3 Inequality, property taxation and local public spending on housing

Lars-Erik Borge, Department of Economics, Norwegian University of Science and Technology (NTNU)

Lana Krehic, Center for Economic Research, NTNU Social Research

In most Western countries, income and wealth inequality have increased during the last decades. We study the impact of increased inequality on property tax receipts and housing outlays by Norwegian local governments. In Norway, both income inequality and housing wealth inequality have increased between 2010 and 2017. Our main findings are: (*i*) increased income inequality does not affect property tax receipts, nor local public spending on housing, (*ii*) housing wealth inequality increases the level of the property tax and (*iii*) housing wealth inequality increases housing-related spending. Interestingly, the two types of inequality have different effects. Compared to earlier studies, which find that income inequality increases property tax receipts, we only find an effect of housing wealth inequality. Surprisingly, we also find that neither income nor housing wealth inequality has any impact on the distributional effects of the property tax measured by the size of the basic deduction.

3.1. Introduction

In most Western countries income and wealth inequality have increased during the last decades (Piketty, 2017[1]). Rising inequality may have negative effects on mortality, health, civic engagement, trust and economic growth. Rising inequality may also affect public spending and revenues, either to reduce the negative consequences of inequality or to collect revenues in a fairer way.

Inequality has also increased in Norway. The first aim of this paper is to analyse the level and distributional effects of the local property tax. Have local governments[1] responded to increased inequality by increasing or reducing the property tax? And has increased inequality contributed to a more progressive property tax? Second, we investigate how local public spending on housing is affected by greater inequality. In Norway, a high share of the population owns their house or apartment and public housing is mainly for individuals with weak attachment to the labour market. It is, therefore, of great interest to analyse how public spending on housing is affected by rising inequality. In both the analyses of property tax receipts and housing spending, we focus on two types of inequality, i.e., income inequality and housing wealth inequality.

In Norway, the property tax base is the assessed value of land and buildings. Local governments can decide to apply a basic deduction, which reduces the taxable value before the tax rate is applied. A higher basic deduction makes the property tax more progressive. Since the basic deduction is the same across all households within a municipality, an increase in housing wealth inequality implies that higher valued properties make up a larger share of the total tax base. Consequently, for a given total revenue target, the average tax payment increases with a more unequal distribution of housing values.

The rest of the paper is organised as follows. In the next section we discuss the theoretical background and develop hypotheses. Then we present the Norwegian institutional context and describe the residential property tax, local public spending on housing and the measures of income and housing wealth inequality. Following this, we discuss econometric challenges, while the estimation results are presented after. Finally, the revenue and spending responses, the design of the property tax and whether municipalities should have more responsibility for spending related to housing are discussed. The last section concludes.

3.2. Theoretical background and hypotheses

The theoretical literature related to the relationship between government size and inequality is ambiguous. One view, emphasised by Roberts (1977[2]) and Meltzer and Richard (1981[3]), is that rising inequality will lead to higher tax rates and more redistributive spending. These contributions rely on the median voter theorem, which assumes that the voter with median income or wealth is decisive. A reduction in the ratio of median to mean income or wealth (increased inequality) means that the median voter's tax price for higher spending becomes lower. Consequently, the median voter will demand a higher level of overall public spending.

Epple and Romano (1996[4]) and Bénabou (2000[5]) develop models with opposite predictions, where rising inequality may reduce government size. Epple and Romano (1996[4]) investigate a setting where there are private alternatives to public services. According to their theory, households with middle income or wealth can be blocked by a coalition of voters at both ends of the income or wealth distribution. Voters with low income or wealth prefer low levels of public services because they are not willing to pay high taxes, while voters with high income or wealth prefer private alternatives. An increase in the number of voters at the two ends of the distribution (increased inequality) will then reduce the provision of public services. The model developed by Bénabou (2000[5]) has two long-run steady states. One with high inequality and little redistribution, while another with less inequality and more redistribution.

Given that the theoretical literature is ambiguous, estimated effects could go in either direction. However, most empirical analyses using local data (Alesina, Baqir and Easterly, 2000[6]; Borge and Rattsø, 2004[7];

Corcoran and Evans, 2010[8]; Boustan et al., 2013[9]; Fabre, 2018[10]) tend to find that inequality increases government size or taxation. These studies focus only on income inequality, not on housing wealth inequality. In this chapter, we study the relationship between inequality and the property tax. In the Norwegian context, where the property tax is the only tax over which local governments have real tax discretion, income inequality can be interpreted as a socioeconomic indicator not directly related to the property tax base. If anything, we expect housing wealth inequality to have a larger impact on property taxes than income inequality. This implies that we expect municipalities that experience rising housing wealth inequality to enact policies that aim to lower the top part of the distribution.

As in many other countries, the Norwegian property tax is controversial and unpopular. One reason is that the demand for housing is inelastic with respect to income, implying that the property tax base makes up a larger fraction of income in low-income households than in high-income households. Another reason that the tax is disliked is that low-income households may find it difficult to pay the property tax. To address this issue, Norwegian local governments have the opportunity to introduce a basic deduction. The basic deduction is subtracted from the property value before the tax is calculated. We expect that municipalities react to increasing inequality, both in income and housing wealth, by increasing the size of the basic deduction.

Previous findings suggest that rising inequality tends to increase the support for local government spending. Municipalities that experience increasing inequality in either income or housing wealth may want to lift the bottom part of the distribution by increasing public spending related to social welfare. Norway is a homeowner society where most citizens (around 82%) own their main residence. Consequently, public housing is mostly directed towards individuals outside, or with weak connections, to the labour market. These households will typically have low income and no or low housing wealth. Consequently, we expect that both income and housing wealth inequality will increase local government spending on housing.

3.3. The Norwegian institutional context

3.3.1. The property tax

The Norwegian system of financing local governments is quite centralised. Most revenue comes in the form of local taxes, grants from the central government and user fees. The personal income tax is the tax that generates the most revenue. Formally, local governments have substantial discretion over the income tax. There is a maximum tax rate, determined by the national parliament, that varies from year to year. Municipalities are free to set a tax rate below the maximum. However, since 1978 all local governments have used the maximum tax rate. In addition, local governments levy a wealth tax and a natural resource tax on power plants. The maximum local wealth tax rate is also determined at the national level and all local governments are applying the maximum rate.[2] The tax on power production is set nationally with no local discretion. Neither the wealth tax nor the natural resource tax generates much revenue in the aggregate, but they are important for individual local governments.

The property tax, which makes up around 3% of total revenue, is the only tax over which local governments have real discretion. The property tax is an optional tax for local governments and it is administered locally. This means that – contrary to other local taxes – property tax revenues are not a part of the tax equalisation scheme between local governments. Moreover, the revenues from the property tax are not earmarked for any particular purpose.

The property tax base is the value of land and buildings combined, while there is no separate taxation of the two components. The tax cannot be deferred, e.g., for elderly people with low pensions. Local governments can choose what type of property to tax, i.e., residential and business property, or only one of them. If a local government chooses to have a property tax, the tax rate must be between 0.2% and 0.7%. The minimum and maximum rates refer to the period under study (2010-2017). The maximum rate

has recently been reduced for residential property, but not for business property, to 0.5% in 2020 and further to 0.4% in 2021. The minimum tax rate was reduced to 0.1% in 2020.

Local governments that choose to tax residential property, can decide to have a basic deduction. This is a measure used by municipalities to make the taxation of property less regressive. Here we describe in more detail the distributional effects of the basic deduction. In general, residential property tax is given as:

$$PT = t(V - E) \qquad (1)$$

where PT is the property tax for the residence, t is the property tax rate, V is the assessed value of the property and E is the basic deduction. Since E is the same for all households in a municipality, the basic deduction will reduce the property tax payment relatively more for less valuable residences compared to more valuable residences.[3] Little is known about whether the property tax is regressive or progressive. As far as we know, the only study of the distributional effects of the residential property tax in Norway, is Borge and Nyhus (2012[11]). In a sample of nine municipalities, they find that the property tax is regressive in five, roughly proportional in three and progressive in one. It may come as a surprise that the distributional effects vary across municipalities, but it is likely to reflect variation in assessment practice, variation in the impact of income on housing demand in the local housing markets and variation in the basic deduction.

In 2017, the last year of our study, 28% of the local governments with a residential property tax had a basic deduction. The deduction varies greatly between municipalities, with an average of NOK 325 439.[4] The lowest deduction is NOK 10 000, whereas Oslo, the capital, has a basic deduction of NOK 4 million. The second highest was NOK 1.8 million. Interestingly, Oslo was taken to court because of the high basic deduction. Plaintiffs argued that it was against the law since the high deduction rate led to only a low share of residences (around 20%) that had to pay property tax. The Supreme Court decided in favour of the municipality, but also stated that such a high deduction was a borderline case.

Finally, the practice of assessing residential properties (V) can take two different forms. Local governments can choose to assess the properties within their municipality themselves, usually carried out with an inspection and appraisal. Alternatively, they can rely on the values from the Norwegian Tax Administration, which is also used for wealth taxation. In 2017, 69% of the local governments used the values from the wealth taxation also for the property tax. Municipalities that assess properties themselves could potentially come up with a more precise appraisal, but municipal appraisal makes it difficult to compare the value of properties across municipalities.

It is important to note that the property tax rate, t, is not very informative about the level of property taxation. There are several reasons for this. First, property values are reassessed every 10th year. Because reassessment tends to increase property values, local governments reduce the property tax rate the first year after reassessment. This is to avoid a sharp and sudden increase in the property tax burden for households. After the property tax rate reduction, the rate gradually increases over time. Furthermore, local governments reassess at different times. The tax rate does not take into account differences in assessment practice nor the basic deduction. This means that a 0.7% tax rate in one municipality can represent a very different tax burden compared to the same tax rate in another municipality.

In this paper, we rely on an alternative measure of the property tax burden. It is the property tax payment for a household that owns a standard detached house of 120m². The property tax paid by a standard house is our preferred measure of tax burden because it takes into account the regional variation in housing values and the size of the basic deduction. It is also quite representative for the type of house most households live in throughout the country.

Table 3.1 reports the average property tax for a standard house of 120m², with the average basic deduction and the percentage of local governments that levy a residential property tax. It is evident that the average property tax for a standard house and the percentage of local governments with residential property tax increased between 2010 and 2017. The average tax has increased steadily, leading to a doubling in size

during the sample period. On the other hand, the average basic deduction has been roughly stable until 2015. After 2015 the deduction increased with relatively large, yearly jumps. The average basic deduction has increased by 30% since 2010.

Table 3.1. Property tax for a standard house, basic deduction and share of local governments with a residential property tax

Averages in NOK, 2010-2017

	Average property tax for a standard house of 120m	Average deduction	% of local governments with residential property tax
2010	1,503	251,319	42.0
2011	1,620	248,173	45.1
2012	1,721	248,024	46.2
2013	1,924	245,094	48.4
2014	2,209	237,103	53.5
2015	2,457	270,797	57.1
2016	2,836	314,250	62.7
2017	3,012	325,439	63.7

Note: Average property tax and average basic deduction are both in current Norwegian kroner (NOK) and are calculated for local governments with a residential property tax and with a basic deduction respectively. At the time of writing one Euro equalled NOK 11.36.
Source: Statistics Norway.

3.3.2. Housing-related public spending

Norwegian local governments are responsible for welfare services like childcare, primary and lower secondary education, care for the elderly (homes and institutions), primary health care, child custody, social assistance and housing. Other important tasks are culture, roads and infrastructure. As discussed in Section 3.1, Norwegian local governments face quite strict regulations on the revenue side of their budgets. On the expenditure side, they have more discretion and there is a large variation in priorities across local governments. Local governments can freely allocate most of their revenues between service sectors.

Norway is a homeowner society, with a high share of the population (around 82%) owning their home. Except for the larger cities, the professional renting market is limited. Public housing is mostly for citizens outside, or with weak attachment to, the labour market. Local governments are responsible for providing housing for their citizens and support for establishing private housing. The latter is part of social assistance. In addition to support from the local government, the central government has a responsibility to support low-income households by providing housing allowances. We analyse spending related to two local government housing policies, namely spending on public housing and support for private housing. These are analysed separately.

Table 3.2. Local government spending on housing

Average expenditure in NOK per capita, 2010-2017

	Local government housing spending	Local government support for private housing
2010	765	106
2011	755	91
2012	771	99
2013	796	116
2014	836	129
2015	877	130
2016	985	127
2017	1052	133

Note: Measured in current NOK per capita. At the time of writing one Euro equalled NOK 11.36.
Source: Statistics Norway.

Table 3.2 reports the development in average local government housing spending and average support for private housing. The first column shows that spending on local government housing has increased by almost 40% between 2010 and 2017, and growth was particularly strong in 2016 and 2017. On the other hand, the expenditure related to support for private housing has increased less (25%), even experiencing a decrease on average in 2011 and 2012 compared to 2010.

3.3.3. Measuring inequality

We measure income and housing wealth inequality using Gini-coefficients, which increase as inequality increases. The Norwegian Tax Administration (*Skatteetaten*) has provided data for each local government during the years 2010-2017. More precisely, the Norwegian Tax Administration has provided data at the household level for 25% of the households in each local government for each year. The random sample varies from year to year.

Income is measured as ordinary income (*alminnelig inntekt*). This is an income concept that includes labour income (wages and self-employment), pensions, social security benefits and capital income (including interests and dividends) net of deductions (interest payments and a minimum deduction among others). The approach of calculating the tax base for personal income is identical across all local governments.

For housing wealth, we use the same values as the Tax Administration uses for wealth taxation[5] based on an empirical model developed by Statistics Norway. The model predicts the market value of all residential housing in Norway, which is then included as part of an individual's wealth. We utilise this valuation because it allows for a comparable measure of housing wealth inequality, both for local governments that appraise properties themselves and for local governments that do not levy a residential property tax.[6] We measure housing wealth as the (predicted) values of the primary residence. In cases where a person or a household owns several residences, it is included as a part of their housing wealth if these secondary residences are located in the same municipality as their primary residence.

Ideally, we would like to adjust the inequality indicators for differences in the size and composition of households – for example, the number of adults and children. However, we do not have this information and are thus unable to adjust the inequality indicators. It can be argued that the inability to adjust for household size and composition is most important for comparisons across local governments. Therefore, to compensate for this in the empirical analysis, we include local government fixed effects and only use time-series variation in the data. As the composition of household types is not likely to change greatly during our period of study, for example going from a high share of four-person households to a high share of two-person households, the inclusion of municipality fixed effects should absorb the effect that household composition may have on local government property taxation and housing spending.

Table 3.3. Gini-coefficients for income inequality and housing wealth inequality

Average Gini-coefficients, 2010-2017

	Income inequality	Housing wealth inequality
2010	43.44	60.98
2011	43.95	61.15
2012	44.16	60.58
2013	44.81	62.11
2014	45.45	62.99
2015	46.46	63.53
2016	46.38	64.18
2017	46.72	65.01

Note: The Gini-coefficients are normalised to vary between 0 and 100.
Source: Norwegian Tax Administration.

Table 3.3 reports the development of income and housing wealth inequality. It appears that both income and housing wealth inequality have increased over time. However, there are some exceptions. Housing wealth inequality was stable during 2010-2012, while income inequality was stable during 2015-2017. Moreover, housing wealth inequality is substantially higher than income inequality. Rather surprisingly, the two measures of inequality are practically uncorrelated, both across local governments and over time.

The Gini-coefficients for income reported in Table 3.3 are substantially higher than the official OECD numbers. In 2017 the Gini for income reported by OECD was around 26. We believe that the main reasons for the discrepancy is that our income measure is not adjusted for household size and composition (see the discussion above) and that it is measured before tax. However, the trend of rising income inequality is similar to the findings in other Norwegian studies (Aaberge, Atkinson and Modalsli, 2020[12]).

3.4. Econometric specification

The specification of the property tax equations, i.e., for a standard house and the basic deduction, are similar to Borge and Rattsø (2004[7]). For housing expenditure, we rely on a demand approach (Inman, 1979[13]; Rubinfeld, 1987[14]) and applied to Norwegian local governments by Borge and Rattsø (1995[15]) and Borge, Brueckner and Rattsø (2014[16]). The econometric specification is given by:

$$y_{it} = \beta GINI_{it} + \gamma X_{it} + \alpha_i + \delta_{tc} + \varepsilon_{it}, \tag{2}$$

where y_{it} is the dependent variable (property tax for a standard house, basic deduction or housing expenditure per capita), $GINI_{it}$ is either income or housing wealth inequality, X_{it} is a vector of (time-varying) controls, α_i is a local government fixed effect, δ_{tc} are county-specific trends and ε_{it} is an error term. The coefficient of main interest is β. If $\beta > 0$, more inequality leads to higher property taxation for a standard house, a higher basic deduction, or higher municipal housing expenditure. If $\beta < 0$, more inequality leads to decreases in the dependent variables.

Several control variables are expected to influence the evolution of property tax payments and housing spending. First, we include municipal per capita revenue which consists of lump-sum grants and local tax revenues. The latter includes regulated income, wealth and natural resource taxes, as well as property tax revenue from business property. Since the local governments use the maximum rate for most of these taxes and lump-sum grants are distributed by objective criteria, this revenue measure can be treated as exogenous. We expect that higher local government revenue increases housing spending and reduces the property tax.

We also include an indicator of fiscal distress, Robek, a dummy variable that is equal to one if the municipality is being supervised by the county governor because of budgetary problems. An earlier study by Hopland (2013[17]) shows that local governments on the Robek list increase the property tax and reduce spending. In addition, we control for average private disposable income per capita in the municipality. We expect that higher private income increases the demand for local public services, while higher expenditures are financed by higher property taxation.

Moreover, we include two political variables that the previous literature (Kalseth and Rattsø, 1998[18]; Borge, 2005[19]; Fiva and Rattsø, 2007[20]) has shown to influence policy outcomes in Norwegian local governments. The first political variable is the effective number of parties (inverted Herfindahl index) in the local council. This index was developed by Laakso and Taagepera (1979[21]) and may be interpreted as an indicator of political fragmentation. We expect that increased political fragmentation increases both the property tax and housing spending. Second, we control for ideology by including the share of socialists in the local council. We expect that socialists prefer a larger public sector than non-socialists, implying that an increased share of socialists in the council may contribute to higher property taxation and housing spending.

Furthermore, we control for the age composition of the population by including the share of children (0-5 years), youths (6-15 years) and the elderly (above 80 years). These variables represent demand for childcare, education and care for the elderly, respectively. These services compete with housing on the expenditure side and may also affect the property tax. We also control for municipal population size and the share of the population living in urban areas. These variables capture background characteristics that may influence policy decisions.

Finally, in the property tax equations, we include a dummy variable that indicates whether the local government performed a reassessment of their properties during the sample period. The variable takes the value 1 in the year the new assessment is applied and in all subsequent years. Reassessments will in most cases lead to an increase in assessed property value and is thus an alternative to increasing the tax rate. Reassessments are therefore likely to have a negative effect on the property tax rate, whereas they will have a positive effect on the property tax for a standard house.

Even though we have included many controls, there is a concern that some time-invariant factors are left out. For instance, there is variation in the housing price level, housing standard and housing type, which simultaneously influence the property tax and municipal housing spending. Some local governments are rural and characterised by mostly detached houses with lower market values. On the other hand, the property base in urban areas is more diversified, which in turn can produce more variation and inequality in both income and housing wealth. Failing to control for these factors can lead to standard OLS estimations being biased. This is our motivation for including local government fixed effects.

A further concern, not mitigated by the fixed effects approach, is the potential for time-varying effects correlated with both inequality and policy outcomes. For instance, international or nationwide shocks, such as financial crises, could induce municipalities to increase revenue through property taxes. These shocks can also affect inequality and housing spending. Regional housing market shocks are also an example of factors that can have simultaneous effects on inequality, property taxes and housing spending. To cope with these potential biases, we include county-specific trends in all our regressions.

We use data between 2010 and 2017, with most Norwegian local governments included in the estimations. For the property tax for a standard house and housing expenditure, we have access to data for an average of 419 (of about 430) local governments. For the basic deduction analyses, where we only include local governments with a residential property tax, we only have data for an average of 219 local governments. The standard errors are clustered at the municipal level, to account for potential correlation over time within municipalities.

3.5. The determinants of property taxation for a standard house and basic deduction

In Table 3.4, we report the estimation results for the effect of inequality on the property tax for a standard house and the basic deduction. Models A and C show the results with income inequality as the main explanatory variable, while models B and D show the results with housing wealth inequality as the main explanatory variable.

For the property tax for a standard house (columns A and B), the effect of inequality on the tax depends on the type of inequality. Income inequality comes out as negative and not statistically significant, while housing wealth inequality comes out as positive and statistically significant. An increase in the Gini-coefficient of 4 (roughly corresponding to the average increase in Table 3.3) increases the property tax for a standard house by NOK 100. This constitutes an increase of nearly 6% from the average. Since housing wealth is closely related to the property tax base, the impact of housing wealth inequality may be interpreted as a tax price effect.

Other empirical studies (Alesina, Baqir and Easterly, 2000[6]; Borge and Rattsø, 2004[7]; Corcoran and Evans, 2010[8]; Boustan et al., 2013[9]; Fabre, 2018[10]) find that income inequality increases the property tax but have not analysed the effect of housing wealth inequality. It is a bit surprising that our results differ from the Norwegian study of Borge and Rattsø (2004[7]). On the other hand, their analysis is based on an earlier period (1996-1998) and may not hold for the period we analyse (2010-2017).

Second, economic variables and fiscal distress have a statistically significant effect on the property tax. An increase in local government revenue per capita by NOK 5 000 per capita reduces the property tax for a standard house by nearly NOK 315. This effect is similar to that of Borge and Rattsø (2004[7]) and can be interpreted as revenue substitution in the sense that high revenues from other sources give room for a lower property tax. Local governments on the Robek-list increase the property tax for a standard house by a bit more than NOK 250, which is consistent with earlier findings by Hopland (2013[17]). An increase in private disposable income increases the property tax for a standard house by nearly NOK 100. The underlying mechanism is most likely that higher private income increases demand for local public services, while more public services are financed by a higher property tax. The modest effects of local government revenue and private income point towards a substantial flypaper effect. Money tends to stick where it hits.

Third, reassessments of property values that increase assessed values contribute to a higher property tax for a standard house. The most likely interpretation of this effect is that the property tax rate has reached the maximum rate, and that a reassessment gives room for higher property taxation for a standard house. Fourth, we do not find any statistically significant effect of political variables, age composition of the population, population size, or the share of the population living in urban areas.

For the basic deduction, both income and housing wealth inequality come out with positive signs. However, none of the estimated coefficients are statistically significant. Given that the deduction reduces the regressivity of the property tax, it is surprising that inequality has no statistically significant effect on the basic deduction.

However, the positive effect of the share of the elderly may reflect distributional concerns. Many of the elderly live on (low) pensions, and some of them in high-valued residences, benefitting from a large basic deduction. An increase in the share of the elderly by one percentage point increases the deduction by nearly NOK 23 000.

Table 3.4. Property tax for a standard house and basic deduction: Estimation results

Estimates with clustered standard errors, t-values in parentheses

	Property tax for a standard house		Basic deduction	
	A	B	C	D
Income inequality	-4.42 (-0.46)		579.4 (0.74)	
Housing wealth inequality		24.9 (2.72)		543.3 (0.46)
Local government revenue (NOK 1000)	-65.1 (-5.69)	-62.5 (-5.56)	1054.5 (0.97)	1068.4 (1.00)
Robek	244.5 (2.13)	252.4 (2.20)	1610.6 (0.21)	1945.8 (0.25)
Private disposable income (NOK 1000)	10.0 (1.96)	9.4 (1.91)	-625.4 (-1.69)	-598.3 (-1.60)
Effective number of parties	83.59 (1.52)	78.7 (1.48)	6808.0 (1.07)	6912.2 (1.08)
Share of socialists in the local council	-105.2 (-0.30)	-63.1 (-0.18)	54591.3 (0.931)	53046.4 (0.90)
Share of children (0-5 years)	-5859.3 (-0.77)	-5647.3 (-0.75)	-4898.6 (-0.01)	-15446.6 (-0.02)
Share of youths (6-15 years)	-11071.5 (-1.55)	-10659.1 (-1.54)	-133243.4 (-0.22)	-158305.2 (-0.27)
Share of elderly (above 80 years)	-3051.7 (-0.32)	-5015.0 (-0.55)	2202430.6 (2.24)	2271001.7 (2.21)
Population (10000)	1267.6 (1.78)	1223.9 (1.71)	202787.1 (1.88)	202690.8 (1.89)
Share urban	1413.5 (1.31)	1340.5 (1.26)	-94486.1 (-0.97)	-94896.9 (-0.97)
Reassessment	1455.3 (10.18)	1474.9 (10.42)	81170.2 (2.09)	82069.2 (2.11)
Estimation period	2010-2017	2010-2017	2010-2017	2010-2017
# of observations	3354	3344	1753	1744
R^2	0.385	0.388	0.172	0.172

Note: Local government fixed effects and county-specific trends are included in all regressions but are not reported in the table.

We find a significant effect of the population size and more populous local governments have a larger basic deduction. An increase in population size by 1 000 inhabitants increases the basic deduction by a bit more than NOK 20 000. Again, the reassessment dummy comes out as positive and statistically significant. This suggests that the deduction increases when assessed housing values increase. Other things equal, increased valuation makes the property tax more regressive. An increase in the basic deduction works in the direction of neutralising the increased regressivity.

Finally, we are not able to document any statistically significant effects of other variables capturing fiscal conditions, private income, politics, the younger part of the population and settlement pattern for the size of the basic deduction.

3.6. The determinants of housing spending

In Table 3.5, we report estimation results for local government housing spending and support for establishing private housing. First, we discuss the determinants of public housing spending in columns A and B. Similar to the property tax for a standard house, the type of inequality we study is of importance. While housing wealth inequality comes out positive and statistically significant, income inequality is not statistically significant. An increase in the Gini-coefficient of 4 (again corresponding to the average increase in Table 3.3) increases public housing spending by NOK 40, which corresponds to 0.5% of the average. We also estimate a positive and statistically significant effect of the share of socialists in the local council. An increase in the share of socialists by 10 percentage points will increase public spending on housing by NOK 26.

Table 3.5. Housing-related spending: Estimation results

Estimates with robust/clustered (at the local government level) t-values in parentheses

	Local government housing spending		Support for establishing private housing	
	A	B	C	D
Income inequality	-7.4 (-0.86)		-2.0 (-1.35)	
Housing wealth inequality		10.3 (2.60)		6.1 (1.78)
Local government revenue (NOK 1000)	-8.2 (-1.44)	-7.1 (-1.33)	-1.4 (-0.99)	-1.0 (-0.71)
Robek	32.0 (0.81)	31.9 (0.81)	-5.9 (-0.52)	-5.4 (-0.47)
Private disposable income (NOK 1000)	0.1 (0.17)	-0.7 (-1.23)	0.5 (1.10)	0.2 (0.64)
Effective number of parties	-25.6 (-0.92)	-25.5 (-0.94)	-3.0 (-0.41)	-2.9 (-0.40)
Share of socialists in the local council	253.9 (1.83)	263.4 (1.90)	29.5 (0.63)	27.2 (0.59)
Share of children (0-5 years)	3424.1 (1.13)	3774.6 (1.26)	-759.4 (-0.70)	-719.1 (-0.68)
Share of youths (6-15 years)	3576.0 (1.05)	4002.9 (1.16)	-466.7 (-0.45)	-310.8 (-0.32)
Share of elderly (above 80 years)	-952.4 (-0.30)	-1491.2 (-0.47)	635.2 (0.53)	787.9 (0.67)
Population (10000)	185.9 (2.42)	171.8 (2.28)	109.8 (3.05)	100.7 (2.76)
Share urban	144.3 (0.55)	108.5 (0.41)	-74.9 (-0.67)	-93.3 (-0.82)
Estimation period	2010-2017	2010-2017	2010-2017	2010-2017
# of observations	3354	3344	3354	3344
R^2	0.095	0.095	0.034	0.042

Note: Local government fixed effects and county-year trends are included in all regressions but are not reported in the table.

We then turn to the determinants of support for establishing own housing in columns C and D. Again, the type of inequality matters. Housing wealth inequality comes out as positive and statistically significant at the 10% level, while income inequality is not statistically significant. An increase in the Gini-coefficient of 4 increases housing support by NOK 24, which is 2% of the average. None of the other explanatory variables is statistically significant.

3.7. Policy implications

3.7.1. Property tax and housing spending

The analyses in the last two sections suggest that local governments react to increasing housing wealth inequality in two ways. First, municipalities increase the property tax, with an aim to reduce the top of the housing wealth distribution. Second, they increase local government housing spending and support for establishing private housing, thus lifting the bottom part of the housing wealth distribution. In summary, local governments seem to tackle rising inequality with policies aimed at both ends of the distribution. A relevant question is whether municipalities exercise some form of revenue recycling within housing wealth inequality. As explained in Section 3.1, local governments have very limited discretion when it comes to revenue raising. The property tax is the only tax that municipalities can decide on whether to levy as well as how much revenue to raise. Thus, there is a possibility that municipalities raise revenue from property taxation, which in turn is recycled into public housing spending. Local politicians can potentially use this argument as a justification for residential property taxation. Alternatively, housing wealth inequality may be considered as more (or less) important, such that they prioritise spending more (or less) money than they raise from residential property taxation.

Figure 3.1. Effects of increases in housing wealth inequality
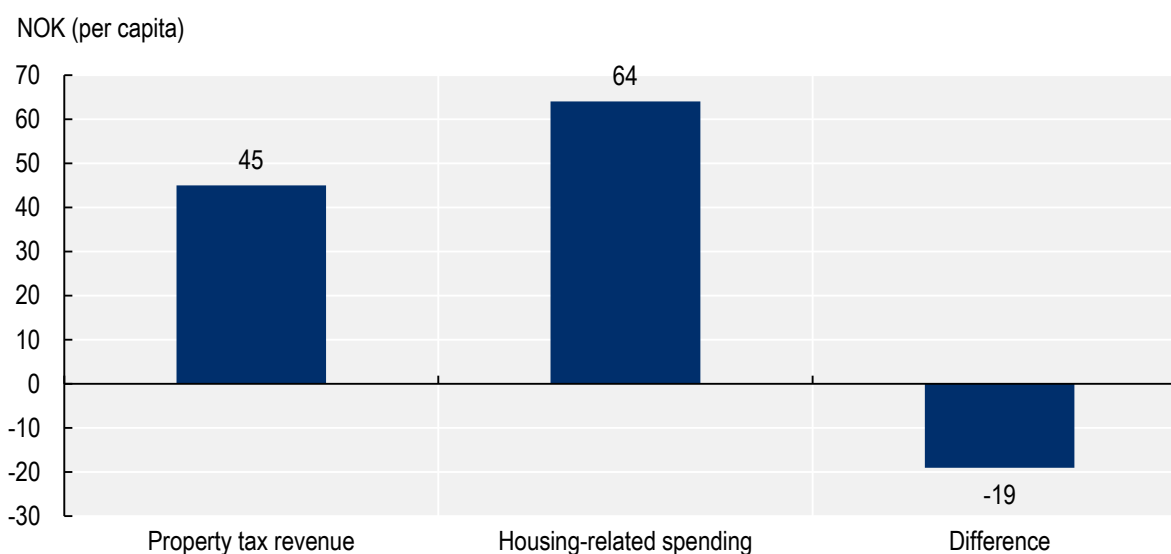
Source: Authors' calculations.

We do a simple back-of-the-envelope calculation using the estimated responses. The revenue response suggests that an increase in housing wealth inequality by 4 Gini points increases the tax levied on a standard house by NOK 100. On the expenditure side, we found that municipalities increase housing-related spending by NOK 64 (40+24) when housing wealth inequality increases by 4 Gini points. The average number of persons per household in Norway is 2.2, implying that revenues per capita from the residential property tax are predicted to increase by NOK 45 when housing wealth inequality increases by 4 Gini points. These findings are summarised in Figure 3.1. This implies that the revenue response to increased housing wealth inequality is slightly smaller than the expenditure response. However, both responses are modest.

3.7.2. Some remarks on the design of the property tax

Two expert committees, one on local public finance (NOU, 2022[22]) and the other on taxation (NOU, 2022[23]), delivered reports to the Norwegian central government in 2022. Both reports discussed the property tax among other issues. The local public finance committee considered the residential property tax to be a good tax base for local governments, highlighting its low mobility, stability over the business cycle, and that it works as a benefit tax. In addition, the committee emphasised that it is important that local governments have the opportunity to take distributional effects into account through the basic deduction. Moreover, the committee suggested that local governments should have more discretion in taxing property and proposed that the recent reduction in the maximum tax rates from 0.7% to 0.4% should be reversed. The committee did not propose to include the residential property tax in the tax equalisation scheme. Since this is the same as today, it implies that the residential property tax will still not affect grants from the central government. However, there are large differences in property tax revenues from businesses and other natural resource revenues like revenues from the sale of concession power and revenues related to sea farming. The committee proposed a modest equalisation of these revenues, implying that higher revenues from some business property taxation will lead to cutbacks in grants from the central government.

As pointed out by the OECD (2022[24]) among others, housing in Norway is more favourably taxed than other capital objects. There is no taxation of user value, the valuation of the primary residence in the wealth tax is only 25% of the assessed market value, rental income is exempted from taxation if the owner lives in the house and less than half of the residence is rented out, there is no tax on the financial gain from selling a home if the owner lived there for more than a year, and interest expenses can be fully deducted. On the other hand, most house buyers must pay a document fee to the central government when a residence is purchased.

The tax committee proposed to increase the tax on housing by increasing the valuation of all residences to 100% of the market value in the wealth taxation, to (re)introduce[7] the taxation of user value, that all rental income should be taxed, and to make it more difficult to avoid the taxation of financial gains.[8] Should these measures be taken, a full deduction of interest expenses can be continued and the document fee can be abolished. Taxation of housing will then be in line with the taxation of other capital objects.

The tax committee argued that the residential property tax is well suited for local taxation because of low tax base mobility and may also contribute to better correspondence between citizens' preferences and local government service provision. The committee also proposed that local governments should no longer have the opportunity to assess properties themselves, but rather should use the same values for housing wealth as the Tax Administration uses for the wealth tax. A final proposal was that local governments should not be allowed to have a basic deduction in the residential property tax.

It is reassuring that both committees agreed that property tax is a good local tax and that the reasoning of the two committees is similar. The main point where the two committees disagree is whether local governments should have the discretion to take into account distributional aspects. The local public finance committee emphasised that it is a favourable characteristic of the property tax that local governments have the discretion to decide the size of the basic deduction. In our analyses, neither income nor housing wealth inequality are statistically significant determinants of the basic deduction. On the other hand, distributional concerns may be taken into account through the share of elderly in the population.

We support the suggestion by the tax committee on the valuation method. It is preferable that the assessed property values are updated yearly, which would be the case if the local governments were forced to use the same valuation as for wealth taxation. Yearly updating is also an advantage for local government budgeting, as it would translate into a more stable revenue development. A concern, however, is whether voters are willing to pay property tax to the local government when the general taxation of housing increases.

3.7.3. Local responsibility for housing allowances?

Both the central government and local governments have responsibilities for housing expenditure. The central government is responsible for housing allowances, while there is a local government responsibility that people have a home and provide financial support for establishing private housing. Since many of the same people receive social assistance, which is a local government responsibility, local governments could also be responsible for housing allowances. In addition to corresponding to the theory that local governments are better at matching local preferences, it also allows for more flexibility and more integrated measures when it comes to policies aimed at supporting low-income households with weak connections to the labour market.

3.8. Concluding remarks

In this chapter, we revisit the subject of the relationship between inequality and local government taxation and housing-related spending. This is motivated by rising inequality seen both globally and within Norway. We study two types of inequality, namely income and housing wealth inequality. Both have increased over time. We investigate whether Norwegian local governments respond to the increase in inequality by enacting redistributive policies. A novelty is that we separate the two types of inequality to investigate whether they have different effects on taxation and public spending.

Local governments in Norway have limited discretion when it comes to raising revenue. The only tax they can choose whether to levy, and to which extent, is the property tax. On the other hand, they have wide freedom in how they prioritise and allocate resources between service sectors. We investigate whether the increase in income or housing wealth inequality leads to an increase in the property tax level, the basic deduction of the property tax or an increase in public housing spending.

Our findings suggest that income inequality has no impact on the level of the property tax, the basic deduction in the property tax, nor housing-related spending. On the other hand, housing wealth inequality affects all policy outcomes except the basic deduction. Comparing the responses to housing wealth inequality, we find that property tax revenues increase slightly less than housing-related spending. Moreover, there is an ongoing public debate about property taxation and taxation in general. As in other Scandinavian countries, Norway is a country with a strong preference for an equal distribution of income and wealth, and distributional issues are likely to remain important topics in the future.

The positive effect of housing wealth inequality on the property tax level is explained by the observation that increased inequality implies a larger share of high valued properties in the total tax base. For a given total revenue target, this increases the average tax payment. The effect comes through the distribution of the tax base, not changes in the tax rate or basic deduction which determine the design of the property tax. Thus our findings imply that growing inequality in housing wealth makes the average tax burden higher, even if the overall design of the property tax system remains unchanged.

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Notes

1 The terms local government and municipality are used interchangeably.

2 A single local government decided in 2021 to have a wealth tax rate of 0.2, which is below the maximum of 0.7%. This caused a large public debate about local tax financing in Norway. However, 2021 is outside our sample period.

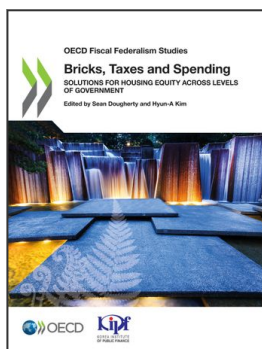3 See Reschovsky (2023[25]) in this volume. He uses the term fixed dollar exemption instead of basic deduction.

4 At the time of writing one Euro equaled NOK 11.36.

5 It should be noted that wealth taxation differs from property taxation in two important ways. First, the wealth tax also includes financial wealth, and second, debt is deducted.

6 Local governments without property tax do not need to assess their properties.

7 The taxation of user value was abolished in 2005.

8 The tax committee proposed to link the tax exemption to the fraction of the last 5 years the person (or household) was living in the residence.