, people don't have so much spare to save or put into a pension."* (EXP01)

Private Pension:

There are different types of personal pension. They include:

- stakeholder pensions - these must meet specific government requirements, for example limits on charges
- self-invested personal pensions (SIPPs) - these allow you to control the specific investments that make up your pension fund

The UK employment sector is changing and more and more people are self-employed (or have limited companies that just employ them, so they are classed as employed by their company. They do this as there are tax benefits). These people (young and older) need to take out a private pension, but a lot do not. They either decide to invest in property, or simply do not worry about the future, or plan to rely on the state pension provision.

With private pensions, you need to check what it is invested in. You can take investment risks when you are younger as if the value of your pension pot fluctuates it doesn't necessarily matter for the final pension. Those who move closer to retirement, tend to invest in something more stable. To establish the desired risk profile, a questionnaire is being filled out when setting up a pension. Companies will then invest money, given the set age of retirement and the rough amount expected.

Occupational Pension:

The UK government has started to bring in changes to the law on workplace pensions. By 2018, every employer must automatically enroll their employees in a scheme if they are over 22 and under State Pension age and earn more than £10,000 a year. This is called 'automatic enrolment'.

Employees can opt out but if they do they have to do this within 30 days and then they can get a rebate. If they leave it longer than 30 days then they are just in it and if they want to leave at a later date, they lose all the money they have put in. One of the experts felt that, although the automatic enrolment was a "*step in the right direction*", it still as not enough:

> *"In terms of contribution to the pension pots, the new auto-enrolment rules state that the minimum contribution is 1% employee and 1% employer. Contributions go up next year and the year after and when they meet there full level. This is not enough, even at full level you are still just looking at 3% from the employer and 5% from the employee; still not a huge amount".* (EXP01)

However, our experts highlighted than many employers, in particular the larger employers, give more than the minimum:

> *"A lot of employers do give more than the minimum. A often double what people put in up to a set amount. For example, if the employee puts in 2% they will give 4%. Usually up to 8 or 10%."* (EXP02)

III.I Effects of employment uncertainty

Public Pension:

The impact of **unemployment** on future entitlements from the public pension strongly depends on the duration and frequency of unemployment periods.

As mentioned before, people need to pay into public pensions for a minimum of 30 years. Long-term unemployment has a negative affect on public pension entitlements if people have not been able to pay into the scheme for 30 years. However, there are ways they can top-up their contributions during times of employment (or when not in employment), although again, this might be difficult to do for those who have long-term unemployment.

If someone has gaps in their insurance record, they may be able to make voluntary contributions to increase their pension. People are also allowed to defer state pension as the default retirement age (a forced retirement age of 65) no longer exists. Deferring your State Pension can increase the payments as the basic State Pension increases by 1% for every 5 weeks someone defers. The extra amount is paid with your regular State Pension and can be claimed on top of the full basic State Pension amount, for example in maternity leave.

Fixed-term employment – in principle – has no direct consequences for public pensions, if people have no ”gaps” in between employment contracts. For many this is often the case (EXP1) as often people leave one fixed term contract, to entre another one, or a perminent position. Fixed-term contracts also do not mean low-paid contracts. For example, many universities in the UK use fixed term contracts nowadays (EXP 3). With the increase to the retirement age, in theory youth have more years to contribute to the public pension and thus ensuring they are able to contibute for the minum 30 years required.

Zero-hour contracts[30] are becoming more common place in the UK. Although they often are attached to low-paid industries, such as catering, they do not always mean low-paid. For example, interpreters who are “on call” are often on zero-hour contracts. The contracts are becoming more common in the health and education sectors also.

Regardless of how many hours are actually offered, the employer must pay at least the National Minimum Wage (Gov 2017) and everyone employed on a zero hours contract is entitled to statutory employment rights (for example, rest breaks and protection from discrimination, etc.). Zero-hour contracts might affect pension contributions as (depending on the specific agreements in the contract) a zero hours contract might mean that the contract only exists when the work is provided.

Private Pension:

Anyone can enrol in a private pension and they are tax free (so you do not pay tax on what you put into the pension, although you pay tax when withdrawing the money).

[30] A zero hours contract is one in which the employer does not guarantee the individual any hours of work. Some zero hours arrangements will require the worker to be available to work when called upon by the employer. Others are more flexible and the worker is free to accept or refuse work when offered.

However, employment uncertainty can also have negative impacts on private pension provision if you are not able to continue paying or reduce contributions into the private pension.

However, private pesnions are usually taken out by those on higher incomes, and when they have already saved for a house deposit, as then they are more likely to have spare funds to invest in a private pesnion.

Occupational Pension:

For people in employment, there are all types of rules governing statutory leave (illness, maternity leave, etc.). The statutory minimum is that the employer keeps contributing at the rate they were before the leave, while the employee keeps contributing at the previously paid rate. Yet, if earnings drop when being on leave, then individuals can contribute a lower amount, while the employer contribution remains constant. However, this only applies to statutory leave (one year).

In case of career breaks, some of the big employers allow to take three or five years off contributions, e.g. for childcare; yet during this time, no further contributions by employers are being paid. However, during this time there is the opportunity to build up credit on the state pension.

As discussed previously, **fixed term contracts** do not neccisairly mean low-wages, nor do **zero-hour contracts**. Therefore, as with perminet contracts, if employees earn above the set threshold, they will automatically be enrolled into the pension. Employers will have to assess their zero hours workers alongside the rest of their workforce. However, due to having potentially widely fluctuating earnings, zero hours workers are more likely than others to change eligibility categories for the purposes of the auto-enrolment duties. For example, an increase in earnings in a pay reference period may result in a worker changing from being a non-eligible jobholder (who is entitled to opt into an auto-enrolment scheme) to an eligible jobholder (who must be auto-enrolled).

IV. Recent and actual Reforms

In recent years, there have been a number of reforms to the pension system. As discussed previously, the government has introduced the automatic enrolment scheme and Lifetime ISA.

In addition to these two initiatives, the government argues that, in order to create greater choice and flexibility for people who have saved hard for their pension, they announced at Budget 2014 (GOV 2017) a series of changes to how people access their pension.

From April 2015, any withdrawals from pensions will be treated as income; whereby the amount of tax will depend on the amount of other income in that year. This is instead of being taxed 55% for full withdrawal, as it has been previously.

People can also pass on their pension to others without paying any tax. Instead of paying the 55% rate of tax when passing on their pension, people who die under 75

with defined contribution pensions can from April 2015 pass on their unused pension as a lump sum to a person of their choice tax free.

V. Summary

In contrast to many other European countries, youth in the UK are faced with a rather privileged labour market situation, due to the low unemployment rate. The introduction of the automatic enrolment ensures that young people are saving for their future. Employers are obliged to pay in as well, with the government adding a little extra through tax relief. Experts and ministers say it is vital people make a start at an early stage in their working lives, to eventually have savings that will top up the state pension.

Despite the introduction of this new scheme, the experts are worried that it would not be enough due to the low payment amounts. However, it was also acknowledged that it was a delicate balancing act and if you increased the amounts employers needed to pay in by too much, then they would end up having to employ less people (especially the smaller employers).

3.3.3.3 Sweden

Mattias Strandh, Umeå University (UMU), Sweden

In Sweden two interviews were made. One expert interview with a Sociologist/Labour Economist with many years of experience from relevant research fields (EXS01) and one labour union expert on occupational pensions who works with providing support and information to union members on the issue of occupational pensions (EXP02). Given the changes made in Sweden regarding private pensions, where private insurance solutions since 2015 largely have been replaced by general advice to save, no interview was made with a private pension insurance broker/professional.

I. The general structure of country-specific pension scheme

The current Swedish Pension system created through a grand political agreement between the government and opposition in 1994 is based on a three-pillar-model, which could be understood as pyramid with three parts. Basic income security is provided by the state pension, within which all employees are compulsorily insured. The second tier of the pyramid is provided by occupational pension schemes (tjänstepension) provided within the framework of collective bargaining between unions and employers. The top of the pyramid is formed by private insurance and since 2015 of normal savings solutions (EXS01).

The Swedish **public pension system** consists of three parts. The most important component is the *income based pension*. This system is based on a pay-as-you-go basis where all employees and self-employed contribute 16% of their labour market income (and taxable transfers) up to 7,5 income base units, which is recorded in individual accounts. Care for children and studies also provide certain lower pension rights. The retirement age is flexible with the current earliest outtake from 61 (which is expected to increase). The income pension system is autonomous from the budget and contributions are transferred to buffer funds. It is also designed with automatic balancing, which means that it regulates its own finances, therefore economic growth affects can affect pensions. The second component of the public pension system is the unique Swedish system of the *premium pension* administered by the state Premium Pension Authority (PPM). For all employees and self-employed an additional 2.5% of taxable income is paid into a compulsory funded pension scheme where the money is deposited in individual investment accounts where employees can choose to have their premiums invested in up to five funds out of more than 700 mutual funds offered by independent fund managers (and one managed the National Swedish pension Fund). The premium pension can be drawn earliest at the age of 61. The final part of the public pension system is the *guaranteed pension* financed through the government's budget. The guaranteed pension is a means tested benefit and provides for a minimum pension for persons older than 65 with low income and at least 40 years of residency in Sweden. All three parts of the Swedish public pension system is taxed as income when drawn. For individuals who do not qualify for the guaranteed pension there is the possibility to outside the pension system qualify for old age economic support (äldreförsörjningsstöd) as a stable alternative to having to apply for social assistance (EXS01).

The **occupational pension** is in Sweden based on nationwide collective bargaining agreements where permanent employees automatically belong to an occupational pension scheme as long as the employer is part of the collective agreement. Employers and self-employed who are not part of collective agreements can offer participation on a voluntary basis. In all around 90% of all Swedish employees have occupational pensions (EXS01).

There is some variation in occupational pension depending on the collective agreement for the branch of industry. In general the individual occupational age pension for employees born after 1973 is a defined contribution system earned from age 23 to age 65 (for older employees there is usually a part that is made up by defined benefits as well), and is normally paid from 65 until death. One can apply for earlier (from age 55) and later payment which affects the generosity. Payment is made by the employer of 4.5% up to 38 435 SEK (approximately 4000 Euro) per month, the threshold over which coverage in the public pension is lost, and usually 30% above this amount. Through local agreements with the employers there is also the opportunity to transform an additional part of your salary into pension contributions. The employee can largely control the management of the pension money through the choice of private management funds active within the occupational pension system. In addition to the individual occupational age pension there is also a smaller part that is the complimentary age pension earned between ages 23-65. This is paid out over the first five years of retirement in order to make the economic transition into retirement smoother. When drawn the occupational pension is taxed as income (EXP02).

Private saving for pensions is an important third pillar of the pension system. Up until 2015 saving in **private pension insurance** funds were completely tax deductible (up to a certain amount), where taxes would be paid once the pension was drawn (and incomes lower) which could be done from an age of 55. This system was cancelled for new saving in 2016 and there are currently no tax deductions available for private savings and very little new saving is going into these funds under the current rules. Instead the recommendations by the authorities is for individuals to save through paying off mortgages, regular fund savings, or regular capital insurance available from the private sector (EXS01).

The current Swedish pension system as described above represent a substantial shift in relation to the system prior to the 1994 grand pension reform agreement. The state pension system shifted from being based on the top 20 years of income, to being based on life time incomes, thus increasing the need for longer working lives and punishing interruptions. It introduced more flexibility to retirement ages (from earliest possible of 61 years to a right to stay at work until 67 years) and related increases in pensions to economic growth. This substantially decreased the generosity (where current calculations show that the state pension on average will represent only around 45% of the end salary) and increased the importance of occupational pensions and private savings (EXS01).

II. Demand-side

The new pension system has created an increased need for *private life time savings* for the current youth groups. This as the new system is considerably less generous than the old system. This is particularly the case for higher educated. In the old system highly educated earned pension rights on the 15 best income years (typically toward the end of working life), whereas they in the new system earn pension rights only up to the threshold of about 4000 Euro for their entire working life (which with long periods of schooling might be shorter) (EXS01).

The need for private saving in preparation for retirement that the Swedish expert emphasises is according to recent Swedish Surveys underestimated in general, and in particular among youth. In a survey of 1000 randomly selected Swedes made by SWEDBANK, 4 out of 10 respondents in the ages 24-39 expected pensions of 70% of their final salary or more whereas the prognosis for a 27 year old on average actually is 53% (SVT 2017). Surveys also show that the proportion of young who regularly save money is relatively low as compared to what the case is in older age groups, something largely related to low incomes. Regular saving among young individuals is also often related to future plans for housing rather than pensions (Swedbank 2014). The pension authority and the trade unions are investing heavily in information about the pension system for youth both in order to provide a realistic understanding of what can be expected but also in order to make sure that they can maximize their benefits from it (EXP02) and according to the pension authority there has in conjunction with this been a 20% increase in the number of 20-30 year olds who have registered on the authoritys individualized website in 2017 (SvD 2017).

III.I Access conditions for different types of pension schemes

Public Pension:

Contribution to the *income pension* and the *premium pension* is based on work income (from employment or self-employment) where 16% of the income is contributed to the income pension and 2,5% of the income is contributed to the premium pension (in both cases up to 7,5 income base units). Pension contributions are also made on all taxable transfers (i.e. transfers related to the labour market), which in include incomes from the unemployment insurance, sickness insurance, and incomes from parental leave (EXS01).

Occupational Pension:

The occupational pension is in Sweden based on nationwide collective bargaining agreements where permanent employees automatically belong to an occupational pension scheme as long as the employer is part of the collective agreement. The membership in the occupational pension is thus not related to individual membership in trade unions but to the employer’s participation in a collective agreements with the relevant union. Employers and self-employed who are not part of collective agreements can offer participation on a voluntary basis. In all around 90% of all Swedish employees have occupational pensions (EXS01).

Although the overall coverage rate for the occupational pension is very high, there is a larger proportion of employers without collective agreements in sectors with many youths employed (such as the hospitality industry), and within certain industries not all temporary employed are covered by the occupational pension. In addition the occupational pensions are related to collective agreements within branches of industry, and earned rights within one branch is not asily transferable to the occupational pension within another branch of industry. As the number of years participating is very important for the outcome, with full rights often connected to 30 years of contribution, this means that there are negative aspects of changing out of the sector (EXP02).

III.II Effects of employment uncertainty

Public Pension:

Unemployment or *illness* will have a detrimental impact on both the income pension as well as the premium pension. As unemployment and sickness benefits are counted as taxable income pension contributions are made in relation to the size of the income, but as this income is low there will be substantial negative effects of extended periods of illness or unemployment. The consequences of illness or unemployment related gaps have also become harsher as the new pension system is based on life time earnings, while the old system was based on the 20 best income years which made it possible to compensate for bad income periods (EXS01).

Parental leave also provides taxable income which provides pension rights. As parental leave is shorter, and is more highly compensated the negative impact of this on the pension will be substantially lower than from sickness or unemployment (EXS01).

There is no negative effect of being in *fixed term employment*, as the contribution and pension is connected to the taxable work income. With many youths today working on (different) fixed term contracts over longer periods of their life as compared to previous generations the accumulation of gaps might however have an impact on their pensions. This in particular as the current pension system based on life time earnings is less forgiving of periods of insecurity and gaps as compared to the old system (EXS01).

As in the case with fixed term employment, *self-employment* should in principle not have negative consequences for pensions. Contributions are made on the same basis from self-employment incomes as employment incomes. A potential problem for the pensions of self-employed is that there might be incentives to, and the possibility to, reduce work related incomes among self-employed. Using the incomes from the company to investment in the company instead of self-employment income will reduce the pension. Additionally company profits are taxed less than work incomes and no pension contribution is paid, this creates the incentive to maximise the profit instead of increasing the self-employment income, something that will reduce the pension (EXS01).

Occupational Pension:

Periods of *unemployment* will have strongly negative effects of the occupational pension. No contribution to the occupational pension is made while unemployed (EXP02). For periods of *illness* the consequences will be less dramatic. There is some variation but in most agreements there is an insurance that cover the employer's contribution

after, and for set periods. There should be very few negative consequences of *parental leave* on the occupational pension. In accordance with all collective bargaining agreements the employer keeps paying the contribution during periods of parental leave (Pensionsmyndigheten 2017a).

Most individuals on fixed term contracts will be covered by occupational pensions on the same conditions as permanent employed as long as the employer is covered by a collective agreement. Youth are more vulnerable as they both more often have fixed term contracts and more often work within industries where fewer companies are covered by collective agreements. Unstable labour market positions and gaps will however have more clearly negative effects as there will be no contribution when not employed EXP02).

Job mobility, which is more common among youths are potentially problematic for the occupational pension as the occupational pension is connected to branches of industry. Changing jobs within the sector will thus not affect contributions, job change out of the sector ends the contribution. However, although the individual rights already earned will remain. This means that a career that spans several branches of industry might result in non-transferable pension rights from several agreements. As the number of years of contribution is of importance for the outcome of the occupational pension (in order for full occupational pension within PA03, for instance, 30 years of contribution is required) this means that there are negative aspects of changing out of the sector or having delayed or broken careers (EXP02). Self-employed are not covered by the occupational pension which makes them vulnerable in relation to total pension income, and places an additional responsibility for investing in private saving for retirement on this group (Pensionsmyndigheten 2017b)

IV. Summary

The current Swedish pension system created in the grand agreement in 1994 is extremely robust in relation to public finances. The construction of the pension system however substantially increases the risk for young people as compared with the earlier system. Firstly the flexibility of the labour market for young people will have stronger negative implications for pensions than earlier. The importance of life time earnings mean that temporary employment, casual employment and employment with employers that do not have collective agreements (which is more common in industries where many youth work, such as hospitality) will have negative effects on retirement incomes. Secondly the consequences of breaks in the working career due to unemployment sickness or having will also be more negative for pensions than previously. Thirdly the importance of the occupational pension in the new system (given that the public pension is calculated to be substantially less generous, with compensation levels estimated to be as low as 45% of final salary for many) might create problems in a situation where lifetime employment become less common. Changes in careers between sectors during the life time might place a young person within several occupational pension systems, which creates risks for not fully qualify for pensions within any one system despite many overall work years. Finally the premium pension system and the automatic balancing creates an increasing market related risk to the pensions of young people. With pension contributions individually invested, there is a higher level of indi-

vidual risk to retirement incomes, with the automatic stabilising of the pension system there is a generational risk connected to growth rates when a cohort enter retirement (EXP02).

3.3.3.4 Italy

Valentina Moiso, University of Turin (UNITO), Italy

In summary five interviews were conducted with experts from different fields (Appendix 1), and qualitative evidence from the EXCEPT interviews to young people are used in order to clarify the youth point of view analysing the demand side. In our sample are included one economist from a research institute (EXS03), a financial advisor of a local bank (EXS01), a managing director (retail sector) and financial advisor of a global bank (EXS02), a managing director (retail sector) and financial advisor of an insurance company (EXS04). This sample took into account the differences between local and global banks. Both types are rather important for the Italian banking sector and differ in many aspects, such as the assessment of client risk, the management of risk, the relationship with clients and the complexity of the instruments, which are proposed to the clients.

I. Country specific pension scheme

The Italian pension system consist of three pillars: Compulsory public pensions, occupational and private pensions that are voluntary insurances.

The public pension (first pillar) is a compulsory insurance. The first reforms in 1992 and 1995 and the following ones introduced many changes that are still in progress. In the past, the public pensions were a pay-as-you-go scheme ("*a ripartizione*", today's workers paying for today's pensioners) and were earnings-related. The "Dini reform" in 1995 introduced the NCD[31] scheme (notional/non-financial defined contribution, contributions are paid into each worker's insurance account) and the contributory system for the computation of benefits, and additionally a progressive increase of retirement age. The reform introduced also the so-called 'Gestione separata' of INPS, a fund for atypical workers managed separately from the funds of subordinated and professional workers, with a lower level of contributions with respect the other categories. In the "Gestione Separata" the quote of contributions was a half of the quote of a subordinated worker: this implied a level of pension very lower for the atypical workers. Today this discrimination has been overcome by the last reforms and the quote of contributions are almost the same than that the subordinated workers have (EXP05).

The long phasing-in period has on the one hand generated increasing inequalities among workers to the detriment of younger ones, and on the other hand, the always changing conditions have contributed to generate a lot of confusion among workers on eligibility rules.

[31] "Contributions are levied on the basis of a defined rate depending on the worker's category. The revenues thus levied through work contributions are adjusted annually according to the average five-year variation in GDP, as calculated by ISTAT (the Italian Institute of Statistics) with reference to the five years prior to the year the relevant adjustment refers to. The amount thus obtained (paid-in capital plus revaluation: so called montante contributivo) is multiplied by the transformation coefficient linked to the age of the worker at the very time the pension is claimed" (OECD – Social security right in Italy 2013)

Today the expected retirement age is 66 years and 7 months (January 2018) for both women and men and will gradually increase to 67 years in 2019, the highest retirement age in Europe; in reality the eligibility conditions for old age pensions still varied between males and females as well as across professional categories, but full equalization is expected in 2018. The current gross pension replacement rate is 71% (net 80%) but it will decrease for the next generations. With the complete implementation of the 90s reforms, public pension levels are expected to diminish substantially, but it is not possible to know now what this level will be (EXP05).

The early retirement in Italy was generous in the past ("baby pensions" required 25 years of contributions, but also only 14 years in particular cases) and are now strictly defined by the complex rules system of Fornero reform in 2011.

Moreover, retirees with very low contributory pensions and in general all people in need, receive a tax financed income-tested benefits at 65 years old ("assegno sociale - old age social allowance").

The **supplementary funded schemes (occupational and private)** are defined benefit schemes: pensions are paid by capitalising individual contributions of each worker. The reform of 1995 introduced also a peculiar provision aimed to favour the conversion of a pre-existing severance pay scheme (TFR) into funded supplementary pension provision[32]: a subordinated worker should decide if leave its own TFR to the firm or invest it on market. These schemes are not mandatory and are underdeveloped in Italy. To incentivise the investment in supplementary funded schemes, there exist some **fiscal benefits**.

After Legislative Decree no. 252 of 2005 – a masterpiece of the pension funds sector's legislation - besides the public pension system there is the so-called *"previdenza complementare"* with **supplementary pension funds** (452 funds at the end of year 2016), that are occupational or private (see par. 3 for more details).

II. Demand-side

Public and private as well as occupational pensions have both a very low impact for young people. The first ones imply a low level of entitlements: Lower than for previous generations and really inconsistent for atypical workers (EXP01, EXP02, EXP03, EXP04), while the second ones are not requested by youth. Young people in Italy have in mind that they should have to care about their pension arrangements, but they are strictly hindered in doing it due to present problems in the Italian labour market, which affect their present economic conditions.

[32] "It provided that private employees enrolled for the first time in their working life have to choose where to transfer their TFR in a pension plan or to keep it in their company. In case of no active choice by the employee after a six-month period, the TFR is automatically paid into an **occupational pension fund** (typically, the industry-wide occupational fund or to Fondinps). A less risky portfolio is set as the default option for tacit adhesion. On the basis of the provisions of the collective agreements, **the employees can decide to add further contributions** in order to get matching contributions from the employers. Additional voluntary contributions are allowed" (COVIP 2017).

“Instead, I am thinking about retirement, especially now I've begun to think, "so for all the work I'm doing, are they paying my contributions?" but, with this contract...” Are you paying for me?" I have started to think about it because... because I have known that in any case, my job allows me to eat today, but I would like... […] retirement is a long way off but I've start to get interested in these things, I' wouldn't want all this energy to be thrown away in the future.” (Anna, 27, female, temporary employed)

I: “Ok. Do you ever think about your financial security for the future? With regard to savings, for example, insurance on your house and health, a savings plan, or a pension plan?”

R: “Hmmm (…) I avoid thinking about that, because those things make me sad, (smiling) so I avoid thinking about it. /Once again, it's about me finding the courage/ (laughing) sometimes it's better not to think about it. That's all.” (Franco, 30, male, non-contractual job)

“Even without a contract, really. I would work, I would work again, paid under the table. Anyway, me, I won’t have the pension myself. Then why should I leave them the money? To pay someone else retirement benefits? /No, really/(laughing sarcastically), who will pay for my pension then?” (Mara, 30, female, unemployed).

Additionally, the experts interviewed have identified some additional issues for youth.

- **Needs to face the problem of liquidity (and pension arrangements not easy allow to withdraw). According to professionals,** youth does not invest in private pension schemes because there are very few cases that allow withdrawing their money from a pension fund (health problems, buying the first house etc.) (EXS04). On the contrary, young people need money to face income discontinuity during their careers or unexpected events, they are not able to pay given their low income (e.g. medical expenses, car breakdowns) (EXP01, EXP04).

“To have a decent supplementary pension they have to have so much money…. that young people do not have! (...) if young people save in a pension fund, they will have their money back when they retire, while there are other products they can withdraw when needed” (EXP03).

- **Complementary pension schemes are appealing for some categories of older workers, particularly rich ones, but they not required by young people** (EXP01, EXP02, EXP04). There are no particular requirements to get a provisional arrangement but, in practice, young people, especially if precarious, do not have it. On the contrary, they are important for fixed-term contract employees who want to integrate the public pensions (occupational funds) and for high-level income professionals who have the possibility to reduce the taxes because of the fiscal benefits (private funds) (EXP02, EXP04). Fiscal benefits, in fact, are possible only with pension funds:

“Mostly the commercial leverage used is taxation (…) The tax advantage is only and exclusively for retirement funds (not for other types of funds) (…) Self-employees, what they do? They open a retirement fund, do not deposit anything, at the end of the year

they evaluate with their accountants the amount that could be useful to detract and they deposit (on pension fund) 3000-4000 euros". "people who are behind the retirement age deposit in order to reduce their tax rate - so save the 20-30% of taxes- and then since they have deposit (on pension fund) too little they will pick up this money but taxed at 15%, so they do arbitrage thanks to this tax circle" (EXP02).

- **Fiscal benefits exist but they are not important for young people** because they have a low level of income (given the atypical contracts and low- or underpaid jobs) and, therefore, a low level of tax (EXP04).

"Young people need to have a job rather than detract" (EXP02)

II.I Actual savings behaviour

Young Italian would like to make savings, but also in the case they are able to do it, they tend to use those savings to face the consequences of unemployment or low-wage income rather than for old age.

R: "through agencies, they give you these (atypical) contracts […] It is a little worrying cause knowing that tomorrow you won't have a job that's bad… I mean you have expectations for the month… and then you know you don't have nothing any more… so you have to turn to your savings that you put aside every month you work, you say: 'maybe next month I will be out of work' and you have to pay for everything, bills, rent, all this stuff".

I. "And so you try to save"

R: "Yes I do, this is why I haven't bought many things I like, because I have saved money cause you never know". (Marius, 23, male, unemployed).

Savings in a family could be useful in order to face unemployment periods of parents too, and young people learn from these experiences:

"I know how to make sacrifices […] My mum is more than conscientious about these things. You give her 5 Euro, she gets 10 Euro out of it somehow, she really makes you save, […] she walks everywhere, she buys things only when they're on offer, on sale, she's really not a big spender […] when my dad was at home without money, if it wasn't for her, that she'd saved all through the years of their marriage, putting things aside, keeping money in hiding places around the house she told no one about, well, in the end she managed to pay the bills, the rent and get things for us. […] She made it". (Margherita, 24, female, unemployed).

I: "Concerning your future financial security, do you ever think in terms of savings, for example? Do you have a savings or retirement plan?"

R: "Well, yes, if I find work. Logically yes, because, with now you can channel your salary to your checking account, and the extra money that I get from the subsidy I could use, I don't know, to open a savings account for my children, to let them find something more, send them to university which I regret not going to because I wanted to go to college but unfortunately I couldn't, really /had wanted to and could have gone/ (with emphasis)." (Matteo, 28, male, unemployed).

The experts interviewed have identified some specific topics related to it.

- **Short-term vision, no vision of the future. According to professionals,** Italian youth does not have a culture of investment, because there is a lack of long-term vision, given that the uncertainty on future living conditions is widespread in public opinion (regarding not only the labour market but also the environment, global wars etc.) (EXP01, EXP03). This uncertainty is in a sense "institutionalized" in the case of pension system, given the ongoing reforms and the lack of information about the pension:

"Young people today have to make more decisions on the pension system, they must be informed. There is a great attention to financial literacy. The defined contribution public system is a complicated formula, so it is very difficult to understand what the amount of your public pension will be. Finally, with a decade-long delay, the orange-pin was sent home to gain access to a replacement rate simulator at individual level. (...) on a series of hypotheses that INPS assumes, which may be incorrect. For the expert user there is a possibility to modify these parameters according to individual expectations, e.g. wage premium, job change, etc." (EXP05)

"It is very difficult to make predictions over time, to say to a person "you deposit 200 euros a month and in 40 years ..." you cannot quantify how much you will give it! (...) you should take into account inflation and everything else "" people do not do it (private pension funds) for the pension, who feels this need to deposit, deposits without the awareness of how much the final pension will be" (EXP02)

"Young people have only one advantage: the years beyond them. These years allow the money to make a little more, but to take advantage of this; young people have to start saving already when they are 20-25 years old. No one at that age save money forgetting it up to they will are 67 years old" (EXP03)

- **The previous point** can be seen as a proxy of the **low importance of financial investments in Italian families** with respect to other European countries. Instead, Italian parents typically have invested in one or more houses (EXP03).

"House is the best investment because it is yours, when you are retired if the house is too big, you can sell it and buy a smaller one. Young people want to have a house on their heads" (EXP03)

- **However, Italian families also count in the current pension arrangements**. Grandparents save in pension funds, when their grandchildren are born. Another situation occurs when parents save in private pension arrangements for their children when they start to work, to compensate their future low income level from the public pension (EXP01, EXP02, EXP04).

"Clients rarely ask (for pension funds) ... often adult asked instead of young people (...) parents of children who have just started working…because there is a tax advantage,

parents can detract (...) the optic is the parent's tax savings while accumulating” (EXP02)

It is also and overall a matter of money availability: “parents are paying (...) the capacity of accumulation of young people is quite low (...) for a matter of income, or period of life where the expenses are higher, for example you just rig up home” (EXP02)

II.II Financial literacy

According to experts, Italian youth has low financial literacy, which affects their financial behaviour about pension schemes: they don’t invest on a market that they don’t understand or they are at risk of predatory behaviours of the experts (EXP01, EXP03, EXP04). However, it is interesting to note that the financial literacy of Italian youth is still higher than that of their parents: Italy is the only case in the G7 countries (similar to BRIC countries) (EXP04).

III. Supply-side

The supplementary funded schemes include the following possibilities:

- **Contractual pension funds** (36 funds): established through collective bargaining between employers’ associations and trade unions. They only support occupational pension plans and benefit from the introduction of the mandatory enrolment of workers (**not atypical ones**), e.g. in 2016 in the construction sector.
- **Open pension funds** (43 funds): promoted by banks, insurance companies, asset management companies. They support both occupational (given a voluntary agreement between employers and employees in a company) and personal plans (individual and voluntary). They invest on the market and are subject to risk according to the sector.
- **New PIPs** (78 funds)**:** individual pension plans realized through **life insurance contracts**, instituted after the entry into force of Legislative Decree no. 252 of 2005. They are subject to the same rules applied to new pension funds with respect to members’ rights, portability and transparency. Offered by insurance companies, they only support personal plans.

There exist also:

- **Pre-existing pension funds** (294 funds): they were already operating before the entry into force of Legislative Decree no. 124 of 1993, they are structured as defined contribution and defined benefit schemes and they are not open to new members.
- **Old PIPs** (personal investment plans): individual pension plans realized through life insurance contracts, instituted before the entry into force of Legislative Decree no. 252 of 2005. They are not allowed to collect new members.

III.I Access condition

Public schemes are reserved to employed and self-employed workers who are members of the Compulsory General Insurance (AGO), which includes the

Employees' Pension Fund (FPLD) and special self-employed funds (craftsmen, retailers, farmers, colonists and stockbreeders) **and are members of the "Gestione Separata" (atypical workers)** in possession of the **statutory and contributory requirements prescribed by law** (retirement age, years of contributions in a specific fund). In other words, in Italy each type of contract implies to make provisions to a pension fund, with differences given to the type of work firstly (subordinated, self-employed), the type of contract (typical/atypical) and the sector.

Occupational schemes require being employee in a defined company or sector. In fact, they are reserved schemes for employees in a company/in a sector in which they exist some agreements between employers/unions and financial intermediates relative to pension funds. The portability of these schemes is guarantee in case of change of work (EXP05).

Private schemes have no access conditions and no groups are excluded from them, but they have low effectiveness in case of low and discontinuous income. The schemes have a high level of flexibility (e.g. it is not mandatory to make provisions with continuity), although interruptions, low income and periods of unemployment all have strong consequences on the entitlement level (EXP02, EXP04).

III.II Effects of employment uncertainty

The experts interviewed have identified some specific topics related to the impact of employment uncertainty on pensions.

Public pensions

Periods of **unemployment** have a strong impact on the future pensions, but also **fixed term contracts**. In fact, discontinuous and low-income jobs affects the possibility to have an entitlement that will ensure sufficient income levels to continue their own standard of living in old age, because the amount will depend on the revenue of the contributions also for the public pensions. Fixed-term contracts in case of young people in Italy are mostly atypical ones, which are less payed than other contracts and does not implies contributions in periods of unemployment.

Job mobility does not affect directly the pensions level because the portability is allowed.

Occupational pensions

In the case of occupational pensions also, **periods of unemployment and fixed term contracts** have a negative impact for young people, because this type of pension scheme in Italy are not mandatory and are provided mostly for employed with typical fixed-term contacts, while 50% of young people have not access to this type of contract and for them the access to occupational pensions is not allowed.

Job mobility does not affect directly the pensions level because the portability is allowed. There are some compensatory mechanisms in case of changes in sectors/firms that imply changes of pension funds.

Private pensions

Unemployment and **fixed term contracts** strongly affect the possibility to have private provisions for young people because of problems of liquidity due to the absence of income subsidies during unemployment and the fact that fixed term contracts are expecially low-income jobs:

> *"Once there was a state pension, the state was giving money and in front of a contribution it gave you much more. Today, both the INPS and the private pension funds give you the capitalization of what you have saved, and since the rates of interest are close to zero ... .hah it's very difficult for a young person to have a retirement fund, usually young people are struggling to pay the contributions to the INPS, just think a pension fund!!!"* (EXP03)

This problem affect the possibility to have a private pension in the old age because i**t is important to start as young as possible and save regularly** in order to benefit from the compounding of one's own savings[33] (EXP01). Morehover, **high amounts are (informally) required since the first contributions** (EXP02, EXP04). To have a supplementary pension that could compensate the low level of public pensions for the new generation of citizens, the monthly amount of contributions has to be high. Moreover, while bank rhetoric tells young people they can make their own pension arrangements with just 20 euros a month (EXP01), two experts (and the calculus) say that a "minimum" amount for a reasonable entitlement is 400 euros a month (starting at 20 years old), and this is not economic sustainable for young precarious workers (EXP02, EXP04).

The timing and the amount of contributions affect the amount of entitlements in a strong way and there are no compensatory measures/devices for whoever has discontinuous work/income.

> *"When I have one month a year that is missing, it may sound nonsense, it means that you miss 4-5 years of contributions, where you go to transform the total provision into the annuity you see the difference"* (EXP02).

Job mobility does not affect directly the pension level because the private pension system is not directly linked to a specific contract and it is not formally dependent on the contractual situation of the client.

Given the widespredness of informal employment among young people in Italy, it is important to note that in this case only voluntary contributions are allowed.

More generally, given that the convergence among quotas of contributions to the different funds mentioned above (Gestione separate and other funds), the great difference for the young workers is on the level of earnings, that depends on the type of

[33] In other words, it would be better to save 100 euros a months starting at 20 years old than a larger amount ten years later in one single solution, for two main reasons: 1) 100 euros starts to gain interest (compounding) that becomes capital on which interest is calculated the next month (capitalisation). 2) The amount is invested in shares on the financial market so its value can increase and decrease over time so, in the long term, the global effect would be positive (in theory).

contract. The low level of wage for atypical workers is the main cause of the low level of pension in the old age (EXP05). On the other hand, this convergence had implied that also the public pension entitlement will be lower than in the past, so for the young people it is very important to integrate the public pension with the so-called complementary system, occupational or private. In this sense, the atypical workers have a double problem due to the low level of wage: in a defined contribution system, the low wages implies low entitlements and then low pension level, and at the same time low wage doesn't allow for make provisions in the complementary system, because the money are not enough.

"A precarious worker is…a precarious one. To say "I deposit for when I will be 60 years old when I do not know if I'll have a salary in 3 months" is actually a bit odd" (EXP02).

"If a young person has a good job with good prospects he makes a retirement fund to invest, if he can save 1000 euro and deposit 200 (...) a young person with a narrow wage should deposit anyway, but he have to do less consumptions (...) if I want to do consumptions tomorrow, I do not have to do consumptions today" (EXP02).

IV. Recent and actual Reforms

The current configuration of the Italian pension system is the result of various reforms that have radically changed the system: It was expansionary and distributive until the early-1990s, but after 1992 a transition towards a multi-pillar system started. The reorganization of the social security system was necessary given the critical conditions of Italian public finances and the stringent compulsory Maastricht parameters. The 90s reforms introduced NDC formula for the computation of benefits that has a strong impact on decrease of future pensions. The introduction of non-mandatory supplementary funded schemes does not have a strong impact to compensate such decrease. Last austerity-driven reforms of the period 2009-11 had a strong impact on unemployed for workers over 50 years old.

The **«pension package» included in the 2017 Stability Law** marks discontinuity with the last reforms. The new measures rely on the equity principle and promoting redistribution, aim at tackling the most severe social consequences produced by the combination of previous interventions with prolonged economic stagnation. However, the focus of those reforms remains on older workers.

V. Summary

To sum up, the changes in public pensions and the introduction of private and occupational pension plans are not designed in order to be sensitive to needs of young precarious workers, but to face a problem in sustainability of public pension system by enrolling in the providence the private sector (focus on role of employers' associations, trade unions, companies and their employees).

Private and state pensions have both very low impact for young people. They will not have the same public pensions their parents have due to changes in both the pension system and the labour market, which have created a situation of cumulative disadvantages for young people, such as the:

i. passage from retributive to contributive calculus of entitlements;
ii. raised pension age;
iii. atypical contracts guaranteeing a very low level of providence (also because of missing contributions in periods of unemployment).

Private/occupational provision arrangements will not compensate the difference in entitlement in the case of precarious youth because they are economic sustainable or even reserved to typical contracts. “Double burden problem” of public pension for young people: youth have to finance with their contributions both the pensions currently implemented and their own old age provisions. Their difficulties to do so are even greater in time of low employment and precarious income.

“To make a retirement fund takes so much money. The government has created these retirement funds to let off the Inps, as Inps could no longer guarantee past pensions that were higher than the contributions, the government did this thing of supplementary retirement funds by unload on people to support themselves, but they need money to make a retirement. It is a false possibility” (EXP02).

“In Europe as in Italy, the pension problem is one of the great challenges that young people face today. There is a shift from a earnings-related *system to a defined contribution one (...) in the market there are increasingly complex products that young people do not understand well ... (...) young people have to take responsibility (…) ”* (EXP04)

3.3.3.5 Poland

Jędrzej Stasiowski, Educational Research Institute (IBE), Poland

This report is based on the three individual in-depth interviews and one dyadic interview with Polish experts, both academics and professionals, specializing in the areas of financial markets, investment products, pension systems and retirement. Interviews were conducted in July 2017. The following table presents profiles of our interviewees:

ID	Interview date	Interviewee profile
EXP01	12-07-2017	Dyadic, interview was conducted with two experienced financial advisors who are selling insurance and investment products for individual clients and companies.
EXS02	13-07-2017	Academic, PHD dissertation in economics (topic: stability of pension systems; areas of interest: macro and microeconomic conditions affecting pension systems), worked as one of the key experts responsible for pension system reform in 1999
EXP03	18-07-2017	Expert with comprehensive working experience in commercial financial institutions, currently executive in Polish national development bank, responsible for preparing assumptions the new law introducing Employee Capital Programs (Pracownicze Programy Kapitałowe PPK)
EXP04	19-07-2017	Expert, representative of Chamber of Commerce of Pension Companies which is an organization consociating 11 out of 12 Open Pension Funds/Voluntary Pension Funds.

I. Country specific pension scheme

The current shape of Polish pension system origins in Four Reforms Program introduced in 1999 by Jerzy Buzek's government. Four Reforms Program involved deep structural changes in Polish educational system, regional administration, healthcare and social insurance system. The reform of social insurance system was designed to supply existing state pension system with two additional pillars – compulsory and universal, capital-based second pillar and various, voluntary solutions available within 3rd pillar.

First pillar:

The first pillar of Polish pension system is built upon a typical "pay–as-you-go" system, which is based on notional defined contribution accounts. Pension contributions are tracked in accounts run by state-owned Social Insurance Institution (Zakład Ubezpieczeń Społecznych – herafter: ZUS). Pay-outs within the first pillar do not come from investment returns in the capital markets. ZUS's account is notional which means that its pay-outs are artificially set by the government depending on the country's budget overall condition.

The contribution to ZUS equals to 19.5% of employee's taxable income and it is equally paid by both the employer (50%) and employee (50%). Since July 1st, 2014 12.22% of employee's taxable income is transferred to FUS (Fundusz Ubezpieczeń Społecznych: Social Insurance Fund), while the remaining part of contribution (7.3%) might be stored at FUS subaccount. It is a default option. The second option, available for people who decided to stay with Open Pension Funds (herafter: OFE, explained in the next section), means dividing remaining part of contribution between FUS and OFE (4.38% is stored on special subaccount, while remaining 2.92% is transferred to OFE and invested on

the market. However, this option is available for employees who actively decided to stay with OFE.

Contributions are transferred to Social Insurance Fund (FUS), which is used to cover ZUS pension's expenses[34]. However, in certain conditions contributions are paid by the state: military service, maternity leave, unemployment (limited periods, related to eligibility to collect unemployment benefits). The retirement age in Poland is currently set at 60 years for women (job seniority length – minimum 20 years) and 65 years for men (job seniority length – minimum 25 years). However, it is possible to extend the working period beyond that age (retirement is treated as privilege, but not obligation). People whose total pension is below the defined level but where the contributive period still equals at least to 20 years for woman and 25 years for men are entitled to the minimal pension (1000 PLN in 2017).

The minimal length of contributive period depends on the income level. During periods when salary is below the minimum wage[35] (currently 2000 PLN) the contributions are adequately lower. Consequently, many Poles are not entitled to a minimal pension, as they are not able to achieve required length of contributive period.

In 1999 the reigning government led by Jerzy Buzek planned to create a single, common pension system with the same rules and institutions for all participants – government's ambition was to constrain retirement privileges inherited after former regime of Polish People's Republic. However, these plans were followed by protests and decline in government' support. The next government was forced to sustain existing pension privileges for most of the privileged civil servant groups (military, law enforcement, justice system), mineworkers, railway workers and keep separate famers' pension scheme. During the pension reform in 1999, the government had to introduce temporary solutions to smooth the transition into the new system. People born before 1949 are entitled to pension, which is based on the "old rules" – their pension does not depend on the level of their past contributions, but it is related to length of their contributive period[36]. People who were born after 1949 and fulfilled certain conditions related to their job seniority length in specific working conditions before 1999 also reached their retirement earlier – this scheme is referred to as **bridging pensions**[37].

[34] The overall structure of FUS is more complicated – it has several sub funds: retirement pension fund - based on contributions credited to the main account in ZUS and funded pensions, pension fund - based on contributions credited to the sub-account in ZUS, sickness fund and accident fund. Moreover, there in 1998 The Demographic Reserve Fund (Fundusz Rezerwy Demograficznej, FRD) was established. Its income is based mainly upon monies derived from privatization and its purpose is to secure funds for deficits in FUS old-age pension due to demographic reasons (Pątek, 2016).

[35] The minimum wage is defined every year by the Regulation of the Council of Ministers.

[36] Their retirement age is following: Men – minimum 65 years old, 20 years of job seniority length; Women - minimum 60 years old, 15 years of job seniority length. In case of miners: 50 – 55 years old depending on the job seniority length and years worked underground (ZUS Polish Social Insurance Institution, 2017).

[37] Men – minimum 60 years old, 25 years of job seniority length, Women - minimum 55 years old, 20 years of job seniority length, In case of certain professions: minimum 55 years for men and 50 for women, with various minimum length of job seniority – depending on the character of job (ZUS Polish Social Insurance Institution, 2017).

Specific working conditions. Within ZUS system, certain professional groups are privileged if their jobs are classified as those performed under specific working conditions. The examples of such professions are miners and heavy industry workers, actors, dancers, musicians, teachers etc. Thus, the minimal length of job seniority period might be shorter and the minimum retirement age might be lower, depending on the type of performed job. However, the minimum threshold, for the heaviest jobs, is 55 years for men and 50 for women (ZUS Polish Social Insurance Institution, 2017).

Polish Military Services and law enforcement units have also separate pension systems. It is important to stress that since 1990 Polish farmers are enrolled in the separate pension system, which is managed by Agricultural Social Insurance Fund (KRUS). The state subsidizes farmers' pension scheme by more than 90%. Both contributions and benefits are flat-rate and amount to roughly half the average of the public pension benefits (Wilmington, 2017).

Second pillar:

In the Polish system, the second pillar of the Polish pension system used to be a compulsory, defined contribution system based on Mandatory Individual Accounts which are managed by Open Pension Funds (Polish name: Otwarte Fundusz Emerytalne - herafter: OFE). There were no exclusions regarding age or type of the contract[38] - it used to be parallel to the first pillar (ZUS) and covered the whole working population. Because of recent changes, participation in OFE is no longer compulsory, thus effectively, that the second pillar is no longer present in the Polish pension system[39].

Pension paid from OFE's account depends on contributions and investment returns. Since 2014, 2.92% of employee's taxable income might be deposited at OFE individual account. Participants may choose OFE's, they are entitled to change their OFE's once per 3 months. Contributions to OFE's are tax free. Money saved in the OFEs might be inherited. Separate regulations were established to minimalize OFE's investments risk – foreign investments are prohibited and the structure of their equites is regulated.

The Polish Financial Oversight Commission (KNF) is entitled to control OFE's operations and secure guaranteed rate of return. KNF establishes a minimal rate of return, which is, based on the 36 months average OFE's rate of return. If a given OFE achieves lower results, it is obligated to transfer missing funds to its' clients' individual accounts. OFE deduct a management fee for their investment operations. These costs became a source of controversies around the profitability of the whole Second Pillar. In 2014 government introduced so called "transfer windows" – once per 4-year period people might change their decision about OFE (deposit 2.92% of employee's taxable income at OFE account or register the same amount at sub-account in ZUS).

[38] Except specific task agreements ("umowa o dzieło") - type of civil contracts regarding specific, short-term tasks which result in the creation of something. In this case, renumeration is paid for the result of work, not work itself. No contributions for health or social insurance are deducted from specific task agreements in Poland.

[39] More detailed information about these changes is provided in the following sections, thanks to conducted interviews.

According to data published in the end of June 2017(KNF - Polish Financial Supervision Authority, 2017b), there are 12 open pension funds (OFE) with 16 344 599 members. However, only 1/6 of them decided to continue paying contributions for OFE. Current OFE's net assets equal to 174 683 212 108 PLN. Participation in OFE used to be compulsory – they were a crucial part of Polish pension system, a complementary capital-based scheme for the I pillar - ZUS. Because of recent changes OFE have become marginal, but still they manage bigger funds than IKE/IKZE and Employee Pension Funds taken together.

Third Pillar:

In the Polish system, the "third pillar" is a general term used to cover a huge variety of financial or insurance services, which might provide additional resources for retirement.

Some of these individual or occupational pension plans are specially promoted by the state, mainly through special tax incentives. Currently, there are three types of such, state-supported schemes in Poland: (1) Personal Pension Accounts (Indywidualne Konta Emerytalne: IKE), (2) Individual account for retirement protection (Indywidualne Konta Zabezpieczenia Emerytalnego: IKZE), (3) Employee Pension Programs (Pracownicze Programy Emerytalne: PPEs). There are no exclusions regarding age or type of the contract[40] for IKE, IKZE or PPEs. PPEs are available for the employees in companies, which decided to start such program. Having IKE/IKZE is completely voluntary, but at the same time, these solutions are theoretically available for unemployed or inactive people. The main problem with abovementioned solutions is that they are marginal. IKE (less than 1 million of participants, over 6 million PLN) and IKZE (less than 1 million members, over 1 million of savings) are becoming more popular, but their significance (measured by number of participants and gathered assets) is marginal in comparison to OFE (over 16 million of members, net assets equal to over 174 billion PLN). The perspectives for the development of PPE are discussed in the next chapter, but currently Employee Pension Programs are a marginal part of Polish pension system.

Personal Pension Accounts:

Minimal age for participation is 16 years old, but with limited rights for deposits – it is available only for juvenile workers (16-18 years old, hired under regular contract). For people who are older than 18 years old there are no restrictions regarding type of contract.

The limit for payments to the IKE, determined annually by the Minister of Labour – it is 300% of forecasted average monthly income. Money invested on the capital markets and saved under IKE formula are exempt from tax on capital gains, but only if they are withdrawn after reaching 60 years old (or earlier if a person reaches retirement age). IKE might be managed by investment funds, brokerage houses, banks and voluntary pension funds (Ministry of Family, 2017a).

[40] Except specific task agreements ("umowa o dzieło") - type of civil contracts regarding specific, short-term tasks which result in the creation of something. In this case, renumeration is paid for the result of work, not work itself. No contributions for health or social insurance are deducted from specific task agreements in Poland.

Clients can change their IKE providers or even move their resources to their PPE. Resources gathered on IKE account might be inherited by client's family members. Available data for the end of 2016: 902 615 active IKE accounts with 6 655 497 PLN of savings. Since the end of 2015, the number of IKE accounts increased by 5% (Ministry of Family, 2017b).

Individual account for retirement protection:

Minimal age for participation is 16 years old, but with limited rights for deposits – only for juvenile workers (16-18 years old, hired under regular contract). For people who are older than 18 years there are no restrictions regarding the type of contract. IKZE might be managed by investment funds, brokerage houses, banks and voluntary pension funds. What is important, resources gathered on IKZE account might be inherited by client's family members. IKZE deposits lower the income tax base (tax exemption on contributions). IKZE pay-outs are favourably taxed with flat-rate income tax (10%), but only if they are withdrawn after reaching 65 years old. The limit for payments to the IKZE, determined annually by the Minister of Labour – it is 120% of forecasted average monthly income.

Available data for the end of 2016 are following: 643 112 active IKZE accounts with 1 078 090 PLN of savings. However, since the end of 2015, the number of IKZE accounts increased by 7.7% and amount of savings kept at these accounts raised by 74%(Ministry of Family, 2017).

Occupational pension plans (PPE):

Occupational pension plans (PPE) are constructed as defined contribution plans – pension depends on contributions and investment returns. PPE are voluntary set up by employers. Their conditions must be negotiated with trade unions or employee representatives within a company. Moreover, the occupational pension plan should be accessible for at least 50% of employers within a given company. The maximal contribution equals to 7% of the employee's salary. The contributions paid by the employer are exempt from social security levies up to 7% of the employee's gross salary. Employees' additional contributions supplementing employer's basic contributions are allowed. Pension benefits might be paid only after reaching the retirement age. The returns on PPE investments and pay-outs from PPE are not a subject to income tax.

PPE are managed by independent financial institutions (insurance companies, investments funds) or specially established company pension funds; the investment regulations are not as strict as in a case of OPFs. PPE's might have different forms, starting with the most popular (in terms of participants' number): (1) Agreement on contributing employee contributions to an investment fund by the employer; (2) Group investment employee life insurance agreement concluded with an insurance company in the form of a group life insurance linked to capital investment funds, (3) Employee pension fund.

In 2016, 1106 employers had their PPEs which covered 330 228 active participants - by the end of 2016 they contributed 12 308 890 086 PLN (Yearly Bulletin. PPEs' Market 2016) (KNF - Polish Financial Supervision Authority, 2017a).

II. Demand-side

According to our experts, youth in Poland are not aware that their pensions will be much lower than they are for their grandparents or they will be for their parents.

“For people who are going to enter the labour market, the awareness of having retirement savings will certainly be important ... If we talk about the savings among young people, it seems to me that the main problem we have identified is the lack of universal economic education.” (EXP03)

Currently, the replacement rate is around 70%. Within the new system (without OFE, without any new solutions) it will be around 30% for women and 40% for men (EXS02, EXP04). Low earnings and high costs of living do not facilitate making savings for retirement (EXS02).

"A lot of young people say ´I do not want to count on ZUS, I want to count on myself`... and it turns out that these savings are much lower (…) It is certainly a matter of fact that wages are low; young people have a lot of other expenses - the issue of housing, family setting, the appearance of children (...)" (EXS02)

Another expert does not agree with this point of view:

“Saving 10, 100, 200 zł is possible for any visitor of this cafe ... We are talking about young people entering the labour market ... This is often the claimant youth, as we find ourselves wanting to hire a person to the company, so please forgive me for talking about this group without scruples. But each of these people can afford to put aside their money" (EXP01)

Moreover, young people often present myopic attitudes toward their future (EXP02).

"This is a typical phenomenon in social insurance - the so-called short-sightedness or myopia. Due to the fact, that we know we should save, but we still want to do it and then (...) the years pass by and we didn´t saved [something]" (EXP02)

II.I Actual savings behaviour

According to one expert (EXP04), the younger people are less interested in retirement and savings. Other experts raised the issues of laziness, hedonism and decadency among the young generation, which are mirrored by irresponsible attitude toward personal finances (EXP01).

"The buzzword of today's generation ... I will name is a following: laziness, hedonism, decadence. Unfortunately, it affects money management. Buying daily sandwiches with avocado for breakfast instead of putting 5zł into a piggy bank." (EXP01)

There is a need of greater awareness and better, easily accessible knowledge in this area (EXP03, EXP04).

"The issue building of awareness for savings for retirement is a difficult and complicated undertaking ...especially if we want that people are aware of the risk of shorter contributions ..." (EXS02)

"Research done by prof. Czaplinski, prof. Góra shows that young people do not even think about their retirement in the future. It is such a distant future that they are not analysing in any way what the consequences will be in 30 years, whether it is better to sign a contract of employment or an order contract, a specific task agreement" (EXP04)

II.II Financial literacy

Another expert (EXP03), raised the point that regarding youth, it is important to distinguish between saving and saving for retirement – both are not very common in Poland, but saving for retirement is perceived by youth as something very abstract. According to experts, this points to the problem of young people's low interest in economics and also the lack of reliable knowledge in this area. Thus, there is a growing need for reliable economic education for young people.

"I do not know if children in Poland are taught to save money ... I do not know if a lower secondary school graduate who goes to high school has any idea what is the interest rate on credit, how much does it cost him to take such a loan ... why it is worth to have some savings" (EXP03)

Low awareness results in marginal saving behaviour and low participation rates in third pillar. Thus, we can consider the general population of Polish youth as a risk group (EXS02, EXP04).

III. Supply-side

According to EXS02, key assumptions behind the reform in 1999, which introduced our new pension system, were two slogans: "Your pension based on your contributions" (which meant encouraging people to extend their professional career) and "Pension safety through diversity". This latter referred to the fact that initially pension was based on state component (first pillar) and capital component (second pillar). This solution was designed to diversify risk between capital market and labour market. The compulsory second pillar should compensate negative consequences of population ageing. It worked – standard deviation of weighted rate of return from first and second pillar pension accounts was lower than the rate of return from the first and second pillar pension accounts taken separately.

Authors of the 1999 reform assumed clear redistribution mechanisms embedded in pension system: state pays your contributions for certain periods: short periods of unemployment, maternity leave. People whose income was too low are entitled to minimum state pension.

Experts highlighted that while the financial crisis of 2009 did not affect Polish GDP, it severely hit public finance. During this time, the public debate about Polish second pillar (OFE) became very critical:

- Open Pension Funds had too high management costs (about 7% - initially, high costs were justified by the need of building new system, but after 10 years they should drop).

- OFE were fiercely competing on the aftermarket[41] - trying to convenience clients of their competitors to move to their fund which was rather senseless (Due to strict investment regulations, OFE had almost identical investment strategies and results). OFE could not create sub funds and adjust their investment strategies to clients' life cycles (EXP04).

Given the problems outlined, in 2013, the Polish government decided to temporarily reduce contributions for the second pillar and transfer a considerable part of private savings from OFE to ZUS subaccount. Gathered resources were used to support state's budget (EXS02, EXP04). Government took over 51% of OFE's capital (mainly invested in public bonds)[42]. Since 2013 Polish Open Funds cannot invest in Polish public bonds – it is a unique situation worldwide (EXP04).

Soon, government made the second change – contribution level for OFE was lowered significantly and all the employees instead had to volunteer to continue their participation in the second pillar. As a result, OFE lost 13 500 000 clients (out of 16 million), their assets dropped to PLN 173 billion (EXP04). Moreover, government introduced so called "safety zip" – a mechanism that forces OFE to gradually transfer employee's resources from his OFE's account to ZUS while he is approaching the retirement age (EXS02). These changes were possible, because the reform of 1999 did not precisely define OFE's capital as private resources. Thus, government could easily move these financial resources to ZUS (EXP04).

Described above changes resulted in effective elimination of second pillar (EXP03, EXS02, EXP04). We might say that the second pillar was transformed into a first pillar "bis" (EXP04). Thus, current pension system puts employees in a greater risk – as pension based only on first pillar, which will be much lower and its prospects are less secure: this change will affect mainly the youngest generation (EXS02, EXP04).

In 2013, despite opposition in Polish society, government decided on raising retirement age (up to 67 years for women and men while it used to be 60 years for women and 65 for men). Yet, in 2017, new government again restored the previous levels of retirement age. One expert (EXS02) stresses the negative consequences of this change, especially for women: five years' shorter contribution period, keeping all other factors constant, transfers into much lower pension for women as compared to men.

"In most European countries, the retirement age for men and women is equal (...). This is important in the context of the Polish pension system - the defined contribution formula means that the 5 years difference in retirement age for men and women translates into a situation, in which women have a retirement income, which is half of the pension of men, if other things are equal. Two effects are overlapping here ... (...) the compound interest mechanism means that each year of contributions at the end of a working period weights a lot; Second, the average life expectancy, significantly higher for women, which translates into retirement "(EXS02)

[41] Although Poles choosed their Open Pension Fund in the begining of the proffesional career, they could change their decision and move their assests between diferent funds.

[42] Initially, government planned to seize 100% of OFE's capital, but it would result in dramatic breakdown on Stock Market in Warsaw.

Personal and occupational pension programmes:

In 1999, government introduced the possibility of opening Employee Pension Programs (PPEs) by employers. The solution was fostered, but also carefully monitored by state. Participation in PPE's was not dependent on age or type of contract (EXP03). Specific conditions within PPE's are negotiated between employers and their providers; sometimes they are combined with IKZE. However, it is not the rule that in terms of conditions and profitability PPEs are better than individual plans (EXP01).

Since 2000, only around 1000 PPE's were registered; PPE's were created mainly in big, responsible Polish companies or foreign corporations. Thus, the majority of Poles often have not even heard of PPE's. The low popularity of PPE's can be attributed to several reasons (EXP03). First, responsibility for contribution was put only at the employer side. Second, opening of PPE was formally difficult, the whole solution was too bureaucratized. Our expert summarized this as following: "*Monitoring and report obligations killed this idea*" (EXP03).

In 2003/2004, Personal Pension Accounts (IKE) were introduced. It is permitted to open only single IKE account. Idea for IKE was inspired by solutions present in the USA (EXS02). Savings gathered within IKE are exempt to capital gains tax (tax exemption on pay-outs). However, IKEs have not become popular either.

Individual accounts for retirement protection (IKZE), introduced in 2013, are a similar tool, but with different tax exemption – IKZE deposits lower the income tax base (tax exemption on contributions). People might save within IKZE as much as they want, but there is a fixed limit for savings lowering tax base. Moreover, there is a rule that one person can only possess one IKZE. IKZE might be managed by different institutions, including voluntary pension funds, banks, investment funds, brokerage houses. Yet, the problem with IKZE is that products sold under this formula are not very profitable for financial advisors - that is the reason why this mechanism did not become popular in Poland (EXP03). However, IKZE probably will become very popular in the following years due to the planned reform – government is going to open IKZE account for every person who participated in OFE (EXP03).

The main problem of the third pillar is that, despite many possibilities, most Poles just do not make any additional savings for their retirement (EXS02). Approximately, 1000 000 of Poles gathered PLN 16 billion of savings on IKE/IKZE accounts – it means that these solutions are unfortunately marginal – EXP04. Several characteristics are associated with higher chances of making savings (EXP04): 45-55 years old, females, wealthy, higher education, living in big cities.

"In general, if we are looking at who is making savings, when it comes to the third pillar these are more affluent people, foremost from large cities and in an age group of 45-55, more often women" (EXP04)

"Most often, savings are being made by people between 45-55 years. And I would say that the younger ones are the less interested in the pension system and the less knowledgeable at all. (EXP04)

Experts (e.g. EXP01) furthermore criticised IKE and IKZE for being sold mainly for the profits of financial brokers (IKE) and being, despite tax exemption, not very profitable for clients (IKZE). Academic expert do not agree with that opinion:

"It is worth to enter IKE/IKZE precisely because they are regulated. There is KNF control. Secondly, there are tax reliefs" (EXS02)

One positive attribute of these schemes, though, is that IKE/IKZE are flexible – people might gather their savings irregularly; deposit at IKE/IKZE different amounts of money. For example, it is possible to buy any number of units of available investments funds at any time.

III.I Access conditions for youth

Our experts (EXP01, EXS02, EXP03, EXP04) agree that additional savings for a retirement should be considered as a necessity, given that replacement rates within the first pillar will drop in the next decades.

"All projections show that pensions in the new system will be much less generous than they were in the old system (...)" (EXS02)

Systematic savings, 4% of individual income per month, will raise future pension by approximately 15% (EXP04).

The polish pension and insurance market is full of various products and solutions with different characteristics – pure investments products, investments with insurance or life insurance products.

"The product category on the market is the whole mass - these are insurance products, purely austerity products, these are products with capital assurance or total investment products, with no such assurances" (EXP01)

These products might have different management fees, with guaranteed payoffs or without, with compulsory, fixed contributions or with flexible contributions, with fixed penalties for breaking the contract or without. Generally, it is difficult to sum up third pillar solutions – according to our experts (EXP01, EXS02, EXP03, EXP04) they are broadly-based and diversified. According to EXP04, the majority of products sold on this market might be rather characterized as insurance-type products, which combine some form of insurance with more risky investment strategy.

Brokers and insurance agents mostly tend to approach wealthy clients – in principle, they treat any client similarly, but the more a given client can invest, the more profitable such work is. One interviewee works for entrepreneurs, professionals, middle class representatives – some of his clients can invest up to 20 000 PLN per month[43] (EXP01).

All interviewees emphasised that it is difficult to talk in general about conditions, flexibility and risks related with different types of commercial pension products. They differ a lot and depend on specific agreements with insurance or investment companies

[43] It is a very high salary indicating some bias toward weatlhy clients. Average monthly gross wage and salary in enterprise sector in August 2017 was 4492 PLN.

(EXP01, EXS02, EXP03, EXP04). According to EXP01, the best investment strategies, which will bring satisfying results for the future retirement, are those, which were carefully tailored for individual needs. One of our experts, EXP03, recommends full endowment products – life insurance contracts, which pay guaranteed sum after reaching agreed period. The flexibility of such products depends on given conditions and insurance provider. Another expert (EXP01), consider these types of products as the safest, but not very profitable. Unit-linked insurance plans offer life insurance and investment plans under a single agreement. However, these products might be risky – their profitability depends on market performance and related charges (EXP01, EXP03). I might be costly to withdrawal money before the date given in the contract (EXP01, EXP03). Infamy of such solutions (unit-linked pension insurance products – UFK: Ubezpieczeniowe Fundusze Kapitałowe) has its sources in bad information policy of some of its providers – earlier withdrawal of money or gaps in contribution periods could lower profits – some of clients were not aware of that (EXP01).

Huge diversity of commercial retirement solutions means that there are no perfect or universal solutions, which will be appropriate for anybody. Each product should be customized for individual needs, goals and financial capacities. Marketing and advertising in financial sector is very often distorted – people shouldn't believe it. However, over last 10 years there was a huge improvement it terms of sales ethics and the profitability of pension products (EXP01). That's the role of professional financial advisors (EXP01). Moreover, experts highlight that one shouldn't demonize financial institutions – usually they are more flexible than one think (and then it is stated within contract): it is not the interest of insurance provider to cancel the contract while its' client losses his job or has temporary financial difficulties (EXP01).

People who are thinking about their retirement often got scared by the richness and complicity of solutions available on the market. Consequently, they repeatedly postpone their decision about starting some serious individual plan for their savings. Thus, it is important to use professional and straight help of financial advisors– their profits are not equal to our costs[44] (EXP01).

III.II Effects of employment uncertainty

Generally, the Polish pension system is quite flexible in terms of different types of contracts – pension contributions are deducted in majority of cases – different types of temporary contracts and order contracts. However, contributions are not paid in case of specific task agreements (Polish legal term: mow o dzieło) - type of civil contracts regarding specific, short-term tasks, which result in the creation of something. In this case, remuneration is paid for the result of work, not work itself. No contributions for health or social insurance are deducted from specific task agreements in Poland.

[44] According to EXP01, there are different mechanisms of including commission in their services – usually every financial product has included commission, the question is who will get it (or how they will share it: the broker, financial advisor or the company – provider.

Moreover, people who are self-employed have a possibility (which is widely used) of lowering their contributions to a minimum level[45].

"The current system covers a significant part of the various types of contracts - firstly if it is a contract of employment, it is not important for the system whether it is an indefinite or definite contract - contributions are being paid. Secondly, contributions are also paid on contracts for specified service - since 1999, but social and health insurance is a subject to the principle of deducting contribution from single contract ... it was used by employers but since last year it was assumed that the minimum contribution base is minimal pay, that is, if there are 3 contracts for specified service then the contributions will be paid from each of them if the amount is lower than the pay threshold. Contributions are not paid on specific task agreements." (EXS02)

Since 2016, the government introduced the rule that the income baseline for contributions deducted from multiple order contracts equals to minimum wage. Previously, it was compulsory to deduct a contribution from a single order contract. This change was introduced to prevent employers/employees from deducting their contributions only from the contract with the lowest pay (EXS02).

People under 26 years old who are during their education do not pay their pension contributions from order contracts. The idea behind this is to encourage employers for hiring young people, but this mechanism slightly lowers their pension capital in the first pillar (EXS02).

"Students do not pay contributions if they are working on an assignment (...) the assumption was that, for students, the assignment is casual (...) this period is preferentially ... this is to facilitate entry into the labour market; Lower wages are also a risk factor." (EXS02)

Periods of unemployment will also affect individual pension:

- People who are entitled to unemployment benefits (worked legally for at least one year with at least minimal wage) won't suffer from gaps in their contributive period, but the contribution deducted during this time will be usually lower than it used to be when they worked. Moreover, unemployed people may receive unemployment benefits for a maximum period of 12 months[46].
- Unemployed people who are participating in the internships organized by Labour Office pay their pension contributions as regular employees.
- People who are not entitled to unemployment benefits or long-term unemployed will suffer from gaps in their contributive period. Consequently, it will lower their future pension.

[45] In case of self-employed, contributions are not necessarily based on the actual income. In first two years of self-employment the baseline is 30% of the minimal wage, after this period the minimum contribution is calculated upon 60% of forecasted average wage in each year. Self-employed workers might deduct higher contributions, but majority of them stick to the minimal baseline.

[46] Only if other conditions are fulfilled (ex. living in region with high unemployment rate) – typically it is 6 months.

"What groups are at risk of poverty after retirement? All people who have a short period of employment (...) all breaks and discontinuities in employment negatively affect retirement " (EXS02)

Hiring self-employed people, using multiple contracts for performance of a specific task and informal employment are common strategies used by employers to lower their employment costs. These strategies generate the most disturbing risks for young employees' future old age income (EXS02). Low income, artificially lowered pension contributions and gaps in contributive periods (unemployment, informal work) result in lower pensions, which might not be enough to secure retirement. According to expert (EXS02) these are the main present risks for young people who are entering the labour market. Moreover, due to unequal retirement age, women will be, on average, in worse financial situation than men (EXS02).

The general advises for youth, based on the conducted interviews, might be summarized as following:

- Young people should familiarize with the fact that pension based only on ZUS won't be sufficient for their needs. Additional savings are necessary.
- Any moment is good to start making savings and any, even small, amount of money is worth of being put aside. The earlier we start, the more we will save – it is a simple mechanism of a compound interest.

"A person beginning to save at the age of 20 and saving for 20 years and then leaving them alone ... is able to lay down 2-3 times as much as a person who will put off twice the amount over the last 20 years of his career ..." (EXP01)

- It is worth to save money within IKE/IKZE – pension saving schemes supported by state. These solutions not only give tax exemptions, but are also strictly regulated and monitored by state. A good solution for young people with low or irregular income are open registers within investment funds where deposits might be made at any time. However, it is important to clearly state financial goals, stick to personal plan and make regular contributions.
- IKZE seems to be the friendliest scheme for making additional savings for retirement. There are different products, which might be sold under this formula. The most recommended are life cycle products, which adjust financial risk to the individual situation (lowering investment risk as we are approaching retirement age).
- Considering third pillar products, it is crucial to carefully read agreements and conditions, do not believe in marketing buzzwords and check related costs, fees and analyse rate of returns in longer periods. Help of financial advisor might be very useful, but it is beneficial to compare offers provided by different advisors.

IV. Recent and planned reforms

The current pension system in Poland is currently incomplete. Contributions that are being made within first pillar will not guarantee satisfying retirement for the next generation. The previous second pillar was minimalized and effectively transformed into a-

quasi first pillar solution. Polish savings within third pillar are rather symbolic, they will protect the future of only very few people.

Thus, Polish government is currently working on the plan of the big reform. The main assumptions of the reform are still being discussed. However, our interviewees revealed some of them:

- In the future, the second pillar (or rather first pillar "bis") will be entirely removed. Open Pension Funds (OFE) will be transformed into to Investments Funds. Their remaining assets will be transferred Demographic Reserve Fund (25%) and IKZE accounts (75%) (EXP04). Government is planning to popularize IKZE accounts (EXP03).
- Government is going to create Employee Capital Programs (Pracownicze Programy Kapitałowe PPK) which will take place of Employee Pensions Programs (Pracownicze Programy Emerytalne - PPE). PPK's will be compulsory for all employers (EXP03) or employers hiring more than 19 people and will largely resemble British solutions in this area (EXP04).
- Contributions for PPK's will be defined by the law – minimum 1,5% of tax base for employer and minimum 2% of tax base for employee. Employer or employee might raise their contribution up to 4% of tax base (EXP03).
- Participation in PPK won't be compulsory, but it will be default for all employees who have been working for a given employer for at least 4 months. People who do not wish to participate in PPK should voluntarily opt out from the programme (EXP03).
- Every PPK's member, as an incentive, will get the welcome contribution stored at his account – probably it will be 250 PLN (EXP03).
- People who earn less than half of minimum wage will get additionally 240 PLN per year for their PPK(EXP03).
- Assets gathered at PPK will be transferable – they should follow employee if they find another job (EXP03).
- Financial products accessible under PPK formula should have "life cycle" character – the risk related with capital investments should drop as we are approaching our retirement age (EXP03).
- Assets gathered under PPK are inheritable, moreover – they can be used (with no penalties) in case of the serious illness. They might be also used for buying first own flat (one's own contribution), but they must be returned to PPK account within 10 years (EXP03).
- The new pension system should be introduced in 2018 – it will be based on ZUS, IKZE and PPK (EXP03).

It is difficult to speculate about the effects of abovementioned reform for youth until its implementation. In general, planned reform will be beneficial for all employees. "Quasi-compulsory" (default for all employees who have been working for a given employer for at least 4 months) Employee Pension Plans will create additional opportunity and incentive for making retirement savings. This incentive is crucial, especially if we take into consideration low awareness of a need of making additional retirement savings among Polish youth. PPE will be based on relatively save "life cycle" investment products – it should protect retirement savings of Polish youth against inevitable turbulenc-

es on financial markets. In the current pension system, with recently disassembled second (OFE), such solution seems to be imperative.

V. Summary

- Former government had plans to raise and equalize retirement age for men and women (up to 67 years old). The new government restored previous levels of retirement age and gave up making it equal for men and women. This state puts women in a greater risk of poverty during their pension: 5 years' shorter contribution period, keeping all other factors constant, transfers into much lower pension for women than for men.
- Since the time of global financial crisis, Polish pension system went through the deep changes. Former government consequently constrained the autonomy of Open Pension Funds and took over half of their assets. According to the plans of current Polish government, in the following years Open Pension Funds are going to be eliminated.
- Interviewed experts agree that second pillar doesn't exist anymore – it might be called as first pillar 'bis', but it is voluntary and won't play any important role in future pensions.
- There is a huge risk of old-age poverty for all young people who do not make any additional savings for their future. This risk is higher for women and people who do not pay their compulsory pension insurance contributions (long-term unemployed, informally employed).
- According to our experts, youth present myopic attitudes toward their retirement. There is a low awareness about the need of making long-term savings. Young Polish suffer from the lack of knowledge about available solutions and risks related to certain financial products.
- Third pillar remains quite marginal – most of Polish just do not make any long-term savings. This problem affects short-term saving as well. Relatively low salaries in Poland only partly explain this phenomenon. Equally important are: lack of proper economic education and low awareness of the need of having long-term savings.
- People who are considering to start making their savings often feel overwhelmed with complexity of available products and aggressive marketing. In consequence, they repeatedly postpone their decision.
- Government introduced several solutions, which should facilitate gathering savings within third pillar: IKE (since 2003), IKZE (since 2013). The incentive mechanism is embedded in tax exempts. IKE has an exempt from tax on capital gains. IKZE deposits lower the income tax base (tax exemption on contributions).
- IKE and IKZE are rare among Polish. Currently there are 902 615 active IKE accounts (with 6 655 497 PLN of savings) and 643 112 active IKZE accounts (with 1 078 090 PLN of savings).
- In 1999 government introduced possibility of opening Employee Pension Programs (PPEs) by employers. Sadly, law regulating was too restrictive, thus employers were not interested in starting their PPEs – they didn't become a popular solution.

- Current government is preparing a new reform of Polish pension system – its aim is to popularize occupational pensions through Employee Capital Programs. Work progress is advanced – the new solution should be ready in the beginning of next year. The consequences of planned reform should be beneficial for all employees - Employee Capital Programs will substitute OFE (second pillar), the latter was already marginalized within Polish pension system.
- According to our experts, government policy should aim at: better control of employers – reducing informal employment and frauds (EXS02), reducing possibilities of bypassing compulsory pension contributions (EXS02), equalizing retirement age for men and women (EXS02), promoting responsible attitudes toward retirement savings (EXS02, EXP03).

3.3.3.6 Estonia

Marge Unt and Epp ReiskaTallinn University (TLU), Estonia

The report is based on the three interviews with experts from different fields. The low number of interviews achieved results from the saturation of the information, as the pension system is not complicated in Estonia. Our sample included one public policy expert (EXS01) and two high level consultants, one from a bank (EXP02) and another from private pension insurance company (EXP03). Experts very often referred or asked to check the details from different written sources or from their official homepage. Where necessary, the report additionally draws from the interviews conducted with youth excluded from labour market or working in insecure jobs in Estonia (see details WP3 D3.3 Methodological report).

I. The general structure of Estonian pension scheme

15-20 years ago, Estonian pension system underwent a paradigmatic shift starting in 1998, when Parliament adopted a reform program aiming to implement the three-pillar system in Estonia. The first pillar is the public pension or state pension fund included to general government accounts. Second pillar is a private pension, which is mandatory to newcomers to the labour market and to all those born after 1983. Its aimed that first and second pillar would together guarantee 40% of the net replacement rate. The third pillar is a voluntary pension scheme. Second and third pillar pension funds are not included in general government accounts and are managed by banks and insurance companies. Given the low replacement rate in Estonia, retirement is related to the risk of falling into poverty, especially for single person households. According to the EU SILC, 74% of elderly living alone were in relative poverty in 2014; however, the poverty is not deep as they are not in absolute poverty (Rummo 2016). Thus, in Estonia, there is no experience of 'golden age' of retirement of earlier nor current cohorts as all cohorts have struggling with their living standards once they have left the labour market.

The public pension:

The public pension is divided into two main programmes: the ***old-age pension*** **and the *national pension***. The national pension is for those persons who are not entitled to the old age pension given the contributions from work are not reaching 15 years. Recipients have to be 63 years of age and have lived in Estonia for at least five years before applying for the pension. The amount of the national pension is very low, since **01.04.2017 176 EUR**.

The old-age pension:

An entitled person is someone who has become 63 years old and whose length of employment in Estonia is at least 15 years. The old-age pension consists of three parts. Firstly, **the main or basic part**, secondly, t**he pensionable service period component**, which is calculated for employment until 31 December 1998 and thirdly, t**he insurance component** – the personally calculated additional payment. The amount of the insurance component depends on how much social tax has been paid on the salary

of the pensioner since 1 January 1999. If social tax is paid on the average salary, the annual factor is 1.0 (The old age pension, n.d.).

The retirement age was 63 for both, men and women, in 2016. Starting in 2017, it will increase gradually to 65 years by 2026 (see also Unt and Saar 2016).

The average gross replacement rate of pensions for pensioners not covered by second pillar is 33.7% in 2016 (Ministry of Finance 2016; Statistics Estonia 2017 – own calculations). Current the inequality is low, but the trend is increasing. In 2016, it was 0.107, which is 3.5 times less than income GINI of 18-64-y-o. The growth in inequality is attributed to the new retirees, as their pension depends more on their contributions (previously on tenure).

The second pillar:

The second pillar is **directly dependent upon a person's income**. Upon joining the second pillar, 2% of gross wages are transferred to a personal pension account each month. The state adds 4% to this out of the 33% social tax paid on person's wages. This is how the monthly 6% funded pension is formed.

The second pillar is **mandatory for all** persons born in 1983 and later. If you were born before 1983, you can no longer join the second pension pillar (it was possible until 2010).

The second pension pillar funds have four different investment strategies and banks and insurance companies manage these. 22% have joined the aggressive option: 75% invested into shares) 58% progressive funds, 11% in balanced funds and 9% in conservative funds in 2016 (Ministry of Finance 2016). The higher the share of investments into shares, the more an investment strategy is considered 'risky' and 'aggressive'. The higher the share of investments into state bonds, the more a strategy is considered 'conservative' or 'less risky'.

The average gross replacement rate of first and second pillar together is in 2016 33.8%. The importance of second pillar is marginal today as only 1.6% of retired persons have this contract. Average productivity of second pillar was 1.8% in 2016 and in 2015 2.55%. The average productivity from 2002-2016 was 3.8% and also in real terms positive (0.7%) (ibid.). In the future, the importance of second pillar will grow and the replacement rate of first pillar is expected to decrease (Ministry of Finance & Ministry of Social Affairs, 2016) due to the decreasing future cohorts.

The third pillar:

Voluntary pension funds[47] can take two forms: **pension insurance products** provided by life insurance companies or banks. In these case, a person does not directly decide into which funds or companies to invest, but can still choose the risk level – how much is invested into shares and how much into state bonds similarly to the second pillar. The second option is **voluntary pension funds** offered by banks**,** were investments can be made to different assets classified according to the risk rate. Within these plans, a person herself can more influence the decision were to invest. Both third pillar in-

[47] Voluntary pension funds were introduced in 1998

vestment options are "*very similar, both related to investments. Most important – how risky are the investments. All can join either one or several third level instruments at the same time, no restrictions*" (EXP02).

In contrast to the previous two, the third pillar is **voluntary**. One main and immediate benefit of it (which distinguishes it from other investments and insurance funds) is that **income tax (20%) is refunded** on contributions not exceeding 15% of the gross annual income or EUR 6000 in a year. Disbursements that are made **after the 55th birthday** are charged with lower income tax or tax-free as Lifelong pension disbursements if recipients are 55 years old and have saved at least 5 years.

Employers[48] can make contributions for their employees in the third pillar. Employees have tax incentives to participate. This limit is common to contributions made by both, the persons themselves as well as their employer.

Despite these advantages, participation in the voluntary pension funds remains low (EXP02). Among those investing into the third pillar, 60% of people opt for insurance funds, 40% opt for pension funds (EXS01). Currently, approximately 100,000 have joined third pillar – around 10% from labour force, with the median age of clients being 45[49] (EXS01). The perception of both academic experts and bank consultants is that the importance of third pillar is low. Official figures may suggest that the situation is slightly more positive than the opinions of experts: in the end of 2016, around 15% from labour force have joined the third pillar. Since 2002-2008, there was a very rapid increase of joining, in 2008 135 000 persons have been joined. However, during crisis people started to opt out. During the last three years, the number of participants has stabilised, with 105 034 persons in 2016 (Ministry of Finance 2016).

II. Demand-side

Experts were **doubtful if youth is aware of these future pension problems**. All agree that the participation in the third pillar depends heavily on the awareness and ability to save money.

So far, the opportunity for employers to make payments into the third pillar is rarely used. In Estonia, for instance, one big public sector institution uses this opportunity for their employees, but 80% of employees take it out right away (EXP02), instead of saving it for retirement.

In addition, also advisers from bank and insurance company were themselves critical about the need to join at any rate the third pillar. For youth, they suggest **investing into third pillar only if they have enough money and have decided to stay in Estonia**.

> *"It is always good to think about pension funds. However, those who have not decided where to settle, no point to start investing into third pillar. Young people*

[48] Legislation allows since 2012, employer has to fill in special form for Tax Office

[49] Expert quoted the Ministry of Finance Statistics; however, we could not find it to verify the numbers. For this reason, please not use the concrete numbers while referring to third pillar coverage in Estonia. Should be checked.

travel and study abroad – it is always good to know the options and also learn the tax issues abroad and compare the terms. If you have a plan for your life, if you plan to stay in Estonia, if you have a job – then it makes sense to start investing into third pillar" (EXP03).

Advisers treated third **pillar pension funds foremost as a way to optimize taxes, not as pension funds per se** and have some liquid assets, which can be used in case of need (EXP02, EXP03). People with low income do not have resources to save and cannot get back income tax. At the same time, people who have a lot of money are not satisfied with the productivity of third pillar. They may use it for optimizing the taxes, but not so much for investment schema. They use other finance instruments (EXS01).

II.I Attitudes of youth towards the necessity of long-term savings

In the following section, data from youth is used to reflect attitudes of young people. The interviews were conducted in the frames of EXCEPT project. On overall, in Estonia, 53 young people aged 18 to 30 were interviewed. The sample had two geographical parts, two bigger cities and counties in mainly rural areas. The interviewees were vulnerable youth at the labour market you had or have had over 6 months periods of unemployment or repeated periods of short term or informal jobs[50].. In addition, gender, age, level of education and legal status in Estonia were taken into account. in the following, we present the attitudes towards long term savings among vulnerable youth in Estonia as youth unemployment nor temporary jobs are not a mass phenomenon in Estonia.

Qualitative evidence from interviews with youth 18-29 who are either long-term unemployed or in insecure job positions supports the view that most of those have **not yet seriously considered saving for future.** While having some backup for unexpected expenses is almost universally considered as being necessary by young interviewees, having savings in long term is not an issue most of our interviewees think about. Only a small group, all **aged above 25 years, has thought about the issue and say that taking action to secure their later life is importan**t. What describes vulnerable youth is that either they have almost no official work experience (which affects their pension) or they are frugal people. For example, Mai who has not worked much officially and is already 28 considers her pension perspective and feels she should take some kind of action to improve the prospects.

"I think, taking in account that I haven't worked much, it is necessary [saving for retirement]. Because I am 28 now and I have got almost no tenure //mhmh// so sometimes, I have worked and for short time, so that does not give me pension. So living on the minimum pension in the future will be very difficult." (Mai, 29, F, LE, U (parental leave))

[50] 37 were unemployed, 2 inactive, but not studying, 10 employed temporary/unofficially and 4 employed after a long period of unemployment

Also Toivo, who is close to his thirties, says he is not yet seriously considering his retirement age as one should enjoy life when young. He guesses that he will start saving some time later when his income is bigger and more stable.

> *"So at the moment it is … a young person should enjoy being young. You cannot enjoy that later. When you are 60 then you cannot enjoy being 28 again. Not for a moment." (Toivo, 28, M, ME, NCJ)*

Georg sees his old age in very grim colours and sees no point in saving for that period of life for this reason.

> *"I don't care actually [about retirement]. When I am retired, then I am old and sick and then … It does not make a difference. My grand grandfather, who lost his eyesight and then also started to lose his hearing and then he thought that he is a burden to his family, having all these problems and then he drowned himself in the river. This is something like what I plan to do when I will be old. So well, what's that … Well, this is my pension plan, it is such." (Georg, 23, M, ME, U)*

Some interviewees, mostly men with either upper secondary or tertiary education, who have thought about saving for retirement, are sceptical about the Estonian pension system and think this is not the way to secure old age. Aleksandr, who works unofficially, expresses the doubt that the money people have paid in pension funds will not be paid to them later.

> *"Before 25 I didn't think about it at all. Live as you do. But now I understand that when you think about future you have to put some money aside yourself. Yourself, you either have to put money aside or buy something, invest. I do not count on the pension at all. It means, for me, I see, it has failed me. Maybe I am not right, maybe they will pay the pensions from the funds, but there is the risk. It means, the risk that what I put in there will be smaller in future, when I think about retirement." (Aleksandr, 27, M, ME, NCJ)*

There are also a couple of interviewees who think about the economic and political context in more general terms and see that there is a lot of instability which makes saving in long term very difficult. Ott worries about inflation, which makes just saving not reasonable and thinks that maybe investing would be a better option.

> *"Lately I have understood that the inflation will eat all your savings anyways. So saving money is like … complicated. Let's put it like that, taking into account the level of income here, well, in Estonia. When you save, let's say, you put aside 2000 Euros today, then in 10 years there isn't much left of that 2000 Euros ... nothing is left. I mean the value, well. So yes, I rather would like... some kind of investment, which would bring in money for me. So my money is moving, well. But you need very big starting capital for that." (Ott, 28, M, HE, U)*

Georg thinks that saving money is only reasonable for unexpected expenses or in very large sums. He sees the political instability in the world and thinks there is a big threat to medium range savings.

> *"The problem at the moment is that the interests are low. Firstly. And secondly the political situation is very unstable. It means that they might take my money from there. Do some kind of fair redistributing and stuff like that. In this respect … I am thinking now that there is no point in having medium range savings, because you have no possibility to hide it or something, well … What is the main thing, one problem, what may happen…? The situation is unstable. Russia, the immigrants, well also in America the thigs have gotten really peculiar." (Georg, 23, M, ME, U)*

II.II Actual savings behaviour

Next, expert opinions are used to reflect the actual saving behaviour of youth in general.

"Young persons do not think about pension. Those who join the third pillar are established at labour market and usually they have 20 years of tenure ahead". (EXS01). In addition, expert from bank and especially from insurance company found this behaviour 'normal' and even use this advice while consulting consultants and youth. It is clear that the recent economic crisis has affected especially the savings behaviour of younger cohorts as the average age of a person contributing to third pillar was 40.5 in 2007, but has increased to 48.9 by 2015. It is related to the fact that younger are more likely to opt out and the average age of those joining the third pillar has increased year by year (Ministry of Finance, 2016). People can use third pillar assets at any point of time, but they have to pay 20% of income tax on it. Thus, during the times of crisis, third pillar savings can be used to cover up the falling income from other sources. For older, its higher incentives not to spend the savings and wait until age 55 to be able to use the lower tax rate (either 10% or 0%).

The low interest in private pension funds is related to **traditions** (EXP03). ***"1 out of 100 come here to ask about third pillar.*** *It is* ***very r****are. Young people ask about* ***second pillar which is mandatory" (EXP02).*** People are not used to make additional payments into pension schemes, as these are relatively new opportunities.

Another main reason for so few opting for third pillar and especially youth: they **need to satisfy their other needs first**. As majority of population own its living place, the mortgage payments etc. mean that young people do not have much to save. In addition, they are afraid of inflation (EXP02).

Our interviews also provide some insight into the strategies used for long term financial planning by those who are vulnerable at the labour market. Some interviewees, who have not worked at all or mostly work unofficially, have also other arrangements. One interviewee, for example, has insured her apartment. She also plans to use other types of insurance to secure her against unexpected events in the future.

> *"[Saving is] very important, because you never know when the good times can come down with a crash. So insuring you, so insurance, maybe this is what, maybe not to think about the states support, but to secure yourself, create some funds or something like that." (Sigrid, 26, F, ME, U)*

One interviewee has had investments in the past and there are some more (all belonging to the older age group, with either upper secondary or tertiary education, without

children) who consider this as an option for the future, in addition to the obligatory pension fund.

> *R: "Although I try not to grow this sum too big, I rather try to find options to invest, when there are sums … When the sums are bigger, then I rather try to find options to invest, not just to raise money."*
>
> *I: "Mhmh. So you have already some investments?"*
>
> *R: "I have had. I don't have at the moment." (Anna, 29, F, HE, U)*

Several interviewees see their future financial security in entrepreneurship. Now however they do not have enough resources to start a business. All interviewees complaining about lack of funds to start a business are men. Kevin, who has had hard time after a prison sentence to find a job has been thinking about starting his own business in a country house which his father has bought him, but lacks the resources necessary.

> *"I have been thinking… about even starting my own business. I have so much room there by the lake; it would be possible to do all sorts of things there. To start everything up, you would need, like money and … Like, all this requires thinking it through enough and …" (Kevin, 24, M, LE, NCJ)*

II.II Financial literacy

Advisers were doubtful about the financial literacy of youth. *"No habit of saving. It starts from home; it needs to be educated into kids, also in schools. Too low financial literacy" (EXP02).* Another expert pointed out that youth who use counselling on where to invest (both for second and third pillar) have usually low financial literacy and frequently follow the advice of the consultants (EXP03).

However, at the same time, youth actively decide about their second pillar pension funds, which are mandatory. It is not known how many of young entrants have consulted the decision with banks and insurance companies. If a person has not chosen a mandatory second pillar (private) pension fund by 1 January of the year following the year they turn 18 or before starting work or an internship, the Estonian Central Register of Securities will draw a fund for them out of conservative funds. In 2016, 6.1% of all new entrants (all youth as older generations cannot anymore join) were drawn randomly a pension fund. Most of them did later request the change of pension fund (Ministry of Finance, 2016). Thus, it seems that, at least for the second pillar, **majority of youth** really pays attention or at least **actively decided into which fund they want to invest** for their future pension.

III. Supply-side

The pension provision market is very transparent and relatively simple. The main choice is to choose the provider (different banks and insurance companies) and the risk level of your assets. Still even inside the companies the principles of products are very similar, thus, the difference lies in management costs and productivity level. Lately, the state started to control more strictly also management costs, which together with market pressure has resulted in decreasing management costs of pension funds.

For instance, in order to subscribe to the funded pension of second pillar, a person needs to fill in a choice application, stating into which fund the contributions will be directed. The funded pension can be subscribed to via the internet, at bank offices and insurance companies. It's obviously needs financial literacy to make an informed choice, but as people themselves have no control where to invest in second pillar, they can only choose the 'risk level' or how much of their assets will be invested into shares. The consultants' suggest different products to their clients depending on their age. The aggressive fund (75% in shares) is advised for younger pension savers who have enough time left until their retirement (30-40 years) and whose rate of risk tolerance is high. For younger pension savers (15-30 years until retirement), also the Progressive Pension Fund is suitable, which invests up to 50% of the assets into equity funds. For those clients having left less than 15 years, the focus on the maintenance of the assets saved is recommended, and that is why a pension fund with a more conservative investment strategy will be suitable for them (at most 25% of the fund's assets into assets with an equity risk, and the latter avoids equity risks at all) (EXP02).It could be concluded that banks and insurance companies suggest youth to take higher risks while making their pension investments as this should still give the higher return in long run.

One important difference between the second and third pillar is that although both are directly linked to contributions, second pillar pensions cannot be used before the retirement age. Money invested into the third pillar can be used in case of need – it thus is not merely a pension but additionally can be used as savings for unexpected circumstances.

Third pillar pensions have very flexible withdrawal options. Everyone can make use of savings before retirement, although the valid rate of income tax will then be deducted from the payments. Even in case that employers make the savings, clients can draw money out also immediately. Starting from the age of 55, if contribution period to the third pillar for five or more years, the income tax rate is much more favourable when money is withdrawn. The same rate applies if a person is incapacitated and unable to work. Lifelong pay-outs (especially common in insurance instrument) are not subject to income tax (ibid).

Neither the second nor the third pillar is bound to a specific employer, which is very important aspect for flexibility (EXS01). Both pillars are related to the individual and thus, individual accounts are not negatively affected by changes of jobs or change of sectors etc. (EXP03). However, this applies only for job mobility *inside* Estonia.

III.I Access condition

For second pillar, the right and obligation to pay the contributions arises on 1 January of the year following the year **when a person becomes 18 years old and receives a salary**.

The access conditions to third pillar is that the client has to be 18 years old.

The insurance company invites everybody for individual counselling before making the contract for the third pillar. It will be a profound financial counselling – mapping the cur-

rent incomes, assets, duties and needs. The recommendations are based on person's profile. Although everybody over 18-y-o has access, it only pays off for those established in Estonia, have a job and receive gross salary (EXP03). Everybody can join several third level instruments at the same time, no restrictions.

It is very flexible; person can change their payments sum and timing or stop payments in internet bank without any extra costs (EXP02). Thus, *"the word to describe the contributions of supplementary funded third pillar is flexibility: One can determine yourself the amount of contributions; can increase or decrease the amount of savings according to your need; can temporarily suspend contributions; can take out part of the money before your retirement. The inputs can be rather small, concrete sum can be really small"(EXP02)*

The experts stress that formally, there are no requirements in terms of employment contract, though it's good if a person has a job (EXP02), even if fixed-term. The terms of contract of third pillar are flexible, but the investment makes sense only if the contract is not very small (some funds allow investments starting from 5 euros) as contract and transaction have several fees including management fee, fund unit exchange fee, disbursement fee, fees related to the underlying assets. Most of these are proportional, and have a minimum sum that is not beneficial for those having very small amount of money invested (EXP03).

Thus, **low-income people are indirectly discriminated** according to the critics of third pillar – it is **a regressive tax as income tax 20% returned and save can only those who have more money** (EXS01).

The quotes below demonstrate the effect of low income in terms of benefits from the third pillar.

> *"Very important restriction for low earners that they might not be able to make use of 20% income tax return if low level of income tax. State pays also income tax back in case of children informal education, lifelong learning, part of mortgage etc. This means that person may not have any more income tax 'left', which could be returned. We see in everyday life that this is very strong restriction for many people" (EXP02)*
>
> *"Clearly pointed out that the gain for low income people can be marginal and for those not having income from Estonia and cannot use tax refund option, there is a risk to lose money (if want to take out before 55, 20% of income tax has to be payed even if refund has NOT been used)" (EXP03).*
>
> *"You can make payments at any time and amount. Minimum payment is 30 euros per month. You have the possibility to withdraw money partially. Usually no point to invest so little sums as don't give an effect". (EXP03)*

Some interviewed youth, who have not worked at all or mostly work **unofficially**, have made also other arrangements and have a fund where they can put money in manually. For example, Peep, who has very little work experience, has this kind of arrangement. However, in this case, people are **not able to benefit from tax return.**

“Otherwise the state pays something in there when you work, then I have this, since I haven't worked, then sometimes I put some money in there //mm// for the pension so, I put it there so I can have some more money when I am retired.” (Peep, 25, M, LE, U)

III.II Effects of employment uncertainty

Unemployment:

Implications for the public pension will be severe. As since 2002 important part of first pillar is based on the insurance component, the inequality of pension entitlements is currently increasing fast. This will be especially so for the future cohorts as the part related to contributions in growing for each cohort. Currently, 58% (Ministry of Finance 2016; Sotsiaalkindlustusamet- authors’ calculations) from average public pension is attributed to the part, which is related to contributions (and tenure in case of older cohorts). Thus, unemployment strongly affects the future public pension. Furthermore, employees are eligible for the first pillar only if they accumulate at least 15 years of tenure.

As second pillar is only connected to the contributions to the social insurance, thus, the effects of employment uncertainty are even stronger as for the public pension. Unemployment risk always has adverse effects as it implies a not-covered period (EXS01).

The third pillar benefits are related **the income tax return only for those who have a gross salary**. Thus, those not working are penalised if they invest into third pillar as they don’t have the income tax. “Everybody is free to join, but it’s beneficial only for those who live and work in Estonia” (EXP03)

The reason is that if a person wants to use savings before age 55, then s/he has to pay still 20% of income tax to the state. Thus, **for unemployed, low earners and those working abroad it is more beneficial to keep money on your bank account or invest outside of the pension funds** as they don’t have tax benefits and in addition **they face a risk of paying 20% from their assets in case they want to use these before age 55.**

Fixed-term employment:

In case of fixed term contracts, no direct consequences for state pension should occur as long as there are no gaps between employment contracts. Job mobility within the country has no negative effect, but international labour migration may strongly affect pension outcomes, as a person needs to have 15 years of tenure in Estonia in order to be eligible for public pension. This is especially relevant in the situation where migration patterns have become more diverse with new, temporary and transitory patterns appearing next to the traditional ones. Estonia has one of highest rates of commuters in Europe (25.000 commuters which is 18.8 commuters per thousand inhabitants based on 2011 Census). Thus, 4,4% of Estonian employees work abroad, mostly in Finland (Krusell 2012).

The second and third pillar:

The second and third pillar assets are strictly individual and can be used even if collected within any (however short) period of time. Thus, no effect of fixed-term employment as long as no unemployment gaps between the temporary contracts. Still, in reality, people may especially reluctant to join the voluntary third pillar in case of insecurity of job. Therefore, second pillar is less dependent on subjective perceptions of job security as its mandatory for youth.

IV. Recent and actual Reforms

There are no recent reforms in structure of pension system. Only some changes in regulations are planned, for instance in 2015 concerning the management costs of private pension funds.

There is also an ongoing debate about the possible change the general formula of the first pillar. The proposed idea is to replace the insurance component of the first pillar with the years of working time. In this case, old-age pension would not depend on the size of contributions anymore. If applied, no change in average replacement rate, but radically reduces the inequality of future cohorts, i.e. more equal distribution of first pillar. The change will most likely be discussed at the Parliament in the end of 2017.

The third pillar depends very much of income tax. Next year the income tax free level will be raised maybe to 500 euro, then all those having such a salary do not receive back this income tax when they invest into third salary (EXP02). This would directly affect youth with lower salary levels as they have less income tax to claim back from state, which make youth even less likely to invest into third pillar.

V. Summary

The current Estonian pension system is strongly related to the contributions, which is different from the previous system. However, currently it is the transition period, thus, the inequality of pension benefits is rising especially for the future cohorts. Foremost, the insecurity of labour market situation will have stronger negative implications for pensions than earlier. The importance of life time earnings mean that all employment gaps due to studies, unemployment or working abroad will have negative effects on retirement incomes. However, the changes in careers between sectors do not affect the retirement incomes as none of the pillars is tight to the specific employers nor to specific sectors. The main importance is the level of income, and there is a limited redistribution even in first pillar at the moment. Furthermore, as the second and third pillar are fully dependent from financial markets, it makes individuals retirement assets highly dependent from the situation at stock markets when they enter retirement.

Taken together, the major implications for youth are critical: One major problem for youth is that while there is an EU wide-open labour market, the pension systems still are highly national specific. This strongly affects labour migrants, commuters, but also the digital nomads. This implies very high security risks for current youth who have several short periods abroad; they might face limited portability of pension schemes across borders. Furthermore, the state pension is related to 15 minimum contribution years, which becomes very problematic if a person has a long tenure, but in different countries. Especially, the low earning youth is cumulatively disadvantaged as they are

less able to invest into pension funds. In case they still do invest into third pillar, they penalised are twice: their income tax is usually too low and they don't get any or only limited tax benefits from third pillar. Furthermore, if they want to use the assets in third pillar before age 55, they still have to pay 20% of income.

3.3.3.7 Ukraine

Olga Nikolaieva and Hanna Vakhitova, Kyiv Economics Institute (KSE-KEI), Ukraine

The report is based on three interviews and short desk review. Interviewed experts included an economist working in an academic institution (EXS01), an economist working in a think tank, who is an expert in public policy (EXS02) and a highly ranked representative of a pension fund administrator (EXP03).

I. The general structure of country-specific pension scheme

The development of the current pension system in Ukraine was initiated in October 10, 2001 when the President of Ukraine addressed the Parliament and the government with a special message "*On the main directions of reforming the pension system of the population of Ukraine*". Prior to this, there were no special presidential messages on a separate topic. The President stressed the need for radical reform of the existing pension system that at that time could not prevent poverty among the elderly, given the undergoing economic and social transformations and thus, dissatisfied the overwhelming majority of citizens, both pension recipients and pension fund contributors. The key points of the 2001 Presidential message were in accordance with the conclusions of the World Bank Report "*How to Avoid the Senior-age Crisis: A Policy for the Protection of Senior Citizens and Promoting Economic Growth*", published in 1994.

Despite the emphasized urgency, only at the end of 2003, the necessary legislation was adopted and the three pillar pension system was launched. The pay-as-you-go system formed the first pillar to be complemented by mandatory individualized second pillar and voluntary personal pension savings accounts (third pillar).

In reality, even now, only the first and the third pillars are functioning while the actual operation of the second pillar has always been postponed until “better times”. Moreover, the third pillar has stayed tiny and underdeveloped due to years of dubious macroeconomic policies and poor property rights protection (EXS01, EXS02). Being hit hard by the economic crises of 2008-2009 and 2014-2015, third pillar’s total assets stood at about 0.1% of GDP as of the end-2016[51] (~USD 77 million), it has low coverage and does not play any important role in pension provision at the country level. Only ~3% of the adult population (838 thousand persons) participates in private pension funds (SCRFSMU 2017b).

Thus, pension system in Ukraine mainly remains a pay-as-you-go scheme. It is based on a compulsory state pension insurance scheme and is operated by the State Pension Fund of Ukraine (PFU).

In addition, some professions (public employees, MPs, prosecutors, judges, military, journalists, scientists) are subject to so-called "special" (higher) pensions covered directly from the State Budget and some occupations (such as military, miners, hazardous chemical production, etc.) allow for early retirement. As a result, the effective retirement age in Ukraine was 58.5 years for men and 55.9 for women (IMF 2017). The extended benefits and low retirement age together with the negative demographic

[51] UAH 2.1 billion (~USD 79 million)

structure of the Ukrainian population[52] and highly spread informal practices in the labour market[53] generate a strong pressure on the Pension Fund. PFU expenditures reached about 16% of GDP in 2014 and only after harsh cuts were reduced to 11% of GDP in 2016. Still, at the moment the Pension Fund is unsustainable and runs a high deficit which in 2016 constituted 3.6% of GDP (overall transfers from the State Budget to PFU amounted to 5.5% of GDP [PFU 2017]).

Despite a relatively high share of pension expenditures to GDP, pensions in Ukraine are very low. Average monthly pension was USD 67 as of January 1, 2017 and it was just 26% of the average salary. Inflation quickly eats up the real value of the retirement payments because pensions are not indexed on a regular base (EXS01, EXS02, EXP03). Currently, 8 of 12 million of Ukrainian pensioners receive minimal pension (UAH 1312, roughly equivalent to USD 50 [PFU 2017]).

Overall, the current situation with the pension provision is associated with high poverty risk. Experts say that "*we do not have such people who could feel safe [about pensions]. Even people who occupy certain positions when they lose these posts for political reasons or due to some life circumstances, it may turn out that they have absolutely nothing , they lose everything. Probably in Ukraine there are no such people who could carelessly wait for their pension*." (EXS01). "*Those who will have the right for pay-as-you-go pension and accumulated in a non-state pension fund [can feel safe]. In Ukraine they are few...* " (EXS02)

II. Demand-side

Ukrainians in general lack a savings culture and are not very financially literate. 27% of Ukrainians have no savings at all (Bond et al. 2010). Poor property rights protection and macroeconomic instability prevent people from saving. People are not used to financial products and are afraid to lose their money (EXS01, EXS02, EXP03). In addition, high poverty rate means that many families simply cannot save from their low incomes (EXS01, EXS02). "*The country is too poor to have a powerful accumulation programs ... Theoretically, everybody understands that it is good to join the contributory schemes early, but in practice nothing is done and there are no preconditions for that.*" (EXS01)

The participation of youth in pension schemes is traditionally lower. While Ukraine also follows the worldwide trend in growing higher education enrolment rate, the share of youth at colleges and universities in Ukraine is among the highest in Europe (82% in 2014 [World bank 2017b]). Thus, many young people now postpone entering the labour market or are less keen in seeking formal employment (EXS01, EXS02). Although people with non-typical employment have possibilities to take part in the first-pillar of the pension system, few people know about this and most do not see economic sense in participation (EXS01).

[52] The number of Pension Fund contributors is less than the number of its beneficiaries (10.5 mln vs. 12 mln).

[53] Many employers report only minimum wage and pay minimal SSC; ~6 mln of local workers do not pay SSC as well as ~1.5 mln Ukrainian labour migrants.

Deferred labour market entrance could have been compensated with higher salaries later on. Yet, many current students will not see high returns to this investment in human capital, both due to the low quality of education and education-labour mismatch. In addition, youth is not eager to start a career while studying, and without work experience, it is hard to expect a job with a good social package after the graduation (EXS02).

Besides, youth has low general motivation to participate in pension schemes. One can often hear in Ukraine that pay-as-you-go scheme is not sustainable and youth may not expect considerable payments from the Pension Fund in the future (EXS01, EXS02, EXP03). Given current trends of increased retirement age and an increased minimal qualifying period of employment, young people know they will retire later and will have to work more to earn state pension. The share of private funds' investors under 25 years is also disproportionally low (0.41% of youth or 1.8% among all investors [SCRFSMU 2017b]).

III. Supply-side

III.I Access condition

Public Pension:

The involvement in the public pension scheme is mandatory, relatively easy and in many cases almost automatic for all officially employed, both salaried and self-employed persons. Typically, employers are responsible for paying a single social contribution (SSC) on behalf of their employees. Contributions are proportional to the reported wages which often implies that self-employed as well as workers at mini and midi (and sometimes large) firms pay only minimal contributions either because they chose so (as self-employed, for example) or due to reporting only minimal wages while other compensation comes "in the envelope" (where it is voluntary or not).

There is no variety in terms of offered pension plans.

Private Pension:

The current law allows for a significant flexibility of the private pension agreement. Contributors decide about the size, frequency, and period of contributions. "*There are no age limitations [to participate in open private pension fund]. It can be a person of any age, 90 years old or 1 day from birth. We have cases when parents contribute to pension programs of newly born children […]. Alternatively, there are cases when children contribute to additional pension of their parents. They make one-time contribution and the fund starts pension payments immediately*." (EXP03) There are corporate and open private funds and individuals can transfer between funds if he/she changes the employer.

However, the state regulation of the financial markets, including private pension funds is not working properly. Therefore, pretty much all the responsibility is shifted to the investor (EXP03).

Among other reasons that prevent saving for retirement are few possibilities to invest. The stock market is still very small compared to the pre-crisis level. Actually, experts

describe it as “dead” (EXS02). As a result, the main assets of private pension funds are deposits (41%) and government bonds (41%) (SCRFSMU, 2017).

Neither the private sector nor the government pay much attention to the development of the sector of private pensions. There is a lack of state policy on stimulating young people to take part in private pension schemes (EXS01, EXS02). Private pension funds on their side have no special offers for youth either. At the same time, the private sector is lobbying the government to introduce compulsory contributory pension pillar instead of attracting young and active people with savings (EXS02).

To address the main challenges with the private pension provision the country needs reforms aimed at improving the business climate, rule of law, property rights protection, court system etc. If the contributory schemes remain undeveloped, youth has quite limited chances to provide for themselves in old age (EXS01, EXS02, EXP03).

III.II Effects of employment uncertainty

Public pension:

Unemployment has a considerable impact on public pension provisions. On the one hand, periods, when a person is officially registered unemployed and receives unemployment benefits, are counted toward required qualifing period. On the other hand, unemployment benefits are not subject to contributions, so only minimal payment is assumed during this period. What is more, payments are usually paid not more than for 360 days in two years. The period when a person is unemployed, but does not receive benefits, is not included in employment qualifying period even if this unemployed individual was officially registered. Therefore, long-term unemployed are exposed to higher risks according to this system.

Moreover, young people have a stigma towards public services, including services of state employment office, so few of them apply for services and register as unemployed. Especially given that youth is subject to the smallest size of unemployment benefits. For instance, youth, which has just finished education, is eligible for minimal unemployment benefits (UAH 544 in 2017 or EUR 17 per month (SSIFUUC 2017)) for 180 days.

The state also provides social security protection for 1.5 million persons that are temporarily out of work. The state pays minimal SSC for these categories and the period during which contributions are paid is included into the employment qualifying period. In particular, the state pays SSC for

- Individuals drafted to the military.
- Individuals on maternity/paternity leave who receive child assistance from state
- According to recent changes, students on intramural are also subject to social insurance.

In Ukraine, the **fixed-term employment** does not necessarily imply worse employment conditions. There are spheres where fixed-term contracts are more widespread. For instance, teachers at the universities or employees in NGOs, who work on a project basis, have fixed-term contracts (EXS01). However, if a person has breaks between

contracts this can have a negative impact on pension provision. Only those months for which minimal size of contribution was paid are included to employment qualifying period. This is a restrictive condition with only few exceptions. Thus, if a person paid high contributions one month but have no contributions another month, only one month is counted towards required employment period, even if this person overall had higher contributions compared to a person who paid a minimal amount for two months. This is particularly problematic for seasonal workers, who may have high but not stable wages. Due to the irregular periods of employment, this category may face difficulties accumulating needed employment qualification period

Experts (EXS01, EXS02, EXP03) admit several categories of the population whose labour market positions put them at higher risks of poverty at older age irrespective of their earnings.

- **Informally employed**. In Ukraine, this is a widespread practice. In many cases, even for officially registered employees, contributions are paid based on a minimum wage, and the rest of the income comes "in the envelope". Such people face the risk of very low pensions. Experts believe that informal employment is a risk factor specifically relevant for youth. "They tolerate informal employment more, perceive it as usual practice. As a result, the period of informal employment may be prolonged" (EXS02).
- **Private entrepreneurs** and "pretend" private entrepreneurs[54]. Self-employed usually pay only minimal pension contributions (irrespective of their profits), which is allowed by the legislation.
- **Labour migrants.** People who work abroad, often employed informally. They risk receiving no pension, neither in Ukraine nor in the other country.

As for the higher risk of poverty at older age, experts also admit the following categories, for whom the effect of employment uncertainty on future pension is manifested mostly through low wages:

- Population in *rural areas* (due to low wages and lack of employment opportunities).
- *Women*. According to an expert, the gender wage gap is high (around 30%) and does not diminish (EXS01). Lower wage transforms into a lower pension later on.
- People with a disability or those forced to retire earlier for *health reason*s. Individuals with health disabilities have fewer opportunities for employment, very few of them work, and those who do usually receive minimal wages. Disability pension is low too.
- *Immigrants*. Though immigration is not so widespread, immigrants often work informally.

[54] Regular employees who registered officially as self-employed, signed contracts for provision of services with their former employers, with the purpose of avoidance of high social contributions by both the employer and employees.

Private pension

Private pension agreements are flexible in terms of the size of contributions and the frequency they are paid, so they can be adjusted according to changes in the income. That is why the consequence of unemployment may result into a pause in contributions.

Private occupational pensions are even less popular than open private pension funds, but after leaving the employer, contributions should be transferred from occupational fund to any open private pension fund of a participant's choice (EXP03).

IV. Recent and Actual Reforms

Recently adopted pension reform, first of all, aims at eliminating the public pension fund deficit.

The overall low levels of trust to the government (Zlenko 2017) and volatile political and economic situation have led to the situation when both, employees and employers, are interested in salaries "in the envelopes". Employers pay lower taxes, employees receive a bit higher salaries. Yet, the pension fund does not receive sufficient contribution due to this evasion of the payment of social contributions.

Thus, the changes that have taken place in recent years among other things include a gradual increase in retirement age for women from 55 to 60 (VRU 2011) and a curtailment of the list of professional pensions, which allows earlier retirement.

Among the most recent changes, the pariament adoted a further graduate increase of minimum required employment-qualifying period (35 years in 2028) which basically hides extension of the retirement age (to 65 years in 2028).

Current pension reform aims to impose tighter connection of the employment-qualifying period and the right to old age pension. The employment qualifying period will be increased from 15 to 25 in 2018 and to 35 in 2028. This period is hard to achieve given the current retirement age (60 years for both men and women). Therefore, it is expected that people, who want to receive a pension based on the pay-as-you go scheme, will be more motivated to search for formal employment (EXS01, EXS02).

Current pensions were revised. According to proposed amendments, all pensions will be recalculated based on the average wage over the three years (2014-2016). Last time it was done based on 2007 average wage. The government also offers to improve further indexation of pensions from at least 20% to at least 50% of the average wage growth and at least 50% of the inflation rate.

There were many discussions about the introduction of the compulsory contributory level. Private pension funds and insurance companies were lobbying for it. Eventually, it was agreed that the second pillar based on compulsory contributions will start in 2019, However, experts see obstacles to that – government guarantees are missing, there are little possibilities to invest, poor property rights protection, poor control over private pension funds activities (currently the regulator undergoes reform) (EXS01, EXS02).

For youth this reform means that the transformed first pillar (public pension) may still be in operation when they retire but a much longer official employment period will be required to qualify for the public pension. The implemention of the second pillar still faces

substential obstacles. However, youth seems to stay aside of the pension public discussion and it is not clear whether and how the reform will affect the expectations and the actual behaviour of youth.

V. Summary

The pension system in Ukraine continues stagnating while economic, social and demographic situation is worsening. The lack of a savings culture, widespread informal labour market practices and poverty combined with the limited investment opportunities put future pension entitlements of Ukrainian youth under risk.

All pillars of the pension system requite substantial transformation to turn the tide, and especially for youth. "*There is a need in pension reform but it has to be combined with strong information campaign targeted first of all at young people to explain and convince them to make contributions.*" (EXS01) "*The development of the voluntary contributory pension provision is very important for young people. Since we cannot expect large payments from pay-as-you-go pension scheme, young people should be setting expectations on the private pension funds. In order to develop them, government policy is needed to carry out reforms to improve the investment climate, the rule of law, the judicial system, law enforcement agencies, etc."* (EXS02)

3.3.4 Summary

Sina Schadow and Janika Kletzing, Institute for Social Work and Social Policy, University of Duisburg-Essen, Germany

In the following section, we summarise the main findings from the country-case studies to provide a synthetic overview of the basic structural characteristics of the three pension pillars in all European countries as well as their treatment of employment flexibilisation (e.g. atypical or fixed-term contracts, employment interruptions. In doing so, we focus separately on each pillar, the *public* pension, the *occupational* pension and also the *private* pension.

Taken together, the country case studies show a number of **common trend across countries**.

In all countries in the sample, the gross pension replacement rate of **public pensions** is falling or stagnant at low levels, given that pay-as-you-schemes increasingly face financial shortages due to demographic ageing (OECD 2013). Today's youth will be most affected from this drop in the future. The drop of the *gross pension replacement* rate has been or will be most severe in countries, which initially had a high replacement rate, like Sweden, Poland or Italy. At the same time, in all countries, the *retirement age* for public pensions has increased until now, and is expected to increase even further for future cohorts. For young people, these two trends imply that they will need to work longer to receive relatively lower pensions than current cohorts. Depending on the magnitude of the increase in retirement age, it could also imply fewer healthy years in retirement, particularly in countries where life expectancy is lower, such as in many Eastern European countries (see Mackenbach et. al. 2014). Only Poland recently lowered its retirement age, but did so more for instant political rather than substantive reasons (see Stasiowski, in this report).

Moreover, in some countries , the necessary minimum *qualifying period* for the full public pension will be harder to achieve for today's youth as they stay longer in the educational system; yet, at the same time, they more often suffer from interruptions in their employment biographies due to rising employment flexibilisation and labour market uncertainty. This problem will be most pronounced in Germany, where the qualifying period is 45 years of contributions (see Schadow, in this report). In principle, it could be argued, that through the described increase in the retirement age, youth also have a larger time window to fulfil the qualifying period. Yet, as different country experts claim , these additional years could be easily "eaten up" through employment interruptions and broken careers, given that periods of unemployment are often only insufficiently considered in pension calculations. Especially youth in countries with high youth unemployment and a rather problematic or unstable labour market situation (Italy, Poland, Ukraine and – to a lesser extent - Estonia) will face this problem. Furthermore, our experts also highlight that cross-country *job mobility* has increased significantly for youth compared to previous generations, which may also negatively affected public pension entitlements, as these are often not (fully) portable (see Holzmann & Koettl 2015). Again, such problems may occur particularly for youths from Southern and Eastern European countries (Italy, Poland, Estonia, and Ukraine) which more frequently migrate

to other countries to find work. Consequently, even successful and mobile youth may face the risk, to not fulfil the qualifying period for public pension and/or to accumulate just small entitlements from different pension systems.

An additional difficulty for young people regarding the public pension could be, that *new types of jobs* – like for example crowd-working or zero-hour-contracts – are often not sufficiently insured in many of the European public pension systems.

Currently, **occupational pensions** are more common in established welfare states (Sweden, United Kingdom, Germany and Italy), while in new emerging welfare states the second pillar hasn´t been implemented yet (Poland, Estonia[55], Ukraine). For those existing, the described problem of portability also applies to occupational pension arrangements, as investments into such plans are not easily transferable between employers or sectors, and if so, only with high transaction cost. Furthermore, occupational pension plans often include long qualifying periods which youth may find hard to fulfil, given their more frequent employment interruptions, particularly in their early careers. Particualarly in times of unemployment, contribution occupational pension plan will stop.

Another potential problem to fulfil qualifying criteria and draw adequate benefits may arise from young people's higher job mobility. Young people with frequent job changes could have made contributions to three or four occupational pension plans, and still end up with just low revenues from each of them when approaching the end of their carreers. Job mobility – either on an international or even national level – thus can have strong negative effects on savings in second pillar pension plans. The third pillar, i.e. **private pension** schemes, has been implemented in all countries within our sample. Yet, the coverage rate of private pension scheme is low in most of them and also seems to have stagnated at a low to moderate level. Investments in private pensions often have been supported through monetary incentives, such as tax deductions. Yet, these benefits frequently has only been attractive for high earners due to their generally higher tax load. Employees with low wages often do not benefit from these incentives, as their tax load is lower.

As our expert interviews highlight, the **financial crisis** in 2008 hit both the second and the third pillar hard as since then, interest rates in both types of systems have been extremely low and "good" schemes (i.e. those where high revenues are guaranteed, like in defined benefit schemes[56]) have been closed for new members (Germany, UK, Italy). For young people currently entering into a contract, the financial crisis has reduced the effectiveness of the second and third pillar dramatically, as current interest rates can´t compensate the falling income of the public pensions (see also Fachinger & Künemund 2014). In some countries, the financial crisis and the following political decisions even has led to the entire collapse of the second pillar (Poland) or the evolution

[55] Poland and Estonia's pension systems consist of three pillars, but the second pillar isn´t an occupational pension arrangement in the sense, as it is not offered by employers. Thus occupational pensions plans are avaible in Poland within the third pillar (see Stasiowski & Unt and Reiska, in this report).

[56] In Defined Benefits schemes revenues from investments are guaranteed. If the interest rate are to low to draw the needed profit, employers or insurance companies has to finance the guaranteed revenue from their own capital. In comparison Defined Contribution schemes only guarantee to pay back paid contributions.

of a “dead” stock market within the third pillar (Ukraine). Since the financial crisis, only very few attractive and long-term sustainable private or occupational pension plans are available that allow filling the emerging public pension.

Beyond these common trends, country case studies also reveal a number of **specific findings for each country**.

- In comparison to the other countries, *Germany* stands out with an extremely high complexity of its pension insurance market and the lack of transparency in both the private and occupational pension pillars. This complexity makes it hard or even impossible for youth to make a rational decision about their future pension plans. Besides that, unlike in other countries, the occupational pension in Germany has not developed into a quasi-universal second pillar scheme available to all individuals, but is frequently used as a personell policy instrument to bind attractive high –qualified employees; an antagonistic logic as compared to widespread employment flexibilisation among those with lower humn capital. At the moment, it seems unlikely that employers will offer such young employees an occupational pension plan. In consequence, the occupational pension pillar in Germany currently rather exacerbates social inequalities in contributions and future pension benefits rather than developing into a universal component of old age security for today’s youth.
- Given its liberal welfare state design, public pension replacement rates in the *United Kingdom* have long been low, resulting in an increased risk of old-age poverty. To tackle the problem of low pensions for future generations, the UK implanted auto-enrolment rule for occupational pensions. Second pillar pensionas are now available for all individuals in dependent employment, who are automatically enrolled in an occupational pension plan[57]. Particularly with this recent reform, the UK improved its system in terms of providing old-age-security, as more young people prospectively will be covered by occupational pensions. However, a sizeable number of youth will not be covered by this reform, as they work in self-employment or in zero-hour contracts, which both are still largely excluded from occupational pensions.[58].
- *Sweden* represents a unique pension system, with a flexible retirement age, which allows Swedish citizens to retire within a window of 63 to 67 years.. However, recent reform of the pension system, particularly that in 1994, have brought substantial deteriorations for youth, in comparison to previous generations. Sweden shifted the calculation of retirement income (which was initially based on the earnings of the last 20 years) to a calculation based on life-time-earnings which will reduce pension entitlements, for Sedish youth.
- The most profound reform in pension system has been undertaken in *Italy*, where the public pension system shifted from a retributive to a contributive calculation of pension entitlements from the state. Pension entitlements were pre-

[57] In principle, they can also “opt-out” (i.e. choose to leave the occupational pension plan) within 30 days.

[58] For example, those working in zero-hour contracts will only be enrolled, when their income is over the threshold, while fixed-term employment only be enrolled when their working contract is over 3 month

viously calculated on the earnings of the last 10 years and a sufficient amount of years of contribution. Following most ercent reforms, future pension benefits are now calculated based on life-time earnings and the overall years of contribution. In consequence, today's youth in Italy must shoulder a double burden: while they have to finance the pension of previous generations, with their own contributions, they also will have to build up their own future pensionsYet, shouldering this double burden is increasingly difficult for youth in Italy, given their high unemployment risks and problematic labour market situation. These difficulties can only partially be compensated by a cross-generational saving culture ("housing culture"[59]) where parents and grandparents start to save for their children to compensate the low income from the state pension.

- *Poland* went through many inconsistent political reforms of their pension system within recent years, and new reforms are already planned. Thus the new reforms plan a auto-enrolement rule for occupational pensions, like in the UK, which should improve the longterm enconomic situation for polish youth, given these constant changes and the realted uncertainties, youth in Poland was not able to make rational long-term saving plans, as additionaly, the first and third pillar are rather unpopular among polish youth. Furthermore, after the fininacial crisis the Polish state was had took over 50% of the open pension's funds in 2013. As for now, the government added the entitlements from individuals from the second pillar to the first pillar entitlements and had changed the second pillar from an compulsory to an voulantary insurance. Yet, both developements has lead to the marginalization of the second pillar and limited active fonds, which are now no longer reasonable. The third pillar is well-established; yet, young polish people don't´ invest in it, as they are not aware of the need to make additional savings for retirement. Also, the current high gross pension replacement rate could be a misleading signal for them, as they do not know, that the gross pension replacement rate could halved for young Polish.
- Despite its relatively well-established three pillar system, *Estonian youths* show only a low awareness of the need to make additional savings for old age. Only very few people participate in the third pillar. Instead, there is a high inclination to take up loans and leasing contracts, which is the counter logic of saving. Additionally, Estonia displays a low level of income, which naturally effectively limits the potential of savings. Yet in comparison to other Eastern European countries, political conditions have remained largely stable.
- *Ukraine,* in contrast, exhibits an extremely unstable system, as the state pension fund runs a high deficit. Thus, pensions in Ukraine are extremely low. Furthermore, Ukraine faces a problem of trust into the government, as the widespread use of informal employment has resulted in lowered expectations about revenues from the public pension system. Both employers and employees are often more interested in inofficial salaries "in envelopes", which prevent them to participate in the compulsorily insurance of the state pension. Given the current-

[59] (Grand)Parents in Italy invest mainly in property, typical in buying one more houses, which will be transmitted to their children.

ly unstable economic and political situation in Ukraine, there nowadays is no population who can feel safe about their pensions (see Nikolaieva & Vakhitova, in this report).

To shortly summarize the **key points** of the presented main findings and there meaning for youths in Europe:

- Among those countries considered, none of recent pension and welfare reforms has effectively improved the situation for youth; often it even deteriorated it, for example in Italy where youth have to shoulder a double burden of pension contributions under a bad labour market situation, or in Sweden where the national government increasingly shifted the risk of labour market uncertainty's on individuals.

- Despite a number of reforms, none of the three pillars effectively has adapted to employment flexibility. Mostly, they are still proportionally linked to regular employment and continuous contribution and punish interruption. This is particularly problematic, given that the careers of Europe's youth are increasingly characterized by interruptions, job changes and unemployment.

- The current structure of the three pillars system results in patterns of cumulative disadvantage for youth, due to labour market uncertainty and the widespread employment flexibilisation, which will have long-term socio-economic consequences.

4. Synthesis and Policy Conclusions

Dirk Hofäcker, Sina Schadow and Janika Kletzing, Institute for Social Work and Social Policy, University of Duisburg-Essen, Germany

The previous presented findings suggest a problematic situation for today's youth concerning their future pension prospects, as all three pension pillars haven´t adapted to employment flexibilisation and increasing labour market mobility until now. Previous results, however, were based on the extrapolation of existing standards and trends in contemporary pension systems, i.e. assuming that they will remain stable throughout future decades. Naturally, there is also the opportunity for changes in pension systems that could improve the socio-economic situation for youth. Some good practice examples already have emerged from the country-case-studies, which are able to improve old-age security for young people, which will be presented in the following. In this context, we also discuss the PEPP pension product which was recently introduced by the EU. Finally, we discuss further proposals for enlargening the coverage rate of pensions, as well as possible solutions for the problems of portability and restricted access conditions for the atypically employed.

The *Swedish unique public pension system* and *the auto-enrolment-rule for occupational pension in the United Kingdom* could serve as **good practices example** which provided a starting point for a sustainable old-age pension for youth. Both systems have taken into account that second and third pillar savings have to start as early as possible to prevent old-age poverty. Therefore, they do not rely on the voluntary participation of individuals in such plans, but make additional savings obligatory. Sweden does this by an **internal diversification of public pension contribution**, where people invest 2.5% of their taxable income in up to five compulsory pension funds, out of 700 offered funds. Thus, employees in Sweden have mandatory individual investment accounts, which improve their income from the public pension. The United Kingdom chose a different way by implementing the **opt-out-model for occupational pensions**[60]. One main advantage of occupational pension is that employers will make additional contributions to the contributions of employees, which will increase the amount of savings and spreads the responsibility on different actors. Young people are then "released" from the sole burden to make long-term binding decisions for old-age, which are particularly hard to take under the current labour market uncertaintys. By making additional occupational savings obligatory, more young British people will be ensured and could also benefit more from the compound interest, as they start saving with employment. These compulsory solutions could solve the present problem of insiufficient old-age savings of young people. However, it needs to be noted that the unemployed will not benefit from such schemes, so that especially long-time-unemployed require an alternative to ensure their old-age security.

In most countries, public pensions are still the main source of retirement income. A basic problem in a number of countries remains the not universal coverage rate of the three pension pillars, even within the public pension (which often deos not sufficiently

[60] Within the new reforms plannend in Poland, also an autoenrollment rule for occupational pensions is forseen (see Stasiowski in this report).

integrate those in s slef-emploxyment, informal employment or unempüloyment. Thus, a **universal coverage of public pensions** should be reinforced, by including more groups into the compulsory insurance, like self-employed or new types of jobs, such as zero-hour-contracts or crowd-working.

As the countries-studies have also shown, access for youth in Europe tos econdary and third pillar pension schemes are limited due employment flexibilization. Young people frequently tend to work in atypical employment, fixed-term contracts or (false) self-employment. Even when applying an an auto-enrolment rule for regular employment, these youths often won´t gain access to (or get offered) occupational pensions. To improve the situation for old-age savings for youth the **access conditions**, linked to atypical and self-employment **should be flexibilised in public, occupational and private pension** arrangements, as young people will need savings from all three pillars to sustainably ensure their standard of living. Especially for public pension, there shouldn't be any exception in compulsory insurance. Additionally, the possible reduction of contributions into the first pillar should be used restrictively. Some country examples show, that, for example, self-employed frequently use the opportunity to lower their contributions which will also reduce their future pension entitlements and set them on an higher risk of old-age-poverty.

As outlined in section 3, one additional problem for youth is the portability of the different pension pillars in cases of high job mobility, both on a national and an international level. An option to transfer entitlements from one national public pension system to another would be helpful for mobile youth. Up to now, there still has been a substantial variation in national pension systems, which made the international transferability of pensions difficult. Partly in response to this, the EU has recently supposed the **PEPP**[61] (Pan-European Personal Pension Product), intended as a move forward to solve the problem of portability. The PEPP product represents an EU-wide pension plan and is therefore portable. In addition, eligibility to the PEPP programme does not change with employment status. This "open access" circumvents the problem of various existing private pension plans. Nevertheless, it´s possible that foremost "successful youth" may benefit from this new type of product, i.e. youth that are mobile and have sufficient earnings to invest into such schemes.

As presented earlier, structure of pension systems and the associated problems differ between countries respectively welfare systems. Thus, when thinking of country-specific policy solutions, respective contextual conditions must be considered. The afore mentioned policy recommendations to improve and expand the three-pillar system will foremost work in established welfare states with a stable labour market situation and a low youth unemployment rate. In some countries, other problems obviously will need to have priority. For example, in the Ukraine, widespread informal employment must be tackled first to make the public pension financially sustainable, and low trust in government regulations and institutions will need to be improved. Furthermore, in Germany, occupational pension have a long tradition as a personnel policy instru-

[61] For information see: https://ec.europa.eu/commission/news/new-pan-european-personal-pension-products-2017-jun-29_en

ment; hence employers expectedly low initial interest on giving up this tool to set up an auto-enrolment rule will need to be tackled.

References

Aassve, A., Cottini, E., Vitali, A. (2013). Youth Prospects in a Time of Economic Recession. *Demographic Research*, 29, pp. 949 -962.

Aassve, A., Davia, M.A., Lacovou, M. et al. (2007). Does Leaving Home Make You Poor? Evidence from 13 European Countries. *European Journal of Population*, 23(3-4), pp. 315 -338.

Aassve, A.; Lacovou, M. and Mencarini, L. (2006). Youth Poverty and Transition to Adulthood in Europe. *Demographic Research*, 15 (2), pp. 21-49.

Alkire, S., Roche, J.M., Vaz, A. (2017). Changes Over Time in Multidimensional Poverty: Methodology and Results for 34 Countries. *World Development*, 94, pp. 232-249.

Alkire, S., Roche, J.M., Seth, S. et al. (2015). Identifying the Poorest People and Groups: Strategies Using the Global Multidimensional Poverty Index. *Journal of International Development*, 27, pp. 362 – 387.

Alkire, S., Santos, M.E. (2014). Measuring Acute Poverty in the Developing World: Robustness and Scope of the Multidimensional Poverty Index. *World Development*. 59, pp. 251-274.

Anand, P., Lea, S. (2011). The Psychology and Behavioural Economics of Poverty. *Journal of Economic Psychology*, 32(2), pp. 284-293.

Arunachalam, R., Shenoy, A. (2017). Poverty traps, Convergence, and the Dynamics of Household Income. *Journal of Development Economics,* 126, pp. 215-230.

Ayllon, S., Gabos, A. (2017). The Interrelationships between the Europe 2020 Poverty and Social Exclusion Indicators. *Social Indicators Research*, 130(3), pp. 1025 -1049.

Ayllon, S. (2015). Youth Poverty, Employment, and Leaving the Parental Home in Europe. *Review of Income and Wealth*, 61(4), pp. 651 -676.

Ayllon, S. (2009). Poverty and Living Arrangements among Youth in Spain, 1980-2005. *Demographic Research*, 20, pp. 403 -434.

Bechert, I. and Quandt, M. (2010). ISSP Data Report Attitudes towards the Role of Government, 6, Bonn: GESIS – Leibniz Institute for the Social Sciences.

Bernheim, B.D., Ray, D., Yeltekin, S. (2015). Poverty and Self-Control. *Econometrica*, 83(5), pp. 1877-1911.

Biewen, M. (2009). Measuring State Dependence in Individual Poverty Histories when there is Feedback to Employment Status and Household Composition. *Journal of Applied Econometrics,* 24(7), pp. 1095 -1116.

Blossfeld, HP., Klijzing, E., Mills, M. et al. (eds.) (2005). Globalization, Uncertainty and Youth in Society , London: Routledge.

Bonoli, G. (2014). Employer's Attitudes towards Long-term Unemployed People and the Role of Activation in Switzerland. *International Journal of Social Welfare*, 23(4), pp. 421-430.

Börsch-Supan, A.; Coppola, M.; Essig, L. et al. (2009). The German SAVE Study: Design and Results, MEA Study n°6.

Börsch-Supan, A., Brandt, M., Hunkler, C. et al. (2013). Data Resource Profile: The Survey of Health, Ageing and Retirement in Europe (SHARE). *International Journal of Epidemiology*, 42, pp. 992–1001.

Bridgen, P., Meyer, T. (2017). Divided citizenship: how retirement in the host country affects the financial status of intra-European Union migrants. *Ageing and Society*, pp. 1-23.

Bond, R., Kutsenko, A. and Lozitskaya, N. (2010). Financial Literacy and Awareness in Ukraine: Facts and Findings, 2nd ed., (Kyiv: USAID Financial Sector Development Project). Available at: http://pfin.com.ua/wp-content/uploads/2012/07/finlit_survey_6dec2010_en.pdf (accessed August 4, 2017).

Carvalho, L., Meier, S., Wang, S.W. (2016). Poverty and Economic Decision-Making: Evidence from Changes in Financial Resources at Payday. *The American Economic Review,* 106(2), pp. 260-284.

Choi, J. (2009). Pension Schemes for the Self-Employed in OECD Countries, *OECD Social, Employment and Migration Working Papers*, No. 84, OECD Publishing, Paris.

Chzhen, Y. (2017). Unemployment, Social Protection Spending and Child Poverty in the European Union during the Great Recession. *Journal of European Social Policy,* 27(2), pp. 123-137.

Deutscher Bundestag (2016): *Alterssicherung im europäischen Vergleich. MISSOC-Datenbankabfrage zu den im Alter gezahlten Leistungen*. Available at: https://www.bundestag.de/blob/416282/18c1e0301c0d886a6744256875636f8/wd-6-0-23-16-pdf-data.pdf (accessed July 27, 2017).

Delamonica, E. (2016). Transformational Growth and Poverty: An Evolutionary Approach for Inter-Country and Inter-Temporal Comparisons of Poverty Incidence. *Applied Research in Quality of Life* 12(2), pp. 387-411.

Deliyanni-Kouimtzi et al. (forthcoming): *Comparative Report on Socio-Economic Consequences*, to be published as EXCEPT working paper.

De Luca G., Celidoni M., and Trevisan E. (2015). Item nonresponse and imputation strategies. In: Malter F., Börsch-Supan A. (eds.): *SHARE Wave 5: Innovations & Methodology*. Munich: MEA, Max Planck Institute for Social Law and Social Policy.

DICE Database (2015). *Pension rules for the self-employed in the EU*, 2014, ifo Institute, Munich, Available at: http://www.cesifo-group.de/DICE/fb/8j3SM8j2 (accessed October 30, 2017).

Ebbinghaus, B. (2011). Introduction: Studying Pension Privatization in Europe. In: Ebbinghaus, B. (ed.), *The Varieties of Pension Governance. Pension Privatization in Europe*. Oxford: University Press, pp. 3-22.

Ebbinghaus, B. and Gronwold, M. (2011). The Changing public-Private Pension Mix in Europe: From path dependence to path departure. In: Ebbinghaus, B (ed.): *The Varieties of Pension Governance. Pension Privatization in Europe*, pp. 23-53.

Esping-Andersen, C. (1990). The Three Worlds of Welfare Capitalism. Cambridge: Polity Press.

Eurostat (2015a): *Youth employment rate by sex, age and country of birth.* Accessed online at http://appsso.eurostat.ec.europa.eu/nui/submitViewTableAction.do on September 30, 2016.

Eurostat (2015b): *Formal child care by duration and age group*. Accessed online at http://ec.europa.eu/eurostat/tgm/refreshTableAction.do?tab=table&plugin=1&pcode=tps00185&language=en on September 17, 2016.

Expert Group on Gender Equality and Social Inclusion, Health and Long-Term Care Issues (EGGSI) (2011).*The socio-economic impact of pension systems on the respective situations of women and men and the effects of the recent trends in pension reforms*. IRS/Fondazione Brodolini.

Fachinger, U., Künemund, H. (2014). Stabilität des Versorgungsniveaus nach dem Paradigmenwechsel. *Vierteljahresheft zur Wirtschaftsforschung*, 83(2), pp. 33-47.

Gash, V. (2008). Bridge or trap? Temporary workers' transitions to unemployment and to the standard employment contract. *European Sociological Review* 24(5), pp. 651–668.

Gläser, J., Laudel, G. (2010). *Experteninterviews und qualitative Inhaltsanalyse*. Wiesbaden: VS Verlag.

Gorlich, D., de Grip, A. (2009). Human Capital Depreciation during Hometime. *Oxford Economic Papers – New Series*, 61(1), pp. 98-121.

Gov.uk. (2017). *National Minimum Wage and National Living Wage rates - GOV.UK*. Available at: https://www.gov.uk/national-minimum-wage-rates (accessed October 30, 2017).

Gradín, C., Cantó, O., Río, C. (2017). Measuring Employment Deprivation in the EU using a Household-level Index. *Review of Economics of the Household*, 15(2), pp. 639-667.

Hjalmarsson, S., Mood, C. (2015). Do Poorer Youth have Fewer Friends? The Role of Household and Child Economic Resources in Adolescent School-class Friendships. *Children and Youth Services Review*, 57, pp. 201 -211.

Holzmann, R. and Koettl, J. (2015). Portability of Pension, Health and Other Social Benefits: Facts, Concepts, and Issues. CESifo Economic Studies, 6(2), pp. 377-415,

Available at: https://academic.oup.com/cesifo/article/61/2/377/295824/Portability-of-Pension-Health-and-Other-Social (accessed October 30, 2017).

Hsiu-Fang, H., Shannon, S. E. (2005). Three Approaches to Qualitative Content Analysis. *Qualitative Health Research*, 15, pp. 1277–1288.

Huegaerts, K., Puig-Barrachina, V., Vanroelen, C. (2017). The mental health of unemployed Brussels youth: the role of social and material resources. *Archives of Public Health*, 75(1).

Income Tax Calculator. (2017). *Average Salary UK is £27,000 for 2016 / 2017. Available at:* https://www.incometaxcalculator.org.uk/average-salary-uk.php (accessed October 30, 2017).

International Monetary Fund (IMF), 2017: Ukraine: *Selected Issues. Country Report No. 17/84.* Available at: https://www.imf.org/~/media/Files/Publications/CR/2017/cr1784.ashx (accessed August 4, 2017).

Julkunen, I. (2002). Social and Material Deprivation among Unemployed Youth in Northern Europe. *Social Policy & Administration* 36(3), pp. 235-253.

Karren, R., Sherman, K. (2012). Layoffs and Unemployment Discrimination: a New Stigma. *Journal of Managerial Psychology*, 27(8), pp. 848-863.

KNF - Polish Financial Supervision Authority (2017a). *Biuletyn roczny.* Rynek PPE 2016.

KNF - Polish Financial Supervision Authority (2017b). *Dane miesięczne OFE - czerwiec 2017.* Available at: https://www.knf.gov.pl/?articleId=57360&p_id=18 (accessed October 24, 2017).

Krusell, S. (2012). Estonian Citizens working abroad. Census snapshots. Estonian Statistical Office, pp. 129-138.

Lewis, O. (1966). The Culture of Poverty. *Scientific American*, 215(4), pp.19-25.

Lorentzen, T., Angelin, A., Dahl, E. et al. (2014). Unemployment and Economic Security for Young Adults in Finland, Norway and Sweden: From Unemployment Protection to Poverty Relief. *International Journal of Social Welfare* 23(1), pp. 41-51.

Mackenbach, J. P., Kulhánová, I., Menvielle, G. et al. (2015): Trends in inequalities in premature mortality: a study of 3.2 million deaths in 13 European countries. *Epidemiology Community Health*; 69, pp. 207–217.

Majamaa, K. (2011). Dismissed Intergenerational Support? New Social Risks and the Economic Welfare of Young Adults. *Journal of Youth Studies*, 14(6), pp. 729 -743.

McFadden, D. (2008). Human Capital Accumulation and Depreciation. *Review of Agricultural Economics,* 30(3), pp. 379-385.

McKee-Ryan, F. M., Song, Z., Wanberg, C. R., Kinicki, A. J. (2005). Psychological and Physical Well-being during Unemployment: A Meta-analytic Study. *Journal of Applied Psychology*, 90(1), pp. 53-76.

Mendola, D., Busetta, A., Aassve, A. (2009). What Keeps Young Adults in Permanent Poverty? A Comparative Analysis Using ECHP. *Social Science Research*, 38(4), pp. 840 -857.

Mendola, D., Busetta, A., Milito, A.M. (2011). Combining the Intensity and Sequencing of the Poverty Experience: a Class of Longitudinal Poverty Indices. *Journal of the Royal Statistical Society. Series A, Statistics in Society,* 174(4), pp. 953 -973.

Mendola, D., Busetta, A. (2012). The Importance of Consecutive Spells of Poverty: a Path-Dependent Index of Longitudinal Poverty. *Review of Income and Wealth*, 58(2), pp. 355 -374.

Ministry of Family, Labour and Social Policy (2017). *Co trzeba wiedzieć o IKE?* Available at: https://www.mpips.gov.pl/ubezpieczenia-spoleczne/ubezpieczenie-emerytalne/indywidualne-konto-emerytalne/co-trzeba-wiedziec-o-ike/ (accessed October 2, 2017).

Ministry of Family, Labour and Social Policy (2017). *Liczba IKE*. Available at: https://www.mpips.gov.pl/ubezpieczenia-spoleczne/ubezpieczenie-emerytalne/indywidualne-konto-emerytalne/liczba-ike/ (accessed October 24, 2017).

Ministry of Family, Labour and Social Policy (2017). *Liczba IKZE.* Available at: https://www.mpips.gov.pl/ubezpieczenia-spoleczne/ubezpieczenie-emerytalne/ikze/liczba-ikze/ (accessed October 24, 2017).

Ministry of Finance (2016). *Riikliku vanaduspensioni, kohustusliku kogumispensioni ja vabatahtliku kogumispensioni statistika*. Available at: http://www.pensionikeskus.ee/files/dokumendid/kogumispensioni_statistika_012017.pdf (accessed October 30, 2017).

Ministry of Finance, Ministry of Social Affairs,(2016). *Riikliku vanaduspensioni jätkusuutlikkuse analüüs*. Available at: http://sm.ee/sites/default/files/content-editors/Uudised_pressiinfo/vanaduspensioni_jatkusuutlikkuse_analuus_2016.pdf. (accessed October 30, 2017).

MISSOC (2016). *Mutual Information System on Social Protection database*. Available at: http://ec.europa.eu/employment_social/missoc/db/public/compareTables.do (accessed September 16, 2016).

Mossakowski, Krysia N. (2008). Is the Duration of Poverty and Unemployment a Risk Factor for Heavy Drinking? *Social Science & Medicine* 67(6), pp. 947-955.

Möller, J.; Umkehrer, M., (2014). Are There Long-term Earnings Scars From Youth Unemployment in Germany?, *ZEW Discussion Paper*, No. 14-089, Mannheim: Center for European Economic Research.

Myles, J., Peirson P. (2001). The Comparative political Economy of Pension Reform. In: Peirson, P. (ed.): The New Politics of Welfare State, New York: Oxford University press, pp. 305–333.

Nandori, E. S., (2014). Objective and Subjective Poverty. *Encyclopedia of Quality of Life and Well-Being Research*, pp. 4424-4428.

Nizalova, O., Norton, E. (2017). Long-Run Effects of Severe Economic Recessions on Male BMI Trajectories and Health Behaviors. *IZA Discussion Paper* No. 10776.

OECD (2015). *Pensions at a Glance: OECD and G20 indicators*. Paris: OECD Publishing.

OECD (2009). *IOPS Country Profiles – Malta*. Available at: https://www.oecd.org/countries/ malta/ 43469300.pdf (accessed September 10, 2016).

Oris, M., Gabriel, R., Ritschard, G. et al. (2017). Long Lives and Old Age Poverty: Social Stratification and Life-Course Institutionalization in Switzerland. *Research in Human Development*. 14(1), pp. 68-87.

Paskov, M. (2011). Labour Market Uncertainty and Private Pension Planning in Europe. In: Blossfeld, H.-P., Hofäcker, D., Bertolini, S.: *Youth on Globalised Labour Markets. Rising Uncertainty and its Effects on Early Emploment and Family Lives in Europe*. Leverkusen Opladen: Barbara Budrich Publishers, pp. 69–92.

Pątek, A. (2016) *Social Security in Poland. Warsaw.* Available at: http://www.zus.pl/documents/10182/167615/Social_Insurance _in_Poland_2014.pdf/71ffe1b1-c142-48fa-a67b-0c7e1cec6eb6 (accessed October 30, 2017).

Paul, K. I., and Moser, K. (2009). Unemployment Impairs Mental Health: Meta-analyses. *Journal of Vocational Behavior*, 74(3), pp. 264-282.

Pension Fund of Ukraine (PFU) (2017). *Annual report for 2016*. Available at: http://www.pfu.gov.ua/pfu/control/uk/publish/article?art_id=277159&cat_id=122125 (accessed August 4, 2017).

Podesta, F., Marzadro, S. (2017). Operationalizing De-commodification and Defamilization Outcomes via the Relative Poverty Approach: An Application to Western European Countries. Social Indicators Research, 131(2), pp. 701 -726.

Polonskyi, V.G., Shapovalova, O.I. (2010). Depreciation of Human Capital. *Actual Problems of Economics*, 103, pp. 151-154.

Popp, S., Schels, B. (2008). 'Do You Feel Excluded?' The Subjective Experience of Young State Benefit Recipients in Germany. *Journal of Youth Studies*, 11(2), pp. 165 -191.

Rokicka, M., Kłobuszewska, M. (2016). *The short-term economic consequences of insecure labour market positions in EU-28*, EXCEPT Working Papers No. 10.

Rokicka, M. et al. (2017). *The impact of the institutional setting and policies on the economic situation of youth in insecure labour market positions in EU-28 & Ukraine*; forthcoming as EXCEPT working paper.

Rokicka, M., Kłobuszewska, M., Palczyńska, M. (2015). *Composition and cumulative disadvantage of youth across Europe*, EXCEPT Working Papers, WP No 1. Tallinn: Tallinn University. Available at: http://www.except-project.eu/working-papers/ (accessed October 30, 2017)

Rummo, T.-L. (2016). *Suhtelises vaesuses elas 2014. Aastal iga viies elanik.* Available at: https://blog.stat.ee/tag/suhteline-vaesus/ (accessed October 30, 2017)

Saar, E., Täht, K. and Unt, M. (2011), Late Careers and Labour Market Exit to Retirement. In: Saar, E. (ed.): *Towards a Normal Stratification Order: Actual and Perceived Social Stratification in Post-Socialist Estonia*. Peter Lang, pp. 143-176.

Schels, B. (2013). Persistence or Transition: Young Adults and Social Benefits in Germany. *Journal of Youth Studies*, 16(7), pp. 881 -900.

Scherer, S (2004). Stepping-stones or Traps? The Consequences of Labour Market Entry Positions on Future Careers in West Germany, Great Britain and Italy'. *Work, Employment and Society*, 18(2), pp. 369–94.

Skare, M., Druzeta, R.P. (2016). Poverty and Economic Growth: a Review. Technological and *Economic Development of Economy*, 22(1), pp. 156-175.

Skibitsky, H.D. (2103). Jobless in America: Discrimination against the Unemployed and the Efficacy of State and Federal Protected Class Legislation. *Rutgers Law Review*, 66(1), pp. 209-240.

Sletten, M.A. (2010). Social Costs of Poverty; Leisure Time Socializing and the Subjective Experience of Social Isolation among 13-16-year-old Norwegians. *Journal of Youth Studies*, 13(3), pp. 291 -315.

Schmillen, A., Umkehrer, M. (2013). The scars of youth: effects of early-career unemployment on future unemployment experiences. *IAB Discussion Paper*, No. 6/2013.

Spears, D. (2011). Economic Decision-Making in Poverty Depletes Behavioural Control. *The B. E. Journal of Economic Analysis & Policy* 11(1), article 72.

State Commission for Regulation of Financial Services Markets of Ukraine (SCRFSMU) (2017a). *Results of the development of the system of non-state pension provision as of* . Available at: https://nfp.gov.ua/files/17_Dep_Repetska/NPF_IV_kv%202016.pdf (accessed August 4, 2017).

State Commission for Regulation of Financial Services Markets of Ukraine (SCRFSMU). (2017b). *Results of the development of the system of non-state pension provision as of*. Available at:

https://nfp.gov.ua/files/17_Dep_Repetska/NPF_II_kv%202017.pdf (accessed August 4, 2017).

State Statistics Service of Ukraine (SSSU) (2017). *Labour Force Survey in 2016 (in Ukrainian)*. Statistical Yearbook. Available at: http://www.ukrstat.gov.ua/dr

uk/publicat/kat_u/2017/zb/07/zb_eanu2016pdf.zip (accessed August 4, 2017).

Statistics Estonia (2017): *Statistics Estonia.* Available at: https://www.stat.ee/en (accessed October 30, 2017).

Sotsiaalkindlustusamet (n.d). *Pensioni suuruse arvutamine*. Available at: https://www.sotsiaalkindlustusamet.ee/et/pension-toetused/pensioni-suuruse-arvutamine (accessed October 30, 2017).

Tabellini, G. (2010). Culture and Institutions: Economic Development in the Regions of Europe. *Journal of the European Economic Association*, 8(4), pp. 677-716.

The old-age pension (n.d.). Pensionikeskus. Available at: http://www.pensionikeskus.ee/en/i-pillar/state-pension-i-pillar/the-old-age-pension/ (accessed October 30, 2017).

Tinios, P., Lyberaki, A., Georgiadis, T. (2011). Explaining Persistent Poverty. SHARE: Does the Past Play a Role? In Börsch-Supan A., Brandt M., Hank K. et al. (eds.): *The Individual and the Welfare State*. Berlin, Heidelberg: Springer, pp. 19-29.

Unt, M., Saar, E. (2016). Determinants of Retirement and Late Careers in Estonia. In: Hofäcker, D., Hess, M., König, S. (eds.): *Delaying Retirement. Progress and Challenges of Active Ageing in Europe, the United States and Japan*. London: Palgrave, pp. 53-72.

Vaalavuo, M. (2016). Deterioration in health: What is the role unemployment and poverty? *Scandinavian Journal of Public Health*, 44(4), pp. 347-353.

Verkhovna Rada of Ukraine (VRU) (2003a). *On Compulsory State Pension Insurance. The law № 1058-IV of 9.07.2003*. Available at: http://zakon2.rada.gov.ua/laws/show/1058-15/ (accessed August 4, 2017).

Verkhovna Rada of Ukraine (VRU) (2003b). *On Non-State Pension Provision. The law № 1057-IV of 9.07.2003*. Available at: http://zakon2.rada.gov.ua/laws/show/1057-15/ (accessed August 4, 2017).

Verkhovna Rada of Ukraine (VRU) (2011). *On Measures regarding Legislative Provision of the Pension System Reform. The law 3668-VI of July 8, 2011*. Available at http://zakon5.rada.gov.ua/laws/show/3668-17/(accessed August 4, 2017).

Verkhovna Rada of Ukraine (VRU) (2017). *Draft Law on Amendments to Certain Legislative Acts of Ukraine on Pensions Increase. 6614 of June 22, 2017*. Available at: http://w1.c1.rada.gov.ua/pls/zweb2/webproc4_1?pf3511=62088 (accessed August 4, 2017).

Voßemer, J. and N. Eunicke (2015). *The Impact of Labour Market Exclusion and Job Insecurity on Health and Well-being among Youth – a Literature Review.* EXCEPT Working Papers, WP No 2. Tallinn University, Tallinn.

Wanberg C.R. (2012). The Individual Experience of Unemployment. *Annual Review of Phycology*, 63, pp. 369-396.

Wilke, F. (2016). *Sparen für unsichere Zeiten: Die schwierige Organisation privater Altersvorsorge*. Wiesbaden: VS Verlag.

Wilmington (2017). *Pension Funds Online. Country Profiles. Poland*. Available at: http://www.pensionfundsonline.co.uk/content/country-profiles/poland/81 (accessed October 24, 2017).

World Bank (2017a*). Age dependency ratio (% of working-age population).* Available at: http://data.worldbank.org/indicator/SP.POP.DPND (accessed August 4, 2017).

World Bank (2017b). *Gross enrolment ratio, tertiary, both sexes (%).* Available at: https://data.worldbank.org/indicator/SE.TER.ENRR (accessed August 4, 2017).

Zheng, B.H. (2001). Statistical Inference for Poverty Measures with Relative Poverty Lines. *Journal of Econometrics*. 101(2), pp. 337-356.

Zlenko, S. (2017). *Trust to Social Institutions. Kiev International Institute of Sociology*. Available at: http://kiis.com.ua/?lang=eng&cat=reports&id=678 (accessed August 4, 2017).

ZUS Polish Social Insurance Institution (2017). *Zasady przyznawania emerytury*. Available at: http://www.zus.pl/swiadczenia/emerytury/zasady-przyznawania-emerytury/informacje-ogolne (accessed 24 October 2017).

Appendix: Guidleine for Expert Interview

Preliminary note:

The aim of this study was to analyse the socio-economic long-term consequences of insecure labour markets for Youth in Europe. We want to find out, which services are offered to young Europeans and how flexible these services are, concerning changed working life conditions. Therefore, we had taken guided interviews with experts from additional pension insurance systems. For this purpose, experts from the private pension market and (if existing) occupational pension institution were interviewed (following Professionals). Additionally, scientific Experts from the field of social- and pension insurance system were conducted.

private pension market	At least 1 Professional
Occupational pension institutions	At least 1 Professional
Scientific perspective	1 or 2 Experts

The duration of the interviews was about 45 minutes to 1 hour. Also two Guidelines were created, one for Professionals and one for Scientist, to better concentrate

Guideline Professionals – Offered products for private and occupational pension arrangements

I Company

1. What is your profession/position in this company?
2. Could you tell me something about your company?
   - What is your main business?
   - How is the current market situation?

II Importance of private and occupational provision

1. Which role does your product play in the three pillar model of pension insurance?
   - How important are private or occupational provisions for young people?

III Products for old age provision

1. What do you offer for private/occupational provisions?
   - What are your target groups?
2. Which possibilities do young people have, to make provisions for old age?
   - Do you have special offers for young employees/trainees starting their career?
     - If yes: How do they look like and what are the differences to other models of private/occupational provisions?
3. Is it possible to combine these products with other products for old age provision? If yes: How does it function and what requirements are needed?

IV Requirements

1. Are specific requirements needed to get a private/occupational provision arrangement? Which are those?
   - Age, income, employment contract (permanent, fixed-time, full-time, half time)
2. (Specifically for occupational provision) Do you have special offer funding/promotion programs for young employees?
   - If yes: Who are these offers addressed to? How would the ideal candidate look like?
   - Which requirements are needed?

V Flexibility

1. How old should a client be to start with a private/ occupational pension arrangement?
   - Which consequences may arrive, if young people start their provisions later, for example because of extended educational training? Are there products that are not available anymore later? What are those?
2. Are there options for someone with low income?
3. Are there options for a private provision when someone is unemployed?
4. How are your products dealing with changing income levels?
   - Can the contributions be adjusted or paid extra?
   - Do the delayed contributions have effects on the private/occupational provision in comparison to contribution without interruption?
5. (Specifically for occupational provision) Do you know which possibilities exist if someone left the company?
   - Can the contribution payments be continued?
   - If you switch the company, can you take your occupational provision with you?
6. What consequences may arrive, when contributions are missing?
7. How will early retirement, due to illness for example, impact the entitlements?

VI Conclusion

1. What would you recommend for young people? How should they take care of their old age provision?

Guideline Experts

I Field of research

1. What is your research topic and since when do you work on it?
   - Why did you choose it?

II Value and Change of the pension insurance system

1. Could you please explain how the country specific model of pension insurance looks like and which conditions it is built on?

   - When there is more than one model: Who are the different models of pension insurance addressed to? Which of these models addresses youth? Which role does youth play there?
2. How did the pension insurance system change in the last years?
   - What does this mean for young people?

III Actual models and requirements for old age pensions

1. Which offers or possibilities actually exist for old age pension?
   - What possibilities exist for young people in atypical employment?
   - Are there actually other models of old age pension arrangements than the institutional one and how do they look like?
2. What access do young people have to pension insurance models?
3. How important is private provision actually for youth in your opinion?
   - When should young people start with private pension arrangements?
   - Does the income or the way of employment matters?
4. For which group does the actual model for old age provision hold risks and why? Which Problems will we get?

IV Flexibility

1. How would you rate the flexibility of actual models for old age provision?
   - Particularly with regard to precarious employment and fluctuating income.
2. Which consequences could discontinued career paths in early years have?
3. Does extended educational training have effects on old age provision? If yes, what are those effects?

V Consequences for individual life situations

1. How will individual life situations of young people affect their situation in an old age in the future?
2. Who will have a higher risk of poverty in old age?
   - People who had fixed-term employment contracts, many interruptions in their employee career, only a low income.
3. Which groups don't have to worry about their life situation in old age?
4. What effects will an early retirement have, for example because of illness?

VI Conclusion

1. What will be the great challenge for the pension insurance systems, especially concerning youth?