

Date: June 2001

13. Fiscal controls in Europe: A summary

Jørn RATTSSØ, Norwegian University of Science and Technology

1. Introduction

The book has introduced the reader to the institutional complexities of fiscal controls in European local public finance. All countries apply restrictions to local government budgeting and borrowing, but in various forms and degrees. The restrictions are broadly understood as necessary components of a fiscal federalism involving strong central government involvement in local government affairs. This design can be named administrative federalism, and is characterized by local governments integrated into a larger 'public sector'. Extensive fiscal controls look like natural ingredients of this administrative federalism, and the public sector hierarchy model works quite different from the cooperative federalism and competitive federalism discussed in the US (Kenyon and Kincaid, 1991). Only Switzerland stands out as a decentralized model of public finance.

Local governments in Europe operate in a system of centralized financing with decentralized spending, that is vertical fiscal imbalance, and with great national political interest in the redistributive services provided by the local governments. The setting can be described as a double common pool problem (Rattsø, 2001). First, individuals claim excessive local government redistributive services when they are not financed by benefit taxation. Second, local governments demand central government funds financed by general taxation. This system will have strong pressure for increased spending and associated threat to fiscal indiscipline. The broad arguments for control are discussed in chapter 2. Using the formulations of Inman (2001), we have given up the first line of defence when local governments are not limited to resident-based taxation and low spillover services, and then the second line of defence when grants are not made costly. The third and last line of defence for hard budget constraint is to establish fiscal controls.

This book offers information and understanding about how European countries have designed their restrictions to balanced budgets and borrowing. It adds to the recent empirical literature on the working of systems with vertical fiscal imbalance, notably Rodden et al. (2001). In this

short summary we will discuss some common aspects of fiscal federalism in Europe and some general characteristics of the fiscal controls observed. The concluding section discusses possibilities for future research in this area.

2. European versus US local public finance

The dominating thinking in local public finance is the Musgrave-Oates-Tiebout model of fiscal federalism (Musgrave, 1959, Oates, 1972, Tiebout, 1956). The model offers a sharp understanding of the key mechanisms of local public finance in the US system. The theory is based on four key assumptions: Local public goods, benefit taxation, mobility, and no spillovers. The strength of the local public sector in this setting is competition (Tiebout) and balancing of local benefits and costs (Oates' decentralization theorem). Local governments in this design are like clubs established by the local population to solve common problems. Benefit taxation assures local accountability, and there is no case for central government financial controls.

To give room for central government intervention and control, we must go beyond this model. Concern about equity is the obvious candidate for central government involvement. In this respect, the US looks like a special case. The US federal government has been less involved in equalization grants than most countries, and the emphasis on equity varies among the US states. When the central (federal) government is not much engaged in what is going on at the local level, the local governments can be allowed to work like a club. Interestingly, McKinnon and Nechbya (1997, p.55) see more emphasis on equity as the major threat, even 'the beginning of a slow collapse of the relatively successful US federal system into a unitary state'.

There is another challenge to local fiscal discipline in the US that may be stimulated by the high mobility, since mobility generates spillovers. It will be tempting to shift the financing of current spending on to future taxpayers if you can leave the place when the bill is to be paid. Private credit markets may or may not prevent such deficit financing, which may appear in complicated ways (like pension underfunding). Inman (2001) clarifies the conditions for such 'deficit-shifting' and studies more closely the exceptions to the US success, notably the recession in the 1930's and more recent big city crises (like New York City, Washington DC, Philadelphia and Miami). He identifies institutions promoting fiscal discipline, in particular powerful presidents, constitutional balanced budget rules, and fiscal oversight boards. His

major conclusion is that ‘this tradition of refusing to provide significant national fiscal relief to governments in distress continues to this day’. Epple and Spatt (1986) report that the debt of local jurisdictions has been restricted by their state governments for more than hundred years. They emphasize externalities of default at the financial markets.

The European design presented in this book is quite different from the US federal system and the Musgrave-Oates-Tiebout model. Compared to the model, all four key assumptions are false. Local governments deal with redistributive services as well as local public goods. The financing is centralized rather than of local benefit character. The mobility is limited, and the redistributive services involve spillovers (like schooling). Rather than the result of local population organizing a club to solve common problems, local governments are established as part of a national ‘public sector’.

Many European economists have articulated frustration with the limited relevance of the dominating US thinking in fiscal federalism. In my neighbourhood, Jørgen Lotz of the Ministry of Finance in Denmark has been the leader of the ‘anti-US’ movement. In his historical account of Denmark, he states that ‘economic theory played no role in the design of the municipal reforms’ (Lotz, 1998, p. 22). The background is an increasing central government concern about the service provision at the local level, first and for all related to equity. Musgrave (1959) discusses this in relation to ‘merit goods’, and concludes that the choice of institutional arrangement depends on political evaluation of the role of the state. The guidelines for design are less clear when local governments produce welfare services in heterogenous communities, and issues of redistribution and preference aggregation are high on the agenda. Oates (1999) acknowledges the complexities of the vertical structure of the public sector in a recent essay.

Why have the Europeans chosen to break with the normative message of the Musgrave-Oates-Tiebout model? If local governments were allowed to concentrate on local public goods based on local financing, much of the basis for central government intervention into local government affairs would disappear. But the public sector in general is larger in Europe, and the sector has higher ambition to influence the lives of the people. As formulated by Assar Lindbeck in Sweden, socialism ended up socializing the family and not the production. Whatever explanation for the larger size of the public sector, and with great redistributive ambitions, central government direct handling of all redistributive activities would lead to administrative overburden. Decentralization of redistributive spending, combined with mandating and centralized financing, is an administrative convenience. European fiscal

federalism consequently can be called administrative federalism. At the local level, the local politicians have gladly accepted the increased responsibilities.

The local public sector across Europe is not a static entity. There is frustration both at the national and the local level. While central governments often express worry about control of spending and cost efficiency and productivity growth of service provision, local governments are unhappy about limited discretion and local democracy with little content. These frustrations do not point to one clear strategy of reform, but it seems like reforms generally aim at clearer lines of responsibility between the center and the locals and consolidation of grants to reduce earmarking. The recent wave of introducing competition and privatisation even in basic social services may change the conditions for local governments. If Europeans end up with a smaller public sector and less emphasis of equity, deconstruction of the fiscal controls and more emphasis on market controls may happen in the future.

3. Varying fiscal controls in Europe

This book has entered into the details of local government budgeting and borrowing across Europe, based on the definitions sorted out by editor Bernard Dafflon in chapter 1. The ambition has been to facilitate international comparison of fiscal design. The country studies presented first and for all show how complex and different fiscal arrangements for local governments are in the details. Although a general basis for comparison across countries has not been established, there is much to learn from the country studies.

Comparing complex designs

The first problem of international comparison is the varying definitions of basic economic variables involved. The countries have different definitions of key elements of public expenditure, notably the definition of public investment. In addition, many different definitions of expenditure are in use in relation to the fiscal controls. Needless to say, it is hard to interpret and compare budget balance requirements and borrowing limitations when the basic definitions vary in this way. Austria (in chapter 3) may serve as an example, where local borrowing is said to be permitted only for 'extraordinary and absolutely necessary expenditures', where extraordinary means 'unusual in nature and size'. While the meaning of this certainly is open for discussion, also the economic conditions for approval of loan financing vary between the länder (regions) within the country.

The second problem of international comparison is the institutional design. Also here the devil is in the details. As discussed by Bernard Dafflon in chapter 2, the IMF has made an earlier attempt at broad international comparison of fiscal federalism (Ter-Minassian 1997, in particular chapter 7 by Ter-Minassian and Craig), with country approaches to borrowing controls divided into four categories: market discipline, cooperative control, administrative control, and rule-based control. The concepts are clearly helpful in understanding how mechanisms of fiscal discipline are established and function. However, given the country descriptions of this book, the ‘cooperative control’ of Ter-Minassian and Craig (1997) in Belgium and Denmark is hard to separate from their ‘administrative control’ in Austria, Norway, Spain, and United Kingdom. They all have administrative control systems from the top with sufficient contact and negotiation with local units to call them cooperative. The loan restrictions reached ‘in cooperation’ in Denmark certainly leave less room to maneuver than the combined rules and administrative controls in Norway. Since rules set by law must be interpreted, they always imply administrative discretion. The IMF classification of Italy and Germany as ‘rule-based’ as opposed to ‘administrative’ is challenged even by the country authors of the book (chapters 10 and 11 in Ter-Minassian, 1997). Their ‘administrative control’ in Norway and Spain has rules by law that seems to be even more clarifying than the ‘rule-based’ Italy.

Budget balance versus borrowing restrictions

The extreme cases of fiscal control in our sample are Denmark and France. The design of the two appear to be quite different on paper, but less so in practice. In Denmark (chapter 5), the ‘main rule’ says that all spending, including investment, is financed by current revenues. There are automatic and discretionary exceptions from the main rule, and the discretionary part is related to macroeconomic policy. Recently 40-50 % of investment has been financed by loans. This is more than in most countries. At the other end, in France (chapter 6) the fiscal control is delegated to the private market, and the communes can finance their investments by private loans without limits. But then the central government controls the current budget balance, so that the debt burden can be financed by current surpluses. Loans finance about 40% of local investment. Restrictions on the current balance substitute restrictions on borrowing.

While Denmark concentrates on borrowing control and France on current budget balance control, the other countries rely on both in different degrees. Belgium, Italy and Norway are oriented towards current budget balance control, while Austria, England, Germany and Spain

are putting more emphasis to borrowing restrictions. The fiscal requirements of the Maastricht Treaty have encouraged more emphasis on budget balance controls to satisfy the deficit criteria. This is certainly true in Austria, where the 3% deficit allowed is shared out among the three levels and among the regions in great detail.

The emergence of fiscal controls is a separate area of research, and Von Hagen and Eichengreen (1996) share the view that the conditions of administrative federalism motivate restrictions on borrowing. In a broad dataset of 45 countries they test the relationship between vertical fiscal imbalance and borrowing restrictions. Vertical fiscal imbalance, high degree of central government financing of local government, is a common characteristic of administrative federalism. They find econometric evidence that centralized financing is associated with borrowing controls. They also find that countries with borrowing restrictions have higher government debt. The understanding is that the fiscal pressure against the center is higher when the center controls the funds. Their result fits well with the understanding of Austria here, where debt is understood as a result of limited local revenue sources. Spending pressure without local revenue instruments may lead to growth of debt and motivate restrictions. On the other hand, this is the opposite of the understanding in Denmark. The strict Danish controls are motivated by their freedom in local income taxation. Borrowing restrictions are seen necessary because the tax decisions of the large local public sector have notable macroeconomic consequences.

Performance under controls

The restrictions imposed regarding balanced budgets and borrowing allow for administrative discretion at the central government level. They typically involve some rules related to budgets and accounts, but the rules are always supplemented with supervision and discretion. Many countries report local activities to get around the rules and regulations, either in the form of innovative accounting or in organizing enterprises outside the accounts under control. The chapters for Austria, Germany and Spain discuss experiences with 'hidden debts', while France has similar problems in the control of budget balance. Presumably the importance of administrative evaluation is a way of compensating for the limited effects of formal limitations. Restrictions seem to work although they are imperfect.

All the countries are successful in that none of them are heading towards fiscal crisis in local public finance. This overall rosy picture does not mean that the countries altogether have avoided fiscal imbalances. The episodes of local fiscal crisis experienced, notably in Italy and Spain in the late 1970s, motivated an overhaul of the fiscal controls. Central government

interventions and bail-outs were followed by institutional reforms to avoid future repetitions. The optimistic view is that the countries have learned their lesson. At present, Germany certainly has a challenge in the handling of the new eastern Länder, with weak fiscal capacities and high fiscal demands. Many authors report that the EMU process has been helpful in arranging sustainable balances. This is contrary to the negative assertion that EU governments attempted at shifting the burdens of the fiscal criteria down to the local level. The most recent observations certainly indicate that new fiscal imbalances have not resulted at the local level.

Control of budget balances and borrowing reduce local government flexibility and may induce fiscal bias. When current revenues are assumed to finance a large part of the investment, the investment pattern easily becomes pro-cyclical. Procyclical local public investment is reported for Austria, Germany, Norway and Spain. In this case, the attempts at controlling local governments create new challenges at the national level, to counterbalance the pro-cyclical elements following controls. In Belgium, the investment variation over time rather is related to a political cycle. In Denmark, strict borrowing controls are used as an active instrument of macroeconomic policy, but the cyclical pattern of local government investment is not reported. Another type of potential fiscal bias is reduced investment over time. Given strong national controls on overall local spending and rising pressure for services locally, the room for investment may be squeezed. Declining local public investment over time is reported in England, Germany and Norway. A similar mechanism has led to the discussion of the 'infrastructure problem' in the US (Hulten and Peterson, 1984). The bias towards current spending may lead to a deterioration of public infrastructure and construction over time.

In terms of design, the regional level seems to be the main challenge of the countries concerned. Sharpe (1988) introduced a bold and interesting classification in this respect, between 'Napoleonic states' and 'non-Napoleonic states'. In our sample the Napoleonic states include Belgium, France, Italy and Spain, and their defining characteristic is the central government representatives at the regional level overseeing the local governments ('the prefect'). This kind of representation now seems to be the case in all the countries studied in this book, except for the federal states, Austria, Germany and Switzerland, where the regions (länder and cantons) have a stronger independent position in relation to the locals. The role of the 'middle level' looks like an interesting area of further investigation.

The lesson from this book is that all the countries involved carry out their budget balance and borrowing controls in a complicated mix of rules by law, administrative routines and supervision, and cooperative arrangements. Market discipline plays a limited role and mainly in France. This reflects the common European approach to fiscal federalism, where local governments are an integrated part of a national 'public sector'. Controls within this public sector appear in many forms and always allow some discretion at the center. The controls are successful in that fiscal imbalances in the local public sector generally are avoided.

4. Future research

A set of country studies like in this book offer a broad understanding of institutional variation and economic performance. A long political and economic history explains the emergence of the administrative system, rules and regulations based on law, and decision making in each particular country. The stories told for each country are of interest in themselves, but do not allow for much generalization about how different designs have different consequences for economic performance. The next step is to move to more explicit and quantitative comparative analysis of fiscal federalism. Europe presents rich variation in federalist structures, and allows for comparative analysis of many aspects such as local tax systems, grant systems, degrees of monopoly or competition in service provision etc. Not many comparative analyses of this sort are seen, maybe there is too much variation in too many dimensions for comparative analyses to be productive. Still I suggest that some attempts should be done.

Comparative analysis 1: Fiscal restrictions

The EU oriented analysis of fiscal discipline by Von Hagen and Harden (1994) represents a fruitful approach that could be developed to include decentralized government. Their emphasis is on broader characteristics of the budget process, and the main conclusion is that budget stringency is associated with lower budget deficits and lower levels of government borrowing. Similar comparative analysis at the country level has been made for Latin-America (Alesina et al., 1999) and with the same conclusion that budget institutions matter.

More extensive econometric studies of the consequences of budget balance requirements and borrowing limitations are made for the US states. The US states with their relative homogeneity and institutional variation offer an attractive database for the investigation of fiscal restrictions. The states generally have balanced budget requirements and limitations on

debt, but in different forms. Von Hagen (1991) did an innovative study of how these rules affect state indebtedness. The motivation for his study was the discussion about European monetary integration and the use of fiscal restraint. The US case represents an opportunity to investigate how fiscal restraints in a monetary union are functioning. His main conclusion is that fiscal restraints 'do little to reduce the likelihood of extreme outcomes in fiscal performance' and thus that they cannot be expected to be effective in a European monetary union. The conclusion is since challenged, and an overview is offered by Poterba (1997).

Most US states apply some kind of balanced budget rules for operating budgets, and their variation opens up for comparative analysis. Poterba (1997) classifies three main types: Required submission of a balanced budget; required legislative decision of a balanced budget allowing for actual deficits; combining a balanced budget from the legislature with a prohibition to carry forward the deficit. The empirical analyses apply an index of the stringency of the state's balanced budget requirements. The econometric analyses following up Von Hagen's study have estimated broader models of economic and political variables affecting spending and revenue behaviour. There has been some discussion about what deficit concepts are most appropriate given that the balance restrictions apply to specific components of revenue, spending and funds. However, the analysts today seem to agree that the most restrictive fiscal limits do reduce the state indebtedness and also reduce the borrowing costs for a given deficit.

Since fiscal restrictions are stable over time, the econometric evidence primarily is based on cross-section evidence and with the associated problems of linking the performance to the restrictions in question. This problem will be even larger across countries (as compared to across US states), which may motivate other approaches.

Comparative analysis 2: Shocks

If quantitative analyses of fiscal restrictions cannot be done, we have to look for simpler alternatives. A realistic approach is to do separate analyses of local government behaviour in each country, and in a design that can be compared. Analysis of economic responses to fiscal shocks and the handling of budget deficits are well suited for international comparison. Fiscal shocks can be understood as 'natural experiments' that provide information about government behavior.

Country studies of fiscal shocks in the local public sector already exist for Denmark, Norway and Sweden (Rattsø and Tovmo, 2000, Rattsø, 1998, and Lundberg 1998 respectively).

Although the broad model of fiscal federalism is similar among the Scandinavian countries, there are distinct differences in control systems. As we have seen in chapters 5 and 9, Norway has the most centralized control of financing with close to no local tax discretion, while the Danish system is particular in its strict control of loans and investments, where central government regulates the loan totals for each local unit and the design assumes that investment activity is financed within the current budget. Sweden has more centralized control of the welfare services through mandating and standardization, but leaves more discretion in borrowing.

The different types of centralized control leads to distinct different patterns of response to shocks. The strict borrowing restrictions in Denmark forces the local governments into immediate adjustments. Rattsø and Tovmo (2000) estimate that both current revenues and expenditures are adjusted in response to shocks, and that current revenues take most of the adjustment. The results are comparable to the most restrictive fiscal institutions analysed for the US states by Poterba (1994), where strong anti-deficit rules increase spending responses. The controls in Norway are directed towards the current budget balance, and the discretion within the current budget is limited by tax regulations and mandated spending. Rattsø (1998) finds no short run adjustments to shock in Norway, and all the adjustment is channeled through investment. The system clearly is based on central government handling of short run stabilization issues by way of adjusting tax revenue sharing, grants and mandating. The result confirms the pro-cyclical investment observed in the text. Lundberg (1998) identifies no revenue adjustment to shock for Sweden, and surprisingly concludes that the expenditure side absorbs the shock. All three countries have adjustment mechanisms avoiding serious fiscal imbalances, but the adjustments are channeled in different directions dependent on the fiscal arrangement. It is of interest to compare shock adjustments of this kind for several countries.

Comparative analysis 3: Local public investment behavior

Fiscal constraints of budget balance and borrowing have consequences for investment behavior, as discussed above. There are tendencies for procyclical investment and long run investment squeeze in the data. Public investment stagnation in the US has been analyzed by Hulten and Peterson (1984). They show that state and local capital spending as a share of their total spending has declined from 30 % in the mid-60s to 15 % in the early 80s. Some observers refer to deterioration of roads, mass transit systems, water and sewage systems etc.

as evidence of problems related to bad decision making. In Norway, the deterioration of local public sector capital stock is basically manifested as declining quality of buildings, first and for all schools and hospitals. Maintenance of buildings seems to suffer most. It is not self evident that this deterioration is suboptimal. But it cannot be concluded from direct observation that bad decision making explains the stagnating investment level. The slowdown may be the sensible response to reduced future revenue growth or demographic shift. Local and county governments have based their investment plans on expectations about future economic and social conditions, and investments are typically predicted to develop *pari passu* to revenue growth. Slowdown and stagnation may follow news about changes in permanent revenue growth and demographics. Changes in the age composition of the population may motivate a reorientation of the service production towards more labour intensive services; e.g. care for the elderly is less capital intensive than education for children.

Econometric analyses of investment may supplement the observations of the country studies. Holtz-Eakin and Rosen (1993) innovated this field by estimating an intertemporal model of investment determination. Their conclusion is optimistic, that US states operate in accordance with the forward looking model. Rattsø (1999) analyse the investment decline in Norway using a similar approach. The investment decline is found to be a consequence of a negative shift in the local government revenue growth. Consistent with chapter 9, local public investment is procyclical with respect to unexpected components of the cycle. Expected changes in gross domestic product and unemployment have no influence on the investment level, consistent with the forward looking model. It follows that the fiscal restrictions in Norway have not limited the long run behaviour of local governments 'on average'. Since most of them generate current surplus financing of investment, they have not been restricted by the balanced budget rule. The dynamics of local public investment is an interesting research area in other countries.

Poterba (1995) has made an econometric analysis of borrowing restrictions across the US states in order to test whether investment behaviour is affected. The main distinction is between states with unified budgets and states with separate budgets for capital and current spending. The background understanding is that investment spending is squeezed within unified budgets. Also the states vary with respect to restrictions regarding current revenue financing (pay as you go) of investment projects. Poterba concludes that separate capital budgets are associated with higher investments. Interestingly, differences in fiscal restrictions

(possibly resulting in investment decline) can be compensated by local budgetary practices (like separating out a capital budget). European counterparts to these econometric regularities are certainly of interest.

Comparative analysis 4: Broader issues

The fiscal constraints discussed primarily address short run imbalances. But as we discussed in section 2, the European design implies vertical fiscal imbalance with potential effects also for the growth and size of the local public sector. The common pool problem associated with centralized financing leads to a spending pressure towards the central government. The fiscal restraints consequently can be seen as ways of handling this spending pressure. The broad question is how the national political system handles the spending pressure resulting from limited internalization of the costs of decentralized government. Analyses of the spending growth of the total local public sector over time may reveal how changing conditions of central government influences the outcome. This is the approach for the study of US grants by Inman (1988) and the local public spending growth by Borge and Rattsø (1997, 2001). The US study emphasizes strong presidents as disciplining factors, while the Norwegian study points to the fragmentation of parliament as an important factor. This type of public sector growth studies in principle can be made at the regional and local government level to investigate the effects of variation in political and institutional design.

5. Concluding remarks

The country analyses of this book show that fiscal stability of decentralized government can be achieved in different ways. The variation in administrative and institutional arrangements across countries reflects broad historical differences including cultural, social and political backgrounds. All the countries included in this volume have been successful in avoiding serious fiscal imbalances in the last 20 years. But the effects of these fiscal arrangements for the broader goals of the government sector is an open question. In this final chapter we have indicated alternative approaches for more explicit comparative studies of fiscal performance in the future.

Acknowledgement

I appreciate help and input of the country authors, and in particular Bernard Dafflon, Guy Gilbert, Javier Suarez Pandi and Niels Jørgen Mau Pedersen, without holding them responsible for the text.

References

- Alesina, A., R. Hausmann, R. Hommes and E. Stein, 1999, Budget institutions and fiscal performance in Latin-America, *Journal of Development Economics* 59, 253-273.
- Borge, L-E. and J. Rattsø, 1997, Local government grants and income tax revenue: Redistributive politics in Norway 1900-1990, *Public Choice* 92, 191-197.
- Borge, L-E and J. Rattsø, 2001, Spending growth with vertical fiscal imbalance: Decentralized government spending in Norway 1880-1990, mimeo, Department of Economics, Norwegian University of Science and Technology.
- Epple, D. and C. Spatt, 1986, State restrictions on local debt: Their role in preventing default, *Journal of Public Economics* 29, 199-221.
- Holtz-Eakin, D. and H. Rosen, 1993, Municipal construction spending: An empirical examination, *Economics and Politics* 5, 1, 61-84.
- Hulten, C. and G. Peterson, 1984, The public capital stock: Needs, trends, and performance, *American Economic Review* 74, 166-173.
- Inman, R., 1988, Federal assistance and local services in the United States: The evolution of a new federalist fiscal order, in H. Rosen (ed.), *Fiscal Federalism: Quantitative Studies*, Chicago: The University of Chicago Press.
- Inman, R., 2001, Hard and soft budget constraints in the United States, in J. Rodden, G. Eskeland and J. Litvack (eds.), *Fiscal Decentralization and the Challenge of Hard Budget Constraints*, Washington DC: The World Bank, forthcoming.
- Kenyon, D. and J. Kincaid (eds.), 1991, *Competition Among States and Local Governments*, Washington DC: The Urban Institute Press.
- 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*, Cheltenham: Edward Elgar.
- Lundberg, Johan, 1998, Local government responses to unexpected fiscal shocks and budget deficits: Evidence from Swedish municipalities, mimeo, Department of Economics, Umeå University.
- McKinnon, R. and T. Nechbya, 1997, Competition in federal systems: The role of political and financial constraints, in J. Ferejohn and B. Weingast (eds.), *The New Federalism: Can the States be Trusted?*, Stanford: Hoover Institution Press.
- Musgrave, R., 1959, *The Theory of Public Finance*, New York: McGraw Hill.
- Oates, W., 1972, *Fiscal Federalism*, New York: Harcourt, Brace and Jovanovic.
- Oates, W., 1999, An essay on fiscal federalism, *Journal of Economic Literature* XXXVII, 1120-1149.
- Poterba, J., 1994, State responses to fiscal crisis: The effects of budgetary institutions and politics, *Journal of Political Economy* 102, 4, 799-821.
- Poterba, J., 1995, Capital budgets, borrowing rules, and state capital spending, *Journal of Public Economics* 56, 165-187.

Poterba, J., 1997, Do Budget Rules Work?, in A. Auerbach (ed.), *Fiscal Policy: Lessons from Economic Research*, Cambridge, Ma.: The MIT Press.

Rattsø, J., 1998, Fiscal adjustment with vertical fiscal imbalance: Empirical evaluation of administrative fiscal federalism in Norway, mimeo, Department of Economics, Norwegian University of Science and Technology.

Rattsø, J., 1999, Aggregate local public sector investment and shocks: Norway 1946-1990, *Applied Economics* 31, 577-584.

Rattsø, J., 2001, Vertical fiscal imbalance in a welfare state: Norway, in J. Rodden, G. Eskeland and J. Litvack (eds.), *Fiscal Decentralization and the Challenge of Hard Budget Constraints*, Washington DC: The World Bank, forthcoming.

Rattsø, J. and P. Tovmo, 2000, Fiscal discipline and asymmetric adjustment of revenues and expenditures: Local government responses to shocks in Denmark, mimeo, Department of Economics, Norwegian University of Science and Technology.

J. Rodden, G. Eskeland and J. Litvack (eds.), 2001, *Fiscal Decentralization and the Challenge of Hard Budget Constraints*, Washington DC: The World Bank, forthcoming.

Sharpe, L., 1988, Local government reorganisation: General theory and United Kingdom practice, in B. Dente and F. Kjellberg (eds.), *The Dynamics of Institutional change*, London: Sage.

Ter-Minassian, T. (ed.), 1997, *Fiscal Federalism in Theory and Practice*, Washington DC: International Monetary Fund.

Ter-Minassian, T. and J. Craig, 1997, Control of subnational government borrowing, in Ter-Minassian, T. (ed.), *Fiscal Federalism in Theory and Practice*, Washington DC: International Monetary Fund.

Tiebout, C., 1956, A pure theory of local government expenditures, *Journal of Political Economy*, 64, 416-424.

Von Hagen, J., 1991, A note on the empirical effectiveness of formal fiscal restraints, *Journal of Public Economics* 44, 199-210.

Von Hagen, J. and B. Eichengreen, 1996, Federalism, fiscal restraints, and European Monetary Union, *American Economic Review* 2, 86, 134-138.

Von Hagen, J. and I. Harden, 1994, National Budget Processes and Fiscal Performance, *European Economy* 3, 311-418.