

INTERGOVERNMENTAL FISCAL RELATIONS AND THE SOFT BUDGET CONSTRAINT PROBLEM¹

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ABSTRACT

The soft budget constraint problem in intergovernmental fiscal relations arises when subnational governments' spending and borrowing decisions are influenced by the expectation of receiving additional resources from the central government. The paper describes the key determinants of soft budget constraints and surveys the theoretical and empirical literature on the topic. An assessment of the soft budget constraint problem is provided for selected developed, developing, and transition economies as reported in the case study literature. The paper concludes with a discussion of the methods that may be employed to mitigate the soft budget constraint problem.

I. INTRODUCTION

The problem of soft budget constraints in intergovernmental relations has generated interest recently in light of the movement towards decentralization in many countries throughout the world. This movement is motivated by the traditional argument that subnational governments are better able to allocate resources according to the preferences of their own citizens (see, for example, Oates (1972)). Decentralization, however, yields maximum benefits in the absence of externalities

and opportunistic behaviour on the part of subnational governments. When these are present, problems associated with soft budget constraints reduce the benefits that decentralization is expected to bring to the efficient allocation of resources.

The problem of soft budget constraints was first recognized by Kornai (1979, 1986) in relation to state-owned enterprises. According to Kornai, a soft budget constraint arises when a state-owned enterprise expects an additional subsidy if it experiences financial difficulty. The expectation of additional resources in turn results in opportunistic behaviour that may precipitate a financial crisis in the firm. More recently, the problem of soft budget constraints has become an issue in intergovernmental relations. The problem arises because, with decentralization, the central government has limited control over subnational government spending and borrowing, but it maintains a strong interest in the affairs of lower-level governments. In this setting, soft budget constraints arise when subnational governments perceive that they will receive additional resources from the central government in the event of financial difficulty. This perception leads subnational governments to behave strategically in selecting spending and borrowing levels, and this may precipitate a crisis and a request for more resources or even a bailout from the central government. In what follows, we refer to all forms of financial assistance as a bailout in order to simplify the terminology.

Following Inman (2003), the soft budget constraint problem can best be viewed as a sequential game. In the first stage, the central government announces its granting policy. In the second stage, the subnational government makes its expenditure and borrowing decisions, which may or may not precipitate a financial crisis. In the final stage, if the subnational government does experience a financial crisis, then the central government decides whether or not to bail out the subnational government. If it has an incentive to do so, then the subnational government takes this into account when making its expenditure and borrowing decisions. This is the essence of the strategic game played by the subnational government.

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As von Hagen and Dahlberg (2002) point out, however, it is important to distinguish between a financial crisis brought on by strategic behaviour and one that results from factors beyond the subnational governments' control, such as adverse macroeconomic shocks. The soft budget constraint problem arises only when subnational governments *expect* the central government to provide additional resources, and this expectation affects subnational government behaviour.

The sequential game depicted in the previous paragraph highlights the two necessary conditions for the existence of soft budget constraints: (i) it must be in the interest of the subnational government to behave strategically in order to extract a bailout from the central government and (ii) it must be in the interest of the central government to deviate from the originally stated policy in stage 1 and bail out the subnational government in stage 2. The second condition is the crux of the soft budget constraint problem. While the central government finds it optimal *ex ante* to deny subnational government bailouts in order to instill fiscal discipline, it finds a bailout optimal *ex post* when the subnational government finds itself in financial difficulty (Kornai, Maskin and Roland (2003)). The central government therefore is unable to commit to a no-bailout policy.

Much of the theoretical literature examining the soft budget constraint problem in intergovernmental relations seeks to determine when conditions (i) and (ii) are likely to arise and what can be done to mitigate them. We explore this literature in Section III. We first examine the implications of soft budget constraints in Section II. In Section IV, we present empirical analyses that attempt to measure the soft budget constraint problem in intergovernmental relations. In Section V, we present case study analyses that examine the experience various countries have had with soft budget constraints and what mechanisms have been employed successfully to mitigate them. In light of what we have learned in Sections III-V, we then summarize potential mechanisms that can harden budget constraints.

II. IMPLICATIONS OF SOFT BUDGET CONSTRAINTS

Under a hard budget constraint, the efficient level of expenditure or borrowing is achieved when the marginal benefit of additional expenditure or borrowing equals the marginal cost. With a soft budget constraint, the marginal benefit exceeds the marginal cost to the local government because it expects the central government to assume part of the cost of its spending or borrowing. This is the essence of the common-pool problem of soft budget constraints identified in the literature (see, for example, PISAURO (2001) and von Hagen and Dahlberg (2002)). In particular, when the subnational government extracts additional resources from the central government, part of its spending and borrowing costs are shifted onto national taxpayers. Thus, soft budget constraints constitute a negative externality in that subnational governments do not take into account the welfare of national taxpayers when making their spending and borrowing decisions. As a result, an implication of soft budget constraints is that too much spending and borrowing are undertaken relative to the efficient level (Goodspeed (2001), PISAURO (2001), von Hagen and Dahlberg (2002)).

A further implication of soft budget constraints arises from the fact that the central government implicitly insures the subnational government against the risk of financial crises (PISAURO (2001)). This results in moral hazard problems associated with the composition of subnational government spending. In particular, the subnational government may undertake non-viable projects, projects that are too risky, or that increase the government's popularity and perks (Careaga and Weingast (2000), von Hagen and Dahlberg (2002)).

Macroeconomic instability may also result from soft budget constraints. The excess government expenditure and borrowing that are characteristic of soft budget constraints plays havoc with the central government's ability to use fiscal and monetary policy effectively to stabilize the economy (Prud'homme (1995)). Furthermore, the resulting increase in aggregate demand puts upward pressure on prices. This is exacerbated by the large transfers that result from unexpected bailouts of subnational

governments. Furthermore, the excess government expenditure may crowd out private investment and consumption. All of these effects can undermine the central government's stabilization program.

III. DETERMINANTS OF SOFT BUDGET CONSTRAINTS

As described in the Introduction, two necessary conditions for soft budget constraints to arise are that (i) the subnational government has an incentive to behave strategically in order to extract additional funds from the central government and (ii) the central government finds it optimal to deviate from its originally stated policy and bail out the subnational government. Knowing (ii), the subnational government comes to expect a bailout, and this influences its behaviour. It is important to understand, therefore, that soft budget constraints do not arise out of direct policy choices on the part of the central government. Rather, to understand the soft budget constraint problem it is necessary to examine the fiscal and political institutions that create the expectation of bailouts. We do so in this section.

(i) Vertical Fiscal Imbalance

A common feature of intergovernmental fiscal relations is for expenditure responsibilities to be devolved to subnational governments and taxing authority to remain in the hands of the central government. This gives rise to a vertical fiscal imbalance (VFI) that necessitates transfers from the central government to the subnational governments. The soft budget constraint problem would not arise if subnational governments did not depend on transfers from the central government (Rodden (2001)). That is, if expenditures, including debt service payments, are financed only by local own-source revenues, then the subnational government is in a position to solve financial difficulties itself. The existence of large VFIs creates expectations of bailouts on the part of subnational governments, voters, and creditors due to the subnational government's limited ability to raise revenues in the event of a financial crisis. The central government may then feel compelled to solve the crisis because only it has the ability to do so (Rodden (2001), Rodden, Eskeland, and

Litvack (2003), von Hagen and Dahlberg (2002)). Furthermore, local voters and creditors may find it difficult to fault the subnational government in the event of a financial crisis when it has limited ability to raise revenues. As evidence of this, it is common that in countries with high levels of VFIs, subnational credit ratings reflect the expectation that the central government backs the debt of the subnational governments. In Germany, for example, the Länder receive a uniform triple A rating despite the fact that some have experienced significant financial difficulties (Rodden (2003)).

VFIs necessarily exacerbate the common pool problem identified in Section II whereby the marginal benefit of additional spending or borrowing exceeds the marginal cost because part of the cost is borne by national taxpayers. This negative externality leads to excessive spending and borrowing that may precipitate a financial crisis. A theoretical analysis of the common pool problem has been undertaken by Garcia-Mila, Goodspeed, and McGuire (2002) using a two period model whereby the central government provides additional funds to the subnational government in the second period. Additional funds are provided in response to subnational borrowing in period one, and are financed by a proportional income tax levied on citizens of all regions. Thus, when the central government provides an additional grant to the region, the taxes paid by the region's citizens increase, but by less than the amount of the grant. The price of borrowing is therefore reduced for the subnational government, which provides an incentive for excessive borrowing. Importantly, this tax price of borrowing decreases with the size of the region's economy. Thus, the common-pool problem is likely to be larger the smaller the region.

Aizenman (1998) also examines the common pool problem in a model where the central government has limited control over the spending behaviour of subnational governments. In his model, a subnational government receives a fiscal allocation from the central government that is financed by shared tax revenues and public debt. Excessive spending by subnational governments is financed by an increase in the center's public debt. Subnational governments face opposing incentives when deciding their

spending levels. First, the common pool problem is apparent in that the subnational government obtains the full benefit from excessive spending while shifting part of the burden onto future national taxpayers. The second incentive derives from the voting public's dislike for public debt. In particular, voters are able to remove both the subnational and national governments from office if debt levels are too high. The first incentive tends to induce excessive spending whereas the second incentive tends to dissuade it. When the second incentive dominates, the macroeconomic equilibrium is a cooperative one and debt levels remain low. A limited cooperative outcome occurs when the central government is able to adjust the fiscal allocation to the highest level that induces cooperation. A non-cooperative outcome occurs when the central government is unable to constrain the spending behaviour of subnational governments. Aizenman shows that adverse shocks can result in regime switches from cooperative to non-cooperative outcomes. More specifically, a negative adverse shock encourages opportunistic behaviour because the benefits of additional spending are increased due to diminishing marginal utility. An implication of this is that soft budget constraints should be more common during economic downturns.

(ii) Flexibility of Own Revenue Sources

In some federations (Germany for example), subnational governments have access to a large number of tax bases, but they have little autonomy in setting tax rates or in creating new bases. In such a setting, the subnational government may find it difficult to adjust its revenues in response to a financial crisis, and it may therefore expect to be bailed out by the central government. Here again, as in the case of VFIs, voters and creditors may not hold the subnational government accountable for a financial crisis if it has limited flexibility in securing additional revenues from own sources.

(iii) Types of Federal Transfers

Even with high levels of VFIs, the soft budget constraint problem may not arise if intergovernmental transfers are completely non-discretionary (Rodden (2001)). That is, if the level of transfers are determined by explicit

formulae such as those based on the number of poor or the number of schoolchildren, then the central government would have little discretion in providing additional transfers in times of financial crises. By contrast, if the criteria for determining federal transfers are poorly defined or if the criteria are easily manipulated, then the subnational government may petition the central government to use its discretionary transfer powers in the event of a financial crisis (Rodden, Eskeland, and Litvack (2003)). In this setting, the central government cannot hide behind transfer rules that effectively tie its hands and enforce its no-bailout policy.

Rules can, however, have the opposite effect and help to enforce bail-out expectations. For example, the constitution may provide explicit rules for the central government to ensure equal opportunities for citizens across the country. These rules often are manifested in an explicit equalization program that compels the central government to redistribute funds across subnational governments. If financial difficulties mean that citizens in one region of the country may suffer a reduction in the provision of goods and services, then the central government may be obligated to bail out the subnational government. Two German Länder - Bremen and Saarland - recently received bailouts in this way.

(iv) Budget Transparency

Subnational government budgets are often exceedingly complex, which may confuse voters when attempting to identify the true costs and benefits of government policies. At least part of the complexity may be deliberate. For example, Alesina and Perotti (1999) explain that subnational governments may (i) overestimate the expected growth of the economy, (ii) overestimate the effects of government policies, (iii) overestimate the revenue effects of small changes in tax policy, and (iv) announce a multi-year budget where most of the difficult adjustments occur in the future. The confusion created by deliberate complexity in the budgeting process makes it difficult for voters to hold subnational governments accountable for financial difficulties experienced at the end of the fiscal year.

(v) The Assignment of Expenditure Responsibilities

Another common characteristic of intergovernmental fiscal relations is for subnational governments to be responsible for providing key services at minimum national standards. This exacerbates the soft budget constraint problem because it is difficult for the federal government to deny a bailout in the event the subnational government is unable to meet its obligations (Rodden, Eskeland, Litvack (2003) and von Hagen and Dahlberg (2001)). This problem is exacerbated if both levels of government provide the good or service because voters may find it difficult to discern which level of government is ultimately responsible for providing the good. Furthermore, subnational governments that are responsible for the provision of many goods and services have more possibilities for getting into financial difficulty.

It is also often the case that the provision of basic goods and services provides positive externalities to citizens in all jurisdictions. Examples include vaccinations, potable water, education, and basic literacy. Wildasin (1997) provides a theoretical examination of bailouts when subnational governments provide local public goods with positive externalities to other jurisdictions. In the first stage of his model, the central government establishes a matching grant program to correct for the suboptimal level of local public good provision. In the second stage, and given the level of the matching grant, the subnational government selects its level of expenditures. In the final stage, the central government may provide additional funding if the subnational government has selected a suboptimal level of public good provision. The central government may find it optimal to do so because of the positive externalities created by local public goods. The soft budget constraint problem arises at the second stage if the subnational government selects the levels of taxation and expenditures that deviate from the optimal levels knowing that the central government may provide an additional grant in the final stage. Note that the subnational government faces a tradeoff at this stage; it may reap the benefits of additional funding only at the expense of a suboptimal level of expenditure.

An important implication of Wildasin's model is that the likelihood of a bailout increases with the size of the positive externalities generated by local public goods. Thus, bailouts are more likely to be granted to large jurisdictions. This implication has become known as the "too big to fail" justification for bailouts.

(vi) Degree of Borrowing Autonomy

When subnational governments have no power to borrow, financial difficulties are limited only to unpaid public wages and trade arrears, which have a maximum level beyond which employees will refuse to work and supplies will be cut off. Financial difficulties are more likely to escalate to crisis levels if the subnational government has the ability to borrow. For this reason, many countries impose borrowing restrictions on subnational governments. Subnational governments may, for example, face balanced budget requirements and restrictions on the ability to issue debt. The success of these restrictions in enforcing fiscal discipline depends on the subnational government's ability to circumvent them. Subnational governments may, for example, engage in off-budget activities or issue debt to finance special functions that have been delegated to public corporations or political subsidiaries (von Hagen (1991)).

Financial difficulties resulting from unrestricted borrowing, however, are only limited to the extent that the credit market perceives a default risk on the part of the subnational government. If there is an expectation that the central government may bail out the subnational government, then the credit risk is transferred to the central government. In such cases, overborrowing can be severe because subnational governments and their citizens perceive debt-financed projects to be less costly than tax-financed ones (Poterba (1995)). Furthermore, when markets transfer subnational credit risk to the central government, the central government may feel compelled to offer a bail out in fear of precipitating a national financial crisis. This constitutes an additional negative externality to the common pool problem described earlier and severely undermines the central government's

commitment to a no-bailout policy. The risk of a national financial crisis is a special case of the "too big to fail" argument proposed by Wildasin (1997), whereby the likelihood of a bailout is higher for large subnational governments that have the ability to borrow.

(vii) Political Federalism

In most federations, the central government faces some limitations in its ability to influence the expenditure and revenue-raising activities of the lower levels of government. Furthermore, the expenditure and revenue-raising responsibilities of subnational governments tend to be larger in federations than in unitary states. In addition, these responsibilities are often laid out in the constitution, which cannot be changed without the support of the subnational governments themselves. Federal systems, therefore, may be severely restricted in modifying fiscal institutions in ways that could harden subnational government budget constraints. This is further compounded by the fact that, in many federal systems, states or provinces are represented in the upper chamber of Congress or Parliament (Rodden (2001)). Thus, any attempts to limit the autonomy of subnational governments would have a smaller chance of succeeding in a federation than in a unitary nation.

The representation of states or provinces in the upper chamber can also give rise to regional bargaining and log-rolling that can affect the central government's bailout decision (Rodden (2001) and Alesina and Perotti (1999)). That is, a subnational government in financial difficulty may vote in favour of a project in another district in return for that district's vote in favour of a bailout.

Kohlscheen (2003) argues that bailouts may be supported by fiscally healthy regions without the need for bargaining and vote trading. He examines the soft budget constraint problem in a model where bailouts are subject to a vote in the national legislature composed of regional representatives. A key feature of the model is that a revenue sharing mechanism is the source of financing subnational expenditures and debt service. A bailout thus necessitates an increase in taxation. Consequently, when a subnational government receives a bailout, revenue sharing

implies that other subnational governments may receive additional income from the central government. A bailout would then be supported by these regions.

(viii) Political Benefits

The central government has an incentive to deviate from a no-bailout policy if it can benefit politically from doing so. For example, providing additional funding to subnational governments in financial distress may benefit the central government politically during a run-up to an election, especially when the jurisdiction has a large population. Furthermore, the soft budget constraint problem may be exacerbated if the political system is unstable. If it is, then the expected benefits of establishing a reputation of denying a bailout may be less than the benefits the central government receives from granting bailouts. This factor may be exacerbated if the central government favours creditor and local citizens' interests over national taxpayers (Rodden, Eskeland, and Litvack (2003)). For example, financial assistance to the government of the national capital may be more forthcoming than to other regional governments. Note that the above factors may also apply to the subnational government. In particular, a subnational government stands to benefit politically if it increases expenditures during a run-up to an election. Furthermore, the benefits of political perks are increased and those of fiscal prudence are reduced when the political system is unstable.

(ix) Reputation factors

The central government weighs the benefits and costs of establishing a reputation for enforcing hard budget constraints. The central government knows that its past experience with bailouts can have a significant impact on subnational governments' expectations for bailouts, even if they are provide in response to adverse macroeconomics shocks. Thus, the central government knows that providing a bailout damages its credibility in enforcing a no-bailout policy (Pettersson-Lidbom and Dahlberg (2003)). Once the reputation is established, subnational governments' fiscal behaviour is then based on the expectation of a bailout, and it

becomes difficult to deny bailouts in the future. As was mentioned in section (viii) above, the central government is less likely to establish a reputation for denying bailouts when the political system is unstable.

(x) Information

The previous section hinted at a potential disadvantage the central government has vis-à-vis the subnational government. The central government may not have enough information at its disposal to discern whether a subnational government's fiscal crisis is self-inflicted or is the result of other factors, such as an adverse macroeconomic shock. If it is the latter, then a bailout may be warranted. The subnational government has every incentive to place the blame for its financial difficulties on factors beyond its control. Doing so shields it from blame in the eyes of voters and creditors, and it increases its chances of receiving a bailout from the central government. Without explicit monitoring of the subnational government's fiscal decisions and without efficient auditing of its budget, the central government may be unable to determine the underlying factors that resulted in a financial crisis.

IV. EMPIRICAL ESTIMATION OF SOFT BUDGET CONSTRAINTS

Rodden (2001)

The first empirical estimation of the soft budget constraint problem in intergovernmental relations is Rodden (2001). His is a comprehensive cross-national analysis of 43 OECD, transition, and developing countries for the period 1986 to 1996. Rodden's study seeks to determine the factors that account for the large variation among countries in the fiscal outcomes of subnational governments. To this end, his analysis focuses on the roles of (i) vertical fiscal imbalances, (ii) borrowing autonomy, and (iii) federal institutions. In particular, Rodden's analysis tests the following hypotheses:

H1: Vertical fiscal imbalance has a negative effect on subnational government fiscal performance

H1(a): The relationship between vertical fiscal imbalance and subnational fiscal performance is

strongest when grants are distributed according to discretionary criteria

H1(b) and H1(c): The relationship between vertical fiscal imbalance and subnational fiscal performance is strongest when subnational governments depend on general purpose and equalization transfers

H2: Central governments will place restrictions on subnational government borrowing when vertical fiscal imbalance is high

H3: Vertical fiscal imbalance will only affect subnational fiscal performance at high levels of borrowing autonomy

H4: Political federalism undermines the central government's ability to restrict subnational government borrowing

H5: Federalism is associated with subnational government fiscal indiscipline

H6: Federalism is associated with subnational government fiscal indiscipline only at high levels of vertical fiscal imbalance

The rationales for the above hypotheses follow directly from our discussion of the determinants of soft budget constraints in section III.

The dependent variable in Rodden's analysis is subnational government debt as a proportion of subnational government expenditure. The most important independent variables are measures of (i) the level of vertical fiscal imbalance, (ii) whether intergovernmental grants are general-purpose or not, (iii) whether the transfer system contains an equalization program, (iv) borrowing autonomy, (v) whether the country is a federation, and (vi) whether subnational governments are represented in the federal upper chamber.

The results of Rodden's analysis are very interesting. He finds support for H1(b) and H1(c), H2, H3, H4, and H6. He finds no support for H1, H1(a), and H5. In summary, the results of Rodden's analysis are the following: (i) large vertical fiscal imbalances alone have no effect on subnational fiscal performance, (ii) the negative relationship between subnational fiscal

performance and vertical fiscal imbalance is strongest when subnational governments depend on general-purpose and equalization transfers, (iii) countries with high levels of vertical fiscal imbalance tend to restrict borrowing by subnational governments, (iv) average subnational government deficits are much higher in countries with high levels of vertical fiscal imbalance and where subnational governments have borrowing autonomy, (v) federalism alone is not associated with fiscal indiscipline, (vi) subnational governments in federations tend to have a higher degree of borrowing autonomy, (vii) a positive relationship exists between federalism and fiscal indiscipline, but only in countries with high levels of vertical fiscal imbalance.

Buettner (2003)

Buettner provides an empirical estimation of the softness of budget constraints of German municipal governments by investigating the role of intergovernmental transfers in restoring fiscal balance. Note that Buettner, like Rodden (2001), does not distinguish between fiscal deficits created by unexpected shocks and those that result from strategic behaviour. However, if soft budget constraints are present among municipal governments, the data will capture a tendency for relying on intergovernmental transfers rather than own revenues or expenditure reductions in response to fiscal deficits. Buettner uses a vector error-correction model to capture the evolution of intergovernmental grants, equalization transfers, own-source revenues, expenditures, and debt service over time. He applies this model to 1102 German municipalities in the German state Baden-Württemberg for the period 1974 to 2000.

The estimation results indicate that when German municipalities experience a permanent innovation in the budget deficit there is a positive impact on own revenue, grants, and debt service and a negative impact on equalization transfers and expenditures. The magnitude of the responses, however, differs greatly among the five fiscal variables. By far the largest response is in expenditures. A €1 increase in the deficit results in a reduction in expenditures of 0.457 €. In contrast, the response in own revenues is an increase of only 0.044 €. The response of

intergovernmental grants to a 1 € increase in the deficit is 0.053 € whereas the response of equalization transfers is -0.084. The negative coefficient for equalization transfers indicates that the municipalities in Baden-Württemberg over the period 1974 to 2000 were net contributors to the equalization system in Germany. The small response of grants to an increase in the deficit indicates that soft budget constraints may not be a serious problem among German municipalities as a whole.

Buettner also investigates the role of city size in affecting the response of the various budget components to an innovation in the budget deficit. Interestingly, he finds that medium and, especially, large cities rely much more on adjustments in intergovernmental grants than do small cities. Furthermore, small cities tend to respond more with changes in expenditures when faced with fiscal deficits than do medium and large cities. Thus, the soft budget constraint problem may be more severe for medium and large cities.

Petterson-Lidbom and Dahlberg (2003)

Petterson-Lidbom and Dahlberg approach the estimation of soft budget constraints in a different way than do Rodden (2001) and Buettner (2003). Their analysis is an attempt to measure the *expectation* of bailouts and how these expectations affect subnational government behaviour. The rationale behind this approach is that the soft budget constraint problem arises only when subnational governments behave strategically in response to the belief that, in the event of financial difficulty, the central government will find it optimal to bail them out.

The measurement of bailout expectations is a difficult undertaking. Petterson-Lidbom and Dahlberg approach the problem by first supposing that there are two channels for the formation of expectations. The first is past experience of the subnational government itself. In particular, expectations for bailouts increase if the subnational government has previously received a bailout from the central government. The second channel for the formation of expectations is collective experience, whereby the expectation for bailouts increases with the

average number of bailouts received by other subnational governments.

The aim of Petterson-Lidbom and Dahlberg's empirical analysis is to determine how the expectation of bailouts affects subnational government fiscal indiscipline. Here fiscal indiscipline is measured as the level of debt. They assume that subnational governments have rational expectations, which allows them to use an instrumental variable method to replace bailout expectations with their observed realization.

Petterson-Lidbom and Dahlberg estimate their model for Swedish local governments from 1974 to 1992. There were 1697 bailouts during this time period. The estimation of the model for Swedish local governments is particularly interesting given the fact that local governments in Sweden have the constitutional right of self-government and face no borrowing restrictions or balanced budget rules. Petterson-Lidbom and Dahlberg conclude that soft budget constraints are a serious problem in Sweden. Their results indicate that local government debt increases by 13% if the local government expects a bailout with a probability of 1 compared to a probability of 0. Also interesting is the result that the collective experience channel for bailout expectations defined above has four times as large an effect on local government debt as does the past experience channel.

V. CASE STUDIES

This section describes case studies undertaken by various authors that highlight the political and fiscal institutions that have resulted in soft or hard budget constraints. The case studies examine the experiences of various developed, transition, and developing countries. They thus provide a variety of experiences from which we may learn which factors have been key determinants of soft budget constraints and what mechanisms have been effective in mitigating them. The case studies presented here are abbreviated versions of the detailed studies undertaken by various authors. Our purpose is to summarize the key features in each country that may result in soft or hard budget constraints.

V.1 Germany

Case studies of Germany's experience with soft budget constraints have been undertaken by Seitz (1999), von Hagen, Bordignon, Dahlberg, and Grewal(2000), Rodden (2000), and Rodden (2003a). The German case is a very interesting one because of the German institutional structure that gives rise to the expectation of bailouts.

Intergovernmental Fiscal Relations

Germany has three levels of government: federal (Bund), state (Länder), and local (Gemenden). The division of responsibilities among the three levels is outlined in the German Constitution. The state and local governments have few exclusive areas of responsibility and the German federal system is characterized by a significant degree of overlapping responsibilities. In particular, although the state governments have a significant degree of autonomy over spending, they are responsible for implementing federal expenditure policies that are subject to uniform federal laws. These laws are meant to ensure "equivalent living conditions" for all German citizens and this is mandated in the constitution. Moreover, close to 75% of tax revenues accrue jointly to the federal, state, and local governments according to negotiated shares, the most important of which are laid-out in the constitution. These shared taxes comprise the most important revenue sources for the states. Tax revenues accruing to the states are subject to rates and bases that are determined by the federal government. Thus, states have little discretionary power in adjusting tax revenues. Any power they do have results from their representation in the federal upper house (Bundesrat). In contrast to the state governments, local governments are able to set property, local excise, and local business tax rates.

One of the most significant features of the German system of fiscal federalism is its equalization program. The purpose of this program is to ensure that state governments have the necessary funding to enforce the "equivalent living conditions" provision in the constitution. The first stage of the equalization program involves a horizontal distribution of 75% of

VAT revenues to the states according to population. Up to 25% of the remaining VAT revenue is redistributed to the states with the lowest revenues. The second stage involves a horizontal redistribution of revenues among the states so that all reach a tax capacity that is within 5% of the average national tax capacity. Note that this stage entails payments from the richer states to the poorer states. In the final stage, the Federal government provides supplementary grants to ensure that the poorer states receive at least 99.5% of the average national fiscal capacity and to compensate states for “special burdens”.

Borrowing

In contrast to the centralized powers of taxation and the requirements for the uniform provision of public goods and services, the state governments in Germany face very little restrictions on borrowing. The central government has no power to restrict or review the borrowing activities of the states. The states have, however, introduced their own restrictions that prevent them from borrowing more than the amount required for investment purposes. These are called “golden rule” provisions and are detailed in the state constitutions. In practice, the states are often able to side-step these restrictions due to the ambiguous definition of “investment purposes”. Furthermore, some states simply ignore these restrictions.

An important difference between the federal and state/local levels is the type of borrowing that is undertaken. The federal government finances its deficits through the issuance of bonds, whereas the state and local governments rely primarily on bank loans. The latter is more attractive to the state and local governments given that they have considerable political connections with the boards of the German commercial banks.

Implications for Soft Budget Constraints

From our discussion above, we can point to several factors in the German institutional structure that have the ability to generate soft budget constraints. One factor is the limited autonomy German states have in raising tax revenues combined with the shared federal/state responsibility for spending programs that

conform to national standards. In such a setting, state governments have limited flexibility in adjusting revenues and expenditures in response to fiscal difficulties. Moreover, voters have difficulty determining which level of government should be held accountable for fiscal difficulties. Another factor that affects the fiscal discipline of the state governments is the equalization system that allows states to enforce the “equivalent living” condition in the constitution. Such a system provides little incentive for states to improve economic conditions and expand tax bases. Furthermore, the supplementary transfers in the third stage of the equalization system explicitly reward states with poor fiscal performance. A third factor affecting fiscal discipline is that state and local governments face limited restrictions on borrowing. Despite this, however, credit markets have not disciplined state and local governments with interest rates that vary according to fiscal performance.

The combination of the “equivalent living conditions” provision in the constitution with the final stage of the equalization program led in 1988 to the German Constitutional Court’s decision to support the demand by Saarland and Bremen for financial assistance from the federal government to cope with their high debt load. Both Saarland and Bremen argued that the cause of their financial difficulties were beyond their control. Specifically, both states experienced significant declines in tax revenues and increases in social assistance expenditures due to the decline of the coal mining and steel industries in Saarland and the shipbuilding industry in Bremen. Furthermore, they argued successfully that the majority of their expenditures were fixed by federal law and any reductions would violate the “equivalent living conditions” mandated by the constitution. Importantly, the federal bailouts of Saarland and Bremen have confirmed to creditors that the central government effectively backs state debt.

V. 2 The United States

The details provided here of the intergovernmental system in the United States and the discussion of subnational government fiscal discipline are derived from Watts and Vigneault (2000) and Inman (2003).

Intergovernmental Fiscal Relations

The United States federation has three levels of government: federal, state, and local. As is common with many federations, the United States exhibits an asymmetry between revenues and expenditures at the state and local levels. Revenue-raising is considerably centralized in the United States despite the fact that states have access to a wide variety of tax sources. At the same time, the state and local governments are responsible for the provision of most goods and services. Thus, transfers from the federal to the state governments and from the state to the local governments play a significant role in the financing of public goods and services. This being so, it is important to note, however, that the United States constitution does not prescribe intergovernmental transfers for the purpose of equalization, nor are there any constitutionally prescribed revenue-sharing arrangements.

The United States constitution specifies the responsibilities that are under the jurisdiction of the federal government, and leaves the residual responsibilities to the states. Local government powers, by contrast, are granted by the state governments and thus vary considerably across the United States. Despite the distinction in the constitution between federal and state responsibilities, the delegated powers of the Congress have been interpreted in a way that allows the federal government very few restrictions in the areas in which it can exercise its power. The primary methods by which the federal government influences the provision of goods and services are through categorical grants and conditional block grants. These comprise the bulk of intergovernmental transfers in the United States. These types of grants provide funding for specific programs or for expenditures incurred within a general area. Funding is often accompanied by provisions for adhering to national goals and standards.

Although the use of the federal government's spending power in areas of state jurisdiction suggests that the state government's spending autonomy is somewhat compromised, it should be noted that state representation in the national legislature has the effect of influencing the number and level of grants used to finance locally beneficial programs. In fact, a significant proportion of the growth in intergovernmental

grants can be attributed to this. The only period in the United States' history where federal grants showed a significant decline was during the Reagan administration. During this period, President Reagan was able to use his popularity to carry through large cuts in the grant programs.

Borrowing

There is a great deal of variation in borrowing restrictions across state and local governments in the United States. For example, some states have constitutional debt limits, others restrict borrowing to capital expenditures, and others face essentially no borrowing restrictions. Despite some restricted access to capital markets, in the United States, unlike in Germany, capital markets discipline lower level governments with higher interest rates when they are fiscally irresponsible. This is further evidenced by the fact that states that have clear, enforceable balanced budget rules face lower interest rates. Note that the ability to discipline lower level governments requires a mature banking system and a competitive bond market, both of which are present in the United States.

Also important is the bankruptcy standard passed by the United States Congress in 1937. The standard specifies the formal procedures for debt repayment and in the case of municipal bankruptcy. In the event of bankruptcy, creditors have full access to the state or local government's tax revenues to ensure debt repayment. Thus, voters and creditors are fully aware that the state or local government is fully responsible for any excessive borrowing it undertakes.

Implications for Soft Budget Constraints

The vertical fiscal imbalances that exist at the state and local levels of government combined with the federal government's reliance on categorical and conditional block grants have the potential to create expectations of soft budget constraints. In such a setting, it is difficult to determine which level of government can ultimately be held responsible for fiscal difficulties. Although the growth in the federal and state grant programs suggests that soft budget constraints may be a problem, fiscal indiscipline resulting in outright bailouts is not a serious problem in the United States. The

historical experience during state and local fiscal crises is perhaps the deciding factor in extinguishing bailout expectations. The states learned that the federal government would not bail them out during the 1840s when eight states defaulted. What was key to the federal government's no-bailout decision at that time was the fact that the economic costs of the defaults would be borne primarily by wealthy local landowners and by foreign investors. Thus, there were no significant externalities created by allowing the states to default. In the 1870s and the 1930s, the states in turn faced their own bailout decisions when a number of local governments defaulted. In response, some states imposed restrictions on local debt and passed no-bailout provisions in their constitutions. A consequence of the federal and state governments' no-bailout policies is that voters and creditors have come to hold subnational governments accountable for their fiscal performance. Moreover, many state governments have balanced budget rules and have adopted clear standards for debt repayment and formal procedures for declaring municipal bankruptcy.

There have been two exceptions to the no-bailout rules adopted by the federal and state governments. The first is the Washington, DC bailout in 1997. Here, the decision to bailout can be attributed to the externalities provided by the nation's capital and the fact that Washington, DC has no state government supervision and thus is responsible for many state functions. Note that the bailout was accompanied with reductions in the local government's autonomy, which can be interpreted as a significant cost to the local government. The second bailout was provided to the local government of Camden, New Jersey. Here, the decision to bailout can be attributed to distributional considerations given that Camden is very poor relative to other localities in New Jersey.

V. 3 Canada

Bird and Tassonyi (2003) examine the issue of soft budget constraints in the Canadian federation. Canada is an interesting study of the soft budget constraint problem because of the different institutional features that characterize intergovernmental relations between the federal

government and the provinces on the one hand and between the provinces and the municipal governments on the other.

Intergovernmental Fiscal Relations

Federal and provincial powers are set out in the constitution, whereas municipal powers are determined by the provincial governments. The constitutional separation of powers has resulted in a federal-provincial relationship that is very decentralized. The provinces have access to most tax bases and have the right to adjust rates and bases as they see fit. They are also responsible for providing most public goods and services.

While the provinces face little constraints in raising revenues, they do rely on federal government transfers for financing part of their expenditures, although these transfers are largely unconditional. The two most important transfer programs are the Canada Health and Social Transfer and the equalization system. The former is a block grant intended to be used for expenditures on social assistance, health and postsecondary education. The latter is meant to equalize tax capacity across thirty-three different tax bases.

Borrowing

Like the United States and Germany, Canada has a mature banking system and competitive bond markets. The Canadian provinces face no borrowing restrictions whatsoever, and about half of provincial debt is owned by foreign investors. By contrast, municipal governments face strict limitations in their ability to borrow. They cannot, for example, incur long-term debt without the approval of the provincial government.

Implications for Soft Budget Constraints

The combination of fiscal autonomy, borrowing autonomy, and intergovernmental transfer programs such as the equalization system would seem to be the ideal conditions under which soft budget constraints would be created at the provincial level. This is not the case in Canada, however. It would seem to be the case that market mechanisms are working effectively in Canada in enforcing hard budget constraints at the provincial level. Both voters

and creditors hold provincial governments accountable for their fiscal performance and provincial governments have come to accept the fact that the federal government will not bail them out.

Hard budget constraints are also apparent at the municipal level in Canada. However, there is a striking contrast between the federal-provincial intergovernmental system and the provincial-local intergovernmental system. While the former reflects an extremely decentralized system, the latter is characterized by strict hierarchical controls. In Canada, municipal governments face formal constraints in raising revenues, in the provision of goods and services, and in borrowing. Furthermore, although municipal governments depend a great deal on provincial transfers for their revenues, most transfers are highly conditional. These formal constraints are the result of provincial reactions to local crises dating back to the nineteenth century. The changes brought about as a result of these crises has resulted in a progressively effective hierarchical fiscal management practice that enforces hard budget constraints on municipal governments.

V. 4 Sweden

Case study analyses of the soft budget constraint problem in Sweden have been undertaken by von Hagen et al (2000) and von Hagen and Dahlberg (2002). Petterson-Lidbom and Dahlberg (2003) have also conducted an empirical investigation of soft budget constraints in Sweden, as was described in section IV. These analyses show that intergovernmental relations in Sweden exhibit several features that can give rise to soft budget constraints.

Intergovernmental Fiscal Relations

There are three levels of government in Sweden: Central, county, and municipal. The latter two comprise the local government sector. Each local government level is charged with different functions, and there is thus no hierarchical relationship among the two levels. These functions are set out in the constitution. Local governments in Sweden have a relatively large spending responsibility in comparison to other nations. They undertake over 30% of total public spending and constitute over 80% of total

employment in the public sector. The municipalities are responsible for some of the major expenditures areas – social assistance, education, healthy, and safety - and are essentially free to choose the level and quality of services as long as they satisfy a minimum requirement set by the central government.

The financing of public goods and services at the local level is mainly done through tax revenues obtained from a proportional income tax. The base of this tax is set by national law, but the municipalities are free to set their own tax rates. The personal income tax generates over 50% of revenues for the local governments. Central government grants are also an important revenue source, and comprise approximately 25% of revenues. The majority of grant revenues are unconditional.

A further important feature of the Swedish intergovernmental structure is the equalization system. This system equalizes both per capita tax revenues and structural cost conditions. The objective is to provide similar levels and standards of public goods and services. Another important feature is the constitutional provision that municipalities cannot legally default. This has been interpreted to mean that the central government is obligated to respond to a municipality in serious financial difficulty.

Borrowing

Like other developed countries, Sweden has a sophisticated banking system and competitive bond market. Local governments are essentially free to borrow both domestically and internationally.

Implications for Soft Budget Constraints

The facts that local governments have a high degree of financial autonomy and low levels of vertical fiscal imbalance would tend to mitigate the soft budget constraint problem in Sweden. However, the constitutional provision banning municipal defaults combined with (i) the policy of equal living standards that forms the basis of the equalization system and (ii) the local governments' freedom to borrow tend to exacerbate the soft budget constraint problem. These latter features may have contributed to a soft budget constraint problem during the period 1974 to 1992. During this period, many

municipalities found themselves in financial difficulty and the central government introduced a special financial relief program to deal with this. Important features of this program are that it was largely discretionary and tended to reward those municipalities that had incurred the most debt. Dahlberg and Petterson-Lidbom (2002) show empirically that this program affected the debt behaviour of municipal governments by reducing the cost of additional borrowing.

Another round of bailouts occurred during the 1990s and into 2000. During this period, many municipalities experienced severe economic problems in response to the macroeconomic adjustments that occurred after the central government raised interest rates considerably in a failed attempt to maintain a fixed exchange rate with the Deutsch Mark. The central government responded with a bailout program. Although the empirical analysis undertaken by Dahlberg and Petterson-Lidbom shows that bailout applicants tended to have high spending growth – a sign of weak fiscal discipline – the debt problems experienced by these municipalities cannot ultimately be attributed to strategic behaviour. However, the fact that the central government did respond to the municipalities' financial crises by bailing them out can create strong expectations of future bailouts.

V. 5 Australia

Case study analyses of the soft budget constraint problem in Australia have been undertaken by von Hagen et al (2000) and Grewal (2000). Australia presents an interesting contrast to other federations in regard to the degree of hierarchical oversight of fiscal affairs at the subnational government level.

Intergovernmental Fiscal Relations

The Australian federation is comprised of three levels of government: central (Commonwealth), state, and local. The constitution severely restricts the revenue-raising powers of the states. Specifically, they are excluded from levying sales or consumption taxes, and since 1942, they have only limited access to income taxation. This has resulted in the states collecting less than 17% of total revenues. At the same time, the state and local

governments are responsible for approximately 50% of public sector expenditures. Thus, the state and local governments have very high levels of vertical fiscal imbalances that are addressed through transfers from the central government. These transfers include general and specific grants for which the levels are determined by the central government at its discretion.

Borrowing

Central, state, and local government borrowing in Australia has been the domain of the Australian Loan Council since its establishment in 1927. In its early phase, its purpose was to determine the amounts, the interest rates, and all other conditions relating to government and semi-government borrowing. While the states had some input into the Loan Council administration of borrowing, the fact that the central government had greater voting rights and had superior revenues meant that it held a dominant position in the Loan Council.

Over time, the heavy restrictions on subnational and semi-government borrowing were relaxed in the mid 1980s when subnational debt levels had increased considerably and the central government began a policy of fiscal contraction. At that time, the Loan Council began establishing global borrowing limits that were based on macroeconomic goals and not on the needs of the subnational governments. The fiscal contraction combined with several adverse developments placed some states in serious financial difficulty. In particular, the state of Victoria found itself in serious trouble, and the loan council subsequently responded by approving additional loans to Victoria in 1992. The system was then reformed to address the needs of the states and to introduce market discipline by allowing states to apply for their loans based on budget balance projections.

Implications for Soft Budget Constraints

The subnational governments' large vertical fiscal imbalances would tend to exacerbate soft budget constraints in Australia. However, the Australian federal system is very hierarchical, and restrictions on revenue-raising, spending, and borrowing are able to keep subnational government strategic behaviour in check. Except

for the period where the Loan Council relaxed its restrictions and the states and semi-government authorities were able to increase borrowing, the restrictions on subnational borrowing have succeeded in keeping subnational debt at low levels.

V. 6 Italy

Case study analyses of the soft budget constraint problem in Italy have been undertaken by von Hagen et al (2000) and Bordignon (2000). As Bordignon describes, the Italian experience is a lesson in what should *not* be done to avoid bailouts and enforce fiscal discipline.

Intergovernmental Fiscal Relations: Reforms in the 1970s

There are four levels of government in Italy: central, regional, provincial, and municipal. During the 1970s the central government drastically reduced the fiscal autonomy of local governments in an attempt to reduce growth in local government expenditures and redistribute from the rich North to the poor South. This resulted in an increase in local governments' reliance on central government financing through transfers to the extent that regional governments were only able to raise less than 3% of revenues and relied on central transfers for almost 97% of their financing. At the same time, there existed an overlap of functions among the various levels of government and there was no consistent framework by which grants were allocated. Contrary to the goals of the central government, the result of the changes introduced in the 1970s was a rapid increase in local government expenditures, especially in the health care sector. The resulting deficits were ultimately financed by the central government and a continuous system of bailouts was created.

Implications of the 1970s Reforms for Soft Budget Constraints

The reforms introduced in the 1970s created soft budget constraints that resulted in a rapid deterioration in local finances. The reasons for the deterioration are easy to identify. First, because of the large central government responsibility for financing expenditure, local government authorities had no incentive to

behave responsibly as they could not be held accountable for any financial difficulties that arose. The lack of accountability was compounded by the overlapping functions between the central and local levels of government. In addition, the central government failed to adopt a consistent framework that could deal with the deficits that resulted from excessive expenditure growth. Thus, bailouts were largely discretionary and tended to reward irresponsible government. Furthermore, Italy's parliamentary system with proportional representation tended to produce weak, short-lived governments. Thus, there was little incentive to carry through with tough policies.

Intergovernmental Fiscal Relations: The Reforms of the 1990s

The economic upheaval beginning in 1992 started a reform of intergovernmental fiscal relations that was intended to strengthen local governments' budget constraints. In 1992, financial crises resulted in Italy leaving the European monetary system and devaluing the lira. The country was near bankruptcy and private bondholders and banks began refusing to hold government bonds. To avoid bankruptcy, the central government introduced a massive fiscal contraction and introduced much-needed reforms. Intergovernmental transfers were reduced considerably and the revenue autonomy of local governments was increased. In addition, new electoral laws were put in place to make local governments more accountable to their citizens.

Implications of the 1990s Reforms for Soft Budget Constraints

The reforms introduced in the 1990s went some way towards hardening local government budget constraints. However, the soft budget constraint problem has not been entirely eliminated. Local government accountability still suffers from the overlapping responsibilities with the central government. In addition, many transfers are still allocated on a discretionary basis, which results in wasteful lobbying and transfers being allocated to local governments with strong ties to the central government. Furthermore, deficits in the health sector are still financed by the central government because of

the importance of health care in the central government's priorities. Because of this, local governments have an incentive to use their revenue autonomy to finance other expenditures, knowing that the central government is more vulnerable to bailouts in the health sector. Italy is presently reevaluating its intergovernmental system in order to address these deficiencies.

V. 7. Argentina

Case study analyses of the soft budget constraint problem in Argentina have been undertaken by Nicolini et al (2002) and Webb (2003). Jones, Sanguinetti, and Tommasi (1999) also examine the common pool problem as a determinant of the fiscal outcomes of the Argentine provinces. Argentina's experience with soft budget constraints in the 1980s and its attempts to harden budget constraints in the 1990s offer an interesting example of the evolutionary process of intergovernmental reform.

Intergovernmental Fiscal Relations

Argentina has a relatively high degree of decentralization of public expenditures in comparison to other countries in Latin America. The provinces are responsible for approximately 50 percent of total public expenditures. By contrast, revenue-raising is highly centralized, with the central government responsible for all the major taxes. Thus, Argentina exhibits a relatively high degree of vertical fiscal imbalance, which as we have learned can give rise to the common pool problem and soft budget constraints. Intergovernmental transfers comprised over 60% of total provincial revenues in Argentina in the 1990s. The general revenue sharing program is the largest transfer program. The distribution of these revenues among the provinces is determined by law, which reduces the discretionary power of the central government.

Borrowing

Provincial governments in Argentina face little restrictions on borrowing. They have the ability to borrow both domestically and in foreign capital markets. Any restrictions they do face are the result of market discipline and self-imposed restraints. Prior to the reforms

introduced in 1991, the provinces borrowed heavily from their own banks. However, when the Argentinian peso was fixed to the U.S. dollar in 1991, the central government effectively prevented the provincial banks from relying on the central bank as a lender of last resort. They then became more conservative in their lending behaviour, including with respect to loans to the provinces. The reforms after the 1994 Tequila crisis attempted to instill even greater market discipline on provincial governments. Provincial banks were privatized and they began deducting debt service payments from provincial shared revenues if these revenues were used as collateral for provincial borrowing.

Implications for Soft Budget Constraints

Argentina experienced severe economic upheavals during the 1980s and 1990s. Macroeconomic mismanagement resulted in hyperinflation by the end of the 1980s. Facing no restrictions on borrowing both domestically and in foreign capital markets, the provincial governments also borrowed heavily during this period. In addition, the provinces began accumulating arrears on wages and pensions, payments to suppliers, and debt service. The central government responded by providing funding to the provinces in order to prevent the collapse of the provincial banks. This funding was provided often and on a discretionary basis.

By 1990, the country was on the verge of financial collapse. In 1991, President Menem gained the political support necessary for radical reform of the economy. Under the direction of the economics minister, Domingo Cavallo, the exchange rate was fixed to the US dollar and the central bank was mandated to hold a 100% reserve requirement for the issue of high-powered money. As a consequence of these measures, the sole role of monetary policy was to keep the exchange rate fixed. The central government's budget constraint was significantly hardened as a result, and this helped enforce its determination to harden provincial budget constraints. Furthermore, a new Ministry of Economy resolution was adopted that prohibited any federal agency from paying a creditor on behalf of a province. The economic situation improved greatly in the early 1990s as a result of these reforms. In particular,

the rapid decline in inflation led to a rapid increase in tax revenues. However, some provinces responded by increasing expenditures more than the increase in revenues. Thus, the reforms enforcing hard budget constraints continued to lack credibility for some provinces.

Further reforms were introduced after the 1994 Tequila crisis where Argentina witnessed significant declines in tax revenues and GDP. During this crisis, Argentina's heavy reliance on foreign financing led to a run on provincial banks. The central bank refinanced the liabilities of the provincial banks through a project financed by the World Bank and the Inter-American Development Bank. However, the program was conditional on the provinces privatizing the provincial banks. As well, the central government took control of some of the provinces' pension systems, which had generated large deficits due to generous benefits and inadequate funding from a pay-as-you-go system. And, from 1992-1994, the central government provided special financial assistance to the seven provinces experiencing the most severe fiscal difficulties. The central government determined that the economic crisis in these provinces was severe enough to risk political and social instability. Note, however, that these funds were provided with conditions that included deficit reduction targets, freezing public employment levels, and borrowing restrictions.

The reforms of 1991 and 1994 helped harden provincial budget constraints. However, there are several factors remaining that still contribute to a soft budget constraint problem. First, the provinces are still dependent on federal transfers for a sizable proportion of the funding for their expenditures. Another factor is the effect of the provision that allows banks to deduct debt service payments from shared revenues. While this provision increases the province's borrowing costs and thus helps harden budget constraints, it has had the perverse effect of increasing the banks' desired lending to the provincial governments, and provincial debt has increased as a result. Furthermore, none of the reforms enforced central government restrictions on provincial borrowing. Thus, Argentina is still vulnerable to

the soft budget constraint problem, especially during bad economic times.

V. 8 Brazil

Case study analyses of the soft budget constraint problem in Brazil have been undertaken by Bevilaqua (2002) and Rodden (2003b). Brazil presents an interesting case study because of its recent history with federal bailouts and its recent efforts to decentralize expenditure and revenue authority to the state governments.

Intergovernmental Fiscal Relations

There are three levels of government in the Brazil federation: federal, state, and municipal. Brazil exhibits a high degree of decentralization among developing countries. The 1988 constitution specifies some expenditure responsibilities that are exclusively federal and municipal, but importantly, many expenditure responsibilities are shared between the state and federal governments. This compromises the accountability of the state governments. In addition, the constitution restricts the ability of the states to alter some important expenditures. For example, it prohibits states from firing redundant public employees.

The state and local governments receive a high proportion of their revenues through shared taxes with the federal government. These shares are detailed in the constitution, and states therefore have little ability to create new taxes. Furthermore, changes to the tax bases and tax rates must be approved by the Committee of the Secretaries of Finance of the States. Despite the importance of tax revenues, transfers from the federal government are still important revenue sources for the state and local governments.

The political structure in Brazil also has important implications for soft budget constraints. The political autonomy of the states is protected by the constitution. States also have strong representation in the legislature. It is noteworthy that an average of three-quarters of senators are former or future state governors. Thus, the states have been able to influence many federal government decisions regarding state finances. Moreover, major reforms often require extensive negotiations and concessions to governors.

Borrowing

State governments have faced little restrictions in borrowing, both domestically and externally. As was the case for Argentina, the states have borrowed heavily from their own state banks. Although all public borrowing must be approved by the Senate, the Senate has consistently authorized state credit operations. Furthermore, federal government bailouts of state debts assured private creditors that the federal government was backing state debt. Thus, state governments have faced little discipline from private creditors and they have borrowed extensively in the past two decades.

Implications for Soft Budget Constraints

There have been three extreme fiscal crises at the state level in Brazil since the late 1980s. These crises were the result of a period of high inflation, the severe macroeconomic adjustments needed to reduce inflation, and Mexico's debt crisis. Each crisis involved the states' inability to service their debt. The fact that states have little discretion in altering tax revenues and expenditure levels meant that they responded to each crisis by incurring large amounts of debt. Borrowing was relatively easy since the Senate refused to restrict state borrowing and credit markets perceived (correctly) that state debt was backed by the federal government. The federal government responded to the states' debt crises by federalizing state debts. In doing so, the federal government considered that the costs of bailing out the state governments in terms of compromising fiscal discipline were lower than the risk of financial crisis and the political benefits of granting a bailout.

Significantly, the first two bailouts in 1989 and 1993 were not accompanied by any conditions for reforming state finances. Only the 1997 bailout under President Cardoso specifically tied debt relief to reforms and the privatization of state banks. Thus, until 1997, state governments faced little cost in generating large debts. The federal government by then had developed a reputation of granting bailouts, and empirical evidence shows that the bailouts were accompanied by increases in fiscal irresponsibility. Reversing the expectation of federal bailouts may take some time to accomplish in Brazil, and soft budget constraints

may thus continue to be a problem until the federal government establishes a tough reputation.

V. 9 Mexico

A case study analysis of the soft budget constraint problem in Mexico has been undertaken by Trillo, Cayeros, and Gonzalez (2002). Mexico has just recently begun decentralizing responsibilities to subnational governments after many years of one-party rule. It has also recently experienced a serious financial crisis in 1995 that resulted in a federal government bailout of state governments. The analysis by Trillo, Cayeros, and Gonzalez seeks to determine the main factors involved in the 1995 bailout.

Intergovernmental Fiscal Relations

Mexico is a federal republic with three levels of government: federal, state, and municipal. Even with the recent political transformation and the beginnings of decentralization, the federal government still maintains a heavily dominant position in the fiscal affairs of the country. This manifests itself in very high levels of fiscal imbalance at the subnational government level. The federal government collects all major taxes and shares the revenues with the subnational governments through a formula-based transfer system. Subnational governments are permitted to levy property taxes, payroll taxes, and fees, all of which represent less than 4 percent of total tax revenues. Although subnational governments are responsible for the provision of many goods and services, the financing of these is provided by the federal government through conditional transfers that are often allocated on a discretionary basis. In fact, over 50 percent of expenditures are beyond the control of the subnational governments. These are largely current expenditures such as salaries. Moreover, because a large proportion of federal transfers result from shared tax revenues, federal transfers are pro-cyclical and tend to exacerbate the fluctuations in the states' business cycles.

Borrowing

Borrowing by subnational governments is regulated by the National Constitution. The

requirements specify that states are only permitted to borrow domestically. The states have been able to circumvent this rule because the development bank from which they borrow is permitted to borrow externally. Furthermore, subnational government borrowing is only permitted for investment projects. In practice, however, the development bank has allowed extensive borrowing for current expenditures. Until 1997, the states were able to use federal transfers as collateral, with the federal government deducting debt service payments from state transfers in the case of default. In the eyes of state governments, voters, and creditors, however, this provision lacked credibility because of the state governments' inflexibility in altering current expenditures and tax revenues in response to financial difficulty. In essence, state governments knew that the federal government would ultimately bail them out if they were unable to meet their expenditures, especially for such politically sensitive items as teachers' and health care workers' salaries.

In comparison to Argentina and Brazil, subnational debt burdens in Mexico have not risen to the point where macroeconomic stability has been threatened because of them. However, subnational debt levels increased at an alarming rate prior to the 1994 Tequila crisis. For example, from 1988-93, debt levels increased at an annual rate of 62%. The Tequila crisis resulted in a quadrupling of interest rates and, by 1995, the debt burden had become a serious problem for subnational governments and reached an average of 80 percent of disposable income.

Implications for Soft Budget Constraints

The federal government responded to the states' fiscal crisis in 1995 with additional cash transfers. The size of these transfers varied among states according to the level of indebtedness, thus rewarding the most indebted states. Interestingly, the most indebted states were the richest states. The bailout was accompanied by requirements for reform. In particular, states were required to restructure their debts, implement balanced budget rules, implement uniform accounting procedures, and implement laws to limit and regulate both state and municipal debt. Importantly, there was no

enforcement mechanism that would ensure these reforms were implemented.

Trillo, Cayeros, and Gonzalez have undertaken an empirical analysis of the determinants of the 1995 bailout. They found support for the "too big to fail" hypothesis in Mexico. That is, those states with large current expenditures and large populations tended to receive larger additional transfers from the federal government. Trillo, Cayeros, and Gonzales also found that political factors, such as the closeness of a municipal or state election, had no effect on the federal bailout. Interestingly, they found little support for the role of vertical fiscal imbalances. This may be due to the special circumstances mentioned above where the most indebted states are the richest ones. Because state and local governments have access to property and payroll taxes, being rich lessens the need for federal transfers to correct for vertical fiscal imbalances. However, high levels of vertical fiscal imbalances can compromise accountability at the subnational level and provide incentives for intense lobbying of the federal government.

V. 10 India

A case study analysis of the soft budget constraint problem in India has been undertaken by McCarten (2003). Enforcing subnational fiscal discipline in India presents an interesting challenge given its large population, ethnic and cultural diversity, and large number of subnational governments.

Intergovernmental Fiscal Relations

India is a large federation with three levels of government: central, state, and municipal/local. The constitution specifies the division of responsibilities between the state and central governments and both levels have exclusive and shared expenditure responsibilities. Municipal powers are, however, delegated by the state governments. The state and local governments are responsible for over 50 percent of public expenditures. The constitution assigns some taxes exclusively to the central government and some taxes exclusively to the state governments. This assignment has resulted in the states raising approximately 35 percent of total revenues.

Thus, the Indian states exhibit high degrees of vertical fiscal imbalances that are addressed through transfers from the central government.

India has developed a rather elaborate transfer system. There are four components to this system. The first involves Finance Committee transfers that are designed to correct for vertical fiscal imbalances. As such, the level of the transfer is based on the gap between actual expenditures and own-revenues. These transfers also provide a small measure of debt relief to state governments. The second fiscal transfer component is the Planning Commission transfers. These are intended to support the development plans of the central and state governments. In particular, they are used to reduce poverty and income inequality across states. The Planning Commission transfers are formula-based in theory, but in practice, the levels of the grants are negotiated every year and are subject to the Planning Commission's discretion. The third transfer component is the conditional grant program, which is a shared-cost program intended for mandated programs such as primary education. The fourth transfer component is deficit financing. Here, the central government provides loans to state governments and assumes responsibility for marketing state-issued bonds to financial institutions.

Borrowing

The constitution specifies that state government borrowing must be approved by the central government and the states are restricted from borrowing abroad. As described above, the central government provides net loans to state governments to cover their deficits and the central government assumes responsibility for marketing state-issued bonds to financial institutions. Furthermore, state governments are able to bypass borrowing restrictions by engaging in off-budget borrowing activities through state-owned enterprises.

Implications for Soft Budget Constraints

The large vertical fiscal imbalances at the state level contribute to soft budget constraints by directly involving the central government in the financing of state and local expenditures. This blurs accountability and distorts incentives. In particular, the Finance Commission transfers

are based on the difference between actual expenditures and tax collection. They thus provide an incentive for states to incur large expenditures and they discourage tax effort. There is also no linkage between the Planning Commission loans for capital projects and actual capital expenditures. Furthermore, the conditional/shared-cost programs directly involve the central government in the provision of state public goods and services, and thus blur accountability.

The hierarchical borrowing restrictions on state governments have the ability to harden budget constraints. However, the fact that the central government assumes a large role in state borrowing implies that state governments tend to face uniform interest rates, despite large differences in fiscal performance. In addition, capital markets in India are not fully developed, which further impedes capital market mechanisms in enforcing fiscal discipline.

A further problem that gives rise to soft budget constraint problems is the short time horizon experienced by both state and central governments. Beginning in the 1990s, short time horizons have arisen under coalition and minority governments at both the center and state levels. This provides incentives for incurring current account rather than capital expenditures and has produced an emphasis on populist social policies.

V. 11 China

A case study analysis of the soft budget constraint problem in China has been undertaken by Jin and Zou (2003). Jin, Qian, and Weingast (2001) also conduct an empirical analysis of the effects of China's fiscal contract system introduced in the 1980s on provincial fiscal incentives. China's experiment with decentralization within the process of its transition to a more market-based economy provides an interesting and different perspective from which to examine subnational fiscal discipline.

Intergovernmental Fiscal Relations

The Chinese federation has five levels of government: central, provincial, prefecture, county, and township. In the 1980s, the central government reformed the revenue and

expenditure systems in an attempt to introduce incentives for local governments to improve efficiency in tax collection and provision of public goods and services. Prior to the reform, local governments were responsible for collecting taxes and remitting the proceeds to the central government, which then redistributed them back according to expenditure needs determined by the central government. This system obviously provided little incentives for efficient tax collection efforts and expenditure provision.

The reform in the 1980s involved a “fiscal contracting system” that partially decentralized revenue and spending responsibilities to the local governments. The tax collection system still required that provincial governments collect tax revenues and remit part of the revenues back to the central government (budgetary funds), but it also allowed them to keep revenues from sources such as tax surcharges, some fees, and retained earnings of state-owned enterprises (extra-budgetary funds). Interestingly, this system is contrary to other federations where the central government collects revenues that it then transfers back to local governments in order to correct for vertical fiscal imbalances. Jin, Qian, and Weingast show that the fiscal contract system allowed local governments to retain over 80% of revenues at the margin. Furthermore, increased tax effort did not result in a reduction in transfers from the central government. Thus, they conclude that the fiscal contract system provided a strong link between expenditures and revenues that is a necessary condition for correct market-preserving incentives.

Jin and Zou argue, however, that the fiscal contract system created incentives for local governments to find ways to retain revenues at the expense of the central government. For example, local governments diverted resources from budgetary to extra-budgetary items, provided tax concessions to state-owned enterprises, duplicated industries to capture revenues, and expanded local bank lending to state-owned enterprises. The result was a massive decline in total tax revenues and the central government’s share of total revenues. To address these problems, the central government reformed the tax system in 1994. The 1994 reform assigned some taxes exclusively to the

central government, some exclusively to the provincial governments, and some shared between the central and provincial governments. The reduction in provincial revenues under this new system is made up by central government transfers. These transfers are largely allocated on an ad-hoc case-by-case basis, which results in rent-seeking behaviour on the part of provincial governments. Moreover, negotiating additional grants from the central government is a means by which local governments are able to balance their budgets.

Borrowing

Borrowing at all levels of government is formally under the control of the People’s Bank of China, but local banks are given operational autonomy. The Ministry of Finance also provides subsidies to local banks so that they may charge lower interest rates for the financing of economic development projects. Under the 1994 budget law, local governments are forbidden to borrow on capital markets, but local enterprises can. This has generated “indirect borrowing” through the creation of many trust and investment companies and through a buildup of arrears.

Implications for Soft Budget Constraints

Prior to the 1994 tax reform, China operated under the peculiar system in which provincial governments remitted tax revenues to the central government rather than the other way around. Such a system is unable to generate soft budget constraints at the provincial level in the usual way that is characteristic of subnational governments’ dependence on transfers from the central government. However, “indirect borrowing” through the creation of many trust and investment companies can result in soft budget constraints if provincial governments expect the central government to bail them out in the event of bankruptcy. Only one such company has gone bankrupt (the Guangdong International Trust and Investment Company in 1999) and, importantly, the central government chose not to bail it out.

One avenue by which soft budget constraints may arise is the relationship between the provincial governments and the local governments beneath them. It is important to

note that the 1994 reform only affected fiscal relations between the central and provincial governments. The provinces have the authority to decide what fiscal relationships they will maintain with the local governments. In particular, the provinces have the power to retain greater revenues for themselves at their discretion and to devolve expenditures to the local governments, thus creating large vertical fiscal imbalances at the lower local government levels. In addition, the traditional soft budget constraint problem identified by Kornai in relation to state-owned enterprises still exists in China. Provincial governments continue to pay large subsidies to state-owned enterprises that perform poorly.

V. 12 Hungary

A case study analysis of the soft budget constraint problem in Hungary has been undertaken by Wetzel and Papp (2003). During Hungary's transition from a government-controlled economy it has introduced mechanisms that have hardened budget constraints of local governments. At the same, there are some features of the Hungarian intergovernmental system that still are conducive to soft budget constraints.

Intergovernmental Fiscal Relations

Hungary is a unitary country with three levels of government: central, county, and municipality. In 1998, local governments were responsible for the provision of roughly 22% of total expenditures. Ten of these expenditure functions are mandatory, such as health, education, and welfare services, and local governments have little autonomy over these functions. Local governments also have a list of potential responsibilities that they may undertake, which creates ambiguity in expenditure responsibility that can exacerbate soft budget constraint problems.

The financing of local government expenditures is primarily from central government transfers. Local governments raise approximately 10% of their revenues from own taxes on local business, property, and tourism and can choose whether to levy these taxes at all and at what rate. Local governments also receive a share of central government tax revenues.

Hungary has an elaborate transfer system. The transfer system comprises (i) shared revenues, (ii) normative transfers based on expenditure needs, (iii) investment grants, (iv) earmarked operating grants, and (v) deficit grants. Deficit grants are provided to cover deficits of local governments so that they may be able to provide their mandatory services.

Borrowing

During the early transition period 1990-95, local governments were free to borrow as they wished. The only restriction they faced was that shared revenues could not be used to repay loans. Virtually unrestricted borrowing led to an increase in local government debt that resulted in a number of municipalities facing the risk of bankruptcy and demanding a central government bailout. In 1995, the central government responded to the local governments' debt problem by reforming the financial market system. New laws and regulations were introduced that placed limits on the local governments' ability to issue new debt. Specifically, local governments are now responsible for payment of their debt service with own revenues. Since local governments have limited own-source revenues, this has resulted in a rapid decrease in debt. Furthermore, the central government strengthened the treasury, audit, and budget management practices. In particular, there is now explicit monitoring of local government liabilities with the aim of identifying who is ultimately responsible for meeting those liabilities.

The central government also introduced legislation regarding municipal bankruptcy. There is now in place a formal procedure that creditors are able to follow in the case when a municipality goes bankrupt. The procedures are implemented by an independent court system. Thus, the central government will not guarantee municipal debt and the consequences of bankruptcy are entirely the responsibility of the municipality.

Implications for Soft Budget Constraints

The feature of Hungary's intergovernmental fiscal system that is most conducive to soft budget constraints is the deficit grant system. Recall that these grants are provided to local

governments' deficits so that they may be able to provide their mandatory services. Local governments therefore have an incentive to increase expenditures on mandatory services knowing that the central government will provide partial payment of these services. The central government is aware of this incentive and has stipulated that deficit grants are to be provided only to those local governments that levy their own taxes. They thus provide an incentive to increase the local government's effort at raising its own revenues.

The reform of the financial system has significantly improved local governments' fiscal performance. Local governments are aware that they are responsible for most of the costs of excessive borrowing, except to the extent that the costs impact the provision of mandatory services. In addition, the new bankruptcy legislation has had a significant impact on strengthening local governments' budget constraints.

V. 13 Ukraine

A case study analysis of the soft budget constraint problem in Ukraine has been undertaken by O'Connell and Wetzel (2003). Ukraine's transition to a market economy has not yet provided the proper incentives for hard budget constraints. O'Connell and Wetzel's case study highlights the important areas for reform.

Intergovernmental Fiscal Relations

Ukraine has a unitary government structure with four levels: central, regional, district, and municipal. The constitution provides only an ambiguous assignment of expenditure responsibilities among these four levels. This has been interpreted in a way that grants spending authority to each level in every expenditure category. Since the beginning of the transition period, subnational governments have increasingly been asked to undertake mandatory expenditures that were previously provided by state-owned enterprises. In 1998, this has resulted in subnational governments providing nearly 40 percent of total public expenditures.

The main source of subnational revenue is shared taxes with the central government. The central government controls both the rates and bases of most taxes. Thus, subnational

governments have little control over their revenues. Intergovernmental transfers are also an important source of revenue for subnational governments. In 1998, they provided up to 17 percent of revenues for some governments. None of the transfer programs are formula-based and all are subject to the discretionary power of the central government. This power manifests itself in the central government sometimes withholding part of the agreed-upon transfers and reducing transfers if subnational governments increase their own revenues.

Borrowing

Financial markets in Ukraine are not fully developed. In particular, there is no explicit legislation to guide borrowing procedures, the use of collateral, disclosure, and monitoring. The relative immaturity of capital markets has resulted in the lower-level governments borrowing primarily from higher-level governments, despite the fact that they have the ability to borrow from commercial banks and to issue bonds. Government loans are provided at zero interest and only as a means of financing deficits. As such, they have no relation to the quality of programs provided and to the credit worthiness of subnational governments.

Explicit deficits of subnational governments are relatively small. However, subnational governments have significant expenditure commitments or arrears that are caused by the squeezing of deficits from the central governments to the subnational governments to enterprises and so on. The buildup of arrears can be regarded as a form of forced borrowing. The buildup of arrears has resulted in the widespread use of promissory notes called vekseli to settle transactions. Vekseli are used by governments and enterprises, especially for the payment of taxes.

Implications for Soft Budget Constraints

A number of factors contribute to soft budget constraints in Ukraine. First, subnational governments have taken on mandated services without sufficient financing, which results in a buildup of arrears that individuals expect will ultimately be addressed by the central government. A second factor is the uncertainty regarding which level of government is

responsible for which service. This compromises accountability and fuels the expectation that the central government is partly responsible for budget deficits incurred at the lower levels of government. A third factor contributing to soft budget constraints is the intergovernmental transfer system. As described above, subnational governments have little control over revenues, and intergovernmental transfers are used to address the gap between actual expenditures and revenues. These transfers are allocated on a discretionary basis and are reduced if subnational governments improve tax collection efforts. Such a system obviously provides subnational governments with little incentive to raise revenues and reduces the perceived cost of spending. A fourth factor contributing to soft budget constraints is the immaturity of the financial system. There is little legislative oversight of the financial system. Furthermore, subnational governments are able to borrow at zero interest from higher-level governments to finance their deficits. They therefore bear very little cost from poor fiscal performance. Moreover, the ability to borrow from higher-level governments at zero interest further depresses the maturity of the financial sector and its ability to discipline irresponsible fiscal behaviour. A final factor contributing to soft budget constraints is the weak political structure in Ukraine. There are many political parties in Ukraine and the country is adapting to new democratic practices. Many important decisions are made behind closed doors in an adversarial atmosphere. Consequently, citizens have little information to hold elected representatives accountable and the politically process is generally chaotic.

VI. LESSONS LEARNED

From our discussions in sections III, IV, and V, we are now in a position to examine the ways in which subnational budget constraints may be hardened. The essence of this problem lies in altering the incentives for subnational governments to behave fiscally responsibly and for strengthening the central government's commitment to enforcing hard budget constraints. Our review of the theoretical and empirical literature illustrates the many different facets of the soft budget constraint problem,

which is testimony to the difficulties involved in hardening budget constraints. In particular, what works best in one country may not in another because of the different fiscal, political, and financial institutions in place. Furthermore, the effectiveness of various methods of hardening budget constraints can change over time as the country develops economically and politically and the central government develops a reputation for denying bailouts.

(i) Fiscal Autonomy

When subnational governments are unconstrained in their ability to raise revenues and are able to spend as they see fit, they are then in a position to solve fiscal crises on their own and the central government has little reason to involve itself in their affairs (Rodden, Eskelund, and Litvack (2003)). There are very few countries, however, where the federal government exhibits such a disinterest in the fiscal outcomes of subnational governments. The level of central government involvement in the affairs of the subnational governments varies considerably among countries. For example, in Germany, Sweden, and Canada, the central government has a strong interest in guaranteeing that subnational governments are able to provide equal access to public goods and services to citizens across all jurisdictions. Such a guarantee is dictated in the constitution. By contrast, in the United States, the federal government is much less involved in the affairs of the state and local governments.

As described in section III(i), a common feature of intergovernmental fiscal relations is for the central government to be the dominant player in raising revenues and the subnational governments to be the dominant players in the provision of public goods and services. Decentralization is therefore typically characterized by a devolution of expenditure responsibilities accompanied by vertical fiscal imbalances at the subnational government level that are addressed through intergovernmental transfers. In many countries, subnational governments are responsible for providing key public services such as education, welfare, health care, and pensions. Funding for these services is provided primarily by the central government through transfers. It is therefore

difficult for the central government to turn a blind eye when these governments are unable to fulfill their obligations in these key areas. We have seen how this has been a contributing factor to soft budget constraints in Sweden, Italy, Argentina, Mexico, India, and Ukraine.

As was argued in section III(i), vertical fiscal imbalances necessarily involve the central government in the fiscal affairs of the subnational governments. Furthermore, high vertical fiscal imbalances imply that subnational governments have little flexibility in raising revenues in the event of financial difficulty. They can therefore justifiably appeal to the central government for additional funding in such a case. Voters and creditors also have difficulty holding subnational governments accountable for financial difficulties when they have little opportunity to raise their own revenues.

Allowing subnational governments revenue autonomy can help break the expectation of central government support because the subnational governments are in a position to solve their fiscal difficulties on their own. A theoretical analysis in support of this argument has been made by Garcia-Mila, Goodspeed, and McGuire (2002), in which they show in a two-period model that when subnational governments are provided with taxing powers in the second period to finance first-period borrowing, they internalize the costs of borrowing and produce an efficient allocation of public and private consumption.

In addition to devolving taxing and spending authority to subnational governments, the hardening of budget constraints also requires that the division of responsibilities between the central and subnational governments be clear to citizens and creditors (Rodden, Eskelund, and Litvack (2003)). We have argued in section III that accountability suffers a great deal when voters and creditors are unable to determine which level of government has access to a given tax base and which level is ultimately responsible for the provision of goods and services. Indeed, such has been the experience in Germany, Italy, Brazil, India, Hungary, and Ukraine.

Very few countries, however, have decentralized both expenditure and revenue-

raising authority to the subnational governments. In our case studies, we have seen that the United States, the Canadian provinces, and the Chinese provinces under the “fiscal contract system” have been allocated considerable taxing and spending powers. While decentralization of spending and revenue authority may be efficient, decentralization of revenue authority can create inequities across regions and can hamper efforts at redistribution. With resource mobility across jurisdictions, any attempt to impose higher taxes on the rich to redistribute to the poor will be self-defeating because the rich will simply move to a lower-taxed region and the poor will move to a higher-taxed region. Thus, for equity reasons, the traditional assignment of responsibilities has the central government assuming the dominant role in taxation and income redistribution.

(ii) Market Mechanisms

When voters and creditors hold subnational governments accountable for fiscal outcomes, competition for voter support and in capital markets helps enforce hard budget constraints (Qian and Weingast (1997), Inman (2003), and Rodden, Eskelund, and Litvack (2003)). In particular, competition for mobile resources helps prevent subnational governments from behaving fiscally irresponsibly. In this setting, subnational governments face rising interest rates when they behave irresponsibly and they therefore bear the costs of excessive spending and borrowing.

As described above, accountability arises more easily when subnational governments are fiscally autonomous. Thus, the soft budget constraint problem is mitigated when subnational governments have well-defined and broad taxation and expenditure powers that are not subject to discretionary intervention by the central government. Such has been the case for the United States and the Canadian provinces. Even with fiscal autonomy, however, market mechanisms for enforcing fiscal discipline may take time to evolve. Indeed, market discipline has taken many years to develop in the United States and Canada. Consequently, countries that are just now undergoing a decentralization process after many years of strong central government cannot expect voters and creditors

to immediately hold subnational governments accountable for financial difficulties. Moreover, newly industrializing countries may lack a sophisticated banking system and efficient capital markets that are necessary for market mechanisms to enforce fiscal discipline (Inman (2003)).

(iii) Internalizing the Costs of Spending and Borrowing

An essential feature of soft budget constraints is the common pool problem whereby part of the costs of excessive spending or borrowing on the part of subnational governments is borne by national taxpayers. Thus, subnational governments perceive the costs of additional spending or borrowing to be less than the benefits. The soft budget constraint problem would therefore be mitigated if subnational governments internalized the costs of their spending and borrowing decisions. As we have seen, decentralizing taxing authority is one way in which subnational governments would internalize these costs. Another method has been examined theoretically by Goodspeed (2001). Goodspeed develops a model where subnational government expenditure programs are funded both by borrowing and by a system of transfers from the central government. Central government transfers are financed by a tax levied on citizens in all regions. If grants are paid only to the region when it experiences financial difficulty, the tax-cost for the region is small because taxes are spread over citizens of all regions. Goodspeed shows that the soft budget constraint problem can be mitigated if the central government increases grants to *all* regions in response to financial difficulty in one region. Then, the subnational government anticipates a large increase in taxes if it spends or borrows too much, and it therefore internalizes the costs of its spending and borrowing decisions.

Inman (2003) provides another method for internalizing the costs of subnational government borrowing and spending. He argues that an explicit constitutional bankruptcy standard that requires the repayment of all debts is a necessary condition for subnational governments to internalize the costs of excessive spending and borrowing that lead to fiscal crises.

Note that such a standard is in operation in the United States and in Hungary, as was described in the case studies for these countries. In both countries, such a standard has been very successful in mitigating the soft budget constraint problem.

The experience in Argentina, Brazil, and Mexico for example, offers another method for internalizing the costs of subnational government borrowing and spending. Although subnational governments have been recently granted bailouts in these countries, the conditions for bailouts have imposed costs on the subnational governments. In particular, they have been required to undertake significant reforms in return for additional funds. In some cases, the subnational governments have lost a considerable degree of autonomy, which can be a considerable deterrent to fiscally irresponsible behaviour.

(iv) Limiting the Discretionary Power of the Central Government

We have seen in the case studies of Argentina and Brazil that when central government transfers are provided on a discretionary basis, it is very difficult for the central government to commit to a no-bailout policy. Limiting the central government's discretionary power can help harden budget constraints by making a no-bailout policy credible. If, for example, transfer programs are based on clearly defined rules and formulae, then the central government has little discretionary power in bailing out a subnational government in financial distress. In addition, basing transfers on clearly defined rules lessens the possibility for vote trading among regional representatives in the central legislature. It also reduces the incentives for political bargaining and rent-seeking behaviour.

As was pointed out in section III(iii), however, equalization transfers that are based on rules and formulae can soften budget constraints. This has been the case in Germany and Sweden because subnational governments face weak incentives for tax effort and expect additional funding if their citizens are in danger of not receiving a minimum level of public goods and services. As a further example, a significant part of India's transfer system is based on filling the

gap between expenditures and revenues. Such a system also provides weak incentives for tax effort and strong incentives for increasing expenditures on populist social policies.

(v) Strong Central Government

As was described in section III, a determining factor of soft budget constraints is the vulnerability of the central government to pressure from subnational governments in times of financial crises. Denying bailouts can be very costly to the central government. The benefits of denying bailouts accrue in the future when the central government's no-bailout policy becomes credible and subnational governments begin to behave responsibly (Inman (2003)). The ability to resist this pressure requires a strong, stable, and long-lived central government. The central government's strength derives from the stability of political coalitions and the support it receives from a national constituency. The latter is crucial, as it provides the incentives for the central government to put the interests of the nation ahead of those of individual regions. When it is lacking, pressure to give in to the subnational governments' demands for bailouts can take the form of logrolling and vote trading among regional representatives in the central government. As we have seen in the case studies for Mexico, Brazil, and Argentina, the experience of serious macroeconomic crises can alter the behaviour of regional representatives in creating a national coalition backing the central government's efforts at reform.

(vi) The Central Government's Information

Central governments are more vulnerable to demands for bailouts when fiscal crises are the result of adverse exogenous shocks. In such situations, subnational governments' fiscal difficulties are not the result of opportunistic behaviour, and responding to demands for bailouts may well be called for on equity and efficiency grounds. Furthermore, subnational governments' fiscal difficulties may be the result of the central government's own macroeconomic policies. Denying bailouts in such cases may be considered unjust. The problem the central government faces is knowing when fiscal crises are self-inflicted and when they are not. To help improve the central government's information

deficit, regulations can be implemented that enforce clear accounting standards and the direct monitoring of subnational deficits. Furthermore, the central government can help reduce the level of uncertainty through a well-managed macroeconomy (Rodden, Eskelund, and Litvack (2003)).

(vii) Hierarchical Mechanisms

In the presence of weak credibility in enforcing a no-bailout policy, the use of hierarchical mechanisms such as balanced budget requirements, debt ceilings and other borrowing restrictions may be used successfully in hardening budget constraints (Rodden (2001), Inman (2003), and Rodden, Eskelund, and Litvack (2003)). As Rodden (2001) observes in his empirical analysis of the soft budget constraint problem in 43 countries, those countries that have large vertical fiscal imbalances have a tendency to use hierarchical restrictions in order to lessen the soft budget constraint problem. Whether hierarchical mechanisms can be successfully used to mitigate the soft budget constraint problem depends on a number of factors. First, as was noted in section III, some countries may have limited ability to employ hierarchical mechanisms due to the powers allocated to subnational governments in the constitution. Such is the case in Canada for the provinces, the United States, Germany, Sweden, Brazil, and India. In other countries, adoption and enforcement of hierarchical restrictions is difficult due to the representation of regional governments in the central legislature. Second, for hierarchical mechanisms to work, the central government must be able to enforce them. This requires regulations that have legal backing in the constitution so that they cannot easily be changed and enforcement by politically independent courts (Rodden, Eskelund, and Litvack (2003)). Lastly, as von Hagen (1991) points out, borrowing restrictions must extend to other government-controlled bodies such as state-owned banks and public corporations. For this to be truly effective, the subnational governments should not be allowed to own banks and there should be a clear separation between the subnational government and its public corporations (Rodden, Eskelund, and Litvack (2003)).

The case study analyses of Canada's, Australia's, and Hungary's local governments illustrate that hierarchical mechanisms can be very successful in enforcing fiscal discipline on lower-level governments. In these countries, local governments exhibit high levels of vertical fiscal imbalances and are very dependent on intergovernmental transfers. Both countries learned from experience that allowing local governments the ability to borrow and spend without restriction led to soft budget constraints. Without the necessary fiscal autonomy that enables market mechanisms to discipline local governments' fiscal behaviour, the only recourse available to successfully enforce fiscal discipline was the implementation of strict controls on borrowing and spending. The experience of Argentina, Brazil, and India also illustrates that for hierarchical mechanisms to be effective, they must not be susceptible to lax enforcement by central government bodies that oversee these restrictions.

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