



EUROPEAN SOCIAL POLICY NETWORK (ESPN)

Financing social protection

Denmark

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Social Europe

EUROPEAN COMMISSION

Directorate-General for Employment, Social Affairs and Inclusion

Directorate C — Social Affairs

Unit C.2 — Modernisation of social protection systems

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European Social Policy Network (ESPN)

**ESPN Thematic Report on
Financing social protection**

Denmark

2019

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Quoting this report: Kvist, Jon (2019). ESPN Thematic Report on Financing social protection – Denmark, European Social Policy Network (ESPN), Brussels: European Commission.

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Summary

By comparison with the EU as a whole, the **level and structure of social protection spending** can be characterised as:

- Denmark spends a lot on social protection. In 2016, gross social expenditure was equal to 31.6% of GDP, only surpassed by Finland and France.
- Net social expenditure was 26.2% of GDP in 2015, i.e. taxation of social protection benefits considerably reduces the share of social spending.
- Tax expenditure on social protection amounts to approximately 1.5% of GDP (2017), i.e. the tax system is widely used for social protection purposes.
- Mandatory private social expenditure amounts to 2.5% of GDP in gross terms and to 2.1% of GDP in net terms – both figures are much higher than for any other EU-28 country; this is made up mainly of private supplementary occupational pensions.

In spending, the **development** from 2007¹ to 2016 entailed an increase in gross social expenditure from 29.1% to 31.6% of GDP, and of pension expenditure from 6.8% to 8.5% of GDP.

Compared to other EU countries, the **financing of social protection** in Denmark is characterised by:

- High revenues from government, in particular from central and local taxes on personal income, which financed 77% of social protection expenditure in 2016.
- Low revenues from social security contributions, which financed only 16.8% of total costs in 2016.
- Denmark thereby has the highest share of general government financing and the lowest share of social contributions.

In terms of financing, the **development** from 2005 to 2016 towards more reliance on taxes and less on social contributions has **led Denmark further away from the situation in most EU-28 countries**.

In the period from 2005 to 2016, various tax-benefit reforms reduced the marginal effective tax rates. This has benefited all income groups:

- Low-income groups have, in particular, benefited from the introduction and expansion of tax allowances for income from work (employment allowances, an extra employment allowance for single parents and a job allowance).
- Middle incomes have become less subject to top tax rates.
- High-income groups have benefited from the reduction in tax rates and the introduction of tax allowances (not described here).

One group has not benefited from tax-benefit reforms: namely those who are not in the labour market. They are mainly social protection claimants who cannot make use of employment allowances and who have seen their benefits *de facto* reduced, relative to wages, due to lower indexation than wage developments.

On the basis of this report, the recommendations are to:

- increase economic sanctions in case of tax evasion, to improve the effectiveness and legitimacy of the tax system and the financial basis of the social protection system,
- pay more attention to those who do not make use of increased employment allowances in the tax system, especially families with children,
- consider new tax bases to ensure the sustainability of social protection financing.

¹ The Danish European System of Integrated Social Protection Statistics (ESSPROS) data has a break in the time series, making it impossible to compare the situation before 2007.

1 Current levels and past changes in financing social protection

The Nordic welfare model is known internationally for being an encompassing system with universal coverage and generous benefits that is financed by high taxation, including high taxation of personal income in the form of taxes and social security contributions. In this section we examine the extent to which Denmark belongs to the Nordic model in this regard. In the first part, we focus on the level and structure of social protection spending, looking at both gross and net measures, before and after the inclusion of tax expenditure and mandatory private social protection benefits. In the second part, we turn to the financing of social protection, and examine the current mix and development in sources of social protection financing.

1.1 The level and structure of social protection spending

Denmark spends a lot on social protection when measured in gross terms, i.e. before taxation. In 2016, gross expenditure on social protection was 31.6% of gross domestic product (GDP), which is above the figure for the EU-28 (28.2%) and was the third largest in the EU-28, surpassed only by Finland (32.0%) and France (34.3%). Several countries have gross social expenditure that amounts to around 30% of GDP, such as Germany (29.4%), the Netherlands (29.5%), Sweden (29.6%), Italy (29.7%), Belgium (29.8%) and Austria (30.3%).

Most social security **benefits are taxed as other personal income**. In 2015, taxes amounted to 15.2% of gross social expenditure (Eurostat, 2019a). The income tax paid is used to finance general government expenditure, including social protection. At first glance, it may seem strange that money should flow back and forth: first, there is taxation to finance social security benefits, which are, in turn, taxed. However, the main rationale is to be able to directly compare income from work with income from social protection, irrespective of the benefit scheme. Thus, the size of unemployment benefits can be compared directly to, for example, wage levels; and the size of social assistance can be compared to, for example, pensions. A secondary aim of taxing social security benefits is to get everybody to finance social protection and other public policies. Because everybody is a taxpayer, there is no polarisation between people who pay and people who benefit from the system.

In 2015, **social expenditure amounted to 31.1% of GDP in gross terms, and 26.2% of GDP in net terms**, a difference of 4.9 percentage points (pp) (Eurostat, 2019b). By comparison, the figures for Germany were 27.9% and 25.4% (a difference of 2.5 pp); for the Netherlands – 28.4% and 22.7% (a difference of 5.7 pp); for Finland – 31.5% and 28.2% (a difference of 3.3 pp); and for Sweden – 28.6% and 25.3% (a difference of 3.3 pp).

Moreover, cross-national differences become less marked when we take into account tax expenditures and mandatory private social expenditures, and the taxation of benefits from public and mandatory private programmes. Tax expenditures are favourable deviations from the normal tax system that result in less tax being paid for certain types of activities or by certain groups of taxpayers. In this sense, tax expenditures are an indirect cash subsidy comparable to direct cash subsidies, like social protection benefits. For example, a favourable tax exemption for child allowances means that the family has more money at its disposal than if the allowances were taxed as other income (see also Kvist and Sinfield, 1996).

In the most recent OECD study, Denmark was found to have spent 0% of GDP on tax expenditures in 2013 (Spasova and Ward, 2019: Annex ESSPROS tables). However, this is an inaccurate depiction of Danish tax expenditures. In 2017, the total amount of tax expenditures was €4.2 billion – equal to 2.5% of GDP, according to a recent study by the Danish Ministry of Taxation (Skatteministeriet, 2018). Some 60% of these tax expenditures relate to social protection, as set out in Table 1. **Tax expenditures on social protection thus amount to approximately 1.5% of GDP.** Tax exemption of benefits

to child families and to old-age pensioners or persons about to retire make up the largest items (see Table 1).

Table 1. Tax expenditures on social protection, Denmark, 2017

	€, millions ¹⁾
Total tax expenditures	4,234.7
Tax expenditures on social protection	2,550.0
- Tax exemption for child and youth allowance	716.5
- Tax exemption for housing allowances, urban renewal grants, etc.	560.6
- Reduction of mortgage rate taxation for old-age pensioners	332.7
- Tax exemption for certain invalidity benefits	253.4
- Reduced taxation of income for 64-year-olds (senior deduction)	190.2
- Tax exemption for voluntary early retirement premium	121.0
- Tax exemption for child family allowances	119.6
- Tax exemption for various benefits in the social area	110.9
- Increased transport tax allowance for low-income groups	69.9
- Increased job allowance for single-person providers	58.5
- Favourable taxation on alimony	6.7
- Tax exemption for certain benefits to children and old-age pensioners	6.0
- Advantageous pension scheme for ex-self-employed above 55 years	4.0

Source: Skatteministeriet (2019).

Note: ¹⁾ In 2017, €100 was the equivalent of DKK 743.86 (Nationalbanken, 2019).

Denmark probably has a low level of tax expenditures by international standards. A Nordic study from 2009 found that tax expenditures were higher in Sweden (8% of GDP), Finland (7.0%) and Norway (5.4%), than in Denmark (2.2%) (Nordic Working Group, 2010).

Similarly, a 2010 study by the OECD found significantly higher levels of tax expenditures in Canada, Britain and the US than in the Netherlands and Germany (OECD 2010). Including tax expenditures thus leads to smaller cross-national differences in the level of social protection expenditure.

In 2015, the OECD found that gross mandatory private social expenditure amounted to 2.6% of GDP, and net mandatory private social expenditure to 1.7% of GDP (OECD, 2019). Denmark thus has **more mandatory private social expenditure than any other EU-28 country**. The major components of these are fully funded supplementary pensions, which are compulsory and where contribution rates are set through collective agreements.

1.2 The development of social protection spending

The share of gross expenditure on social protection rose from 29.1% of GDP in 2007 to 31.6% in 2016 (Eurostat, 2019a), a 1.5 pp increase.

Box 1. The 2012 ESSPROS revision of Danish data

Statistics Denmark is responsible for reporting social protection statistics to Eurostat that conform to the European System of Integrated Social Protection Statistics (ESSPROS). ESSPROS categorises social expenditure according to function (Sickness/healthcare, Disability/rehabilitation, Old age, Survivors', Family, Unemployment and employment, Housing, Other benefits), in kind versus in cash, and means tested versus non-means tested.

In 2012, Statistics Denmark 'radically reorganised' the Danish social expenditure data (Danmarks Statistik, 2012: 16).

The revision entailed major reclassifications of social expenditures, the inclusion of new schemes and the exclusion of other schemes. Among the most important changes were the following:

exclusion of various employment-related wage subsidies from the function 'Unemployment and employment',

inclusion of privately organised pension and insurance companies which manage compulsory pension and life insurance schemes in the function 'Old age',

many benefits categorised as benefits in cash were reclassified as benefits in kind,

reclassification of some 'Disability/rehabilitation' schemes as 'Old age' and 'Family'.

This revision means that the data from 2007 onwards cannot be compared with data from earlier periods.

Comparing the old and the new statistics, Statistics Denmark finds a reduction of 23.8% in social expenditure on 'Unemployment and employment' and an increase in the expenditure on 'Old age' of 13.7%.

The revision also resulted in a spectacular jump in the share of means-tested benefits in total expenditure from 3.0% in 2006 to 33.6% in 2007 – 'spectacular', as there had been neither policy nor economic changes that could explain this rise. In 2016, means-tested benefits made up 39.2%, making Denmark an inexplicable outlier on this dimension.

For more information on the 2012 revision, see Danmarks Statistik (2012).

In **real terms, gross expenditure rose by 14.9%** from 2007 to 2016 (Eurostat, 2019a) – equivalent to an average annual change of 1.6%. This is **slightly less than for the EU-28**, whose gross social expenditure in real terms rose by 22.6%, at an average annual rate of 1.9%. By comparison, the annual average changes were 1.8% for Germany, 2.0% for Sweden and 2.5% for Finland.

With an ageing population and the maturation of private pension schemes, Denmark has seen a **growth in old-age pension expenditure**. Pension expenditure made up 6.8% of GDP in 2007 and 8.5% in 2016, an increase of 1.7 pp or 25% (Eurostat, 2019b). Measured in purchasing power standard (PPS) per inhabitant, the increase was from 2,153 in 2007 to 2,983 in 2016, i.e. 39%. According to Eurostat, the number of old-age pension claimants increased from 867,243 in 2007 to 1,119,203 in 2016 – an increase of 251,960 persons or 29% (Eurostat, 2019c). The major part of the increase in expenditure is thus attributable to a rise in the number of old-age pensioners. Another contributing factor is the maturation of private supplementary pension schemes: many schemes were introduced around 1990, with increasing contribution rates over the 1990s.

Expenditure has **increased less in the area of sickness and healthcare**, which is financed by general taxation. In 2007, Danish social protection benefits in sickness and healthcare amounted to 6% of GDP, rising to 6.3% of GDP in 2016 (Eurostat, 2019d). Measured in PPS per head, expenditure increased from €1,910 in 2007 to €2,157 in 2016 – a rise of 13%.

2 Current mix and past changes in the sources of financing social protection

Most parts of the Danish social protection system are financed through general taxation. This goes for all benefits in kind, and the vast majority of cash benefits. Both the state and the local authorities (municipalities) have the right to levy taxes. And both the state and the municipalities are involved in the financing of social protection. For social protection benefits in cash, the state often reimburses municipalities for part of the costs. Little use is made of social contributions to finance social protection.

The biggest issues in Denmark on social protection and financing concern the balance between adequate social protection benefits and incentives to work. How should income from work and income from social protection benefits be taxed, and what are the effects on labour supply? This has been the main question in Danish tax-benefit reforms over the last 10-15 years.

The first parts of this section describe the development of tax revenue. Then comes a description of the Danish system of personal income taxation and, subsequently, its recent developments. The next part examines in more detail the financing of social protection schemes according to function. The final part of the section sets out changes in local/central financing and the public/private mix in social protection.

2.1 The development of tax revenue

As mentioned, the Danish social protection system is **largely financed through general taxation**. Social contributions and other revenue made up, respectively, 16.8% and 6.2% of total financing of social protection in 2016 (Eurostat, 2019a). Hence, 77.0% of social protection expenditure was financed by general government, i.e. taxes. This makes the Danish social protection system stand apart from those systems in other countries: it has the **lowest share of social contributions and the highest share of general government contributions**. In comparison, the share of social contributions in the EU-28 in 2016 was 54.5% and general government contributions were 40.4% (with 5.1% other funding). See section 2.4 for the financing of individual social protection schemes.

From 2007 to 2016, the reliance on general government rose by 13.8 pp (from 63.2%) and social contributions fell by 12.0 pp (from 28.8%) (Eurostat, 2019a). In other words, the Danish social protection financing system **reinforced its reliance on taxation over the period**.

The major part of social contributions is paid by employers. In 2016, the share of total financing of social protection paid by employers was 9.6%; by employees – 6.6%; and by the self-employed – 0.6%. Meanwhile benefit recipients paid 0% (Eurostat, 2019a). In 2005, employers paid 10.3%, employees – 18.5%, and the self-employed – 0.0%.

2.2 The system of personal income taxation

Taxes on income from work provide a significant amount of tax revenue and contribute to income redistribution. At the same time, income taxes reduce the benefits of participating in the labour market and distort people's economic choices. High marginal tax rates on income from work limit the propensity to work an extra hour, to search for a better-paid job or to take a long education. Income taxation may thus reduce effectiveness and the creation of wealth in society. In this sense, the system of personal income taxation needs to balance a concern for generating revenue with a concern not to reduce wealth creation in society.

The Danish personal income taxation system consists of six types of taxes (2018 figures):

- The labour market contribution (*Arbejdsmarkedetsbidrag*) of 8.0% of gross wages, i.e. income from wages before tax allowances. There is no labour market contribution on social protection benefits.

- The bottom rate of tax (*Bundskat*) of 11.1% is paid on income above the personal tax allowance of €6,170 annually.
- The local tax (*Kommuneskat*) varies across municipalities and is paid on taxable income defined as personal income, after the deduction of the personal tax allowance and other allowances, including the employment allowance of 9.5% (up to a maximum of €4,600), the job allowance of 2.5% of taxable income above €25,160 (with a maximum of €190), and allowances for contributions to unemployment insurance and trade unions. The average local tax across the 98 municipalities was 24.9% in 2018.
- The health contribution (*Sundhedsbidrag*) of 1.0% was paid on taxable income (see definition above). This contribution was abolished in January 2019.
- The church tax (*Kirkeskat*) of 0.7% is paid by members of the national church (*Folkekirken*) on taxable income.
- The top rate of tax (*Topskatten*) of 15.0% is paid on income above €66,940 annually.

The tax wedge is a measure of the tax on labour income which includes the tax paid by both the employee and the employer. Formally, the tax wedge on labour income is defined as:

$$\frac{\text{Personal income tax plus employee and employer social contributions minus family benefits}}{\text{Total labour costs (gross wages and employer social contributions)}}$$

In 2017, Denmark had the nineteenth-highest tax wedge for a single worker of the 22 EU Member States covered by the OECD *Taxing Wages 2018* study (OECD, 2018). The average single worker faced a tax wedge of 36.3%, compared with an OECD average of 35.9%. For a one-earner married couple with two children, Denmark had the eighteenth-highest tax wedge of the 22 EU Member States covered: 25.8% in 2017, compared to the OECD average of 26.1%. In an international perspective, the tax wedge in Denmark is not that high.

The tax wedge for a single worker decreased by 2.5 pp – from 38.8% in 2005 to 36.3% in 2017 (OECD, 2018). In the same period, the OECD average tax wedge for a single worker increased by 0.1 pp – from 35.8% to 35.9%. Hence, the Danish level of tax wedges has converged with that of the OECD in recent years.

However, if we look at the employee net average tax rate, which measures the net tax on labour income paid directly by the employee, we get a slightly different picture. In 2017, the average single worker faced a net average tax rate of 35.8%, compared to the OECD average of 25.5% (OECD, 2018). For an average married worker with two children, the net average tax rate was 25.3%, compared to 14% for the OECD average.

2.3 Developments in the personal income taxation system

This section sets out the major changes in the financing mix since 2005. Particular attention is paid to tax reforms that affect the disposable income of workers and benefit claimants. There have been three major reforms in the period: the tax reforms of 2007 and 2009, the tax reform of 2012, the deal on more years in the labour market (*Aftale om flere år på arbejdsmarkedet*) from 2017, and the tax reform of 2018. As with earlier reforms, the main aims were to increase labour supply by reducing work disincentives, in particular for low-income groups (Det Økonomiske Råd, 2008, 2011, 2018; Danmarks Statistik, 2016).

The tax reform of 2007 eased the taxation of income from work by increasing the employment allowance and the personal tax allowance. The tax reform of 2009 phased out the middle tax rate, reduced the bottom tax rate and increased the employment allowance and the personal tax allowance.

The tax reform of 2012 reduced work disincentives by increasing the employment allowance and the income ceiling at which the top tax rate applies (see Box 2). Because

many single parents have above-average marginal effective tax rates (i.e. reductions in childcare subsidies and housing allowances, in addition to tax rates), the reform introduced a new employment allowance for single parents.

Box 2. The Danish tax reform 2012: Main elements relating to social protection

Element	Scheme	Content
Lower tax on income from work	Employment allowance increases	To increase from 5.6% in 2012 to 10.65% in 2022 and an increase in the maximum from €2,400 to €4,570 ¹⁾
	Introduction of employment allowance for single parents	6.25%, max. €2,680
	Top tax limit	Increased by €7,760 to €62,620 in 2022
Raising money to finance the reform	Income testing for child family allowance	Reduction in child family allowance by 2% if income exceeds €93,860 annually
	Lower regulation of social protection benefit levels	Reduce indexation of social protection benefits by 5.1 percentage points from 2016-2023
Keeping the elderly from being affected adversely by the tax reform	Increase in pension supplement (aka the elderly cheque)	€600 extra per year
	Increase in pension supplement	€100 per year to compensate for the lower indexation of social protection benefit

Note: ¹⁾ in 2013, €100 was the equivalent of DKK 745.80 on average (Nationalbanken, 2019).

Raising the income ceiling under the tax reform of 2012 was designed to move about 250,000 persons out of the top tax bracket. Many teachers, electricians, nurses and blue-collar workers thus had their tax on the last kronor earned reduced by 14 pp.

The government and the Danish People's Party agreed on tax-benefit reforms in both 2017 and 2019 (Regeringen & Dansk Folkeparti, 2017, 2018a). To reduce savings disincentives for workers in later life, and to postpone retirement and prolong working lives, their agreement '**More years in the labour market**' (*Flere år på arbejdsmarkedet*) from June 2017 sets the annual maximum contribution that can be paid into old-age savings (*Aldersopsparing*) without a reduction in the pension income-tested part of the national pension at €670 for individuals with more than 5 years until pensionable age (of particular relevance for people on a low income) and at €6,700 for individuals with less than 5 years to retirement and for individuals already claiming a national old-age pension, so long as they have not already begun to draw down their pension savings. Previously, the annual maximum contribution was €4,000, irrespective of time to retirement.

The parties have, furthermore, agreed to set aside a sum of €33,600,000 to reduce the taxation of contributions to retirement saving schemes.

To increase incentives to continue working, the earliest date at which one can begin to draw on tax-subsidised retirement savings was reduced from 5 to 3 years prior to the pensionable age for the national old-age pension.

In line with the growth in life expectancy, the maximum duration of annuity pensions will be increased from 25 years to 30 years.

The agreement introduces greater flexibility of financial incentives to postpone the claiming of a pension until after the pensionable age. Persons who retire later than the pensionable age receive a permanent supplement to the pension when in retirement. In addition, the

agreement introduces the possibility of getting this supplement paid as a 10-year annuity or a lump sum. The agreement allows persons to choose between having the supplement paid as a permanent benefit, a 10-year annuity, a lump sum, or a mix of an annuity and a lump sum.

The use of residence as a principle for calculating pension entitlement is extended from the national old-age pension to include the cheque for the elderly (an annual lump sum) and the disability pension.

Moreover, the benefit formula has been changed. Since 1973, each year of residence in Denmark between the age of 15 and the pensionable age has entitled a person to 1/40 of the national basic pension. The new formula will require people to have resided in Denmark for a minimum of 9/10 of the years between the age of 15 and the pensionable age to become entitled to a full national old-age pension, full cheque for the elderly or full disability pension.

The agreement also brings rules for refugees' disability pension entitlement into line with the new benefit formula.

In 2018, the government and the Danish People's Party agreed on a tax reform where the main purposes were to increase incentives to work and save (Regeringen & Dansk Folkeparti, 2018a). To improve work incentives for low-income groups, a new job (tax) allowance was introduced and the bottom tax rate was reduced marginally (see Box 3).

To reduce disincentives to save, the employment allowance was extended to cover pension contributions and introduced an extra tax allowance for contributions to pension savings (see Box 3).

Box 3. The Danish tax reform 2018: Main elements relating to social protection

Element	Scheme	Content
Increase work incentives for low-income groups	Reduction of the bottom tax rate	The bottom tax rate reduced by 0.02 pp, so the rate becomes 11.13% in 2018, 12.16% in 2019 and 12.17% in 2020
	Introduction of job allowance	Job allowance: 2.5% with max. €190 in 2018 3.75% with max. €270 in 2019 4.5% with max. €340 in 2020 onwards
Increase incentives for private pension savings	Extension of the employment allowance base and raising of its ceiling	The employment allowance income base to include pension contributions and the ceiling raised by €130
	Extra tax allowance for contributions to pension savings	Persons with fewer than 15 years until national old-age pension: 8% (2018 and 2019), 12% in 2020 Persons with more than 15 years until national old-age pension: 20% (2018), 22% (2019) and 32% (2020) For both groups a max. of €9,390 applies

Overall, the tax reforms over the past 10-15 years have seen a reduction in marginal tax rates on income from work.

The changes in social security contributions have been less frequent. However, as part of the 2019 Budget, the government and the Danish People's Party agreed, on 11 November 2018, on a new old-age savings scheme for social protection claimants that, for the first time, introduces social contributions paid by recipients of social protection (Regeringen & Dansk Folkeparti, 2018b). On 22 December 2018, the Social Democrats, the Social Liberals, the Socialist People's Party and the Alternative joined that part of the deal that includes this new scheme. The scheme is financed by a proportion of the indexation of social protection benefits. Prior to the reform, social protection was indexed with wages minus 0.3 pp of increases above 2.0%. The 0.3 pp was put into a fund that financed projects for social protection claimants (*Satspuljen*). The reform closed down this fund, and instead uses the 0.3 pp for the new savings scheme for social protection claimants. ATP (which is also the name of the governing body) is to administer the new scheme.

2.4 Financing of social protection schemes

Although social protection is largely financed by general taxation, a number of schemes have requirements that govern the contributions or premiums necessary to ensure eligibility to social protection, or that impose either a delay before a claim can be made (thus pushing the financing onto the insured) or an employer-financed period in the benefit formula. There is also variance among schemes as to whether they are funded or pay-as-you-go schemes.

Denmark has a Ghent-type unemployment insurance scheme, which means that membership is voluntary and the state helps finance expenditure. Hence, **unemployment insurance is financed by a mix of taxes and contributions**. Unemployment insurance benefits are financed by the state and the municipalities, which both raise funding through general taxation. Contributions are not paid by employers, but only by employees and the self-employed. As membership is voluntary, the share of the insured in the labour force varied between 81.3% and 83.8% from 2008 to 2015, and was 82.3% in 2016 (Danske A-Kasser, 2018). Insured members pay mandatory contributions that depend on the type of coverage (i.e. part-time or full-time insured, early retired person, and voluntarily early retired person) and on the costs of administration of the unemployment insurance funds. Each of the 24 unemployment insurance funds sets its own level of contributions to cover administrative costs. In 2018, the monthly contribution to the unemployment insurance funds for a full-time insured person varied from €58 to €79, with an average of €64 (Danske A-Kasser, 2019). Special rules apply to the self-employed. The share of public funding depends on the number of unemployed and thus the economic cycle. **In periods of high unemployment, the public share of financing increases**, while it decreases in periods of low unemployment.

Sickness benefits are financed by taxes. However, the employee's sickness benefits during the first 30 days are financed by the employer. The local authorities and the state share the costs of sickness benefits beyond the 30-day limit. Local authorities are reimbursed by the state, although the amount declines over time:

- 80% for the first 4 weeks of sickness,
- 40% from the 5th to the 26th week,
- 30% from the 27th to the 52nd week,
- 20% from the 53rd week onwards.

Voluntary early retirement pay (*efterløn*) allows members who are members of a trade union and have paid contributions for at least 30 years to claim money for early retirement. As well as having to belong to a trade union, **members covered by the voluntary early retirement scheme each month pay €67 for full-time coverage** and €45 for part-time coverage.

Several reforms have aimed at reducing the importance of voluntary early retirement pay. The Welfare Reform of 2006 introduced lifetime indexation of the pension age on the

voluntary early retirement pay and on the national old age pension: the longer expected longevity, the higher official retirement ages (see later). The Retirement Reform of 2011 brought forward implementation of the lifetime indexation and gradually reduced the maximum benefit period for voluntary early retirement pay from 5 to 3 years.

Moreover, members of the voluntary early retirement pay scheme have twice been given the chance to get their payments into the scheme paid out tax free – if they renounce their right to retire with this benefit. In 2012, 500,000 members opted to take this opportunity. In the first half of 2018, many more people seized the opportunity. As a consequence, there were about 500,000 members of the voluntary early retirement scheme – some 27% of trade union members, down from 80% before the reforms (Økonomi- og Indenrigsministeriet, 2019).

Maternity benefit is financed exclusively by taxation, and the state reimburses local authorities for 100% of expenditure.

Notionally there was a health contribution (*Sundhedsbidrag*) of 1% of gross earnings paid by all employees in 2018, but it was abolished in 2019. However, this contribution did not establish any rights to health insurance, like sickness benefits or healthcare. Therefore, the health contribution was *de facto* a gross tax, defined as a compulsory contribution to state revenue that did not result in any corresponding rights.

The **disability pension** (*Førtidspension*) is **pay-as-you-go tax financed**, and expenditure is split between the state and municipalities. As with most social protection benefits, municipalities are reimbursed by the state on a declining scale over time (see sickness benefits above).

The supplementary pension (*Arbejdsmarkedets Tillægspension*, ATP) pays out benefits in case of disability, old age, and as lump-sum benefits to survivors. The **ATP scheme is funded by contributions**. Two thirds of the contributions are paid by employers, and one third by employees. Their total monthly contribution is €38.

The **national old-age pension** (*Folkepension*) is **pay-as-you-go tax financed** and the state covers 100% of the expenditure.

The **ATP pays out a modest supplementary pension and is financed by contributions**, as described above.

There is **no survivors' pension scheme in the Danish social protection system**. That said, there is a range of benefits for survivors, primarily from private and quasi-private social protection schemes. Survivors on low income can apply for a tax-financed lump sum benefit of a maximum €1,970 for annual income below €32,830 (in 2018). Survivors may also apply for a tax-free lump sum (max. €1,475) from the ATP for help with funeral costs, if the deceased leaves no means.

There is no single public scheme covering accidents at work and occupational diseases in the Danish social protection system. Instead, there are **two mandatory private schemes for, respectively, accidents at work and occupational diseases**. The private work accident insurance scheme is organised by insurance companies and is pay-as-you-go financed by premiums. The Labour Market Insurance is a private insurance scheme funded by employers' contributions to cover the risk of occupational diseases. The insurance premiums (accidents) and contributions (occupational diseases) vary according to risk, and are paid by the employer. The state and municipalities do not participate in the financing of schemes covering accidents at work and occupational diseases.

Family allowances are financed by taxes.

Long-term care is organised locally by the 98 municipalities and is **financed by these local authorities through local taxation**. The state pays a subsidy to municipalities for their social and health services.

The general non-contributory minimum benefits, like **social assistance, are financed by taxation** and the costs are split equally between the state and the municipalities.

2.5 Changes in the local/central financing of social protection

There have also been changes in financing structures outside of taxation that have an influence on social protection. In 2016, there was an important reform of the reimbursement system, whereby the state reimburses municipalities for part of the costs of paying out social protection to their residents. Until 2016, reimbursement varied across social protection schemes, with the aim of getting municipalities to place citizens on the least permanent schemes whenever possible. Since 2016, the reimbursement rules have been the same across schemes, with a declining level of reimbursement over the benefit period. Local authorities are now reimbursed by the state:

- 80% for the first 4 weeks of the benefit period,
- 40% from the 5th to the 26th week,
- 30% from the 27th to the 52nd week,
- 20% from the 53rd week onwards.

The falling share of reimbursement over the time of the benefit period **gives municipalities economic incentives to reduce long-term receipt of social protection** benefits.

2.6 The public/private mix in social protection

The Danish social protection system is, by and large, a public system. However, there are **elements of private schemes** in social protection; elements that vary in size and nature across different functions of social protection.

Probably the biggest element of private schemes is in old age, where the **Danish multi-pillar pension system** has both second-pillar mandatory, collective, funded, contribution-based occupational schemes and third-pillar voluntary, individual, funded, premium-based old-age savings schemes. The mandatory collective pension schemes are included in ESSPROS, but not the third-pillar old-age savings schemes. According to new figures from the trade association of Danish insurance companies and industry-wide pension funds, Forsikring & Pension, which covers both second- and third-pillar schemes, the **share of the youngest cohort of old-age pensioners in receipt of private pensions had increased from 45% in 2005 to 65% in 2017** (Forsikring & Pension, 2019). It is primarily the expansion and maturation of second-pillar occupational pensions that can explain the marked increase.

In health, the number of persons covered by **private health insurance continues to grow**. In 2017, 1,685,743 persons were covered by private health insurance, compared to 427,721 in 2005 – an increase of more than 1.25 million, or nearly a tripling (Forsikring & Pension, 2018a). By comparison, 2,848,333 persons were employed in 2017. If all those insured were employed, the coverage rate would be 59.2%. However, not all insured are employed: about 83.3% are employees covered by a company-financed scheme (*arbejdsgiverbetalt ordning*), 14.1% are spouses/partners and children covered by the same schemes, and only 2.7% are policies taken out by individuals. The premiums for, and the compensation from, private health insurance have also increased markedly in the period. The premiums increased from €75 million in 2005 to €263 millions in 2017, or 0.1% of GDP, an increase of €187 million or 250%. The ratio of compensation to premium, the so-called gross compensation rate, varies from year to year. In 2005, gross compensation was at its lowest (64%); at 102%, it was at its highest in 2008.

In 2017, the **accidents at work** scheme (*Arbejdsskadeforsikring*) received €391 million in premiums and paid out €157 million in benefits – equivalent to, respectively, 0.13% and 0.05% of GDP (Forsikring & Pension, 2018b).² The gross compensation rate was thus 40.2% in 2017. Historically, the gross compensation rate varies a lot. In the period from

² In 2005, €100 was the equivalent of DKK 745.19, and in 2017 €100 was the equivalent of DKK 743.86 (Nationalbanken, 2019).

2005 to 2017 it was highest in 2005 (101.3%) and lowest in 2016 (28.1%). In 2005, premiums amounted to €492 million and compensation to €495 million. Thus, the accidents at work scheme declined in terms of both premiums and compensation from 2005 to 2017. There is no sign of the occupational injury scheme going bust or being defunded.

In unemployment, the national unemployment insurance scheme is supplemented by **private wage/unemployment insurance schemes for a growing number of persons**. The number of insured grew from 82,220 in 2006 to 273,150 persons in 2017 – an increase of 190,930 or 232% (Forsikring & Pension, 2018c). In 2017, 9.6% of the employed were thus covered by private wage/unemployment insurance. The premiums rose from €25.7 million in 2006 to €64.8 million in 2017, or 0.02% of GDP, equivalent to an increase of 60%. The reason that premiums have increased less than the number of insured is the shift toward group-based private unemployment insurance, which makes the price of each insurance lower.

Overall, the past 10-15 years have seen a stable situation for accidents at work insurance, the maturing of occupational pension schemes and an expansion of private social protection into the functions of health and (less so) unemployment.

3 Strengths and weaknesses of the existing mix of financing options and potential future sources of financing - national debate on the topic (if any)

The high reliance on taxes in the Danish financing of social protection makes it relatively easy to change allocations across schemes and policy areas. Because taxes are not tied to particular rights, reallocation can be made relatively swiftly, compared to the situation in a contribution-based system, where contributions and benefits are linked, giving the insured firm expectations of what they can expect from a particular scheme. By contrast, money in a tax-based system can, in principle, be taken from one function (such as old age) and given to another (such as family).

The weakness of the Danish system of financing social protection largely through taxation has historically been regarded as the high marginal tax rates, in particular for high-income groups. In 2008, for example, the Danish Economic Councils emphasised that increased internationalisation would make it harder to attract and retain persons with high incomes to Denmark, because of the relatively high taxes in the country (Det Økonomiske Råd, 2008). Also the Tax Commission of 2008-2009 (*Skattekommissionen*) was asked by the government to look into high tax rates for high-income groups.

However, the Danish tax reforms over the past 25 years have reduced marginal tax rates on income from work and broadened the tax base, by reducing the scope of tax allowances. A recent study by the Danish Economic Councils found significant reductions in marginal tax rates for low-income, average-income and high-income groups from 1994 to 2018 (Det Økonomiske Råd, 2018). Hence, high marginal tax rates for high-income groups may no longer be the main weakness of the Danish financing of social protection. And indeed, a number of recent reforms – especially, the social assistance benefit ceiling and various employment allowances – have sought to tackle the high marginal effective tax rates for lower-income groups, with varying degrees of success.

Instead the focus may be on how a well-functioning and efficient collection of taxes and social contributions is a precondition for financing social protection with a high level of services and a given distribution through taxes and benefits (Det Økonomiske Råd, 2011). Tax evasion and work in the informal economy erode the tax base, create unfair competition and distort the organised labour market. Such practices also break down the welfare state and lead to an arbitrary distribution from those who do not cheat to those who do. Therefore, it is no surprise that all political parties in the Danish parliament were behind a package in 2017 on combating work in the informal economy that included possibilities for the authorities to impose digital sales register systems and electronic logs, and to hire third-party wage administration companies, evaluations of measures to combat informal work, and an information campaign (Regeringen et al., 2017). Similarly, it must also be applauded that money is going into reorganisation of the tax authorities, which have for years suffered depletion in staff and money and been plagued by scandals involving failing tax collection systems and tax fraud.

Indeed, the recent big scandals in the Danish tax system and financial sector – the CumEx and the largest money-laundering scandal in history, involving Danske Bank – will most likely result in legislative changes both nationally, in Denmark, and in the EU (CumEx, 2019; Reuters, 2018). However, it is still too early to assess what these changes may be. In particular, it is difficult to evaluate the possible impact of the coming reforms on social protection financing. However, it is likely that the changes will involve broadening the tax base further, and thereby improving the theoretical possibility of greater tax revenue.

To further increase the efficiency and legitimacy of the tax system, we **recommend considering the introduction of tougher sanctions against tax evasion**, as suggested by the Danish Economic Councils in their 2011 study on tax evasion (Det Økonomiske Råd, 2011). Harder sanctions reduce the value of tax evasion by increasing the cost of being caught.

To be eligible for full social protection benefits, it is becoming increasingly important for someone to be in work and able to document an attachment to the country. In fact, the principle of using residence in the benefit formulae dates back to 1973, when Denmark joined the European Community. At that time, residence was introduced into the calculation of the national old-age pension, with each year of residence in Denmark between the ages of 15 and 65 giving entitlement to 1/40 of the full national old-age pension. As described above, the disability pension became subject to the same rule, as part of the 2017 tax-benefit reform 'More years in in the labour market'. In February 2018, as part of the tax-benefit reform, the requirement for someone to have been resident in Denmark (or another EU country) for 7 of the last 8 years, in order to be eligible for social assistance and educational help (*uddannelseshjælp*) was extended to 9 out of the last 10 years, while a supplementary work requirement (1.5 years of employment in the past 10 years) was introduced. Also, the reform introduced a residence requirement for eligibility to unemployment insurance, resource process benefits (*ressourceforløbsydelse*) and the benefits to people in flex jobs.

The economic incentives to work will continue to grow in the coming years, as a result of various reforms being phased in. The Danish Ministry of Taxation estimates that the number of persons with a net benefit compensation rate above 80% fell from 362,000 in 2013 to 265,000 in 2017 (Skatteministeriet, 2018). In 2023, when the 2012 tax reform is fully phased in, it is expected that the figure will fall by an additional 75,000 persons, to 193,000 persons.

Equally, work pays for a growing number of people. Hence, the number of persons gaining less than €266 extra per month by going to work, rather than receiving social protection, fell from 132,000 in 2013 to 81,000 in 2017 (Skatteministeriet, 2018). The phasing-in of the 2012 tax reform is expected to lead to a further fall of 48,000 persons.³

We recommend **paying more attention to those who cannot, for various reasons, respond to the improved economic incentives to take up work**. In particular, more focus could be placed on those **families with children** that do not get into work, but are left with lower social protection benefits.

Finally, technological advances and globalisation threaten to disrupt the financing of social protection. Automation is one of the major challenges facing Denmark and other countries with extensive social protection systems. Because personal income taxation provides such an important source of financing, automation may significantly reduce the tax base and thus the welfare state. It will be difficult to address such challenges, **and it may require completely new tax bases**, like taxes on robots, environmental impact and financial transactions.

³ In 2018 €100 was the equivalent on average of DKK 745.32 (Nationalbanken, 2019).

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