

Local tax financing in the Nordic countries*)

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Abstract

The Nordic countries have decentralized government spending more than any other country and consequently the local public sector needs more financing. This is generally solved by income tax revenue sharing systems and central government grants. Another characteristic is the emphasis on tax equalization. While this centralized financing generates considerable revenue for the local governments, the design implies vertical fiscal imbalance and a challenge for local accountability. Overall the system is better understood as public sector decentralization than traditional fiscal federalism. The Nordic countries represent an interesting puzzle in local government financing. The financing of local governments must be arranged nationally when decentralization is extensive. The resulting degree of local autonomy varies, and the local discretion in income taxation in Denmark and Sweden seems to help strengthen the locals. But all the Nordic countries struggle with the balance between central government control and local self rule.

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1. Introduction

Based on the national reports for Denmark (Mau Pedersen and Jensen, 2004), Finland (Enberg, 2004), Iceland (Juliusson, 2004), Norway (Borge, 2004), and Sweden (Dahlberg and Ågren, 2004), I will in this general report discuss the local tax financing. Section 2 offers a background understanding of the 'Nordic model'. Section 3 presents an overview of the present tax financing, while section 4 evaluates the present financing compared to standard criteria for local tax financing. Local tax discretion and central government controls are discussed in section 5, while tax equalization is addressed in section 6. Section 7 summarizes the recent public debate about reform of the local tax design. Section 8 gives some concluding remarks.

The local public sector in the Nordic countries is broadly similar. Except for Iceland, the local public sector represents 15-20% of GDP, the largest and most decentralized public sector of the world. The welfare state is to a large extent organized as decentralized government. The local governments provide the major welfare services to the population and consequently are an integrated part of the national public sector. Income tax is the major source of revenue, along with a comprehensive central government grant system. But there are also important differences to notice in the local government design. Finland and Iceland have two-tier structures with municipalities solving many regional tasks in cooperation. Finland has 444 municipalities while Iceland has 104. The other countries have three tiers, a local and a regional level. Sweden has 290 municipalities and 21 counties, Norway has 434 municipalities and 19 counties, while Denmark has 271 municipalities and 14 counties. The size of local governments consequently varies between countries, but even more within countries. The median size municipality in Iceland is 300 inhabitants, which explains the limited decentralization here. In Sweden the average sized municipality has 31.000 inhabitants, while the median has 15.000. In Norway the average is 10.000 and the median about 5.000. As will come clear, the size heterogeneity within countries is important for tax design and tax equalization, as distribution issues represent a major factor motivating the national framework for the decentralization.

Below we will use local government as a common term for decentralized government units, and we will separate between municipalities and counties when needed. Institutional details are found in the national reports.

2. The Nordic model of local public finance

Compared to the standard Musgrave-Oates-Tiebout model of local public finance, local governments in the Nordic countries have more comprehensive responsibilities and are more of an integrated part of the national public sector. The standard model assumes local public goods, mobility and benefit taxation. The Nordics differ in all three characteristics. First, the local public sector is responsible for welfare services with strong redistributive characteristics, and local public goods only take a small share of local spending. Second, mobility of the population is low and local jurisdictions are heterogeneous with respect to preferences for welfare services and local public goods. Third, financing is centralized and dominated by regulated income tax revenue sharing and central government grants. While in theory local governments are like clubs set up by the local population to handle local public goods, here they serve more as agents for the national government. They are formed by national concerns for the division of labor within a large public sector. When local governments rather are agents than clubs, the working of the local public sector is quite different from the standard theory model.

Nordic economists have struggled to understand local governments under this design for decades. Lotz (1998) expresses the frustration among economists of the region that the guidelines from local public finance theory are of so limited relevance. Philip (1954) presented an early account of the challenges involved. When redistributive services rather than local public goods are the main responsibility, we are in a much more open territory concerning principles for organization and financing. The international literature has acknowledged the lack of clear criteria for the handling of ‘merit goods’ (Musgrave, 1959) or ‘redistributive services’ (Foster et al., 1980). The problem is fairly deep. Since we cannot give solid economic arguments for government responsibility for redistributive

services in the first place, we also lack arguments for decentralization of such services. The design of the local public sectors ends up more as a question of administrative convenience than economic principle. The design is better described as delegation rather than decentralization, and can be called ‘administrative federalism’. A key argument for decentralization is to avoid overburdened national bureaucracy.

The choice of decentralization or centralization of welfare services is complex. A basic objective of the welfare state is to arrange equality and standardization of welfare services across the country, and national politicians are held accountable for their performance. Central government interventions in the areas of schooling, health care and care for the elderly are seen as legitimate. At the same time, redistributive welfare services have local characteristics that make local political choice important. Local governments can help adjust welfare services to local conditions. Local governments have informational advantages of preferences and costs and can better take into account local characteristics. Schooling is a good example of the dilemma. On the one hand, a national curriculum is desired and education should be standardized across the country. On the other hand, location and size structure of schools are seen as important local political choices. The dilemma is solved by a combination of decentralization and regulation. Many will argue that the schools then are left to a third party, the teachers.

The Nordic departure from the standard recipe for local government also has consequences for the central government level. When local governments are like clubs handling local public goods, central government must take the responsibility for national public goods, income distribution and stabilization. The Nordics decentralize a large part of the distribution policy, but the decentralization of provision and production is associated with mandating and sophisticated control systems. The independent local governments of the standard model become dependent of national policies here. As we will see, this dependence implies a challenge for central government control also, with a permanent and strong spending pressure against central government funds. Interestingly, the central government is vulnerable in this centralized environment. Decentralized governments can exploit the national political concern for the access to and quality of the

welfare services they provide. Rattsø (2003) discusses the consequences of vertical fiscal imbalance. The Nordic countries have chosen different ways of handling this situation. Denmark and Sweden have sought to achieve more local responsibility by local tax discretion. In all countries mandating, and detailed service regulation combined with balanced budget requirement and loan controls impose fiscal discipline on the system.

The background of the challenge to central government control is the double common pool problem created by the redistributive welfare services and the vertical fiscal imbalance. The costs of the welfare services are internalized neither at the individual level nor at the local government level, and a spending pressure towards the center results. Local politics in this setting is partly about channeling the individual demands for welfare services into local government demands for central government funds. But opportunistic behavior from individual local governments to exploit the weakness of the central government is not observed on a broad basis. To be discussed in section 5, local tax discretion may help control opportunism. The hierarchical controls and the detailed monitoring by the central government limit local fiscal imbalances and distorted service production and thereby the room for strategic behavior. In addition, given the availability of public information about economic conditions and performance, it is hard to 'break out of the pack' for any locality. At the same time, centralized financing and control precludes any disciplining role of the credit market.

A key question of fiscal discipline is the functioning of the political system. Since the pressure is on the central government, the working of national politics is important. Politics can undermine the designed system of administrative delegation. Internalizing the costs of the welfare state is hard with the spending pressure resulting from the common pool problem (Weingast, Shepsle and Johnsen, 1981). This is certainly true under proportional regional representation, fragmented parliament, and minority and/or coalition governments. It seems like the parties, although many and weak, have been able to collect their representatives to a national policy. Regional coalitions across party lines are seldom seen. The main challenge seems to be the establishment of majority coalitions among the parties. The 'strength of government' is an important concept in this situation.

This context for local taxation is important to understand how the local tax systems work in practice. The concluding section will return to the paradox of strong decentralization and strong central government control.

3. The present tax financing of the local public sector

The local public sector in all countries except Iceland accounts for 15 to 20 % of GDP. This volume of financing can only be mobilized by having local governments as part of the national tax systems. Since the tax base shows large variation between local governments, national grant systems are necessary to arrange equalization of tax revenue. All in all this leads to centralized financing with central governments in control. Local autonomy and accountability is a serious challenge in this design. Table 1 shows the numbers.

Table 1 about here.

Local taxes are generally understood as taxes that channel revenue to local governments. The local control of this tax revenue varies with institutional design. The most local taxes have tax rate and tax base set locally and are collected locally. Internationally the property tax often serves as the key local source of tax revenue and with this local control. The least local taxes have tax rate and tax base set by central government and are collected with other national taxes. OECD (1999) distinguishes between five cases: 1) Locals set tax rate and tax base, 2) locals set tax rate only, 3) locals set tax base only, 4) tax sharing arrangements with and without local influence, 5) central government sets rate and base of local tax. In the OECD classification, the income tax in Denmark, Finland, Iceland and Sweden are classified as type 2. The income tax revenue in Norway is classified as type 4, as revenue-split determined by central government as part of the annual budget process.

The local taxes applied in the Nordic countries cover the following list:

- Income tax for individuals, all countries
- Property tax, all except Sweden
- Corporate tax, Denmark and Finland
- Wealth tax for individuals, Norway
- Other: Pension funding in Denmark, natural resource tax in Norway

In an international context, the Nordic countries are characterized by the important role of the local income tax. Income taxes dominate as the main source of local tax revenue, varying from 85% of local taxes in Iceland to 100% in Sweden. The tax base for the local income tax is a broad measure of income including salaries, capital income and pensions, and all at an individual basis. The income tax is designed by the central government (definition of tax base, tax rules like deductions) and shared between local and central governments. The income tax is consequently a revenue-sharing arrangement. The local share is determined by a flat tax rate, but the revenue generated by this tax rate is affected by the central government design, like expenditure deductions. In practice the local income tax is progressive, the marginal tax is larger than the average tax for the tax payer.

All local governments in all Nordic countries have discretion in determining the tax rate for the local part of the income tax revenue. The OECD classification referred to above is debatable, since Norway and Iceland have discretion only within an interval, while the others have full discretion. In Norway and Iceland central government determines minimum and maximum income tax rates. In Norway all local and county governments apply the maximum rate, to be discussed in section 5. In Iceland, 67 out of 104 local governments apply the maximum rate and 5 apply the minimum rate. The difference between minimum and maximum is about 1.8 percentage point. In Finland the difference between lowest and highest is 4 percentage points, in Sweden 6.2 percentage points, and in Denmark the difference is 6.7 percentage points. For country and local governments combined the difference between top and bottom can be substantial, in Denmark up to 11%.

Table 2 about here

The property tax generally includes both residential and business property and both land and structures. The tax base is assessed property value, and the assessments are made locally and the assessment practice may vary. Market values serve as the basis of evaluation, but often in modified form. The design of the property tax differs between the countries. Iceland has separate rates for residential and business property, and Finland also has separate rates for different types of residential property. The Danish property tax consists of three parts, one on land, one on residential property, and one on private and public business property. In Norway the tax is not available to all municipalities since it is restricted to urban areas and certain facilities. The property tax is a voluntary tax, and in practice around 230 of the 434 municipalities have property tax. If we exclude the property tax related to electric power production, about 110 local governments have property tax and this is mainly applied to residential property. The property tax in Sweden is a tax only for the central government.

Finland and Denmark have a local corporate tax. This has recently been abolished in Norway and Sweden. In Norway a reintroduction is discussed as part of the grant system. Danish local governments receive a fixed share of the central government corporate tax. The geographical distribution of the tax revenue is a challenge and is related to salaries paid. Finland has a similar sharing system, but the local share is gradually reduced over time.

A few smaller taxes account for the rest of Table 2. Norway has both a wealth tax and a natural resource tax. The wealth tax also is shared between local and central government. The tax base is net wealth less a standard basic deduction. The municipal part of the wealth tax again is a flat rate. The natural resource tax is related to electric power production. In Denmark local governments also receive a share of a pension fee.

As discussed in the introduction, the distribution of tax revenue across local governments is important, in particular when local governments provide welfare services. The

distribution challenge motivates central government interventions and disturbs the local autonomy and accountability. The distribution problem fundamentally results from differences in the private income tax base across local governments. It is influenced both by the size structure of local governments and the geographic pattern of economic activity. Table 3 illustrates the distribution challenge and shows the municipalities with the lowest and the highest tax base. Surprisingly, the more centralized structures of Denmark and Sweden still show considerable difference between top and bottom, about 2.5 : 1, the same as in Norway, while ratio of top to bottom is about 4:1 in Finland.

Table 3 about here.

All countries deal with the tax base differences by extensive tax equalization schemes. Expenditure equalization arrangements add to the effect. Norway is a case in point. The private rich urban communities in the south end up with the lowest municipal revenue per capita, while the most prosperous municipalities are small rural communities, at the very top when they have waterfalls and/ or are located in the north. To be discussed in section 6, the tax equalization systems seriously affect the incentives of local taxation and obviously reduce the local autonomy of taxation.

4. Evaluating the local tax financing

In the standard Musgrave-Oates-Tiebout model local governments work as a self-financed club. The membership is determined by residence and all share the benefits of the club. The benefit tax and residence tax principles are the basic principles of local taxation. Local taxation is a payment of local government services, alas benefit taxation. Local governments produce local public goods to the benefit of all residents, alas the residence principle.

The competing paradigm of local taxation is the Brennan-Buchanan (1977) proposal of a constitutional constraint on 'Leviathan'. The understanding is that tax design can help voters in controlling governments. Leviathan governments seek expansion to the benefit

of government officials, and voters need mechanisms to control them. They advocate complementarity between tax base and public services to have a positive response of the tax base to service supply. Bad services will undermine the tax base and thereby contribute to lower tax revenues. Good services will increase the tax base and is rewarded by more tax revenue.

With both these starting points, redistributive taxes and tax exporting are major concerns in the design of a good system of local taxation. Redistributive taxes reduce the linkage between spending and taxation. Tax exporting means that the tax burden is shuffled on to residents of other local governments, also breaking the linkage between spending and payments. This basic reasoning assumes local public goods. When local governments provide redistributive services, beneficiaries of the services are not necessarily identical to all residents. The benefit principle in this case requires direct payments of services.

The analysis of local taxation emphasizes the mobility of the tax base. Oates (1996) clarifies the conditions for efficiency-enhancing competition among jurisdictions, notably the use of benefit taxation. Redistributive taxes may influence the mobility of households and firms, and such tax competition may distort the tax decision. A mobile tax base may encourage tax competition and lead to low taxes and underprovision of local public services. The Brennan-Buchanan view is less pessimistic about tax competition. The argument is that tax competition may counterbalance political failures that lead to a large and inefficient public sector.

The most obvious argument for an even distribution of the tax base is equity since an uneven distribution of the tax base is a source of differences in service standards across local governments. The central government can compensate for differences by a tax equalization system, but an ambitious tax equalization program weakens the link between the local tax base and local government revenue. An even distribution of the tax base can also be defended on efficiency grounds, since it reduces the incentives for fiscally induced migration. One of the consequences of this argument is that local governments

should avoid having highly progressive taxes. Associated with this, the tax design should avoid giving local governments instruments in a local distribution policy.

The local public sector is typically considered as destabilizing in a macroeconomic context. When local tax revenues are pro-cyclical, balanced-budget-rules imply that local public spending tends to increase in booms and fall in recessions. A tax base that is stable over the business cycle can serve as an automatic stabilizer.

The broad guidelines above form the basis for a broad evaluation of the three major taxes applied in the Nordic countries:

Property tax

Around the world, property taxation forms the core of local government financing. Property tax is considered as the best approximation to a local benefit tax. The property tax is basically paid by homeowners and firms located in the community. It works as a benefit tax if consumption of public services is proportional to house values and/or the quality of local public services is capitalized into house values. In addition, the property tax has favorable incentive effects since local government performance affects property values. The property tax base is not much mobile and tax competition is limited. The property tax base is fairly stable over the business cycle as new construction is relatively small compared to the existing base. Tax assessment is typically not affected by short-term fluctuations in market prices.

Income tax

The Nordic local governments mainly rely on the personal income tax. It is needed to generate the amount of revenue necessary here. The income tax satisfies the residence principle, but does not offer the strong linkage between local government performance and tax base as the property tax. Compared to the conventional criteria the income tax is more mobile and more cyclical. The variation in income tax revenue over the business cycle follows from the procyclical character of labor and capital income. The mobility of the income tax base may induce tax competition as income taxation may give an

incentive to attract high-income individuals. The challenges related to distribution and mobility of income taxation are addressed by tax equalization schemes.

Corporate income tax

The corporate income tax hardly satisfies the criteria of good local taxes discussed above. The corporate income tax is unevenly distributed between local governments, strongly procyclical, and encourages tax competition. It is hard to allocate the income generated to a particular location. The regulated local corporate income tax applied is motivated by the incentive to stimulate industry.

Looking for other local taxes

As an alternative or supplement to the income tax, it is natural to look at other taxes that generate substantial revenue like VAT or the payroll tax. The VAT has a more mobile tax base (location of trade centers etc) and the residence principle is violated due to cross border shopping. The same arguments are relevant for the payroll tax if it is paid to the municipality and county where the employer is located. If it is paid to the municipality and county where the employee resides, it becomes more similar to the income tax in terms of a local tax. Since it only includes workers, it is less of a residence tax.

5. Local tax discretion and central government control

In the standard Musgrave-Oates-Tiebout model local tax discretion is obvious, the local club determines its own financing. Oates (1972) introduced the decentralization theorem, that decentralization implies an efficiency gain in local public goods allocation compared to uniform allocation when preferences are heterogeneous across local governments. There are two aspects of this allocation gain, size and composition of local public goods. The composition efficiency can be achieved for an exogenously given budget (grants). Local tax discretion is needed to choose an optimal size package of local public goods. Tiebout solves the allocation problem a bit different. He assumes that mobility generates migration flows to internally homogenous local governments. This strengthens the allocation gain since all residents of each community will have the same preferences for

local public goods. Again the local governments need to be able to arrange their own financing of the desired volume of public goods.

In a welfare state setting with strong goals of equalization, the allocation gain is less clear cut. The desire to establish local accountability has been more important in the Nordic countries. In the literature this is more closely related to the Brennan-Buchanan-approach. The role of tax discretion influences the relationship between local and central governments. Tax discretion can help local governments take full responsibility for the services they provide and reduce the spending pressure towards central government. Carlsen (1994, 1998) offers theoretical models to capture strategic interactions and arguments for regulations in this setting. The strategic interaction can be understood as a bailout problem, as analyzed by von Hagen and Dahlberg (2004). In this setting, fiscal autonomy of a local government serves as protection for central government against bailout. Local governments that finance the spending out of own taxes are expected to make stronger adjustments to shocks. Central government control will weaken fiscal autonomy at the local level and reduce the central government's protection against bailout.

Central governments all around the world struggle to control the level of local taxation. Two alternative strategies can be observed. One alternative is to have local tax discretion and let local governments be fully responsible for the local tax level. The other alternative is to control the local tax level from above. The role of controls is dealt with in a comprehensive literature on tax limits. Preston and Ichinowski (1991) and Reuben (1997) are representative analyses on US data where regulations vary across states. They conclude that regulations do help to reduce the growth of tax revenues, total revenues and total spending in local governments. Reuben and Poterba (1995) look behind the overall local public growth effects to study how regulation of the property tax has affected employment and wages in the local public sector. They find that regulations have been important, in particular by holding down the wage growth of local government employees. Regulation also is a way of avoiding tax competition.

Given these mixed arguments for local tax discretion and central government control it is not surprising that all Nordic countries have a mix of discretion and control. Local governments in all countries have freedom to set the income tax rate, but the local discretion varies across countries and time.

Denmark and Sweden look like role models for local government decentralization and accountability. They are by design given wide discretion to set the tax rate for a substantial source of local revenue, and the income tax rate differs substantially among local governments. But the local responsibility of the local tax level is not as clear cut in practice. The tax discretion in Denmark takes place within national agreements between the central government and the associations of the local and county governments. Bargaining between the local and the national level and among the locals are expected to follow national guidelines for the overall income tax level. At present there is a 'tax stop' implying that the average municipal and county tax rates are not allowed to increase. County governments have had a small increase in the tax level, and a new control system is implemented whereby half of the revenue generated in counties with increased tax rate will be captured by the central government. Counties that have reduced the tax rate will be compensated for half of the revenue loss. The same system may be introduced for municipalities if they don't behave well. The Danish municipalities also have some discretion in the property tax, but with maximum and minimum limits to tax rates.

In Sweden the local discretion to tax is set in the constitution. Still the central government has intervened during the 1990s to control the tax level. First the government introduced a 'tax stop' as a constitutional regulation, whereby local governments are not allowed to raise their income tax rate. Later the central government used the grant system to control taxes. Municipalities maintaining the tax level were compensated, and then municipalities raising the tax rate were punished by lower grants.

In Norway, municipal and county governments formally have tax discretion. The municipalities can choose tax rate within an interval for the income tax, the wealth tax and the property tax. Counties can set the income tax rate within an interval. However,

during the last 25 years all municipalities and counties have applied the maximum rates in income and wealth taxation, and in practice tax discretion is limited to the property tax. There is no simple explanation why all local governments use the maximum tax rate. The common background understanding is that local governments with a lower tax rate will be punished in the discretionary grants handed out by the central government. A local government with a lower tax rate signals that it is rich, which is a bad position to be in when you want extra funds. If the local discretion to tax in Norway shall work in practice, the central government must convince the local governments that the grant system is independent of the tax setting.

It should be noticed that local governments in Norway do make use of their discretion in the property tax. A key issue is how property taxes are affected by other revenue sources, mainly block grants and regulated income and wealth taxes. Borge and Rattsø (2004) show that property taxes tend to increase when other sources of revenue become more restricted, and also are higher when the costs of serving the municipal debt is increasing. Similar studies of the political economy of taxation find significant effects of political institutions. Both a fragmented local council and a high share of socialists contribute to higher property taxes.

Given the limited tax discretion in Norway in practice, Borge (2003) provides calculations of how local tax discretion affects efficiency (decentralization gains) and service provision. The desired service provision and income tax rate in a hypothetical situation with full tax discretion is estimated. The decentralization gain is calculated as the income reduction the median voter can accept under tax discretion and still be as well off as in the present situation with maximum tax rates. In the benchmark case (with price elasticity of -0.4 and income elasticity of 0.6) the decentralization gain is calculated to nearly 1000 NOK per taxpayer or 3 billion NOK in aggregate. In addition increased local tax autonomy will give more equal provision of local public services. Small, rural communities (with high levels of service provision and low private disposable income within the present system) are predicted to reduce their tax rates, whereas larger, urban communities (with relatively low levels of service provision) are expected to increase

their tax rates. Central government regulations of local tax setting do influence the local government behavior and economic efficiency. To be discussed below, tax equalization systems also affect the local tax discretion.

6. Central government tax equalization

The income tax generates substantial local revenue and seems to be a necessary part of the financing when the local public sector is as large as in the Nordic countries. As shown in section 2, however, the income tax base is not equally distributed among local governments, differences between top to bottom is about 2,5 : 1 in Sweden, Denmark and Norway, and even more in Finland and Iceland. Differences in local government revenue at this level will generate large and unacceptable differences in welfare services across each country. In addition we have referred to the tax competition problem associated with the income tax. The countries have solved this problem by combining income tax financing with an ambitious tax equalization program. The tax equalization weakens the relationship between the local tax base and local government revenue, and reduces the local autonomy in taxation.

The main goal of tax equalization is political, to arrange horizontal equity, in particular equality in service provision across municipalities. The main tradeoff concerns the incentive to stimulate local economic development. If tax equalization is complete, so that local governments with the same (income) tax rate receives the same per capita revenue everywhere, local governments will receive no extra revenue from improving the tax base. Technically the balance between equalization and incentive is affected by the choice of tax rate compensated for. If local governments are compensated at their actual local tax rate, their tax increases are subsidized when their tax base is low. On the other hand, if a tax rate norm is compensated for, local governments will not receive much equalization at the margin. Tax equalization also provides insurance against reductions in tax revenue. Losses of tax revenues due to economic shocks are compensated in the tax equalization. High degree of compensation means high insurance, but also small incentive. The Nordic countries have chosen different solutions to the tradeoffs involved.

The incentives effects of the Swedish tax equalization scheme are nicely presented by von Hagen and Dahlberg (2004). They show that the effect on net tax income of a change in the tax rate is given by:

$$\frac{\partial(T_i - C_i)}{\partial t_i} = n_i y_i \left(1 + \frac{t_i \partial n_i}{n_i \partial t_i} + \frac{t_i \partial y_i}{y_i \partial t_i}\right) - 0.95 \frac{\tau}{t_i} n_i y_i \left[\left(1 - \frac{y}{y_i}\right) \frac{t_i \partial n_i}{n_i \partial t_i} + \frac{t_i \partial y_i}{y_i \partial t_i}\right].$$

In this expression T_i is tax revenue, C_i is local government net contribution to the tax equalization system, t_i is the income tax rate, n_i is the population size, y_i is the average per capita taxable income, all variables refer to local government i . The tax equalization takes into account a standardized tax rate τ and the national average tax base y . The tax revenue is based on the actual tax rate t_i , but the net contribution is based on the standardized tax rate τ . The contribution is set to 95% of the difference between the local tax base and the national average tax base, measured at the standardized tax rate. Both population size and tax base are assumed to respond to the tax rate. The first term on the right hand side shows the response of local tax revenue to a change in the tax rate. If the tax-paying population is attracted by lower local tax rate and local per-capita income rises with lower local tax rates, the two elasticities in the parenthesis are negative. Thus, if the combined elasticities are sufficiently large, a rate hike may reduce tax revenues. The second term shows how the net contribution to the tax equalization system is affected by the tax rate. Changes in tax revenue are partially offset by equalization payments. This effect is stronger for low-tax rate municipalities (where τ/t_i is large) and for relatively rich municipalities (where $y/y_i < 1$.) Both low tax-rate communities and rich communities may lose tax revenue when their income level increases. Successful development policies are punished. In Sweden this taxation above 100% is called the 'Pomperipossa' effect, named by Astrid Lindgren based on an old story.

Sødersten (1998) emphasizes how tax equalization 'solves' the tax competition problem. The advantage of the tax equalization is that it offsets most of the variation in the tax base. This must be balanced against the disadvantage that incentives to economic

development are distorted. Chernick (2004) offers an external evaluation of the Swedish system. The Swedish system represents heavy emphasis on equalization with their 95 % compensation rate. At the other end is Denmark, with a compensation rate of 45% of the difference between the local per capita tax base and the national average. But Denmark has additional compensation for the poor and the Copenhagen area, and there are mechanisms to keep some incentive to improve the tax base. The Danish system is discussed by Mau Pedersen (2003). Norway is somewhere between Denmark and Sweden in ambitions for equalization.

In the Norwegian report, Borge (2004) argues that the combination of substantial tax financing and ambitious tax equalization seems unnecessary complicated. As in the formula above, good incentives on the margin (to develop the local tax base) can be obtained by a combination of less tax financing and less ambitious tax equalization. In addition, the macroeconomic control of local government revenue will be improved and the revenue of individual local governments will be more stable. The narrow economic argument implicitly assumes that the share of taxes in local government revenue is of little importance. However, in a political context the tax share may be important. Jackman (1988, p.7) notes that proposals of less tax financing and less ambitious tax equalization "... has been attacked by political scientists on the ground that distinguishing the total from marginal expenditures is confusing in a political context, and thus may undermine the political preconditions for democratic accountability". The proposition that the share of taxes in local government revenue is of political importance seems to be widely accepted in Norway.

7. Reform discussion

When the main source of revenue, the income tax, is part of the national tax system, some interaction and conflict between local and central governments are expected. Both Finland and Iceland has recently experienced the conflict between national equalization policy and the local demand for funds in the income tax. National concern for low income groups leads the central government to increase the minimum deduction to the

income tax. Local governments experience this as reduced income tax revenue and are 'forced' to increase the tax rate. In the public debate, central government tax reductions look 'good', local governments tax increases look 'bad'. This is part of the blame game observed in all countries and follows from the dependence between local and central taxes. The income tax assigned to the local governments is increasingly progressive, and will lead to larger differences in income tax revenue. Local governments appeal to the grant system to compensate the local loss of central government actions. In Iceland the long term aspects of this has been raised as a concern. The low capital taxation as compared to wage taxation leads to a shift in the tax population away from wage income to capital income and with negative consequences for local governments. In Denmark another aspect has been up for debate. The lower tax rates in rich municipalities reduce the progressivity built into the income tax system. While central government attempts at reducing (net) income differences between individuals, local governments strengthen the differences.

The possible extension of the property tax is discussed in both Finland and Norway. In Finland there is a local spending pressure to increase the local taxes and the income tax approaches the 'psychological barrier' of 20%. Higher property tax consequently is demanded from below and also is in line with government policy. The debate concerns both the limits to the tax rate and expanding the tax base to include land in agriculture and forestry. The introduction of a broad and general property tax that includes all property is discussed in Norway, both as part of a reform of the tax system and as a reform of local government financing. In the tax system debate, the main goal is to equalize taxation of return to different types of capital. In the local government setting, the most realistic alternative is a mandatory property tax with minimum and maximum rates. A new broad property tax can be combined with reduction of the wealth tax and elimination of the imputed rent tax. The property tax may generate tax revenue of say 3% of GDP, which is close to 50% of local government tax revenue (municipalities). Distributional effects are always a political concern when property taxes are discussed. Denmark has an interesting solution. Pensioners can 'freeze' some of their property tax debt against the value of their property.

The need for central government control is partly motivated by macroeconomic stabilization. A technical aspect has been controversial in Norway, the collection of tax revenue. Local governments have collected taxes and thereby have had first hand contact with economic cycles. A government commission has proposed that the central government collect taxes and arranges tax payments to the locals. Macroeconomic control and stability of local government revenue is less important in Denmark and Sweden where taxes are collected nationally and distributed to local governments in the same way as grants.

The local discretion to tax is a reform issue in Norway, and more recently related to the discussion of changing the size structure of governments. Larger local governments will imply reduced income differences among them. It is important to understand the relationship between tax discretion and distribution in the Norwegian debate. The share of the income tax received by local governments is an important tool for the national government to achieve an equal growth of taxes and block grants. The background is that balancing of taxes and block grants has important distributional consequences because the share of taxes in local government revenue varies substantially between local units. An economic boom with high growth rate of local taxes will benefit local governments with a high share of taxes in total revenue. On the other hand, local governments strongly dependent on grants will not take much part in the boom, in particular if grants are reduced in boom years. This central government balancing of taxes and block grants is an important argument against full local tax discretion. An alternative is to allow full local tax discretion combined with tightened tax equalization, so that the (net) distribution is less responsive to cycles. This is the Swedish design.

All countries struggle with the regional level. In Finland and Iceland the regional level is handled in a combination of local government cooperation and central government responsibility. In Norway the responsibility of hospitals recently is moved from county governments to central government. County governments still have some responsibilities in secondary education, transport and industrial policy, but they look increasingly

irrelevant. Several alternatives are introduced in the public debate, and they have consequences for taxation. One alternative is to have larger regions, 5-7 in all, with new responsibilities decentralized from the central government (roads and other transport, culture, colleges) and with its own income tax with discretion. Another alternative is to move to a two-tier system with like 100 municipalities and allow them more discretion in the income tax along with a larger property tax. Denmark has had even more turbulent public debate over the proposal of 'New Denmark' with inspiration from a government commission. The initial proposals were dramatic, with an abolishing of the regional level except for hospitals and larger and more powerful municipalities. The later proposals from the government look less dramatic, but move in the same direction. Sweden also experiments with alternative organizational forms of the regional level.

The broader reform debate concerns the organization of financing of the welfare services decentralized to local governments, notably health care, care for the elderly and schools. Private alternative welfare services are developing and they challenge the public funding of the services and introduce payments by the users. Typically, central government funds are increasingly channeled to private providers outside the local governments (private schools and private health clinics), and with consequences for the funding of local governments. This leads to reform debate about financing, but mainly outside the area of local taxes.

8. Concluding remarks

The Nordic countries represent an interesting puzzle in local government financing. Extensive decentralization does not necessarily mean strong local autonomy. Rather the other way around. The financing of local governments must be arranged nationally when decentralization of spending is ambitious. This is called vertical fiscal imbalance. It is associated with the struggle to balance central government control and local self rule. Local governments end up being integrated parts of national tax systems. Comprehensive tax equalization schemes add to the centralized financing. The countries have chosen different solutions to the tradeoff. The local discretion in income taxation in Denmark

and Sweden seems to help strengthen the locals. The local autonomy and accountability also is related to the size structure of local governments. The large municipalities in Sweden and Denmark obtain more autonomy than the many small in Norway and Iceland, with Finland somewhere in between.

References

National reports:

Borge, L.-E. (2004), Local tax financing in Norway

Dahlberg, M. and H. Ågren (2004), Local government taxation: The case of Sweden

Enberg, M. (2004), Kommunal beskattning i Finland

Mau Pedersen, N. and N. Majgaard Jensen (2004), Lokal beskatning i Danmark

Juliusson, G. (2004), Lokal beskatning i Island

General references:

Borge, L.-E., 2003. More tax autonomy for Norwegian local governments: possible implications for efficiency and service provision, manuscript, Norwegian University of Science and Technology.

Borge, L.-E. and J. Rattsø, 1998. Reforming a centralized system of local public finance: Norway, in J. Rattsø (Ed.) *Fiscal Federalism and State-Local Finance: The Scandinavian Perspective*, Edward Elgar.

Borge, L.-E. and J. Rattsø, 2004. Income distribution and tax structure: An empirical analysis of the Meltzer-Richard hypothesis, *European Economic Review* 48, 805-826.

Brennan G and J M Buchanan, (1977), Towards a tax constitution for Leviathan, *Journal of Public Economics*, 8, 255-273.

Carlsen, F. (1994), Central regulation of local government borrowing: A game-theoretical approach, *Environment and Planning C: Government and Policy*, 12, 213-224, also in J. Rattsø (ed.), *Fiscal Federalism and State-Local Finance: The Scandinavian Approach*, Cheltenham: Edward Elgar, 1998.

- Carlsen, F. (1995), Why is central regulation of local spending decisions so pervasive? Evidence from a case study, *Public Budgeting and Finance* 15, 43-57, also in J. Rattsø (ed.), *Fiscal Federalism and State-Local Finance: The Scandinavian Approach*, Cheltenham: Edward Elgar, 1998.
- Carlsen, F. (1998), Central regulation of local authorities, *Public Finance Review* 26, 4, 304-326.
- Chernick, H. (2004), Fiscal Equalisation Between Swedish Municipalities, in Molander, P (ed), *Fiscal Federalism in Unitary States*, Kluwer Academic Publishers, London.
- Jackman, R., 1988. Accountability, redistribution and local government expenditures: Is the poll tax the answer?, manuscript, London School of Economics.
- Lotz, J. (1998), Local government reforms in the Nordic countries, theory and practice, in J. Rattsø (ed.) *Fiscal Federalism and State-Local Finance: The Scandinavian Perspective*, Edward Elgar.
- McGuire, T, 1999. Proposition 13 and its offspring: for good or evil?, *National Tax Journal* 52, 129-138.
- Oates, W.E., 1972. *Fiscal Federalism*, Harcourt, Brace and Jovanovic.
- Oates, W.E., 1996. Taxation in a federal system: The tax assignment problem, *Public Economics Review*, June, 35-60.
- OECD (1999), *Taxing powers of state and local government*, OECD Tax Policy Studies No. 1.
- Pedersen, Niels Jørgen Mau (2003), Challenges of the Danish equalization scheme: redistribution and incentives, in G. Farber and N. Otter (eds.), *Reform of Local Fiscal Equalization in Europe*, Speyerer Forschungsberichte 232.
- Pettersson-Lidbom, P. and M. Dahlberg (2003), An empirical approach for evaluating soft budget constraints, mimeo, Department of Economics, Uppsala University.
- Poterba, J.M. and K.S. Rueben (1995), The effect of property tax limits on wages and employment in the local public sector, *American Economic Review*, Papers and Proceedings, 85, 384-389.
- Preston, A.E. og C. Ichniowski (1991), A national perspective on the nature and effects of the local property tax revolt, 1976-1986, *National Tax Journal*, 44, 123-145.
- Rattsø, J. (2003), Vertical Fiscal Imbalance in a Welfare State: Norway, in J. Rodden, G. Eskeland and J. Litvack (eds.), *Macroeconomic Stability in Decentralized*

Countries: The Challenge of Hard Budget Constraints, Cambridge, Mass.: MIT Press, 2003.

Reuben, K. (1997), Tax limitations and government growth: The effect of state tax and expenditure limits on state and local government, mimeo, Public Policy Institute of California.

Philip, K. (1954), *Intergovernmental fiscal relations*, Copenhagen: Ejnar Munksgaard.

Söderström, L., 1990. Fiscal federalism, revenue sharing and the size of government, in H. Carlsson and B. Larsson (Eds.) *Problems of the Mixed Economy: Cooperation, Efficiency and Stability*, North-Holland.

Söderström, L., 1998. Fiscal federalism: the Nordic Way, in J. Rattsø (ed.) *Fiscal Federalism and State-Local Finance: The Scandinavian Perspective*, Edward Elgar.

von Hagen, J and M Dahlberg, (2004), Swedish local government: Is there a bailout problem? in Molander, P. (ed), *Fiscal Federalism in Unitary States*, Kluwer Academic Publishers, London.

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Table 1 Financing of the local public sector

	Sweden	Denmark	Norway	Finland	Iceland
Taxes	53%	59%	48%	48%	73%
Fees	8%	20%	15%	20%	17%
General grants	22%	12%	35%	16%	9%
Selective grants	-	9%		-	-
Other revenues	17%	0%	2%	16%	1%
	100%	100%	100%	100%	100%

Source: National reports

Table 2 Tax financing of the local public sector

	Sweden	Denmark	Norway	Finland	Iceland
Income tax	100%	86%	88%	88%	85%
Property tax	-	11%	4%	5%	15%
Corporate tax	-	2%	-	7%	-
Wealth tax	-	-	6%	-	-
Other taxes	-	1%	2%	-	-
	100%	100%	100%	100%	100%

Source: National reports

Table 3 The distribution problem

Gap in per capita income tax base between poorest and richest municipality

	Sweden	Denmark	Norway	Finland	Iceland
Minimum	SEK 93.000	DKK 102.000	NOK 82.400	Euro 6.200	-
Maksimum	SEK 235.000	DKK 284.000	NOK 196.900	Euro 26.700	-

Source: National reports (Norway 1999-data).