**Traute Meyer**
**How European pension promises changed in austere times: 2002-2015**
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Pensions are the biggest welfare state programme in all EU countries by far. In 2015 spending on public pension programmes accounted for an average of 13 per cent of the 28 EU countries' GDP, followed by health at 8.4 per cent (Eurostat 2015). This is not surprising, considering that most people leave the labour force at some point as they age and that from then on they need a steady income to survive. This need has not declined; if anything, it is now greater than in the 1960s or 1970s because people live longer and have higher expectations of their living standards. However, there is today less confidence that the state or employers can meet these expectations. Indeed scholars agree that the challenge of financing pensions has been growing, since the 1980s, long before the financial crisis of 2008 and the subsequent Great Recession. In comparative welfare state research contributors have broadly adopted Paul Pierson's diagnosis that we live in an era of "permanent austerity", caused by economic globalisation, programme maturation and population ageing (Pierson 2001; Starke 2006 for an overview). As a consequence, governments must cut or at least contain pension spending. At the same time, changing employment and family structures have increased the pressure for policy-makers to ensure pensions are more responsive to the needs of those disadvantaged by the established systems, such as part-time workers, single parents, the low qualified or unemployed. Bringing together retrenchment and modernisation is difficult – to achieve both policy-makers would have to "recalibrate" programmes, i.e. to mix benefit cuts with the introduction of new rights, while keeping overall expenses under control (Pierson 2001, p. 425-27; Häusermann 2010). These dynamics have characterised pension reforms of the 1990s and the first decade of the millennium. The Great Recession threw into sharp relief how interrelated economic globalisation and pension finance are: because of volatile returns on investments the cost of annuities increased significantly between 2007 and 2008 for example, reducing private pension incomes (Antolin and Stewart 2009, p. 21). However, the challenges referred to in the literature existed before it, the recession when it came highlighted weaknesses already well known.

In this chapter I will first outline in some more detail the different drivers of austerity and modernisation in pensions as described by the literature, to illustrate the structural difficulties anyone involved with pension politics and policies faces today. My focus, however, is not pension policy or politics but I will investigate how pension promises changed for EU citizens between 2002 and 2015; this means that my analysis will cover a period of cost constraints that will have been heightened but not triggered by the Great Recession. The chapter will show how change has affected individuals with different means across the European Union. At this point not much research has been done in this area. Knowing more about the material consequences of reform decisions for individuals will complement our knowledge of socio-demographic, institutional and political circumstances of pension reform. For this purpose, in the core part of the chapter I will analyse OECD data showing how pension replacement rates in 20 EU member states have changed since the early 2000s in countries fitting the Bismarckian and the Beveridgean type of pension insurance. The final part will relate these findings back to the discussion on pension systems and politics. The chapter shows a decline in pension promises in most countries, but, interestingly, no matter what institutional type of pension system we examine, replacement levels remain fairly

high for most and especially for those on lower incomes. This result does not align well with studies showing that contemporary labour markets increasingly marginalise vulnerable groups while the more privileged remain protected. It suggests that pressures on governments to reduce statutory pension commitments have led to cuts, but with few exceptions states still prescribe substantial levels of replacement income for future retirees.

## I. Austerity and modernisation – the literature

*The decline of employer interest in social policy - the rise of the citizen as "investor"*
Looking at the drivers of austerity in more detail, the literature on the impact of economic globalisation and financialisation has highlighted how increased global competition puts pressure on pension funding (Cutler and Waine 2001); for public policy-makers it is harder today to impose costs on internationally mobile businesses for whom occupational pensions are less attractive and who have reduced contributions and moved out of defined benefit and into defined contribution schemes (Sass 1997, p. 20, 238-46; Ross and Wills 2002; Dixon and Monk 2009; Meyer and Bridgen 2011). As states and businesses have retrenched their pension programmes the responsibility of investment risks and of savings shifted from companies and public policy to individuals who are expected to take on greater personal risks and to save more voluntarily. Citizens have to accept that their income in retirement will be less predictable and that they are more directly affected by the volatility of their investments' value. The change has turned them into "investor subjects" (Langley 2006; French and Kneale 2009; Lapavitsas 2009).
This is regarded as problematic because individuals need stable incomes in retirement, yet evidence suggests that, if left to their own devices, even under favourable conditions the average citizen will not save enough for their long term future. Those on low and unstable wages simply lack the resources to do so (OECD 2013, p. 14), insurers do not find their custom sufficiently profitable (ABI 2003; Pensions Commission 2004, p. 93) and there is a good chance that the savings of the poor will be taxed by means-tested social assistance at retirement age, making their efforts superfluous (Rowlingson 2002, p. 628-9; Casey and Dostal 2013). Obstacles persist where a lack of resources is not the issue: even more prosperous households, on average, do not save sufficient amounts (Lusardi and Mitchell 2007; Alessie, Angelini et al. 2013). Long term planning is difficult because people tend to make decisions about their future based on personal experience rather than more systematic information (Kahneman and Tversky 1979; Kahneman 2011, p. 85-88; 138-140). They also imagine what lies ahead for them in an optimistic light, (Weinstein 1980; Thaler and Sunstein 2009), avoiding the negative feelings that thoughts of old age might elicit – illness, fragility, decay (Rowlingson 2002, p. 633-9). The situation is further complicated by complex savings products which potential customers cannot understand (Rowlingson 2002; Clark and Strauss 2008; Hagen and Kleinlein 2011; Ziegelmeyer and Nick 2013). For these reasons researchers are concerned about the impact of economic globalisation on the quality of pension schemes and they anticipate that the trend towards greater personal responsibility will lead to increased poverty risks.

*Growing employment inequality*
Risks might be exacerbated by the fact that sharper international economic competition has also enforced a "dualisation" of labour markets and welfare states, as

some scholars argue (Palier and Thelen 2010; Emmenegger, Häuserman et al. 2012). The term refers to the reforms that divide citizens into labour market "insiders" and "outsiders", with the former still enjoying much of the protection customary during the "golden age" whereas the conditions for the latter have become more precarious. Increases in means-testing, privatisation, cuts in replacement rates and restrictions of entitlements have enforced part-time and flexible employment, wage inequalities and long-term unemployment across OECD countries and deepened the difference between the status, income and employment security of said insiders and outsiders. Regarding pensions this trend would mean that insiders remain sheltered against the trends summarised above, while outsiders would be affected more.

*Ageing populations and programme maturity*

Research about programme maturity has focused on the relationship between the expansion of public pension programmes, ageing and cost. Since the 1960s governments extended the scope and level of pensions in many western countries and as more people retired under better conditions, expenses increased, reducing also the scope for expansion in other areas such as family policies. The trend was exacerbated by population ageing, i.e. life expectancy grew and people had fewer children, (e.g. Clark, Munnell et al. 2006, p. 10).

*"New social risks" create modernisation pressure*

The research above outlines why pension programmes have been under pressure to cut benefits. During the 2000s some social policy analysts focused their attention on population trends which have increased pressures on countries to modernise their welfare systems. They point out that increased individualisation, especially of women with children and worsening employment opportunities of the low-qualified exacerbated poverty risks in welfare states that had been built on the industrial male breadwinner model (Taylor-Gooby 2005; Bonoli 2005) These "new social risks" created structural pressure for the expansion of rights: a universal minimum in public pensions to protect part-time and low income workers, the expansion of public child care. These competing pressures – ageing on the one, individualisation on the other hand - had to be negotiated under general conditions of austerity (Häusermann 2010).

*Reform trajectories in different pension regimes*

How economic globalisation, programme maturity, population ageing and individualisation affected different countries much depended on their pension institutions (Bonoli 2003; Lynch 2006; Immergut, Anderson et al. 2007; Häusermann 2010). In this regard, the (West-) European pension landscape has been subsumed under two headings (Ebbinghaus and Gronwald 2011): on the one hand in the "Beveridgean" model a universal minimum state benefit is available to most citizens, protecting them against poverty. Status preservation is the domain of mandatory occupational pensions or other compulsory benefits. The core countries include the Netherlands, Switzerland, Sweden, Denmark, Norway, Finland and most recently also the UK (Bridgen 2010). In the "Bismarckian" model , one dominant public pension protects status through income-related benefits, but there is no universal minimum. Counted among the core Bismarckian countries are Austria, Belgium, France, Germany and Italy. The Beveridgean model is generally regarded as more inclusive than the Bismarckian one because its minimum, universal level is independent of labour market performance or marriage status, thus protecting a broader range of biographies (e.g. Bonoli 2007). At the same time, public pension expenses in

Bismarckian countries have been higher because of income-related high replacement rates. These structural differences have implications for reform. In Bismarckian countries with population ageing a declining number of employees had to maintain high replacement rates for a growing number of retirees; logically they expected similar benefits in return, which looked increasingly untenable, posing a dilemma for reformers (Myles and Pierson 2001, p. 312-13). Any major change would be unpopular and highly visible to the electorate. In Beveridgean countries the responsibility for the governance and adjustment of pension provision is divided between state and non-state actors. Thus, public policy makers are under less pressure to make cuts because costs are lower. Besides, non-state actors are less visible, less accountable, and can therefore make changes more easily (Bonoli 2003).

*The financial crisis 2008*

The trends summarised above meant that pensions had been under pressure for quite a while before the financial crisis began in 2008. Economic globalisation was already assumed to exacerbate labour market inequalities and to shift investment risks for pension savings towards individuals who are not well equipped to carry them. The economic shock and its aftermath added to this pressure, through a sudden drop in the value of pension funds, a rise in the cost of annuities for individuals, through very low interest rates, through companies being more concerned about the costs of occupational benefits and through a loss in housing wealth (Antolín and Stewart 2009, p. 21; Munnell and Rutledge 2013; MacDonald and Osberg 2014, p. 316-19). The extent of the crisis was not expected when it came, but the vulnerabilities of the systems it exposed were well-known. At the same time scholars also expected that reforms would have to accommodate "new social risks", shaped by complex reform coalitions and existing pension institutions.

*The impact of austerity and modernisation for retirement incomes*

On this basis we would expect to find retrenchment pressures in the decade between 2002 and 2015, while more individualised life courses strengthened the need for universal rights protecting less stable employment and marital biographies. Comparative pension policy analyses focus on how institutions, economic and demographic trends affect the conditions under which public policy-makers, companies and individuals make decisions about pension insurance. Even though austerity has loomed large in this body of work and a lot has been written about the difficulties of meeting new demands without increased resources, the outcome of change for individuals has been considered much less. Existing work suggests that individuals' pension rights are under pressure, that retrenchment will affect many, modified by modernisation. However, little detailed research has been done into what the impact of the politics and policies of austerity have been on citizens' income, on their ability in retirement to be free from poverty, on the quality of the protection of groups facing "new social risks". This is perhaps not surprising.

## II. Assessing today's pension promises – aim of the chapter

The purpose of pensions is to provide social security after a working life is completed. Especially after periods of significant change we would therefore expect their impact on people's income to become a key area of concern for social policy analysis. However, as stated, research has focused on the politics and policy of pensions. Where recent analyses have explored retirement income more extensively their focus

has been on individuals who are already retired or about to do so, in Canada, Europe and the USA (for example van Vliet, Been et al. 2012; Fasang, Aisenbrey et al. 2013; Vara 2013; Nivakoski 2014; Wainwright and Kibler 2014; Cahill, Giandrea et al. 2015; Möhring 2015). The problem for those interested in the impact of current policy change is that the income of today's pensioners is the result of past reform paths and employment histories (for this point also Hinrichs and Jesuola 2012, p. 17). The pensioners in the above studies would have needed at least four decades to build their entitlements. During that time rules will have changed repeatedly, reducing or increasing individuals' pension promises; there will have been small alterations and paradigm shifts. The impact of reforms also depended on the age of the individual at the point when they took effect, take for instance countries' decisions to bring in care-years for mothers at certain cut-off points. Thus, final outcomes also depend on employment and care-related histories. Pensions are the result of the programme rules an individual encounters during their long working life and their personal and employment history. They are therefore not necessarily related to current legislation or governance and by the same token the incomes of current retirees do not predict future outcomes. To be sure, as discussed above, scholars have argued that pension reform more than any other social policy is path dependent, and that we therefore should expect gradual change only. This is why we readily label countries' programmes in a static way, consider "Bismarckian" or "Beveridgean", for example. To assume continuity is certainly plausible for shorter time spans. However, a typical working-life lasts many decades during which we are bound to find major changes in social security systems (Kasza 2002). Between 1970 and 2015 for example, in northern and western continental European countries the first few years were still regarded as the "golden age" of the welfare state, bringing with it significant expansion, to be followed by similarly significant changes after cost containment set in since the late 1970s. British pension reforms in the mid-1970s or the German reforms of 2001 are examples. More importantly perhaps, in a great many of today's 28 EU member states authoritarianism still reigned in 1970, followed by regime change and EU membership in the mid-1970s in Southern Europe and from the 1990s in the East. What marks such decisions have left on individual pension biographies has not been systematically investigated and is therefore not well understood. I do not want to pursue this point in empirical detail here, but simply argue that today's outcomes are unlikely to have been caused by one set of path-dependent rules; instead individuals' entitlements in many countries are likely to have been characterised by significant changes. Likewise, the rules of contemporary systems are unlikely to explain the current incomes of pensioners. Instead, studies using the incomes of today's retirees to understand pension systems need to be retrospective; this research is perhaps comparable to the work of astronomers who use light waves to understand the features of long exploded stars.

If this is true, why do we not see more research on the possible impact of current rules? One plausible response is that the full impact for individuals of the changes that have taken place since the mid-1990s are not yet known; in fact they will never be known in full, because they, too, will be replaced by further reforms before they can mature. Focusing on the projected impact of current rules, therefore, will not allow us to predict future outcomes with much accuracy. This is a dilemma. There are good reasons to engage with these rules regardless. While they do not allow predictions of future outcomes, they do show where today's lines are drawn between collective and individual responsibility, the state and the market when it comes to ensuring citizens' future security. The rules show what level of income decision-makers guarantee for

different income groups in the future, what minima and level of mandatory status preservation seem appropriate under current conditions.
The OECD has studied the impact of current pension systems in greater detail than academic contributions. Its "Pensions at a Glance" studies have taken stock of mandatory pension systems and pension reforms in all member states since the early 2000s and they have documented the extent of entitlements prescribed (2005; 2007; 2009; 2011; 2013; 2015). Important for the purpose of this chapter is that they also project what impact these rules would have on the retirement incomes of citizens starting employment in 2002 and in 2015. Analysing this information we can see how the lines drawn between individual and collective responsibilities changed during more than a decade of austerity. Moreover, levels are calculated for hypothetical workers on low, average, and above average incomes, giving us the opportunity to compare how change affected more marginal individuals, the middle, and wealthier ones. To be sure, we need to reflect critically whether these are appropriate proxies for an analysis of social difference. Many people who started their working lives in 2015 and whose employment careers will count as marginal by the time they need a pension at retirement age in the 2050s will have experienced more complex employment biographies, these will include times of inactivity, but also of full-time work. Similarly, only few average and above average earners are likely to have the linear income trajectories assumed by the OECD. When interpreting the figures we need to bear these limitations in mind. Nevertheless, they do reflect three very different trajectories, they are unique in highlighting such differences at all and, last but not least, typical future employment trajectories in 20 countries are unknown, so to assume three different levels in relation to average wages is a reasonable attempt (Bridgen and Meyer 2007). A final advantage of this data is that the documents contain descriptions of the countries' pension systems which allow the categorisation according to Beveridgean and Bismarckian criteria of 20 EU member states, i.e. significantly more countries than used in previous comparative studies can be included.[i] On the basis of this information in the following I will give an overview of main changes in the projected pension entitlements in twenty EU countries between 2002 and 2015, and of patterns in 2015.

## III. Today's pension promises for the future

### Analytical approach and data

Table one groups 20 EU countries for which appropriate information is available according to Beveridgean and Bismarckian criteria. Countries whose systems have a universal base and a mandatory earnings-related part count as "Beveridgean"; the "Bismarckian" systems are mandatory and earnings-related, but lack such a base. This categorisation allows me to assess later whether the two types afford the individuals analysed here systematically different levels of retirement income. Tables two and three show the nationally agreed levels of protection for citizens in public and other mandatory pensions systems. The figures demonstrate what retirement incomes individuals accrue under all compulsory programmes in the year they retire. This is expressed as net pension replacement rate of the last wage after a full employment career receiving stable wages worth the national average, half and one and a half times the national average. To capture change, table two compares one set of earners who accrue rights under the conditions of 2002 with one doing the same in 2015. To measure inclusiveness I assume that a person is at risk of relative poverty when

replacement rates are below half average wages. For status preservation I assume that the higher the replacement rate the closer a life in retirement can be to an individual's living standard during their economically active period. Comparing 2002 and 2015 allows us to see how the collectively agreed levels of adequacy and status preservation change. Table three focuses on the situation in 2015, using the same data as table 2; it ranks the countries by the level of replacement for different income groups and pension regime type; its purpose is to make the relative position of countries immediately visible. Both tables only capture income at the point of retirement, likely to be the most favourable date. Indexation rules affect long term adequacy and it is now rare for pensions to grow in line with wages (OECD 2013, p. 146). Therefore, in most cases the value of the pension is going to deteriorate steadily until life ends.

Table four displays the overall "pension wealth" individuals have at their disposal during their life in retirement. To determine this value the number of years from national retirement age until statistically projected year of death is calculated and multiplied with the income on retirement, taking into account how entitlement changes through indexation. The result is expressed as multiple of the individual's wages. Changes in pension wealth combined with changes in replacement rates enable us to see whether pension reforms are projected to lead to overall retrenchment, true when there are cuts in individuals' overall pension pots, or if they have preserved the value, but spread it more thinly over lives projected to last longer. Besides, pension wealth reflects differences between the replacement rates of income groups, higher replacement rates will lead to higher pension wealth. Comparable figures exist for 2009 and 2014, making only short term comparisons possible, unfortunately.[ii]

Finally Graph one is designed to check whether citizens with half average wages are more likely to depend on the minimum in Bismarckian or Beveridgean countries. For the Bismarckian group the graph compares pensions with the social assistance level. As discussed above it is often assumed that low earners would be at risk because Bismarckian systems have no minimum pension and low life time incomes leading to even lower benefits might render recipients eligible for social assistance. For the Beveridgean countries the graph shows how much above the minimum universal pension the pensions of low earners would be.

In the following I will examine the projected change of replacement rates and pension wealth upon retirement across EU countries, to gauge where lines have been drawn between collective and individual responsibility, and what level of income today's decision-makers guarantee tomorrow's pensioners.

**Retrenchment and redistribution: Pension promises 2002-2015**

In the EU there are far more countries matching the features of Bismarckian than the Beveridgean model: in 2012 14 of the 20 countries included here had earnings-related mandatory schemes without a universal minimum (table 1). Only Denmark, Finland, Sweden, the Netherlands, the UK and Portugal offered a statutory, broadly accessible minimum at a social assistance level in addition to their earnings-related schemes.

(Table 1 somewhere here)

*Overall change – retrenchment and expansion*

How have the collectively agreed levels of adequacy and status preservation changed

between 2002 and 2015? Retrenchment has happened in most places, but in a significant number of cases rights expanded (table 2). In eight of the 18 countries for which we have data (Belgium, France, Germany, Greece, Italy, Luxembourg, Poland, Finland), projected pension replacement rates fell for all income groups, most drastically in Greece and Germany. In two countries (Austria, Hungary) only the average and higher earners lost entitlements, while the lowest earners gained them. In another two only the lowest (Portugal, Sweden) and middle income (Sweden) groups lost. In contrast, six countries have extended entitlements for all groups (Czech Republic, Ireland, Spain, Denmark, Netherlands, UK); in Denmark, the Netherlands and the United Kingdom they grew particularly strongly.

What did these changes mean for contribution rates?[iii] Overall, citizens in all countries have to pay more to accrue their monthly incomes than before. In the group where retrenchment was universal the contribution effort stayed roughly the same (Belgium, Greece, Luxembourg and Poland, Germany, Italy) or increased (France, Finland). In the group were expansion was universal rates rose, too (Czech Republic, Netherlands). Where we see cuts for some and expansion for others rates also increased (Hungary, Sweden) or stayed constant (Austria). At the same time the average values of individual pension pots have not diminished between 2009 and 2014 (table 4), suggesting that over the period of their retirement citizens are not projected to become poorer, but that instead their assets will be spread over a longer period of time. While not losing in the long term, individuals will still need to make do with less every day. Regarding the Bismarckian/Beveridgean divide, average change does not confirm the expected differences between them: we see significant retrenchment for all income groups in the 12 Bismarckian countries, including higher earners; in the six Beveridgean cuts only affected one group, but atypically this was the one on lower wages; the entitlements for middle and better earners expanded.

(Table 2 somewhere here)

*Lower earners - 2015*

The data also shows a transnational commonality which is significant from a social policy perspective: low earners remained better protected than other individuals (table 2). In 2015 they enjoyed the highest replacement levels in all but five countries; the gap between them and higher earners in this regard was significant in Ireland, Denmark, the Czech Republic and the UK and it had grown in their favour in six countries. On average, their replacement rate of 79 per cent was nine percentage points higher than that of average earners and twelve percentage points higher than that of higher earning individuals (table 3). This suggests that despite retrenchment in the majority of countries, lower income groups continue to receive the strongest protection. As a consequence in most countries these more vulnerable individuals can accrue benefits on the level of or fairly close to their previous earnings. In Denmark, the Netherlands and the UK their pensions would at least fully replace their last wage, in another seven cases their replacement rates were between 80 and 98 per cent and in two more between 70 and 79 per cent. Only Slovenia, Poland and Germany offered entitlements below 58 per cent. As already pointed out, pension wealth did not change much between 2009 and 2014, however, reflecting the higher replacement rates of lower earners, their pension wealth is also significantly higher than that of higher waged individuals (table 4).

(Tables three and four somewhere here)

*Average earners - 2015*

In 2015 average earners faired relatively less well than low earners, but in most countries, significant parts of their last earnings would still be replaced, too. In seven countries the mandatory systems still protected their living standards, granting pensions between 96 and 80 per cent of last wages (table 3). This was achieved through an extension of rights from already high levels in the Netherlands, Portugal and Spain; in Austria and Hungary the existing high replacement rates were cut only a little; retrenchment in Luxembourg and Italy was significant, but it took place from a high level (table 2). In seven other cases workers were set to accrue less, but still on course for benefits at least worth 60 per cent of their last wage: in the UK, Denmark and the Czech Republic this group's entitlements increased significantly, in France, Sweden and Belgium it experienced some cuts; in Finland retrenchment was significant but started from a high level. Average earners were much more vulnerable in Greece and Poland where their pensions would be no more than four points above the poverty line, after deep cuts from a high level (Greece) and significant reductions from a lower one (Poland). The situation was worse in Germany and Ireland were the pensions of average earners would be on or below the poverty line, after significant cuts in Germany and only a small rise from a very low level in Ireland. Accordingly, this group's pension wealth was below that of lower earners, and stayed relatively constant (table 4).

*Higher earners - 2015*

The majority of higher earners also received pension promises worth at least 60 per cent of their last wage. Eight countries went a lot further: higher earners in the Netherlands, Hungary, Spain, Austria, Portugal, Luxembourg, Italy and Sweden accrued pensions above 78 per cent of last income. They either had had high replacement rates in 2002, which remained above average after cuts, such as in Hungary, Spain, Austria, Luxembourg and Italy, or their rights were extended, such as in the Netherlands, Portugal and Sweden. In the remaining countries with entitlements above 60 per cent the UK had extended rights for all; cuts in France were small, in Finland they were significant, but had started from a high level. Better earners did less well (57-52%) in Denmark and the Czech Republic where rates had increased from lower levels, and in Greece and Poland where they suffered big cuts. Belgium, Germany and Ireland are at the bottom, due to big cuts (Germany), cuts from a relatively low level (Belgium) and a small rise from an even lower one (Ireland). In line with these trends the pension wealth of highest earners was lowest, with a small gap to average earners only, and it had stayed relatively constant (table 4).

*Differences between Beveridgean and Bismarckian systems*

Table three also highlights the Beveridgean/Bismarckian divide. Particularly relevant here is whether those on low incomes are better protected against poverty in the Beveridgean world than in the Bismarckian one, as widely assumed in the literature. On average, this is certainly true. In 2015 the average replacement rate in the Bismarckian countries for low earners was 75 per cent – twelve percentage points below that of the Beveridgean countries (table 2). However, this average covers a wide spread. At the top are Denmark and the Netherlands, well known for their social democratic welfare principles, but there is also the recently reformed United Kingdom with a much less solid reputation in this regard. Near the bottom we find Finland and Sweden, of equal social democratic reputation, with very low replacement rates for

low earners, much below those for instance of Eastern European new member states Czech Republic, Hungary and Estonia, (table 3). To explore further the supposed better offer of Beveridge over Bismarck when it comes to the low waged, it is useful to consider whether citizens on half average wages in Bismarckian and Beveridgean countries will be eligible for the minimum (graph 1). In all 14 Bismarckian countries without a minimum pension such workers' retirement benefits would still be far above the social assistance level. Similarly, in the Beveridgean countries no individual would depend on the non-means-tested minimum only. Overall, for the low paid under investigation here, the minimum level is irrelevant because their income is higher.

(Figure 1 somewhere here)

*Pension promises 2002-2015: discussion*

Summing up, where do countries stand regarding their pension promises after a period of change? We have seen that governments have cut replacement levels in almost all countries, i.e. mandatory protection has been in decline. This happened not through a reduction of individual pension wealth, but by spreading it over a longer period. Of course, this would still be problematic for someone whose replacement level has fallen below the poverty line or whose standard of life is set to deteriorate significantly in retirement. It appears that policy-makers share this view; the data also suggests a broad consensus among European decision-makers that a large share of future retirement income must still be guaranteed through mandatory savings, particularly when it comes to lower earners: mandatory levels of insurance have been kept high for all, and redistribution in favour of low earners is taking place in many countries. In 2015 mandatory benefit promises suggest to low earners they will receive 79 per cent of their last income one day and they are set to replace about two thirds of earnings for medium (70%) and higher earners (67%), too. On average, the Beveridgean group makes even higher promises for low earners, however, the average includes extreme variation, raising once more the question whether the Bismarck/Beveridge categorisation which is based on the structure of programmes can be extended to systematic differences in outcome (Overbye 1997). That the two categories might matter less for outcome than often assumed is also demonstrated by the fact that the low waged in Bismarckian countries would not become dependent on means tested income support because their employment related pensions are far above this level everywhere. In other words, it is true that these systems lack a very basic minimum but for many of the less well-off this minimum is irrelevant anyway.

Some countries are clear outliers. I count among them those where earners receive much lower protection than elsewhere, indicated by values more than one standard deviation away from the mean. In the low-income group Germany, Poland and Slovenia allow individuals to sink well below this average distance of 62 per cent replacement level, but Sweden is also only slightly above it (table 3). Unless such individuals save the missing capital voluntarily, which is unlikely, they are on course to live below the relative poverty line in retirement. Average income individuals accrue very low pensions in Ireland, Germany, Poland and Greece with Slovenia coming close to the outlier line of 54 per cent replacement level. Ireland, Germany, and Belgium are also at the bottom of the higher earners.

The outliers on the other end of the spectrum make pension promises above one standard deviation. In the lowest income group these are Denmark, the Netherlands, but also the UK and Luxembourg, with the Czech Republic and Austria coming close.

In the medium and higher income group we find the Netherlands, Hungary, Austria, Portugal and Spain.

## IV. The literature in the light of pension promises

*Substantial replacement rates remain despite retrenchment*

How do the above findings relate to the comparative research on pension reforms?

The fact that pension entitlements declined in most countries for most individuals is in line with the austerity trends described initially. In 2015 in almost all countries included here individuals have to save more voluntarily, often considerably more, if they want to maintain the replacement levels they had at the beginning of the millennium. This might well lead to under-saving in the future; as shown, research into long term financial planning suggests that individuals on average do not possess the skills "investor subjects" need. This is exacerbated by the fact that individualised savings accounts are less reliable because risks are not pooled. But we saw not only evidence for austerity policies in the data, boundaries for retrenchment were also evident. Almost everywhere mandated pension regimes grant the low waged relatively high replacement levels. Moreover, retrenchment boundaries seem to have been drawn further: they can be observed for medium and higher earners as well. After all, in 2015 their pensions still replaced two thirds of last wages on average. Such levels are still fairly close to employment income. As stated, my analysis did not consider the politics of reform and therefore does not allow me to say why these boundaries are there or how likely it is that individuals will be expected to take on more responsibility in the near future. What we do know on the basis of the data is that in most EU countries states and collective actors have kept control over the biggest part of pension savings, rather than transferring it to the hands of individual citizens. This outcome is consistent with the assumption that austerity and modernisation go hand in hand, that welfare states have "recalibrated", reserving the strongest control for the most vulnerable.

The fact that the low paid have the highest replacement rates is inconsistent with the dualisation thesis which would expect that the status of the "labour market outsiders" on half average wages would have deteriorated while the "insiders" on average wages and above would do better. This is not the case; in addition the gap in replacement rates between the highest and the lowest earners has also widened in favour of the latter in six of 18 cases for which we have data, while it stayed constant or declined by very little in a further three. The analysis offers support for dualisation research in that the labour market insiders are still protected fairly well, too; however, the point is that the outsiders do not lose out as much as expected by this approach.

*Extremes: Germany, the United Kingdom, Sweden*

Three extreme cases are not described by the trend above. In Germany the mandatory levels for the low paid are far lower than anywhere else; Germany also no longer shows the typical high replacement rates for medium and higher earners associated with Bismarckian systems; instead outcomes here are particularly low, too. Thus, Germany's pension system no longer fits the conservative or corporatist labels it has worn for so long. In Sweden compulsory coverage for higher earners increased significantly, while those on low and average pay received less in 2015 than in 2002, cuts were most drastic for low earners; Sweden is the only country where only the entitlements of higher earners increased and where the replacement rate of the highest paid is much above those of the lowest paid (14 percentage points). Thus in 2015

Sweden is among the countries least protective of the low paid and at the same time much above the average regarding the high paid. This goes completely against the greater social inclusiveness expected of the Beveridgean model and of the social democratic welfare state. Finally, the UK counts among the radical cases because it extended its replacement levels not just for all income groups, like Denmark and the Netherlands, but also more significantly than these two. The country has been the main representative of a liberal political economy and welfare state for a long time, this move into the Beveridgean group during a time of austerity is therefore surprising. There is no space in his chapter to explore why of all countries the most radical changes have happened in the three identified like no other with the now classic welfare regime ideal types; however, in all three the previous model had been exhausted. In Germany and Sweden reforms were triggered by the increasing costs of the existing model heavily regulated by the state and the trade unions; in contrast, the British system based on low state benefits and private sector voluntarism had created its own rising costs. In Germany in 2001 radical retrenchment provided a direct solution to the problem that already significant pension contributions were projected to rise over the next decades; at the same time the cuts did not affect anyone immediately, but they would be phased in over decades. The red-green coalition government could thus claim the credit for a reform whose full impact future governments will need to confront (Bridgen and Meyer 2014). In Sweden in the context of a deep recession at the beginning of the 1990s and an ageing society actors across the political spectrum agreed that a structural pension reform was needed, which would cut costs and tie outcomes more strongly to market performance and demographic change, while keeping a minimum level for those on low incomes (Anderson und Meyer 2003; Belfrage and Ryner 2009, p. 270-273; Belfrage 2015). In the UK comparatively radical expansion happened because after the strong decline of occupational pensions means-tested benefits were set to become the standard option for retirees in the British pension system. In this situation a cross-class political consensus agreed that the existing system of a very low state pension and voluntary occupational benefits was no longer functional. A higher state pension and employer compulsion was the resulting compromise (Meyer and Bridgen 2012).

*The Beveridge vs Bismarck distinction is not helpful to understand outcomes*

The results also suggest that we should be careful when using as proxy for outcomes the organisation of pension systems and particularly the divide between Beveridgean countries that have adopted a poverty preventing universal minimum and a mandatory second pillar for status preservation and Bismarckian ones which only have one statutory pillar granting earnings-related benefits. It is true that on average this institutional distinction goes hand in hand with different outcomes: average vulnerable workers accrue more in Beveridgean countries while the higher paid with uninterrupted careers accrue less; the opposite applies in Bismarckian countries. However, these lines become blurred when we look at the individual cases. In the low-income group, Denmark and the Netherlands are the most protective, but Sweden and Finland are among the least protective cases. Moreover, there is significant variance regarding higher earners; even though Bismarckian systems are associated with higher replacement rates for them, Germany is among the least protective countries, together with Ireland, Belgium, the Czech Republic, Poland and Greece, while Sweden is substantially above the EU average. These diverse outcomes in Beveridgean and Bismarckian systems suggest that national specifics, such as rules for accrual and tax legislation matter more than common programme structures.

The second reason why the institutional distinction should be treated with caution when assessing outcomes is that in practice the universal minimum existing in Beveridgean systems does not matter for low waged individuals. This universal minimum has often been identified as the reason for better poverty protection. However, the current study suggests that it is irrelevant for the low paid because their entitlements are above that level anyway. By the same token, the absence of a minimum in the Bismarckian countries is seen as problematic because it increased means-tested dependency of marginalised workers. However, the current findings suggest that low paid individuals' pensions are higher than this means-tested social assistance level in any case. To be sure, citizens with life time incomes significantly below half average wages would still be better protected in Beveridgean countries. But for everyone meeting this level in Bismarckian countries a guaranteed minimum would not make any difference. Altogether, we can conclude that we cannot use the Beveridgean or Bismarckian institutional divide as shorthand for the quality of citizens' protection.

*The benefits of a larger sample*

Finally, the inclusion of a broader range of countries than commonly analysed in comparative pension policy and politics – four Eastern European member states as well as all Southern European ones – has made the observations on pension trends in the European Union more robust. On an empirical level it highlights that national agreements to keep minimum levels for the low paid are wide spread. On a conceptual level, by adding more countries to the two pension regime categories, it allows us to explore more extensively how useful the distinction between Bismarckian and Beveridgean institutions is for outcomes across the whole of the European Union.

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**Table 1. Qualifying conditions, benefits and contributions of mandatory pensions. EU 2012**

| | universal non-means-tested minimum available (poverty prevention) | income-related (living standard preservation) | basis for rights accrual |
|---|---|---|---|
| **Income related, no independent minimum (Bismarckian)** | | | |
| Austria | no | yes | employment, care work |
| Belgium | no | yes | employment |
| Czech Republic | no | yes | employment |
| Estonia | no | yes | employment, care work |
| France | no | yes | employment, care work |
| Germany | no | yes | employment, care work |
| Greece | no | yes | employment, care work |
| Hungary | no | yes | employment, care work |
| Ireland | no | yes | employment, care work |
| Italy | no | yes | employment |
| Luxembourg | no | yes | employment, care work |
| Poland | no | yes | employment |
| Slovenia | no | yes | employment |
| Spain | no | yes | employment, care work |
| **Income-related, independent minimum (Beveridgean)** | | | |
| Denmark | yes | yes | country, employment |
| Finland | yes | yes | residence, 40 years in country, employment |
| Netherlands | yes | yes | residence |
| Portugal | no but low threshold for non-means-tested social pension (at social assistance level) | yes | employment, but no lower limit for contribution years |
| Sweden | yes | yes | residence, 40 years in country, employment |
| United Kingdom | no, but low access threshold to full state pension | yes | 30 contribution years or equivalent: employment, care work (11 years per child) |

Source: OECD 2013 (missing: Bulgaria, Cyprus, Latvia, Lithuania, Malta, Romania); Mutual Information System on Social Protection (Missoc) )(2012).

**Table 2: Projected net pensions as per cent of final wage from statutory and other obligatory old age provisions for pensioners at the end of their working lives with 50, 100 and 150 per cent of the average wage; public pension**

| | Working life begins 2002 | | | Working life begins 2015 | | | Change 2002-2015 | | | Highest (1.5) as % of lowest | | Public pension contribution rates (% of gross earnings) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Income (% of average)** | **0.5** | **1.0** | **1.5** | **0.5** | **1.0** | **1.5** | **0.5** | **1.0** | **1.5** | **2002** | **2015** | **1999** | **2014*** | **1999-2014** |
| **Income related, no independent minimum (Bismarckian)** | | | | | | | | | | | | | | |
| Austria | *91.2* | 93.2 | 93.5 | *92.1* | 91.6 | 88.9 | 0.9 | -1.6 | -4.6 | 103 | 96 | 22.8 | 22.8 | 0.0 |
| Belgium | *82.7* | 63.1 | 53.3 | *64.2* | 60.9 | 49.1 | -18.5 | -2.2 | -4.2 | 64 | 77 | 16.4 | 16.4 | 0.0 |
| Czech Republic | *88.3* | 58.2 | 42.9 | *93.1* | 63.8 | 51.9 | 4.8 | 5.6 | 9.0 | 49 | 56 | 26 | 28 | 2.0 |
| Estonia | .. | .. | .. | *76.1* | 59.8 | 53.5 | .. | .. | .. | .. | 70 | 35 | 20 | -15.0 |
| France | *98.0* | 68.8 | 62.6 | *66.9* | 67.7 | 62.0 | -31.1 | -1.1 | -0.6 | 64 | 93 | 16.7 | 21.3 | 4.6 |
| Germany | *61.7* | 71.8 | 79.2 | *53.4* | 50.0 | 49.0 | -8.3 | -21.8 | -30.2 | 128 | 92 | 19.7 | 18.9 | -0.8 |
| Greece | 99.9 | 99.9 | 99.9 | *66.8* | 54.1 | 52.4 | -33.1 | -45.8 | -47.5 | 100 | 78 | 20 | 20 | 0.0 |
| Hungary | *86.6* | 90.5 | 99.1 | *89.6* | 89.6 | 89.6 | 3.0 | -0.9 | -9.5 | 114 | 100 | 30 | 47 | 17.0 |
| Ireland | *63* | 36.6 | 27.4 | *70.1* | *42.2* | 32.5 | 7.1 | 5.6 | 5.1 | 43 | 46 | no sepa | 14.8 | |
| Italy | *89.3* | 88.8 | 88.4 | *82.2* | 79.7 | 81.6 | -7.1 | -9.1 | -6.8 | 99 | 99 | 32.7 | 33 | 0.3 |
| Luxembourg | 125 | 109.8 | 105.6 | *98.4* | 88.6 | 83.7 | -26.6 | -21.2 | -21.9 | 84 | 85 | 16 | 16 | 0.0 |
| Poland | 69.6 | 69.7 | 69.8 | *54.0* | 52.8 | 52.4 | -15.6 | -16.9 | -17.4 | 100 | 97 | 19.5 | 19.5 | 0.0 |
| Slovenia | .. | .. | .. | *57.6* | 57.4 | 55.1 | .. | .. | .. | .. | 96 | 24.4 | 24.4 | 0.0 |
| Spain | *88.7* | 88.3 | 88.4 | *89.1* | 89.5 | 89.3 | 0.4 | 1.2 | 0.9 | 100 | 100 | 28.3 | 28.3 | 0.0 |
| **Income-related, independent minimum (Beveridgean)** | | | | | | | | | | | | | | |
| Denmark | *95.6* | 54.1 | 42.5 | 103.2 | 66.4 | 57.2 | 7.6 | 12.3 | 14.7 | 44 | 55 | private | 1.4 | |
| Finland | *90.7* | 78.8 | 79.2 | *66.6* | 63.5 | 65.0 | -24.1 | -15.3 | -14.2 | 87 | 98 | 21.5 | 24.8 | 3.3 |
| Netherlands | *82.5* | 84.1 | 85.8 | 101.3 | 95.7 | 94.1 | 18.8 | 11.6 | 8.3 | 104 | 93 | 17.9 | 21 | 3.1 |
| Portugal | 115.9 | 79.8 | 84.4 | *87.7* | 89.5 | 88.4 | -28.2 | 9.7 | 4.0 | 73 | 101 | no sepa | 20.2 | |
| Sweden | *90.2* | 68.2 | 70.1 | *63.9* | 63.6 | 78.2 | -26.3 | -4.6 | 8.1 | 78 | 122 | 15.1 | 22.9 | 7.8 |
| United Kingdom | *78.4* | 47.6 | 38.2 | *99.1* | 71.1 | 62.3 | 20.7 | 23.5 | 24.1 | 49 | 63 | no sepa | 21 | |
| **Average Bismarck** | **87** | **78** | **76** | ***75*** | **68** | **64** | **-10** | **-9** | **-11** | **87** | **85** | **24** | **24** | **-0.1** |
| Standard deviation | 17.3 | 20.5 | 24.9 | 15.5 | 16.9 | 18.9 | 14.4 | 15.0 | 16.2 | 26.6 | 17.2 | | | |
| **Average Beveridg** | ***92*** | **69** | **67** | ***87*** | **75** | **74** | **-5** | **6** | **7** | **73** | **89** | **18** | **22** | **3.8** |
| Standard deviation | 13.1 | 15.0 | 21.2 | 17.7 | 14.1 | 15.0 | 23.4 | 13.8 | 12.8 | 22.8 | 25.1 | | | |
| **Average EU** | *89* | 75 | 73 | *79* | 70 | 67 | -9 | -4 | -5 | 82 | 86 | 23 | 22 | -0.5 |

Source: OECD 2015, p. 147, 177; 2013: 169; 2005: 52 (missing: Bulgaria, Cyprus, Latvia, Lithuania, Malta, Romania).
Notes: Estonia, Slovenia: 1999 contribution rate is for 2004; italics: replacement rates below the poverty line of 50% average wages. UK: Voluntary payments to National Earnings Savings Trust (NEST) are included because employers have to enrol employees who can decide to withdraw (auto-enrolment). *Columns "Change 2002-2015": countries for which only 2015 data exist are excluded from the calculation of the average. Thus, averages in columns 2-4 (2002) cannot be deducted from averages in columns 5-7 (2015). **data for Estonia, France, Netherlands, Sweden include mandatory private contributions for 2014.

**Table 3: EU countries (2015) ranked by replacement level for different income groups**

| wage of average | 0.5 | | 1.0 | | 1.5 | Highest (1.5) as % of | |
|---|---|---|---|---|---|---|---|
| **Denmark** | **103.2** | **Netherlands** | **95.7** | **Netherlands** | **94.1** | Ireland | 46.4 |
| **Netherlands** | **101.3** | Austria | 91.6 | Hungary | 89.6 | **Denmark** | **55.4** |
| **United Kingdom** | **99.1** | Hungary | 89.6 | Spain | 89.3 | Czech Republ | 55.8 |
| Luxembourg | 98.4 | **Portugal** | **89.5** | Austria | 88.9 | **United Kingd** | **62.9** |
| Czech Republic | 93.1 | Spain | 89.5 | **Portugal** | 88.4 | Estonia | 70.3 |
| Austria | 92.1 | Luxembourg | 88.6 | Luxembourg | 83.7 | Belgium | 76.5 |
| Hungary | 89.6 | Italy | 79.7 | Italy | 81.6 | Greece | 78.4 |
| Spain | 89.1 | **United Kingdo** | **71.1** | **Sweden** | **78.2** | Luxembourg | 85.1 |
| **Portugal** | **87.7** | France | 67.7 | **Finland** | **65.0** | Germany | 91.8 |
| Italy | 82.2 | **Denmark** | **66.4** | **United Kingdo** | **62.3** | France | 92.7 |
| Estonia | 76.1 | Czech Republic | 63.8 | France | 62.0 | **Netherlands** | **92.9** |
| Ireland | 70.1 | **Sweden** | **63.6** | **Denmark** | **57.2** | Slovenia | 95.7 |
| France | 66.9 | **Finland** | **63.5** | Slovenia | 55.1 | Austria | 96.5 |
| Greece | 66.8 | Belgium | 60.9 | Estonia | 53.5 | Poland | 97.0 |
| **Finland** | **66.6** | Estonia | 59.8 | Greece | 52.4 | **Finland** | **97.6** |
| Belgium | 64.2 | Slovenia | 57.4 | Poland | 52.4 | Italy | 99.3 |
| **Sweden** | **63.9** | Greece | 54.1 | Czech Republic | 51.9 | Hungary | 100.0 |
| Slovenia | **57.6** | Poland | 52.8 | Belgium | 49.1 | Spain | 100.2 |
| Poland | 54.0 | Germany | 50.0 | Germany | 49.0 | **Portugal** | **100.8** |
| Germany | 53.4 | Ireland | 42.2 | Ireland | 32.5 | **Sweden** | **122.3** |
| **Average** | **78.8** | | **69.9** | | **66.8** | | **85.9** |
| Standard deviation | 16.6 | | 16.1 | | 18.1 | | 19.3 |
| Outliers ≤1 std dev of average | 62.1 | | 53.8 | | 48.7 | | 66.6 |
| Outliers ≥ 1 std dev of average | 95.4 | | 86.0 | | 84.9 | | 105.1 |

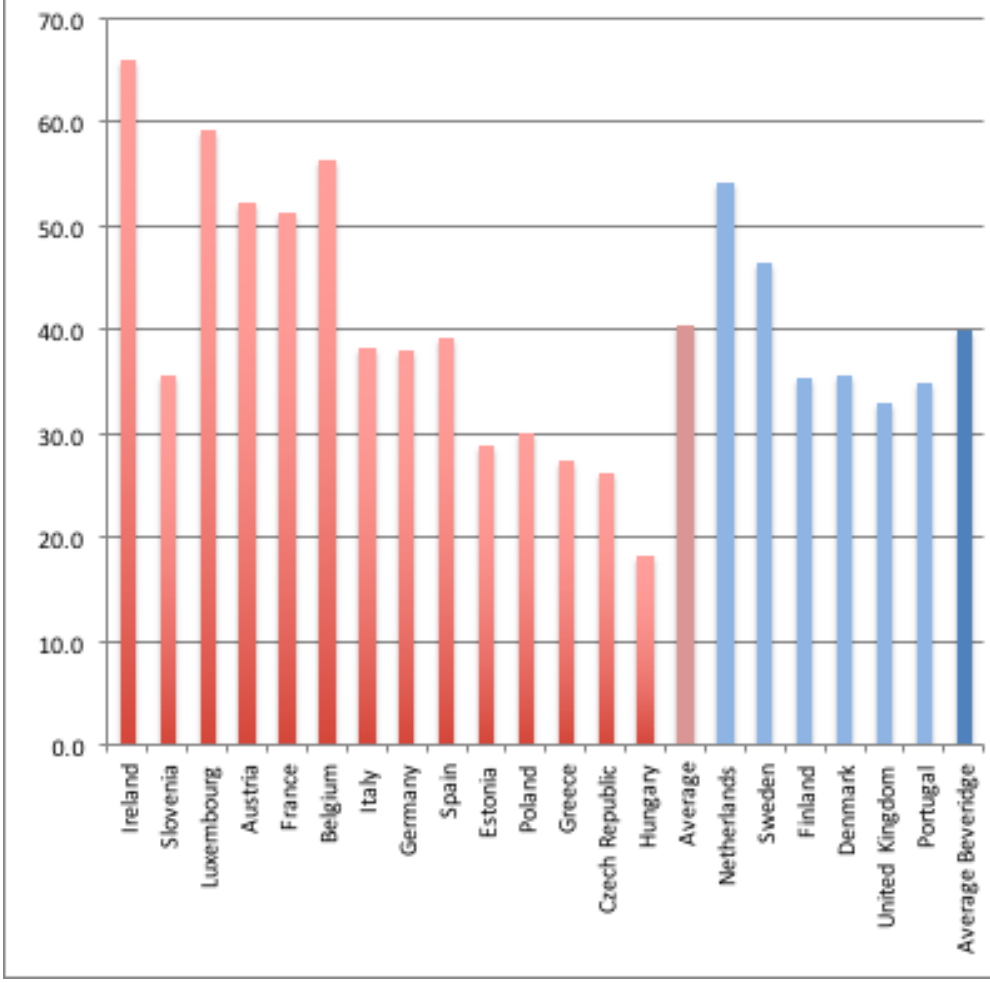
Source: as table 2. Beveridgean countries: bold

**Table 4 - Men's gross pension wealth in mandatory systems expressed as multiples of mean earnings 2009/2014, EU countries**

| | 2009 | | | 2014 | | | Change 2009-2014 | | | Highest (1.5) as per cent of lowest (0.5) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Individual earnin** | **0.5** | **1.0** | **1.5** | **0.5** | **1.0** | **1.5** | **0.5** | **1.0** | **1.5** | **2009** | **2014** | **change** |
| Austria | 12.2 | 11.6 | 10.5 | 13.8 | 13.8 | 13.7 | 1.6 | 2.2 | 3.2 | 86.1 | 99.3 | 13.2 |
| Belgium | 8.9 | 6.4 | 5.0 | 8.3 | 8.1 | 6.1 | -0.6 | 1.7 | 1.1 | 56.2 | 74.3 | 18.1 |
| Czech Republic | 12.1 | 7.6 | 5.6 | 12.1 | 7.5 | 6.0 | 0.0 | -0.1 | 0.4 | 46.3 | 49.5 | 3.2 |
| **Denmark** | 18.5 | 11.6 | 9.6 | 18.3 | 11.3 | 9.1 | -0.2 | -0.3 | -0.5 | 51.9 | 49.5 | -2.3 |
| Estonia | .. | .. | .. | 8.9 | 7.2 | 6.7 | | | | | 75.3 | |
| **Finland** | 11.4 | 8.8 | 8.8 | 9.8 | 9.8 | 9.8 | -1.6 | 1.0 | 1.0 | 77.2 | 100 | 22.8 |
| France | 10.8 | 9.3 | 8.5 | 10.7 | 10.4 | 9.1 | -0.1 | 1.1 | 0.6 | 78.7 | 85.0 | 6.3 |
| Germany | 7.2 | 7.2 | 7.1 | 14.5 | 14.5 | 14.5 | 7.3 | 7.3 | 7.4 | 98.6 | 100 | 1.4 |
| Greece | 14.3 | 14.3 | 14.3 | 15.1 | 12.7 | 11.9 | 0.8 | -1.6 | -2.4 | 100 | 78.8 | -21.2 |
| Hungary | 12.4 | 12.4 | 12.4 | 8.5 | 8.5 | 8.5 | -3.9 | -3.9 | -3.9 | 100 | 100 | 0.0 |
| Ireland | 12.1 | 6.1 | 4.0 | 12.9 | 6.5 | 4.3 | 0.8 | 0.4 | 0.3 | 33.1 | 33.3 | 0.3 |
| Italy | 10.0 | 10.0 | 9.9 | 12.2 | 12.2 | 12.2 | 2.2 | 2.2 | 2.3 | 99.0 | 100 | 1 |
| Luxembourg | 21.7 | 19.2 | 18.4 | 20.8 | 17.8 | 16.8 | -0.9 | -1.4 | -1.6 | 84.8 | 80.8 | -4.0 |
| **Netherlands** | 17.2 | 16.3 | 16.0 | 17.8 | 17.2 | 16.9 | 0.6 | 0.9 | 0.9 | 93.0 | 95.0 | 2.0 |
| Poland | 8.4 | 8.4 | 8.4 | 6.5 | 6.5 | 6.5 | -1.9 | -1.9 | -1.9 | 100 | 100 | 0.0 |
| **Portugal** | 9.2 | 8.1 | 8.0 | 12.7 | 11.8 | 11.6 | 3.5 | 3.7 | 3.6 | 87.0 | 91.3 | 4.3 |
| Slovenia | .. | .. | .. | 9.8 | 8.5 | 7.9 | | | | | 81.1 | |
| Spain | 12.2 | 12.2 | 12.2 | 14.6 | 14.6 | 14.6 | 2.4 | 2.4 | 2.4 | 100 | 100 | 0 |
| **Sweden** | 12.4 | 9.9 | 12.0 | 9.7 | 9.7 | 11.4 | -2.7 | -0.2 | -0.6 | 96.8 | 117.5 | 20.8 |
| **United Kingdom** | 6.8 | 4.1 | 2.9 | 7.1 | 3.6 | 2.4 | 0.3 | -0.5 | -0.5 | 42.6 | 33.3 | -9.3 |
| **Average** | 12.1 | 10.2 | 9.6 | 12.2 | 10.6 | 10.0 | 0.4 | 0.7 | 0.6 | 79.5 | 82.2 | 3.1 |
| **Standard deviati** | 3.9 | 3.8 | 4.1 | 3.9 | 3.7 | 4.1 | 2.5 | 2.5 | 2.6 | 23.0 | 23.8 | 10.6 |

Note: UK data for 2014 does not include auto-enrolment
Source: OECD 2005: 63; 2015: 149

Figure 1: Annual means-tested benefit as % of pensions of individuals with life time income of half average wages (Bismarckian countries) - Minimum universal pension as % of half average wages (relative poverty line) (Beveridgean countries); working life




Source: OECD 2015

[i] Bonoli's research (2003) was based on nine countries, Ebbinghaus' (2011) on ten; Immergut's, Anderson's and Schulze's (2007) on 16. None of these publications included Central and Eastern European countries.

[ii] Pension wealth was first calculated in 2005, but the first figures are not comparable to later ones (OECD 2005, p. 61-3).

[iii] The available information refers to the period between 1999 and 2014 and to public rates only. The analysis below does not include all countries because firstly there are no 2002 replacement figures for Estonia and Slovenia; secondly, no 1999 separate pension contribution rates exist for Ireland, Denmark, Portugal and the UK.