Fiscal welfare – change and size in the universal welfare state of Denmark

Draft – not for quotation
May 6, 2016

Jørgen Goul Andersen (Aalborg University)
Bent Greve (University of Roskilde)

Content
Abstract ................................................................................................................................. 2
1. Introduction ................................................................................................................... 3
2. Changes in the Danish tax system – and its implications for fiscal welfare ................. 5
   The institutional context .............................................................................................. 5
   Implications for fiscal welfare .................................................................................... 9
      1. Child benefits ......................................................................................................... 9
      2. Family care ............................................................................................................ 10
      3. Pensions ................................................................................................................. 10
      4. Homeowners ......................................................................................................... 13
      5. Tax credits ............................................................................................................. 14
      6. Unemployment insurance .................................................................................... 14
   Conclusion .................................................................................................................... 15
3. Estimating the Size of the hidden welfare state ............................................................ 16
4. Impact of the hidden welfare state .............................................................................. 19
5. Some conclusions ....................................................................................................... 20
References ....................................................................................................................... 21
Abstract

This article discusses the change, content and official knowledge on fiscal welfare in Denmark – including a historical overview of the development. On the one hand the international trend towards broadening the tax-base has reduced the influence of fiscal welfare also in the universal Danish welfare state. However, at the same time the boundaries between what is and what is not fiscal welfare continue to influence the understanding of the size and impact of fiscal welfare. The earned income tax-credit is a case.

It seems that fiscal welfare continues, as historically, to have a negative distributional impact, while at the same continues to be hidden in the welfare states. Especially the distinction between insiders and outsiders on the labour market are an important predictor of the differences in access to fiscal welfare.
1. Introduction

This article seeks to estimate the size of fiscal welfare in Denmark and analyse how it has developed as a consequence of tax reforms over the last three decades. On the one hand the international trend towards broadening the tax-base has reduced the influence of fiscal welfare also in the universal Danish welfare state. On the other hand, new elements have appeared which has blurred the boundaries of fiscal welfare, in particular the earned income tax credit. Besides, there are some “atypical” forms of fiscal welfare in the Danish welfare model which follows the Ghent model of voluntary state subsidized unemployment insurance. In this case larger tax subsidies to unemployment insurance brings the system closer to universalism and decommodification (Goul Andersen, 2012), which is usually not the case with fiscal welfare.

This means that it is useful to distinguish, in the Danish case, between fiscal welfare in the narrow sense, and fiscal welfare in the broad sense, including earned income tax credits and tax deductions for unemployment insurance and trade union membership.¹ The picture of the size, the development, and the distributional impact of fiscal welfare is quite different, depending on whether we consider fiscal welfare in the narrow or broad sense. On one point the two pictures converge, however: Fiscal welfare is more beneficial to labour market insiders than to those without employment, and thus also pointing to a continuation of the negative impact on distribution.

This paper presents as an illustrative case the history of the changes in the official knowledge on fiscal welfare in Denmark, from a time where there was a yearly update to now where the tax-authorities only estimate the size of specific changes in the tax-system in Denmark. The implication being that there is no longer a central overview of the size and structure of fiscal welfare in Denmark. Furthermore, there is no overall knowledge on the distributional impact of the use of fiscal welfare, thus still contributing to being a hidden type of welfare within the Danish welfare state.

This despite that fiscal welfare, for example, has been used in recent years to introduce and increase in-work tax-credit implying, by decay, that unemployed people’s economic situation has been worsened relatively (and due to indexation also in absolute terms), and, implicitly the same for all those outside the labour market (e.g. also pensioners, although this is less clear given the development of occupational based pensions). Thus this can be used as a way of measuring size and discussing the impact on the overall economic distribution. By this it also reflects the possible increasing economic and social disconnection between people in and people outside the labour

---

¹ We have left out co-called labour market contributions, which is an 8 per cent “gross tax” introduced in 1994, initially ear-marked for unemployment expenditures and justified as a sort of collective incentive to keep wage demands low. The philosophy was that labour market contributions should be reduced if wage increases were sufficiently low to improve wage competitiveness, improve employment, and reduce unemployment expenditures. As it emerged that this was a pro-cyclical tax and that the loss of revenue if lowering would have been large the ear-marking was in practice abandoned. But technically it remains a (tax) contribution that is deductible in the ordinary income tax. As regards fiscal welfare, this element of the tax system contributes to broadening the tax base and reduce the tax value of deductions.
market, a situation that can be worsened in the years to come given the expected change on the labour market.

The paper will discuss whether fiscal welfare has been phased out in Denmark. This could partly be through a deliberate adaptation of the public pension system to increasing private (mainly occupation-based, but collectively negotiated) pension savings, partly as a side effect of attempts to lower marginal taxes through broadening the tax base. At any rate, very large tax subsidies to pensions, housing etc. has, dependent on the way one understands fiscal welfare been changed over the last years. In relation to housing also the low interest rate has had an impact on the size of fiscal welfare. Broadening the tax-base is not only a Danish, but also an international trend (OECD, 2011), while at the same time “only the low hanging fruit has been gathered to date and the political economy of base broadening remain difficult” (LeBlanc et al., 2013: 7). The fiscal crisis with the increased pressure on public sector financing seems to have increased the awareness and impact of fiscal welfare and also that a change in tax-expenditure could raise revenue without increasing the level of taxation (Feldstein, 2014).

The paper proceeds by in the next section to depict the historical development in the Danish tax-system and its implications for fiscal welfare. Section 3 takes up the debate on the possible size of fiscal welfare, including as a prelude to that a debate on how to measure and what to include in fiscal welfare as this has implications for the understanding, impact and size of fiscal welfare. Section 3 also includes some data to illuminate the possible size, whereas the distributional impact of fiscal welfare is discussed in section 4.
2. Changes in the Danish tax system – and its implications for fiscal welfare

Denmark constitutes a somewhat deviating case as regards fiscal welfare. In the first place, fiscal welfare runs counter to the major concern in Danish tax reforms since 1985: reducing income tax rates via broadening the tax base. Secondly, as regards social class, the fiscal welfare that remains tend to favour the working class at least as much as the upper middle class. This is so at least if we consider fiscal welfare in its broader sense and include tax credits. On the other hand, the winners of the ensemble of tax reforms over the last three decades are people with high incomes and large assets, the main losers being low income groups and in particular those outside or at the fringe of the labour market. And fiscal welfare also benefits those with stable employment at the expense of those outside or at the fringe of the labour market.

The institutional context

From its very beginning, the Danish welfare state has been financed almost exclusively by general taxes. Denmark is unique as mandatory social contributions and payroll taxes have been virtually non-existent (see Figure 1). In the long run, it has little impact whether tax revenues derives from social contributions, payroll taxes or income taxes. But tax on labour is exceptionally visible in the Danish case, and the incentive to exploit income tax deductions used to be both highly visible and very strong.

Figure 1. Composition of tax revenue in Denmark and selected countries. 2013. Per cent.
Income taxes have been levied both at the national, regional and local level – the former being progressive whereas municipal taxes are proportional.\(^2\) In addition, taxes on consumption have been high in Denmark. Since 1992, the VAT has been 25 per cent. (without any differentiation as regards food or other “necessary” goods). Taxes on energy, tobacco, alcohol, cars and various sort of luxury goods have been among the highest in the European Union, although somewhat less deviating than two or three decades ago. Still, VAT as well as duties on electricity and motor vehicles remain exceptionally high.

In the mid-1980s the highest marginal tax had reached a level of 73 per cent, and the lowest income tax rate was around 50 per cent. This spurred a concern for reducing the tax rates, alongside an increasing concern for the distortion effects of high marginal tax rates – and inspiration from tax reforms on a global scale. Most of the Danish tax reforms were neutral in terms of tax revenue; it was mainly a question of broadening the tax base in order to reduce tax rates, and of finding alternative revenue sources. The tax reform of 2007 was financed post hoc by cuts in social spending, but only from 2012 governments embarked on a path with more and more explicit links between tax cuts and savings on the social budgets.

Since 1985, Denmark has been in a state of more or less permanent tax reform. There have been seven “big” tax reforms and a huge number of adjustments and single issue decisions. We have only included a few of the latter. An overview of the major reforms is presented in Figure 2. We have included a minor, but important reform in 1983 introducing taxation of current revenues on pension savings. After several changes it ended up with a uniform taxation of 15 per cent by 2002 – raised to 15.3 per cent as from 2012. This remains a low taxation as compared to the capital income tax on ordinary savings (or tax on income from shares). But it significantly affects the effective taxation of pensions savings, alongside the 1994 tax reform which increased the income testing of public pensions substantially.

Apart from reducing the highest marginal tax rate from 73 to 68 per cent, the most significant element of the 1985 reform was to separate taxation of personal income and (positive or negative) capital income; the reduced the tax value of interest deductions for homeowners and others almost overnight from up to 73 per cent to (typically) 50 per cent. The 1999 reform and the 2009 reform carried this further to 33 and 25 per cent, respectively. The same holds for tax deductions in the taxable income which cover most other deductions.

Until 1994, the lowest income tax rate was about 50 per cent (with small variations from one municipality to another). In the 1994 reform, this was gradually reduced to about 45 per cent, and the highest marginal tax was reduced to 63 per cent.

A somewhat underestimated reform in 2003, effective from 2004, introduced a small tax credit for those employed. Through subsequent reforms, this was gradually increased from 2.5 per cent and a low ceiling in 2004 to 8.30 per cent by 2016 and 10.65 per cent with a rather high ceiling by 2022, according to the 2012 tax reform. By 2022, the ceiling corresponds to an income of about 80 per

\(^2\) After the municipal reform of 2007, the state took over the right of taxation from the regions (formerly counties), temporarily in the shape of a proportional health tax.
## Figure 2. Major tax reforms and major components.

<table>
<thead>
<tr>
<th>Implemented</th>
<th>Adopted</th>
<th>Reform</th>
<th>Content</th>
</tr>
</thead>
<tbody>
<tr>
<td>1984</td>
<td>1983</td>
<td>Taxation of pension savings</td>
<td>• Introducing taxation of revenues on pension savings (later changed on several occasions; as from 2002 a uniform 15 % tax on all revenues; as from 2012 15.3 %)</td>
</tr>
<tr>
<td>1987</td>
<td>1985</td>
<td>Tax reform</td>
<td>• Separation of taxation of personal income and capital income, reducing tax value of interest deductions (and tax deductions in taxable income) to 50 %</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Reduction of highest marginal tax rate from 73 to 68 %</td>
</tr>
<tr>
<td>1994</td>
<td>1993</td>
<td>Tax &amp; labour market reform</td>
<td>• Lower income tax rates, financed by higher “green” taxes and more heavy taxation of fringe benefits</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Three tax levels: basic, medium (+6%), top (additional 15%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Reduction of lowest tax rates to about 45 % and highest marginal tax to about 63 %.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Introducing a “labour market contribution”, deductible from ord. income tax. 5 % on gross personal income, increasing to 8 %. Initially ear-marked to labour market expenditures.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Changed taxation of pensions, compensated by a substantial increase in the means-tested (income-tested) part of the universal people’s pension</td>
</tr>
<tr>
<td>1997</td>
<td>1996</td>
<td>Property tax abandoned</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Slightly lower income taxes for low and medium incomes</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Higher “green taxes”</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Introduction of a Special Pensions Saving, 1 % of gross income (modified 2001, suspended from 2004, terminated and savings paid out in 2009).</td>
</tr>
<tr>
<td>2002</td>
<td></td>
<td>Tax stop introduced by new government: No taxes could be increased.</td>
<td></td>
</tr>
<tr>
<td>2004</td>
<td>2003</td>
<td>Tax reform (“Spring package”; “Lower tax on labour”)</td>
<td>• Introduction of tax credit for those employed (universal, with a ceiling: 2.5 %, ceiling 5,800, increasing to 6,800 DKK)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Income bracket for 6 % “medium tax” raised by 48,000 DKK</td>
</tr>
<tr>
<td>2008-2009</td>
<td>2007</td>
<td>“Lower tax on labour”</td>
<td>• Tax credit raised from 2.5 % to 4.25 %, ceiling 13,100 DKK</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Income bracket for 6 % “medium tax” raised to the “top tax” level; from 2009 only two tax levels: 42.1 and 62.8 %</td>
</tr>
<tr>
<td>2010-2009</td>
<td>2009</td>
<td>Tax Reform (“Spring package 2.0”)</td>
<td>• Medium tax abandoned. Highest marginal tax rate 56 %</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Higher income bracket for the 15 % “top tax” (389,990 from 2010 as against 347,200 in 2009)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Tax value of interest deductions (above 50,000DKK) and tax deductions in taxable income gradually reduced from 33 to 25 %</td>
</tr>
<tr>
<td>2013-22</td>
<td>2012</td>
<td>Tax reform</td>
<td>• Tax credit raised from 4.4 % to 6.95 % by 2013 and gradually to 10.65 % by 2022. Ceiling raised from 22,300 to 34,100 DKK.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Income bracket for top income gradually increased to 467,000 (2013- level) in 2022 (or a gross income of 507,600)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Extra tax credit for lone parents</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Co-financed by annual reduction in the regulation of social transfer incomes of 0.75 per cent 2019-2023.</td>
</tr>
</tbody>
</table>

Sources: Albrekt Larsen & Goul Andersen (2004: 130-198); Kallestrup (2000, 2003); *Tidsskriftet Skat* 2001 no. 1; Danish Ministry of Taxation (http://www.skm.dk/aktuelt/temaer/skattereformer-og-skatteomlaegninger-siden-1987 with links to individual reforms)
cent of the OECD average worker level. Unlike in some countries, the Danish tax credit is universal, subject to a ceiling, but not to any means test.

The other element in the 2003/04 reform was a substantial increase in the income brackets for a so-called intermediary or “medium” tax of 6 per cent in-between the lowest and the highest tax level. By 2009 the bracket was further raised to the bracket for the “top tax” of 15 per cent, only to be phased fully out in the 2009 tax reform, leaving essentially a flat tax for the overwhelming majority of tax payers and an additional tax of 15 per cent for a minority (around 10 per cent). The flat rate tax is modified, however, by the third element of the income tax system: tax credits which gradually reduces the lowest tax level to around 40 per cent. On the other hand, the share of taxpayers subject to the 15 per cent “top tax” level is substantially reduced by extraordinary increases in the income brackets for this tax.

The overall impact is a substantial reduction of the marginal tax rate for higher incomes from 73 per cent to 56 per cent, cf. Figure 3. For medium incomes the reduction is from some 58 per cent in the mid-1980s to around 41 per cent in 2015. And for the lowest incomes the reduction is from slightly above 50 per cent to around 40 per cent in 2015. Provided that people are employed.

**Figure 3. Marginal tax rates, 1993-2015. Per cent.**

![Figure 3. Marginal tax rates, 1993-2015. Per cent.](source)

Source: Danish Ministry of Taxation homepage

This also means that marginal taxes on labour (ignoring consumption taxes etc.) have become comparatively low in Denmark except for the relatively small minority who pay the highest marginal tax. As witnessed by the 2015 OECD figures in Figure 4.

Finally, wealth taxes (except real estate taxes) were abandoned in 1997, and a declaration of Tax Stop from 2002 has largely been followed by subsequent governments. This includes one element
of the real estate taxes, but not the other element which is subject to a maximum annual increase. As the latter is based on assessing the value of the ground without any buildings, the value assessment has been difficult and, is, for the time being, open for discussion.

**Figure 4. Marginal and average tax rates for an average worker, 2015. Per cent.**

![Marginal and average tax rates for an average worker, 2015. Per cent.](image)

Source: OECD (2016).

With a few exceptions, the reforms were neutral in terms of revenue. The 2004 reform remained under-financed, however, except in the first year; the reform adopted during the booming economy in 2007 was mainly implemented in 2009 and thus counted as a counter-cyclical measure which was neutralized by a tough austerity package in 2010, including a cut in duration of unemployment benefits from four to two years, alongside substantially tougher requirements for requalification. The 2012 reform is the only reform so far that is explicitly co-financed by cuts in social spending – a reduction in indexation of social transfers from 2019-2023. However, the government programme of the Liberal minority government which took over in 2015 contains yet another planned tax reform, with little attempt of concealing the relationship between tax cuts and cuts in social welfare.

**Implications for fiscal welfare**

1. **Child benefits**
   Initially, support for children in Denmark was an instance of fiscal welfare as families were supported via an income tax deduction for dependent children. In the early 1960s this was changed
to a negative income tax. By 1970, the universal scheme was abandoned. After 15 years with means-tested benefits, universal child benefits was reintroduced by 1985, but now as an ordinary cash benefit. In short, this is an instance where support via the tax system was abandoned. 3

2. Family care
There is no deductions for elder care or child care in the Danish system, and thus no impact on fiscal welfare

There has been a so-called home-service, which was introduced 1994, and abandoned by a large majority of parties by the end of 2012. However it became reintroduced as a deduction of expenditures on certain specific construction work up to 15.000 Danish kroner, of which up to 6000 kr can be spent on specific services in private homes Overall, this has a negative impact on distribution.

3. Pensions
Denmark is the EU country which has the highest private pension savings as compared to the GDP (Figure 5). By 2014, the pension savings constitute more than 200 per cent of GDP. As this contains a considerable asset in terms of postponed taxes, the Danish state is much more affluent than it emerges from official accounts. The asset in terms of postponed taxes is not accounted for anywhere. Expressed in other terms, the Danish state has secured future incomes from taxes on pensions to safeguard against the costs of demographic change – via higher pension age, healthy ageing and high private pension savings, it is possible to maintain existing welfare arrangements without any tax increase (Forsikring & Pension, 2012; Goul Andersen, 2013).

As a main rule, pension savings in Denmark, collective or individual, builds on the principle that pension contribution/payment is tax deductible whereas pension income is subject to ordinary income tax. 4

---

3 In the 2012 reform child benefits became means tested, but only for very high incomes, and thus is remains an almost universal benefit.

4 The so-called capital pension ("kapitalpension") and its successor, old age savings ("aldersopsparing"), constitutes the major exception. Initially, contributions to capital pension was fully deductible (with a tax value of up to 73 per cent) whereas payment of the saved amount was taxed by 40 per cent. Later, the tax value of contributions was changed to 40 per cent. Contributions under the old age savings scheme is not deductible; in return, the payment of the saved amount is not taxed. The subsidy consists in a low taxation of current returns of 15.3 per cent. This scheme is equally favourable as its predecessor, but without the psychological element of tax deduction (de facto postponement of taxation) contributions for this scheme fell by some 90 per cent.
Decades ago, private pension savings was heavily subsidized by the tax system, but this has changed substantially because of three major changes:

- **taxation of current returns** on pension savings has reduced the subsidy (even though taxation remains lower than taxation of capital income or income from shares)
- changing the state pension system from an almost flat-rate system to a predominantly *means-tested* system has increased the *composite* tax rate for income from pensions. In addition to a taxation just below 40 per cent on income for pensions, pensioners typically experience a cut by about 30 cent in the people’s pension for each additional Euro they receive in savings-based pension income; in addition, other means-tested elements of the pension system (housing benefits for pensioners, subsidy for heating and others) may be reduced as well.
- Changing the income tax system into a system with only one tax level (slightly modified by the tax credit for employed) makes the tax arbitrate – moving to a lower level of taxation by

---

For a full account of the highly complicated Danish multipillar pension system, see e.g. Goul Andersen (2011). Like in Sweden, but even more importantly in Denmark, a preferential housing benefit scheme for pensioners constitutes an essential element of the state pillar. Unlike other elements like support for heating, individual supplements, and supplementary pension benefits where the means-testing is very steep, the curve for the means-testing of housing benefits is rather flat, making most middle class pensioners entitled to some support, provided that they are tenants.
postponing taxes via the pension system – accessible only for the minority that pay the top level tax rate of 15 per cent.

This can be illustrated by an example. Take an ordinary, single pensioner who receive 200,000 DKK in gross pension income from private pension savings – a typical level for e.g. a school teacher or a nurse having worked full-time for some 40-45 years. We assume that this person has no additional income from other sources except the people’s pension. The people’s pension consists of a basic amount of DKK 72,756 annually which is for all citizens (means tested only against – high – labour income), and an income-tested pension supplement of DKK 76,788. Both are subject to income tax.

The first 68,400 DKK in supplementary income does not cause any reduction in the pension supplement. For incomes above that level (private pensions or any other sources), the pension supplement is reduced by 30.9 per cent. When the supplementary income reaches DKK 316,900 there is no pension supplement left.

What is, then, the composite marginal tax for pension incomes between 68,400 and 316,900? In addition to the income tax, we have to calculate the value of the lost pension supplement. Now, we should take account of the fact that this pension supplement would otherwise have been taxed, that is, the pensioner does not lose 30.9 per cent, but only the after tax value of 30.9 per cent. As the country average tax level for such income is 37.69 per cent, the pensioner only has a net loss of 30.9 * 62.31 per cent = 19.25 per cent. This provides the following calculation (Table 1):

Table 1. Composite marginal tax rate for a single pensioner with private pension income of 200,000 DKK, 2016.

<table>
<thead>
<tr>
<th>Income tax</th>
<th>37.69 %</th>
</tr>
</thead>
<tbody>
<tr>
<td>+ Net value of lost pension supplement</td>
<td>19.25 %</td>
</tr>
<tr>
<td>= Composite marginal tax rate</td>
<td>56.94 %</td>
</tr>
</tbody>
</table>

Even if we take account of the lower taxation of current revenues on pension saving, there is no tax subsidy in this case, except for the first 68,400 DKK where there is no cut in the pension supplement. To the contrary, the state would seem to have a net benefit from pension incomes between 68,400 DKK and 316,900 as the composite marginal tax of nearly 57 per cent far exceeds the ordinary taxation on positive capital income (42.7 per cent) or income from shares (27-42 per cent).

For people who would can deduct the pension contribution from a high income subject to the top tax (52.69 per cent – excluding labour market contributions from which there is no deduction), the calculation looks slightly better. In broad terms, the arrangement is neutral: People pay a higher marginal tax than they initially deducted, but they enjoy the lower taxation on current returns on their savings.
Both of the above groups, however, still enjoy the (small) tax subsidy for the first part of their pension savings where there is no cut in pension supplements.

By the same token, for low-income people who have no cut in their pension supplements, pension saving involves a (small) tax subsidy.

There is also a tax subsidy for people receiving private pension incomes above 316,900 DKK. They have a composite marginal tax of only 37.69 per cent. This is roughly equivalent to the tax they would initially have paid (if the fall below the top tax ceiling), but they enjoy the lower taxation of current returns.

For those who manage to deduct the pension contributions from an income where they would otherwise have paid top tax of 52.69 per cent, there is a more substantial subsidy if they manage to have an income as pensioners that fall below the top tax ceiling, and if they are not subject to cut in pension supplement because their supplementary income is above 316,900. But this is only a very small interval – from DKK 389,656 to 467,300 (2016).

Finally, for those who pay the highest income tax both as employed and as pensioners, there remains a small subsidy as current returns on pension savings are only taxed by 15.3 per cent. They enjoy the same small subsidy as those who choose to use the old age savings scheme (“aldersopsparing”).

Briefly, there is very little tax subsidy left for pension savings. As a whole, the system seems to be largely neutral. In some instances, people have a small net subsidy; in other instances, they may even suffer a small loss. Altogether, investments of savings in e.g. shares would seem to compete very well with pension savings.

From the 1980s onwards, this system was construed in order to ensure higher private savings and, accordingly, a balance of payment surplus. Further, the system was construed to ensure long-term sustainability of the welfare system. Basically, it has worked successfully in both respects. However, the system is not very transparent, neither for ordinary citizens, nor for political decision-makers. As regards the latter, they have been surprised by the fact that the system worked to relieve the state of future pension obligations which involves, by definition, a rather high marginal tax rate on pension savings. By 2014, a pension commission was appointed, but in 2015 its work was terminated by the new government.

4. Homeowners
Net subsidy stopped around 2003. At that time the real property taxes reached the value of tax deductions for interest. Since then – and catalyzed by the enormous drop in interest rates – taxes on real property have far exceeded the (declining) tax value of interest deductions. We can only guess how this will change in the future if and when interest rates become more “normal”; still, it would seem unlikely that net tax subsidies for private housing will reappear.
Unlike Sweden, however, Denmark has no taxation of capital gains for homeowners who are lucky to buy when prices are low and sell when prices are high. Since 2008, this has not been a very typical situation for Danish homeowners as house prices dropped after the burst of one of the biggest housing bubbles that has ever been seen in Europe (Goul Andersen, 2011, 2013).

5. Tax credits
As mentioned, tax credits for those employed was introduced in 1994 as a very small measure, but it has grown to become substantial and is scheduled to raise further in the future (see Figure 2 above, and the data in the next section). It is an illustration of competing ends in economic policy as this has been introduced as a means to improve incentives to take up jobs (the “make work pay” mantra). For Liberals and Conservatives, it has to some extent been a second-best solution. Giving tax relief for low incomes is more easy to justify for the voters, and more acceptable for the Danish People’s Party, than cutting the top tax level. Still, what justifies tax credits as a work incentive, at the same time means increasing economic divisions between those with stable employment and those outside or at the fringe of the labour market. As regards the distributional impact among the gainfully employed, the tax reforms have not been very heavily skewed (although clearly most beneficial for people with high incomes); if we look at the population at large, they have altogether, step by step, contributed substantially to increasing inequality over the last decades.

6. Unemployment insurance
Like in Sweden and Finland, the Danish unemployment insurance system follows the Ghent model with voluntary, state-subsidized insurance. It is still organized primarily by unemployment insurance funds with attachment to the unions, even though other actors (working in practice as market actors) have gained an increasing share. Members pay a fixed amount, regardless of income, and regardless of the unemployment level in the individual fund, or in society at large.

As contributions to unemployment insurance (and membership of trade unions) are tax deductible, this is formally an instance of fiscal welfare in the broad sense. However, Liberals and Conservatives have usually been interested in reducing the state subsidy for unemployment insurance whereas the Social Democrats have historically worked for higher state subsidies in order to have those with high incomes contributing to the financing of unemployment insurance.

One way of reducing state subsidies to the system is to reduce the tax value of contributions. In Sweden, the centre-right government elected in 2006 entirely removed the tax deductibility. In the Danish case, the tax value of contributions has been reduced from up to 73 per cent (1983-86) to 33 per cent (from 1999), and from 2010 to 2019 it is further reduced to 25 per cent.

This is an instance where fiscal welfare paradoxically contributes to social equality (and to strengthening the power of trade unions), and reducing the tax-expenditures in this instance is tantamount to approaching unemployment insurance to a more “private”, or at least liberal, and “re-commodified” system.
Conclusion
Overall, there has been a decline in the lowest and the marginal tax-rate, and, thereby reducing the value of fiscal welfare has been reduced, cf. also the next section. The issue of broadening the tax-base has thereby also influenced the Danish development, even if fiscal welfare still plays a role in the system. The distributional impact is much less crystal-clear than it used to be. As regards the most important element, the tax subsidies for pension, this has not been completely eliminated, but it has been substantially reduced, and in some instances there is not always a net subsidy. Further, the distributional impact is much less clear than it was previously. People with low incomes and pensions, or with very high incomes and pensions, seem to benefit the most. But in both cases, the subsidy is quite moderate, and other savings/investment opportunities would often seem to compare well, e.g. investments in shares which enjoys a low taxation for low to moderate incomes (27 per cent, increasing to 42 per cent for high share incomes). On the other hand, people with high incomes have benefited the most from tax reforms as a whole – and have also been relieved from wealth taxes. As regards fiscal welfare in the broad sense, including the earned income tax credit, the boundaries of fiscal welfare as well as the distributional impact is somewhat blurred. The income tax credit is most beneficial for people with low incomes. But first and foremost, it contributes to a widening gap between the employed and those without employment – justified by the “make work pay” mantra.
3. Estimating the Size of the hidden welfare state

Knowledge about the size of the hidden welfare state is difficult to get. This despite that it has been discussed for years – also in Denmark (Greve, 1993 and 1994, Erhvervsministeriet et. al. 1996). OECD has also historically presented and discussed various approaches, including the three different methods to calculate the size: Revenue foregone, revenue gained and the outlay equivalence method (OECD, 1984). Erhvervsministeriet et. al. (1996) calculated that using the revenue forgone the tax-expenditures amounted to in 1993 to 1998 between 2.71 and 2.93 % of GDP. The term hidden welfare state is not only a Danish perspective, but has also been used to describe the development in, for example, the US (Howard, 1997), and Sinfield (UK and comparative) has persistently over the years discussed fiscal welfare, see, for example, Sinfield (2013).

From the mid-nineties until 2006 the size of tax-expenditures in Denmark was published in the yearly finance bill. Since then the Ministry of Taxation from the year 2007/08 used a new approach, by that only new legislations possible fiscal welfare would be reported. Sometimes there is although also a more systematic overview (Skatteministeriet, 2015). This change has been criticized by the Danish State Auditors first in 2008 and then as a follow up in 2010 (Rigsrevisionen, 2010) as a way of making it difficult for the society to know with what purpose and the size hereof that fiscal welfare is used, including that there should regularly be information on the size of fiscal welfare.

There is some public information on the size of tax-expenditures. With regard to personal income tax is a mentioned above Skatteministeriet, 2015 an indication of the size, and, also regarding the fiscal welfare related to the business sector is it possible to get some information about (Erhvervs- og vækstministeriet, 2015).

Before embarking upon presentation of some of the data it is important to be aware that the choice of what is considered tax-expenditure and which is not considered has implications of the size of fiscal welfare. For example, shall one consider in work tax-credit as an example of fiscal welfare? On the one hand it is general in the sense that all who has a wage income can have the deduction. On the other hand all those outside the labour market (either permanently or shortly) and dependent on welfare benefits do not have access, e.g. pensioners and unemployed are two large groups who has not access to this tax-credit (albeit those not unemployed or on pension for the full year can get at least part of the tax-credit). Another example is related to saving for pension purposes, which is widespread in the Danish case. Here there is, on the one hand, ability to not pay income tax (except the 8 % labour market contribution) when saving money, and then on the other hand postpone income tax when having the money paid out. If the tax-level is the same then there should in principle not be any impact on fiscal welfare, although if there is a difference in the marginal tax when paying in and getting the money out then there is a fiscal welfare. Furthermore, the capital tax

---

6 Other possible interest in the use of in-work tax credit, such as possible labour supply, is not part of the analysis here, see instead Barrios et. al. (2015). This article also indicates the there can be different impact on distribution dependent on the specific way the in-work benefit is done.
on savings are lower within the pension funds and thus there is a hidden support for pension saving. As the high income earners have the highest saving for pension purpose they benefit most. So, it is not simple to deduct and calculate the size of the hidden welfare.

Size of the hidden welfare state is difficult to come about. A recent report (Tyson, 2014) estimates it for Denmark to be 2.75 % of GDP. Thus in the middle of the countries included – being highest in Australia, Italy and the US. A problem being that there is no general agreement on how to measure and understanding tax-expenditures. The OECD already in 1984 defined tax-expenditures as “a departure from the generally accepted or benchmark structure, which produces a favorable tax-treatment of particular types of activities or groups of taxpayers” (OECD, 1984). This is in principle in line with what the Danish authorities do although they call it “deviation from clearly identifiable tax-rules” (www.skm.dk – Skatteudgifter – en faktaside, 2010). Still, the concept can be criticized as the choice of the benchmark structure might be within different views of what the normative tax base should be (OECD, 2010), who although also notes that “a frequent common element is some notion of departure from a tax benchmark system” (p. 16). Denmark is unfortunately not part of this OECD-analysis. Still, even if there is disagreement between countries of what the benchmark structure is this does not imply that one should give up the notion and options and possibilities of entering into analysis of the concept and how to use it in order to make sure that one can make decisions on a sound basis, including also comparing the use of tax-expenditures with direct public sector spending in order to achieve a set of policy objectives. This especially due to, that at least in 2010 in the OECD analysis it seemed that “the use of tax expenditures by governments is pervasive and growing” (OECD, 2010, p. 3). This is although in contrast with arguments about that broadening of the tax base has taken place in a way to lower the tax-rates.

In the Table 2 below is shown large tax-expenditures in the years from 2006-2015. They cannot be added as some has last been updated in 2006, and, therefore the year they are calculated are in different years, although there has been an update to 2012 prices. In the Table only expenditures about the level of 1 billion D.Kr. is included.

Table 2: Tax-Expenditures in Denmark – 2006-2015.

<table>
<thead>
<tr>
<th>Tax-expenditure</th>
<th>Latest update</th>
<th>Calculated tax-expenditures in billion D.Kr.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Taxes on buildings</td>
<td>2006</td>
<td>2.9</td>
</tr>
<tr>
<td>Experiments and research (companies)</td>
<td>2006</td>
<td>2.9</td>
</tr>
<tr>
<td>Housing/job deduction</td>
<td>2015</td>
<td>1.6</td>
</tr>
<tr>
<td>VAT financial sector</td>
<td>2013</td>
<td>2.7</td>
</tr>
<tr>
<td>VAT General practitioner, Dentist</td>
<td>2013</td>
<td>2.5</td>
</tr>
<tr>
<td>VAT Day-care institutions</td>
<td>2006</td>
<td>2.3</td>
</tr>
<tr>
<td>Certain duties (diesel og udlignignafgift – skal lige have rigtig oversættelse)</td>
<td>2006</td>
<td>3.4</td>
</tr>
<tr>
<td>Electricity duty reduction renewable energy</td>
<td>2012</td>
<td>3.8</td>
</tr>
</tbody>
</table>

As the Table shows it is not only within personal income taxation that there are tax-expenditures. It is also surprisingly that deduction for pension savings is not included. This might be explained, as indicated earlier, that the argument is that although it is deducted when paying into the pension fund thereafter the pension is taxed when paid out. Within the area of business there is sizeable support to companies. In 2015 overall through the tax-system there is a support of 11.6 billion Danish Kroner (Erhvervs- og vækstministeriet, 2015). It is a very diverse number of activities from support to research and development, export, innovation, environmental changes, and the agricultural sector.

In the Table 3 below is shown the development in the size of deduction before paying income tax in Denmark since 1994 for selected years.

Table 3. Deductions in taxable income from 1994 to 2014 in million Danish Kroner

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>3. Total wage income deductions</td>
<td>28 235</td>
<td>31 612</td>
<td>39 381</td>
<td>59 275</td>
<td>75 056</td>
<td>107 948</td>
</tr>
<tr>
<td>3.1 Unemployment insurance</td>
<td>16 716</td>
<td>18 840</td>
<td>23 502</td>
<td>24 374</td>
<td>24 920</td>
<td>19 394</td>
</tr>
<tr>
<td>3.2 Transport costs</td>
<td>5 510</td>
<td>6 860</td>
<td>8 875</td>
<td>11 176</td>
<td>12 473</td>
<td>18 127</td>
</tr>
<tr>
<td>3.3 Earned income tax credit</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>15 761</td>
<td>28 946</td>
<td>55 433</td>
</tr>
<tr>
<td>3.4 Alimonies</td>
<td>2 101</td>
<td>2 241</td>
<td>2 595</td>
<td>2 852</td>
<td>3 086</td>
<td>3 068</td>
</tr>
<tr>
<td>3.5 Expenditures for services</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>6 257</td>
</tr>
<tr>
<td>3.6 Other wage-income earner expenditures</td>
<td>1 130</td>
<td>600</td>
<td>758</td>
<td>1 053</td>
<td>235</td>
<td>141</td>
</tr>
<tr>
<td>3.7 Other</td>
<td>2 778</td>
<td>3 071</td>
<td>3 651</td>
<td>4 059</td>
<td>5 396</td>
<td>5 528</td>
</tr>
</tbody>
</table>

Interest rate expenditures | 59 550 | 63 553 | 68 144 | 72 723 | 80 537 | 63 684 |

Note: The reason for the decline in deduction for unemployment insurance between 2010 and 2014 has been a ceiling (now abolished again) on 3000 Danish kroner per year for a person.

The table is a clear indication of that the reduction in the level of interest rate have had a strong impact on the overall size of reduction in the tax-base, however still being the largest deductible item in the personal income taxation system. The earned income tax-credit is thus the second highest and in the coming years where increases has been decided this will be even higher and thus the most important type of deduction in the Danish tax-system. However, at the same time over the period there has, cf. section 2, been a reduction of the marginal tax-rate and also the size of the tax-rebate as many of the possible deductions are not given a rebate on the top-marginal tax, which is, above a ceiling, is 15 %, but only at the lowest income tax-rate.

Looking into benefits that are in principle taxable, but often to a lower value than the real value and therefore having an indirect impact on the households consumption, often labelled fringe-benefits (here it is from the wage income statistics covering items such as housing, car, etc.). This is also a way to depict fiscal welfare and possible distributional consequences.
In Table 4 is shown the amount of fringe benefit as a percentage of the wage income in 2014.

**Table 4. Fringe benefits in 2014 as % of hourly wage income (and in bracket the absolute amount in Danish Kr.).**

<table>
<thead>
<tr>
<th></th>
<th>Total all sectors</th>
<th>Private Sector</th>
<th>State</th>
<th>Municipalities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Men</td>
<td>1.0 (2.58)</td>
<td>1.2 (3.31)</td>
<td>0.1 (0.26)</td>
<td>0.1 (0.15)</td>
</tr>
<tr>
<td>Women</td>
<td>0.3 (0.65)</td>
<td>0.6 (1.34)</td>
<td>0.1 (0.22)</td>
<td>0.0 (0.06)</td>
</tr>
<tr>
<td>All</td>
<td>0.7 (1.65)</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
</tr>
</tbody>
</table>

Note: n.a. not available
Source: Danmarks Statistik, Statistiske Efterretninger, Løn, arbejde og indkomst no. 15, 2015.

There is a clear divide – highest for men and especially men in the private sector, and also clear a public private difference. It is further persons having management and leadership positions that have the absolutely highest amount (and also the highest amount paid into to pension). Thus this is a clear indication of the possible upside down effect of tax-expenditures.

### 4. Impact of the hidden welfare state

That tax-expenditures have an impact on distribution seems relatively obvious, especially given that high income earners will have better options in order to deduct expenses and save for pension purposes. However, there might be other types of influences. One being that if certain types of consumption are less taxed than others then this may distort the choice between different types of goods and service (DØR, 2008), so there is also an impact on the allocation of goods and services. Further, that hidden elements that increases the complexity of the system, are more difficult to control and might even imply higher loss of tax-income than expected and higher cost of monitoring (Burman and Phaup, 2011).

Right to benefit and especially the earned income tax-credit and fringe benefits seems to imply a strong deviation between insiders and outsiders on the labour market. Thus the way the fiscal – and occupational welfare works – implies that those who has a job have a higher and more stable income than those outside, and, also better access to fiscal welfare.

A possible caveat regarding the upside down effect here is whether one sees the general tax-allowances as a fiscal welfare. If one do that this implies that the general tax-allowance reduces inequality, in Denmark by approximately 1.6 % (Avram, 2014). This is albeit a very much broader framework than the one often used, and general tax-allowances normally not seen as a deviation from the general benchmark structure.

Broadening the tax-base and lowering the tax-rate that gives rebate has implied a reduced size of fiscal welfare, whereas on the other hand the strong increase in the earned income tax-credit has, especially between insiders and outsiders, implied that fiscal welfare has grown in importance. The
in-work tax-credit has at the same time been a way to reduce the generosity of the welfare state without making direct cuts in the level of the benefits.

Besides this one can still debate the impact of the right to save for pension purposes with a deduction at the highest marginal tax rate (e.g. inclusive top-tax rate). The implication being that especially high income earners who deduct at a high marginal tax rate and pay the lower tax-band when pension is paid out – while at the same time the taxation of capital income is lower within the pension funds implies that they especially gain by this system.

5. **Some conclusions**

Fiscal welfare still plays a central role in the Danish welfare state and still with a seemingly up-side down impact, but perhaps even more and stronger implying a division between insiders and outsiders on the labour market.

The historical development with lowering tax-rate and broadening of the tax-base has in principle reduced the possible negative impact of fiscal welfare, whereas when looking into a broad measure of fiscal welfare (e.g. include in-work-benefits) there has been an enlargement of the impact of fiscal welfare.

Therefore overall, despite the universality of the Danish welfare state, albeit under change, fiscal welfare still contributes to a more unequal society.
References
Rigsrevisionen (2010). Notat til statsrevisorerne om beretning om gennemsigtighed vedrørende skatteudgifter (fradrag m.v.). Copenhagen: Rigsrevisionen.