After Another Decade of Reform: Do Pension Systems in Europe Converge?

Martin Werding*

Public pension schemes that today are operated in virtually all industrialised countries, also defining the scope for any other sources of retirement income, are of a dual origin. What is now often referred to as the contrast between Bismarckian vs. Beveridgean systems – the former being the dominant form of public old-age provision in continental Europe, the latter prevailing in Anglo-Saxon countries – effectively dates back to the introduction of public pensions in Germany (1889) and Denmark (1891).[1] Over time, national systems that were inspired by either of these differing approaches have developed numerous similarities with respect to many details, or have been augmented by additional tiers that are built on the competing tradition, thus compromising any simple distinctions. In fact, European pension systems nowadays show what the philosopher Ludwig Wittgenstein, in a very different context, has termed "family resemblance", pointing to the fact that a limited number of distinct features are combined in a far greater number of permutations in any of the existing institutions.

The question of whether or not there is a convergence of actual pension arrangements across countries has been addressed repeatedly over the past decades. Sometimes the intention of those who investigated it was purely descriptive, sometimes the inquiry was also driven by an interest in exploring ways to further co-ordinate, or even harmonise, public pension systems, for instance on an EU level. During the last fifteen years or so, there have been fresh rounds of major pension reforms in next to all European countries. As the reforms enacted are meant to address very similar problems, and are largely built on a similar set of principles, the question for convergence across countries may again deserve some interest.

It would go beyond the scope of this article to describe all the details of current pension systems and the changes made in recent years.[2] Yet, based on a stylised description of what national pension systems look like, and what the latest reforms were about, we can shed some new light on an old controversy. In the end, the answer to the question raised here will once again be twofold. Yes, there is a notable degree of convergence brought about by recent amendments. But, considering the different points of departure, national systems seem to converge towards at least two differing models which can still be described in terms of the ancient Bismarck-Beveridge dichotomy.

Bismarck vs. Beveridge: a stylised description

Ideally – *i.e.*, disregarding a host of complications that enter the picture if we look at real-world public pension schemes as they are actually run decades after their inauguration – Bismarckian systems of old-age provision are characterised by the following features:

– Membership is compulsory mainly for dependent workers, the systems often being "categorical" in that separate branches are designated to different categories of (e.g., blue-collar vs white-collar) employees or to different sectors of

* Martin Werding is head of the department for Social Policy and Labour Markets at the Ifo Institute for Economic Research.

[1] In other words, Beveridgean systems were introduced long before Lord Beveridge wrote his famous report in 1944. In a sense, the contrast between the two types of regimes becomes even sharper if we acknowledge that they were invented almost simultaneously and not with a 50-year interval in between. Also, the rough localisation need not be adjusted in any way, as it is well-known that the Anglo-Saxons lived on the Danish mainland before many of them moved to Britain.

[2] Recently, the Ifo Institute has completed a comparative survey dealing with all the three pillars of typical systems of old-age provision in the EU-15, Switzerland, and the US, covering revenues, benefits, and the taxation of all major branches (cf. Fenge et al. 2003). Much of the information provided in this study, which was published as a book volume in German only, will now be fed into the DICE database (see http://www.cesifo.de).

employment (in agriculture, mining, the public sector, *etc.*).

– Benefit entitlements are strongly linked to an individual's contributions, based on benefit formulae which, to some extent, are modelled on the principles of actuarial fairness that are a necessary ingredient in any privately managed pension plan operating in a competitive environment.
– Considering the level of benefits accruing to individuals with a life-time work record, systems of this kind usually aim at a substantial replacement rate, effectively providing a major share of retirement income for most pensioners.

In contrast, Beveridgean pension systems typically have the following characteristics:

– Membership is much more universal, often covering the total labour force or, as a limiting case, all the residents of a given country.
– The link between contributions and benefits is weak at best, the latter being basically a flat rate that is reduced *pro rata temporis* in cases where labour force participation (or the time of residence) falls short of a legally defined qualification period.
– Even in cases of a full life-time work record, benefits are largely intended to guarantee a certain minimum level of retirement income, while second or third-pillar provisions play a major role for maintaining earlier living standards at old age.

The first of these characteristics, though less important from a theoretical perspective, often turns out to be a crucial aspect for the implementation of pension reform. Applying a new set of rules to just one, universal system is often much easier than doing so to a categorical system with several branches that differ slightly in their design. The second and third features – actuarial fairness vs redistribution and the (average) level of benefits – are obviously important in both theory and practice.

As of today, a common feature of the two types of pension systems is that they are now run primarily on a pay-as-you-go basis, current benefits being financed from current contributions. The observation is remarkable because this is merely a historical outcome, not a necessary prerequisite for how public pension schemes should be managed. In fact, many Bismarckian systems were initially meant to be fully funded, thus completing the analogy to private-sector pension plans.[3] In the context of pure flat-rate pensions, on the other hand, funding benefits has never been thought to be completely appropriate.

It has already been mentioned that much of the contrast between the two regimes is effectively blurred when we turn to real-world pension schemes and follow the paths they have taken over time. For instance, most Bismarckian systems do not really take into account the full life-time profile of annual contributions when assessing individual benefits. Instead, reference periods range from the entire working career between the ages of 15 and 65, over the "best" 35, 20, or 15 years of employment, to just the last 5 years before retirement. Also, minimum pension guarantees have been introduced in many of these systems. At the same time, many Beveridgean systems have been augmented by "supplementary" schemes with earnings-related benefits in line with the Bismarckian tradition. Over time, these second tiers have often turned out to be the dominant branch of public pensions for most of the individuals covered. The latter observation is particularly true for all of the Nordic countries, while the UK has suspended mandatory participation in the supplementary public pension scheme only a few years after it was established.

Allowing for these and many other complications, public pension schemes that follow a primarily Bismarckian tradition can be found in Austria, Belgium, Germany, Greece, Italy, Luxembourg, Portugal, and Spain. Public pensions that are built on the Beveridgean tradition exist in Ireland, the Netherlands, and the UK. Public pensions which, in one way or another, combine elements of both types of arrangements are operated in Denmark, Finland, France, Sweden[4], Switzerland, and the US.

Recent reforms: the main trends

First of all, the classification that was just given relates to the situation prior to the latest round of pension reform which has taken place during the

[3] The German public pension scheme, for instance, lost all of its capital reserves in the course of the early 20th century, following several periods of war, hyperinflation, and currency reform. Nevertheless, the pay-as-you-go mechanism was not adopted as a legal standard until 1969.

[4] In order to avoid confusion, I should hasten to add that in Sweden things have changed since the latest reform which took effect in 2000. We will turn to that in the sequel.

last 10 to 15 years. We will now look at what happens to our rough distinction following more recent changes.

A fundamental trend necessitating some kind of pension reform in virtually all industrialised countries is a projected shift in the population structure, with the ratio of elderly people over individuals at working age sharply increasing.[5] Demographic ageing is already well under way, being expected to reach its peak in about 30 to 50 years. In order to deal with the problems involved with this trend in an economically reasonable and socially acceptable way, recent reforms taken around the world are driven by one or more of the following four major sub-tasks:

- Reducing, in general, the level of unfunded pension expenditure over time; this is done, for instance, through unspecific changes in the benefit formula which governs pensions at award, implying a decrease of the replacement rate, or through adjustments in the indexation mechanism that is applied to pensions after award, moving, say, from wage indexation to CPI indexation.
- Expanding the portion of pension benefits that is funded; this strategy can be followed either inside the domain of public pensions – by establishing "demographic buffer funds" for example – or in terms of strengthening second and third-pillar arrangements that are expected to compensate for the reduction in unfunded public provisions.
- Promoting actuarial fairness in several dimensions, which usually also amounts to reducing average benefit entitlements. Issues that are relevant here are the extension of reference periods for the assessment of earnings-related pensions, the reduction of financial incentives to retire early, or the introduction of stronger means-testing with respect to redistributive benefit components.
- Introducing or expanding a limited number of non-contributory elements, in particular minimum pension guarantees for low-wage earners and child-related benefits for parents who discontinue labour force participation for a limited period of time.

[5] The timing and strength of these trends are of course different across countries, but the fundamental pattern is the same everywhere. For comparative work on how demographic change is projected to affect public pension schemes in industrialised countries if current policies are pursued over the long term, see OECD (2001a, chapter 4) and EU Economic Policy Committee (2001).

At first sight, measures of this type seemingly contradict the common trend behind all other approaches to reform. On the other hand, they may be just what is called for in order to fix a new set of problems – in particular, poverty at old age arising from gaps in coverage – that only turn up when public pension schemes are tightened in regard to many other aspects.

Whatever route is actually taken in a given country, the majority of pension reforms enacted during the last decade is merely incremental in nature, leaving the system basically intact with respect to its general design. If we restrict our attention to the countries of the EU-15, Switzerland, and the US, reforms with a limited scope that can be subsumed under sub-tasks 1 to 3 have recently been enacted in Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Portugal, and Spain.[6] There are also remarkable examples of more fundamental reforms, but their number is very limited and some of them date back to more than 10 to 15 years ago.

In fact, the 1983 reform of US Social Security, drafting a considerable expansion of the Social Security Trust Funds, is remarkable – but not really fundamental – because it was enacted so early.[7] The introduction of an "opting-out" clause for the UK State Earnings-Related Pension Scheme was also made during the early 1980s; in this case, the reform is clearly fundamental in that it kept the UK public pension system very close to its pure Beveridgean design, against a broad-based trend that could be observed elsewhere at that time.

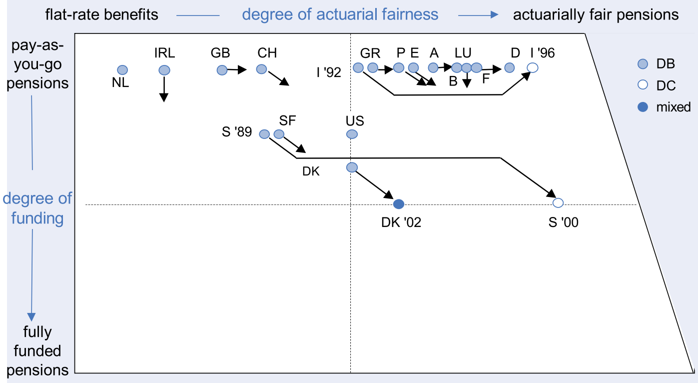
In the 1990s, two further countries in our sample – Italy and Sweden – carried out what could be called fundamental pension reform. Interestingly, the direction of these reforms is very similar in both cases. This time, however, the main effort is spent on making a Bismarckian system (Italy, in 1995) and a mixed regime (Sweden, in 1998) much more "Bismarckian" than even the German public pension scheme. In fact, with their new *systema contributivo* and the *inkomstpension*, the Italians and the Swedish invented what is now called a "notionally defined-contributions" scheme, as opposed to a system with defined (levels of) bene-

[6] For a more detailed survey, see Fenge et al. (2003, section 1.4).
[7] This first example of introducing of "demographic buffer funds" has served as a model for similar reforms that meanwhile have taken effect in Luxembourg, Portugal, Spain, and Switzerland.

fits.[8] In NDC-type arrangements, benefits are strongly linked to individual contributions in a way that mimics a particular design of privately managed pension plans which has become more and more wide-spread over the last two decades. Applying parallel approaches to the domain of public pension schemes was not conceived of until just a few years ago. The new Swedish pension scheme is also remarkable for its *premiereservsystem*, which was introduced in the course of the 1998 reform and became effective in 2000. Meant to make up for projected reductions in unfunded benefits derived from the *inkomstpension* scheme, there is now an additional scheme of mandatory savings that is located, in a sense, at the interface between a public pension scheme and fully private provisions.[9]

Figure 1

CHARACTERISTICS OF PUBLIC PENSION SCHEMES AND DIRECTIONS OF RECENT CHANGE, 1990 -2002



Source: Fenge et al. (2003, p. 131).

If taken together, the reforms observed in our sample of countries indicate that, over the last decade, there has been some convergence with respect to a number of basic features of how public pension schemes are operated: the share of funded pensions has increased, the idea of actuarial fairness has moved to the fore, and systems with defined contributions – instead of a defined-benefits arrangement – have become more wide-spread over the past few years. Yet, this does not necessarily imply that the systems converge to just one, uniform, model across all the countries considered here.

Some convergence with respect to basic features

In a recent review, Lindbeck and Persson (2003) take the three elements just mentioned – the degree of funding, the degree of actuarial fairness, and the choice between pensions based on defined benefits or defined contributions – to be the most important features when it comes to assessing the potential gains from pension reform. Following their line of reasoning, we can thus obtain a simple, but very illustrative way, of comparing systems across countries and of tracking the relevant effects of changes that follow from recent reforms.

First of all, note that the features chosen here are indeed important as they relate to the three main dimensions of (re-)distribution that are affected by the design of pension systems: they are all about distribution – or, to put it in an alternative perspective, about risk allocation – on an inter-generational level (funding), an intra-generational level (actuarial fairness), and between those who provide and those who buy insurance (defined benefits vs defined contributions). If we accept that in between the extremes of fully funded vs pay-as-you-go pensions and of strict actuarial fairness vs pure flat-rate arrangements, there exists a continuum of possible solutions, these two features effectively span a two-dimensional space in which any existing pension system can be located. In addition, any change in the design of a system can be represented as a move inside the funding-fairness space. This is precisely what is done in Figure 1, which is meant to illustrate the position of public pension schemes for all the countries considered here, also covering moves that occurred during the 1990s. The third dimension is captured by using different symbols for (the majority of) defined-benefits schemes and the (rare and rather recent cases of) defined-contributions schemes.[10]

It should be noted that, in Figure 1, the position of any single pension system is to an important

[8] See Palmer (2000) for a comprehensive description.
[9] With their *Særlige Pension* scheme, the Danish adopted a similar approach as of 2001. The option of subsidising voluntary private savings that was chosen in Germany in the course of the 2001 reform is different with respect to a very important feature – compulsory participation. During the first year after its introduction, response has been very low.

[10] The fact that the space spanned by the dimensions "funding" and "actuarial fairness" is not a true rectangle has already been discussed in Lindbeck an Persson (2003), who also suggested this kind of representation. The trapezoid form is meant to indicate that true actuarial fairness is much more easily accomplished in the context of a fully-funded pension scheme.

degree not based on quantitative measurement. Rather, the positions given are relative – vis-à-vis the other systems, that is – and neither the precise location nor the distance between the different symbols should be over-interpreted. Given that, the figure nonetheless tells us something about the diversity of public pension schemes and the directions of recent reforms. First, it is easy to re-establish the classification of Bismarckian (positions: top-right), Beveridgean (top-left), and "mixed" regimes (located somewhere in the middle of the graph). Second, recent reforms have only moved in two directions: towards higher funding (downwards) and increased actuarial fairness (to the right). So these are the aspects in which recent reforms clearly coincide.

Before we continue, we must note that viewing public pension schemes and their reforms in isolation does not offer a full picture of general trends in the larger field of old-age provision. (In fact, the observation that the lower half of Figure 1 is nearly empty should warn us that the picture obtained so far is incomplete.) Public pensions are clearly important for the overall design of national pension systems – even where they deliberately leave considerable room for second and third-pillar schemes. But we would obviously miss important pieces of information regarding actual similarities and differences between national systems of old-age provision if our considerations stopped here.

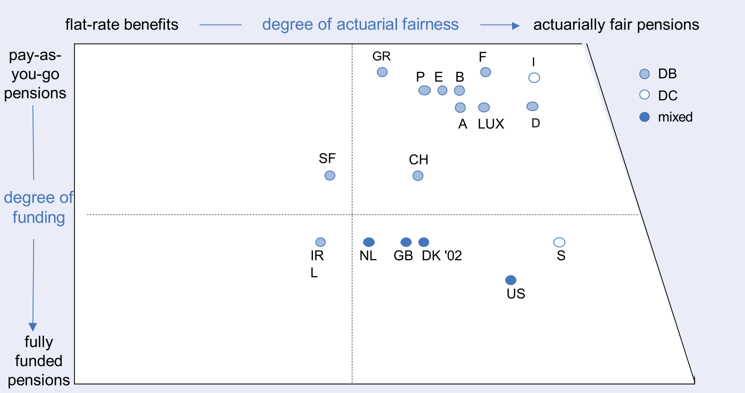
Figure 2 is therefore based on the same logic as that in Figure 1, now covering national pension systems as they are currently designed in total. Unfortunately, comprehensive information regarding the relative importance of the different pillars and branches of national pension systems is often lacking. We therefore use whatever kind of information is available, for example that provided by OECD (2001b) regarding the share of different sources of income in a typical retiree's budget, or similar results derived by Eurostat (2000) to locate each national pension system as a whole in terms of rough "cross-pillar" averages. (In some cases not covered in these studies, it must be admitted that the final position is merely the outcome of an informed guess.) In any case, the relative position of each country as represented in the figure should again be taken to be more important than the precise location on an absolute scale.

Generally speaking, the vast majority of occupational pension schemes, and certainly all kinds of purely private provisions, are fully funded.[11] Also, actuarial fairness established in these schemes can be expected to be rather high, even though it need not exceed the levels that we attributed before to the highest ranking public pension schemes. As a consequence, the position of entire national pension systems should again be located to the "south-east" of the one indicated for public pensions alone in Figure 1 – the question is merely, how far away?

The distance cannot be very long in the case of countries with Bismarckian public pension schemes, due to their relatively high levels of public pension benefits that call for only a limited amount of occupational pensions and additional private savings as a complement. In contrast, all the countries with pure Beveridgean systems, and some of those with a mixed regime, have radically altered their position. In these cases, symbols move quite a long way from the top-left corner to the centre of the graph or even to a position somewhere in the bottom-right section, indicating that the total portfolio of old-age provisions in the respective countries is funded to a much greater extent and exhibits a degree of actuarial fairness that is certainly not lower than in countries which follow the Bismarckian tradition. Last but

Figure 2

CHARACTERISTICS OF NATIONAL PENSION SCHEMES
(FIRST, SECOND AND THIRD PILLAR, 2002)



Source: Fenge et al. (2003, p. 133).

[11] The only major exception is the French system of occupational pensions which is administered in a semi-public fashion, with participation being mandatory for all employed individuals and benefits being financed on a pay-as-you-go basis.

not least, we observe that defined-benefits schemes are still the dominant standard in pure Bismarckian countries[12], while components with defined contributions have become very important in quite a number of the other countries.

Persisting differences with respect to the public–private mix

What does all this imply with respect to convergence across countries in terms of the management of public – and, hence, national – pension schemes? In spite of the fact that a host of recent pension reforms are following a similar pattern, public pensions systems in Europe and other industrialised countries are apparently far away from moving towards a uniform design. The most important reason is that the starting point of reforms is very different from country to country. Comparing Figures 1 and 2, we can easily see that the different pillars of old-age protection are weighted differently from country to country. Thus, the main source of heterogeneity among the national pension systems of industrialised countries is ultimately dependent on the different public-private mix that is inherent in their overall design.

From the point of view of countries with a relatively high level of public pension benefits, increasing the degree of funding and/or establishing more actuarial fairness in the total portfolio of old-age provision may be an important option for reform. However, considering the considerable amount of problems involved in a full transition, switching from generous systems with earnings-related pensions to pure flat-rate benefits is certainly not a type of reform that can be easily enacted. Conversely, countries where public pensions are confined to a much more limited role, providing relatively low levels of (mainly flat-rate) benefits, are not too likely to expand their public pension schemes beyond what is needed for a decent minimum pension guarantee. Thus, in a realistic assessment there is no way of harmonizing the two approaches, which still turn out to be strongly influenced by the competing traditions of Bismarck vs Beveridge, in a uniform framework. The choice between public pension benefits that aim at making a substantial contribution to the maintenance of earlier living standards or, as an alternative, of public pensions that are only expected to provide protection against poverty in old-age cannot be easily rolled back, even if it is effectively a choice that was taken long ago.

[12] Here, an important exception is Italy where the public pension scheme now follows an approach with ("nominally") defined contributions.

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