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Occupational Welfare Policies and Pension Income Inequalities: Case Studies of Pension Systems in Denmark, Finland, and the United Kingdom

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Abstract

This paper provides an overview of different approaches to old age security and their societal outcome in three advanced welfare states: Denmark, Finland, and the United Kingdom. All three countries established a public first tier minimum pension, which was also pursued in the following. Reform paths in the area of supplementary private systems show a broad variation in terms of regulation. As a result, income inequalities among the elderly could reveal specific characteristics.

Data evaluations of the Luxembourg Income Study measure the outcomes of these public-private mixes among the current elderly population. Analyses by socio-demographic and socio-economic characteristics allow detailed interpretation of public and private pension income sources and income levels. Finnish providers are strongly involved in occupational pension provision, whereas public benefits decrease in importance. British retirees have mixed their provision mix strongly, but high income earners tend to maintain less of their previous income. Danish pensioners are selectively covered with private pension income, which keeps benefits of middle income pensioners rather close to the minimum pension amount – a scenario which is slightly changing since the introduction of mandatory occupational pensions in the 90s.

Keywords: social policy, income distribution, inequality, retirement, elderly, redistribution

1. Introduction¹

Pension policies fulfil two main goals: *poverty prevention* and *status maintenance*. Particularly in the 1950s two ideal typical paths of public-private mix designs emerged. Several nation states followed the *Bismarckian* path (e. g. Germany, Italy, Belgium). These countries extended their group-oriented earnings-related programs further, guaranteeing a certain replacement rate of previous incomes for the majority of contributors to these schemes. Thus status maintenance was primarily achieved by public pensions. Occupational and private provision had been crowded out subsequently. Another group of countries maintained or extended their *Beveridge* type minimum pension schemes (e. g. Sweden, Finland, Denmark, the Netherlands, and the United Kingdom). Eligibility criteria to basic pensions were made less restrictive, and levels of guaranteed (income-tested) pensions were increased. Status maintenance policies developed as a second tier of provision. Regulations were set up by various constellations of actors such as the state, social partners, and firms. These schemes were crowded in to replace the income of middle to-high income earners. Occupational welfare policies were mostly used to bind workers to their firm or to reward them. The broad variation of implemented policies for second-tier benefits provides a multiple field of study in cross-national research. Different combinations of the public-private generate various social inequalities across nation states. I will analyse the income packages of retirees in each of these countries to clarify what role pensions in general and private pensions in particular play for income inequalities across the elderly.

In this article, I take a closer look on the public-private mixes of the United Kingdom, Denmark, and Finland. The three welfare states show a commonality in their statutory response to poverty prevention – all countries introduced a minimum pension according to the Beveridge tradition. However peculiar differences occurred in the following in their approach to satisfy the income maintenance function (second tier) of retirement income. This three country comparison will analyse different approaches to occupational pension regulation. I will discuss institutional variation and evaluate consequences for income inequalities. The major differing variable is the degree of compulsion in occupational pension agreements. The Finnish occupational pillar is strongly influenced by its corporatist nature. Administration was early on shifted to the various social partners in the 1960s. Their decision for compulsory enrolment based on employment yielded to one of the highest

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private pension expenditures among the OECD (2009a: 42). In the United Kingdom broad compulsion was reached *via* the ‘contracting-out’ option of the state earnings-related system (SERPS). The second-tier scheme came into effect in 1978. SERPS was compulsory as long as someone did not contract out in favourable occupational pensions or since 1986 also personal pensions. Denmark’s private pension regulation has been based traditionally on voluntary solutions. Tripartite negotiation between the state and the social partners proved to be difficult at first, but since the beginning of the 1990s occupational plans became influential. Various mandatory collective agreements were introduced since then, yielding to a high coverage among current workers. The delayed maturing in Denmark allows an evaluation of a ‘purely’ voluntary private pension path.

Various theoretical concepts provide helpful lines of argumentation to explain the development and current importance of occupational pensions. Some of these are the power resources theory (Korpi 1983), varieties of (welfare) capitalism approaches (Ebbinghaus and Manow 2001a; Hall and Soskice 2001b), occupational welfare theory (Rein and Rainwater 1986; Reynaud et al. 1996; Shalev 1996; Greve 2007; Titmuss 1958), and the crowding in/out thesis (Ebbinghaus and Gronwald 2011; Pedersen 2004). During the analyses I adopt the pillars and tiers approaches commonly used to distinct different forms and functions of pensions (Goodin and Rein 2001; World Bank 1994; OECD 2007).

In a first section I will set the framework about the applied theories and concepts in this paper. Then I take a closer look on occupational pension policies and its pathways of implementation. The main focus will be a distinction into firm-based solutions and collective agreements. A final paragraph deals with occupational pension strategies and its effects on social stratification. I will evaluate the reform process in the three countries and derive hypotheses about the development and spread of private pensions. In the empirical data analyses, I will compare cross-sectional and longitudinal evaluations to understand the ongoing trends of change in each multipillar system. I will depict a selection of descriptive figures, exemplifying the differences in inequality. I will look at recipient rates of private pensions, income shares of private pensions in the public-private mix. Income deciles show the income composition over different levels of income. Most of these estimates will be presented in a socio-demographic perspective to account for differences in the employment histories of men and women. Estimates based on personal and household level signify how these differences are mitigated by living arrangements. A last analysis concentrates on the income distribution of the elderly in relation to the total population’s income distribution.

2. Variety of pension system arrangements

Current public-private pension mixes have been historically influenced by different traditions in state governance. Whereas Liberal market economies aim at a low influence of state actors, Coordinated market economies seek to balance market inequalities more strongly by regulatory efforts, particularly through union influence (Korpi 1983; Hall and Soskice 2001a). In line with this distinction, welfare policies are more developed in Coordinated market economies. Previous research yielded also a valuable distinction concerning the focus of welfare programs (Esping-Andersen 1990; Marshall 1950): The Social-democratic regime aims at universal coverage and introduces social security as a social citizenship right. The Conservative regime sets up group-related welfare programs oriented at status maintenance. These schemes are extended by various family related benefits. The ideal typical Liberal regime focuses on social security targeted to the poor only. Welfare state expenditures are the lowest among the three regimes.

Pillars vs. tiers

In scientific contributions and policy debates it is common use to distinct between pillars and tiers of old age security. The concept of pillars is mainly concerned with the provider of each pillar (Goodin and Rein 2001); the concept of tiers (World Bank 1994; OECD 2007) describes its function. Thus the first pillar is organized by state bodies through social security systems, the second pillar by occupational groups, social partners, and individual firms through specific agreements, and the third pillar by private financial institutions through personal saving plans. The first tier contains mainly a vertical redistributive element providing a minimum income to prevent poverty (*poverty prevention* function). The second tier is linked to previous labour market earnings. These systems maintain the acquired living standard replacing a certain level of earnings (*status maintenance* function). Redistribution occurs mainly on the horizontal dimension reflecting a deferred use of financial resources (Esping-Andersen and Myles 2009; Palme 2006). The third tier is a sort of ‘topping up’ which is saved individually.

In present societies two major public pillar pathways exist: *Bismarckian* and *Beveridge* type systems. The Bismarckian path yielded social insurance systems. These schemes aim at maintaining the acquired living standard. Thus social insurance systems provide also the second tier within public systems. Later beneficiaries accumulate entitlements that closely relate to their previous earnings profile. Bismarckian social insurance systems focus on two components: own accumulated entitlements and derived benefits for survivors or partners

taking care of children or the elderly. In the 1950s, major extensions took place (e. g. Germany, Italy, Belgium). Replacement rates of 60-70 per cent of previous labour market earnings were envisaged for the broad majority of contributors. These pension promises led to a crowding out of complementary systems as status maintenance was broadly provided by the public system. However, the existence of contribution or benefit ceilings made it necessary for high income earners to provide outside the public systems to receive a similar replacement rate. Related to the strong influence of coordinated policies in these countries, selective schemes were introduced in favour of these groups (e. g. VBL in Germany, Tfr in Italy).

In contrast several countries took up the Beveridgean idea of pension provision. This path guaranteed only an absolute public minimum level of benefits to prevent poverty (e. g. Finland, Denmark, the Netherlands, United Kingdom, Sweden (before 1990s)). Minimum pensions, however, are typically paid as a universal social right (Marshall 1950). Full entitlement is either based on years in employment (United Kingdom) or years of residency (Denmark, Sweden, Finland, the Netherlands). Among this group a further sub-dimension separates these systems in *basic*, *targeted*, and *minimum* pension schemes (Whitehouse 2007: 5-7; OECD 2009b: 19-21): *Basic* pensions are universally paid to all retirees, albeit they might be lowered due to missing years of employment or residency. *Targeted* or *resource tested* schemes involve at least a test for eligibility. Income tests measure the amount of other available income sources, means tests measure income and assets. *Minimum* pension systems are similar to targeted schemes. Payment is based on insufficient accumulated earnings-related entitlements and eligibility to claim these additional benefits. All types have in common that they provide the first tier only. The status maintenance function (second tier provision) in Beveridge type systems is reached by individualistic accumulated employment related entitlements. All current Beveridge systems show a more or less shared responsibility between public and private provision, strengthening particularly the role of employers' supply of occupational pension plans. The extension of minimum pension schemes crowded in the development of further public and occupational systems. Low statutory efforts to prevent poverty effectively might increase the incentives for veto points, such as unions and employer associations to bargain for occupational welfare policies.

Public vs. statutory vs. occupational welfare policies

In cross-national perspective there is much variation how the interplay of public welfare state provision and occupational welfare policies has developed. However, previous research

loosely carried out theoretical demarcations of public, statutory and occupational welfare policies (Rein and Rainwater 1986; Reynaud et al. 1996; Shalev 1996; Greve 2007; Titmuss 1958; Esping-Andersen 1996). According to Shalev (1996) occupational pensions are the central program of occupational welfare complementing to statutory pension systems. There is consensus that occupational welfare policies contribute to the overall welfare level and therefore need to be included in cross-national comparisons (Esping-Andersen 1990; Kangas and Palme 1991). But it remains less clear which policies should be included to the term (Farnsworth 2004; Esping Andersen 1996).

First of all occupational pension plans are related to the employment position and thus tied to employer and firm policies. In his early essays on occupational welfare, Titmuss fears that occupational welfare is narrowly related to 'occupational success' (Titmuss 1958: 52). Therefore employer-guided policies might be more exclusive than a universal statutory welfare state solution. Insofar occupational benefits may reflect occupational achievement channelled by the interests of specific groups of employees, employers, or social classes, implementing vested rights for themselves (Titmuss 1958). Greve (2007: 32-37) considers occupational pensions as both a substitute to state welfare and complementary welfare. Particularly, negotiated solutions tend to be a partial substitute towards public pensions (Rein and Turner 2004). The distinction of public, statutory, and occupational welfare policies is an important one as each of the components might enhance social inequalities differently. In the following I apply the following framework adjusted for pension research.

I will comprehend occupational pension policies as the major part of a broader category of occupational welfare strategies to reward their employees. Statutory pension policies on the other hand describe legally obligated public and occupational pension systems such as binding collective agreements. As these two classifications overlap there exist two types of occupational pension policies. The first type subsumes all collectively negotiated occupational schemes, where enrolment is mandatory. The second type is defined negatively; it describes all systems that are not part of statutory pension policies. Such occupational schemes can be based on firm policies or individual contracting. Classification of nation-specific schemes may depend additionally on specific rules. Figure 1 exemplifies the terminological demarcation within the pillars and tiers approach.

	1 st pillar		2 nd pillar		3 rd pillar
	Public Pension		Occupational Pension		Personal Pension
	Bismarckian social insurance	Beveridge minimum pension	voluntary contracts	collective agreements	
3 rd tier					mostly voluntary inclusion based on personal decisions
			supplementary for (MIE), HIE mostly in combination with Bismarckian social insurance	statutory binding for covered employees, status maintenance for MIE, HIE	'topping up' for HIE in addition to statutory systems
2 nd tier	earnings-related state pension 1 st +2 nd tier for LIE, MIE, (HIE)*	income-tested minimum pension for LIE, MIE		mostly in combination with Beveridgean minimum pension scheme, partly substitutes income-tested minimum pension	but also status maintenance for all groups; plans involve partly state contributions or tax rebates to increase savings behaviour
1 st tier		basic pension 1 st tier (2 nd tier for LIE)			

Notes: LIE=low income earners, MIE=middle income earners, HIE=high income earners; light grey areas: inclusion is selective (in the case of income-tested public pensions; entitlement can be cut due to means or income test); dark grey areas: inclusion is mostly obligatory (in the case of basic public pensions; entitlement is based on residency or years in employment)
* replacement rate for high income earners depends on contribution and benefit ceilings

Fig. 1: Pillars vs. tiers

Placing the firm in the centre of the production regime, the 'Varieties of Capitalism' approach tries to link industrial relations, vocational training, and corporate governance together (Hall and Soskice 2001a). Especially in occupational pensions we find also an area of occupational welfare where these three dimensions are strongly intertwined. Altogether they determine the outcome of pension policies in terms of coverage and inequalities in social security, which are finally leading to pension income inequalities (Ebbinghaus 2010; Ebbinghaus and Manow 2001b). Historically, entrepreneurial strategies aimed at binding workers to their firm by setting up beneficial occupational retirement plans. Hence, occupational plans tended to favour particularly high qualified employees. Potential beneficiaries received rewards and thus incentives to stay with the same employer. Later regulations in occupational pension provision led to a further inclusion of whole occupational groups of employees, preventing discrimination and exclusion of employees from such beneficial agreements. Inclusion was strongly achieved by social partner's purposes of universal protection for their workers (Esping-Andersen 1996: 330-34).

Firms frequently remain the decisive actor of occupational pension's design and capital accumulation. However, collective agreements could decide upon comprehensive coverage for all workers within a branch or industry, and fix minimum contributions or minimum rates of return (Ebbinghaus and Wiß 2011). By fulfilling this governing role social partners influence on the distribution of the primary market income and become a major actor in occupational pension provision, but also redistribution policy (Ebbinghaus 2010). Furthermore, occupational pension promises add another variable to wage competition by transferring a part of the loan to deferred social security benefits.

Collective agreements have developed as a first level of occupational regulations on top of firm-based plans. Trade union's and business association's involvement, their strength, and their perception of occupational pensions are some of the central determinants for pension policy outcomes. Whereas inadequate pensions on the statutory level might increase union's interest in universal provision plans, their strength is a pre-condition to push employers to negotiate about such binding agreements (Esping-Andersen 1996; Ebbinghaus 2005). Collective agreements can be viewed as a counterbalance to the individual and selective agreements on the firm level. Social partner's influence is reached through the following levels: legislative framework, bargaining over plan structures and benefits, management and administration of plans, and controlling pension funds (Davies 1996). In this level playing field, unions take action *via* the channels consultation, self regulation, or concertation (Ebbinghaus 2006). In addition to collective agreements the state has the option of legal extension to all workers (*erga omnes* declaration) covered under a specific basic agreement within a branch or industry (Ebbinghaus 2005).

We can identify different traditions in industrial relations across the society (Ebbinghaus 2005 and 2010): The Nordic countries are characterized by strong labour parties or union movements, strengthening the role of collective bargaining and universal agreements. In continental Europe social partnership shapes the institutional landscape, however exacerbates status differences through privileges particularly for white collar workers and civil servants. In liberal countries unionism is traditionally less important in favour of voluntarism. Thus collective agreements seem to be particularly relevant in Nordic countries, they are supported and partially extended by the state in continental European countries, but they are less common in liberal countries.

Occupational pensions and social stratification

By definition second tier systems fulfil the income maintenance function. Occupational systems mainly function as second tier system. Thus it is obvious that they increase inequality above the redistributive first tier systems. However, we could look at the different mechanisms enhancing inequality more than others, particularly through the interplay of basic pensions, targeted benefits and coverage with occupational plans. Whereas traditionally especially the leading positions profited from firm specific regulations as a means of binding employees to the firm, collective agreements fixed broader coverage across firms, industry or the entire nation state. Therefore such policies bring about a more general substitution of public second tier systems by occupational systems. In addition the role of occupational pensions as a fringe benefit diminishes while negotiated occupational welfare systems mature.

However, occupational pensions have another obstacle to overcome. Persons with non-standard employment patterns might stay excluded from these systems due to the schemes' strong linkages to employment. Greve (2007: 72-6) debates that occupational welfare policies such as health insurance or maternity leave are more easily acquired by core workers. This argument can be also transferred to occupational plans. Collectively agreed regulations could even harm temporary workers in general, as these groups could be excluded from the binding rule.

But also when collective agreements are non exclusive, public policies may still be beneficial for particular groups. Particularly public pension schemes introduced allowances for periods of inactivity (child-rearing, taking care for the elderly or unemployment). Such mechanisms are hard to implement in occupational systems. Thus periods of inactivity could be more disadvantageous in systems where public welfare is substituted by occupational welfare.

3. Institutional variation / pension policy paths in Denmark, Finland and the United Kingdom

a) Denmark

Danish old age assistance started off with liberal residual policies in 1891 which only in 1956 became universal, however still means tested (Andersen 2011). In 1964 a part of the universal national pension system became a basic pension (*people's pension*). The other part of the first tier entailed supplementary income-tested benefits. As a public second tier, the

ATP system was introduced. The system is based on working hours and reached broad coverage, but is less important in terms of contributions and benefits (Green-Pedersen 2007; Davies 1996). ATP is a funded system that is enforced by law, but administered by the social partners. It is at the edge of first and second pillar classification. Due to predefined data coding in the LIS data files ATP is treated as part of the public system. National pensions and ATP together provided around 60 % of replacement for the low income earners, therefore satisfying the need for additional private pensions for the low income almost completely, but leaving a higher gap for the higher income groups (Kangas et al. 2010; Kangas and Palme 1991). As a result of reforms in the 60s, poverty across pensioners decreased strongly during the second half of the 80s (Pedersen and Smith 2000).

In the following, supplementary statutory pensions were designed more income tested in the 90s. Benefits were cut as soon as other personal pension income (also including ATP and occupational pensions) exceeded a certain level, however still in favour for occupational pension recipients (Kangas et al. 2010; OECD 2009b). Second pillar pensions remained broadly unregulated and scattered at first. The major reason was unsuccessful negotiations between the Labour Organisations (LOs) and the government on the question who should regulate occupational pensions. In this unregulated scenario almost exclusively civil servants and a small group of white collar employees profited (von Nordheim Nielsen 1996). Danish tripartite solutions remained unsolved until the beginning of the 90s. But then policies shifted to self-administered social partner agreements. It became obvious that the primary goal of universal occupational pension could not be reached through tripartism (Green-Pedersen 2007). Fixed temporary regulations in the public sector finally guided the way for further sector-based collective agreements, initiated by the Danish metal industry (Andersen 2011; Kangas et al. 2010).

Due to broad extension of compulsory enrolment in occupational systems, future generations will benefit strongly from additional occupational pension benefits. Thus income tested national pensions lose their important role in counterpart of an earnings-related contracted-in occupational system for the middle to high income earners. Stunning from an institutionalist point of view is that, although the Danish labour relations system is well developed and influential (Green-Pedersen 2007), social partners failed to structure occupational pension agreements. This issue has been viewed as a matter of public decision making. The LO's priority of a universal solution was transferred to industry-wide plans, however the goal of general extension over the whole workforce was still upheld (Davies 1996). During this reallocation of power, the industrial relations system gained in power in the political arena.

The process also led to an increase in employment-related occupational pensions as a substitute of and complement to public benefits.

b) Finland

Finland redesigned its pre-existent national pension in 1956. The reformation entailed a citizenship-based basic pension benefit (*National Pension*) and an income-tested supplement. In addition two major reforms were enacted in the public system (Kangas 2007). Since 1985 supplemented national pensions were only tested against other legislated pension income. Thus the income test was restricted. Ten years later, in 1995, tremendous cuts were decided. Taking back universalistic policies, the universal national pension basic amount was abolished. Hence, the entire national pension became targeted security, tested against other pension income. Basic pensions are already effectively cut for moderate levels of other pension income (OECD 2009b), diminishing the role of these benefits further. Whereas the replacement rate until the 70s first increased, wage-development overwhelmed basic pension levels in the following, hence leading to a less important role in old age income (Jäntti and Ritakallio 2000).

The statutory development was accompanied by an increasing role of the earnings-related second-tier pensions which were introduced during the 60s and 70s. The balance in the pension income mix was shifted towards employment-related pensions. The various schemes organized across occupational and sectoral lines (TeL, LeL, KvTEL, VeL, YeL, and MyEL) will be interpreted as statutory occupational pensions according to the definition of Goodin as these systems are administered by the social partners and run by financial institutes. The strong corporatist structure in Finland is a key element of pension policy design in the second pillar. This contrasts Finland from other countries in terms of bargaining influence through statutory regulations: Finnish social partners are directly involved in the design of occupational pensions and their reformation (Kangas 2007; Kangas and Luna 2011). The majority of these negotiated systems are organized as pay-as-you-go system, thus yielding a strong linkage of employment-based contributions and benefits. They aim at a replacement of 60 per cent of previous earnings for private sector employees respectively 66 per cent for public employees. Since there is no contribution ceiling, the need for further private pensions was crowded out for decades by these rather generous systems for all income groups. However this scenario is changed through various reforms that will decrease the replacement level (Kangas and Luna 2011).

Summing up, the Finnish case can be interpreted in two ways: First as a system almost exclusively based on statutory occupational regulations combined with a meager targeted first tier public pension. Second - if employment-related pensions are defined as public - as a system where occupational and personal pensions have been effectively crowded out due to the non-existence of contribution ceilings. This interpretation has been applied by Korpi and Palme (1998) by referring to an *encompassing* system. This understanding reflects the Finnish pension system design as an arrangement similar to a Bismarckian social insurance type in a very pristine shape. The main difference occurs in the administration by social partners instead of the state. Given that guaranteed replacement will decrease, Finnish providers may successively need additional private savings plans to attain adequate pensions. These additional demands could be satisfied again by coordinated political influence *via* industrial relations (Kangas and Luna 2011).

c) The United Kingdom

The British pension system is one of the most discussed systems in nation-based articles on inequality and poverty across the aged and political insufficiencies of restructuring the systems (Bridgen and Meyer 2007). The introduction of the first encompassing basic pension occurred 1946 coming into effect in 1948. The design was strongly inspired by the Beveridge report. Pension entitlement was calculated on the basis of the male working career, treating married women as dependants irrespective if working or not (Bridgen and Meyer 2011). Full benefits were paid if 90 per cent of potential employment records (16-65) were documented, phases of unemployment and maternity taken into account. In the area of occupational pensions the governments followed first a liberal path, keeping occupational pensions fairly unregulated based on voluntary employer's decisions to offer such schemes and voluntary employees' choice to provide in such plans. The low level of the public basic pension left a broad scope for the maturation of occupational and private pension systems (Bridgen and Meyer 2007).

The introduction of the State Earnings Related Pensions Scheme (SERPS) in 1975 envisaged a paradigmatic reform in British public pension saving. The system tied public and occupational pension components closely together. First of all SERPS was introduced in efforts to construct a second tier public pension partially related to previous earnings. As the Government feared a crowding out of existent occupational pension plans, the *contracting-out* option was introduced. Thus second tier pensions could be either accumulated in the SERPS or in occupational plans if these were favourable for the individual. The British second tier system could be viewed as statutorily mandatory for all employees. However

those earning below the lower earnings limit (LEL) stayed excluded. The system came into being in 1978. The full effect of the SERPS was intended to come in effect twenty years later offering around 25 per cent of national average earnings by the re-valued calculation of the best 20 years of employment earnings (Blake 2003; Blundell and Johnson 1998). Since the implementation of occupational pension plans remained a decision by the employers, contracting out was not a real option for a part of the society until 1986.

The Social Security Act 1986 dealt with the various consequences initiated by the introduction of the SERPS. Beginning from 1988 all individuals gained a contracting-out option as long as they held 'Approved Personal Pensions'. This meant that providers at least had to pay a minimum contribution to private pensions, the contracted-out rebate which had been already a feature of occupational contracting out from the SERPS (Dilnot et al. 1994). Furthermore, the SERPS benefits were withdrawn to 20 per cent of average earnings based on lifetime earnings. As a result the SERPS became less attractive for low income earners and workers with interrupted careers (Schulze and Moran 2007).

Given the fixed criteria on statutory pensions, the public benefits from the basic pension and the SERPS were expected to be still meager for most employees without supplementary entitlements. The SERPS excluded persons below the LEL and low income earners and disabled persons were not covered with private pensions in particular, which created an everlasting discussion on further necessary reformations of the SERPS (Schulze and Moran 2007; Taylor-Gooby 2005). Since 2003, a means-tested Pension Credit was introduced. This system not only increases the public minimum income, but also rewards modest savings in the occupational area to a certain degree (Blake 2003). Also the newly introduced Stakeholder Pensions aimed at increasing the savings of those with low occupational savings. However, take-up rates remained low in the early 2000s. In order to prevent an increasing share of persons with incomes at the bottom level of the Pension Credit, the government decided a gradual transformation of the SERPS to the State Second Pension (S2P) over the next 50 years (Bridgen and Meyer 2011; Disney and Emmerson 2005). This transformation was initiated in 2002 and will result in a stronger flat-rate character of the second tier.

The UK's complex pension system in a nutshell: Besides the public systems (basic pension and SERPS), two major ways of private provision coexisted since the introduction of SERPS. First private pension plans that approved a contracting out either on the occupational or private level, thereby also including the Stakeholder pensions. Second

private pension plans that were not approved, the important market for life insurances included. Government policies can be best described as ‘exhausted voluntarism’ (Bridgen and Meyer 2011), where voluntary mechanisms were pursued to its limits and the SERPS introduction was soon regretted as a means of interference in the liberal tradition. Interest group influence on collective solutions in private pensions has been low due to the decentralized and fragmented landscape of union involvement. The Trade Union Congress, the umbrella organization of the unions, has been solely an advisor in the stately reform process (Schulze and Moran 2007). This low influence is accompanied by a majority of employer representatives in the governing private pension authorities (Davies 1996).

4. Institutional variation and country-specific inequalities

Summing up we find various institutional linkages between public and occupational systems among the three nation states under study. Institutional paths and past reforms have structured the magnitude of crowding in or out of private pension systems differently. The British and the Finnish system developed a mature multipillar structure yet, the Danish system is a latecomer in occupational pension policies. Whereas British occupational pensions are mostly voluntary, Finnish occupational pensions are highly regulated and are the major source of income. In Denmark, quite generous basic pensions and the introduction of ATP partially satisfied the demand of occupational pensions at first, however kept the middle-to-high income earners in a highly unregulated private pension market. In this scenario portability of occupational pensions in the case of job change was highly disadvantageous.

Social partners fulfil different functions in the regulation process of occupational pensions. Whereas consultation is the main channel in British politics, the coordinated states Finland and Denmark implemented collectively self-administered and self-regulated second pillar solutions. In Finland social partner involvement early on became an important veto point in politics (Kangas 2007). The Danish system only recently shifted to self-administered collective agreements. Danish tripartite solutions were reallocated to self-administered social partner agreements. Therefore British social partners are by far less influential and less involved in the current occupational system regulation than in both Nordic countries. Consequently coverage with occupational pension plans across the current work force is by far higher in the Coordinated market economies Finland and Denmark (both above 90 per cent) than in the Liberal market economy United Kingdom (ca. 60 per cent) (OECD 2009b: 141).

a) Inequalities in recipient rates and private income shares

The picture is considerably different when analyzing current recipient rates of private (occupational + personal) schemes across those aged 65+. ² In this study I will extend the previous cross-sectional analyses in the research area (Behrendt 2000; Casey and Yamada 2004; Ebbinghaus and Neugschwender 2011; Pedersen 2004) by a longitudinal perspective. This allows a more detailed interpretation of current developments of the public-private mix among the elderly.

The LIS data evaluations in Table 1 and 2 document private pension recipient rates and the importance of private pensions in the public-private mix at three points in time: mid 90s, around 00s, and mid 00s. Recipient rates are calculated on the personal and household level. Private income shares are only presented on the household level, as this is the decisive level for living standards. All household statistics use equivalised income adjusted by the household size³ and assume a full intra-household redistribution of income. This is the standard proceeding in income inequality research (Jenkins and Van Kerm 2009; Salverda et al. 2009). Intra-household redistribution increases particularly the partners' recipient rates. Uncovered partners benefit indirectly from private pension beneficiaries in the household. Due to the lower labour market attachment of women, primarily female spouses receive indirect benefits.

The Finnish private pension recipient rates are by far the highest in this comparison (see Table 1). The recipient rates are fairly stable over time signifying the maturity of the system; even women's recipient rates reach values close to 80 per cent on the individual level. The lowest coverage exists in the age group 85+, but even this group receives nearly half of their household income from private systems (see Table 2). In the United Kingdom, especially women are more and more covered, whereas male's recipient rate slightly decreased. However, there remains a positive effect on the household level: three quarter of the households receive private pensions, the recipient rate increased by 7 percentage points over the 10 year period. The increase is mostly driven by higher recipient rates of retirees aged 75+; in contrast the recipient rate of household members aged 65-74 increased only slightly across the United Kingdom. Denmark's most recent data show that the recipient rate strongly increases, however the mandatory collective agreements need to mature further to

² I evaluate the income data of all persons above 65 years from the following cross-sectional LIS datasets: DK(95, 00, 04), FI(95, 00, 04), UK(94,99,04). Partners and household members below the age of 65 are excluded from this population; however their income is taken into account through household's equivalised income.

³ All pension income sources are divided by the square root of household members as proposed by the LIS staff.

depict the whole societal shift towards a higher importance of occupational pensions. During the 90s, shortly after the implementation of negotiated pension plans, overall coverage was rather low (ca. 21 per cent). This number increased in the following 10 years on average by approximately 40 per cent. But still, on the individual level, only 30 per cent of the elderly population are covered. This amounts to almost 50 per cent on the household level.

The trends in the United Kingdom and Denmark are generated by two different ongoing shifts in the old age income packages. First, particularly the coverage of the retirees aged 75+ increased due to higher inclusion rates to voluntary plans. The reforms in the beginning of the 90s in Denmark had almost no effect for these groups, as most of them were already claiming pension benefits when the reforms became effective. Therefore the strong increases in these age groups exemplify an increasing self selection into private systems over time. This is similarly the case in Great Britain. The second effect is increasingly related to the mandatory inclusion to occupational pensions. Recipient rates increased by nearly 40 per cent, although the importance for the income is still rather low. This differentiates the Danish trend quite strongly from the British trend, where recipient rate patterns remained rather stable for the more recent generations of retirees.

In terms of the income share of private pensions in the total pension income mix, the same rank order between the countries can be observed (see Table 2): In the mid 00s, the highest importance in the public-private mix produce the Finnish schemes (ca. 70 per cent), followed by the British (ca. 30 per cent), and the Danish (ca. 20 per cent). Referring to private pension recipient households only, private systems are similarly important in the income mix of British and Danish pensioners (ca. 40 per cent).⁴ This reflects that, if Danish pensioners receive second pillar pensions, they are reasonably contributing to their income.

Similarly to recipient rate patterns, the private income share of pensioners aged 75+ increased most. This is the case in all countries, even in Finland, where recipient rates are stable. In Finland this tendency indicates that the abolishment of basic pensions limits the role of public pensions. A partial effect might be produced also by the longer contribution period to the mandatory occupational systems that had been introduced in the 60s and 70s. As the 75+ cohort entered the labour market mostly before the introduction of the mandatory systems, these systems also have not fully matured in terms of contribution-related benefits. However, the reforms seem to affect particularly two-person households, where the private pension share increased from approximately 69 to 77 per cent. The British data show that

⁴ Further statistics with regard to private pension only recipients are available on request to the author, as are private income shares on the individual level.

Table 1: Recipient rates of private pension by socio-demographic categories

		UK			FI			DK		
		mid90s	00s	mid00s	mid90s	00s*	mid00s*	mid90s	00s	mid00s
individual level	total	50.7	49.7	52.3	80.6	79.4	80.3	20.8	25.2	28.9
	sex									
	male	70.9	65.9	66.0	85.2	84.7	85.1	23.7	27.9	32.1
	female	36.1	38.5	42.0	77.0	75.3	76.5	18.9	23.3	26.7
	age									
	65-74	54.5	51.3	52.0	81.5	81.1	81.3	23.1	27.6	31.6
	75-84	47.8	51.4	54.6	80.8	78.1	80.7	20.5	25.4	28.9
	85+	36.1	39.1	48.2	69.7	69.2	68.4	11.9	15.0	18.6
	hh-size									
	1	52.5	54.9	55.7	79.1	75.5	78.0	18.6	22.8	26.2
	2	50.7	48.2	51.7	79.9	79.8	80.1	23.1	27.9	31.6
	> 2	43.0	41.0	43.3	85.3	83.4	83.9	19.4	19.0	25.7
household level	total	68.0	69.9	75.2	97.8	96.4	97.5	38.3	42.6	48.0
	sex									
	male	74.4	74.8	79.8	99.2	98.5	99.0	38.9	43.6	49.4
	female	62.9	65.9	71.3	96.9	94.8	96.3	37.8	41.8	46.8
	age									
	65-74	73.1	73.0	77.8	98.9	98.4	98.7	41.3	45.3	51.0
	75-84	61.7	68.4	74.0	96.8	93.5	96.7	37.0	42.1	47.2
	85+	50.7	53.5	64.2	93.2	92.6	91.5	24.7	29.3	33.3
	household									
	1	52.5	57.2	60.8	94.6	90.3	93.3	29.2	33.0	35.9
	2	75.4	77.0	82.1	98.8	98.7	99.1	43.4	48.2	54.2
	>2	61.3	60.9	65.5	98.9	96.8	97.3	33.7	34.8	42.1
	deciles									
	1st(lowest)	25.2	29.3	31.9	87.9	86.5	85.9	18.2	20.5	24.0
	2nd	27.4	31.8	46.5	95.3	89.1	96.1	8.5	4.0	6.0
	3rd	50.3	61.0	62.6	97.5	96.5	96.5	3.6	4.6	7.2
	4th	65.6	62.4	74.7	97.5	96.5	99.0	5.9	7.4	13.3
	5th	71.3	72.3	81.5	100.0	97.5	98.9	8.3	17.4	24.5
	6th	77.6	79.9	80.1	100.0	99.6	100.0	36.6	51.0	65.1
	7th	82.3	82.1	87.7	100.0	98.4	99.6	56.0	57.9	65.2
	8th	88.3	86.8	91.2	100.0	100.0	100.0	65.0	76.4	82.0
	9th	92.4	96.0	96.4	100.0	100.0	99.2	86.7	90.5	94.1
	10th(highest)	98.4	97.5	99.3	100.0	100.0	99.7	94.1	96.3	98.1

Notes: *LIS coding for the public and private pensions was changed in Finland in wave 5, on the household level employment-based pensions were recoded back to private pensions, this information is not available on the personal level, values for the 00s and mid00s were calculated on the individual level wave 4 data and household level wave 5 and 6 data. Source: own calculations based on LIS data

private pensions still increase in importance, particularly across the male group, although recipient rates even declined slightly. All country statistics show that being in a two person household strongly increases the private income share. This effect is partly created by the higher share of elderly women among one person households, but also multigenerational households.

b) Inequalities in benefit levels

The cross-national comparison shows a broad institutional variation in terms of minimum pension policies. The British system ties entitlement to labour-market inclusion, whereas the Danish and Finnish systems are based on residency and therefore less dependent on employment. The more recent orientation in Finland towards only targeted minimum pensions drifted the system again away from the Danish combination of universal basic and income-tested benefits. OECD estimations mirror that Danish low income earners might profit from a strong increase in the minimum claims since the 1970s. The level of income-tested pension can amount to approximately double of the amount of the universal national

Table 2: Share of private income in the ppm by socio-demographic categories

		UK			FI			DK		
		mid90s	00s	mid00s	mid90s	00s*	mid00s*	mid90s	00s	mid00s
household level	total	25.2	26.4	30.5	63.5	64.3	69.6	16.1	17.8	19.6
	PP recipients only	37.0	37.6	40.3	64.8	66.7	71.3	41.9	41.7	40.7
	sex									
	male	28.1	28.8	33.0	69.1	71.7	75.9	16.5	18.5	20.2
	female	22.9	24.4	28.2	59.5	58.6	64.4	15.8	17.2	19.1
	age									
	65-74	28.0	29.0	33.2	70.4	71.2	75.8	18.0	19.1	20.5
	75-84	21.6	23.6	28.1	55.8	57.6	63.3	14.8	17.3	19.7
	85+	17.0	18.8	23.3	38.5	40.1	49.9	9.2	12.1	14.2
	household									
	1	19.0	21.0	23.4	60.1	52.8	56.8	12.4	14.3	15.5
	2	29.4	30.0	34.4	68.8	72.1	77.0	18.5	20.1	21.9
	>2	19.0	20.4	22.9	50.8	52.7	56.7	12.4	12.9	16.5
	deciles									
	1st(lowest)	6.0	8.4	8.1	33.1	31.6	41.2	5.2	6.0	6.9
	2nd	4.9	5.2	8.9	37.6	39.6	46.7	1.6	1.2	1.4
	3rd	8.9	11.6	12.4	41.9	50.4	53.8	0.8	0.9	1.1
	4th	13.1	13.2	18.9	49.7	57.8	59.6	0.8	0.9	2.2
	5th	18.7	16.9	23.8	63.6	64.3	72.1	1.2	2.3	4.0
	6th	21.3	23.9	26.7	66.6	70.8	79.4	6.2	9.6	14.6
	7th	26.6	28.2	34.4	79.5	73.0	81.4	15.6	15.7	18.6
	8th	36.0	36.7	42.3	82.8	80.7	84.3	24.7	29.1	32.0
	9th	47.7	51.1	55.1	87.0	82.1	86.1	42.4	45.6	47.1
	10th(highest)	68.3	68.1	73.1	92.6	92.8	90.9	62.2	66.5	67.7

Notes: Share calculated on the gross income level

*LIS coding for the public and private pensions was changed in Finland in wave 5, on the household level employment-based pensions were recoded back to private pensions, this information is not available on the personal level, values for the 00s and mid00s were calculated on the individual level wave 4 data and household level wave 5 and 6 data.

Source: own calculations based on LIS data

pension, guaranteeing an income of 36 (18 + 18) per cent of average earnings (OECD 2009b 158-60). The system provides much higher minimum benefits than in the United Kingdom (28 (14 + 14)) and Finland (18).

Figure 2 depicts the currently achieved income level by each income decile in relation to national median disposable income⁵ across the whole society. Individuals are distributed to each decile with respect to their total net disposable income.⁶ Thus the lowest income decile (1st) reflects the income level of those 10 per cent with the lowest disposable income annuities; lump sum payments have not been implemented. This could again increase the income level slightly. The other two curves for net pension income and public pension income are calculated on the same decile group, reflecting the importance of each income source within the decile. The distance between the y axis and the public pension curve reflects the importance of public pension, the distance between public pensions and total pensions signifies the importance of private pensions, and the distance between total pensions and disposable income clarifies the role of other income sources such as work and capital income. The shape of the curves demonstrates that allocation of the individuals

⁵ Household disposable income is derived by subtraction of payroll and income taxes from gross income (earnings + factor + market income); for further reference see also the LIS homepage: <http://www.lisproject.org>.

⁶ For the calculation of net pension income levels see Appendix

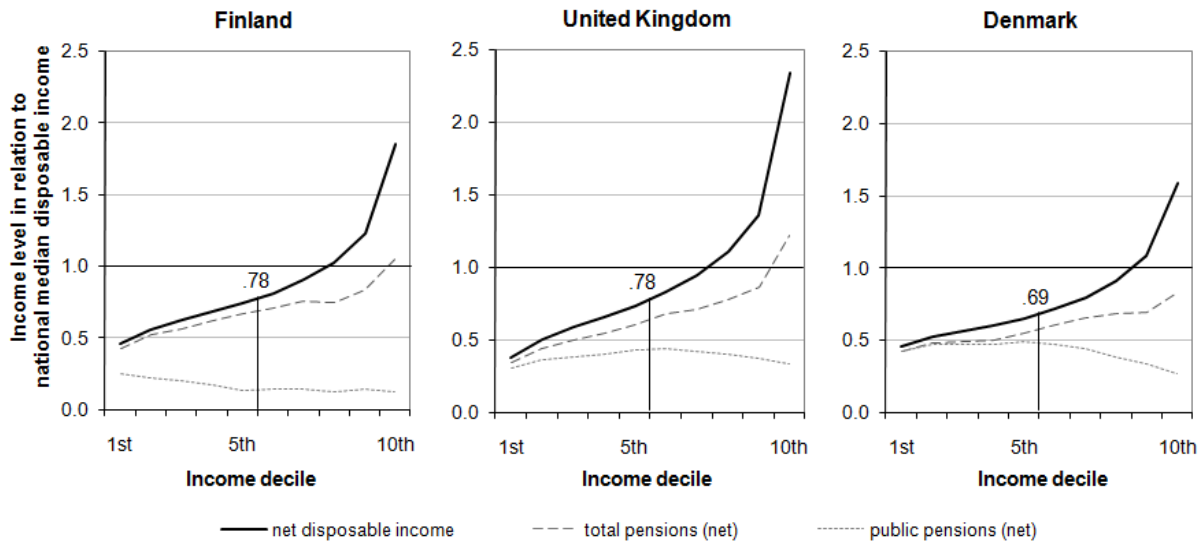


Fig. 2: Income distributions of net disposable income, total pensions, and public pensions (mid 00s)

Source: own calculations based on LIS data

occurred *via* two effects: a higher share of private pensions, but also a higher share of other income sources in the income mix.

Public pension payment is relatively equally distributed across the income deciles. This is in line with the assumed distributional consequences of a statutory Beveridge type minimum pension policy. In all countries, these schemes mainly provide the first tier, preventing poverty. According to generosity of minimum pension benefits, we find the following country order: Danish low income retirees⁷ are better off than in Finland, whereas British retirees are worst off. The diverging characteristics of the public pension curves document the contrasting redistribution logic in each country. The highest public pension amounts are paid on average in the 6th decile in the UK, in the 5th decile in Denmark, while in Finland highest benefits are paid to the 1st decile. This highlights that the Finnish system more strongly concentrates on vertical redistribution, whereas in the two other countries public pension systems replace also an essential part of income for the middle income group: in the United Kingdom primarily *via* SERPS benefits, in Denmark *via* income-tested supplements of minimum pensions and ATP-benefits.

In terms of income shares of private pensions across the income deciles, Finnish occupational systems are by far the most important income source, as reflected by the distance between the public and total pension income function. Even in the low income

⁷ As low income retirees I define in the following those pensioners households who according to their pension income end up in the lowest 25 percentiles, those earning between 25 and 75 percentiles are classified as medium income households, and those earning above 75 percentiles as high income households.

group basic pension income is complemented with occupational pensions by 40 percent. The long maturing process of the statutory occupational systems generated a high relevance for the entire generation of retirees. The evaluation over the three points in time (see Figure 2) signifies that particularly the importance of public pensions decreased among the lower income groups as an effect of shifting to entirely targeted pension benefits since 1996. Private pensions are particularly the most important income source for the middle income group – on average 70 per cent come from second and third pillar systems. The relative importance of private pensions decreases again among high income pensioners. In turn other income sources increase in importance. However in absolute terms still higher private pension amounts are paid, reflecting that the high income groups either have very high private pensions, very high other income, or both.

In the United Kingdom the share of private pensions is below 10 percent for the lowest income decile. Increasing with income more and more persons have substituted the SERPS benefits with favourable contracted out private pensions, this effect gets stronger the longer persons decide to contract out of the SERPS. Voluntary occupational pensions are widely spread across the society even across low income pensioners, however particularly in the upper half of the society they increase in importance. Previous studies showed that the SERPS lead to a segmented occupational provision along gender and occupational lines (Papadakis and Taylor-Gooby 1987: 119-130), particularly leaving part-time workers in the SERPS (Ginn and Arber 2000). As these risk groups have low SERPS benefits as well, they may barely escape poverty (less than 50 per cent of median disposable income). Higher income groups had higher incentives to contract out, as pension replacement by basic and SERPS are frequently too low to maintain living standards. Therefore we find a notable increase in the private share already in the low and medium income groups. From the distribution of public benefits we can conclude that from the 7th decile onwards the effect of contracting out of SERPS outmatches the increase in SERPS benefits. As more and more people in the high pension income group have contracted out permanently, SERPS benefits only replace a marginal part of their income. On the other hand the private share increases strongly. Due to the strong labour market inequality in the United Kingdom, high inequalities are partly transferred to the elderly through higher private pension promises (DB schemes) and higher capital accumulation (DC schemes). In terms of disposable income British high income groups are much better off than the medium income pensioner, but also than the Danish and Finnish high income pensioners. Again this is only partly an effect of higher pensions, but even more other income sources are adding up to the overall inequality

across the elderly. But also the private pension share in the pension income mix increases strongly from the 7th (40 per cent) to the highest income decile (73 per cent).

The Danish figure demonstrates that the lower half of the population is nearly uncovered with private pensions. Consequently, shapes of public and total pensions almost match each other. However, the lower half of the population profits from the generous basic plus income tested minimum pension regulation, lifting the low income groups up to 50 per cent of Danish median income earnings. Moreover, the lower half of the population receives similar levels of pensions. Also the slope of disposable income only slightly increases until the 7th decile, illustrating that there is a partial 'lack of provision' for the medium income group. Pension income levels of the middle and high income groups are by far the lowest in this three country comparison. As income levels are still primarily influenced by the past institutions that kept occupational pensions highly unregulated, we might conclude that voluntary systems failed to foster adequate provision. However, the story is more complicated. First low income pensioners could expect relatively high targeted pensions, which may have hindered the development of private second tier systems. Second, the higher private benefits are, the more cut are public benefits. This is reflected by the decreasing replacement level of public pensions for the high income pensioners. Consequently, the income-tested public pensions decrease inequality of pension benefits partly. Among the upper third of the elderly population, private pension importance in the public-private pension mix increases strongly. From the 7th (32 per cent) to the highest income decile (68 per cent) importance of private pensions more than doubles. Thus high income groups are very likely to be included historically in traditional voluntary occupational plans. In contrast to the high labour market inequality in the United Kingdom, Danish high income retirees may also not need such a high income levels to replace their previous income.

Lastly, I will now turn to income levels received by the median pensioner. The Median retiree of the elderly group aged 65+ (see Table 3) is still worst off in Denmark (69 per cent of median earnings) due to the historical lack of provision. He is better off in the United Kingdom (78 per cent) mainly through other income sources beside pensions. Similarly well off is the median pensioner in Finland (78 per cent), mostly due to the highly regulated occupational schemes. These statistics are rather stable in Denmark and the United Kingdom. The Finnish number drops quite strongly between the observations from 95 to 00 from 84 to 79 per cent. This can be linked again to the general abolishment of basic pensions.

c) **Inequalities in relation to labour market earnings**

The previous evaluation of income showed that particularly the British system generates high inequalities through the income level on the upper end. However, this finding is not a proof for a high replacement rate for this group. It can be also a by-product of high labour market inequalities. Thus it is likely that income inequalities are also high among the elderly. In contrast, income inequalities of the elderly tend to be lower in the Nordic countries due to their more equal labour market income distribution. I will put the earnings levels in relation to nation-wide income standards to get a better impression about the income levels of the income groups.

In the following, I will analyse inequalities among the total population and the 65+ subgroup simultaneously.⁸ For each population I receive a mean income level for each income decile. Division of each decile value of the 65+ distribution by the respective decile value of the total population curve leads to a synthetic replacement level of each income decile group. Figure 3 is calculated on these two inequality distributions. Under simplified assumptions we would expect a stable replacement level over all income groups, if income inequality is similarly reproduced for all income groups. However, we need to be cautious interpreting the findings. Sorting in income groups occurs very differently across the elderly population than it does in the pre-retirement group. Household structures are very different and other income sources besides earnings respectively pensions diverge also strongly. Still, this technique can clarify the differing developments of country specific pension regimes.

There are three notable circumstances that need further attention. First, status maintenance policies do only replace 60-70 per cent of earnings. Minimum pension regulations particularly detach low income earners from this scenario. Otherwise low income earners would fall below their already poor income level. Thus minimum pension recipients may receive augmented benefits, securing their living standard. These replacement levels could be higher than their former disposable income level, when minimum pensions are rather generous. This could be the case in Denmark.

Second, if second tier provision only selectively occurs among certain groups of providers, replacement levels drop down on average. This result could particularly evolve among voluntary systems, like the Danish system, and above the British obligatory contribution limit in the value of the SERPS conditions. Similarly, very selective fringe benefits could be found on the high income pensioner deciles again. These groups are in general financially

⁸ A similar technique has been applied by the OECD before (OECD 2001).

better situated. The coverage and income shares in Denmark make this scenario likely for Danish retirees.

Third, several persons aged 65+ receive a high share of earnings or other income, either personally or through intra-household redistribution. As shown in Figure 2, these persons end up mostly in the high income deciles. I will depict two curves in Figure 3 to disentangle the employment influence from the pensioner income. The first curve shows dpi (65+) income levels in relation to dpi (total population). The second curve illustrates the level of pension benefits. This curve depicts the total pension income level (65+) in relation to dpi (total population). Analogous to Figure 2, this curve employs the same decile sorting for total pension income that has been used for dpi (65+). Two additional refinements in addition two data coding in Figure 2 have been made. First a standard technique has been applied to recode the incomes of the highest one per cent percentile to the value of the 99th percentile to limit measurement bias of mean income in the highest income decile. Figure 3a is based on the population aged 65+. Figure 3b is calculated on a different population to reduce the misleading effect of personal and redistributed employment income in the households. Therefore this figure keeps only households whose pension income share is at least 60 per cent. This procedure allows a more precise measurement of inequality caused by the pension system. Thus this population shows new income deciles depicting each income decile in relation to respective income decile in total population for the elderly whose major source of income is pension income. So, I receive a better measure of pension income replacement levels.

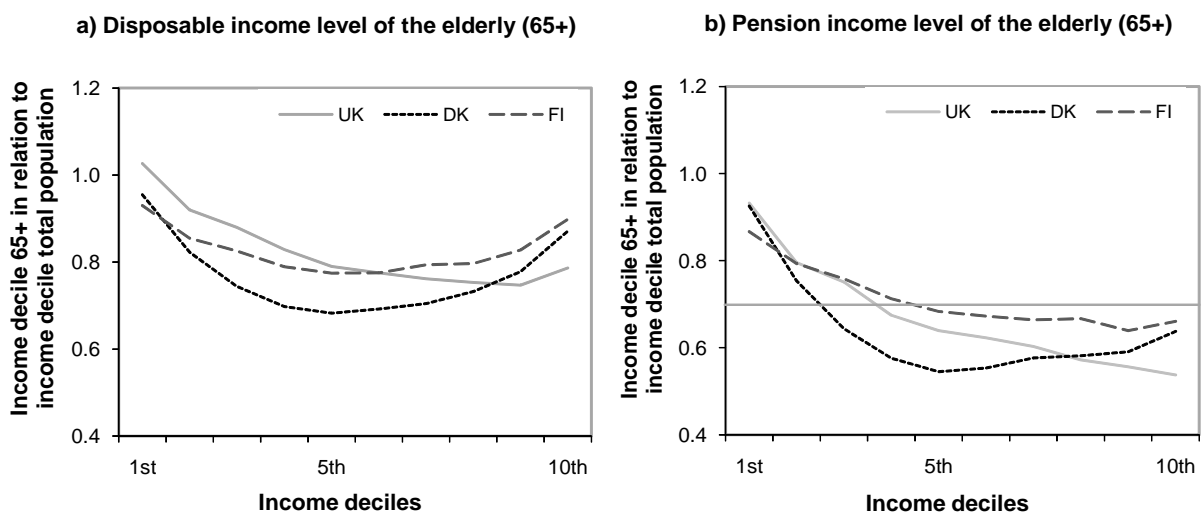


Fig. 3: Income level of the elderly in relation to total population (mid 00s)

Source: own calculations based on LIS data

The curves in Figure 3 show various results. First we can clearly identify the positive effect of minimum pension systems for the low income group. This outcome is evident in each of the three countries. The elderly in the 1st decile fare similar as those in the 1st decile of the total population. In the United Kingdom they are even slightly better off (Fig. 3a). This effect vanishes when analyzing the pensioner population (Fig. 3b). In general, we need to be cautious to interpret the rather high number for the UK. The income level is rather low for the working aged and the elderly in general. Although the elderly are not poorer than the society's average, they face still higher poverty risk than among both Nordic countries.

Replacement levels in Denmark decline fast from the low income group to the median. They decline more moderate in the United Kingdom and decrease rather slow in Finland. This fits quite well to the findings before. In Denmark, minimum pensions are by far the most important income source below the median. Minimum benefits are not essentially complemented by the ATP benefits or any forms of private pensions. As a result, income groups below the median receive similar pension amounts (Fig. 2). Fig. 3b proves that inequality among the total population is much higher than among pensioners. Pensioners below and at the median seem to have lacked to save within private schemes. Their replacement level drops down below 55 per cent. This situation is less pronounced in the United Kingdom, but similarly inadequate. Low to median income groups provided rather less for their retirement, as a result of the rather low minimum pensions, meagre SERPS contributions, and low obligations for complementary private pensions. The partial inclusion to earnings-related systems leads to a less steep decline. Institutions in Finland produce a different scenario. A small group of pensioners fare less well compared to both other countries. This may be linked to the abolished basic pension entitlement. In contrast to Denmark and the United Kingdom, almost all pension beneficiaries receive an important share of their income mix from mandatory statutory occupational systems. Benefits are in general strongly linked to the previous earnings history. Thus Finnish retirees receive more individualized pensions that bring benefit levels more closely to the structure of the labour market inequality.

In the upper half of the population various tendencies occur. The Finnish income levels remain rather stable over the income deciles due to the employment linkage. Social partner's systems are by far the dominant income source. They reproduce the income inequality of the labour market also for the high income groups, as these systems have no contribution ceilings. In the United Kingdom and Denmark coverage with occupational and private pensions is rather selective. In the British case the fixed criteria for contracting out of

SERPS are rather low. As basic pensions are paid to all types of households, their importance for replacing income vanishes with income. In the past British retirees did not increase their savings behaviour to receive similar high replacement levels. As a result the replacement level drops further among the high income groups. However, as could be seen in Figure 2, their income level is still rather high compared to median earnings of the society. In the Danish scenario we find that if a person receives private income, this pension is rather important for the household's income mix. This signifies the still high relevance of fringe benefits of occupational pensions. Historically occupational pensions have been only relevant for a small group of beneficiaries. Therefore the curve shows slightly higher values on the upper end.

5. Different paths to private pensions – different societal inequalities?

Occupational and personal pension plans have frequently been argued as instruments increasing inequality due to their strong selectivity to high qualified occupations. This three country case study brought further insights in the distribution of private pensions among retirees in three advanced European societies: Finland, Denmark, and the United Kingdom. The three countries implemented their private second tier pension systems very differently. Links between statutory and private income sources vary. Whereas Finnish social partners early on introduced statutory occupational systems in the 60s, similar solutions were made mandatory in Denmark only in the 90s. Thus the Danish retirees receive their current income mostly from historically voluntary pension. Income tested minimum pensions yield to a close connection between public and private benefits. The British second tier system is only partly mandatory on a low level. Its structure complements to the basic income for all income groups. The contracting out of the SERPS was particularly attractive for middle and high income groups.

Consequently, occupational pensions are an important income source even for low income pensioners in Finland. Whereas British and particularly the Danish low income retirees depend primarily on public pension claims. The breaking down in income deciles made it possible to observe the pension income level of each group in relation to the society's median disposable income. By application of this standard technique, income levels could be compared cross-nationally. In a further step the income distribution of the elderly could be compared to the total population's income inequality. The different paths that have developed concerning second tier provision and private pensions led to substantial

differences in the income inequalities among the elderly across the three countries under study. The following country-specific conclusions can be derived:

Finnish second tier systems reached by far the highest importance in this comparison. The maturing of mandatory employer-employee systems allowed the state to substitute public pension partially with occupational pensions. First high importance of occupational pension benefits was reached, and then as a consequence public basic pensions were abolished so that the remaining income-tested systems are now targeted to the poorest only. Finnish median pensioners are much better off due to their fixed statutory savings structure.

Danish middle income pensioners show rather low income levels. This outcome occurs as a by-product of the former voluntary second tier benefits and the rather generous minimum pension level. As Danish public provision guaranteed relatively high basic pension provision, private pensions were crowded out for the middle income group. As a consequence middle income groups receive rather inadequate pensions in comparison to the respective total population's income decile. Collective agreements will enhance a stronger importance of occupational pensions in the future.

British pensions yield to a different redistribution logic. Income inequality among the elderly is essentially reduced in comparison to the total population. However, this result is primarily caused by the insufficiencies of the system to attract voluntary savings behaviour. Low income groups have a high risk of poverty in general. Middle to high income pensioners receive rather low mixed pension income due to low public income and selectivity of private systems. Thus vertical and horizontal redistribution work insufficiently.

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