Taxation and party fragmentation: a democratic problem?

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Introduction

Representative democracies are designed to promote voter control. Voters elect members of political parties to legislatures, and these can be replaced if voters become dissatisfied with their performance. However, election systems produce varying numbers of political parties. Some scholars suggest that party fragmentation undermines governance capacity, leading higher levels of public spending and more taxes. This chapter reviews political economy modelling related to this conjecture.

Many public services can be targeted to particular groups of voters, while taxes are spread evenly across the population. Interest groups have an incentive exploit the ‘common pool’ of tax revenue by demanding excessive levels of public services. When number of political parties grows, each becomes more focused on increasing particular spending items to please particular voter groups. The universalism model suggests that all parties get what they want, leading to excessive levels of spending and taxation. Other models based on majority voting in elected assemblies suggest that the outcome is much more open.

The first part of the chapter outlines the common pool – universalism model, and identifies a number of theoretical question marks related to this interpretation. The alternative model is the one-dimensional median party model, which will eliminate problems related to democratic governance of taxation. These theoretical interpretations form the basis for a brief review of the empirical literature, and for discussing the politics of taxation in Norwegian local government.

The common pool model I: Incentives

We start out by discussing the common pool incentive, and its relation to policy positions in political parties. Suppose that groups of voters want to expand those parts of the public services from which they benefit. For example, voters in each election district wish public institutions and activities to be located in their neighborhood to generate employment opportunities and better access to public services. With national tax financing, users of individual public services pay a small fraction of the tax-price.
This increases their demand for services financed by generalized taxes (Buchanan and Tullock 1962; Olson 1965). When elected politicians seek reelection, voters’ spending requests will equate the spending demands of the elected representatives. For example: the ‘Law of 1/n’ can be formulated as a problem related to the size of the elected assembly. It is assumed that each representative serves her particular constituency. Elected politician provides beneficial spending policies, and the group supplies political support or campaign contributions in return. Assuming similarly large constituencies (election districts) and equal mean incomes, each supporter will only pay 1/n (n=number of constituencies) of the total tax price related to services received. When tax revenues are seen as a common revenue pool, then groups of voters and their elected representatives have an incentive to ‘overfish the stock’.

Early formulations of common pool problems assumed that political institutions did little to counteract the common pool problem. More recent analyses have addressed the role of political parties (for review, see Krehbiel 2004). Political parties offer individual candidates a trademark, which provides credibility to leaders’ election promises. When the party label is a precondition for membership in the elected assembly, parties can impose discipline on elected representatives. Since broad parties seek electoral support from large segments of the electorate (including most election districts), they therefore internalize the tax-costs of expanding public service supply. Smaller parties serve particular constituencies, and they therefore face lower tax share as compared to a broader political party (Inman 1988; Inman and Fitts 1990; Borge and Rattsø 2002). With a fragmented party structure, each political party will demand high public spending for the benefit their supporters.

The common pool model II: Universalism

Consider a situation with a maximum degree of party fragmentation in an elected assembly: each representative is one party. Suppose that identical representatives in a legislature seek reelection, and seek majority approval for a project that benefits her voters. Each project benefits one particular constituency, and it is financed by national
taxation. Decisions require majority approval in the legislature, and each representative would prefer to be included in a minimum winning (majority) coalition. Weingast (1979) have pointed out that there are potentially many winning coalitions, and no representative could be sure to be included in the majority coalition. He therefore demonstrates that risk adverse representatives have *ex ante* preferences for a (universalistic) coalition comprising all representatives, which would lead to the approval of all projects. Note that universalism leads to more projects and higher levels of public spending and taxation than majority coalitions. Shepsle and Weingast (1981) have generalized the universalism model.1

This result is usually related to election districts, but it is relevant for party structures as well. Universalistic behavior is due to the risk of being excluded from a majority coalition. Few political parties and no majority party reduces the transaction costs related the establishment of a majority coalition (Wittman 1989). For example, the existence of two parties eliminates all uncertainty in the elected assembly. Party leaders identify which projects to approve in consideration of reelection prospects for the party as a whole, and elected party representatives succumb to the party line. Hence: party fragmentation increases the likelihood of universalism, and generates higher levels of public spending levels and more taxation.

Since majority voting is inherently unstable in multidimensional settings, theorists have analyzed how institutional constraints affect the voting outcomes. These outcomes are called “structurally induced equilibriums”. Such models impose more or less realistic decision-making rules on legislative decision-making. Agenda setting has paved the way for one important category of models.

Suppose the elected assembly comprises three political parties. Each pair is a majority, and no party forms a majority alone. Every party prefers to get a particular project approved, and it gets benefits $B$ if their projects are approved. Projects costs are largest for party 3 and smallest for party 1, that is $C_3 > C_2 > C_1$. An agenda setting party is allowed to make a proposal. If rejected, all parties get zero net benefit. If the proposal is approved by two parties, party $j$ will receive a net benefit

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1Weingast, Shepsle and Johnsen (1981) discuss a model where universalism can generate inefficient projects.
The third party $k$ will receive a net benefit

$$NB_j = B - \frac{C_j + C_i}{2}, \quad i \neq j.$$  

Under a closed rule, further votes are not allowed. The agenda setter will include her project in a proposal in addition to one other project that incurs minimum costs ($C_i$). If a party 1 or 2 is agenda setter, projects 1 and 2 get majority approval. If party 3 is agenda setter, projects 3 and 1 are approved. If the agenda setter can scale projects down, it will include a project with minimum costs and marginally positive benefits for the coalition partner. This type of modelling has been generalized to open rules, but a basic tendency survives: when political agents have agenda setter powers, they try to design a proposal that achieves minimum majority approval and minimize the project costs of their coalition partners (see Lee 2000). As to be expected closed rules yields better outcomes for agenda setter than do open rules.

A potential problem with common pool-universalism is that political agreements may not be enforceable (Weingast and Marshall 1988). Since a legislature is comprised of numerous particularistic interests, politicians representing different constituencies must support each other’s proposals. When one elected representative (or political party) fails to honor a settlement, his partner has no legal mechanism to turn to. Elected representatives cannot be penalized for violating a political settlement.² Political parties are hierarchical organizations that impose internal discipline, which facilitate credible settlements within the party. Hence: perhaps elected assemblies comprised of broad parties with internal discipline will approve more publicly financed projects than fragmented assemblies!

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² Suppose decisions are made in succession: party A may support B in one vote, yet party B may fail to support A in a subsequent vote. Party B can claim that the situation has changed, or that the actual proposal deviates from the original motion. In other situations, decisions can be reversed. Suppose party A wants a particular road project, while party B wants improved maintenance of school facilities. Projects are decided simultaneously, but nothing prevents party A from cutting down on school appropriations once the road has been constructed. Knowing that an agreement can be violated by one of the other parties, no deal will be made.
The median party model I: the one-dimensional case

Representative democracies are in many ways designed to accommodate citizens’ public spending and tax preferences. Tax levels are important in most election campaigns, and are vital for political parties as well as the choice of voters on Election Day. Political parties are primarily characterized by their position a one-dimensional left-right axis. Parties on the right want low levels of public spending and taxes, those on the left want a larger public sector with higher taxes. Suppose voters support parties with a policy close to own preferences (prospective voting), and that political parties try to get promised policies implemented. We would then expect a party that comprises the median representative – *the median party* - to be part of the governing coalition. If the party holds a majority in the legislature, the majority party corresponds to the median party. In a fragmented assembly, we would expect the median party to be a minority party located at the centre of the left-right scale. Empirical studies show that governments usually comprise the median party, and if they do not they tend to be short-lived. Multi-party systems can be quite stable since the position of median party represents the core of a one-dimensional voting-game (Strøm 1990; Strøm and Leiphart 1993).

Moreover, Huber and Bingham Powell (1994) demonstrate that governments in multi-party systems take policy positions (along the left-right axis) that are close to the median voter and closer to the median voter than do governments in two-party systems. In fact, a higher number of political parties tend to *reduce* policy distances between government parties (or coalitions) and the median voter. These results are based on survey questionnaires to voters and elected politicians, and not analyses of actual policies. Nevertheless they do corroborate the findings of Strøm and Leiphart (1993). To the extent that median outcomes can be regarded as a democratic benchmark (Cox 1997:227-), multiparty systems appear to do better than two-party democracies.
The median party model II: the multidimensional case

A realistic description political decision-making would include a combination of common pool issues and left-right politics. Common pool issues have an effect on parties’ spending preferences, but left-right politics are important as well. Furthermore, universalism is not necessarily a plausible model for legislative decision-making. Voting procedures and institutions eliminates much of the instability in multidimensional settings.

Similar to many European countries, the social-democratic party (Labour Party) has dominated Norwegian politics on the left side of the party spectrum, while party fragmentation has been higher on the non-socialist side. Shares of social-democratic votes and representatives have declined during recent decades, leading to more party fragmentation in parliament (Stortinget) and in local councils. Should we expect more non-socialist voting to lead to lower levels of public spending and less taxation?

Suppose a legislature comprises three political parties (or party blocks), the conservative party (R), the centre party (C), and the labour party (L). Suppose that each party represents a homogenous group of voters. Further, let us assume that the preferences of each party can be defined over two types of public spending, X and Y. We may think of the two dimensions as infrastructure services and social services (in local government), or defence and regional support (central government). Figure 1 describes the situation. Preference configurations are constructed to establish a realistic description of a fragmented party structure on the non-socialist side, and a relatively large social-democratic party on the other side.
When the Labour party (L) has a majority position in the elected assembly, it can implement its desired budgetary allocation \( (X_L, Y_L) \), leading to a tax level of \( T_L = X_L + Y_L \). A budget line is drawn through the ideal point of L. Similarly, the tax level is lower if the centre party (C) has a majority position, and taxes are even lower when the conservative party (R) is in power. In multi-party systems, one political party seldom commands a majority in the elected council. Let us compare the situation with a Labour-party majority with a situation where the two non-socialist parties together have a majority in the elected council. We analyze three sets of structurally induced equilibriums (Ferejohn and Krehbiel 1994):

**Rule number 1**: Budgets are set by majority voting in two steps. Parties determine total spending and taxes first, and allocate spending afterwards. In figure 1, this means that parties vote on the tree parallel budget lines passing through the ideal points L, C and R. As the centre party holds a median position (it can coalesce with either the R-party or the L-party), the outcome will be the budget line passing through the 'bliss-point' C. Note that the L-party has a median position when it comes to the second step, leading to the allocation \( X^*, Y^* \). Despite an increase in party fragmentation, we
expect to observe a reduction in tax-rates following a shift from Labour-majority to
non-socialist majority.

*Rule number 2*: Parties decide budgets by separate votes on each spending item X and
Y. X^L and Y^L are the median positions on each of the two dimensions. This means
that a shift from L-party majority to non-socialist majority need not lead to a
reduction in taxation. However, suppose the ideal-point of the Labour party is L’
rather than L. This implies that left-right politics is more important relative to how the
budgetary pie is divided. In this case, X^C and Y^R are median outcomes. Since
X^{L’}+Y^{L’}>X^C+Y^R, we may also expect a decrease in taxation following a shift from
labour majority to non-socialist majority.

*Rule number 3*. Two of the political parties negotiate a budgetary settlement given the
non-agreement outcomes as defined by rules 1 and 2 respectively. Any pair of
bargained settlement is theoretically possible. Given the importance of left-right
politics we may assume that the non-socialist parties negotiate. This means that R-
and C-parties identify X^*,Y^* (rule 1) or the X^L,Y^L (rule 2) as non-agreement points.
Figures 2a and 2b display the bargaining sets.
The bargaining set is the shaded area in two figures. The two-step voting procedure yields a relatively small bargaining set (figure 2a) relative to the bargaining set with
separate votes on each spending item (figure 2b). The shaded areas indicate that bargaining will lead to less spending and lower taxes than each of the non-agreement points. This is of particular relevance for rule 2 when the budget line of a Labour party is ‘close’ to that of the centre party.

We may summarize a shift from socialist to non-socialist majority in the elected council, given the configurations of spending preferences assumed in Figure 1: a) the two-step procedure yields lower taxes; b) separate votes on each spending item leads to lower taxes if the budget lines are sufficiently ‘distant’; and, c) negotiations between non-socialist parties lead to lower taxes than the outcomes defined by a) and b). Though these results are critically dependent on assumptions about preferences as well as institutions, they do indicate that median-parties have an upper hand even in multidimensional settings.

A brief review of the empirical literature

The empirical literature on party fragmentation can be classified into three groups, a) longitudinal analyses of particular countries, b) cross-national studies, and c) studies based on data on local government. 3

In the first category, Inman (1988) addresses the centralization of financing of state and local provision of public services in the US. Based on data for 1948-1985, he finds that the decentralized structure of the US Congress in 1972 has accelerated the growth of aid to local government. Inman and Fitts (1990) develop these results by exploring the role of political parties in controlling the behavior of individual representatives, and the influence of presidential veto rights and agenda setting. Their analysis of US historical data indicates that strong presidents lower the growth rate of public spending and taxes. Strong versus weak party control appears to be of lesser importance – parties have no prominent role in internalizing the external costs of

3 A few studies of US Congress have addressed universalistic coalitions on basis of micro data. These studies find little support for common pool–universalism, particularly Stein and Bickers (1994), Collie (1988) and Lee (2000). The existence of expenditure programs where benefits are targeted to specific groups of voters does not necessarily lead to oversized or universalistic coalitions.
increasing public spending. Similarly, party fragmentation has also been analyzed on the basis of Norwegian data. Borge and Rattsø (2002) explore the growth of local government in Norway in the period 1900-1990, and Falch and Rattsø (1997) analyze the growth of local school spending in the same time period. Similar to Inman and his colleagues, they find that the party fragmentation of parliament (Stortinget) affects the growth of the local public sector and local educational spending. Greater party fragmentation and the existence of minority coalition governments accelerate the growth rate of local expenditure.

The second category comprises cross-sectional studies. Milesi-Ferretti, Perotti and Rostagno (1999) analyze the role of electoral districts and the degree of proportionality in party representation. Milesi-Ferretti, Perotti and Rostagno find no significant difference in overall public spending patterns between proportional and disproportional systems. They do find that transfers tends to be greater in proportional systems, and that levels of public goods purchases tends to be greater in less proportional systems. The authors also use the number of parties as an explanatory variable, and it comes out with a positive effect, albeit insignificant. A positive correlation between proportionality in the election system and number of parties is part of the explanation for the insignificant result (Anckar 2002). This lends some support to the fragmentation hypothesis.

Persson, Roland and Tabellini (2003) compare majoritarian systems with electoral systems based on proportional representation. They argue that proportional election rules lead to more fragmented party structure than majoritarian systems, and fragmented legislatures tend to produce coalition governments. Based on data on 40-50 parliamentary democracies over the period of 1960/1990-1998, they find that coalition governments spend more than singly party majority governments. In the long run, public spending levels are 6-10 percent of GDP higher in coalition governments as compared to single party, majority governments.4

4 Other studies based on cross-national data suggest that higher rates of voter participation are associated with higher demands for taxing and public spending. Since two-party systems tend to depress electoral participation (particularly among low status citizens), it would seem that majority systems are biased towards the too low levels of public spending. Both Boix (2001) and Franzese (2002) find that the impact of income inequality is magnified by greater rates of participation (see also Besley and Case 2003:24-29).
Finally, Lars-Erik Borge and Jørn Rattsø have pioneered empirical research of party fragmentation in local government. Their studies of Norwegian municipalities appear to support the country studies and cross-sectional studies. Party fragmentation tends to increase administrative spending (Kalseth and Rattsø 1998) and educational spending in the counties (Falch and Rattsø 1999). Of particular relevance are analyzes the impact of fragmentation on property taxes and fees. Borge (1995, 2000) uses both cross-sectional data and panel data to demonstrate that party fragmentation causes increases in local fees. Borge finds that party fragmentation (measured by a Herfindahl index) and shares of socialist representatives leads to higher levels of infrastructure fees.

Pre-election voter controls: the Norwegian case I

Empirical studies appear to paint a somewhat depressing picture of democratic control: political parties make policy promises, and citizens vote the party platform closest to her preferred outcome. Voters want to expand different items on the public budget, while they have identical preferences for a moderate tax burden. Each political party prioritize one spending program only, and promise hold taxes low by keeping other outlays low. Individual voters will simply vote for a party that favours particular types of public spending, but they are not in a position to do anything about the level of party fragmentation. Prospective voting leads to more spending and higher tax levels than preferred by all.

We use data on 434 municipalities that make up the local democratic institutions of Norway.5 Local elections are held every four years in between national elections. Of particular importance is that the election system is based on proportional representation, and that the entire municipality is one election district. Parties need not coordinate positions and voting of representatives elected in separate districts. Local councils elect an executive board, which comprises senior members from all

5 Norwegian local government includes 18 county governments, which are not included in the current empirical analyses. Oslo, the capital, is left out of the analyses, since it is both a municipality and a county.
main parties represented in the council. The executive board is responsible for the preparation of policy proposals and the implementation of council decisions. Decisions are made by majority voting in the elected council.

Municipalities have responsibility for a number of public services, including kindergartens, primary schools, health centers/primary health services, social welfare, and infrastructure services (water works, sewers, refuse collection and disposal). Tax revenues account for 45 percent of municipal revenues. Most of the tax revenues are collected as a proportional payroll tax, i.e. as income taxes. Central government stipulates the minimum and maximum levels of tax rates, and all municipalities use the maximum rate since 1980. Block grants and earmarked grants account for most of the other revenues. Since municipalities are legally required to balance their budgets, higher spending levels means higher user fees or introduction of property taxes.

Effective number of parties is the inverse of the Herfindahl index, that is

$$\frac{1}{\sum p_i}$$

where $p_i$ measures party i’s share of representatives in the local council (Laakso and Taagepera 1979; Lijphart 1999:65-69). When all the parties are of equal size, the effective number of parties equals the actual number of parties. Otherwise, the effective number of parties will be lower than the actual number. In Figure 3, we present the effective number of parties in Norwegian local councils in the period 1959 to 2003.
Average party fragmentation has increased considerably, from 2.7 effective parties in the 1959-63 election period to 4.1 parties in the last period. In the last period, about 25 percent of the municipalities have more than 4.9 effective parties represented in their elected councils. In the current period, about 25 percent of the municipalities have more than 4.9 effective parties represented in their elected councils. Following the common pool model, we would expect to observe higher levels of taxation and increasing citizen frustration with local tax levels.

We analyze the likelihood of using property taxes and the level of infrastructure fees on basis of data for three election periods, using one cross-section for each election period. Table 1 presents descriptive statistics for the variables used in the regression analyses.\(^6\)

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\(^6\) Centrality is a Statistics Norway (SSB) standard for codifying municipalities according to their interior population concentrations and their proximity to centers of greater population. It takes on the following seven values: 1) Sparsely populated (population center(s) of less than 5,000 inhabitants) in fair distance from greater population center (more than 50,000 inhabitants). 2) Sparsely populated in short distance from greater population center. 3) Contains small population center(s) (5,000 to 15,000 inhabitants) and in fair distance from greater population center. 4) Contains mall population center(s) and in short distance from greater population center. 5) Contains medium sized population center(s) (15,000 to 50,000 inhabitants) and in fair distance from greater population center. 6) Contains medium sized population center(s) and in short distance from greater population center. 7) Greater population center.

<table>
<thead>
<tr>
<th></th>
<th>Municipalities with less than 10000 inhabitants</th>
<th>Municipalities with more than 10000 inhabitants</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>s</td>
</tr>
<tr>
<td>Levies property tax (=1)</td>
<td>0.49</td>
<td>0.50</td>
</tr>
<tr>
<td>Total annual fees in infrastructure services (NOK)</td>
<td>6112</td>
<td>1598</td>
</tr>
<tr>
<td>Effective number of parties (=1/Herfindahl index)</td>
<td>3.84</td>
<td>1.01</td>
</tr>
<tr>
<td>Share of socialist representatives</td>
<td>0.37</td>
<td>0.15</td>
</tr>
<tr>
<td>Rightist parties majority (=1)</td>
<td>0.01</td>
<td>0.09</td>
</tr>
<tr>
<td>Center parties majority (=1)</td>
<td>0.43</td>
<td>0.50</td>
</tr>
<tr>
<td>No bloc majority (=1)</td>
<td>0.35</td>
<td>0.48</td>
</tr>
<tr>
<td>Private median taxable income (1000 NOK)</td>
<td>101.15</td>
<td>22.84</td>
</tr>
<tr>
<td>Payroll tax (propotion)</td>
<td>0.09</td>
<td>0.04</td>
</tr>
<tr>
<td>Centrality index (Statistics Norway) (1-7)</td>
<td>2.96</td>
<td>2.32</td>
</tr>
<tr>
<td>Number of inhabitants</td>
<td>3803</td>
<td>2367</td>
</tr>
<tr>
<td>Share of population aged 0-6</td>
<td>0.09</td>
<td>0.01</td>
</tr>
<tr>
<td>Share of population aged 7-15</td>
<td>0.12</td>
<td>0.02</td>
</tr>
<tr>
<td>Share of population over 80</td>
<td>0.05</td>
<td>0.02</td>
</tr>
<tr>
<td>Exogenous income per capita. (1000 NOK)</td>
<td>23.58</td>
<td>7.03</td>
</tr>
</tbody>
</table>

Source: NSD, Statistics Norway.

About 50 percent of local governments levy property taxes. Average user fees per household are about 6100 NOK (760 Euros), and vary substantially across municipalities. User fees account for a much higher share of local government revenues (about 15 percent) than do property taxes (2-3 percent). As to be expected, the number of parties is higher in municipalities with more than 10,000 residents as they have larger local councils.

The use of property taxes is derived from the local government accounts (Norwegian Social Science Data Services). Infrastructure fees measures the sum of fees for garbage collection and disposal, water supply, sewage and chimney sweeping with which a standard Norwegian household is charged. Data were collected by Norsk Familieøkonomi by way of direct contact with each municipality and are in nominal NOK.
Estimation of the median party model is based on a classification of political parties into three groups, the left-wing parties (Labor Party, Socialist Left Party, Red Electoral Alliance), the right-wing parties (Progress Party, the Conservative Party), and the center parties (Christian Democratic Party, Liberal Party, Centre Party). We define left-wing majority in the local council as reference group, and we use two dummy variables for center party majority and right-wing majority. A final dummy variable captures situations where none of the party blocks holds a majority. The median party hypothesis suggests that tax rates under center party majority equal those under no-block majority. A ‘no block majority’ is very common, and accounts for 35 and 58 percent of the local councils in small and large municipalities respectively. Local governments with right wing majority are rare, particularly is small municipalities. To facilitate comparison with Borge (1995; 2000), share of socialist representatives are used in two of the regression specifications. The other variables in table 1 are more or less standard in analyses of local government policy-making, particularly demographics and local governments’ exogenous revenue.

To validate the classification of political parties, table 2 displays statistics data on local party representatives’ positions regarding taxes. We have asked all local council members in a sample of 120 municipalities whether they would prefer to levy property taxes (a voluntary tax) and collect user fees in the infrastructure sector (a lot of discretion). Table 2 breaks responses down according to representatives’ party affiliation and municipalities’ population size.

<table>
<thead>
<tr>
<th>Municipalities with less than 10000 inhabitants</th>
<th>Municipalities with more than 10000 inhabitants</th>
</tr>
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<tbody>
<tr>
<td>Socialist parties</td>
<td>Center parties</td>
</tr>
<tr>
<td>% (N)</td>
<td>% (N)</td>
</tr>
<tr>
<td>Favors use of property tax</td>
<td></td>
</tr>
<tr>
<td>0.56 (355)</td>
<td>0.43 (300)</td>
</tr>
<tr>
<td>Favors use of user fees in infrastructure services</td>
<td></td>
</tr>
<tr>
<td>0.64 (464)</td>
<td>0.71 (411)</td>
</tr>
</tbody>
</table>

Note: Socialist parties=RV,NKP,SV,DNA; Center parties=Sp,KrF,V,other local lists; Rightist parties=H,Frp.
Property taxation is highly polarized along the left-right axis, and more so in large than small municipalities. Socialist party members see advantages of property taxes: they generate more public revenue, and wealthy homeowners pay more than people with modest houses and flats. Note that the center party members are ‘closer’ to the leftist parties than the rightist parties. User fees are less politicized: Socialist parties are concerned about the distributional effects of user fees, but they want to increase public revenues. Non-socialist parties are probably less worried about the regressive distribution impact of user fees. This is relevant for the discussion of structurally induced equilibriums (see Figure 1): since pure left-right politics is less prevalent for user fees than property taxes, we might expect weaker voter controls for infrastructure fees.

Since universalistic behavior is more likely when partisan conflict is low (Collie 1988), fragmentation may affect user fees more than property taxes. Universalism could also be more frequent in smaller municipalities. However, municipalities with small populations have local councils with relatively few members. This could facilitate communication and interpersonal trust, which improves prospects for overcoming collective action problems (Olson 1965; Ostrom 1988).

In Table 3, we present regression estimates for user charges and use of local property taxes. In specification I and II, we follow Borge (1995, 2000) and use share of socialist representatives as indicator of party strength. The central model specifications III and IV include fragmentation and median parties. Critical statistics are fragmentation effects (common pool – universalism model) versus party effects (median party model). The political variables are estimated separately for municipalities with more and less than 10,000 inhabitants. We use county fixed effects to control for preference heterogeneity across regions.
Table 3: Party fragmentation, partisan preferences and municipal revenue policies.
1996-1999. Use of property tax and fees in infrastructure services (Wald Chi Square/t-values in parentheses).

<table>
<thead>
<tr>
<th></th>
<th>Levies property tax (=1) (logistic)</th>
<th>Fees in infrastructure services (log) (OLS)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>I</td>
<td>II</td>
</tr>
<tr>
<td><strong>Effects for municipalities with less than (A) and more than (B) 10000 inhabitants:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Effective number of parties</td>
<td>-0.016</td>
<td>0.056**</td>
</tr>
<tr>
<td>Share of socialist representatives</td>
<td>0.016</td>
<td>0.048**</td>
</tr>
<tr>
<td>Rightist parties majority (=1)</td>
<td>1.57</td>
<td>0.016**</td>
</tr>
<tr>
<td>Center parties majority (=1)</td>
<td>-0.292</td>
<td>-0.275**</td>
</tr>
<tr>
<td>No bloc majority (=1)</td>
<td>-0.015</td>
<td>-0.015**</td>
</tr>
<tr>
<td><strong>Effects for all municipalities:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Private median taxable income</td>
<td>0.032</td>
<td>0.032**</td>
</tr>
<tr>
<td>Payroll tax (proportion+1, log)</td>
<td>0.032</td>
<td>0.032**</td>
</tr>
<tr>
<td>Centrality index (1-7)</td>
<td>0.018</td>
<td>0.018**</td>
</tr>
<tr>
<td>Number of inhabitants (log)</td>
<td>0.018</td>
<td>0.018**</td>
</tr>
<tr>
<td>Share of population aged 0-6</td>
<td>0.018</td>
<td>0.018**</td>
</tr>
<tr>
<td>Share of population aged 7-15</td>
<td>0.018</td>
<td>0.018**</td>
</tr>
<tr>
<td>Share of population over 80</td>
<td>0.018</td>
<td>0.018**</td>
</tr>
<tr>
<td>Exogenous income per capita</td>
<td>0.018</td>
<td>0.018**</td>
</tr>
<tr>
<td>More than 10000 inhabitants (=1)</td>
<td>0.018</td>
<td>0.018**</td>
</tr>
<tr>
<td>Constant</td>
<td>0.018</td>
<td>0.018**</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Dummies for election period</th>
<th>Yes</th>
<th>Yes</th>
<th>Yes</th>
<th>Yes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dummies for county</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>N</td>
<td>1296</td>
<td>1296</td>
<td>1238</td>
<td>1238</td>
</tr>
<tr>
<td>-2LogL/R²</td>
<td>1341.362</td>
<td>1360.663</td>
<td>0.32</td>
<td>0.33</td>
</tr>
</tbody>
</table>

*** p<0.01, ** p<0.05, * p<0.10.
n.a. (Not available)
A logistic regression model is used to analyze the use of property taxes. As to be expected, a higher share of socialist representatives (I) leads to a higher probability of applying property taxes, particularly among the more populous municipalities. Fragmentation has a negative impact in small local governments, and a significant positive effect in large authorities. The latter result disappears when we compare apply the median party model (II), which suggests that party fragmentation have negative bearing on property taxes. More political parties diminish the likelihood of applying property taxes. Further, estimates for median parties are consistent with empirical pattern in table 1 as well as the median party model. A majority of right wing parties leads to the lower probability relative to the socialist majority (reference group). Centre party majority and councils with “no majority” deviate less from the socialist majority. Party polarization is nearly absent in municipalities with small populations. The analysis of property taxation yields no support for the common pool model.

The regression estimates for user fees (III) are comparable to those of Borge (1995, 2000, see table 4). Heavily populated municipalities are overrepresented in Borges sample, while ours comprises all municipalities. We find positive effects of party fragmentation in the larger municipalities only. One additional party (= one standard deviation, see table 1) leads to an increase in user fees of about 6 percent. A reduction on the share of socialist representatives of 0.4 (=one standard deviation, see table 1) leads to a reduction in user fees of about 10 percent.

Compare these results with the median party specification (IV). In small municipalities, one additional party generates 2 percent higher grant levels. Median party control have almost none effect. In large municipalities, one additional party leads to 5 percent higher grant levels. Moreover: center party control does not deviate from socialist majority; no bloc majority is 8 percent lower than socialist majority, and finally, right wing party control yields 15 percent lower grants than a socialist majority.

Following our discussion of structurally induced equilibriums, we have seen “common pool preferences” may eliminate party differences in actual tax policy (Figure 1, rule 2). Clearly, this is not the case for property taxation. Despite small
differences in party preferences for user fees (Table 2), median party effects are considerable. Fragmentation may lead to higher user fees in large municipalities, but voters may ‘strike back’ by supporting right wing parties. This can cancel out fragmentation effects.

Post-election voter control: the Norwegian case II

If the median party interpretation were valid, we would not expect to observe widespread frustration with local taxes. We would expect to see some tax opposition among supporters of right-wing parties should deviate substantially, whereas centre party and socialist party voters should be less antagonistic. We would also anticipate political polarization among citizens living in small communities relative to those residing in more populous communities. In table 4, we display selected statistics related to voters’ tax preferences.

Share of respondents preferring 1000 NOK more in local taxes.

<table>
<thead>
<tr>
<th>Year</th>
<th>Municipalities with less than 10000 inhabitants</th>
<th>Municipalities with more than 10000 inhabitants</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Socialist parties</td>
<td>Center parties</td>
</tr>
<tr>
<td>1993</td>
<td>0.62 (638)</td>
<td>0.58 (552)</td>
</tr>
<tr>
<td>1996</td>
<td>0.64 (547)</td>
<td>0.65 (612)</td>
</tr>
<tr>
<td>2002</td>
<td>0.71 (94)</td>
<td>0.65 (54)</td>
</tr>
<tr>
<td>2003</td>
<td>0.62 (372)</td>
<td>0.60 (396)</td>
</tr>
</tbody>
</table>

Note: Socialist parties=RV,NKP,SV,DNA; Center parties=Sp,KrF,V,other local lists; Rightist parties=H,Frp.
Source: Survey on "Peoples relation to local government" (1993, 1996), "Attitudes to welfare state" (2002) and "Local Election Survey" (2003). Thanks to Per Stava and Jo Saglie for access to the two latter surveys.
The survey question used is: “Local government appropriations to different programs depend on tax revenues. Would you be willing to pay 1000 Kroner more in taxes each year to get a better service supply in those areas where you think it is most needed?” If common pool – universalism is a suitable model of public budget making, voters would not need more spending to their favorite programs. They have already obtained all they want. Table 4 displays little evidence in favour of tax cutting. More than 50 percent of all groups are willing to pay an additional 1000 NOK (about 125 Euros) in local taxes. The pattern is relatively stable in the 1993-2003 periods; party polarization is lower in municipalities with less than 10,000 inhabitants; and, voters supporting centre parties or socialist parties have relatively similar tax preferences, while right wing supporters are considerably less willing to pay more local taxes. These patterns are very much in line with the median party model.

The basis for this interpretation is voter control by prospective voting (pre election politics). Voters may also discipline local councils by retrospective voting (post-election politics). Tax increases may reduce voter support for the incumbent party. For example, Besley and Case (2003) review the existing US literature, and find that the electoral process keep policy makers accountable for tax policies. Two-party systems lend themselves more to post-election controls. Fragmented party systems can lead to a diffusion of political responsibility, which inhibits voters’ capacity to keep incumbents responsible. Moreover, Norwegian local government is a consensus system where all major political parties are represented in the executive board. Nevertheless, a recent study of Norwegian local government demonstrates that increases in local fees lead to less support for the incumbent local party (the party holding the mayor position, see Martinussen 2004). Retrospective voting may have some bearing on the very small common pool effects in local government.

Conclusions
We started out with the observation that party fragmentation can weaken voter control with public spending and taxation. The essential argument is the common pool – lobbying - universalism model. Groups of voters and their elected representatives

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8 In Norwegian “Hvor mye kommunene kan bevilge til forskjellige formål, avhenger for en stor del av skatteinntektene. Kunne du tenke deg å betale 1.000 kroner mer i skatt til kommunen hvert år for å få et bedre tilbud på de områdene hvor du synes det trengs mest?”
have an incentive to overexploit a common pool of tax revenue, and universalism means that politicians vote for each others spending proposals.

First of all, fragmentation does not *in itself* imply that common pool issues have replaced left-right politics. Left-right politics and tax rates continue to dominate the election campaigns, voter preferences and the behavior elected representatives. In such one-dimensional settings, the median party will get its policy implemented. Second, though tax financing generates collective action problems, it is not clear how elected assemblies handle them. Institutional constraints will often lead to stable minimum winning coalitions. The pure existence of a partisan assembly will often erode the basis for universalistic politics. Universalism may or may not be the preferred solution *ex ante*, but a majority coalition may nevertheless show up *ex post*.

Finally, voters have two mechanisms to control their elected representatives and tax policies. The first is prospective voting (pre-election control): voters support political parties that offer a tax policy in line with citizens’ preferences, and parties take relatively stable positions on the left-right axis. Empirical analyses suggest that median party dominance is important, while fragmentation have modest tax effects. Hence: a shift in voters’ tax preferences will translate into a different median party and a different policy. The second mechanism is retrospective voting (post-election controls): citizens punish incumbent parties that increase taxes too much. Voters are more inclined to vote retrospectively when one incumbent can be kept responsible, which is a problem in fragmented assemblies. Nevertheless, opposition parties collect more voter support when incumbent parties increase taxes. Postelectoral controls have not been totally diluted by party fragmentation.
References


Lee, F.E. 2000. Senate Representation and Coalition Building in Distributive Politics, American Political Science Review 94:59-72


