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NOTE

from:	The Social Protection Committee
to:	Permanent Representatives Committee (Part I) / Council (EPSCO)
Subject:	The 2015 Pension Adequacy Report: current and future income adequacy in old age in the EU: Joint SPC and Commission report - Report

Delegations will find attached the full report (Volume I Part 2) on the above subject submitted by the Social Protection Committee, with a view to the Council meeting (EPSCO) on 5 October 2015.

The key messages which are drawn from this report are contained in doc. 12085/15.

For technical reasons the complete Report had to be split in 5 parts which are found in docs 12085/15 ADD 1 (Part 1) + 12085/15 ADD 2 (Part 2) + 12085/15 ADD 3 (Part 3) + 12085/15 ADD 4 (Part 4) and 12085/15 ADD 5 (Part 5).

2.4. Access to services and non-pension benefits

The well-being of the elderly can depend not only on their incomes but also on their access to services and non-pension benefits, where differences in Member State policies and practices regarding the provision and mix of in-kind and cash benefits are substantial.

According to the OECD,[1] public services have the highest poverty reducing effects for people of working age. Out of the total public expenditure on services targeted on households with incomes below the poverty line, this age-group receive the largest share -58.5 percent - accounting for 62 percent of people at risk of poverty. The older poor, who account for 15 percent of people of risk of poverty receive some 11 percent of all public services intended to address poverty. Public services are thereby likely to also produce secondary redistributive effects. Elderly (and child) care services, for example, favour female employment which entails higher earnings for the family and higher employment levels in the economy.

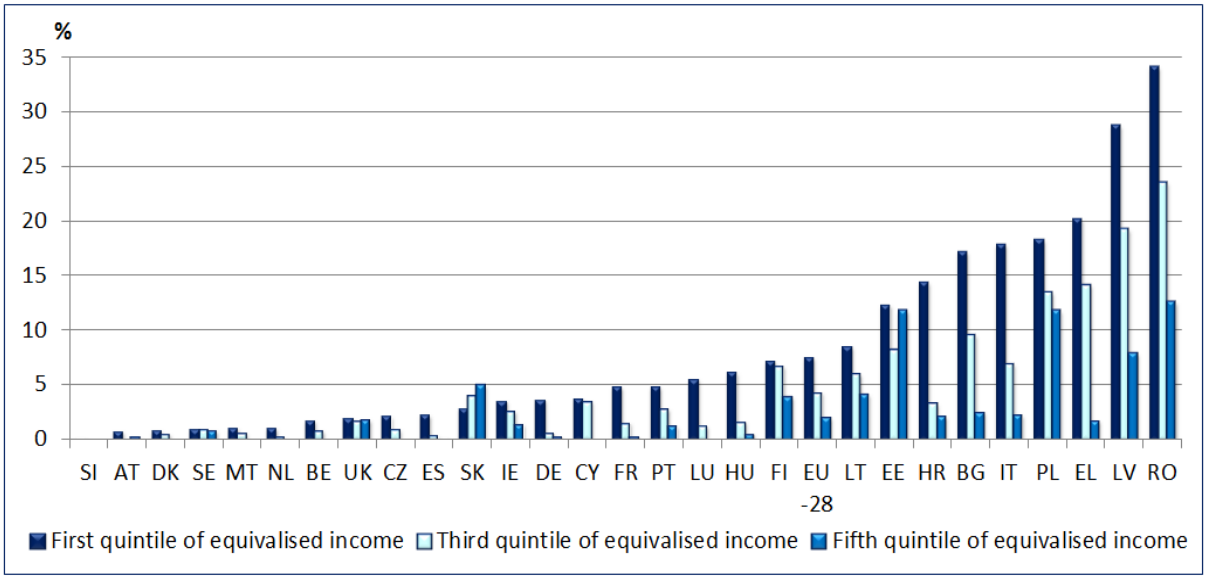
Access to health care

According to EU-SILC data, some 93 percent of the population aged 65 plus have access to medical care in EU-28 although in some Member States people in vulnerable situations and with low-income continue to experience difficulties in accessing healthcare. In 2013, 4.8 percent of elderly (65+) reported unmet needs for medical examination due to 3 reasons: too expensive or too far to travel or waiting list. Among the poorest 20 percent of the elderly in EU-28, 7.5 percent reported unmet needs[2] for medical examination in 2013. Generally, older people in the bottom quintile of equivalised income face higher unmet needs for medical examination (because of 3 reasons: too expensive or too far to travel or waiting list) compared with those with higher income (Figure 2.26). The highest levels of unmet needs for health-care in 2013 were reported in Romania, Latvia and Greece and the lowest in Slovenia, Austria and Denmark. These comparisons, however, should be interpreted with care. Cultural differences between countries hamper the cross-country comparability of self-reported health needs although the data helps to illustrate the situation within countries.

1 Source: OECD 2013. Anna C. d'Addio *et al*. Publicly provided services. Final report. VS/2011/360. Evaluating pension and modelling policies in OECD and EU countries: modelling pension entitlements and evaluating pensions adequacy, 30 June 2013.

2 Reasons - too expensive or too far to travel or waiting list. Other reasons are not included.

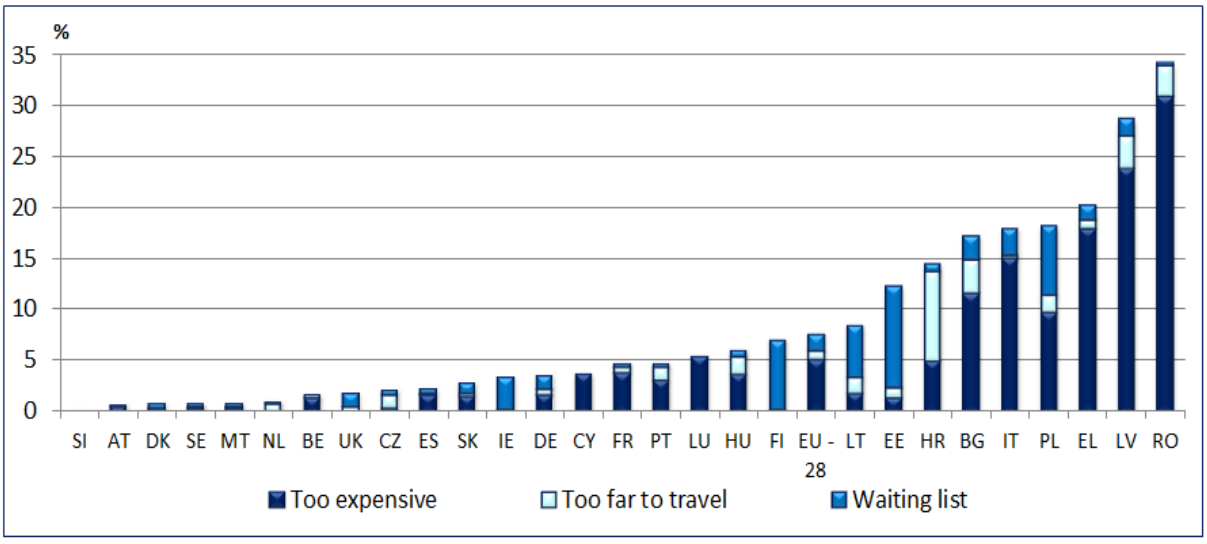
Figure 2.1: Self-reported unmet needs for medical examination, different income quintiles of people 65+, 2013



Source: Eurostat. Note: Reasons - too expensive or too far to travel or waiting list. Sorted by the first quintile of equivalised income. Note: Other reasons are not included.

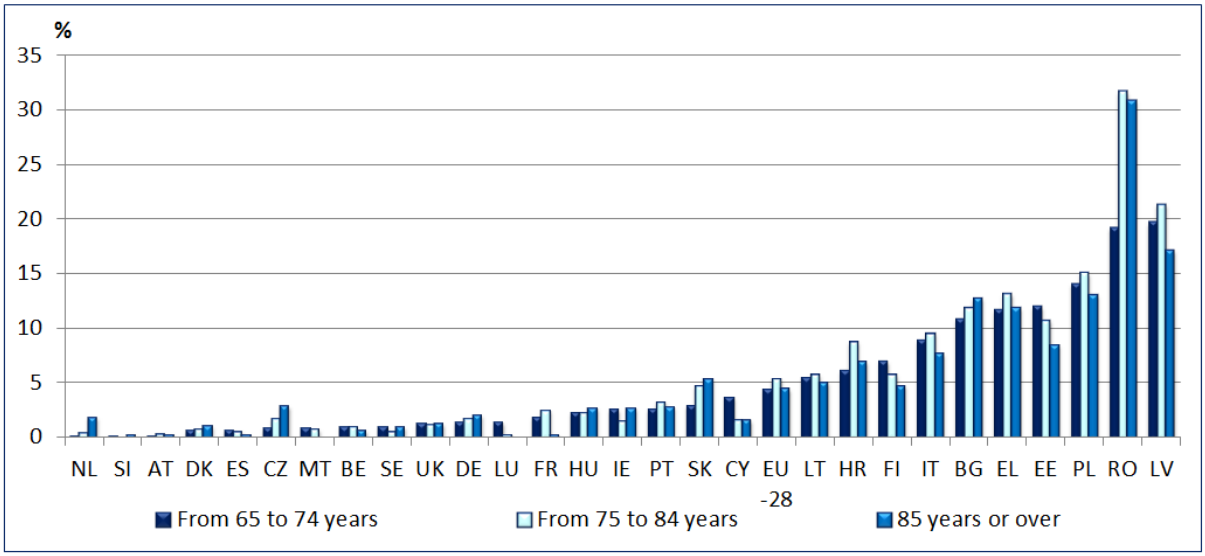
The main reasons for self-reported unmet needs for medical examination are that they are too expensive; too difficult to reach; or delayed because of waiting lists. For elderly in the poorest income quintile, access problems are particularly related to costs (Figure 2.27). Long waiting times are a problem in several Member States (Poland, Estonia, Lithuania, Finland and Ireland), whereas geographical distance to service providers is seen as a particular problem in Croatia, Bulgaria, Latvia and Romania.

Figure 2.2: The main reasons of self-reported unmet needs for medical examination, poorest income quintile of people 65 and over, 2013



Source: Eurostat. Note: Reasons - too expensive or too far to travel or waiting list. Other reasons are not included (No time; Didn't know any good doctor or specialist; Fear of doctor, hospital, examination or treatment; Wanted to wait and see if problem got better on its own; Other reasons).

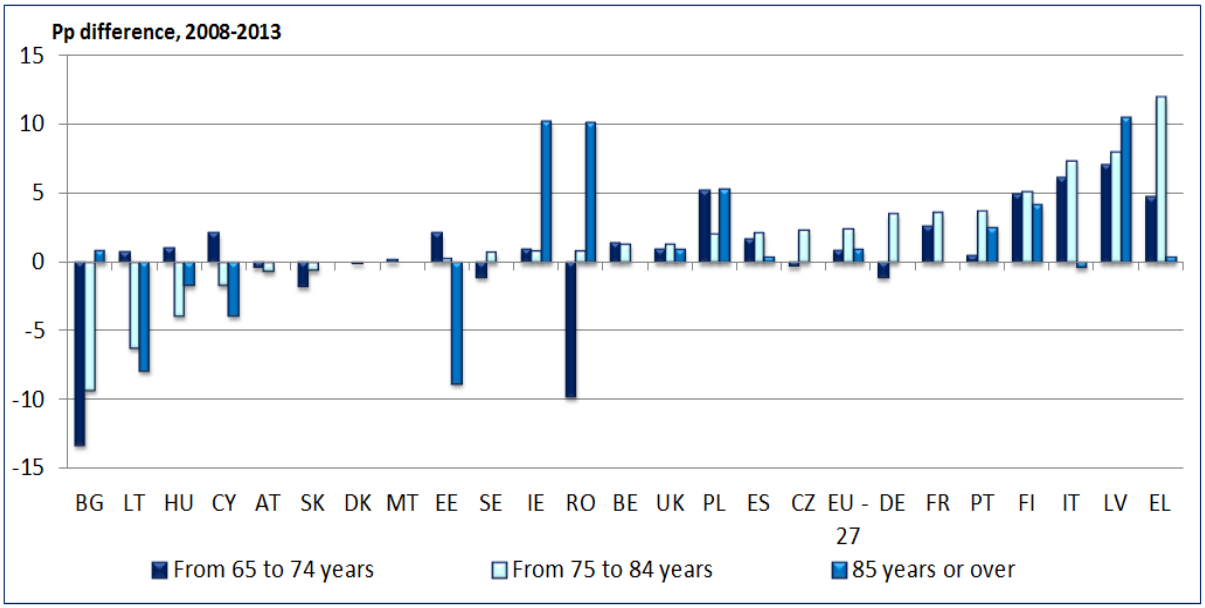
Figure 2.3: Self-reported unmet needs for medical examination, total people from 65 to 74, from 75 to 84 years and 85 years and over, 2013



Source: Eurostat. Note: total people (all quintiles of equivalised income). Reasons - too expensive or too far to travel or waiting list. Other reasons are not included. Sorted by age group: from 65 to 74 years.

Difficulties in accessing health care services tend to increase with age, with the highest unmet needs for medical examination being reported by people aged 75 to 84 years. Those of 85 years and over report lower unmet needs for medical examination in many Member States, although they are higher than for other age groups in Bulgaria, Slovakia, Ireland, Hungary, Germany, Sweden, the Czech Republic, Denmark and the Netherlands (Figure 2.28). Clearly, however, the reasons for these different patterns across age groups are likely to depend on a range of country-specific circumstances.

Figure 2.4: Changes in self-reported unmet need for medical examination, poorest income quintile (people from 65 to 74 years, from 75 to 84 years and 85 years and over), 2008-2013



Source: Eurostat. Note: Reasons - too expensive or too far to travel or waiting list. Other reasons are not included. Due to cultural differences between countries this indicator should not be used to make international comparisons. Data for 2008 are not available for HR, LU, NL and SI. BE: the increase between 2010 and 2011 is largely explained by a change in the wording of the unmet need question in the 2011 SILC questionnaire. Evolutions between years before 2011 and years from 2011 cannot be interpreted.

Over time, the share of people in the poorest income quintile who reported unmet health care has increased somewhat in the EU-27 (2008-2013; Figure 2.29) with significant increases reported in Ireland, Romania and Latvia for people aged 85 and over, and in Greece, Latvia and Italy for those aged between 75 and 84.

Long-term care

Long-term care (LTC) encompasses a range of services and support for people who are dependent on help with their daily living. According to the report "*Adequate social protection for long-term care needs in an ageing society*"[3], an increasing proportion of Europeans can expect to reach an age in which they are at risk of becoming frail and developing multi-morbidity conditions, requiring both medical and social care on a continuing basis. EU citizens aged 65 can expect less than half of their remaining years to be free from conditions affecting their ability to manage daily living activities, with the risk of needing long-term care rising steeply from the age of 80.

The way in which LTC is treated in the social protection systems[4] of Member States varies greatly, notably in the relative weight assigned to formal and informal care. There is also marked diversity in the way formal care is organised (e.g. by public, for-profit or NGO providers), financed (e.g. via general taxation, obligatory social security, voluntary private insurance or out-of-pocket payments) and delivered (e.g. as home care or institutional care).

Formal LTC services may be provided in a variety of settings, including institutions, from traditional old people's homes to modern nursing homes, in supported living arrangements (e.g. residential care) or in people's own homes (e.g. home help or home care). In these respects, LTC may cover very different mixes of health care and social services.

Several countries offer cash benefits or vouchers that can be used to pay for LTC services delivered by professional care providers and, in some cases, by informal carers. In countries where untrained family members can be contracted as informal carers and receive an allowance for the care they provide, the distinction between informal and formal care is blurred even further.

In all Member States, informal care provided by relatives plays a significant role in the overall amount of long-term care provided. But there are enormous variations in the degree to which affordable formal services have been developed and made available.

There is no consistency in the legal framework for providing long-term care across the EU. In many Member States extended families are obliged to provide and/or finance care for their elderly relatives, but countries differ in the extent to which they enforce this legal responsibility and monitor whether the care needs are actually met. Table 2.1 groups Member States into five groups in terms of LTC delivery.

[3] Adequate social protection for long-term care needs in an ageing society. Report jointly prepared by the Social Protection Committee and the European Commission. Luxembourg: Publications Office of the European Union, 2014.

[4] Source: Social Investment Package, SWD(2013) 41 final, European Commission, Brussels, 20.2.2013

Table 2. 1: LTC services in Member States

Characteristics	Member States	Public provision on LTC	Spending on formal-care (FC)		Informal care (IC)		Cash benefits for care
			Public	**Private**	**Use**	**Support**	
Formal-care (FC) oriented provision, generous, accessible and affordable	DK, NL, SE	Financed from general revenue allocations to local authorities	High	Low	Low	High	Modest
FC of medium accessibility, some informal care (IC) orientation in provision	BE, CZ, DE, SK, LU	Obligatory social insurance against LTC risk financed from contributions	Medium	Low	High	High	Modest
FC of medium to low accessibility, medium IC orientation	AT, UK, FI, FR, ES, IE	Social insurance against LTC risk financed from contributions or general revenue	Medium	Medium	High	High	High
Low FC accessibility, strong IC orientation	HU, IT, EL, PL, PT, SI	Modest social insurance against LTC risks	Low	Low	High	Low	Low
Rather low FC accessibility, almost exclusive IC orientation	BG, CY, EE, LT, LV, MT, RO	Little social insurance against LTC risks	Very low	Data not available	Very high	Little to no support	No or very low

Source: Social Investment Package, SWD(2013) 41 final, European Commission, Brussels, 20.2.2013

Two demographic factors threaten the supply of long term carers, namely the decline in the number of people of working age who are potentially available to take on this work, and the wide-ranging societal changes that make it less likely that near or extended families will, in the future, provide the informal, home-based care on which the great majority of older people now rely.

Non-pension benefits

Other non-pension benefits, such as services for free or at discounted prices, can contribute significantly to higher living standards in old age, especially for those living on small pensions with no other sources of income. Access to these services or benefits, and the level of discounts, as well as the quality of services provided, vary however across Member States as well as between regions within many countries. The most typical services or benefits for those on very low incomes are summarised below.

Housing and heating allowances

A number of countries have means-tested systems to help people who cannot afford to pay their rent or heating costs (see Box 2.3). In some local areas, low-income households can also seek a reduction or total exemption from charges such as for waste and water made by private operators or local authorities. Some countries provide housing aid for housing adaptation for people with disabilities while local authorities may provide grants to improve homes that are below basic standards, mostly targeted at older people in rural areas.

Box 2. 1: Housing and heating allowances in Member States[5]

In Austria, any needs which are not covered by the minimum standard (for instance expenses for appropriate accommodation and heating) can be covered by supplementary benefits (in cash). These benefits are very diverse and vary between a flat-rate allowance and the coverage of the actual appropriate costs for dwelling. They are provided by the *Länder*, who may grant housing allowances (*Wohnbeihilfe*) as a supplement to guaranteed minimum resources or as an independent benefit.

According to the special programme in **Bulgaria** ("*Insuring targeted social protection for heating of the low-income population*"), support is provided for heating during the winter period for the persons at risk of severe material deprivation, including elderly. The heating allowance depends on the price of electricity for households consumers and provides fully compensation for the increasing energy prices. The amount of the allowance is fixed and determined by the selling price of electricity for household consumers. The aid currently amounts €168 for the entire heating season. The same conditions as for monthly social allowance are applied for granting targeted heating allowance. The access is significantly wider and depends on the average monthly income for the preceding 6 months compared to the date of submission the claim in the period from 1 of July to 31 of October.

According to another programme in **Bulgaria** on "*Providing social assistance through implementing a differentiated approach*", targeted social allowances are granted for payment of rent of municipal housing. They are granted to older people (over 70 years) living alone. The amount of the aid depends on the respective rent for the municipally housing.

A number additional cash benefits are provided in **Cyprus** under the Guaranteed Minimum Income (GMI) scheme (effective 1-Jul-2014), to those who fulfil the criteria for GMI. Housing (rental and mortgage interest allowances) varies by composition of family-beneficiary and residence area.

In the **Czech Republic**, benefits are provided in the System of Assistance in Material Need (SAMN). Persons/households whose housing costs exceed 30 percent of their income are eligible for housing allowance (income and housing costs tested benefit from the state social support system).

Individual housing allowance for old age-pensioners (*Boligydelse*) is available in **Denmark**. Pensioners' housing allowance is calculated as the difference between 75 percent of the annual housing costs with addition of DKK 6,300, and 22.5 percent of the household income exceeding DKK 149,300. The calculation in respect of one person includes the housing costs for a gross floor space of 65 square meters. For each additional member of the household the calculation includes the housing costs for additional 20 square meters. The maximum housing costs included in the calculations is DKK 83.700 (2014 data). The pensioner shall as a minimum pay a share of the housing costs corresponding to 11 percent or more of his/her household income, provided always that such amount shall constitute not less than DKK 15,800. The calculated allowance for owners, including a pensioner living in a single-family house or an owner-occupied flat, is granted as a loan.

Denmark provides heating allowance for old-age pensioners (*Varmehjælp*). Heating allowance is calculated as decreasing percentage of the heating costs above a certain amount (the minimum the pensioners are obliged to pay themselves) and the pensioners' incomes. The maximum heating costs included in the calculations is DKK 24,700. Heating allowance is means-tested in the same way as the supplementary pension amount. The amount of assets is not taken into consideration. Maximum yearly amount: DKK 9,636 for a couple, and DKK 11,400 for a single pensioner.

Pensioner's housing allowance is available in **Finland** of maximum amount of 720 EUR per month (for singles). Pensioner's housing allowance may be awarded to pensioners residing in FI and whose amount is proportional to the pensioner's income and housing costs, as well as some other factors.

[5] Member States information provided for the SPC questionnaire "Information on Minimum Income Provision for Older People (MIPOP)", 2014

In **Hungary**, home maintenance support (*lakásfenntartási támogatás*) can be claimed if the income per consumption unit in the household does not exceed 250 percent of minimum old-age pension (*öregségi nyugdíj minimum*). The claimant is not entitled if the property of his/her household exceeds the limit defined by law. In addition, persons participating in a debt management procedure also qualify for this support. Around 15-20 percent of the whole spending is spent for older people; about 2-4 percent of old-age pensioners get this type of benefits.

Ireland provides a Household Benefits Package which includes a free TV license and a 35 EUR per month electricity/gas allowance for those aged 70 and other (or aged 66+ dependent on means test). A fuel allowance of 20 EUR per week is available during winter months (26 weeks). A domestic water conservation grant of 100 EUR per year is also available.

Lithuania provides reimbursement for Cost of House Heating, Hot Water and Drinking Water (*Būsto šildymo išlaidų, geriamojo vandens ir karšto vandens išlaidų kompensacija*). It is provided for poor families based upon a means test. A family should not have to pay more than 20 percent of the family income above the State Supported Income (valstybės remiamos pajamos), i.e. 101 EUR per family member for heating of a standard size of accommodation; 5 percent of the family income for basic standard of hot water; 2 percent of the family income for basic standard of drinking water.

In **Luxembourg**, the housing allowance is available (up to 123.90 EUR per month) when the household pays rent for the housing. The amount equals the difference of the effectively paid rent and an amount of 10 percent of the supplementary allowance, with a maximum of 123 EUR. Legal residences in LU are entitled to receive "Cost-of-living type allowance" (*Allocation de vie chère*): 1320 EUR per year for a single household and 1650 EUR per year for a couple. All beneficiaries of the minimum income scheme qualify for this additional benefit.

An allowance called "*complément accueil gérontologique"* is granted for residents of care institutions (nursing homes and so-called integrated centres for the elderly) whose income and wealth is insufficient to pay for accommodation in these institutions. The allowance is directly paid to the institution consists of the difference between the price of accommodation and the personal contribution of the beneficiary.

Local municipalities in **Latvia** are entitled to provide housing allowance to ensure material support for families or separately living persons with low income to pay rent and public utilities. According to the relevant legislation, a housing allowance is the second mandatory benefit (after GMI benefit) that shall be paid to a person or a family of the relevant local municipality. Housing allowance is paid from the municipal budget. Within the framework of a housing allowance municipalities pay for different services: rent, heating energy (fuel), water, drainage or sanitation, waste taking-out, electricity. The amount of this allowance varies from one municipality to another depending on the available resources. Local governments which pay the housing allowance as a fixed amount usually cover a narrower range of services, which are, in most cases, rent or management (administration) fee and part of expenses related to the purchase of heat or fuel. The municipalities also have different procedures for payment of housing allowance – some pay the allowance to the person directly, while some pay to service providers and managers. The ratio of persons at retirement age is the highest among other social groups who receive housing allowance.

In **Malta**, Energy benefit is awarded where the total annual household income is less than EUR 8,800. The maximum amount is tied to consumption of electricity and capped.

In the **Netherlands**, the maximum amount of housing allowance is EUR 328 per month (has to be less than 21.600/yr gross), depending on personal income, assets and amount of rent (between 225 and 699 EUR/month).

Portugal provides benefit from Extraordinary, social support in the consumption of electricity and

natural gas (discount on the invoice of electricity and natural gas set annually by the government).

Housing supplement for pensioners is available in **Sweden** (maximum – SEK 4,990 per month) when income are below SEK 8,029 per month, for single persons (rent/housing cost – from SEK 5,000 per month, assets under SEK 100,000).

Slovenia provides rent subsidies.

In the **United Kingdom**, Housing Benefit payments are made by local authorities to help tenants with their rent and some service charge liabilities. For owner-occupiers, the Department for Work and Pensions makes payments towards the interest due on: loans taken out to buy the property; loans for specific repairs and improvements; as well as ground rents, and some service charges. Help towards tenants' and owner-occupiers' housing costs will be delivered by one benefit, Universal Credit, which is being rolled out at present Winter fuel payments are provided for older people (£200 per household where everyone is under the age of 80, or £300 where there is a person in the household aged 80 or over).

Box 2.4 provides examples of other allowances available in Member States for older people with low income.

Box 2. 2: Other allowances in Member States

According to the programme in **Bulgaria** on "*Providing social assistance through implementing a differentiated approach*", monthly targeted allowances are designed to meet an incidental health, educational, public utilities and other vital needs of the persons.

In **Cyprus**, additional benefits are provided under the Guaranteed Minimum Income scheme (effective 1-Jul-2014) for social care (this can be either granted on a cash or in-kind basis) and varies by type of care needed. Special eligibility conditions for social care should be fulfilled.

In **Denmark**, personal allowance (*Personligt tillæg*) may be paid to old-age pensioners whose financial situation is particularly difficult. The local council shall base its decision on a specific and individual assessment of the pensioner's financial situation. Pensioners, who do not receive a full public old-age pension due to less than 40 years of residence, and whose financial situation therefore might be particularly difficult, can apply for a personal allowance.

Estonia provides supplementary social benefit paid from state budget. A subsistence benefit recipient in a family where all other members are minors has the right to receive an additional social benefit of EUR 15 accompanying the subsistence benefit. For example a grandmother who is living together with her 14 year old grandchild may receive this benefit.

Other occasional/transitional support is available in **Hungary** depending on the local authorities' regulation and it may be granted in exceptional cases (serious illness, death in the family, etc.), in extraordinary life situations provided by local governments (e.g. the most typical is the temporary assistance, funeral aids). Around 30 percent of the whole spending is spent for older people, about 2 percent of old-age pensioners get this type of benefits.

Travel discounts for elderly people are available in **Hungary**. Persons (aged 65 years or over) travel free of charge on long distance and local services. Based on the "Supply travel voucher", retired persons under the age of 65 are eligible 16 times special ticket with 50-90 percent discount per year.

In **Luxembourg**, the means tested general social assistance "*revenu minimum garanti - RMG*" is available to residents aged 25+, and thus also for elderly people whose pension entitlements are below the RMG-threshold. As for 2015 the RMG amounts to 1.348 EUR for single households and 2.022 EUR for households with two adults (386 EUR for each additional adult).

A so-called education lump sum (*"forfait d'éducation"*) of 86 EUR/month/child is available to persons aged 65+ who were primarily occupied with the education of their children provided that the corresponding period has not been considered in any form for their personal old-age pension entitlements. The lump sum is tax financed and especially aims at former housewives.

In **Ireland**, the elderly aged 80 or over receive an "Over 80's allowance" of €10 per week on a State pension payment. The "Living alone allowance" of 7.70 EUR per week (rises to 9 EUR in 2015) is available to those aged 66 and over in receipt of a State pension.

In **Latvia**, a single benefit is available in an emergency situation if, due to a natural disaster or unforeseen circumstances he or she is not able to satisfy his or her basic needs. The amount of this benefit varies from one municipality to another depending on the available resources.

Malta provides Supplementary allowance when the total annual household income is less than EUR 8,800 if single, and EUR 10,968 if married.

Social supplement (*Complemento social*) is available in **Portugal** when the pension amount calculated in general terms is lower than the minimum guaranteed amounts. This supplement does not depend on a means or residence test.

In the **United Kingdom**, there is a free Television license for older people (aged 75 and over). Free public transport is available for people aged 66 and over in **Ireland.** Older people can also travel free on local buses in the **United Kingdom** (based on certain age criteria).

The elderly may also benefit from other services such as local food banks which have played an important role in many countries during the crisis in ensuring that vulnerable people have access to free food. Much of this support is provided through charitable organisations, however, and official data on the number of beneficiaries are not available.

In some countries it is possible for low-income seniors to receive free dentures, eye tests and prescriptions. Older people commonly receive discounts for museums, theatres, concerts and other cultural events and have easier access to information (internet, publications) in libraries. Some financial institutions (banks) do not charge the elderly for bank cards.

2.5. Working until and after the pensionable age[6]

Pensions are meant to replace earned income at the time of retirement from work. With a few exceptions, entitlement to a full pension in EU Member States is contingent on paying earning-related contributions over a long working career. Hence it is important that the length of peoples' careers and the age at which they cease working are reasonably well aligned with the pensionable age and with the contributory career requirements of pension systems. This subchapter explores data that may help us identify the extent to which people are currently able to work until the standard pensionable age. It also examines the reasons for continuing to be economically activity beyond the pensionable age.

[6] This subchapter draws heavily on the following sources: Eurostat (2014): 'Transition from work to retirement', Statistics Explained 03/09/2014; Eurofound (2012): 'Income from work after retirement in the EU'; Eurofound (2014): 'Work preferences after 50'; and OECD (2015): 'Report to the European Commission on Delivering longer working lives and higher retirement ages in the EU'.

2.5.1. Pensionable ages versus effective retirement ages

Pensionable ages in public pension schemes (Table 2.2), pension take-up ages (Figure 2.30) and retirement patterns differ substantially among EU Member States. As we look to available data on retirement we are generally hampered by the absence of comparative administrative data on pension take-up. Moreover we need to be as precise and nuanced as possible in our use of terminology and concepts. Thus we need to distinguish between the age at which people stop working and the age at which they take up a pension benefit. That is we should avoid confounding the effective pension take-up age with the effective labour market exit age. To the extent possible we should also separate the take-up of an early retirement benefit and its functional alternatives (such as for example 'bridges' in unemployment insurance systems) from the take-up of an old-age pension. Unfortunately data that allow for this are only available in special LFS modules and in stand-alone studies, wherefore we will be drawing on these.

Table 2. 2: Legislated pensionable ages (applied in 2013) in EU-28, 2013

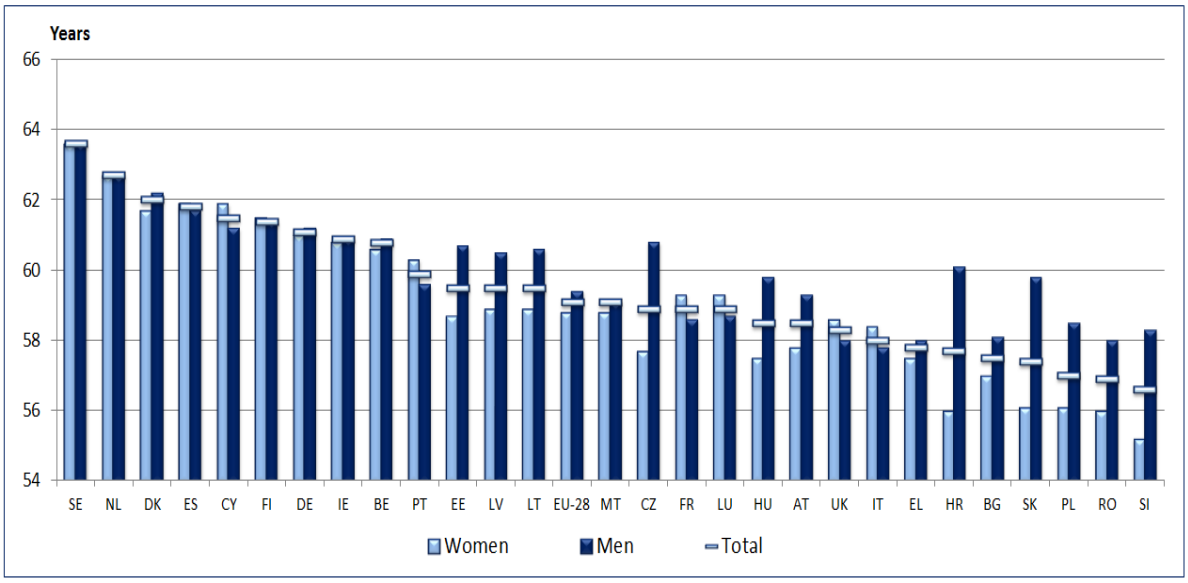
Member State	Men	Women	Member State	Men	Women
Belgium	65		Lithuania	62y10m	60y8m
Bulgaria	63y8m	60y8m	Luxembourg	65	
Czech Republic	62y5m	57y8m-61y8m[7]	Hungary	62	
Denmark	65		Malta	62	
Germany	65		Netherlands	65y1m	
Estonia	63	62	Austria	65	60
Ireland	65		Poland	65y1m[8]	60y1m
Greece	67	62	Portugal	65	
Spain	65-65y1m[9]		Romania	64y8m	59y8m
France	61y2m		Slovenia	65	63y6m[10]
Croatia	65	60y9m	Slovakia	62	57y6m-61y6m[11]
Italy	66y3m	62y3m[12]	Finland	63-68[13]	
Cyprus	65		Sweden	61-67[14]	
Latvia	62		United Kingdom	65	61y4m-61y10m

Data source: Member States

Figure 2.30 depicts the average age at which people aged between 50 and 69 first drew a pension, based on 2012 data from the Eurostat database and computed using the 2012 LFS specific module on transition from work into retirement.

7 Depending on the number of children raised.
8 Since 1 January 2013 the retirement age gradually increases by 1 month per three months.
9 If qualifying period completed - and if not completed.
10 It holds true only for women in the period 2013-2015; later 65 years (ZPIZ-2 27/1). Provided that his/her pensionable age is at least 15 years.
11 Depending on the number of children raised.
12 After 2020 SPA will be linked to life expectancy.
13 Flexible retirement age linked to benefit level.
14 Flexible retirement age linked to benefit level.

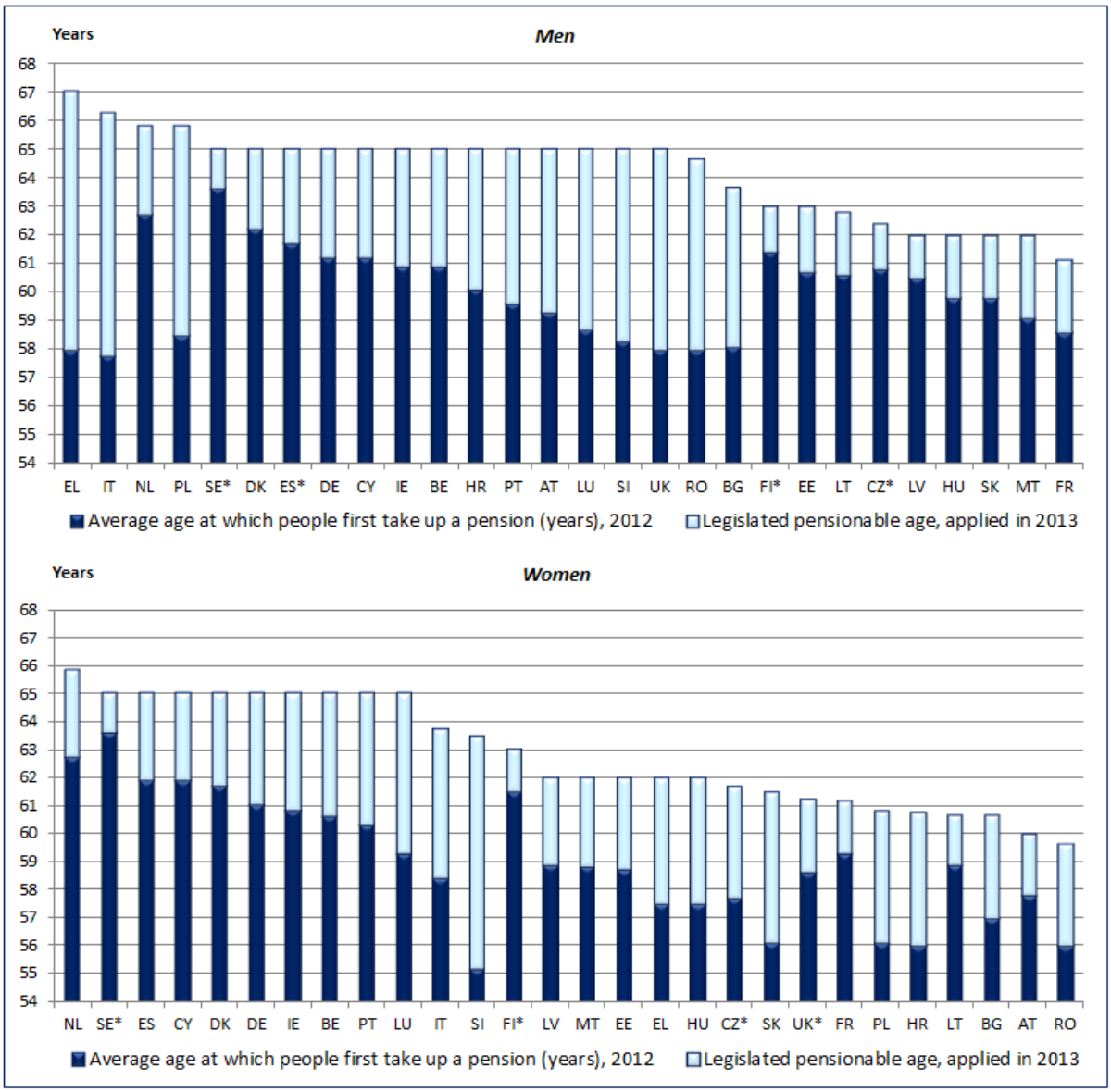
Figure 2.5: Average age at which people first take up a pension (years), 2012



Data source: Eurostat. Note: according to the national statistics, the average age in Hungary for new pensioners was 61.7 years (male), 59.1 years (female) and 59.9 years (total).

For men, this average age varies from under 60 in 14 European countries including Austria, France, Greece, Italy, Hungary, Luxembourg, Malta, Romania, Slovenia and the Slovak republic, to nearly 64 in Sweden. The average age for men is around 60, for women it is 59, and the age of first pension is lower for women than men in all countries bar Cyprus, Finland, France, Italy, Luxembourg, Portugal, Spain and the United Kingdom. The lowest average ages – 56 or under – are found in Croatia, Romania and Slovenia while the oldest female claimants, at 62-64 years of age, are found in Cyprus, the Netherlands, Spain and Sweden. In all Member States the average age at which people first take up a pension is below the legislated pensionable ages for both men and women (Figure 3.31).

Figure 2.6: Average age (years) at which people first took up a pension in 2012 and legislated pensionable age (applied in 2013), for men and women



*Data source: Eurostat (average age at which people first take up a pension) and Member States (Legislated pensionable age). Note: * Legislated pensionable age varies (see Table 2.2)*

2.5.2. Reasons people give for leaving the labour market at career end

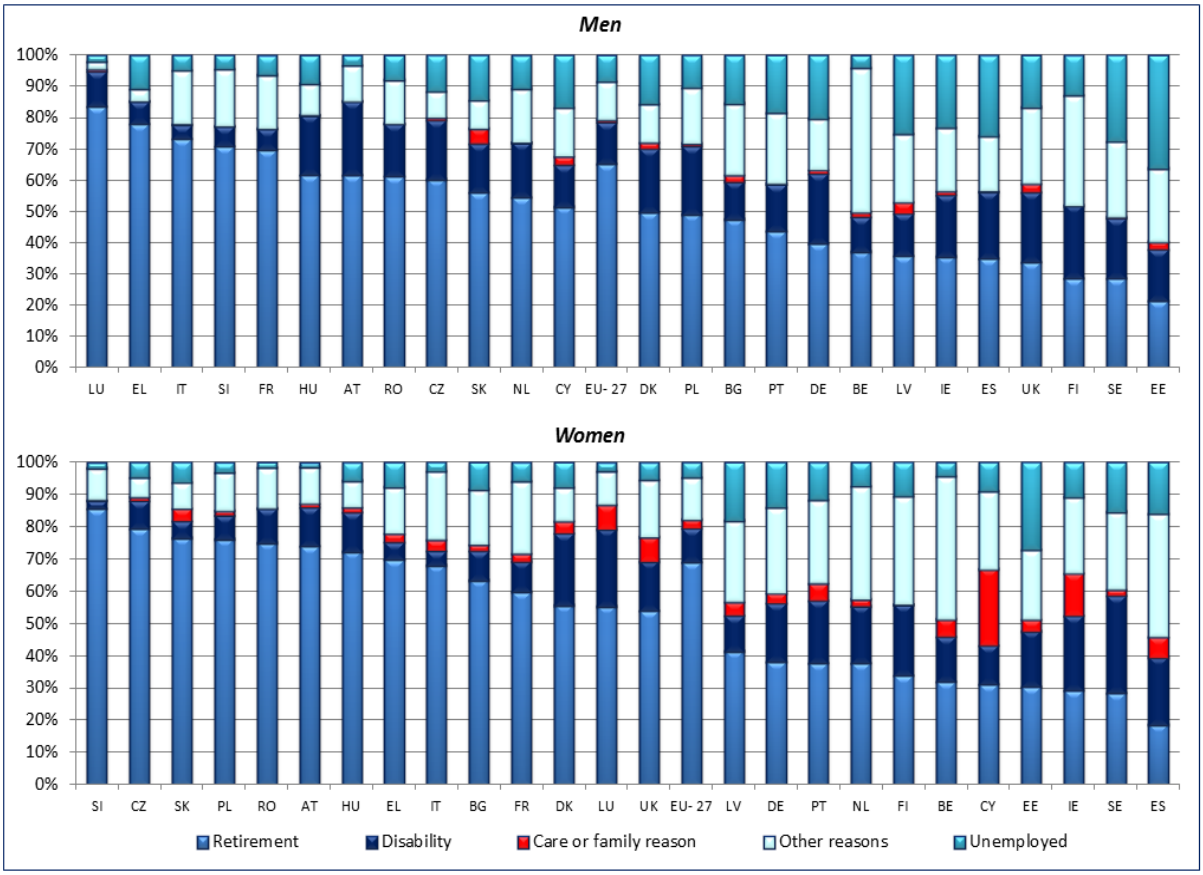
Data from the European Labour Force Surveys (2010) show that when people leave the labour market at the end of their working careers they do so for a number of other reasons than to take-up an old age pension (Figure 2.32).

Retirement – in the sense of ceasing to work and taking up a pension benefit - is a frequent reason for labour market exit for 55-64 year olds. But the data we have from the LFS also include early retirement. Thus in Denmark, Ireland, the Netherlands, and Poland more than half of men's retirement exits in 2010 occurred through early-retirement benefit options. Moreover, labour market exit happens for many other reasons, including unemployment, disability and ill health, or the need to provide care or meet other family responsibilities.

More than a quarter of male exits from employment occurred through unemployment in six countries: Estonia, Germany, Ireland, Latvia, Spain and Sweden. Exit through unemployment

affected 27 percent of women in Estonia. More than one-fifth of men's and women's labour market exits occurred through disability or ill health in Austria, Finland, Denmark and Spain.

Figure 2.7: Reasons for leaving the labour market (by gender), 2010



Source: OECD calculation based on the European Labour Force Surveys (LFS), 2010

Though only 2 percent of male and 4 percent of female exits were primarily due to family caring duties, these averages mask very large differences between countries, with caring duties being a significant factor in Cyprus, Ireland and the Czech Republic. Moreover, caring obligations could also be a subsidiary reason for retirement in the sense of pension take-up.

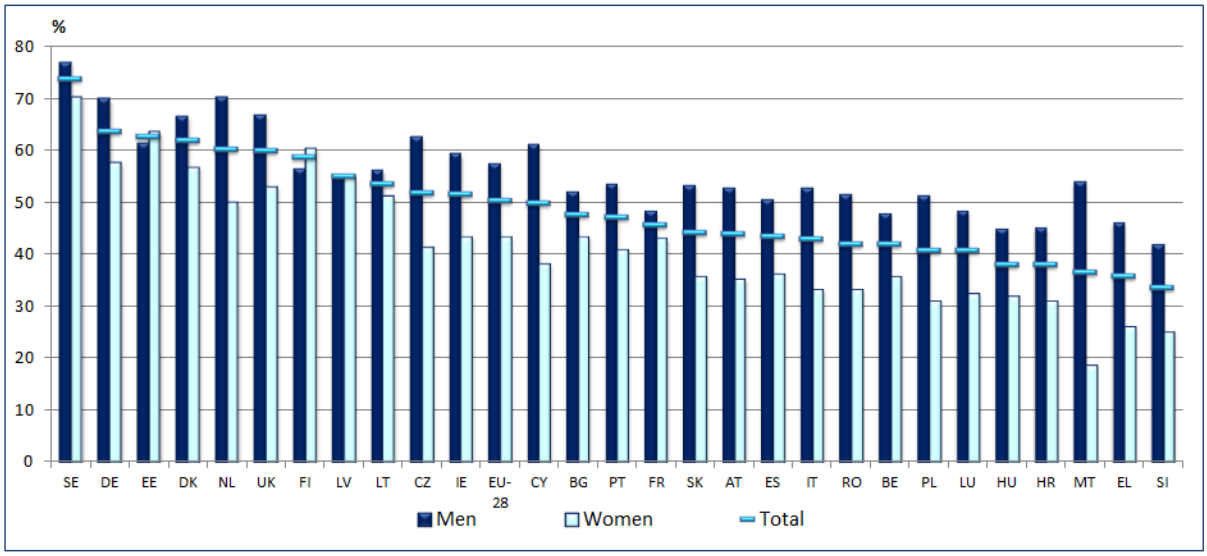
In fact, pension take-up is the main form of labour market exit in only nine European countries - Austria, the Czech Republic, France, Greece, Hungary, Italy, Luxembourg, the Slovak Republic and Slovenia.

2.5.3. Employment rates of older workers in Europe

Another proxy indicator of the extent to which Europeans work until the pensionable age before they retire is the employment rate of older workers.

As workers age they are less likely to be in employment than in their prime-age. While the employment rates of workers aged 55-64 in the EU28 countries averaged 50 percent in 2013, the average among workers aged between 25 and 54 was 77 percent. However, the extent to which employment rates decline as workers become older varies markedly across countries. In 2013, the employment rates of all workers aged 55-64 were more than twice as high in Sweden (74 percent) than they were in Slovenia (33 percent), as seen in Figure 2.33. At the same time there are big gender differences, with employment rates for women aged 55-64 employment rates ranging from 19 percent in Malta to 70 percent in Sweden.

Figure 2.8: Employment rate of older workers (55-64 years), EU-28, 2013



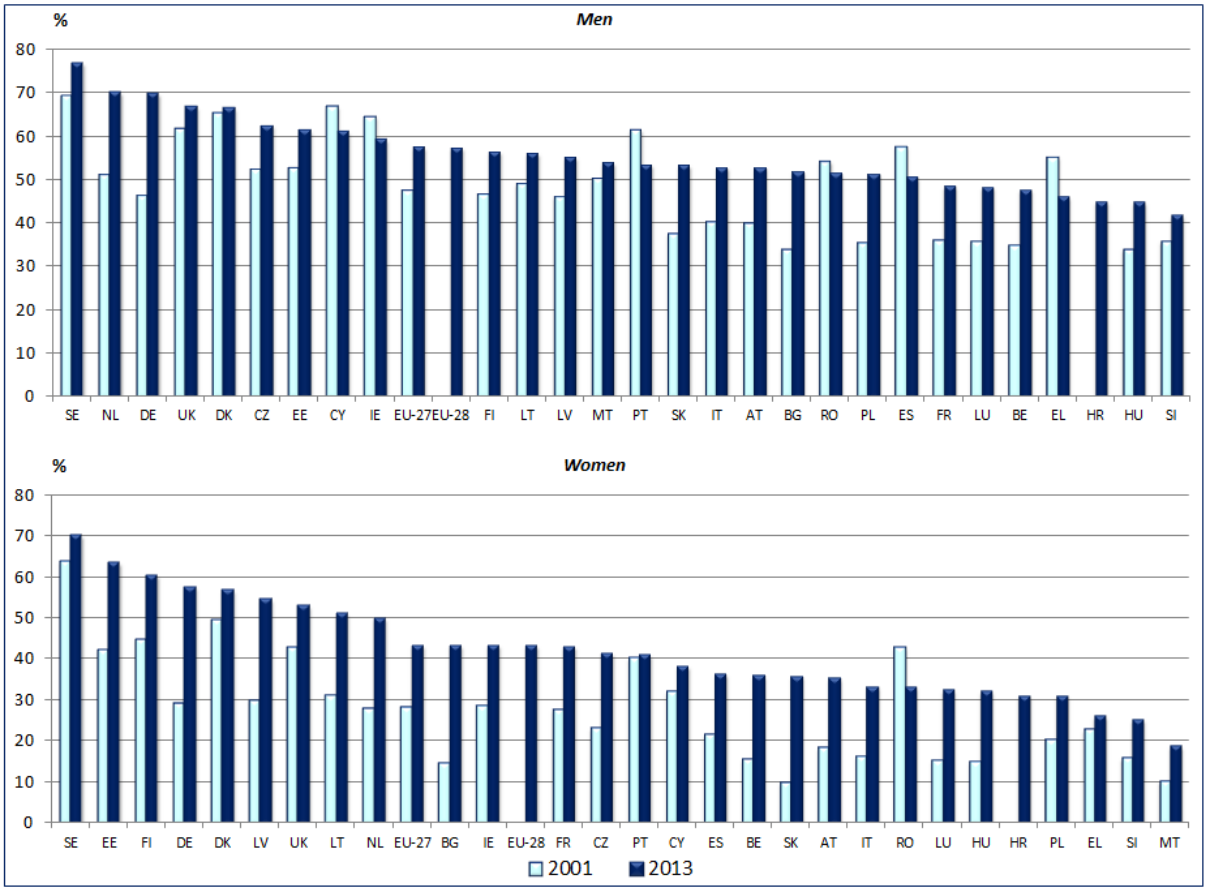
Data source: Eurostat.

Since the turn of the millennium, however, the long standing downward trends in effective exit ages in the EU has been reversed with employment rates of older workers improving by more than a third and having continued to rise even during the crisis in all countries, with the exception of those particularly badly hit by recession. The key characteristics that are related to the relative propensity to work longer are age, gender, educational achievement level and sector of employment.

Focusing on employment rates of older workers by age group, gender and education helps disentangle composition effects behind aggregate trends. In particular, breaking down the changes in employment rates between 2001 and 2013 by gender suggests that much of the increase has been due to increased employment rates of female older workers.

Figures 2.34 demonstrates that, while employment rates for men aged 55-64 had improved by about 10 p.p. from 48 percent to 58 percent, the rates for women have increased by 15 p.p. from 28 percent to 43 percent. Meanwhile, national rates have also converged somewhat: while rates for female older workers in 2001 varied by more than a factor of six (between 10 percent in Slovakia and 64 percent in Sweden) the range has now narrowed to less than a factor of four (between 19 percent in Malta and 70 percent in Sweden.

Figure 2.9: Employment rate of men and women aged 55-64, in 2001 and 2013

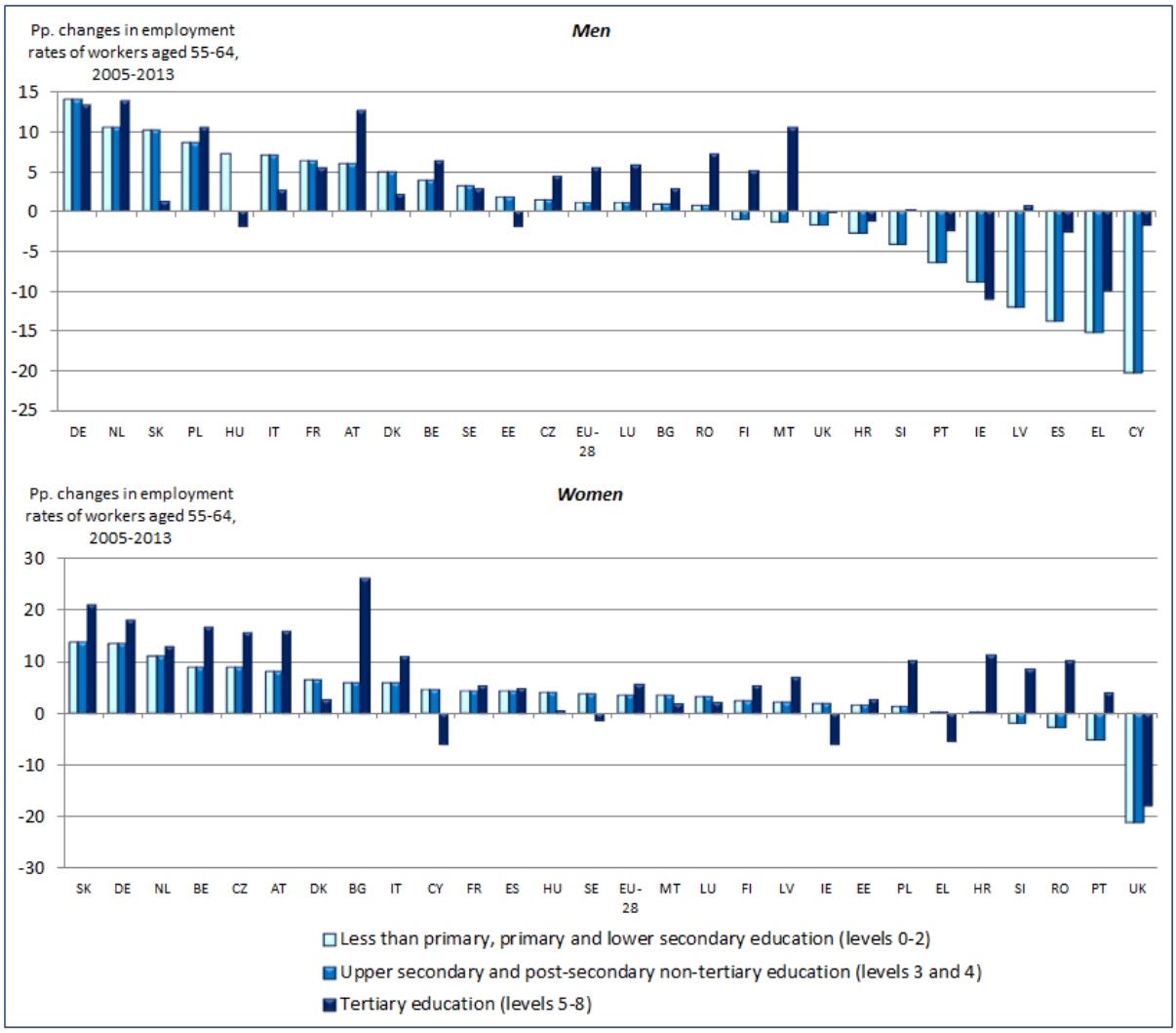


Data source: Eurostat. Note: data for 2001 are not available for HR and EU-28

Since the pensionable ages in most Member States have been stable, or only raised towards the end of this period, the sizeable improvements in employment rates of older workers can generally be taken to indicate that the gaps between effective retirement ages and pensionable ages have narrowed, and that people work until the pensionable age to a greater extent than a decade ago.

Further investigation suggests, however, that these changes vary widely across education levels. In the majority of European countries both men and women with the lowest education levels tend to display lower employment rates in 2013 compared to 2006, implying that the benefits of increased participation in the labour market are largely for those with stronger socio-economic characteristics. Also, increases in the employment of women with tertiary education have tended to be greater than those of men (Figure 2.35).

Figure 2.10: Changes between 2005 and 2013 in employment rates of people aged 55-64, by education level (by gender)



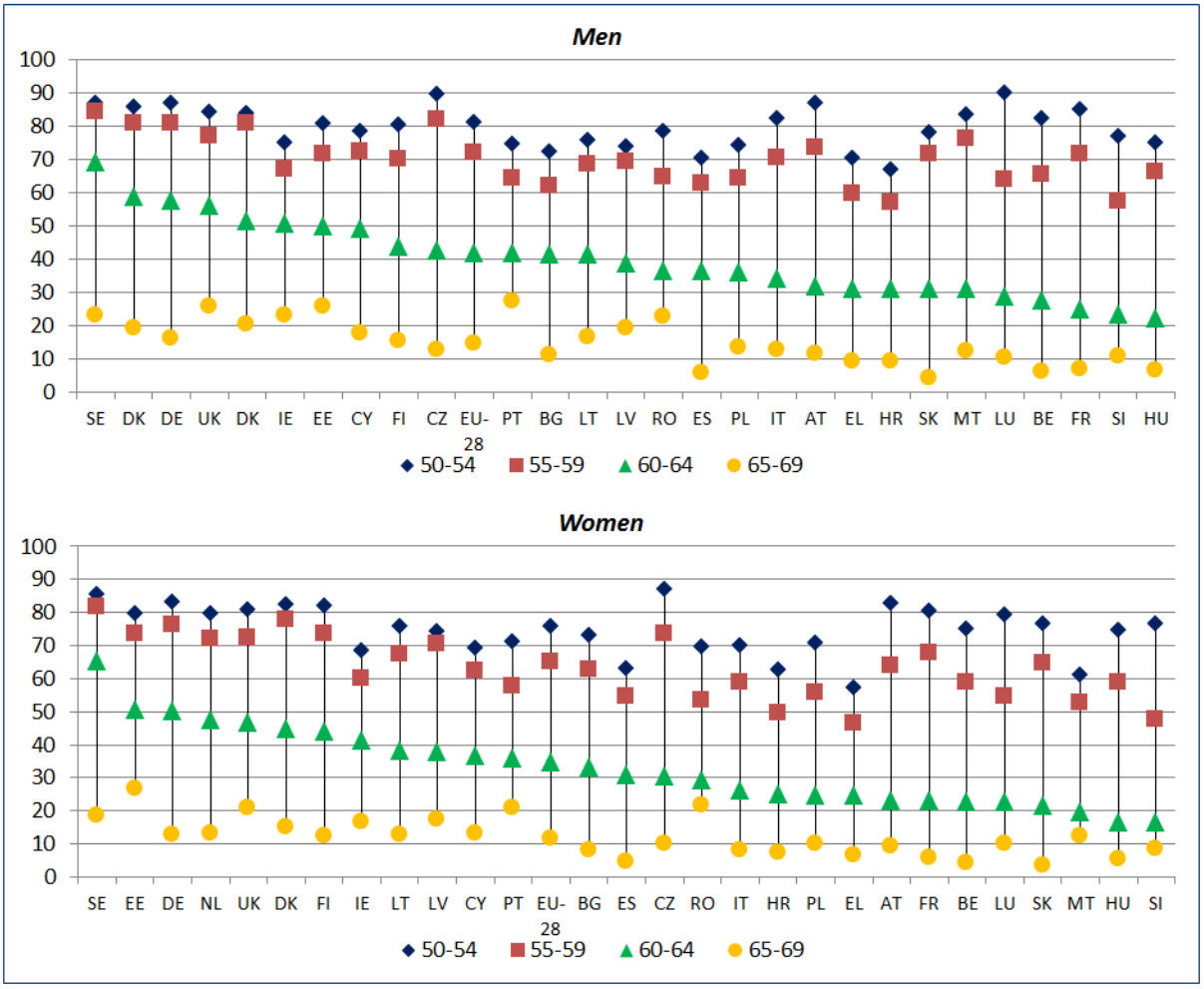
Data source: OECD, based on data from Eurostat, variable lfsa_ergaed

The distribution of older workers across different areas of economic activities also varies substantially across countries and by gender. For example, about one-third of female workers aged 55-64 are found in Education, Human, health and social work activities, while about one-third of men are found in manufacturing and construction activities. The proportion of older workers working in services as opposed to manufacturing and extractive industries or primary occupation like agriculture and fishing has grown significantly since the 1990's. Generally, this would facilitate that people to work to higher ages, both because people would tend to have started working live later and because their work would be less physically demanding.

2.5.4. The waning of late-career employment across the EU

Figure 2.36 further breaks down the late-career employment rates for men and women by age, confirming that they tend to decline rather unevenly with age. Pensionable ages and national retirement practices give rise to a rather varied set of exit age peaks.

Figure 2.11: Employment of men and women workers aged 50+ by 5-year age groups, 2013



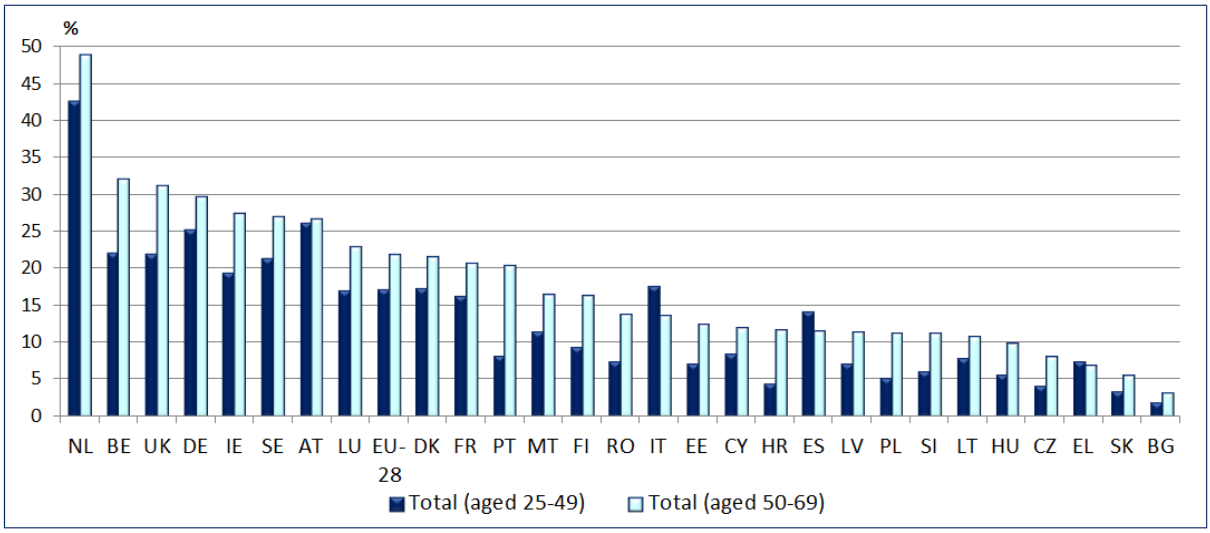
Data source: Eurostat. Note: sorted by age group: 60-64.

Thus cross-country differences are very large. In countries such as the Netherlands and Sweden, the gap between the employment rates of men aged 50-54 and 55-59 respectively is very small. By contrast, this gap is very wide in Austria, Belgium, Bulgaria, France, Italy, Luxembourg, Romania and Slovenia.

Very large differences are also observed between the employment rates of 60-64 year olds and 65-69 year olds. This is also evident in countries which have high employment rates of older workers such as Germany, the Netherlands and Sweden. The situation is very similar for women (bottom panel of Figure 2.36). The pattern of how employment tapers off and when retirement peaks occur reveals large variations across these 5-year groups, but the general picture for women is still one of decreasing employment rates. Countries to the left of the table have key retirement thresholds after ages 55 and 59 while, for those on the right side of the table, peak exits start five and, for a few countries, ten years later.

Moreover, it is important to notice that it is not just the levels of employment, but also the average number of working hours, that are changing as people age. The growing importance of part-time work from prime-age to late-career employment is illustrated in Figure 2.37.

Figure 2.12: Difference in part-time frequency between prime-age and older workers (part time employment by age group), 2012

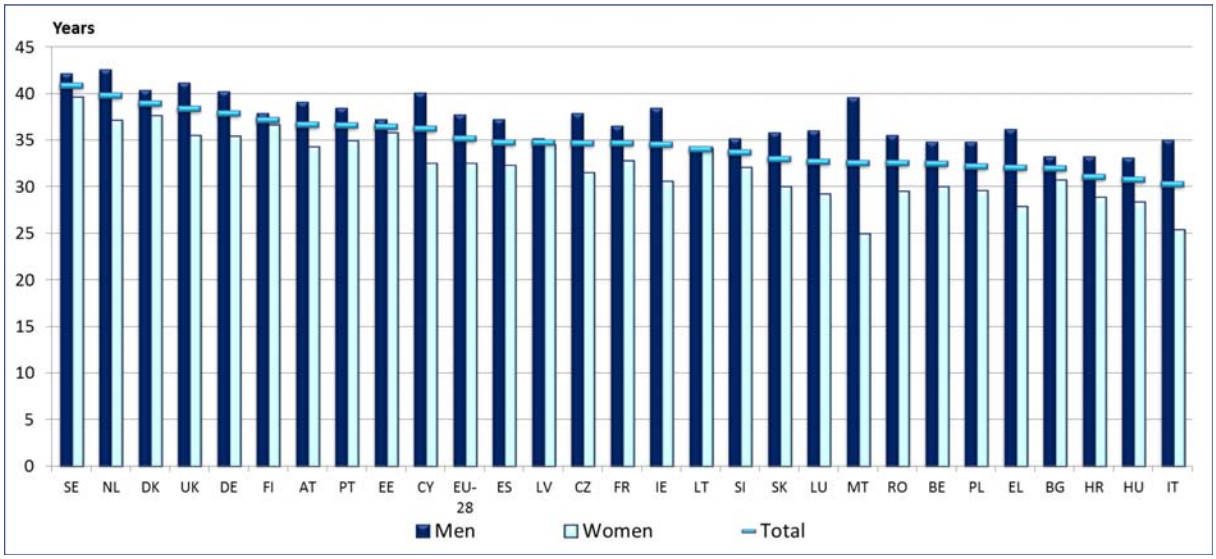


Source: Eurostat – Transition from work to retirement, LFS AHM 2012

When we look at the length of the working careers people manage to complete (excluding time that may be credited to them by pension systems due to the crediting of non-contributory periods) the indicator for the average duration of working lives is seen to represents the best proxy.

Figure 2.38 demonstrates a difference in the total average duration of working lives of more than 10 years across the EU. For men these differences amount to about 9 years and it is only in four Member States that the duration meets or exceeds the reference pension career length of 40 years.

Figure 2.13: Duration of working life, 2013, EU-28



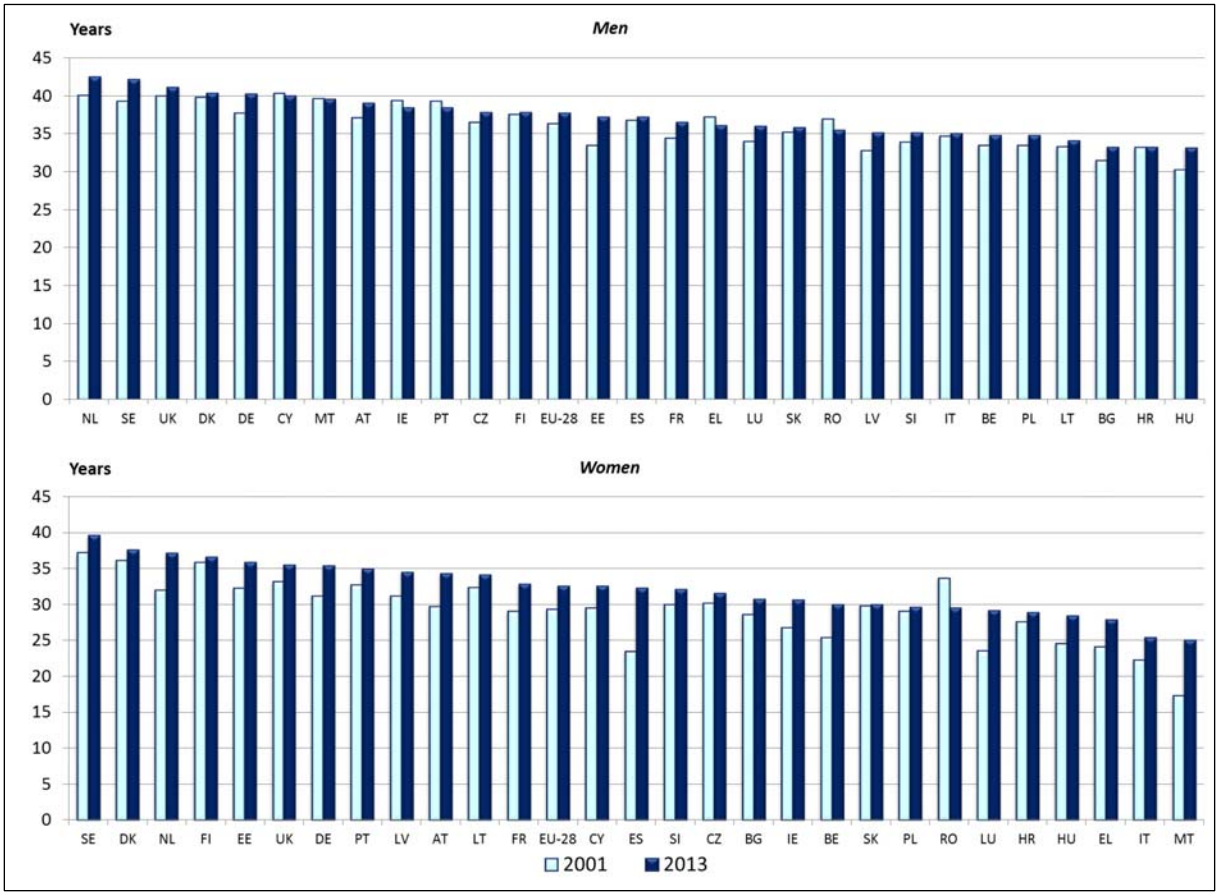
Data source: Eurostat

For women the duration ranges from 25 years in Italy to 40 in Sweden but with the duration of working life for women still below 30 years in eight Member States.

When we turn to recent developments in the duration of working lives, the picture becomes more positive. While improvements for men were moderate between 2001 and 2013, they did improve in all but six particularly crisis affected Member States and Malta.

For women average working lives extended in all EU countries with the exception of Romania (Figure 2.39). Particularly large improvements occurred in countries such as Spain, Malta, Luxembourg, Belgium, Ireland and the Netherlands, while countries like Germany, Austria and France experienced notable increases.

Figure 2.14: Duration of working life for men and women in 2001 and 2013



Data source: Eurostat

This shows that more women are completing careers that are long enough to allow them to qualify for a contributory pension. However, average women's working lives are still far shorter than the 40 years reference base used for theoretical replacement rates.

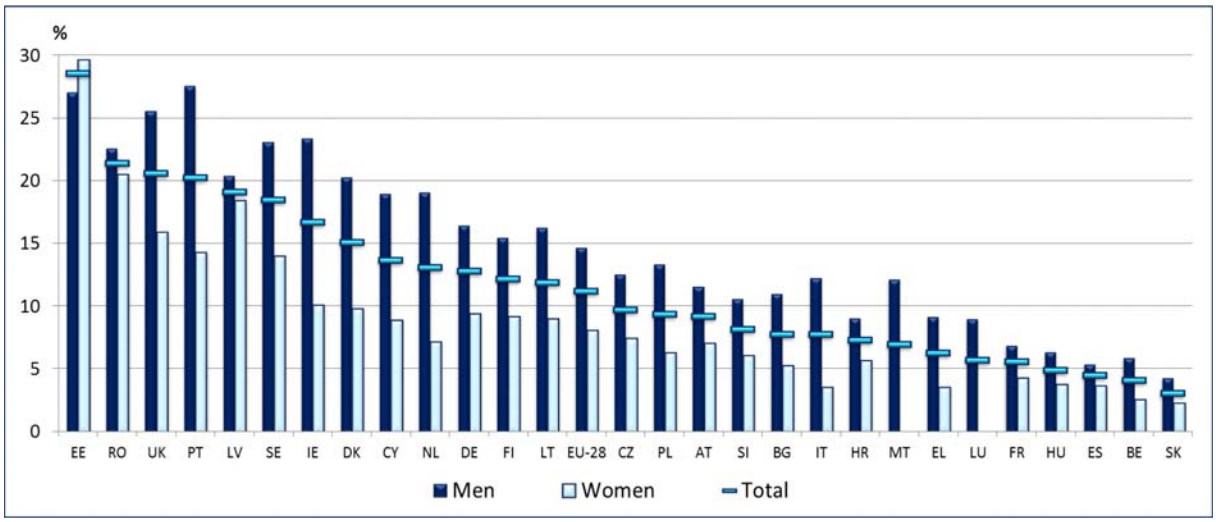
Figure 2.39 provides data on duration of working life for men in 2001 and 2013, showing the highest duration of working life for men in 2013 being in the Netherlands, Sweden and the United Kingdom. However, from 2001 to 2013 it decreased in Romania, Greece, Ireland, Portugal, Cyprus and Malta.

2.5.5. Working beyond 65 and combining income from work with pension

Over the past decade, it has become more common for Europeans to work beyond the age at which they are entitled to a public old-age pension or an occupational pension, with well over four million people aged 65 and over in employment in the EU in 2013.

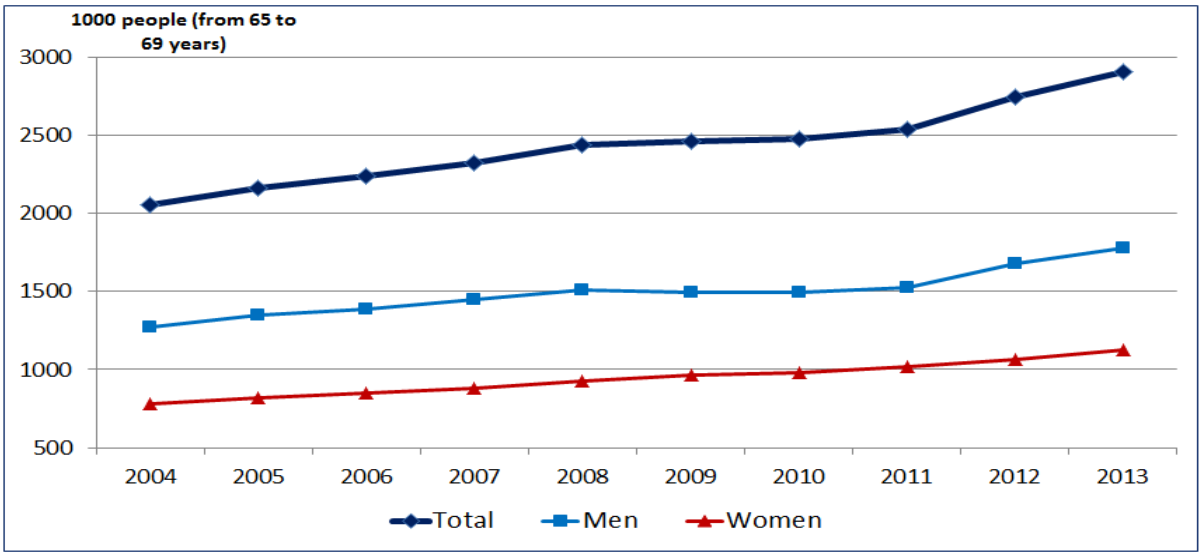
The average employment rate for 65-69 year olds in EU-28 was 11 percent, with 15 percent of men and 8 percent of women still working (Figure 2.40). The frequency of employment varies by a factor of nine, ranging from 27 percent in Estonia to 3 percent in Slovakia. In seven Member States more than one in five men in this age range was in paid work. The gender gap tends to be large but in a few countries it is moderate and in Estonia the frequency is higher for women than for men.

Figure 2.15: Employment rates for 65-69 year olds, 2013



Data source: Eurostat

Figure 2.16: Trend in work beyond retirement: employment rate of older people (aged 65-69 years) in the EU-28 (2004-2013)

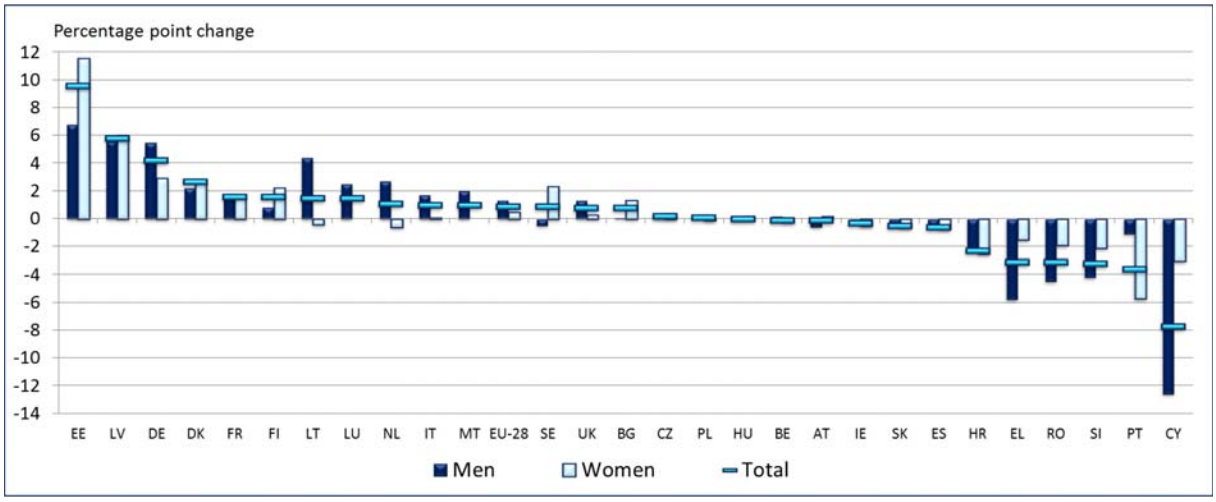


Data source: Eurostat

From 2005 to 2013, the employment rates (self-employment included) of people aged 65 to 69 increased from 9 percent to 11 percent in the EU-28 (Figure 2.41). The largest increases

occurred in Finland, the UK, Lithuania, Germany and Austria. From 2010 to 2013, the largest increases were found in Estonia, Latvia and Germany (Figure 2.42).

Figure 2.17: Percentage point changes in employment rates of older people (aged 65-69 years) in Member States (2010-2013)



Data source: Eurostat

But what are the consequences if people work and earn income after reaching the pensionable age? Do they have to take-up their pension or can they defer it and what are the rules for combining pension benefits with earned income? In most EU Member States (except Ireland, Luxembourg and the Netherlands), public pensions can be deferred beyond the standard statutory retirement age for a limited or unlimited period (Table 2.3).

Table 2. 3: Limits on combining work and pensions, 2012

Member State	Rule	Member State	Rule	Member State	Rule
Austria	<65: above EUR 349.01/month the pension is fully withdrawn; > 65: no limit	Greece	Possible after age 55. Limited if monthly pension income is > EUR 733, the pension in this case is reduced by 70 percent for every extra euro.	Portugal	No limit, but working in the same company as before retirement is not allowed for three years after pension
Belgium	If above EUR 21,436.5 (single) the pension is reduced by the amount beyond the limit. If earnings are 15 percent above the threshold, the pension is fully withdrawn	Hungary	Payment of pensions for people working in public sector is suspended. For pensioners below statutory retirement age, the pension payment is suspended until the end of the year once the annual earnings reach 18 times the minimum wage (€ 6,027).	Romania	It is only allowed to combine work and pension if pension < than the gross average wage (EUR 463/year)
Bulgaria	No limits	Ireland	Limit: EUR 38/week under the State pension (transition) payable between age 65 and 66. There is no limit for the SPC	Slovakia	No limits. There are restrictions for early retirement (it is not possible to receive an early old-age pension and also have mandatory pension insurance).
Cyprus	No limits.	Italy	No limits. However other social benefits (i.e. disability) or survivors' pensions are cut progressively if annual income is > EUR 23,826.40 or > EUR 18,229.77 respectively	Slovenia	Limits below normal retirement age

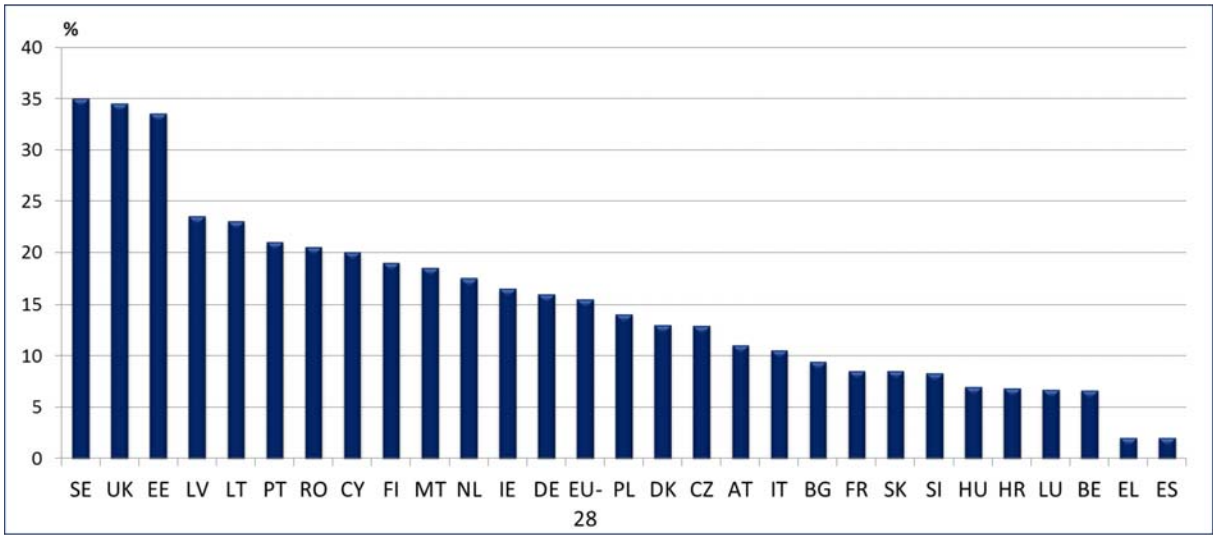
Member State	Rule	Member State	Rule	Member State	Rule
Czech Rep	No limits. Additional annual 0.4 percent receiving full pension. There are restriction for early retirement	Latvia	No limits. The pension contribution rate is lower when combining work and pensions rather than for pension deferral	Spain	<65: pension reduced according to the length of the working day
Denmark	The basis pension amount is reduced by 30 percent of the pensioner's personal income from work exceeding DKKs 305,700 (2015). The pension supplement is reduced if the sum of (1) the pensioner's income from work exceeding DKK 60.000 and (2) the pensioner's other incomes and (3) a possible spouse / cohabiting partner's incomes (all sources) together exceeds DKK 67.000 (single pensioner) or DKK 135.400 (married or cohabiting pensioner.	Lithuania	No limits	Sweden	No limit
Estonia	No limits	Luxembourg	<65: Pension is reduced (or withdrawn) if pension income + work income > average of 5 highest salaries of the career. >65: No limits. Contributions paid when working are refunded on request at the end of the year	United Kingdom	Pension credit is reduced by full income receipt as long as income is below EUR 168.77/week
Finland	No limits	Malta	No limits. Contributions rate: 10 percent of wage until 65 (then contributions stop		
France	No limits for the over-65s and for those aged between 60 and 65 who have contributed for at least 40 years	Netherlands	No limits		
Germany	Means-tested benefit for the over 64 if > EUR 180/month: reduced by 30 percen of income earned and fully withdrawn if income > of the full means-tested (i.e. EUR 180). For those aged <65 on early statutory retirement: amounts exceeding EUR 400 /month are deducted from pensions	Poland	Limits below normal retirement age		

Source: OECD (2013b) "OECD Reviews of Pension Systems: Ireland" compiled using information provided in Eurofound (2012), Income from work after retirement.

Moreover, additional accruals may be earned over these years resulting in a higher pension when the retiree starts draw it. In some Member States this accrual rate is particularly high compared to pre-statutory retirement age accruals, and there may be no limits to the period over which the pension can be deferred. In others, however, additional accruals are moderate and deferral times limited.

Figure 2.43 depicts the percentage of people, who continue working while drawing their old-age pension. In Sweden, the UK and Estonia this is more than one third of old age pensioners. But in the ten Member States to the right of the figure the share is below 10 percent.

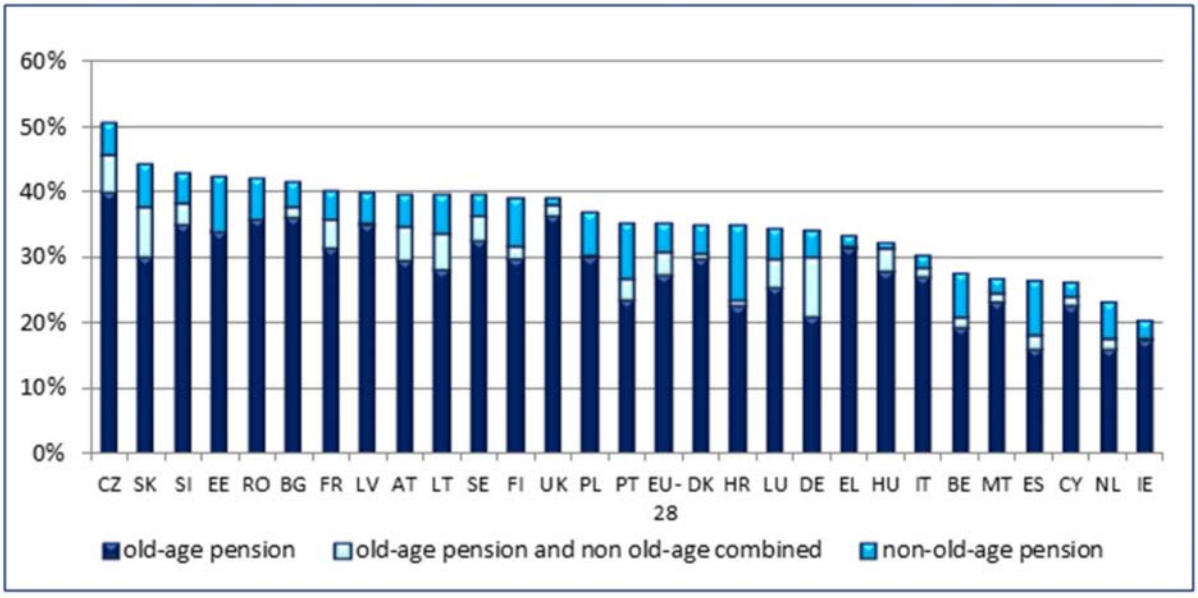
Figure 2.18: People who continue working while receiving an old-age pension (% of people receiving an old-age pension), 2012



Source: Eurostat – Transition from work to retirement, LFS AHM 2012

In several countries the pensionable age is below 65 and people may be in receipt of different types of pensions, while they continue to work. Figure 2.44 illustrates pension recipients aged 50-69 years across the EU and the type of pensions they receive.

Figure 2.19: Pension receivers (aged 50-69): type of pension, 2012



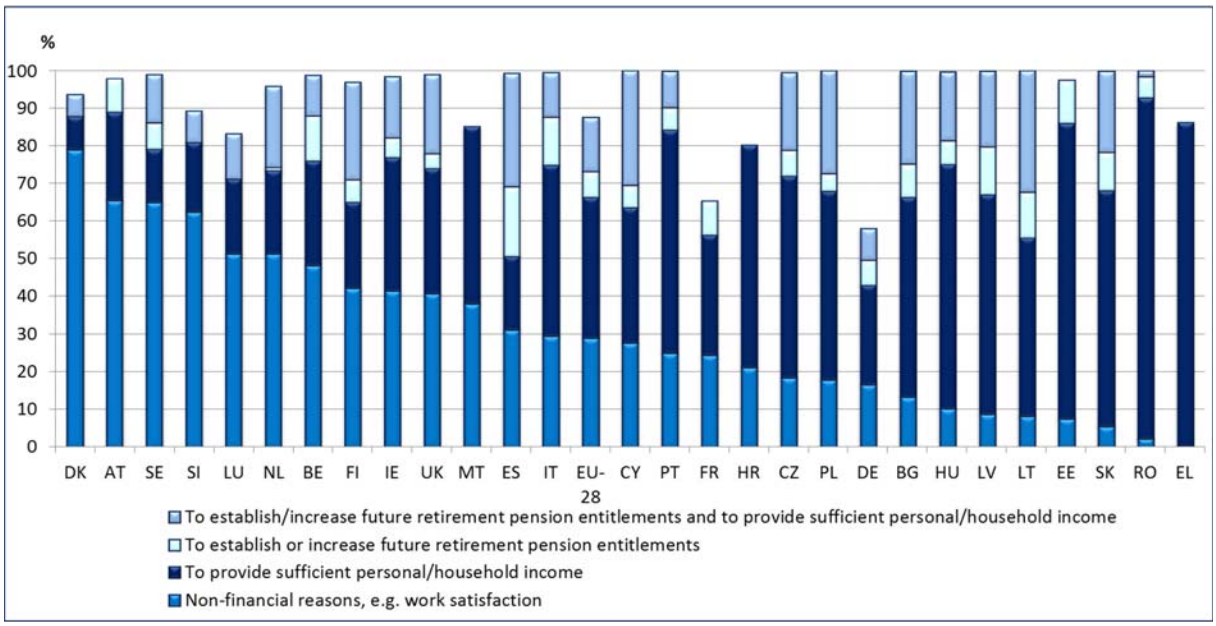
Source: Eurostat – Transition from work to retirement, LFS AHM 2012

In a recent study, Eurofound[15] investigated the motivations of people who continue in paid work after they turn 65 (notably the age group 65-69), and how their reasons relate to income adequacy. The study highlights the characteristics of these working retirees and the work they are doing. As nearly all Member States have pensionable ages of 65 or below, this group is composed almost exclusively of people who continue working to some extent beyond the age at which most people have retired.

15 Eurofound (2012): 'Income from work after retirement in the EU'

Additional income forms part of the motivation with work income providing more than half of their income. But only about one-fifth work primarily due to financial need, this group tends to have low incomes and insecure work conditions. For most, the key motivation comes from a combination other factors: including various satisfactions such as contact with colleagues and clients, opportunities to learn and contribute to society (Figure 2.45).

Figure 2.20: People who continue working while receiving an old-age pension: main reasons for continuing to work (age from 50 to 69 years), 2012 (%)



Source: Eurostat – Transition from work to retirement, LFS AHM 2012. Note. Other reasons are not included.

Whereas most of those who work beyond the age of 65 are predominantly male, more highly educated, living in urban areas, and/or having a mortgage, the recent growth in employment rates among 65-69 year olds has particularly come from female retirees and those with a medium level of education.

The majority of these active 65-69 year olds work part time. About half are self-employed but often work as a one-person enterprise for a single employer. Almost one-fifth of working retirees have a temporary contract, and, while this is higher than for other age groups it may reflect the preference of older workers. Moreover, as in other age-groups, employment beyond age 65 may be undeclared.

People working beyond the age of 65 are spread across a number of sectors, but they are frequently in the agriculture and fisheries or professional, scientific and technical activities sectors. Furthermore, they work relatively often in SMEs. It is particularly uncommon for retirees to work in public administration. Most receive some pension income and can thus maintain their standard of living, while working reduced hours in line with their preferences.

Much work beyond retirement is a continuation of work with a former employer based on individual agreements between the employer and the employee. Workers in this age group are often open to flexible work arrangements and the Eurofound study found that employers indicated that they often exhibit particularly high levels of work motivation. Among retirees, who do not work, a significant proportion would like to work but cannot find suitable employment, with many already disadvantaged in the labour market long before their retirement.

Paid work after retirement has proven necessary for some, who have inadequate incomes, but can find suitable jobs to allow them to make ends meet. This is the case for at least one-fifth of working retirees in the EU. Most of these retirees have low incomes, but the group also contains retirees with higher incomes, who still work beyond retirement, because they need to - for example to pay mortgages or support families/relatives.

The increase in uptake of work beyond retirement also reflects other factors. Generally speaking, people who have recently reached retirement age are healthier than preceding generations, have a higher level of education, and may often be enjoying their professional life too much to let it go completely, or may not want to lose the social contacts made through work. Such factors seem to play a larger role among retired than non-retired workers. Retirees, who work, often appreciate the additional income, but at least three-fifths of them are mainly motivated by non-monetary factors.

3. THE ROLE OF PENSION SYSTEMS IN SECURING ADEQUATE LIVING STANDARDS IN OLD AGE FOR MEN AND WOMEN

This chapter aims to assess the ability of pension systems to secure adequate living standards for the current generation of older people in the EU. Section 3.1 examines the extent to which pension systems replace income from work after retirement, taking into account the different pillars of the pension system as far as possible. Section 3.2 shows how minimum income provisions play an important role in protection against old age poverty, particularly for older people with short contributory periods. Section 3.3 shows how pension credits for time spent out of the labour market, for instance during periods of care obligations, maternity, unemployment, sickness, military service or education, can help secure adequate income replacement after retirement. Section 3.4 presents similar evidence with regard to derived pension rights e.g. of surviving spouses. Section 3.5 shows how differing family and career patterns of men and women when filtered through pension systems can lead to substantial gender differences in pension entitlements.

3.1. Income replacement

The income replacement capacity of pension systems is usually assessed by comparing pension incomes to the earnings of people below pensionable age. This section reviews available evidence on the degree to which pension systems allow the current generation of pensioners to maintain their standard of living after retirement. Section 3.1.1 offers a macro-level assessment, using information on the average level of income replacement provided by today's pension systems. Section 3.1.2 considers the individual pension rights of people who retired in 2013. So-called theoretical replacement rates (TRRs) are used to assess the retirement income of a pensioner with a given career profile, relative to his final pre-retirement income. The section also includes a stylised assessment of the roles of non-mandatory second and third pillar pension schemes in old age incomes.

3.1.1. Assessing the income replacement capacity of pension systems

A number of different EU level indicators have been used to assess the ability of pension systems to replace income after retirement. The various indicators are introduced and compared in Box 3.1.

Box 3. 1: Measures to assess the income replacement capacity of pension systems

The four different indicators which are employed to measure the degree to which pension systems replace work income after retirement are introduced below. Three of these indicators offer an overall perspective on pension adequacy by providing variants of an economy-wide average, whereas the fourth indicator describes the hypothetical situation of an individual worker with certain characteristics. These four indicators capture various aspects of pension adequacy and rely on different assumptions that prevent direct comparison. Hence an assessment of the potentially different messages evolving from the analysis has to be made.

The **Aggregate Replacement Ratio (ARR)** is the ratio of (i) the median individual gross pension of people aged 65-74 to (ii) the median individual gross earnings of people aged 50-59. As with the median relative income ratio (see chapter 2.1.), the ARR is based on income data from EU-SILC. Compared to the median relative income ratio, the ARR is narrower in scope, both in respect to the

income concept (old age benefits, survivor benefits and individual private plans are included but other forms of income are excluded) and to the age ranges that are considered. It should be noted that the ARR indicator is not calculated at household level but is based on individual gross incomes. Several other factors, such as household composition and size and the taxes/social contributions paid on gross pensions can have a strong influence on the disposable incomes and living standards of individuals. Moreover, the fact that ARR compares the income situation of two different cohorts (before and after retirement in the survey year) also needs to be taken into account.

In the Ageing Report prepared jointly by the EPC-AWG and the European Commission, two alternative measures are employed to estimate the level of income replacement after retirement, namely the Benefit Ration and the Gross Average Replacement Ratio. The **Benefit Ratio** is defined as the average pension benefit *relative* to the economy-wide average wage. The average pension is calculated as the ratio of public pension spending relative to the number of pensioners, whereas the average wage is proxied by the change in the GDP per hours worked. The ratio of these two indicators is intended to provide an estimate of the overall generosity of pension systems. The **Gross Average Replacement Rate** compares the average first pension *relative to* the economy-wide average wage at retirement. The information is provided by Member States in the AWG pension questionnaire.

Finally, **Theoretical Replacement Rates (TRR)** are case study-based calculations of the level of pension income in the first year after retirement, measured as a percentage of individual earnings at the moment of retirement. Similar to the Gross Average Replacement Rate, the TRR provides a proxy for the (change in the) standard of living at the time of transition from work to retirement. However, TRRs are not based on economy-wide averages but calculated, on an individual basis, for an assumed hypothetical worker and include schemes that are mandatory, typical or have widespread coverage. The gross TRR is defined in relation to the pre-taxed income (excluding employer contributions but including employee contributions), whereas the net TRR includes income taxes and employee contributions. The TRR concept is used to measure both current and future adequacy. In this section the focus is on current replacement rates, while prospective TRRs are discussed in Chapter 5. The assumptions that apply to the different cases of current TRRs are presented in detail in Section 3.1.2.

How do the four different indicators of pension adequacy compare?

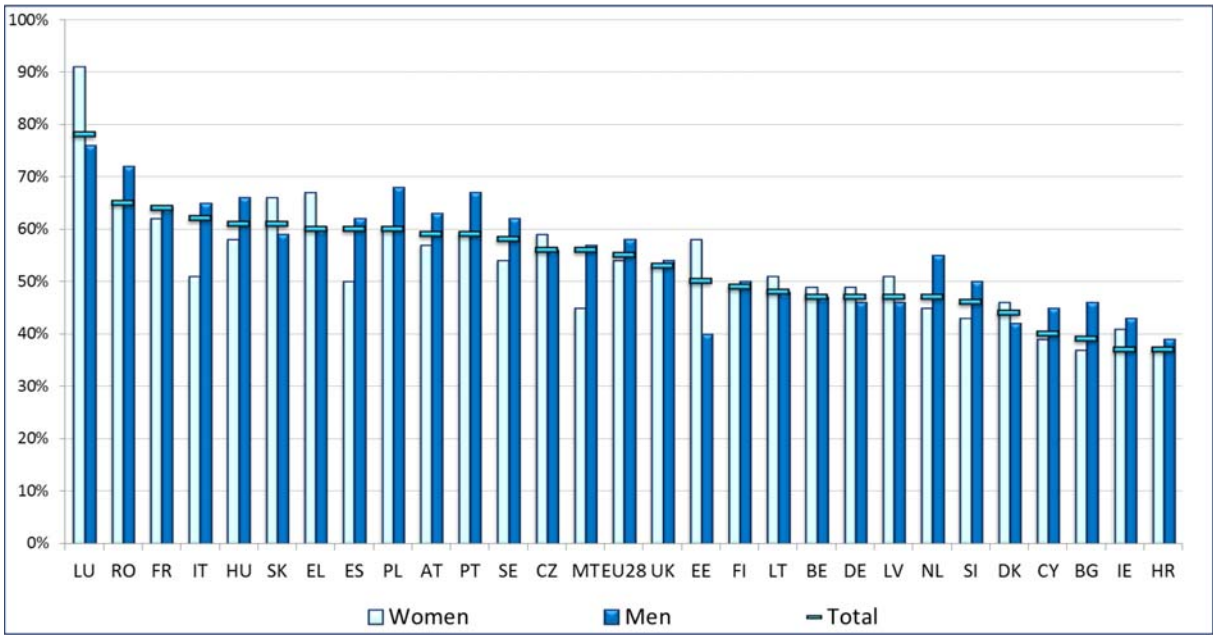
The concept of the four indicators, their coverage of pension schemes and their time horizons are all different, which impedes direct comparison. In terms of the pension schemes covered, the Benefit Ratio includes old-age and early pensions and other public pensions, such as invalidity and survivor, whereas the Gross Average Replacement Rate, as reported in this chapter, only includes earnings related old-age pensions. Private pensions are excluded for all Member States. In contrast, the Aggregate Replacement Ratio and the Theoretical Replacement Rates apply a wider concept by including private schemes (ARR) or schemes which are mandatory, typical or have widespread coverage (TRR). Differences in the underlying wage concepts further impede direct comparison.

In terms of time horizon, the Benefit Ratio provides the widest measure by comparing all (public) pension payments with economy-wide incomes, whereas the Aggregate Replacement Ratio compares the pension income of people aged 65-74 to the earnings situation of people aged 50-59. In contrast, the Gross Average Replacement Rate and the Theoretical Replacement Rate focus on the moment of changing from work to retirement. Moreover, the three ratio indicators represent the average situation of all retirees rather than individuals with a full career, covered by the most general scheme at the time of retirement (as in theoretical replacement rates). The varied cases of TRRs allows for assessment of pension adequacy beyond the median.

To conclude, while all four indicators assess the adequacy of pensions, they follow different concepts and shed light on different aspects of pension adequacy. Such differences need to be born in mind when interpreting the results.

Figure 3.1 reports the aggregate replacement ratio (ARR), which relates the median individual gross pension of people aged 65-74 to the median individual gross earnings of people aged 50-59. Data is provided for all Member States, both overall and disaggregated by gender. On average for the EU-28, the median individual gross pension of people aged 65-74 amounted to 56 percent of the median individual gross earnings of people aged 50-59. The ARR in Member States ranges from more than 60 percent, in France, Romania, Luxemburg, Italy, Hungary and Slovakia, to below 50 percent in 12 Member States.

Figure 3. 1: Aggregate replacement ratio, total and by gender, 2013



Source: Eurostat. Note: Ratio of income from pensions of persons aged between 65 and 74 years and income from work of persons aged between 50 and 59 years. Sorted by total ARR. Data from EU-SILC 2013, referring to the income year 2012.

Significant differences in the ARR exist not only between Member States but also between men and women. As for the relative median income ratio (see section 2.1), female pensioners are found to be, on average, in an inferior income position relative to their male counterparts (EU-28 average of ARR in 2013: 54 percent for women vs. 58 percent for men). Such lower relative pension entitlements of women might reflect shorter formal working careers but could be due to higher incomes of today's working-age women. However, a *higher* aggregate replacement ratio for women is observed in 11 Member States, with a positive difference of more than five percentage points in Greece, Slovakia, Luxemburg and Estonia.

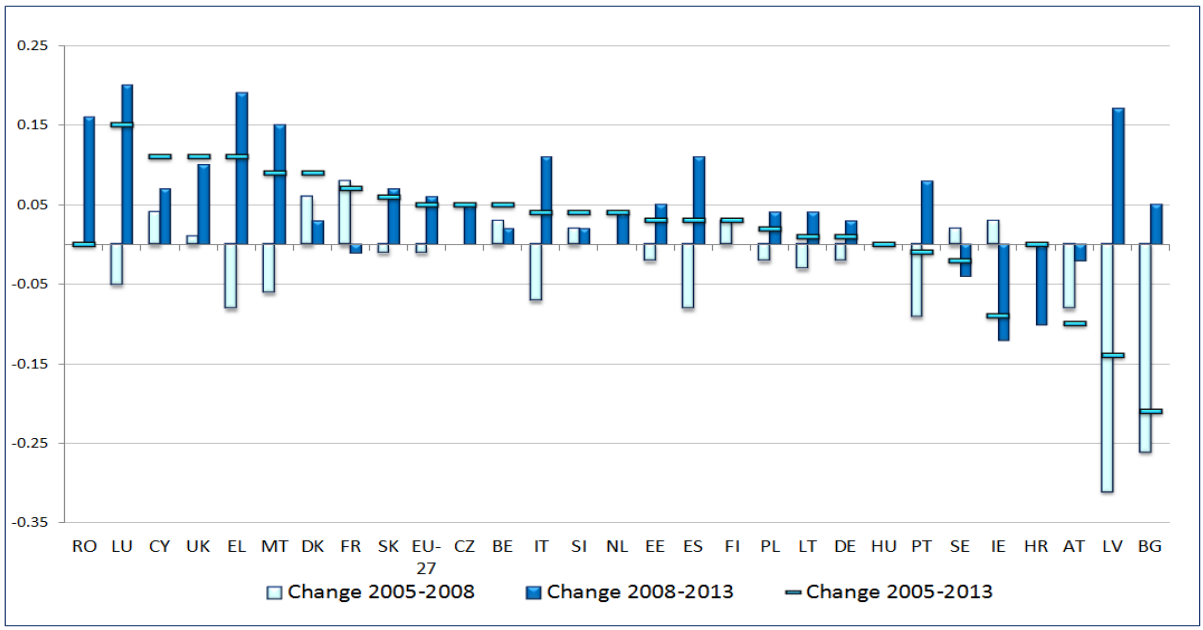
It is important to keep in mind that the ARR is based on gross pensions and earnings data, whereas net figures would provide a more accurate depiction of the actual (disposable) income situation. Further, the ARR has a rather narrow focus on individual income derived from pension payments (old age benefits, survivor benefits and individual private plans) relative to the earnings of people in the decade before retirement. In that sense, the relative median income ratio (see section 2.1) is a broader measure, taking all sources of income into account and relating the disposable household income of the entire elderly population to that of the entire population below age 65.

Despite these conceptual differences, results from the ARR indicator are generally in line with the overall trends described by the relative median income ratio (see Figure 2.1). Where a comparably low aggregate replacement ratios coincide with relatively high relative median

income ratios (e.g., in Greece, the Netherlands, Ireland and Croatia), this may be explained by factors such as the availability of other sources of income, the level of social contributions and taxes levied on pension income, or differences in household structures.[16]

In a number of Member States, the relationship between median gross pensions of people aged 65-74 and median gross earnings of people aged 50-59 has changed quite substantially over recent years. Figure 3.2 illustrates the percentage point changes in the ARR over the periods 2005-2008 and 2008-2013, respectively. On average in the EU-28, the (gross) income position of 'young' pensioners has improved relative to the median gross income of older workers aged 50-59, with a total increase in the ARR of five percentage points between 2005 and 2013 (from 51 percent in 2005 (EU-27) to 55 percent in 2013 (EU-28)).

Figure 3. 2: Changes in the Aggregate replacement ratio, 2005-2008; 2008-2013 and 2005-2013



Source: Eurostat. Sorted by the total change in the aggregate replacement ratio 2005-2013. No data for RO and HR in 2005.

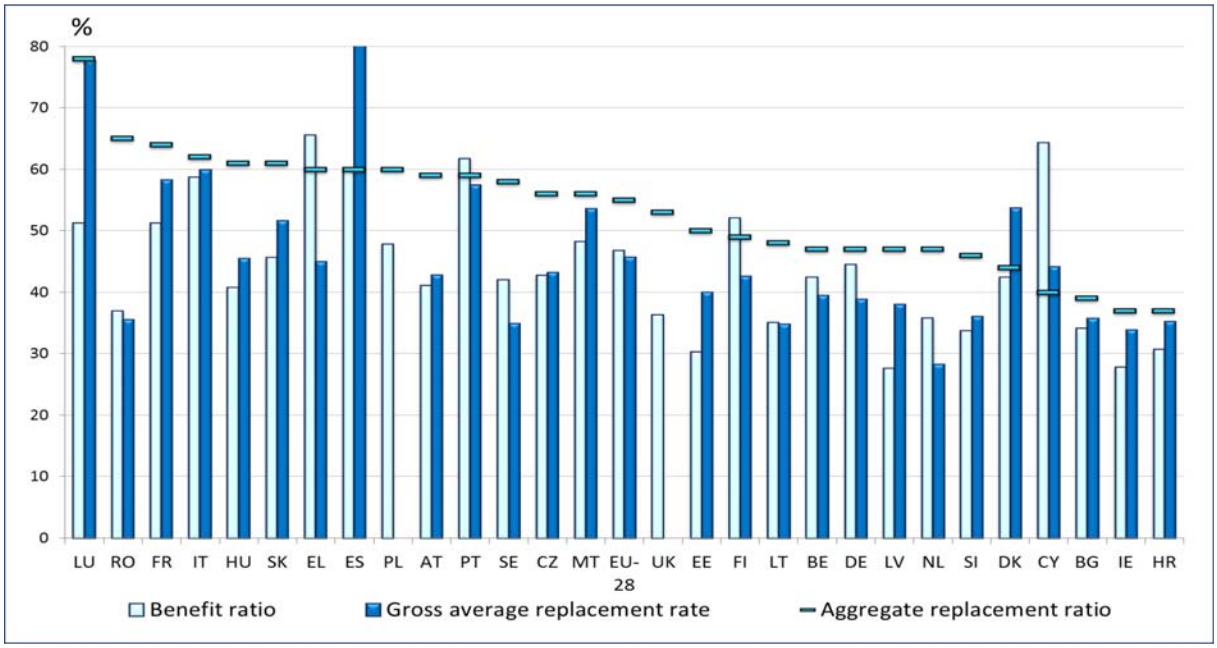
This trend is mainly driven by the increase in the ARR that occurred during the economic crisis. Between 2008 and 2013 a rise in the ARR was observed in 21 Member States, with an increase of more than 10 percentage points in Greece, Spain, Romania, Latvia, Malta and Luxemburg. In contrast, ARR decreased in five Member States over the same period. In this respect, it should be remembered that positive and negative developments in the ARR can, in principle, be driven by both changes in pension incomes (i.e. reform measures[17]) and changes in the earnings of the people aged 50 to 59.

Finally, Figure 3.3 provides a comparison of the ARR with the two indicators of pension adequacy used in the Ageing Report. Overall, the figure illustrates the substantial differences in results that are obtained from the Benefit Ratio and Gross average replacement rate. On average in the EU-28, both the Benefit Ratio (45 percent) and the Gross Average Replacement Rate (48 percent) are lower than the ARR (56 percent in 2013).

16 The country profiles in the Annex also provide a more national-specific assessment of the observed patterns.

17 Section 4.1 provides an overview of recent pension reforms.

Figure 3. 3: Benefit Ratio, Gross average replacement rate and Aggregate replacement ratio, 2013



Source: Eurostat for ARR; BR and GrARR from the 2015 Ageing Report. GrARR refers to earnings-related public pensions. Benefit ratio refers to public pensions. Sorted by ARR. No data on GrARR for PL and UK.

The Benefit Ratio, which compares average public pension payments to the average wage, is lower than the ARR in most Member States (except for Greece, Portugal, Finland and Cyprus). A likely reason for this is the focus of the benefit ratio on public pension payments, whereas the ARR also includes income from private pension schemes. Likewise, the Gross Average Replacement Rate only takes earnings-related public pensions into account, which could explain the relatively low replacement levels in the majority of Member States (see Box 3.1 for a detailed discussion of methodological differences between the replacement rate indicators). In countries with higher Gross Average Replacement Rate (Luxemburg, France, Italy, Slovakia, Spain, Portugal, Malta, Denmark), earnings-related public pensions seem to allow for a rather smooth income transition from work to retirement.

In general, the heterogeneous picture provided by Figure 3.3 confirms the need for a broad assessment of pension adequacy noting that, for Member States with a strong focus on private pension provision indicators that only capture the outcomes of public schemes (such as the Benefit Ratio or the Gross Aggregate Replacement Ratio) may provide a distorted picture. In this regard, the Theoretical Replacement Rate (TRR) concept provides a more comprehensive assessment by taking into account all schemes that are mandatory, typical or have a wide reaching coverage.

3.1.2. Pension adequacy in 2013: current theoretical replacement rates

Current theoretical replacement rates (TRRs) describe the pension income, for a hypothetical worker who retired in 2013, relative to their earnings at the moment of retirement. The choice of common assumptions made about this hypothetical worker (i.e., career length, career breaks, earning profile, retirement age, etc.) obviously implies that not all individuals are going to be accurately represented in this scenario.[18] The representativeness of these calculations depends on the degree to which the common assumptions reflect different labour market and retirement patterns across Member States. Therefore, theoretical replacement rates for a given career scenario are often not evenly representative across Member States.

Hence a number of alternative base cases are presented in this report in order to provide a comprehensive and relevant EU level assessment that reflects the increasingly heterogeneous set up of pension systems in the Member States. The career length assumptions and variant configurations for the four cases of current TRRs are summarised in Table 3.1.

Table 3. 1: Overview of Current TRR Cases

TRR case	Career lengths		Variants		
	Entry age	Exit age	Earnings	Gender	Net vs. Gross
Base case I	25	65	Low, Average, High	both if different SPA for men and women	All cases calculated in net and gross terms
Base case II	SPA-40	SPA			
Increase in SPA	25	SPA	Low, Average		
AWG case	Country-specific			Both	

Notes. SPA: standard pensionable age. See Box 3.2 for a description of the variant assumptions.

For reasons of continuity and comparability the same base case ('variant I') as in the 2012 Pension Adequacy Report is used. The ‘base case I’ refers to a hypothetical worker who started working at age 25 in 1973, and who had an uninterrupted career of 40 years with average earnings and who retired at age 65 in 2013.

Given that given that this base case has become increasingly complicated by 'early retirement' issues, changing retirement rules and rising pensionable ages, a second base case ('variant II') is defined as a 40-year career running up to the standard pensionable age (SPA) in 2013. The standard pensionable age is defined as the earliest age at which an individual with a 40-year career can retire without exit penalty, as summarised in Table A2 in the Appendix. ‘Base case II’ allows for assessment of the impact of reform measures *other* than legislated increases in the pensionable age (where the rise in SPA beyond age 65 leads to reduced pension rights due to early exit penalties in variant I).

The third variant ('increase in SPA' variant) assumes a career from age 25 up to the standard pensionable age. In this 'increase in SPA' case, the entry age remains constant (age 25), while the retirement age reflects the SPA at the time of retirement. In particular, this variant allows for analysis of the impact of reforms of the retirement age, for which future increases have been legislated in the majority of Member States (see also section 5.2).

[18] For instance, the levels of theoretical replacement rates may be overstated for countries where the coverage of systems or the pensionable age is lower than the one assumed in the calculations, and understated when the contributory conditions for full pension rights exceed the simulated career length.

Finally, and complementing the above TRR variants, the so-called 'AWG case' is calculated. Based on the estimated average labour market entry and exit ages used by the Ageing Working Group (AWG) of the Economic Policy Committee (EPC), this variant uses country specific assumptions on the average career length of both current and future pensioners (see Box 3.3 for a more detailed introduction to the AWG methodology). The AWG case allows for a better alignment with the framework used by the Ageing Working Group (EPC-AWG) for budgetary projections in the 2015 Ageing Report.

Box 3.2 sets out the alternative assumptions underlying the TRR calculations. In general, all TRR cases are calculated:

- for different earning profiles
- for men and women (where different)
- in gross terms and net of taxes and social security contributions.

Box 3. 2: Theoretical Replacement Rates – variant assumptions

Earning profiles. Three different earning profiles are considered:

(1) Default, average earnings are assumed throughout the career (based on historical data for current TRRs; based on AWG projections for future TRRs).

(2) Under the low earnings variant, it is assumed that the individual earns 66 percent of the average wage throughout the career.

(3) Under the high earnings variant, the individual starts at 100 percent of AWG average, and earnings grow linearly every year from 100 percent of average earnings to 200 percent after 40 years (the high earnings variant is calculated only for base case variants I and II).

Gender differences. All TRR cases are calculated separately for men and women. For base cases I and II and the 'increase in SPA' case, gender differences are explained (only) by gender differences in pensionable ages or other retirement rules. In contrast, the AWG case is based on gender-specific labour market entry and exit ages. Importantly, no gender-specific earning assumptions are used for the TRR calculations. The impact of income differences on TRRs is assessed in a general way through different earning profiles, while the variant cases on different types of career breaks help illustrate how periods of child care or unemployment effect pension outcomes. The use of gender-specific wages is methodologically problematic, since projections of the future evolution of income differences between men and women have to rely on strong assumptions and could easily be misleading. Therefore, TRRs are calculated for a wide range of career patterns that represent both males and females starting their careers today. Different TRR results for men and women would signal gender differences in the pension system itself.

Gross and Net TRR. The calculations take into consideration social security contributions to statutory and supplementary pension schemes or funds, as well as taxes and means-tested social benefits. This makes it possible to determine the contribution of different components of the pension systems to the pensioner's retirement income. In particular, the gross replacement rate is defined by the pre-taxed income (after employer contributions but including employee contributions). The net replacement rate is calculated as net of income taxes and employee contributions and includes means-tested benefits. Information on which contribution rates are assumed in the calculation is important when interpreting the representativeness of the TRR calculations (see Table 1 in Annex 3 on contribution rates for current and prospective calculations).

Table 3.2 provides the TRR results for the three core cases (base case I, base case II, 'increase in SPA' case) of a worker with average earnings retiring in 2013. For a better interpretation of the results, country-specific standard pensionable ages (SPA) are presented as well. Results are net of income taxes and social contributions and include means-tested benefits.

Table 3. 2: Current TRRs for the different core cases (net, average earnings); underlying standard pensionable ages (SPA) and annual earnings

Member State	Net Theoretical Replacement Rates (2013)						SPA in 2013	
	Base Case I		Base Case II		Increase in SPA			
	age 25 to 65		*40 years to SPA*		*age 25 to SPA*			
	*men**	*women**	*men**	*women**	*men**	*women**	*men**	*women**
BE	78.6		78.6		78.6		65.0	
BG	62.3	69.3	57.3		55.3	51.1	63.7	60.7
CZ	62.2	72.1	55.6		52.2	48.9	62.5	
DK	68.4		68.4		68.4		65.0	
DE	57.0		57.3		57.6		65.2	
EE	61.9	77.1	50.9	63.4	49.2	61.0	63.0	
IE	83.1		83.1		83.1		65.0	
EL	n.a.		n.a.		n.a.		62.0	
ES	96.2		96.2		96.2		65.0	
FR	80.2		80.2		80.2		65.0	
HR	55.5	59.7	55.5		55.5	49.6	65.0	60.8
IT	80.2		80.3	80.0	83.9	75.7	66.3	62.3
CY	58.0		58.0		58.0		65.0	
LV	71.9		65.0		61.1		62.0	
LT	61.6	70.0	52.6	52.4	49.9	47.3	62.7	60.6
LU	105.4		102.5		93.5		60.0**	
HU	100.8		85.4		80.6		62.0	
MT	79.0		79.0		79.0		62.0	
NL	114.0		114.0		114.0		65.1	
AT	85.1	93.7	85.1		85.1	77.1	65.0	60.0
PL	74.2	74.2	73.1		75.5	66.6	65.1	60.1
PT	92.3		92.3		92.3		65.0	
RO	73.1	62.1	73.1	62.1	71.3	59.5	64.8	59.8
SI	57.3	60.3	57.3	60.3	55.4	55.9	60.0	
SK	76.0	77.9	64.4		59.6	58.8	62.0	61.5
FI	69.5		69.5		69.5		65.0	
SE	69.3		69.3		69.3		65.0	
UK	83.4	88.0	83.4	73.4	83.4	71.4	65.0	61.3-61.8

Data source: Member States. Note: if gender differences exist. ** LU: SPA of 57.0 assumed for base case I. Data for EL not available.*

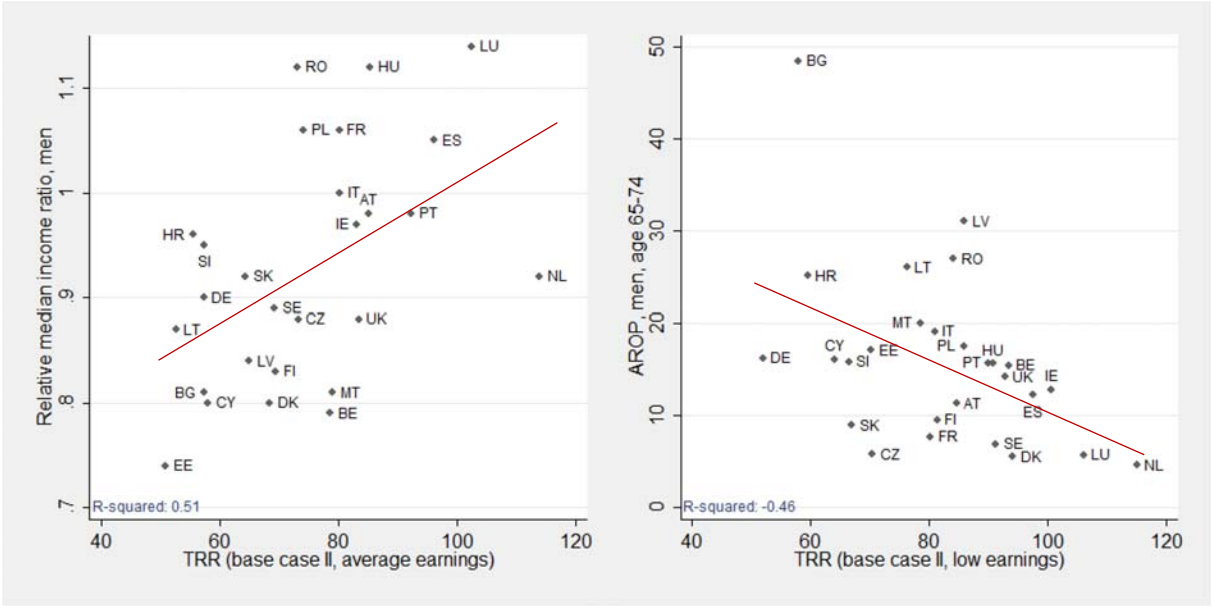
A number of general trends can be identified from Table 3.2. First, identical results for the three TRR variants (40 year from 'age 25 to 65', '40 years until SPA', and 'age 25 to SPA') occur in 11 Member States. This can be explained by the fact that in 2013 the standard pensionable age was 65 in most of these Member States. Secondly, in the majority of Member States with differing results for the three TRR cases, a somewhat higher TRR is reported for a 40 year career up to age 65 (as opposed to a 40 year career up to the SPA). Hence our hypothetical worker appears to benefit from a late retirement bonus when claiming his pension at 65 in countries with a SPA of under 65. In contrast, a comparably lower TRR is observed for the 'increase in SPA' case in the countries with an SPA of less than 65

(Bulgaria, Czech Republic, Estonia, Latvia, Lithuania, Luxemburg, Hungary, Romania, Slovenia, Slovakia), driven by the assumed under 40 year career span. Overall, the differences in theoretical replacement rates across Member States can be substantial. After a 40 year career on average earnings until the (country-specific) SPA, the net pension income varies between 51 and 114 percent of net average earnings in 2013.

However when interpreting these results it is important to bear in mind the relative concept of TRRs, which must be assessed against the average wage level in the particular Member State. Moreover, TRR calculations only consider pension schemes that are mandatory, typical or have a wide reaching coverage, thus excluding (3rd pillar) private pension entitlements in the majority of Member States. Finally, the uniform career length assumptions are not necessarily representative for a typical worker retiring in 2013. Therefore cross-country comparisons should take into account the actual retirement practices in each Member State; the 'AWG case' presented below aims to draw a more country-specific picture.

The potentially ambiguous relationship between TRR levels and actual living standards of older people is illustrated by comparing the current net TRR against the relative median income ratio and the at-risk-of-poverty rate for the elderly, respectively. Bearing in mind that the net replacement rate of those who retired in 2013 is compared to the living standards of an entire cohort of elderly, Figure 3.4 suggests a loose overall correlation between current TRR levels and observed living standards of todays' elderly. Hence factors other than 'standard' pension replacement rate levels clearly determine the income situation of older people as well.

Figure 3. 4: Correlation between the net TRR (base case II, average & low earnings) and the relative median income ratio (men) and the at-risk-of-poverty rate (65-74, men), respectively



Source: own illustration. Based on TRR calculations by Member States and 2013 SILC data. Red line: linear prediction. If gender differences exist, results for men are reported in this figure.

Country-specific career length assumptions ('AWG case'). The 'AWG case', which is intended to provide a more accurate view of a country's actual labour market situation, is based on country-specific and gender-specific career length assumptions provided by the Ageing Working Group of the Economic Policy Committee (EPC-AWG). The underlying methodology is presented in Box 3.3. Apart from country-specific labour market entry and

exit ages, the 'AWG case' uses the same assumptions as the TRR 'core' cases presented above. In particular, the AWG case is calculated for low and average earning profiles and assumes an uninterrupted career between labour market entry and exit. Hence the 'AWG case' only differs from the other TRR base cases in terms of the assumed career length.

Box 3. 3: Calculation of entry and exit ages for the 'AWG' case & 'duration of working life' indicator

AWG career length assumptions. The AWG estimates of labour force entry and exit rates are derived from the 'cohort simulation model' (CSM) developed by DG ECFIN.[19] Based on labour market behaviour observed over the past 10 years, average probabilities of labour force entry and exit are calculated by gender and cohort. Data is derived from the harmonised EU Labour Force Survey (LFS), covering individuals aged 15 to 74 in 2004-2013.

The LFS data is used to compile a so-called "synthetic" generation/cohort of all individuals observed in the 2004-2013 period. The cohort is synthetic since specific individuals cannot be followed over their entire career due to the lack of longitudinal data. Therefore, estimated average entry ages are based on the 15-30 (covering birth cohorts from 1974 to 1998) reference age group, whereas the estimated average labour market exit ages are based on the 50-74 (covering birth cohorts from 1930 to 1963) age group.

The entry and exit ages used in the calculation of the current AWG case reflect labour market patterns of different cohorts. For more realistic comparisons, the average entry ages of those cohorts entering the labour market in 1973 would be preferable. It should also be noted that an uninterrupted career is assumed, whereas average contributory periods are likely to be lower for various reasons. The 'average working life duration' indicator, which takes career breaks into account, is included for comparison.

'Average duration of working life' indicator. This indicator measures the number of years a person is expected to be active in the labour market throughout their life. This indicator is calculated through a probabilistic model combining demographic data (life tables available from Eurostat to calculate the survival functions) and labour market data (Labour Force Survey activity rates by single age group). Similar to the AWG estimates of labour market participation, the indicator is based on recent survey data and does not reflect the actual employment history of those retiring in 2013. However, career breaks, caused by periods of unemployment or child care for example, are reflected in the estimates of labour market participation.

Table 3.3 presents the current TRRs under the AWG case (net, average earnings) for both men and women, and the underlying career length assumptions. In addition, the 'working life duration' indicator is reported, which takes into account career breaks and therefore helps assess the representativeness of the career length assumptions in the TRR calculations. Importantly, the career length used in the AWG case can vary substantially from the 40 year career assumed in base cases I and II. In 2013, average entry ages in the Member States varied between 19.7 and 24.0 years for men and 21.1 to 26.2 years for women. The exit ages of men ranged from 60.2 to 65.8 years and were below 65 in 24 Member States. In contrast, the average female exit ages varied from just under 60 to just under 65. The resulting average career lengths range from 37.8 to 45.2 years for men and 33.9 to 42.7 years for women.

[19] For a more detailed discussion, see EC/EPC (2014), 'The 2015 Ageing Report: Underlying assumption and projection methodologies'.

Table 3. 3: Current TRRs under the AWG case (net, average earnings); underlying career length assumptions, and the duration of working lives

Member State	Current TRRs (2013) AWG case *(1)*		AWG career length assumptions 2013 *(2)*				Duration of working life in 2013 *(3)*	
			Exit age		Career length			
	men	*women*	*men*	*women*	*men*	*women*	*men*	*women*
BE	73.0	71.9	61.9	62.1	39.1	38.4	34.7	30.1
BG	59.2	57.8	63.8	62.0	41.0	36.9	33.2	30.7
CZ	57.8	57.8	63.1	60.7	40.9	35.2	37.7	31.5
DK	68.4	75.7	65.6	63.4	43.0	40.3	40.2	37.6
DE	62.8	55.4	65.1	64.2	44.1	42.0	40.1	35.4
EE	50.9	64.2	64.4	64.2	43.0	41.4	36.6	35.7
IE	82.6	82.6	64.9	64.8	42.8	41.4	38.3	30.5
EL	n.a.	n.a.	64.4	64.5	41.8	40.4	36.0	27.9
ES	81.7	89.1	62.8	64.1	40.7	41.2	37.1	32.3
FR	74.1	63.6	60.8	60.9	39.3	37.5	36.5	32.8
HR	52.1	51.9	62.4	61.4	39.9	37.0	33.1	28.8
IT	72.1	68.9	62.4	62.1	38.4	35.9	34.9	25.4
CY	58.0	55.0	64.9	62.8	43.9	40.2	39.8	32.5
LV	73.8	70.9	64.6	64.0	43.0	40.8	35.0	34.6
LT	53.3	54.7	62.8	61.9	40.6	38.1	34.1	34.2
LU	99.3	97.3	60.2	60.9	37.8	36.7	35.8	29.3
HU	90.6	85.5	63.0	63.0	40.0	37.5	33.0	28.4
MT	79.0	79.0	62.0	61.0	42.2	40.0	39.4	24.9
NL	114.0	114.0	65.5	63.7	44.4	41.8	42.2	37.0
AT	82.9	86.7	62.5	61.0	42.2	39.0	39.3	34.5
PL	82.3	65.7	63.9	60.2	41.7	35.4	34.7	29.6
PT	87.4	86.4	64.3	63.9	42.0	41.1	38.3	34.9
RO	68.1	57.1	64.0	62.3	40.5	36.4	34.6	29.2
SI	54.8	55.3	62.5	60.0	39.9	36.6	35.2	32.1
SK	62.8	48.6	61.6	59.7	40.0	33.9	35.6	30.0
FI	65.5	63.8	63.6	63.1	41.6	40.3	37.7	36.6
SE	75.1	70.5	65.8	64.5	44.8	42.7	42.1	39.6
UK	84.0	83.7	64.9*	63.6	45.2	42.5	41.1	35.5

*Data source: (1) Member States; (2) The 2015 Ageing report; (3) Eurostat. Note: SPA- standard pensionable age. * Exit age of 65 assumed for the calculations. Entry age is the difference between exit age and career length. See Box 3.3 for the definition of the 'average duration of working life' indicator. Data for EL not available.*

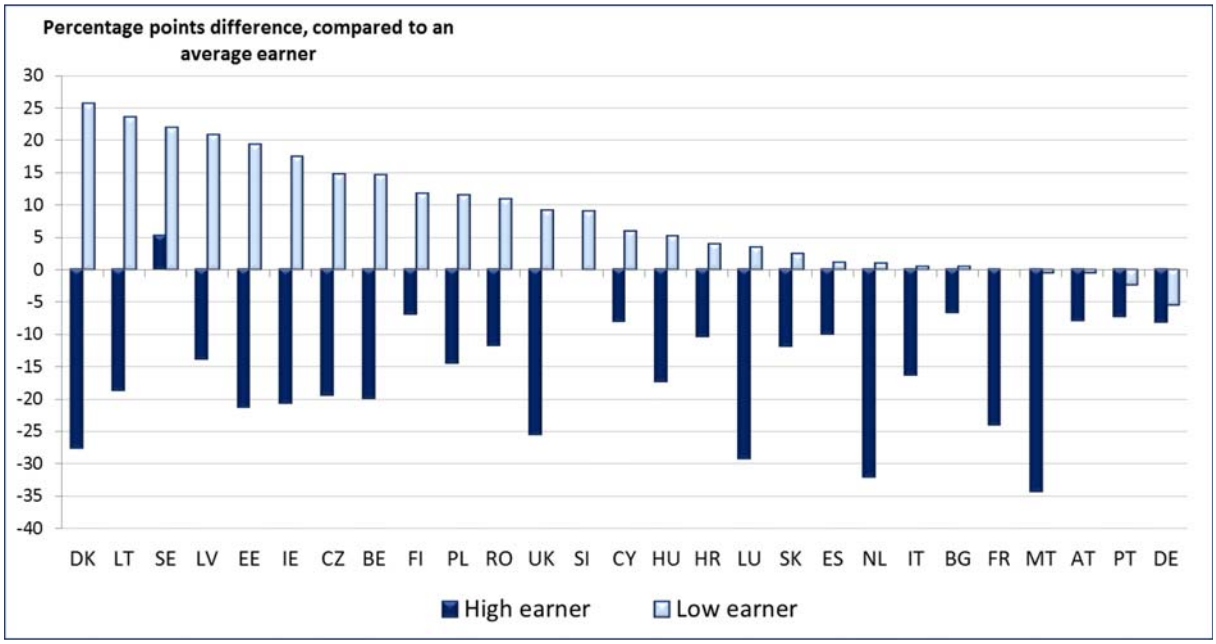
Consequently, the TRR results under the AWG case are often quite different from the results using the base case calculations. For average earners, TRR levels are lower under the AWG case in 12 Member States for both men and women. In most cases these lower pension outcomes are explained by the shorter career in the AWG scenario, particularly for women. However, even an assumed career of 40 or more years can lead to a lower replacement rate (compared to base case II) when the assumed labour market exit age is below 65.[20] Even so, higher replacement rates, in the AWG case as compared to base case II, are observed in nine (men) and eight (women) Member States.

[20] Other reasons might as well be at play. In Finland, for instance, there is no pension accrual in the first year of the AWG career as pension rights only were only accrued from the 23rd birthday onwards according to the legislation that was in force in the 1970s.

Representativeness of TRR calculations. In conjunction with the other current TRR cases, the AWG case provides a more comprehensive picture of today's pension outcomes in Member States. However, the representativeness of all TRR calculations, including the AWG case, depends very much on past labour market conditions in the Member States. In fact the average duration of working lives is estimated to be lower than the assumed career length in the majority of Member States and TRR cases. Hence the TRR results generally provide a rather positive description of the current generation of pensioners' pension entitlements. In what follows, assumptions other than career length are altered to assess their role in current pension adequacy. Unless stated otherwise, a 40 year working career (base case II) is used as the reference for these comparisons.

Results for different earning profiles. So far, all TRRs were presented for workers with average earnings. Alternatively, replacement rates are calculated for workers with low (2/3 of average earnings) and high earnings (linear growth from 100 percent to 200 percent of average earnings at career end). Figure 3.5 provides a comparison between the net TRRs of workers with low and high earnings and those of an average earner.

Figure 3. 5: Percentage point difference in net current Theoretical Replacement Rates between different earning profiles, base case II (40 years to SPA)



Data source: Member States. Note: Sorted by values for low earner. Data for EL – not available (n.a.). If gender differences exist, results for men are reported in this figure.

Overall, replacement rates tend to be relatively higher under the low earnings profile and relatively lower for workers with high earnings, reflecting the focus of pension systems on securing basic living standards in old age for all, while high income earners often rely more on supplementary, private pension schemes (see also Figure 3.7 on the composition of TRRs for different earning profiles, as well as chapter 3.2 on minimum pension provisions).

Behind these general trends exist significant differences between Member States. Net replacement rates are more than 10 percentage points higher for low income workers compared to average earners in 11 Member States. However, in another nine Member States net replacement rates for low income earners are close to or even below the TRR level of average income earners. This may be driven by a stronger impact of taxes and social security

contributions on the net replacement rates for low earners. While low-income workers typically pay less in taxes and contributions, retirement incomes of the lower earning are often at a level that does not allow them to benefit from income-tax reliefs (allowances, credits, etc.). In such circumstances, low income earners might pay a larger portion of their gross pension in taxes compared to an average earner, depending on the progressivity of income taxes.

Differences between gross and net replacement rates. The TRR results have been presented net of income taxes and employee contributions. Table 3.4 provides the gross TRR results for the four core cases for a worker on average earnings retiring in 2013.

Table 3. 4: Current gross TRRs for the different core cases (net, average earnings)

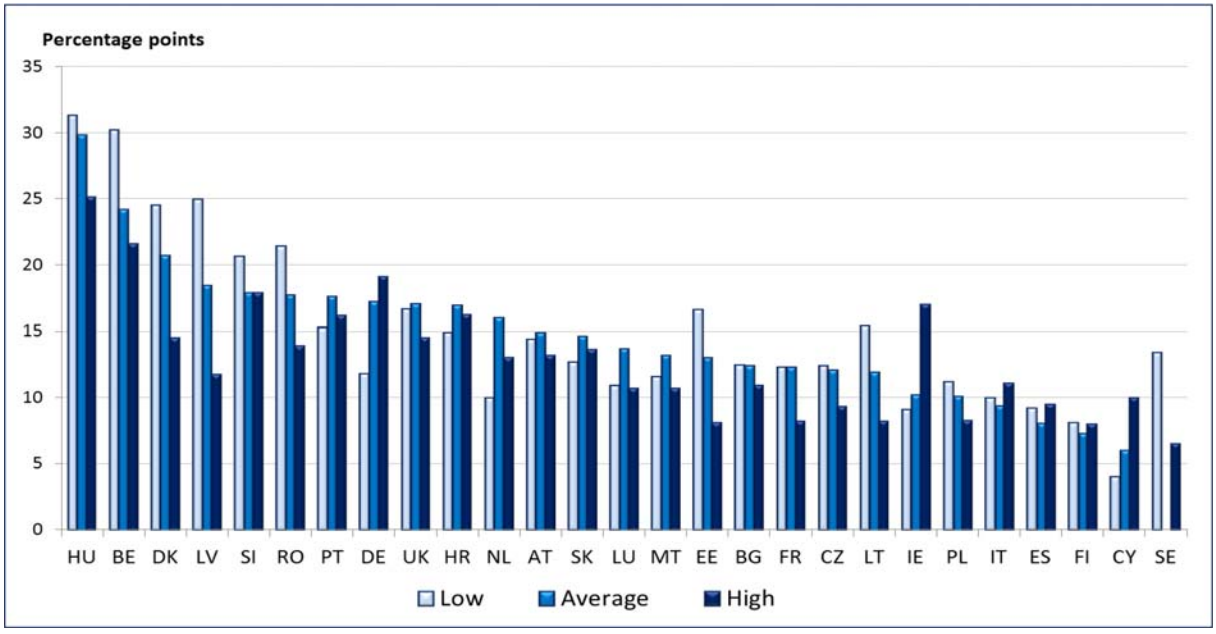
Member State	Gross Theoretical Replacement Rates (2013)							
	Base Case I		Base Case II		Increase in SPA		AWG career length case	
	age 25 to 65		*40 years to SPA*		*age 25 to SPA*		*AWG assumptions* (Table 3.3)	
	*men**	*women**	*men**	*women**	*men**	*women**	*men**	*women**
BE	54.4		54.4		54.4		47.7	46.5
BG	48.5	54.3	44.9		43.4	40.0	46.4	45.3
CZ	48.8	56.5	43.5		40.9	38.4	45.3	
DK	47.7		47.7		47.7		47.7	58.6
DE	39.9		40.1		40.3		43.9	38.8
EE	46.1	58.4	37.9	48.0	36.7	46.2	37.9	49.1
IE	72.9		72.9		72.9		72.9	
EL	:	:	:	:	:	:	:	:
ES	88.2		88.2		88.2		74.3	82.0
FR	67.9		67.9		67.9		62.7	53.9
HR	38.5	41.5	38.5		38.5	34.4	36.2	36.1
IT	70.8		70.9	70.6	74.5	66.2	63.1	59.8
CY	52.0		52.0		52.0		52.0	51.0
LV	52.9		46.6		43.0		54.6	52.0
LT	47.6	54.2	40.7	40.6	38.6	36.6	41.2	42.4
LU	92.4		88.8		78.5		85.0	82.8
HU	65.6		55.6		52.5		58.9	55.6
MT	65.8		65.8		65.8		65.8	66.2
NL	98.0		98.0		98.0		98.0	
AT	70.2	80.2	70.2		70.2	61.4	67.7	72.1
PL	64.1		64.1	63.1	65.2	57.4	71.3	56.6
PT	74.7		74.7		74.7		71.3	71.4
RO	55.4	45.9	55.4	45.9	52.4	41.2	50.4	40.9
SI	39.4	41.5	39.4	41.5	38.1	38.5	37.7	38.1
SK	58.8	60.3	49.8		46.1	45.4	48.6	37.6
FI	62.2		62.2		62.2		58.2	56.4
SE	69.4		69.4		69.4		76.2	70.7
UK	66.4	80.2	66.4	57.8	66.4	57.2	66.9	75.9

Data source: Member States. Note: if gender differences exist. Data for EL not available.*

By comparing net with gross replacement rates, we can assess how different tax treatments of work and pension incomes affect the income replacement of pensions. Figure 3.6 reports the percentage point difference between net and gross TRRs for different earning profiles. The difference between net and gross TRRs varies substantially across Member States, with the net TRR being more than ten percentage points higher than the gross TRR in 22 Member States. The larger the differences between net and gross TRR levels, the more favourable the design of the tax-benefit system is for pension recipients in comparison to wage earners.[21]

Figure 3.6 also shows that the greatest differences between net and gross TRRs are mostly found for low wage earners, whereas differences are smallest for workers with high incomes. Many Member States appear to apply an active policy of 'fiscal correction' on pensions in order to obtain better redistributive results.

Figure 3. 6: Percentage point difference between net and gross current Theoretical Replacement Rates for different earning profiles, base case II



Source: Member States. A positive difference indicates a higher net TRR. Sorted by 'average earnings' variant. Data for EL – not available (n.a.). If gender differences exist, results for men are reported in this figure.

[21] In HU, for instance, the large difference between net and gross figures can be attributed to the fact that pensions are tax-free.

The role of private pensions in current pension adequacy. For a comprehensive illustration of the composition of pension incomes, the role of private pensions (occupational and individual pensions) in current pension levels is assessed. Three categories of pension scheme are distinguished:[22]

- Statutory pay-as-you-go (defined-benefit (DB) or notionally defined-contribution (NDC));
- Statutory funded (usually defined-contribution (DC) schemes);
- Occupational and other supplementary schemes.

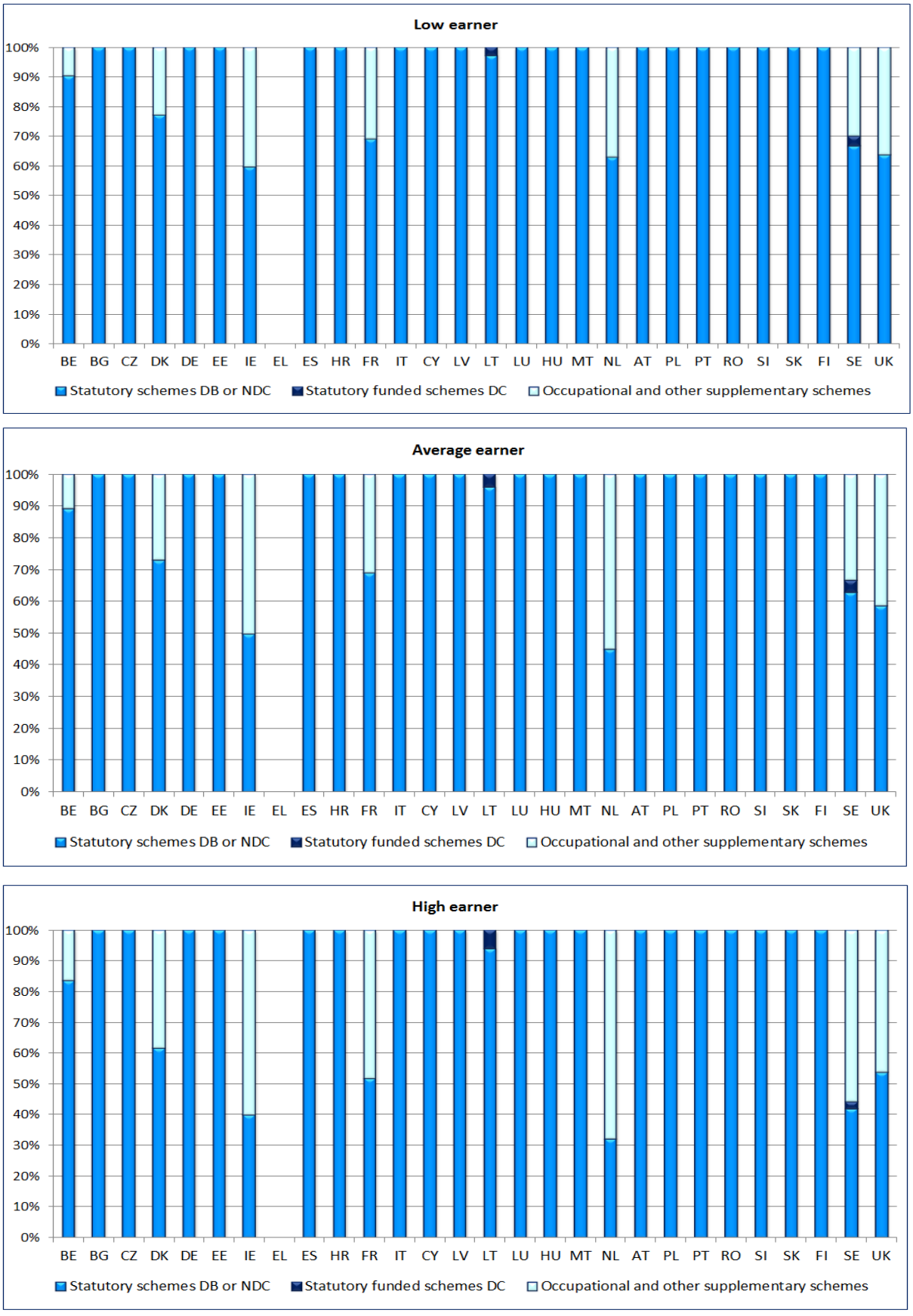
Table 1 in Annex 3 summarises the schemes covered, for all Member States. Figure 3.7 presents the share of the three types of pension schemes in current gross TRRs (base case II) for different earning profiles. Clearly, the public PAYG pension system (DB or NDC) is the main provider of pensions across the EU. However, occupational pension schemes based on either collective agreements or employer sponsorship have achieved a wide coverage in a number of countries and are gaining in importance in providing supplementary retirement income (see also the composition of prospective TRRs, Figure 5.20).

Occupational pensions contribute more than 20 percent to the TRR mix in France, the Netherlands, Sweden and the United Kingdom. Next to the overall design of pension systems and the relationship between 1st and 2nd pillar schemes, the contribution of occupational pension systems is largely influenced by the maturity of the systems, which vary between countries. Newly introduced statutory funded schemes contribute more substantially to pension income where these statutory funded DC schemes are already in the pay-out phase.

Generally speaking, the proportion of income from occupational or statutory funded pensions is lower for low-wage earners, since the redistributive features of statutory PAYG schemes play a more significant role for those with lower earnings.

[22] Note that this classification is not based on the traditional "three pillars" typology (including statutory, occupational and individual schemes). Generally, TRR calculations only include mandatory, typical or wide-reaching pension schemes, which usually exclude individual schemes unless they are part of official pension provisions and of substantial significance (e.g. Riester in DE).

Figure 3. 7: Shares of different pension schemes in gross TRRs for low, average and high income earner, 2013



Data source: Member States. Ref. base case variant II (40 years up to the SPA). Based only on the schemes included in the TRR calculations (Table 1 in Annex 3). Data for EL not available. If gender differences exist, results for men are reported in this figure.

Gender differences in current theoretical replacement rates. Where they exist, differences in theoretical replacement rates for men and women are assessed in more detail. However, since it has been assumed that the same career patterns apply for both men and women, gender differences in the TRRs results only exist in Member States with different retirement rules for men and women, noting that, in 2013, there was a lower pensionable age for women in 12 Member States, as summarised in Table 3.5.

Table 3. 5: Gender differences in standard pensionable ages in 2013 and 2053

MS	2013		Equalisation by 2053 legislated?
	Men	*Women*	
AT	65	60	✓
BG	63y8m	60y8m	
CZ	62y6m	61y4m*	✓
EE	63	61	✓
HR	65	60y9m	✓
IT	66y3m	62y3m	✓
LT	62y8m	60y7m	✓
PL	65y1m	60y1m	✓
RO	64y8m	59y8m	
SI	63y6m	61y6m	✓
SK	62	61y6m	✓
UK	65	61.3-61.8	✓

*Note: Member States with no gender difference in standard pensionable ages not listed. * SPA depends on the number of children raised; assumption of 0 children.*

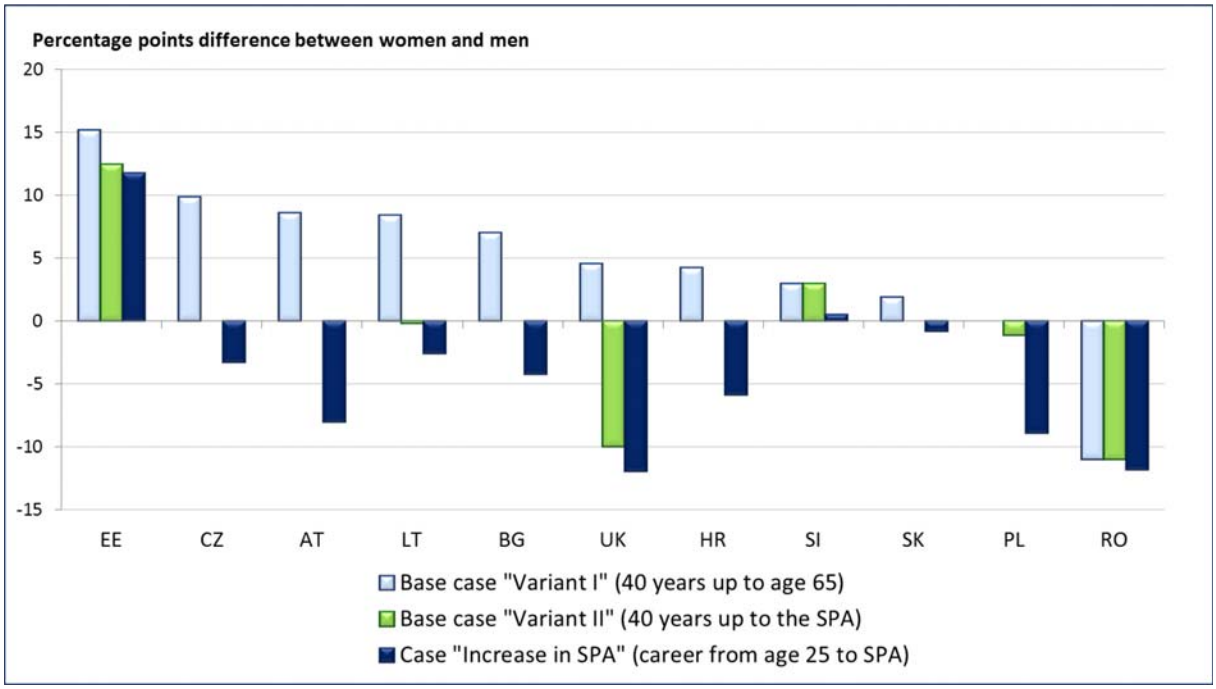
Figure 3.8 presents the percentage point difference in net TRR for men and women under the different career length variants for average earnings. In nine Member States, a 40 year career until 65 results in higher replacement rates for women in 2013, who benefit from late retirement bonuses or a benefit formula based on women having a career of less than 40 years.

Comparisons of TRRs for a 40 year career up to the gender-specific pensionable age (base case II) reveals that the higher theoretical replacement rates under base case I are explained by late retirement bonuses when working until age 65. A 40 year career up to SPA results in identical TRRs for men and women in Bulgaria, Czech Republic, Lithuania, Croatia, Austria and Slovakia, and in higher replacement rates for men in Romania and the UK. The results for women deteriorate further under the 'increase in SPA' case. Lower standard pensionable ages for women lead to shorter careers which translate into lower replacement rates upon reaching the gender-specific SPA in nine Member States (Czech Republic, Austria, Lithuania, Bulgaria, UK, Croatia, Slovakia, Poland and Romania).

However, an uninterrupted career of 40 years generally tends to be un-representative since women, on average, still have shorter periods in which to build pension entitlements. With pension benefits being increasingly linked to the length of contributory periods, lower pensionable ages and earlier entry into retirement are no longer an advantage for women (as is also illustrated by the results for the AWG case). Beyond gender differences in retirement practices, career breaks due to periods of unemployment, child care or inactivity for instance,

can explain the gender gaps observed in pension outcomes (see chapter 3.5 on the gender gap in pensions and chapter 4.1 on related prospective TRR variants).

Figure 3. 8: Percentage point difference in net current TRRs between women and men, average earnings, base case I, base case II, and 'increase in SPA'



Data source: Member States. Only countries included where gender differences exist. A positive difference indicates a higher TRR for women compared to men. Data for EL – not available (n.a.). Sorted by base case "Variant I".