

# Welfare Systems and Adequacy of Pension Benefits in Europe

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*During the post-war years many European countries have implemented far-reaching but diverse pension systems with the objective of providing those in retirement with adequate incomes. In this study, we explore the link between pension systems and the adequacy of retirement income. We analyse the mix of public and private pensions and consider the impact of different policies on poverty rates amongst pensioners. We suggest that only a few European countries have been successful in providing combinations of private and public pensions that improve the adequacy of retirement income.*

**Keywords:** Pension income, private pensions, public pensions, pension systems.

## Introduction

The implementation of different pension systems across Europe reflects the importance of distinct objectives within each government. We focus on the current pension benefits that are mainly the results of policies implemented in the post-war years. Comprehensive pension systems were set up in the post-war years and led to two broad classifications of welfare traditions, the Bismarckian and the Beveridgean models. In countries of Bismarckian tradition, state pensions are part of social insurance tradition and constitute high proportions of welfare expenditure. Other countries have opted for variants of the Beveridge model, where only a minimum income is guaranteed in the form of state pension, and private contributions to funded schemes are encouraged (Baldwin, 1990; Kolmar, 2007). We measure the benefits of current pensioners to assess whether there is a link between pension systems belonging to different welfare models and levels of pension incomes.

In recent years, extensive literature has contributed to the debate on the classification of different European countries into distinct types of welfare regimes (see for example Esping-Andersen, 1990; Ferrera, 1996; Bonoli, 1997; Korpi and Palme, 1998; and more recently Ferrera and Hemerijck, 2003; Jensen, 2008; Arcanjo, 2011). Country classification can raise challenging issues, particularly as policy changes have occurred frequently in recent decades rendering increasingly complex the theoretical or ideal contrast between welfare systems and often weakening their distinctive features (Werding, 2003). We use country classification in relation to welfare systems prior to the reforms of the last 20 years to explore the extent of the connection between pensions systems and current levels of pension incomes. This has been done by Korpi and Palme (1998) to explain differences in income inequality levels, and by Johnson (1999) to explore the convergence of social security systems.

We explore three main issues: firstly, we estimate the importance of public and private pensions within EU countries; secondly, we investigate the existence of a crowding out effect between private and public pensions; thirdly, we study the link between adequacy of pension income and pension systems. Evidence of a crowding out effect between public and private pensions entails that retirees enjoy similar levels of income post-retirement across countries, independently of the type and generosity of pension systems. In devising our research questions, we follow Pedersen's (2004) framework and definitions of public and private sources of retirement income. A public pension is a state-provided benefit that covers all those in employment, while a private pension implies that coverage and benefits of the scheme ensue from the decisions taken by individuals and it includes private insurance pensions as well as occupational/employers' pension schemes.

The definition above is not unproblematic. It implies that where membership to occupational pension schemes is mandatory rather than resulting from the employees' decisions to join the scheme, these ought to be included in the public sphere. We choose to confine occupational schemes to the private domain even when mandated, if their funding derives from private sources rather than from the state (occupational schemes in the Netherlands are a good example). Nevertheless, we also note that the mandatory feature of occupational schemes has important repercussions on the level of coverage of private pensions and may entail that private benefits are used to complement basic state pensions rather than to substitute them.

The countries included in our sample are all part of the European Union but belong to different traditions with regard to pension provision, saving and retirement policies. The countries are: Austria, Belgium, Denmark, France, Germany, Greece, Italy, the Netherlands, Spain, Sweden and the UK. We use data from the Survey of Health, Ageing and Retirement in Europe (SHARE)<sup>1</sup> and from the English Longitudinal Study of Ageing (ELSA). The data used were collated in 2004 and published in 2005.

This article is structured in four sections. The next section reviews the pension arrangements in the countries examined and the relevant theoretical issues on the roles of public and private pensions. In the third section, we present our analysis and findings on the issue of adequacy of retirement income. In the final section, we conclude.

## **Pension arrangements in Europe**

The public pension system is one of the major components of the welfare state in Europe. However, the extent to which public pensions are seen as a means of social and economic equality varies remarkably from country to country and current pension benefits are mainly the legacy of decisions and arrangements made by political forces in power in the post-war years. The different pension systems implemented led to two main forms of welfare traditions, the Bismarckian and the Beveridgean models.

The Bismarckian policy tradition, initially adopted in Germany in the late nineteenth century, was later embraced by many other countries (such as Austria, France, Italy, Spain, Greece) in central and southern Europe (Baldwin, 1990; Ferrera, 1996; Boersch-Supan, 2006), where public pensions are considered a form of social insurance (Hennessy, 2008). In these countries, the state PAYG pensions are predominant and can take the form of social assistance. The Beveridgean tradition focuses on the provision of a universal welfare coverage, with a basic pension, varying according to the number of years in employment. The state pension takes the role of a redistributive component designed to prevent poverty

in old age (Whiteford and Whitehouse, 2006). According to Bonoli's (1997) classification of social policy tradition, the Anglo-Scandinavian welfare system reflects the Beveridge model, whilst the Continental European welfare system developed into the Bismarckian model.

Public pension benefits in Bismarckian countries are provided according to contributions, they are earnings-related and with the objective of income maintenance after retirement. The Beveridgean social tradition is based on the provision of universal, mostly flat-rate benefits (although means-testing is frequently used) with the objective of preventing poverty. In this system, pension income comes from several sources. The main differences between the two models consist in the mix of public and private benefits provided and in the way pension schemes are financed. According to Bonoli (2003), in Bismarckian countries the extensiveness and generosity of earnings-related state benefits might have hindered the role and expansion of occupational/private pensions. The debate on the unfunded nature of PAYG public schemes is centred on how these schemes expose the traditionally generous social insurance countries to the economic and social threats posed by ageing populations (OECD, 1998). This is also why recently many countries have made adjustments to render pay-as-you-go (PAYG) pension systems sustainable and others have encouraged pension systems privatisation with a greater emphasis on individual savings (Pedersen, 2004).

Germany, France, Austria, Italy, Spain and Greece are closer to the Bismarckian model, where public pensions make up the majority of retirement income, include disability and survivor benefits (Haverland, 2001) and present higher pension expenditures as a proportion of GDP. The classification of Sweden presents some problems; Korpi and Palme (1998) define Sweden as an encompassing model due to the mixed nature of its welfare state where a flat-rate basic pension is paid together with a supplementary, income-related pension (ATP) calculated according to defined benefit principles (Anderson, 2001). However, Bonoli (2003) classifies Sweden as a social insurance country (closer to the Bismarckian model) due to its pension system being predominantly financed on a PAYG basis. Our analysis indicates that Sweden does present mixed features, such as a widespread coverage of private pensions but also an earnings-related unfunded state pension; hence for the purpose of this article we use Korpi and Palme's classification of Sweden as an encompassing model. As suggested by Esping-Andersen (1990) and Ferrera and Hemerijck (2003), we classify Belgium as a conservative-corporatist welfare regime (like Germany, France, Austria and Italy) close to the Bismarckian social insurance tradition.

An important feature of the Beveridgean model is that individuals bear the responsibility of maintaining their living standards (Beveridge, 1942) through membership to occupational/private pension schemes and pension planning (Rowlingson, 2002). In these countries (UK, Denmark and the Netherlands), funded private occupational schemes have thrived and sometimes taken mandatory form (for example in the Netherlands). This welfare system often includes additional means-tested benefits targeted to pensioners whose contributions are not sufficient to provide them with a pension income above the national poverty threshold.

Within Beveridgean countries there are notable differences pertaining to the type and level of state pension as well as to the extensiveness of occupational/private schemes. The UK and Denmark present a first-tier state pension that includes basic benefits (the same amount is paid to all retirees according to the number of years in employment)

and targeted plans or means-tested benefits (Whiteford and Whitehouse, 2006). In the early 1960s, the UK introduced a state second pension, closely related to the level of earnings. From the late 1970s, this was called the State Earnings Related Pension scheme (SERPs), and in 2002 was replaced by the State Second Pension (S2P) (Blake, 2003). The Netherlands pay a basic state flat-rate pension (AOW) to all residents from the age of 65 (50 years of residency are required for full benefits). The level of the full state benefit here is set at 70 per cent of the net minimum wage for singles and 100 per cent for couples (Haverland, 2001).

The privately managed schemes are predominantly defined benefit in the Netherlands, defined contribution in Denmark and a mix of defined benefit and defined contribution in the UK. In defined benefit plans, pension benefits are paid according to the number of years of contribution and as a proportion of annual earnings from work. In defined contribution schemes, individuals receive a pension from the monies invested and the return from the invested assets (Whiteford and Whitehouse, 2006); this however, is susceptible to inflation and price volatility in the capital markets (Haverland, 2001).

### **The role of public and private pensions**

In this article, we address the issue of poverty rates and inequality amongst countries with different pension systems (other studies on this topic have been produced by Baldwin, 1990; Korpi and Palme, 1998; Banks *et al.*, 2002; Immergut *et al.*, 2007). Some literature suggests that in countries with low, flat-rate public pensions, private pensions thrive, while where public benefits are earnings-related, private/occupational pensions tend to be under-developed (Bonoli, 2003). According to Immergut *et al.* (2007), in countries where public pensions are far-reaching, they tend to crowd out private benefits, such as employers' schemes and private pension insurance, whereas private schemes are likely to replace public benefits if the provision of state pensions is low. This however, in countries where private pensions have become an important source of income, has sparked concerns over retirement savings and levels of pensions for those on very low incomes, who typically rely on state benefits (Taylor-Gooby, 2005).

The concept of a crowding out effect between the private sphere and public retirement benefits provided through the welfare system was discussed extensively by Feldstein in 1974 and studied by a number of other authors (see for example Browning and Lusardi, 1996; Disney, 2000; Pedersen, 2004; Künemund and Rein, 1999). Evidence of a substitution/crowding out effect between private and public pensions is in agreement with the life-cycle motive for saving, that is to provide for anticipated imbalances between future income and consumption standards (Browning and Lusardi, 1996; Pedersen, 2004). According to the life-cycle theory, individuals' saving for retirement reduces at the presence of a generous public pension (Feldstein, 1974). Disney (2000) finds some evidence of crowding out effects between pension wealth and private saving when he investigates the consequences of the 1992 Italian pension reform. The effects of welfare policies and different levels of social security on saving rates were studied by Atkinson (1991), Hubbard *et al.* (1995), and Feldstein (2005) amongst others. Hubbard *et al.* (1995) as well as Feldstein (1974: 1996) document the decline in personal saving, particularly in low-income households, caused by social insurance programs.

However, research on the existence of a crowding out effect has resulted in contradictory conclusions. Pedersen (2004) examines the relationship between public

and private pensions across a number of OECD countries and finds that there is no clear or consistent evidence of a crowding out effect. Dobbin and Boychuck (1996) as well as Künemund and Rein (1999) show how more generous welfare systems might stimulate, rather than hamper, private resources. This means, for example, that private pensions could be boosted by higher public pensions because of greater expectations of what is considered to be adequate post-retirement income (Pedersen, 2004).

In the following section, we examine the empirical evidence on the extent of the coverage and the levels of private and public retirement benefits.

### **Public and private benefits**

This analysis focuses on the coverage and levels of public and private pensions in Europe to shed light on a number of issues. We examine whether there is any significant difference between Bismarckian and Beveridgean countries in terms of private, public and total pension incomes. We show whether private and public benefits are received jointly to improve overall retirement incomes or whether there is evidence of a crowding out effect. We define individuals as retired if they define themselves as retired or if they have received a public pension in the preceding 12 months combined with retirement from economic activity (Gough and Arkani, 2007). This in some cases includes early retirees receiving only occupational pensions. The choice to consider self-selection was made in order to adopt a homogenous definition of retirement across countries where effective retirement ages do vary greatly. Those who did not define themselves as 'retired' but did receive a public pension were also included in our sample.

SHARE and ELSA distinguish between public and private pension sources. Public pensions include old age public pension, public pension and early retirement, public injury insurance, public pension of reversibility, public pension of invalidity and war public pension. Private pensions include private or employer's pension and early or pre-retirement insurance for disability, pension of reversibility. SHARE allows us to carry out the income analysis at the individual level, in line with Pedersen's, consistently across countries, which would otherwise be rendered difficult by countries' idiosyncrasies. SHARE is a multidisciplinary cross-national longitudinal survey of continental Europeans over the age of 50. The baseline study includes data on 12 countries (ten EU countries at the time of the analysis) providing a representation of the different European regions from Scandinavia through Central Europe to the Mediterranean. We use data from Wave 1, which include over 31,000 individuals aged 50+ across 11 countries, from which we excluded Switzerland as it is not part of the European Union. ELSA is a UK database that covers private households and includes individuals aged 50+. We use data from Wave 2, which include 9,433 individuals interviewed on a range of topics, such as health, work and retirement, social activity, social-economic position. We employ SHARE Wave 1 and ELSA Wave 2 because they are compatible and they have both been part of a harmonisation project by the Economic and Social Data Service. Data for both databases were collected in 2004–05.

The definition of public and private pensions is not straightforward, particularly when examining different countries simultaneously. Ambiguity may arise where occupational pension schemes have been made mandatory by the state, in this case it can be difficult to effectively distinguish between the public and private sphere if we consider private pensions as the result of an individual's free choice. In the countries examined, we

decided to treat these schemes as private (see Pedersen, 2004) as they are primarily financed by private employers or part of selective welfare arrangements (see for example France). In the following part of this section, we discuss public and private benefits for those countries where definitions are not straightforward.

In France, the distinction between basic and complementary pensions is considered far more relevant than the difference between public and private benefits. Basic pensions are generally co-managed by the state and social partners, while complementary pensions (*retraites complémentaires*) are organised on a professional basis and managed by social partners. Under occupational pensions, there are a number of mandatory schemes defined as 'complementary', such as the Association for Complementary Pension Schemes (ARRCO)<sup>2</sup> and the General Association for Executive Pension Institutions (AGIRC)<sup>3</sup> for private sector workers and IRCANTEC,<sup>4</sup> a scheme for non-tenured state workers. The concept of early retirement does not have a clear meaning in France; here the age of eligibility to pension entitlements (60 in the private sector) is often considered the normal retirement age.

In Austria, public pre-retirement benefits have not been included in the sample, while public invalidity or incapacity pensions are composed of a re-distributive element, a financial aid paid to people who cannot support themselves, for example due to disability (*Staatliche Sozialhilfe*). In Denmark, all survivor pensions from spouse or partner have been classified as private. In the Netherlands, the war pension category was not included. Everyone above the age of 65 is entitled to public old age pension (AOW), while pre-retirement public pension (usually provided to those aged between 62 and 65) is very rare and only provided to individuals who are not in receipt of any other income. Also, the public invalidity or incapacity pension category here takes the form of public income support (ABW, IOAW/IOAZ, *Aanvullende*). In Sweden, occupational pensions for blue-collar workers in the private sector (SAF-LO), for white-collar workers in the private sector (ITP), for government workers (PAF) and for municipal and local government workers (KPA) are all defined as private pensions.

Table 1 shows public and private pension coverage, together with the indicative pension system adopted in each country. In Beveridgean countries, private pensions play an evident greater role. In Denmark, the Netherlands and in the UK, private pension coverage is far higher than in the other countries (about a third of the retired population receive a private pension in Denmark and over half in the Netherlands and in the UK). The importance of private income components in these countries is the result of long-standing policies encouraging private responsibility for financial well-being in retirement.

The case of France is interesting. It shows high private pension coverage (over 52 per cent) but its welfare system is more in line with the Bismarckian tradition. The high private pension coverage here can be attributed to the way in which some 'complementary' mandatory occupational schemes have been classified as private pensions. In France, the private sector pension system is a two-tiered structure with mandatory occupational schemes that complement the basic insurance pension, which means occupational pension plans are well established amongst private sector employees (Srinivas *et al.*, 2000). These '*retraites complémentaires*' are prevalent in private sectors, such as manufacturing, commerce, services and agriculture (ARRCO and AGIRC), but also include a compulsory scheme amongst non-tenured state workers (IRCANTEC).

Similarly, in Sweden, where private pension coverage is just below 26 per cent, occupational schemes, such as those for workers in the private sector (SAF-LO and ITP)



Table 1 Public and private pension coverage by country in 2004–2005

Country	Indicative pension system	Public pension %	Private pension %	Percentage of those in receipt of both public and private pensions
Austria	Bismarckian	96.66	6.27	4.07
Germany	Bismarckian	94.88	20.32	19.10
Sweden	Encompassing	84.44	25.76	9.99
Netherlands	Beveridgean	85.11	54.22	39.58
Spain	Bismarckian	98.30	1.80	0.38
Italy	Bismarckian	94.97	6.00	1.56
France	Bismarckian	97.16	52.12	49.41
Denmark	Beveridgean	95.92	30.09	26.60
Greece	Bismarckian	99.17	1.35	0.54
Belgium	Bismarckian	95.21	7.62	3.36
UK	Beveridgean	97.28	55.38	46.38

Sources: SHARE, Wave 1 and ELSA, Wave 2, (2004–2005).

and those for public sector employees (PAF and KPA), are very widespread (reaching 90 per cent of the workforce in some sectors). These schemes are not mandatory as they are negotiated by nation-wide collective agreements between employers and trade unions. Amongst the other countries that have adopted a Bismarckian model, there is evidence of much lower private pension coverage.

Germany has a private pension coverage of 20 per cent, which is higher than most other countries of Bismarckian tradition. Here occupational pension schemes are more extensive than in other parts of Europe; however, pension coverage differs remarkably according to firm size and is particularly low amongst small companies. More recently, the 'Riester Reform' has been introduced to boost occupational and individual private pensions through tax incentives for future retirees. In Austria, Italy and Belgium, the proportion of pensioners receiving a private pension ranges between 6 and 7 per cent. Private pensions here are mainly private insurance policies, while occupational schemes have been fully implemented only very recently. Although a number of pension reforms have occurred in these countries in the last 20 years with the aim of promoting funded occupational schemes, their enactment has not taken place until far more recently (in the last five years) and therefore they do not affect current retirees. In Spain and Greece, the figures are particularly low (less than 2 per cent in both countries), suggesting that the vast majority of those in retirement rely almost entirely on their state pensions.

The results are somewhat unexpected when we consider the proportions of those who are in receipt of both private and public pensions. The Bismarckian countries here show strong dissimilarities. In France and Germany, the vast majority of those who receive a private pension are also in receipt of a state pension. This seems to confirm that in these two countries, but particularly in France, occupational schemes are not only widespread but also used extensively to complement state pensions. In Austria and Belgium, the percentages of those who receive both pensions become very low, suggesting that private pensions, mainly in the form of insurance policies here, are used rarely to

Table 2 Monthly private, public pensions and overall pension incomes (median values)

Country	Monthly public pension benefits in Euros	Monthly private pension benefits in Euros	Monthly overall income for those in receipt of both pensions in Euros	Monthly income for the whole sample** in Euros
Austria	1,310	623	1,550	1,000
Germany	1,482	436	1,540	926
Sweden	1,298	240	1,661	1,416
Netherlands	1,000	900	2,680	2,320
Spain*	NA	NA	NA	490
Italy*	NA	NA	NA	650
France	950	723	1,650	1,456
Denmark	886	641	1,810	1,479
Greece*	NA	NA	NA	550
Belgium	1,000	500	1,462	967
UK	970	776	1,720	1,287

Notes: \*The data for these countries are not sufficient.

\*\*This includes all individuals in the sample, those receiving both private and public benefits and those only receiving public or private pensions.

Sources: SHARE, Wave 1 and ELSA, Wave 2, (2004–05).

boost state pensions. This is even more so in Italy, Spain and Greece where percentages of those in receipt of both pensions are less than 1.6 per cent.

Sweden also shows an unexpected result as the proportion of pensioners receiving private and public benefits drops to less than 10 per cent, meaning that over half of those who receive a private pension do not receive any state benefits. A possible explanation may be that private benefits here are used primarily by those who take early retirement. All major occupational schemes in Sweden (such as SAF-LO and ITP) allow for a contractual early retirement plan starting from the age of 55. Findings for the Beveridgean countries are less surprising. Denmark, the Netherlands and the UK show high percentages of those in receipt of both pensions, as we would expect, due to the established role of private/occupational pensions used to complement basic state pensions.

### Extent of private pensions and adequacy of pension income

In this section, we present our findings on the extent and role of private pensions in the countries examined. Table 2 shows the monthly amounts (median values) of private and public pensions as well as the overall pension incomes for those who receive both pensions and for the sample as a whole (including those who only receive one type of pension). The choice of using median values over averages was made on the basis that median income gives a better overall indication of financial wellness, as average incomes are heavily affected by outliers in the distributions.

Our results indicate that in all countries examined private pensions help boost overall retirement, which implies that they are being used to complement public benefits rather



than substituting them. This is not only the case in Beveridgean countries but also in countries of Bismarckian tradition, such as Germany, France, Austria and Belgium (the amounts of overall income for those in receipt of private and public pensions are higher than the overall income for the whole sample). We are not considering the effect of private benefits on overall pension income in Italy, Spain and Greece due to the extremely low private pension coverage in these countries, which makes it impossible to draw any meaningful conclusions.

An interesting finding is that in Austria, Germany, Belgium and Sweden those in receipt of private pensions are also those with high state pensions. This result seems to contradict the crowding out effect, at least in these countries. Another important outcome of our analysis is the similarity between levels of private and public benefits in countries where private schemes are more extensive. This is certainly the case for countries of Beveridgean tradition, but also for France. Long-standing pension policies in these countries have favoured contributions to private/occupational schemes that, having matured over the working life, result in higher private benefits. Long-term contributions together with greater occupational pension coverage lead to higher levels of overall incomes for a large section of the retired population (the Netherlands, Denmark and France feature the highest income levels).

In the remainder of this section, we show our findings in terms of income adequacy. To define income adequacy we introduce the concept of 'at-risk-of-poverty rate' as identified by the European Commission's Eurostat. We measure the rate of those at risk of poverty by calculating the share of pensioners with a disposable income<sup>5</sup> below the poverty threshold (see Engen *et al.*, 2005), which we identify as 60 per cent of the median disposable income in agreement with the Eurostat guidelines (Eurostat, 1998, 2005, 2010) as well as Duncan *et al.* (1993) and Whelan *et al.* (2003). The equivalised disposable income after taxes and social transfers is expressed in purchasing power standards (PPS) to take into account differences in the cost of living across countries.

Figure 1 shows the 'at-risk-of-poverty rates' for each country together with the Gini coefficients representing income inequality.

Poverty rates amongst pensioners are lowest in Sweden, Denmark, France and the Netherlands (between less than 10 per cent in Denmark and 15 per cent in the Netherlands) where private pension coverage reaches greater portions of the retired population. This indicates that a combination of nation-wide agreements promoting privately managed pensions as well as adequate state pensions is proving effective to keep people out of poverty. Amongst Bismarckian countries, Austria and Belgium show relatively low at-risk-of-poverty rates (below 22 per cent), which can be explained by the generous state pensions in place. High rates of poverty are associated with the almost complete absence of private benefits and total reliance on low state pension, as in the case of Spain, Italy and Greece where a third or more of the retired population receives a pension income below their national poverty lines. Our findings show that where private pensions are used extensively, over a long period and in combination with public benefits there is a significant positive effect on retirement income.

Income inequality amid pensioners is high in all countries examined, and there is no clear evidence of a link between different welfare systems and levels of dispersion in retirement incomes. Although some Bismarckian countries, such as Spain, Greece and Belgium display the highest levels of income inequality, in Germany and Italy we also find the lowest variability of retirement income followed by the Netherlands and the UK.

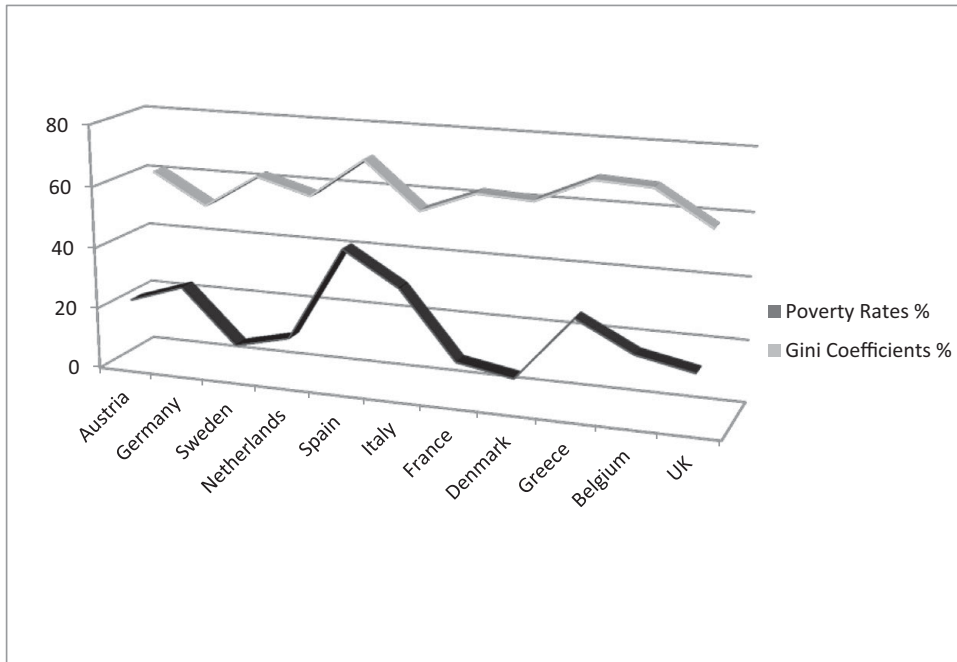


Figure 1. Poverty and inequality rates, 2004–2005

Sources: SHARE, Wave 1 and ELSA, Wave 2, (2004–2005) and Eurostat (2005).

## Conclusions

We examined public and private pensions as well as the adequacy of retirement income in Europe. We used the SHARE and ELSA databases for our analysis and classified the countries according to their pension systems.

We built on previous research (Pedersen, 2004; Disney, 2000) and found that, although private pensions are well established in countries of Beveridgean tradition (namely the UK, the Netherlands and Denmark), France and Sweden also present high private schemes coverage. France is closer to the Bismarckian pension system, however policies have been implemented to render membership to occupational schemes mandatory or prevalent. The extent of private pension coverage together with long-term contributions have the positive effect of increasing overall pension incomes for vast portions of the population as well as reducing the rate of those at risk of poverty in retirement.

In contrast, in some Bismarckian countries (Germany, Austria and Belgium) the proportions of pensioners drawing their retirement income from private sources are considerably lower. In these countries, those receiving private pensions are more likely to be also in receipt of high state benefits, which suggests a lack of support for the crowding out effect between private and public benefits. In Italy, Spain and Greece, the numbers of those receiving private pensions are negligible and therefore we can only conclude that in these countries private components do not contribute to overall retirement income in

any significant way. Those in retirement here rely almost entirely on state pensions and this may account for the high rates of those at-risk-of-poverty.

Our findings indicate that where there is a high coverage of private pensions and where these are well established in terms of entitlements the resulting effect on total retirement income is positive with values largely above the poverty thresholds. We also showed that some countries exhibit high levels of private/occupational schemes in combination with relatively high state pensions. This seems to be a predominant feature where variants of the Beveridgean model have been applied (the Netherlands, Denmark and to a lower extent the UK, but also in France and Sweden) and suggests that no crowding out effect is taking place between public and private benefits. A similar conclusion on the lack of a substitution/crowding out effect can be drawn when we consider that private pensions have not developed, until now, in countries that present generally low levels of state pensions, such as Spain, Italy and Greece.

## Notes

- 1 SHARE also includes Switzerland however we excluded it not being part of the European Union.
- 2 Association pour le régime de retraite complémentaire des salariés.
- 3 Association générale des institutions de retraite complémentaire des cadres.
- 4 Institution de retraite complémentaire des agents non titulaires de l'Etat et des collectivités publiques.
- 5 This is income before taxes and social transfers.

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