

Special tax rules for old-age pensioners*

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Anticipated developments in the Norwegian population imply a steady increase in the number of retired persons per economically active person. In addition, each old-age pensioner will receive a higher pension as a result of increased pension entitlements. Assuming that pension entitlements and benefits are indexed in step with wages, old-age pensioners average disposable income will increase considerably more in the period towards 2030 than that of the rest of the population. These developments result in large increases in social security expenditures. One may therefore ask if it is desirable to continue to give old-age pensioners special privileges through the tax system. The present tax rules let old-age pensioners pay lower taxes than the economically active through the so-called rule of limitation for taxes, lower social security contributions, and a special tax allowance for age and disability. In this article we show how much these special tax rules reduce taxes paid by old-age pensioners, and analyse the distribution of these tax reductions up to the year 2030. The analysis is an update of Gravningsmyhr (1995), but within a somewhat different context. Our results show that an average old-age pensioner's tax reductions amount to NOK¹ 11,700 in 1995, and increase to NOK 13,200 in 2030 (deflated by nominal wages with 1999 as the base year). Income inequality among old-age pensioners is reduced if pensioners are required to pay the same social security contribution rate as workers, whereas a removal of the tax limitation rule contributes to an increase in income inequality both in 1995 and 2030. Abolishing the special tax deduction for age and disability has little effect on the income distribution for old-age pensioners. The three special tax rules together lead to a more equal distribution of income among old-age pensioners in 1995 and 2030, but the tax reductions reduce income inequality less in 2030 than in 1995. Our results correspond with the results in Gravningsmyhr (1995).

Introduction

It is expected that in the years to come there will be a large increase in the number of retired people per economically active person. At the same time old-age pensioners will have earned better pension entitlements. A large increase in the number of old-age pensioners receiving higher pension benefits will lead to a large increase in public expenditures related to old-age pensions. This may give reason to ask whether it is desirable to continue giving old-age pensioners privileges through the tax system. Presently old-age pensioners pay lower taxes than economically active persons through three special tax rules:

- i) lower social security contributions
- ii) a special tax allowance for age and disability
- iii) the rule of limitation for taxes

These rules apply to other pensioners than the old-age pensioners as well. In this article though, we only study the effects for old-age pensioners.

There may be several reasons why old-age pensioners should pay lower taxes than economically active persons. One of the motives behind the introduction of the National Insurance Act was a desire that pension income should be reasonable relative to earlier income from employment, see "Ot.prp. nr 17 1965-66" and Magnussen (2002). Each of the three special rules can also be explained separately. The special tax allowance for age and disability is meant as a compensation for higher health expenditures for older people than economically active. Pension income does not give pension entitlements, which makes it reasonable

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¹ One NOK is 0,13 Euro (19 April 2002).

that old-age pensioners pay lower contributions to social security. The rule of limitation for taxes is motivated by an objective that old-age pensioners with only minimum pension shall not pay taxes. "St.meld. nr. 35 1994-95" expressed that one wanted to narrow the gap between the taxation of pensioners and the taxation of economically active with medium and higher incomes. This has so far not happened.

We calculate the amount of the tax reductions and its distribution by income of old-age pensioners towards 2030. In that way we will be able to illustrate the effects of the tax reductions in the light of the ageing of the population and the strong increase in the incomes of the old-age pensioners in this period. We look into the income distribution effects both among the old-age pensioners and the whole population.

This article is based on a project for the Ministry of Finance, where we have performed the same analysis as in Gravningsmyhr (1995), but with a different model tool, the microsimulation model MOSART, see Rønningen and Fredriksen (2002).

Three special tax rules that imply lower taxes for old-age pensioners²

i) lower social security contributions

There are three levels for social security contribution rates. For income that does not give pension entitlements the rate is 3 per cent. Persons below 70 years of age pay the low contribution rate on pension income, benefits derived from a surrendered property and life annuity from employment. The low contribution rate applies to all personal income for persons of 70 years of age and older. For all income from work where employers' social security contributions are imposed, a medium contribution rate of 7.8 per cent is paid. For income from self-employment the social security contribution rate is 10.7 per cent.³

ii) A special tax allowance for age and disability

From 70 years of age one has the right to a special tax allowance because of age. Persons between the age of 67 and 70 can choose to be full-time or part-time pensioners. One gets the special tax allowance for age according to the degree of pension taken out. The main rule for married couples with joint assessment is that they together receive one full tax allowance for age. If only one of the married is entitled to the tax allowance for age, the tax allowance for age is given to that person.⁴ There is also a tax allowance for disability that is given according to specific rules.

iii) The rule of limitation for taxes

Everyone 70 years of age or older are covered by the rule of limitation for taxes. In addition the rule covers tax payers below 70 years of age who have received i) old-age pension, ii) early retirement, iii) disability pension or temporary disability pension which gives rights to full special tax allowance for disability, iv) survivor pension and v) transitional benefit under the National Insurance Act. The basis of calculation is general income after correction for possible wealth, but before deduction of the special tax allowance for age and disability. The earning limits before tax is to be paid are in 2002 NOK 81,000 for a single person, and NOK 131,700 for married couples. The motivation for the rule of limitation for taxes is that pensioners with minimum pension shall not pay taxes. The intention of the tax system is however that pensioners, apart from lower social security contributions and the special tax allowance for age and disability, shall pay taxes according to their income as other taxpayers. The tax benefits from the rule of limitation of taxes are therefore reduced as the income rises. This implies that the marginal tax rate is higher than for ordinary incomes. When the income after deductions, but before the special tax allowance for age and disability, exceeds the earnings limits, the tax can amount to maximum 55 per cent of the excess income. A basic tax allowance of 22 per cent, ensure that most of the old-age pensioners will have a marginal tax rate of 42.9 per cent. The rule of limitation for taxes does not apply to surtax on higher income and taxation of wealth. A taxpayer can be assessed of taxes under the ordinary tax rules, or under the rule of limitation of taxes, and one will always be assessed under the rules that give the lowest taxes.

Assumptions underlying the analysis

We use the microsimulation model MOSART to calculate the tax reductions from the special tax rules. MOSART is a dynamic microsimulation model for projections of the population, labour force, education level and public pension benefits, and it is suited to calculate the consequences of the special tax rules for old-age pensioners with regard to the amount of the tax benefits and the distributional effects over time. The projections are conducted by simulation of the whole life course for each person in a representative sample of the population with regard to migration, deaths, births, marital status, education, labour force participation and retirement. The events that may happen for a person in a year are drawn with transition probabilities that depend on personal characteristics. The MOSART model is documented in Fredriksen (1998).

² The description of the tax rules is taken from Lignings-ABC 2001 (Taxation ABC 2001).

³ In MOSART there is no distinction between income from self-employment and wage income. The high rate of 10.7 per cent is therefore not included in the model.

⁴ In MOSART the special tax allowance for age is modeled simpler than described here. Single pensioners get one whole tax allowance, while married get half a tax allowance each.

Box 1. Important assumptions in MOSART, base year 1999

| | |
|-------------------------------------|----------------------------------|
| Net immigration | 10 000 per year |
| Life expectancy | Increases 4-5 years towards 2050 |
| Fertility rate | 1.8 |
| Educational activities | As in 1999 |
| Number of new disability pensioners | As the mean 1995-1999 |
| Early retirement | As in 2000 |
| Labour force participation | As in 1999 |
| Prices, wages, basic pension unit | As in 1999 |

We show the effects of the tax benefits towards 2030, with emphasis on a comparison between 1995 and 2030. The growth of the number of people in different age groups is in accordance with projections of the population development from Statistics Norway. The rules for earning pension entitlements are assumed to be unchanged for the whole period. The pension entitlements and benefits (i.e. the basic pension unit) grow at the same rate as the wages. The special tax allowance for age and disability grows at the same rate as the basic pension unit. The most important assumptions are shown in box 1.

We have not performed any sensitivity analyses with regard to the assumptions underlying the projections. An important assumption is that the basic pension unit grows at the same rate as the wages. This has not happened so far. The adjustment of the basic pension unit at a lower rate than wages implies that supplementary pension becomes smaller. At the same time the minimum pension has increased through the adjustment of the special supplement. However, we assume that the basic pension unit grows at the same rate as the wages in the entire period from 1995 to 2030. The share of old-age pensioners on minimum pension decreases a lot towards 2030, because more of the old-age pensioners will have earned more pension entitlements. This development means that the lower social security contributions and the special tax allowance for age and disability will get more significant, while the rule for limitation of taxes gets less significant for the old-age pensioners. On the other hand, if the basic pension unit continues to be adjusted at a lower rate than the wages, the rule for limitation of taxes will be more important, while the lower social security contributions and the special tax allowance for age and disability get less important than in our projections. Another important assumption is that the distribution of labour income is stable. An increased inequality of labour income may have consequences for the impact of the special tax rules.

The population development towards 2030

Table 1 gives a picture of the shares of the population living in households with old-age pensioners and

Table 1. Shares of the population in households with pensioners. In per cent

| | 1995 | 1999 | 2010 | 2030 |
|------------------------------------|------|------|------|------|
| Households with old-age pensioners | 15.7 | 15.2 | 14.7 | 20.7 |
| Households with other pensioners | 14.0 | 16.6 | 21.4 | 20.6 |

Source: Statistics Norway.

households with other pensioners. Households with old-age pensioners are defined as households with at least one old-age pensioner, while households with other pensioners are the rest of the households in the population with at least one disability pensioner, a special contractual pension scheme (AFP), survivors' pensioner or rehabilitation pensioner. We see that the share of households with old-age pensioners decreases somewhat from 1995 to 2010, and then increases strongly towards 2030. The main reason behind the development in the number of old-age pensioners in the period towards 2030 is increased longevity. Those retiring in the period towards 2030 were born in the 1930s and the beginning of the 1940s. These are small cohorts even though the birth rates increased already around 1935 onwards. The birth rate increased strongly just after the war, and together with large cohorts born in the 1950s and 1960s and the increased longevity this will lead to a strong increase in the number of old-age pensioners towards 2030. The share of other pensioners increases strongly between 1995 and 2010, which is specifically caused by a large increase in the number of disability pensioners. This comes from an increase in the number of people in the age groups with many disability pensioners. In 1995 15.7 per cent of the population lived in households with at least one old-age pensioner, and in our projections this share increases to 20.7 per cent of the population in 2030. In 2030 we estimate that somewhat more than 41 per cent of the population will live in households with at least one pensioner. The figures in table 1 are in accordance with the projections in Gravningsmyhr (1995). The differences can to a large degree be attributed to sample uncertainty and somewhat different methods used to project the households. In addition we use a more recent population projection.

The development of incomes for old-age pensioners towards 2030

Table 2 shows the development in pension income and disposable income. Pension income are income from the National Insurance Fund, occupational pension is not included in the pension income. All figures are in 1999-NOK. We see that the old-age pensioners receive both higher pension income and disposable income in the whole period from 1995 to 2030. The disposable income rises 64 per cent from 1995 to 2030. The strong growth in income for old-age pensioners arises from better pension entitlements for old-age pensioners in this period. For the whole population the mean increase in disposable income is 33 per cent in the same period with no growth in wages.

Table 2. Mean own pension income per person by pension status. Mean own disposable income in parenthesis. 1999-NOK

| | 1995 | 1999 | 2010 | 2030 |
|----------------------|---------------------|----------------------|----------------------|----------------------|
| The whole population | 18 700 (111 000) | 23 100 (129 700) | 28 200 (137 000) | 37 100 (147 500) |
| Old-age pensioners | 83 300 (121 100) | 100 000 (143 700) | 114 600 (165 500) | 130 600 (199 300) |

Source: Statistics Norway.

Mean tax benefits, 1995-2030

Higher pension incomes and changes in the composition of the population will influence the “costs” associated with maintaining the special tax rules, and be important for the distributional impact of the rules. We calculate the tax reductions as the difference between tax payment with the present rules and tax payment in absence of the tax benefits. Above we gave a brief description of the three special tax rules for old-age pensioners that lead to lower taxes for them than for economically active. We should emphasize that the rule of limitation for taxes and the special tax allowance for age and disability also apply to other groups than retired persons. In table 3 we show the mean amount of the tax benefits for each of the years 1995, 1999, 2010 and 2030 for households with at least one old-age pensioner. The tax reductions for the household are measured per person, and all figures are in 1999-NOK. We can see that the tax reductions from lower social security contributions increase in the whole period. As a consequence of rising pension incomes the tax reductions from lower social security contributions will increase. The rule of limitation for taxes shows the opposite development. Higher incomes for the old-age pensioners lead fewer people to be affected by this rule, and its importance decreases. For the special tax allowance for age and disability the impact will be the same as for the lower social security contributions. Higher incomes lead to increased tax reductions from the special tax allowance for age and disability, as we can see from table 3. We can otherwise see that all the tax reductions together amount to more than the sum of each and one of the tax reductions separately. This comes from the interaction between the special tax rules. For instance, if the lower social security contributions were removed, the taxes would not increase for those covered by the rule of limitation for taxes. The rule of limitation for taxes will cover for a possible removal of one of the other special tax rules. The mean value of the total tax reductions increases from 1995 to 1999. The value of the total tax reductions is the same in 1999 and 2030, while the value is a little less in 2010.

The distributional effects of the special tax rules

The distributional effects of the special tax rules in years ahead are illustrated by “constructed” measures for household income. The reason is that it is prob-

Table 3. Mean tax reductions per person in households with at least one old-age pensioner, as a consequence of different tax rules. 1999-NOK

| | 1995 | 1999 | 2010 | 2030 |
|--|--------|--------|--------|--------|
| Lower social security contributions | 2 300 | 2 900 | 4 500 | 7 200 |
| Rule of limitation for taxes | 2 800 | 3 300 | 2 100 | 900 |
| Special tax allowance for age and disability | 1 200 | 1 500 | 2 000 | 2 900 |
| Total tax reductions | 11 700 | 13 200 | 12 800 | 13 200 |

Source: Statistics Norway.

lematic to compare the incomes between households of unequal size. A household with more members needs larger income than a smaller household to attain the same level of consumption. This should be considered when the distribution of the benefits is calculated. One can let each person in the household count with the same weight, so that in a household with four persons with a total income of NOK 400, 000, each of them dispose of NOK 100, 000. In that case we assume that it is no large-scale operational benefits for a household with more persons than for a household with only one person. Another possibility is to use the total disposable household income as a target for income. It is reasonable to assume that there will be some degree of large-scale benefits for larger households, but these are not unlimited. We have chosen to calculate the household's equivalence income as the household's total disposable income divided by the square root of the number of persons in the household (Buhmann et.al. 1988).

The distribution of the tax benefits by level of income for old-age pensioners for 1995 and 2030 is shown in table 4 and 5. The tables divide the households in ten groups according to rising equivalence income. The first decile consists of the ten per cent of the households with the lowest equivalence income. The next ten per cent of the households is in the second decile. The tenth decile consists of ten per cent of the households with the highest equivalence income. The tables show that lower social security contributions and the special tax allowance for age and disability first and foremost are beneficial for the households with high incomes. This is due to the fact that the tax reductions of the lower social security contribution increase more than proportionally with the income because of the tax-free allowance, and the special tax allowance for age and disability is beneficial first after the income has reached the limits where the rule of limitation for taxes apply. The tax reductions from the rule of limitation of taxes are largest for the households with low income.

Table 4 and 5 show that the tax reductions from lower social security contributions increases from 1995 to 2030. This is due to higher incomes for the old-age pensioners. The benefit from the rule of limitation for taxes increases for those with the lowest incomes. Old-age pensioners with higher incomes receive lower

Table 4. Decile table for the tax reductions, 1995, the households sorted according to the equivalence income. Households of old-age pensioners. 1999-NOK

| Desil | Mean equival. income | Tax reductions from lower social sec. | Tax reductions from the rule of limit. of taxes | Tax reductions from a special tax allowance | All special tax rules |
|-------|----------------------|---------------------------------------|---|---|-----------------------|
| 1 | 77 900 | 0 | 2 500 | 0 | 9 900 |
| 2 | 88 700 | 0 | 4 300 | 0 | 12 600 |
| 3 | 100 200 | 0 | 6 300 | 0 | 14 900 |
| 4 | 109 600 | 200 | 6 700 | 200 | 15 700 |
| 5 | 119 800 | 300 | 5 200 | 400 | 14 700 |
| 6 | 131 100 | 800 | 4 400 | 900 | 14 300 |
| 7 | 143 200 | 1 600 | 3 400 | 1 400 | 13 600 |
| 8 | 162 100 | 3 700 | 1 000 | 2 700 | 12 100 |
| 9 | 189 000 | 6 300 | 200 | 3 500 | 12 100 |
| 10 | 261 000 | 11 200 | 200 | 3 600 | 15 300 |

Source: Source: Statistics Norway.

Table 5. Decile table for the tax reductions, 2030, the households sorted according to the equivalence income. Households of old-age pensioners. 1999-NOK

| Desil | Mean equival. income | Tax reductions from lower social sec. | Tax reductions from the rule of limit. of taxes | Tax reductions from a special tax allowance | All special tax rules |
|-------|----------------------|---------------------------------------|---|---|-----------------------|
| 1 | 119 900 | 200 | 6 000 | 200 | 15 500 |
| 2 | 148 700 | 1 300 | 1 800 | 1 200 | 12 700 |
| 3 | 168 800 | 4 400 | 500 | 3 500 | 12 100 |
| 4 | 186 200 | 6 800 | 100 | 4 100 | 12 300 |
| 5 | 203 800 | 7 900 | 0 | 4 200 | 12 700 |
| 6 | 222 700 | 9 000 | 0 | 4 100 | 13 400 |
| 7 | 244 900 | 10 400 | 0 | 4 000 | 14 400 |
| 8 | 271 200 | 11 200 | 0 | 3 900 | 15 100 |
| 9 | 313 800 | 13 400 | 0 | 3 700 | 17 100 |
| 10 | 422 200 | 19 000 | 0 | 3 600 | 22 400 |

Source: Statistics Norway.

tax reductions from the rule of limitation for taxes in 2030 than in 1995. For the special tax allowance for age and disability the tax reductions increase most for those with medium incomes towards 2030. All together the old-age pensioners at the lower end and the high end of the income distribution are the ones who get increased tax reductions towards 2030, while the tax burden for old-age pensioners with medium incomes will be about unchanged according to the projections.

Another way of describing the effects of the tax reductions is to use summary measures for measuring income inequality before and after the tax reductions are included in the income. The Gini coefficient is a summary (aggregated) measurement of income inequality. It is between 0 and 1, where higher Gini coefficient implies larger income inequality. A Gini coefficient of zero means that all income is evenly distributed, whereas a coefficient of one means that one person or household receives all income in the society. If the inequality, measured by the Gini coefficient are reduced by one per cent, this will be the same reduction of inequality as we would have achieved if we reduced everybody's income proportionally by one per

cent – and distributed as an equal amount to everybody. This means that everybody with incomes above average give away more than they receive, while the ones with incomes less than average receive more than they give away (Aaberge 1997).

The Gini coefficients for 1995 are cited in table 6, whereas table 7 shows corresponding coefficients for 2030.⁵

Table 6 and 7 show that the inequality among old-age pensioners increases if the tax limitation rule is removed, while the inequality is reduced if the advantage of the low contribution to social security is removed. The low contribution to social security as well as the tax limitation rule have less effect on the difference in income in 2030 than in 1995. The old-age pensioners in the lower part of the income distribution have higher tax reductions from the low social security contribution in 2030 than in 1995 – since their incomes increased considerably in this period. The low social security contribution contributes therefore less to create inequality in the income distribution among the pensioners in 2030 than in 1995. The tax limitation rule will also have less effect on the

⁵ The Gini coefficients are calculated with the use of a "inequality programme" developed by Rolf Aaberge and Tom Vennemo in Statistics Norway.

Table 6. Inequality in disposable income for different populations, 1995, measured by the Gini coefficient. Percentage change in relation to the present rules in parenthesis

| | All special tax rules | Excluding social sec. contributions | Excluding tax limitation | Excluding special deduction | No special tax rules |
|--------------------|-----------------------|-------------------------------------|--------------------------|-----------------------------|----------------------|
| Total population | 0.280 | 0.279 (-0.4) | 0.284 (1.4) | 0.280 (0.0) | 0.293 (4.6) |
| Old-age pensioners | 0.204 | 0.195 (-4,4) | 0.216 (5,9) | 0.201 (-1.5) | 0.224 (9.8) |

Source: Statistics Norway.

Table 7. Inequality in disposable income for different populations, 2030, measured by the Gini coefficient. Percentage change in relation to the present rules in parenthesis

| | All special tax rules | Excluding social sec. contributions | Excluding tax limitation | Excluding special deduction | No special tax rules |
|--------------------|-----------------------|-------------------------------------|--------------------------|-----------------------------|----------------------|
| Total population | 0.252 | 0.249 (-1.2) | 0.254 (0.8) | 0.252 (0.0) | 0.256 (1.6) |
| Old-age pensioners | 0.202 | 0.197 (-2.5) | 0.207 (2.5) | 0.204 (1.0) | 0.212 (5.0) |

Source: Statistics Norway.

income distribution among pensioners in 2030 as a result of the fact that several of the old-age pensioners have increased their income so much – that the rule will not any longer apply to them. For the special deduction the effect on the income differences is different for the two years. The effect is however quite insignificant in both 1995 and 2030.

The inequality among the old-age pensioners increases if all the tax advantages are removed, and the inequality increases more if only the tax limitation rule is removed. This can be explained by the fact that the low social security contribution and the special deduction are advantages that apply to all pensioners when the tax limitation rule is removed. Those who sorted under this rule – would without it gain advantages of a low social security contribution and a special deduction. When all three tax rules are applied – only pensioners with income above the limits to pay taxes according to the tax limitation rule – gain tax reductions from the low social security contribution and the special deduction.

The effects of the three tax rules on the income distribution for the entire population operate the same way as among the old-age pensioners, but the effects are smaller. The income distribution for the entire population will become more even from 1995 to 2030. This may inter alia be due to an increased portion of old-age pensioners, and that their income increase relative to other groups in the population. Since the old-age pensioners have a more even income distribution than the rest of the population, this contributes to the fact that the difference in income for the entire population is reduced.

Conclusion

Old-age pensioners have three special tax rules that result in lower taxes than for the economically active. In this article we have calculated these tax reductions and looked at the distribution effects. The main results are the following:

- Under the condition that the basic pension increases in step with wages the old-age pensioners will receive disposable income that on average will increase by 64 per cent from 1995 to 2030; on average the disposable income for the entire population will increase by 33 per cent in the same period without any wage increase.
- The average tax reduction for an old-age pensioner was NOK 11,700 in 1995 and will increase to NOK 13,200 in 2030 (both figures measured in 1999-NOK).
- The low social security contribution is most beneficial for old-age pensioners with the highest income, and contributes to increase income. The tax limitation rule gives most tax reductions to those with low incomes, and contributes to reduce the inequality in income among the old-age pensioners both in 1995 and 2030. The special deduction for age and disability is most beneficial for those with highest income in 1995, whereas those in the middle of the income distribution will have most tax reductions from the special deduction in 2030. The effect of the special deduction for income inequality among old-age pensioners is rather small.
- Altogether the three advantages offer greater equality in the income distribution among old-age pensioners both in 1995 and 2030. The effect of the special tax rules in the income distribution will be less from 1995 to 2030. This is due to a relatively

strong increase of income among old-age pensioners, something that will result in the fact that more old-age pensioners in the lower part of the income distribution get advantages from the lower contribution rate to social security. This contributes to create less inequality in income. At the same time the tax limitation rule will cover less old-age pensioners in 2030 than in 1995.

- The tax limitation rule is most favorable in regard to reduction of income inequality among old-age pensioners, but the effect will be less from 1995 to 2030. For those with the lowest income the tax reductions from this tax rule will increase from 1995 to 2030.

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