FISCAL RULES FOR SUBNATIONAL GOVERNMENTS
Some organizing principles and Latin American experiences

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Abstract

In this paper we investigate the logic and the workings of fiscal rules, with focus on rules for subnational governments. We argue against a simplistic view that sees the writing of numerical limits on fiscal variables as the solution to fundamental fiscal problems. We suggest that international organizations should take a more comprehensive approach when dealing with the fiscal problems of developing countries. Such an approach requires a deep understanding of the determinants of undesirable fiscal outcomes in each particular case, which in turn requires some explicit political analysis.

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1. Introduction

In this paper we were supposed to analyze the rationale and preconditions for various approaches to designing fiscal rules for subnational levels of government, focusing primarily on evaluating the experience of decentralized Latin American economies with subnational fiscal rules. In attempting to fulfill that mandate, we got "stuck" in analyzing the rationale for fiscal rules. From our theoretical inquiry and from observing some Latin American experiences, we came out with a rather skeptical view on fiscal rules, and an inclination to emphasize the importance of taking a broader political approach.

The gist of our argument is that the root of fiscal problems lies in politico-institutional factors, such as the incentives for fiscal profligacy at the local level caused by inadequate federal tax-sharing schemes, or the incentives for public spending caused by principal-agent type problems – for instance, the incentives incumbents face to increase public spending during election years.[1] In this context, fiscal rules that do not address these underlying issues have a limited capacity to solve fiscal problems, and might even be counterproductive.

Following the definition in Kopits and Symansky (1998), a fiscal policy rule is a permanent (or long lasting) constraint on fiscal policy, expressed in terms of a summary indicator of fiscal performance, such as the government budget deficit, borrowing, debt, or a major component thereof. Fiscal rules are thus a special case of policy rules or, more generally, of institutions. As a matter of fact, a broader definition of fiscal rules includes both rules in the narrower sense above, as well as budget procedures. For concreteness, in the rest of the paper we will use "fiscal rules" to refer to the narrower definition of "numerical limits." Kopits and Symansky also identify several key features of fiscal rules.

- Target or ceiling: what objective does the rule have? (e.g.: numeric limit on the deficit/GDP ratio)
- Effective period: until when is the rule applicable? (The authors argue it is important for the rule to be effective over a relatively long period.)
- Statutory instruments: Is the rule written in the Constitution? Is it a law? An international treaty?
- Government level: Does the rule apply for the central government, subnational governments, all levels?
- Penalty for noncompliance: What is the cost of breaking the rule? Is there a specified financial or judicial punishment, or is the cost simply reputational?

Fiscal rules are increasingly championed as a key policy instrument in achieving fiscal discipline. Kopits (2001) argues that "the primary usefulness of a well-designed and appropriately implemented set of permanent fiscal rules, that prevents a deficit bias, consists of establishing a depoliticized framework for fiscal policy – much like the depolitization of monetary policy under successful inflation targeting." Thus, fiscal rules are construed as an effective policy instrument to overcome the deficit bias caused by a number of political economy considerations – considerations that we discuss in Section 6 below.

However, it is not immediately clear why enacting or signing a law, pact, constitutional amendment or international treaty that states that a certain fiscal variable must respect a certain numeric target will affect the behavior of economic and political actors in such a way that the rule will be respected. In fact, in Section 2 we review the empirical literature on the effectiveness of fiscal rules as instruments to promote fiscal discipline, and find that the evidence is inconclusive.

Rules will clearly contribute to fiscal discipline if there is a benevolent and all-powerful external enforcer with the ability to sanction deviations; but this is rarely the case. On the other hand, absent strong, independent enforcement, it is not obvious that rules can alter behavior. For instance, in the case of a central government imposing a subnational fiscal rule on local governments, it is possible that the central government has electoral incentives not to punish a region that has violated the rule. Furthermore, a weak central government might be unable to muster the political power necessary to punish a deviating province. The point of the example is that in many federal countries the central government is not necessarily benevolent, nor all-powerful. Therefore its capacity to act as enforcer of fiscal rules is questionable.

In sections 3 to 8 we explore the theoretical grounds for the usefulness and relevance of rules. In Section 3 we explore the different *origins* that rules might have (for instance, are they imposed unilaterally or multilaterally?). Identifying the origin of rules is important because origin is related to enforceability. From Section 4 on, we concentrate on the origin most relevant for subnational rules in federal countries:[2] compacts among the different political units.

We explore under what conditions rules could matter. We suggest that those conditions are 1) exogenous enforcement, 2) self-enforcement, 3) signaling to external players.[3] Perfect exogenous enforcement is, of course, a very valuable institutional technology, and if such a technology is available, almost any problem could be solved at low cost. We argue that in many cases it would be a mistake to consider the central government as the perfect exogenous enforcer of subnational fiscal rules. We focus then on the (more interesting) case in which there is the need to rely on some form of self-enforcement. That requires the exploration of some game-theoretic foundations of rules.

The final part of the paper explores the analytical and policy-reform strategy that emerges from our game- theoretic approach, and it illustrates it with a brief analysis of the Argentine case.

2. Evidence on the effectiveness of fiscal rules

In this section we review the empirical literature that studies the effect of fiscal rules on fiscal policy outcomes, and also present some evidence from Latin American countries that have recently implemented fiscal rules both at the national and subnational levels. We find that the evidence regarding the effectiveness of fiscal rules as instruments to improve fiscal outcomes is, as yet, inconclusive.

Finding convincing empirical evidence on the effect of fiscal rules on fiscal policy outcomes is challenging. Changes in fiscal rules are not common at the national level, and when they occur, they are often accompanied by other reforms (financial liberalization, privatization, etc) that affect fiscal outcomes. This limits the explanatory potential of within-country time-series regressions and of cross-country regressions, because a study that finds a correlation between fiscal rules and prudent fiscal outcomes without controlling for other reforms would be biased. A related limitation on studies on the effectiveness of fiscal rules is given by the question of origin of rules. If these rules reflect voters' preference for fiscal rules, and at the same time, voters desire fiscal austerity, then any study finding a correlation between rules and outcomes would be contaminated by omitted variable bias. The academic literature on the effectiveness of fiscal rules has attempted to deal with these complex identification issues, but the results are as yet inconclusive.

The International Experience

Poterba (1994), Alt and Lowry (1994), and Bohn and Inman (1995) pursue the strategy of comparing subnational fiscal rules within a federation such as the United States. According to Poterba and Reuben (1999), the argument in favor of this strategy is that states operate in a homogeneous legal environment and face similar fiscal shocks; however, they exhibit substantial differences in their budget rules, fiscal institutions and fiscal outcomes. In fact, Poterba (1994) and the other studies mentioned above, document a negative correlation between state antideficit laws and the average size of state budget deficits.

However, these studies do not address the potentially crippling issue of causality raised above. Budget rules could very well be endogenous. As any law, budget rules are not fixed. Rather, legislators and voters can change them. Hence, it is possible that states in which voters have a preference for fiscal prudence tend to have low deficits and also pass balanced budget laws.[4] In this case, the correlation between fiscal rules and fiscal outcomes would simply reflect the fact that both variables are jointly explained by an omitted variable. Indeed, Besley and Case (1994) argue that many of the policy differences across states and over time that are usually treated as exogenous in empirical work, are in fact reflections of underlying voter preferences or economic shocks.[5]

In fact, there is evidence that this issue is critical. Reuben (1996) finds that the relationship between state fiscal institutions and state spending depends strongly on whether institutions are treated as endogenous or not. Poterba and Reuben (1999) use instrumental variable estimation to attempt to solve the endogeneity issue in regressions of debt yields on fiscal institutions, but find that their point estimates become insignificant when instrumenting with proxies for voter preferences. These studies indicate that the jury is still out on whether "good" state fiscal rules cause better fiscal outcomes in the US states.

Regarding cross-country evidence for high-income countries, Kennedy and Robbins (2001) survey recent empirical studies, and argue that the evidence is not conclusive. Fiscal consolidation has occurred in countries with and without fiscal rules, implying that these rules are not a necessary condition for fiscal adjustment. In addition, fiscal rules at the national level in industrialized countries have not been in place for long. The authors argue that these rules have not yet been seriously tested, because there has not been a major recession in these countries since the rules have been in place.

The Latin American Experience

In a groundbreaking study, Alesina, Hausmann, Hommes and Stein (1999) found that an index of fiscal institutions that included a component measuring the existence of fiscal rules limiting the level of debt was negatively correlated with fiscal deficits in a sample of Latin American countries. Higher values of the index indicated the existence of fiscal rules limiting the possibility of increasing debt, a more "hierarchical" budget procedure and more transparency. Furthermore, the component of the index related to rules in the strict sense defined in the introduction was also negatively correlated with fiscal deficits. That study suggests that fiscal rules in the strict sense (and well-structured budget procedures and transparency clauses), can contribute to fiscal prudence. However, the paper does not deal with the endogeneity issues discussed above; so it is plausible that the countries with better budget institutions and fiscal outcomes are countries in which voters prefer fiscal prudence, or where the structure of political conflict surrounding the budget process is more cooperative.[6]

Given the difficulties discussed above with performing an adequate econometric study to measure the impact of fiscal rules on fiscal outcomes, we concentrate in this subsection on presenting suggestive evidence from four Latin American examples, Argentina, Brazil, Colombia and Mexico. All of these countries have decentralized government spending and/or tax collection in the past two decades, and thus are interesting cases in which to analyze the effectiveness of subnational fiscal rules. These examples should in no way be construed as presenting conclusive evidence, but can be taken as illustrative of the potential shortfalls of fiscal rules, especially in developing countries.

The recent move by some Latin American countries, including Argentina, Brazil, Colombia and Mexico towards implementing fiscal rules has received increasing attention from economists and policymakers. These episodes look promising as cases of successful implementation of fiscal rules, especially Brazil. However, we show that there have been episodes of non-compliance with these rules, and we argue that in other cases it is too early to make a complete evaluation of the impact of rules. In addition, we believe that particular attention should be given to the institutional reforms taking place together with the implementation of rules. In Table 2 we present a summary of recent fiscal rules implemented in Argentina, Brazil, Colombia and Mexico and the level of compliance they have achieved. Rules passed in Colombia in 1997, Brazil in 1998 and Argentina in 1999 have suffered from episodes of non-compliance.[7] For rules passed in Colombia, Mexico and Brazil in 2000, we argue that it is still too early to tell whether they have been successful.

Table 2: Some evidence on Fiscal Rules in Latin America

Country	Colombia	Mexico	Brazil	Argentina
Year	**1997**		**1998**	**1999**
Kind of restriction	Borrowing Constraint – Traffic Light Law		Ex-ante control over subnational debt	Fiscal Responsibility Law
Level of government	Subnational Governments		Subnational Governments	National Government, and later subnational governments.
Tested	Yes		Yes	Yes
Main Characteristics	Demand side restriction on borrowing and supply side regulation (fully provisioned for red light territories)		Senate approval is required for all subnational govt borrowing operations, prohibiting the issue of bonds and borrowing from state-owned banks	3. Deficit Target and Fiscal Balance convergence path. 4. Pluriannual Budget formulation. 5. Limits on Current expenditure growth. 6. Transparency
Non-compliance event	According to MoF out of 21 depts. That required permission for new credit, 10 approximately got new credit without permission		The states observed the prohibitions on new bond issues only in the narrow legal sense: they did not halt the capitalization of interest on existing bond debt. Nor did these regulations stop new "emergency lending" by Central govt intermediaries.	National govt: No year since 1999 the Deficit Targets were fulfilled. Subnational: 6 out of 11 did not comply with deficit limits. 3 out of 8 did not comply with spending limits.
Enforcement	Judicial		Judicial	Judicial
Year	**2000**	**2000**	**2000**	
Kind of restriction	Fiscal Responsibility Law	Market discipline for subnational borrowing	Fiscal Responsibility Law	
Levels of governments	All Subnational Governments	Subnational Governments	All levels of government	
Tested	No	No	No	
Main Features	Limits and restriction on: - Current Expenditure - Municipality creation - Transparency.	- No discretional transfers to states. - No securing debt with payments from the revenue sharing agreement. - Subnational debt subjected to normal credit exposure celings. - Bank´s capital risk weigthing linked to the international rating of the SNG.	It applies to the three levels of government and encompasses all branches. This Law contains explicit numerical hard budget and intra-budget constraints, public dissemination of information, and institutional and individual sanctions. The law goes into full effect in 2002.	
Enforcement	Judicial	Market	Legislative – own state legislature	

Argentina: Faced with a deteriorating budget balance and growing debt payments, the Argentine Congress approved a Fiscal Solvency Law in September 1999. This law aimed at achieving budget balance at the national level of government by 2003. Apart from establishing numeric limits for the central government's fiscal deficit, it also limited the growth of expenditures. Furthermore, the law stipulated the adoption of pluriannual budgeting, the creation of a Countercyclical Fiscal Fund, and the implementation of transparency measures to increase the availability of information regarding the state of public finances. Although the law did not include conditions for subnational governments, it invited the provinces to pass similar laws at the subnational level.[8]

Regarding the limits on budget deficits, the Law established that fiscal balance had to be reached no later than 2003, and it set nominal ceilings for the non-financial public sector deficit between 1999 and 2002. The Fiscal Solvency Law was modified by the 2001 Budgetary Law, which relaxed the deficit ceilings, and extended the date at which budget balance should be achieved until 2005. Table 3 shows the limits imposed by the Fiscal Solvency Law and its modification, together with the actual budget outcomes between 1999 and 2001. Contrary to the optimism expressed by some analysts of the Argentine case,[9] the rule was broken in every year.

Table 3: Compliance with the Fiscal Solvency Law

Year	Limits (as % of GDP)		Observed
	1999 Law	2001 Modification[10]	
1999	1.9%		3.1%
2000	1.1%		2.5%
2001	0.5%	2.5%	4.0%
2002	0.3%	2%	
2003	0%	1.3%	
2004	0%	0.9%	
2005	0%	0%	

Source: Fiscal Solvency Law and Ministry of Economy

At the subnational level, several governments followed the national example and passed fiscal solvency rules. These rules differ across provinces in some of their characteristics, as well as in the degree to which they have been adhered to. Table 4 summarizes the main characteristics of the existing subnational rules.

Table 4: Main Characteristics of Subnational Fiscal Rules in Argentina

Province	Law	Date	Explicit Limits on			Pluriannual Budget Formulation	Stabilization Fund	Fiscal transparency
			Deficit	Public Debt	Current Expenditure			
GCBA	NO							
Bs. As.	NO							
Catamarca	YES	12/00	Yes					Yes
Cordoba	YES	03/00	Yes	Yes	Yes		Yes	
Corrientes	NO							
Chaco	YES	05/00	Yes	Yes		Yes		
Chubut	YES	-	Yes	Yes	Yes	Yes		
Entre Rios	NO							
Formosa	YES	12/99	Yes	Yes	Yes	Yes	Yes	Yes
Jujuy	NO							
La Pampa	NO							
La Rioja	NO							
Mendoza	YES	01/00	Yes				Yes	
Misiones	YES	05/00	Yes	Yes	Yes		Yes	Yes
Neuquen	YES	-	Yes		Yes			
Río Negro	YES	01/01	Yes	Yes		Yes	Yes	Yes
Salta	YES	05/99	Yes	Yes	Yes			
San Juan	YES	01/01	Yes	Yes	Yes			
San Luis	YES	08/99		Yes	Yes	Yes		Yes
Sta. Cruz	NO							
Santa Fe	NO							
S. del Estero	NO							
Tucuman	YES	09/99	Yes		Yes	Yes		
T. del Fuego	YES	08/00	Yes	Yes				
National Govt.	YES	09/99	Yes	Yes	Yes	Yes	Yes	Yes

These rules include several of the characteristics favored by the recent literature on fiscal rules, such as clear limits on government debt and requirements regarding the timely and accurate publication of fiscal information. However, compliance with these laws in terms of debt and deficit performance has been uneven. Only 5 out of 11 provinces that imposed a hard budget constraint actually fulfilled their commitment in 2000. Out of the five that complied with the law, two of these, Cordoba and Tucuman, had been achieving the objective stated in the law for several years, so the law appears more like a reflection of pre-existing underlying political agreements. With respect to limits on expenditure, three out of eight provinces that imposed limits did not comply with them in the year 2000.

The tradition of not respecting rules goes beyond these recent cases. Several provincial constitutions contain limits on public debt. In fact, 16 of 24 provinces have constitutional limits regarding the ratio between debt service and total revenue. These limits vary between 20% and 25% of the total revenue. However, in 2000, only 10 of the 16 provinces complied with those limits, with preliminary results for 2001 being much worse. (See Table 5)

Table 5: Compliance of Constitutional Debt-Service Rule (Argentine provinces)

Jurisdiction	Constitutional limits	Debt service / Total Revenue Year 2000
G.C.B.A.	No limit	3%
Buenos Aires	No limit	3%
Catamarca (a)	20%	**24%**
Córdoba (b)	20%	13%
Corrientes	25%	**41%**
Chaco	25%	14%
Chubut	No limit	12%
Entre Ríos	25%	**27%**
Formosa	25%	**39%**
Jujuy	20%	**31%**
La Pampa	25%	1%
La Rioja (b)	25%	6%
Mendoza	No limit	14%
Misiones	25%	10%
Neuquén	No limit	14%
Río Negro	25%	**26%**
Salta	25%	13%
San Juan	No limit	12%
San Luis (b)	25%	0%
Santa Cruz	No limit	2%
Santa Fe	25%	5%
Sgo del Estero	25%	6%
Tucumán	No limit	22%
Tierra del Fuego	25%	19%

Source: own elaboration based in Sanguinetti (2001) and Ministry of Economy
(a) It should not be higher that 20% of five-year average
(b) Based on the lowest revenue within the past three years

Thus, Argentina exhibits both long-standing and recent fiscal rules, many approved following international best practices, which have been broken. Several provinces did not comply with their commitments in the face of declining tax revenues, signaling to creditors the inability to maintain fiscal discipline and thus contributing to Argentina's overall fiscal crisis. Inadequate institutional design contributed to the inability of rules to guarantee fiscal sustainability. Furthermore, we argue later that institutional reforms, other than rules narrowly defined, are necessary for these rules to succeed.

Brazil: The 1988 Constitution in Brazil mandated a large increase in tax sharing. However, Congress rejected a proposal for matching decentralization of expenditure responsibilities. Therefore, states were expected to improve their fiscal balance vis a vis the federal government.[11] However, expenditure decentralization did increase during the '90s, and at the same time, the federal government increased tax rates on those taxes it was not mandated to share with the states.[12] Therefore, the federal government managed to keep a roughly constant level of deficit as a share of GDP, whereas fiscal mismanagement at the state level led to excessive state deficits and growing debt. There were several events of state debt crises during the '90s, in several of which the federal government bailed the states out, furthering the incentives for fiscal laxity at the local level. In 1998, a new round of rescheduling was accompanied by attempts at hardening state budget constraints. Senate approval was imposed as a requirement for all subnational government borrowing operations, and the issue of new bonds was prohibited, as was borrowing from state-owned banks. However, these rules limiting debt were not fully effective. (See Table 2).

Following the balance of payments crisis in 1998/9, Brazil enacted its highly publicized Fiscal Responsibility Law in 2000. This law includes rules for government debt, wage bill, and other fiscal indicators (as percentages of own revenues) for different levels of government. Furthermore, it includes stricter limitations for the final year in office for politicians, in an effort to limit the political business cycle. The law contemplates sanctions both at the institutional and individual levels. A state that does not comply with the law may be subject to limits on new credit operations, transfers and guarantees from the central government. At the individual level, a government official can lose her position, lose the right to hold a public sector position for 5 years, and even be arrested and fined. The law also includes provisions to increase transparency of fiscal information.

Although the law was only sanctioned in May of 2000, there have been some promising signs in the past year. Current revenues for municipalities in 2000 reached 6.6% of GDP, compared with 5.3% in 1997. Furthermore, 92.3% of municipalities managed to keep their personnel expenditures below the target of 60% of current revenue. Only 19% of municipalities did not comply with the limit on legislative spending, which compares favorably to 38% that did not comply in 1996. At the national level of government, personnel expenditures reached 30.5% of current revenues, well below the 37.9% legal limit.

These preliminary results are encouraging. However, it is too early to tell whether the Fiscal Responsibility Law will have a long-term effect on public finances in Brazil. It has not yet been tested by a recession or a change in government at the national level. The next few years will require attention on the Brazilian case, so as to fully evaluate the impact of the law, as well as to better study its process of implementation.

Colombia: Colombia has traditionally been a centralist, unitary state. Departments and municipalities have less autonomy than Brazilian states or Argentine provinces. However, political decentralization increased in the late 1980s and early 1990s. Mayors started to be directly elected in 1986 and governors in 1991.

Consistent with the centralist tradition, subnational borrowing in Colombia in the '80s and before was uncommon, and required approval by the Ministry of Finance. However, in late 1980s and 1990s the trend towards political decentralization was accompanied by more freedom for domestic borrowing. In particular, there was no effective ex ante control of cash advances from banks, and subnational debt with the banking sector rose from 2.6% of GDP in 1991 to 4.6% in 1997.[13]

As a way to increase control over subnational debt by the central government, the so-called Traffic Light Law was passed in 1997. This law brought into effect a rating system for territorial governments, based on the ratios of interest to operational savings and of debt to current revenues. Highly indebted local governments (red light) were prohibited from borrowing, and intermediate cases (yellow light) were required to obtain permission from the Ministry of Finance. In this way, the central government would be able to limit the growth of subnational debt.

However, the indebtedness law has not been fully effective. According to Echavarria et al (2000), some governments with a red light rating have obtained new financing without permission of the Ministry of Finance. "Out of 21 departments that required permission for new loans in 1997, 10 received new credit without permission from the Ministry […] In order to be able to violate the law, departments presented defective financial information, and the financial institutions made superficial analysis of it. In addition, the Ministry of Finance gave its authorization in cases where it should have denied it." (Echevarria et al, 2000, p.9). Furthermore, as described by Vice-Minister Catalina Crane, while there was the expectation that departments would transit from yellow to green, they have transited from yellow to red.

The importance of bank lending as a source of financing for subnational governments in Colombia makes bank regulation an alternative way to control subnational borrowing. The Superintendency of Banks has altered its requirements regarding provisions against nonperforming territorial loans. After the bank borrowing expanded in 1993-1994, the Superintendency established that any subnational loan with over a year maturity had to be considered as risky and consequently should require some provisioning. These regulations were relaxed again in 1996, leading to two years of high borrowing. Starting in 1999, the debt of any territory with a red rating in the traffic-light law system must be fully provisioned, increasing the cost of those loans for banks. This combination may make the traffic-light law more effective.

In a new attempt to implement fiscal rules to stabilize subnational finances, Colombia passed Law 617 in the year 2000, the so-called Subnational Fiscal Responsibility Law. The main features of this law are:[14]

i) primary current expenditure must be exclusively financed by non earmarked current revenues, and should not exceed a fixed percentage, depending on the state or municipality category,
ii) expenditure for state legislatures is limited,
iii) across the board cuts should be put in place whenever effective non-earmarked current revenues are lower than budgeted, and state and municipal central administrations are not allowed to make transfers to their public entities,
iv) there are strict limits to municipality creation. Proven non-viable municipalities have to merge.
v) when subnational governments do not comply with the limits imposed by the Law, they have to adopt a fiscal rescue program to regain viability within the next two years.
vi) To promote transparency, there is an extensive list of characteristics and requirements for the election of governors, majors, legislators and their relatives.

It is also still too early to tell whether the law brings about a structural change in fiscal outcomes, but the provisions seem like a move in the right direction. Also, the economic authorities are currently working on a new Fiscal Responsibility Law.

Mexico Following several episodes of subnational bailouts in the aftermath of the 1995 financial crisis, Mexico has passed legislation to limit bailouts by the national government. In 2000, The Zedillo administration established ex-ante, market based mechanisms in order to prevent excessive sub-national borrowing. At the same time, the administration attempted to convey a credible signal that it would no longer bail out local government debt. The new regulatory framework has four main components:

1. The president relinquished his power over discretionary transfers to states, thus limiting the ability of local governments to "game" the federal government into bailing them out.
2. The federal government gave up its role in securing debt with payments from the revenue sharing arrangement. This presumably left the states and their creditors to assume the legal risks for the collateralization of debt.
3. Subnational debt was subjected to normal credit exposure ceilings, thus limiting the extent of financial-sector damage that one single state can cause and signaling that state debt must be evaluated on a basis similar with other debt
4. Bank's capital risk weighting of loans to subnational governments was linked to the international rating of the borrowing government's creditworthiness. The pricing of bank loans thus became a function of the underlying risk of the state government.

To the extent that it is enforceable, we believe that this type of rule (for instance point 1 above), which changes the strategies available to certain key players, is a crucial part of a fiscal reform process. We will expand on this issue later in the paper. For now let us note that in the Mexican case, it is also too early to fully evaluate the impact of the reform.

To summarize the results in this section, we found that the empirical evidence in favor of the claim that fiscal rules can improve fiscal outcomes is weak and inconclusive. It is hard to develop robust empirical studies that measure this, as evidenced by the difficulties encountered with the causality problem in the literature on fiscal rules in US states. Furthermore, there are cases such as Argentina, Colombia and Brazil in which there have been episodes of clear non-compliance with fiscal rules, casting doubt on whether they are sufficient to change fiscal behavior.

3. Where do rules come from?

The predominant view of fiscal rules among economists seems to assume that rules are decided by a benevolent social planner (or by some exogenous enforcement agent) so as to limit the tendency towards fiscal imprudence existing in many countries. However, an important body of economics and political science literature increasingly considers rules (and institutions in general), as the outcome of complex intertemporal non-cooperative games. Calvert (1995) presents a lucid exposition of this view. He shows that in order to explain the effectiveness of institutional constraints on individual behavior it is key to explain how institutions can drive individuals to choose cooperative actions that might be counter to their individual interest. Furthermore, it is essential to understand how these institutions can become self-enforcing – in the sense that mechanisms within the political system must be sufficient for rules to be respected.

Before we analyze the logic and implementation of fiscal rules, we will make a distinction that refers to the "origin" or constitutive nature of rules. The distinction is important since the nature of the underlying problems that are being attacked via rules, as well as the set of complementary (or alternative) mechanisms to attack those problems, might be different. Furthermore, the enforcement technologies might also differ.

It would be best to illustrate our argument by a partial enumeration of actual (possible origins of) fiscal rules:

(a) In a "strongly unitary" nation, the central government imposes a fiscal rule (say, no borrowing) on local governments

(b) Citizens impose rules on *policymakers* (proposition 13 in California)

(c) Previous generations (of political actors) impose rules on future generations of political actors (for instance in constitutions).

(d) A government (or unified actor) imposes rules upon himself, mostly to signal commitment to external actors;[15] for example to financial markets.

(e) A fiscal pact among “subnational” units fixes certain fiscal rules. An example are the Maastricht rules agreed by European countries. There are similar attempts in many “strongly federal” countries such as Argentina and Brazil.[16]

Some of the rules exemplified above are imposed “unilaterally”, and others are agreed upon by contracting parties. In the first set of rules some actor or actors in a position of some (at least temporal) authority try to regulate other actors’ future behavior. This case can be analyzed using the now conventional principal-agent literature on optimal contracts. However, as we will argue later, this scenario is rarely the relevant one. In federations, the central government is composed of many actors, which often are representatives of subnational and sectoral interests, and therefore the decisionmaking process of the national government is also a non-cooperative game, embedded in the larger game played by different levels of government and groups.[17]

On the other hand, rules of type (e) are compacts among actors that assume mutual compromises: “I will keep my fiscal house in order, in exchange for you doing the same.” It is a situation comparable to private contracts enforced by the Courts; unfortunately, in the political (and hence in the fiscal) realm enforcement is more problematic. It is in these sets of rules that the non-cooperative game theoretic approach to institutions is most relevant. Why do local governors comply with pacts? Who enforces sanctions when a deviation occurs? How do economic shocks affect the incentives to cooperate or to subvert institutions? These and other related questions should be addressed to fully evaluate the effectiveness of a proposed set of fiscal rules.

Even though our general message applies to most of the types of rules listed above, in the rest of the paper we will focus mainly on these “horizontal” rules, since they capture one of the dimensions most crucial for fiscal rules for subnational governments.

4. Can rules matter?

Rules are supposed to alter behavior, or at least to reinforce and insure the maintenance of certain patterns of behavior. In the case of fiscal rules, to show that they have been effective, one must prove that in the absence of the rule, fiscal outcomes would have been different (in particular, worse.)

In this section we explore under what conditions might rules have an impact on behavior, considering the fact that actions of fiscal authorities are the outcome of a non-cooperative game.[18] These conditions are either exogenous enforcement or multiplicity of equilibria.

If there is no outside enforcement, and if the underlying game has a ***unique equilibrium***, rules will either be:

a) irrelevant (not binding): the actions taken in equilibrium *without rules* lead to equilibrium values of the relevant fiscal variables which are within the bounds permitted by the rules

b) ignored: the underlying equilibrium leads to values outside the set permitted by the rules, the rules are just ink on paper without power to alter behavior.[19]

In the case of games with ***multiple equilibria***, rules might help to coordinate on equilibria which, hopefully, are Pareto dominant. Rules in that case can be seen as a coordination device.

An example taken from Przeworski (1997) can help illustrate this point. Take three different game theoretic setups representing different structures of conflict, in which A and B represent actions by political groups, and 4>3>2>1 represent preferences over policy outcomes. The payoff pairs that constitute equilibrium outcomes are shown in **bold** letters.

Case 1		
	A	B
A	1,1	2,2
B	2,2	**3,3**

Case 2		
	A	B
A	**2,2**	4,1
B	1,4	3,3

Case 3		
	A	B
A	**2,2**	1,1
B	1,1	**3,3**

Cases 1 and 2 represent the situation of games that have only one equilibrium

In case 1, rules are "not necessary", because the Pareto optimal outcome is a unique Nash equilibrium, and is arrived at by individual rationality. In this case, policymakers may still sign an agreement, or implement a rule, but it is simply a reflection of political reality, and is redundant.[20]

In case 2, ***exogenously enforced*** rules would be necessary to implement B,B, which is preferred by both but is not an equilibrium in the one-shot game. Rules would have to act so that individual incentives are curtailed. That is, rules must somehow alter the game (specifically, the payoffs or feasible strategies) so that what before was not an equilibrium now becomes one. This case could be appropriate for analyzing many of the problems faced by fiscal policy rules. The typical common pool problem faced by subnational jurisdictions due to credit market externalities is a case in which cooperation is not a Nash equilibrium. If everybody else is running a low level of debt, then an individual province has the incentive to defect and run a high level of debt at a low cost. The key lesson from this example is that for fiscal rules to matter, they must be ***enforceable***, meaning that they somehow affect the fiscal game so as to curtail individual incentives to defect from the desired policy.

Hence, a key issue in determining whether fiscal rules can be an effective mechanism to achieve fiscal discipline and macroeconomic stability is the extent to which these rules can be enforced. In the relevant case in which rules attempt to change individual behavior towards cooperation, it is unlikely they will work unless they include effective mechanisms to affect the incentives of the relevant actors to comply with the rule. For instance, if a federal fiscal agreement stipulates that all subnational governments will reduce their nominal spending by 5% and leaves enforcement to the courts, the result is ambiguous. In a country in which the courts lack political independence, their decision can be subverted, and thus the rule is unlikely to affect the incentives to adjust faced by local policymakers. The examples from Latin America presented in Section 2 are cases in which agreements of this type have been violated.

Absent a perfect external enforcer, institutions – and fiscal rules in particular – must become "self-enforceable" -- Calvert (1995). This means that enforcement must come from "within the game", that is, from changes in payoffs, feasible strategies or other fundamental conditions that affect individual behavior. One case in which rules can have an impact is when there are multiplicity of equilibria, as in case 3. In that case, rules can act as a coordinating device, so that the groups can select the B,B equilibrium that is preferred by both.

The arguments presented so far support the view that fiscal rules could be redundant in some cases,[21] and might not be sufficient to alter irresponsible fiscal behavior in others, if not accompanied by deeper institutional changes that substantially affect the fiscal game. In Section 2 we have shown evidence from Latin American countries that is consistent with the second claim.

So far in this section, we have described the game among fiscal authorities as a static game. Of course, the game-theoretic language and style of analysis can take us closer to the reality of dynamic fiscal games. On the one hand, fiscal games are not stationary, since many relevant underlying variables do change exogenously (and even endogenously). The international prices of the main staple exported (and taxed) in certain regions of the country might change, or the dynamics of inflation or of debt accumulation might put the country so close to the brink that the payoffs of cooperation are increased substantially.[22] In those *transitions*, fiscal rules can also play the role of coordinating device towards the new, more-cooperative equilibrium, coordinating the level at which fiscal variables will be stabilized. Indeed, we believe that this is very relevant in practice, and relates to the discussion on the endogeneity problems in assessing the impact of fiscal rules on fiscal outcomes. Furthermore, it stresses the point that things other than just the rules should be happening for fiscal consolidation.

Additionally, even if we abstract from non-stationarities, games among subnational (and national) governments are repeated games, in which fiscal decisions are taken time after time. In the context of repeated games, we are much more likely to fall under case 3, as the normal form of a much larger game, which might consist of the repetition of the game in case 2. In that sense, we concur with Drazen (2002) that rules and reputation should be seen as complements: rules (or institutions more generally) might help to coordinate actions towards cooperative play, given the multiplicity of equilibria in repeated games.

In the rest of the analysis we will focus on that situation. In that case one has to look into all the factors that affect the likelihood of achieving a cooperative equilibrium, and we have to look at the role that fiscal rules (narrowly defined) can play in that broader context.

5. Institutions, cooperation and fiscal outcomes

In many countries (certainly including Argentina, Brazil, Colombia and Mexico) federal fiscal interactions are an important part of the broader political game in which most relevant economic and social policy decisions are taken.[23] At the same time, decisions taken in the fiscal realm are the outcome of a sub-game which is affected by the set of institutions (rules in the broader sense) affecting the overall political game.

For those reasons, in order to improve fiscal and macroeconomic performance, as well as to attain broader goals (including adequate provision of social insurance, development of human capital, and social integration), it is important to have a broader understanding of the determinants of poor performance, and to attempt solutions that tackle the core reasons behind non-cooperative behavior by different levels of government.

This is easier said than done. Among other things, it does require deeper (political!) country-specific analysis than the one that tends to support standardized recommendations from international organizations and other wholesalers of economic advice.

In the rest of the paper we attempt a generic sketch of the nature of underlying problems of decentralized federal countries. We illustrate the approach with one country (Argentina) to expose the difficulties of achieving an adequate diagnostic, and the nature of the type of solution required, in which fiscal rules (narrowly defined) are only one component of a broader strategy of institutional reform.

6. Deficient outcomes and the actions that generate them

The problems underlying poor macroeconomic and fiscal behavior could be summarized in two categories: principal-agent problems and cooperation problems. By principal-agent we refer to the relation between the citizens and their elected representatives. Imprudent fiscal behavior is often the result of actions taken by public officers who are not maximizing the welfare of their constituencies. By cooperation problems we refer to the game played by multiple subnational and national political actors that maximize objectives that, to some extent, include the welfare of their electors. Both problems are at work in actual federations. For brevity, we concentrate here on the second, "intergovernmental" problem, partly because that is the crucial dimension that is added by decentralized, federal, polities.[24]

Table 1 presents a very succinct summary of a number of fiscal policy problems identified in the political economy literature over the last couple of decades.[25] The problems are classified between those faced by any country (or smaller political unit) even if "unitary", and those additional problems faced by a federation of states or of countries.

Table 1: Fiscal Policy Problems and their Consequences

Underlying problem	Size of public spending	Deficit / debt accumulation	Inefficient allocation
Unitary			
Lack of representation of future generations	Too high	Excessive debt accumulation	Underinvestment in infrastructure and long term growth
Political rotation (Political business cycle, strategic use of debt)		Increases before elections	Maybe unnecessary volatility of politically sensitive components of spending
Common pool (political cleavages, interest groups, etc)	Too high (static common pool)	Excessive debt accumulation, delayed stabilization (dynamic common pool)	Procyclicality
Principal-Agent (fiscal illusion, delegated authority, informational rents)	Too high	Too high	Corruption, inefficiency
Federation			
Common pool across jurisdictions (dispute over federal transfers, local public spending, etc)	Too high (static)	Too high (dynamic)	Several (explained later in text)
Credit market externalities	Too high	Too high	
Bailouts	Too high	Too high	
Structure of federal transfers (low incentives to tax, etc)	Too high (flypaper effect)	Too high	

Any country that considers the imposition of subnational fiscal rules is faced with challenging problems. These problems include suboptimal macro-fiscal outcomes, such as excessive subnational deficits, excessive indebtedness, insufficient local taxation; as well as other (more micro) distortions, such as distortionary national taxation, inefficient subnational taxation, procyclical fiscal behavior, rigidities in national tax policies, inadequate risk-sharing, etc.

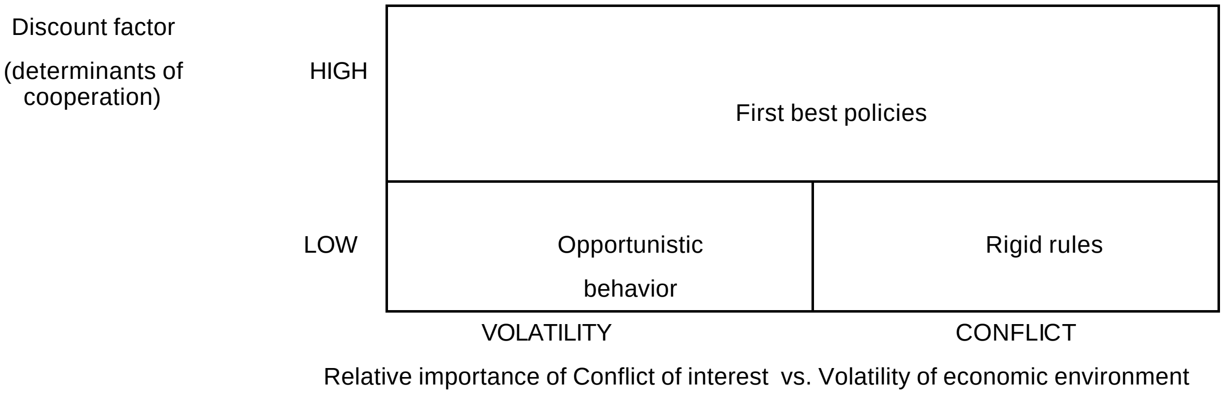
Many of these inefficient outcomes can be understood as the result of non-cooperative actions taken by subnational and national authorities. A typical, but by no means unique example of subnational governments not taking into account the full effects that their fiscal actions have on the welfare of the whole country, are the cases in which they take a lax fiscal stance (for instance, not adjusting when hit by permanent shocks), in the expectation that they will be bailed out in the case of a fiscal crisis.[26] This opportunistic behavior by subnational governments is often corresponded by opportunism on the part of the federal government, whose generosity at bailout time depends on the political alignment of the subnational government in question, or on the exchange of bailouts for favorable votes on salient national issues at the time.

Another example of non-cooperative behavior -- described in Dillinger, Perry and Webb (2001), with reference to Brazil and Argentina – affects the quality of the tax system. Since tax-sharing agreements in many countries require federal and state governments to share the most efficient taxes, these agreements create a systemic incentive to increase inefficient taxes. For that reason, both Brazil and Argentina ended up with excessive social security taxes, and other inefficient taxes on transactions such as taxes on checks.[27]

These examples reflect the *transactional* problems underlying intergovernmental relations. If there were no transaction costs in these intergovernmental dealings, more efficient policy adjustments could be achieved, via adequate intergovernmental compensations. As some readers might have noticed, this is precisely the style of reasoning of transaction cost economics, applied here to *political* transactions.[28] This approach is also useful to understand many of the *rigidities* built into federal fiscal arrangements, precisely to protect from the type of opportunistic actions described above. Very salient examples are the revenue guarantees given by the federal government of Argentina to the provinces in the 1999 and 2000 fiscal pacts. This guarantee led to very costly negotiations during the 2001 crisis, contributing to put at risk the overall sustainability of the national macroeconomic stance, which eventually collapsed in December of 2001. (See also González, Rosenblath and Webb, 2002).

Notice that these rigidities share some similarities with rules narrowly defined. Such rigidities can be understood on the basis of a framework developed in Sanguinetti et al (2001). One of the main results of that framework can be summarized with the following figure.

Figure 1: Outcomes of intertemporal policy game



The figure indicates that when the determinants of cooperation (the discount factor in the explicit model) are such that intertemporal cooperation is possible, optimal policies will obtain. These policies will not be subject to the opportunistic behavior of the different players. Instead, they will be flexible enough to accommodate changing economic circumstances. If, on the other hand, the determinants of cooperation are such that intertemporal cooperation is not feasible, then two things might happen. Either outcomes will be subject to the opportunism of those players with the capacity to move at any particular node, or the players will impose rigid rules to prevent opportunistic behavior. Either of these regimes delivers lower welfare than the one obtained in the northern region of the diagram. This is an important point to bear in mind, since later we will argue that the "rules" approach implies moving east-ward in the diagram, while our approach calls for moving north in the diagram.[29]

7. The determinants of cooperation

All these suboptimal actions are the reflection of non-cooperative behavior by subnational and national authorities. The deeper question, then, is what determines the degree of cooperation in intergovernmental relations. In figure 1, such elements are summarized in a discount factor. More generally, whether cooperation obtains, depends on the factors that affect the payoffs in the stage game (the game at each point in time), and on the factors that affect the intertemporal properties of the game.[30] The set of determinants of cooperation includes both variables pertaining to the fiscal system, as well as variables pertaining to the political system broadly defined. (The partition is arbitrary, since there are features - such as the nature of intergovernmental institutions - that are both fiscal and political).

Before referring to fiscal and political variables specifically, let us reproduce a more abstract listing of variables affecting the likelihood of cooperation in these types of games (from Spiller and Tommasi, 2001):

- *Payoffs of the stage game:* mostly related to characteristics of the fiscal system (see below).
- *Number of political actors with power over a given decision:* the larger the number of players, the smaller the set of other parameters for which cooperation obtains.
- *Length of the horizons / patience of key political actors:* the likelihood of cooperation increases with patience.
- *Intertemporal linkages among key political actors:* the intertemporal pattern of interactions among specific individuals in formal political positions (legislators, governors, bureaucrats) matters for developing cooperative outcomes.
- *Characteristics of the arenas where key political actors undertake their exchanges:* the complex intertemporal exchanges required for the implementation of effective public policies could be facilitated by the existence of institutionalized exchange arenas.[31]
- *Timing and observability of moves:* cooperation is harder to sustain if there is plenty of room for unilateral moves which are hard to observe or hard to verify. This relates to an important point about transparency emphasized in the literature on fiscal rules,[32] and more specifically to bailout channels available. In our application to the Argentine case we will refer to the national executive's discretion in the geographical allocation of national spending.
- *Availability of enforcement technologies:* needless to say, the availability of enforcement technologies facilitates cooperation. Such technologies might include the Courts, a professional and independent bureaucracy, or the role of international organizations. The potential role of international organizations as enforcers of domestic agreements is an issue that requires more detailed analysis than the brief mention that we provide here. Latin American countries would benefit from having someone play the role that the European Commission plays for countries of the European Union.[33]

Coming back to fiscal and political (as opposed to abstract theoretic) variables, key variables of the ***fiscal system*** that will affect the likelihood of cooperation, mostly through their effect on stage-payoffs, include:[34]

- the allocation of tax and spending responsibilities among governments
- underlying heterogeneities in tax capacities and in fiscal needs of subnational units
- the degree of vertical fiscal imbalance
- the features of the intergovernmental transfer system.

The vertical structure of the fiscal system is a crucial determinant affecting the payoffs from cooperation.[35] As Eichengreen and von Hagen have emphasized in a series of papers (1996, 2000), non-cooperative subnational fiscal behavior is more likely, the larger the vertical fiscal imbalance (the smaller the capacity of the subnational government to react by its own means in case of fiscal stress.)[36]

Key ***political variables*** are those that impinge upon the qualities of the arenas of intergovernmental decision making in fostering cooperation. Roughly speaking there are two (interrelated) arenas: one is intergovernmental relations per se (such as the Premier's Conference in Australia) the other is the very structure of the federal government. We stress the latter in the next section, in which we also explore more generally the types of political variables that correspond to the abstract listing above.

8. The central government is not a unified benevolent planner

Many discussions of fiscal rules for subnational governments take the implicit view that the central government is a unified and benevolent actor, whose only flaws might arise from time-consistency problems.[37] We believe that such a view is an incorrect one. A benevolent and unified central government (vis a vis the intergovernmental fiscal game) cannot be assumed as the general case, but only as a particular case which might be (approximately) true under some conditions.

More generally, the central government is a political arena with particular selection rules in which the representation of subnational interests interacts with some "purely national" interests. The purely national interests, in turn, include:

- on the positive side: the more encompassing national interest due to the broader electoral base of the president;[38] and
- on the possibly negative side: the "spurious" national political interests – national officials want to be given the credit for things such as distributing welfare programs, and want to avoid the blame for things such as raising taxes or cutting teachers' wages.[39]

The exact incentives of subnational and "purely national" actors, as well as the exact rules of the game they play, will depend on the details of political institutions. These include:

- electoral mechanisms for different offices
- legislative structure (number of chambers, etc.)
- legislative decision-making rules (including the legislative prerogatives of the executive; Carey and Shugart, 1998).
- the role of Courts[40]
- the underlying distribution of economic, social and ethnic cleavages, as well as their mapping to political geography.

At one extreme, one can find cases where the central government is totally free from "the infiltration of subnational interests."[41] More generally, one needs to identify the configuration of "national" political institutions that are more or less prone to fall into the politically motivated bailouts that distort incentives in decentralized fiscal structures.

As stated in the previous section, one needs to look also into the arenas other than the internal structure of the federal government through which intergovernmental relations take place, and to the interaction between these two spheres. Hoping that by now the reader will recognize the importance of "political detail" to explain fiscal outcomes in federal contexts, for concreteness we devote the next section to illustrate these interactions for the case of Argentina.

9. The evolution of institutions, politics and fiscal outcomes in the Argentine case

Argentina is a country in which provinces have strong constitutional rights. Expenditure is fairly decentralized and tax collection fairly centralized, leading to almost 65% of provincial spending financed out of a common pool of taxes. There is wide variation around that average, with 10 out of 23 provinces financing less than 20% of their spending with own revenues. The main channel to adjust to this vertical fiscal imbalance is the Federal Tax-Sharing agreement, a convoluted method that is bargained over and over and is at the heart of Argentina's problems. Sanguinetti et al (2001) provide more details, and also summarize a number of deficiencies of fiscal federalism in Argentina which have been identified in the literature:

- high deficits of sub-national governments
- increasing indebtedness of sub-national governments
- procyclical finances of sub-national governments
- bailouts
- inefficient local taxes
- poor local tax collection
- poor national tax collection
- inefficiencies in the fiscal mix
- inefficiencies in the provision of local public goods

Those features, in turn, are the outcome of non-cooperative play in the federal fiscal game. The non-cooperativeness of fiscal behavior in Argentina could be explained by mapping the abstract elements identified in Section 7 into the historical and present characteristics of Argentine federal and political institutions.

The environment for intergovernmental transactions has not been the most appropriate; the allocation of policy jurisdictions has evolved in a peculiar way throughout the twentieth century, while intergovernmental agreements have not been backed up by the institutions necessary for overseeing their enforcement. Intergovernmental competition and conflict have prevailed over cooperation in areas of concurrent jurisdiction. Given Argentina's political and economic instability since the 1930's (including numerous military "interruptions" and high and volatile inflation), political actors have tended to adopt a particularly myopic perspective. National and subnational governments have not invested in building intergovernmental institutions, and they have attempted to protect their quite vulnerable property rights instead of collaborating with one another.

This historical legacy has deeply affected the revenue-sharing system. Changes in bargaining power of collections of political actors have reflected in shifts in the system of transfers. For instance, when power was concentrated in the national government (mostly during military regimes) the changes shifted the distribution of taxes towards retention at the national level. Conversely, with the return to democracy, the once-again elected governors managed to get a larger share transferred to the provinces. These modifications in favor of the subnational governments as a whole were, in general, accompanied by an element of interprovincial redistribution, depending on coalitional politics at the time (Saiegh and Tommasi, 1999).

There have been mutually reinforcing interactions arising from intergovernmental relations and the country's overall incapacity to implement efficient intertemporal exchanges (Spiller and Tommasi, 2001). The combination of lack of legislative incentives, the disproportionate power held by provincial leaders in national policymaking, and the ability of the national executive to act opportunistically has deeply affected intergovernmental relations.

Argentina is a case where "executive federalism" (Watts, 1999) is prevalent, that is, the president and governors play a predominant role in intergovernmental relations. Yet, deals struck between national and subnational executives can easily be altered at either the legislative or the implementation stage.[42] This is compounded by the fact that the governors' influence in national policymaking gives them enough political clout to be able to secure occasional legislative benefits at the expense of the national executive or other subnational units. On the other hand, during the implementation stage, the president can easily unravel agreements reached or ratified in the national legislature.[43] Thus, these agreements are often reached outside the national legislature, and they tend to incorporate very rigid rules in order to prevent their modification.

Several features of the Argentine political system explain why the environment is not adequate for efficient political transactions among jurisdictions.

Weak national legislators, powerful governors: The national legislature could potentially serve to foster beneficial intercommunity agreements. The U.S. Congress is depicted as an institution where intertemporal political agreements are secured.[44] As Weingast and Marshall note, its internal organization and institutionalization facilitate the achievement of complex intertemporal agreements among its members. Jones et al (2001) show that this is not the case for the Argentine Congress. Legislators are short-lived, and they do not have the incentives to develop strong congressional institutions.

Jones et al (2001b) trace those incentives to the electoral system, in particular to the methods of intra-party candidate selection, and to the incentives they generate for local party leaders and for individual politicians. To return to their seats, legislators first need to be put back in the provincially arranged lists. Most legislators are not put back on the lists, due to the incentives of local party leaders (which often coincide with governors), who are in charge of drawing the lists. As Argentina is fairly decentralized on the spending side, and as

Congress is not a key policymaking arena, oftentimes politicians are happy to be moved away from Congress towards more lucrative positions in provincial governments.

As a result of this, Argentine governors have a disproportionate amount of power in national politics, and they are continuously involved in national policymaking. The frequency with which the Argentine president meets with provincial governors to discuss and negotiate national policies may seem particularly odd for an U.S. observer.[45] This impinges upon intergovernmental relations, by inducing a peculiar criss-crossing of national and "properly federal" issues.

A weak "horizontal" separation of powers The last point indicates that congressional representatives are not key actors in the Argentine polity, neither for intergovernmental relations, nor for anything else, and that sub-national leaders exert disproportionate influence through Congress. Under those circumstances, one would want to focus on the arenas in which those relevant long-term players undertake their interactions. In turns out that, not only are congressmen not the key players, but neither is the National Congress the arena used by the relevant players to hammer their agreements, since the weak "horizontal" separation of powers does not prevent the national government from reneging on legislative agreements.[46]

The weak horizontal separation of powers is due in part to some constitutional capacities and practices, to budget practices, to the (historical) political alignment of Supreme Courts to the President, and to the lack of a strong, independent and professional bureaucracy.[47] All of these features contribute to the poor institutional environment for the enforcement of interjurisdictional deals.

The "legislative" practices of the presidency have evolved partly out of the history of political instability, which has tended to focalize in the Executive processes that, in a more stable environment, would have drifted naturally towards the legislature. They are also due, in part, to some explicit constitutional capacities and to some constitutional lacunae and their interpretation. Regarding the budget, during large chunks of Argentine history, Congress has not approved the Budget sent by the Executive in time, in practice leaving the latter ample discretion. The budget process is conducted mostly in the Cabinet, which is the entry point for most pressure-group activity. It is not uncommon for provincial governors to visit the Minister of the Economy, his secretaries, or other ministers, trying to get favorable treatment for their provinces in National allocations and decisions. Furthermore, there is a substantial amount of discretion in the ex post geographical allocation of federal money. (See Spiller and Tommasi, 2001, and references therein).

This Executive bias is further aggravated by another institutional factor. Argentina's political instability during the 20th century undermined the ability of the judiciary to place effective restrains on executive action (Iaryczower, Spiller and Tommasi, 2001).[48] Hence, since 1983 there were many instances where the executive made unilateral moves on matters previously discussed by Congress without being challenged by the courts (i.e. "regulating" and altering the content of bills passed by the legislature through its decree authority).

Hence, agreements reached or ratified in a particular way in the national legislature can be easily unraveled at the execution stage (i.e., through changes in the composition of the national budget). This, of course, limits the incentives to undertake such deals in the first place.

Weakly institutionalized intergovernmental relations and its consequences In the previous subsection, we argued that neither are National legislators the key long-term players in intergovernmental relations, nor is the National Congress the arena in which the real players (the Governors and the National executive) strike the key bargains. This begs the question of which is, then, the arena for intergovernmental agreements, and which are the enforcement properties of that arena. The truth is that intergovernmental relations in

Argentina have been carried out in very different ways, mostly on an ad-hoc basis and in multiple and superimposed political arenas.

Informal mechanisms have dominated, but formal intergovernmental agreements have also been used. A good example of the latter are the "Federal Fiscal Pacts": intergovernmental compacts hammered out by the national and sub-national government executives and ratified by the legislatures of the constituent units (Fiscal Pacts of 1992 and 1993) and the national legislature (Fiscal Pacts of 1999 and 2000). Also in 1994, important aspects related to fiscal intergovernmental relations were included in Argentina's revised constitution, establishing that a new coparticipation law, on the basis of agreements between the central government and the provinces, had to be drafted before 1996. (The law has not been passed yet).

However, besides these formal instances of negotiation, intergovernmental relations have been predominantly conducted in a much more informal way. For example, in the period 1983-1988 (in between Coparticipation laws), to decide the allocation of transfers to the provinces, each sub-national government negotiated bilateral agreements with the federal government (Saiegh and Tommasi 1999). Since then, many other negotiations and changes to the coparticipation scheme took place in the executive quarters, or in ad-hoc meetings of the President with Governors. This reflects the separate political power of the national executive and the provinces and the lack of institutionalization of the mechanisms to carry out these agreements.

This lack of institutionalization in the mechanisms through which intergovernmental relations have been handled had serious effects on the nature of policy-making in the federal fiscal realm. On the one hand, these arenas did not provide enough institutional "stickiness", making changes in the allocation of policy jurisdictions and in the allocation of federal funds too volatile -- and more generally making the enforcement of agreements very deficient. On the other hand, in order to avoid such uncertainty and opportunism, allocations have at times been defined through very rigid mechanisms, that oftentimes later become a straightjacket and the source of further difficulties.

10. A comprehensive approach to rules for subnational governments

In this section we illustrate, with the Argentine case, the broader approach that we suggest towards institutional reforms to improve fiscal performance of subnational (and national!) governments. It is important to notice that, even though we are convinced about the usefulness of our overall approach, its detailed implementation is a complex matter, and many of the details of what we suggest might be improved upon.

One of the things to stress is that the recipes for addressing federal fiscal problems are likely to be country specific and even context specific within a given country. The historical and recent evolution of underlying political exchanges have to be taken seriously into consideration, since they are the foundations from which reforms must build upon. In the Argentine case, there have been successive rounds of fiscal pacts in 1992, 1993, the 1994 Constitution, 1999, and 2000, as well as continuous negotiations and modifications in-between pacts. These pacts have attempted to address the underlying problems, the main concerns of the times, as well as the worries of the different parties against the opportunism of others. The main problem has been the inability to enforce those pacts.[49] One of the most salient failures has been the repeated attempts to replace the very inefficient provincial turnover sales tax. Replacing it would have required actions that would have left the complying province vulnerable to future opportunism by the national government and by non-complying provinces. The institutional structure of fiscal federalism in Argentina was unable to enforce that efficiency-enhancing intertemporal agreement.

There is almost absolute consensus among observers and political actors that Argentina should undertake various reforms to its federal fiscal system. Major lending organizations and other specialists have produced many reform proposals seeking to correct several of the deficiencies we have described. Some of these proposals even include fiscal rules narrowly defined. However, these "recipes for change" are not followed. As we argued, even if there are efficiency gains, transactional problems (specially the enforceability of those transactions) make the reforms difficult to enact.

We believe, therefore, that a feasible and sustainable reform strategy must focus at a higher level of institutional reform. It is necessary to reform the structure and process of intergovernmental decision-making. In the spirit of Figure 1, we should find a way of moving upward rather than side-ways on the diagram. Present-day conventional wisdom among economists is to argue in favor of rules – i.e., moving from political opportunism to rigid rules, taking as given the underlying political incentives. We argue instead in favor of changing the political governance structure, if possible.

In the specific case of Argentina, there are several features that lead to a bad transactions environment for fiscal federalism. According to our approach (see also Spiller and Tommasi 2001), public policies are the outcome of a game that has as rules the overall set of incentives and constraints faced by political actors, in multiple arenas. Hence, in order to improve macro-fiscal outcomes, the workings of fiscal federalism, as well as the general process of policy-making in Argentina, reforms are necessary in several fronts.

Having diagnosed the determinants of poor subnational fiscal behavior:

- large vertical fiscal imbalances
- a tax-sharing regime with little incentives to raise taxes locally
- several bail-out channels
- several political motives why the federal government might be willing to bail out provinces
- lack of enforcement of intergovernmental agreements,

we suggest a general strategy, which should include:[50]

1. reforms to the electoral mechanisms to lower the dependency of national legislators on local party elites (as the analysis of the previous section suggests, the weakness of national legislators is one key aspect of the poor transactions environment)
2. reforms to the instruments of legislative interaction between the President and Congress (this could improve the possibility of enforcing, and hence of achieving in the first place, more efficient agreements)
3. reforms to the budget process to curtail some Executive discretion (as it seems to have been instrumented in the Mexican case), limiting the ability to perform bailouts.
4. institutional reforms to intergovernmental relations (given that these federal transactions will inevitably involve "executive federalism" among the national government and provincial authorities, we want to improve the institutional environment for those transactions).
5. reforms to the tax-sharing agreement to improve the Wicksellian connection between the taxes raised and the public goods consumed within each jurisdiction
6. macro – fiscal rules to guide through this transition towards a more cooperative (and more sustainable) fiscal stance.[51]

Looking into the political feasibility of reforms: (1) is very hard, so we can discard it for now; [52] there was window of opportunity for (2) at the beginning of the De la Rua government in 1999, but (as many other things) it was lost. Reforms 3 to 6 present a compact package, all of which could be undertaken under the roof of the still unfulfilled 1994 constitutional mandate.

The Constitution amended in 1994, calls for a new Coparticipation Law (article 75, 2nd paragraph). It explicitly includes several aspects that the new law should take into consideration. Those conditions can be understood in light of the argument developed in this paper, as constraints that the actors try to impose on each other to prevent from opportunism, at the same time that they attempt to enforce some efficient reforms.[53] In particular, the Constitution mandates the creation of a Federal Fiscal Institution ("*Órgano Fiscal Federal*") to instrument that law.

Given the problems we have emphasized in the previous section, we believe that this mandate provides a good opportunity to redefine the governance structure of federal fiscal relations. This constitutionally mandated Federal Fiscal Institution could function as a formal arena in which issues of fiscal federalism would be decided. Such institution, thus, can provide intergovernmental relations with the necessary flexibility to adjust to changing circumstances. A Federal Fiscal Law is an incomplete contract reflecting the political agreement at the time of its creation. If the Law were to specify a set of mechanisms to distribute taxes (i.e., a "rule") it will still always require adjustments to many changing circumstances, as the history of fiscal federalism in Argentina shows (Saiegh and Tommasi 2000b). If no explicit change is made to the federal governance structure, the contract will be "completed" under the "default" extant governance structure. But we have argued that the features of the extant governance structure described above, are precisely the underlying determinants of the many economic inefficiencies observed today. That is why this higher-level institutional change is required, so as to "complete" the contract with better ex-post decision procedures.[54]

The purpose of the Federal Fiscal Institution, hence, should be to provide the proper channel for intergovernmental dealings, away from the national legislature, from informal and unenforceable executive-executive deals, and especially from some excessive ex-post discretion in the hands of the National Executive.[55] This will help to minimize the crisscrossing patterns between national and regional policies described above, and will also help the actors to make decisions in a foreseeable setting. This should allow them to handle intergovernmental relations more effectively and to be able to adjust policy decisions to changing circumstances.[56]

We think that changes in the federal decision making procedure, coupled with changes in the transfer system that substantially increase the Wicksellian connection will constitute a profound redefinition of fiscal federalism in Argentina. Provinces will assume greater *individual* responsibilities, and will acquire more *collective* power in federal decisions. It is only in the context of this broader reform scheme, that it makes sense to discuss the (very important) details of the fiscal rules that are necessary.

11. Conclusions

We started working on this paper with the idea of identifying the circumstances in which fiscal rules might be called for, and of looking into the details of the design of fiscal rules. Yet, our initial approach to the theoretical foundations of fiscal rules, as well as the observation of some past Latin American experiences, led us to a more skeptical view, which called for some broader analysis before getting into the practical details of rules. The paper has attempted to provide that first step.

We argue that observed properties of policies are the outcome of a political game in which relevant actors make decisions at each point in time and engage in intertemporal exchanges. The quality of the resulting policies for social welfare will depend on the extent to which the rules of the political game facilitate cooperative (efficient) exchanges.

In order to improve fiscal performance in a sustainable and efficient manner, one needs to focus on the determinants of fiscal behavior. In each country, the main deficiencies need to be identified, together with a complete diagnostic of their fiscal and political determinants. On the basis of such diagnostic, one should attempt to design interventions at the deepest level possible. In that context, fiscal rules can be a useful instrument to accompany that transition path. On the other hand, an excessive focus on rules might lead to a risky sense of security when one sees such rules in place.

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[1] See Alesina and Perotti (1995) for a survey of political determinants of fiscal problems.
[2] For the purpose of our argument "federal" means that subnational units are of sufficient fiscal and political importance. This definition is satisfied by all formally federal countries and by some formally "unitary" countries.
[3] Due to constraints of time and space, and because this third option is not immediately an impact of fiscal rules on fiscal outcomes, in this paper we focus mainly on the first two cases.
[4] Peltzman (1992) shows that voters in US states tend to reward fiscal prudence.
[5] To use the words of Poterba and von Hagen (1999), also cited by Schick (2002), "budget rules are not randomly assigned to nations ... but rather are the product of deliberate choice by voters and their elected representatives. This makes it difficult to evaluate observed correlations between budget rules and budget outcomes; perhaps the observed relationships are simply due to a correlation between a third factor, voter preferences, and the observed manifestations of voter preferences."
[6] We develop the latter point below.
[7] Another clear case of non-compliance, not analyzed in this paper, is the Peruvian Prudence and Transparency Law of 1999.
[8] The exclusion of limits on subnational governments was a fundamental weakness of the rule. In a country with a federal fiscal system as the one in Argentina, fiscal rules would only make sense if they encompass all relevant governmental levels. Otherwise, they would simply be non-binding. It would be like telling a person that they can only spend $500 a month using their left hand.
[9] See, for instance, Kopits, Jimenez and Manoel (2000).
[10] Values are estimated, because the Law establishes nominal ceilings for the deficit, not for the deficit as percentage of GDP.
[11] See Dillinger, Perry and Webb (2001).
[12] This constitutes an example of the type of inefficiency induced by inadequate transactional environments that we emphasize later in the paper.
[13] For further details, see Dillinger, Perry and Webb (2001).
[14] For further details see Oliva (2001).
[15] And/or to solve time-consistency problems, the original problem analyzed in this literature.
[16] In these cases, the central government has to be counted, to some extent, just as one more player. (More on this later).
[17] It is also important to be precise about the temporality or intertemporalitiy of rules vis a vis "discretionary" action at each point in time. It is clear that rules (if enforceable) are crucial in example (c), where the enacting agents will not be around at later (discretionary) decision points. In case (a), on the other hand, it is not immediately clear why a powerful center needs to define *ex ante* rules instead of dictating its preferred discretionary outcome at each point in time.
[18] For brevity in this section we refer to a game across subnational governments; the national actor and vertical considerations are included later in the paper.
[19] One would have to explore in more detail why that ink and paper are wasted if everybody knows that behavior will not be altered. This would require reaching into a more detailed micro level of analysis, with reference to near-rationality, rules that might be relevant in some states of the world but not in others, embezzling, etc.
[20] The rule might have value as a signalling device to external creditors, for instance, but it is redundant in the sense that it does not alter behavior related to fiscal outcomes. The value of rules as signalling devices regarding the outcome of complex games that are costly to monitor for outsiders is an interesting topic of research which we do not fully develop in this paper. However, if the signalling device helps to use financial markets as an external enforcer of the rule, then one could argue that the rule is valuable not only as a signalling device, but rather as a way to improve fiscal outcomes, even in cases in which the political equilibrium absent the rule leads to inefficient outcomes. This reasoning, could provide theoretical underpinnings to research such as Ter-Minassian and Craig (1997), who study the different ways – including rules-based approaches – that countries attempt to solve the problem of credit market externalities in subnational debt.
[21] Kopits (2001) describes US fiscal and monetary discipline in recent years as an example of successful discretionary policymaking. This could be viewed as corresponding with the game in case 1 above.
[22] This latter case has been analyzed in Velasco (1999) and Mondino, Sturzenegger and Tommasi (1996). See also Aizenman (1998) and Tornell (1995).
[23] In the case of Argentina, for instance, it would be impossible to analyze the performance of social sector policies without reference at the federal fiscal (and political) game. See for instance Fiszbein and Tommasi (2001).
[24] As a first approximation we are treating the two problems as orthogonal, although we will refer to some interactions occassionally.
[25] For a classic survey, see Alesina and Perotti (1995), as well as Drazen (2002).
[26] This is, of course, a very common occurrence throughout Latin America. See Kopits et al (2000) for Argentina and Brazil, Nicolini et al (2000) for Argentina, Dillinger (1997) and Bevilaqua (2000) for Brazil, Hernández Trillo et al (2000) for Mexico, Echavarría et al (2000) for Colombia, Gamboa (1997) for a comparison of the U.S., Brazil and Mexico. Additionally, Fernández-Arias et al (2000) report bailouts in Costa Rica, Ecuador, Honduras, and Uruguay.

[27] The list of examples of inefficiencies induced by non-cooperation in federal fiscal games is quite long, including procyclical subnational fiscal behavior, excessive public employment, inability to reform an inefficient tax system, and underinvestment in the capacity to raise taxes efficiently – see for instance Sanguinetti et al (2001) and Saiegh and Tommasi (2000). Haggard and Webb (2001) provide an interesting example of induced distortions (gaps and inequities) in the provision of social services in Brazil: "Having failed to decentralize federal functions formally, the federal government had to cut its own spending, especially in the stabilization of 1994, and started devolving the responsibility for certain expenditures via ad hoc agreements with individual subnational governments. (...) The federal government also managed to shift some health care costs onto subnational governments by reducing the amount of federal compensation payments." (Haggard and Webb, 2001, p. 23).

[28] This way of reasoning has been dubbed *transaction cost politics* by North (1990) and Dixit (1996). A survey is provided in Arias and Caballero (2001).

[29] Furthermore, the model that leads to figure 1 assumes the availability of an enforcement technology for rigid rules. If such a technology is not available, even enforcing rules would require some form of cooperation, along the lines developed in the rest of the text.

[30] More properly, if we look at the overall intertemporal game expressed in normal form, the possibility of cooperation depends on the elements of the description of the game (payoffs of the stage game, timing of moves, information structure, etc.)

[31] The landmark in the literature is the depiction of the U.S. Congress by Weingast and Marshall (1988).

[32] See for instance Kopits and Craig (1998).

[33] It is worth noting that in the European case, the "exogenous enforcement" provided by the community strengthens the hand of those domestic actors more interested in fiscal conservatism. It turns out that, depending on the nature of federal arrangements, there are cases in which all "internal" actors are in favor of fiscal largesse. The latter is indeed the case in many Latin America federations -- see Jones, Sanguinetti and Tommasi (2000) for evidence on that regard.

[34] It is easy to see that, in this dynamic system, several of these features of the fiscal system are outcomes of previous stages of the game (of history). Nonetheless, they are given at any point in time, affecting the likelihood of cooperation from that moment into the future. These fiscal variables play a similar role than the one played by market variables such as price elasticities, observability of contracts, and the like in dynamic oligopoly games – see for instance Green and Porter (1984).

[35] For brevity in the text we refer to "cooperation" and "lack thereof" as dichotomous alternatives, even though actual fiscal games tend to be more continous.

[36] See also Rodden (1999). Rodden and Wibbels (2001) provide a number of additional fiscal/political linkages between federalism and macroeconomic management. Some of their hypotheses include: "a federation's capacity to control deficits and inflation decreases with the share of total provincial expenditure carried out by the largest province," and "a federation's capacity to control deficits and inflation decreases as the number of states increases."

[37] That view is more vivid in reference to the so-called "administrative controls" of subnational indebtness (see for instance Ter-Minassian and Craig, 1997).

[38] For brevity and concreteness we focus the wording on presidential systems, the most prevalent case in Latin America, although the logic is also valid, with proper adjustment, for parliamentary systems.

[39] This is one of the points in which we depart from the assumption of orthogonality between problems of intergovernmental cooperation and principal-agent problems between citizens and politicians.

[40] Related to the main issue of this paper, Bohn and Inman (1996), find that balance-budget rules in the US states are more effective when they are enforced by directly-elected (as opposed to government-appointed) supreme courts.

[41] We thought that, among federations / decentralized unions, China would constitute an example of "independence" of the central government. Yet, we came across the following statement by Shah (1998, p. 87): "regional communist party bosses-governors exercise a moderating influence on an otherwise monolithic state council at the federal level."

[42] As an example relevant for the central issue of the paper, a fiscal rule agreed upon by national and subnational executives, might not be implemented because the required subnational legislation is not forthcoming.

[43] This is achieved via executive decree powers, ample discretion in the implementation of the budget, etc.

[44] Weingast and Marshall (1988), Cox and McCubbins (1993), Krehbiel (1991).

[45] This fact is particularly evident in the many fiscal pacts signed (1990, 1992, 1993, 1999, 2000), in which, among other things, provincial governors promised to influence national legislators from their provinces (and their party) to vote for this or that law which at the time was important to the national executive.

[46] In principle, the national legislature could play a key role in keeping a balance in the intergovernmental relations, with the national legislators being the pawns of their masters' chess game.

[47] See Spiller and Tommasi (2001) for more details and references on each of these points.

[48] Similarly, Bambaci, Spiller and Tommasi (2001) explain the way in which the Argentine bureaucracy operates, preventing it from serving as an independent mechanism for enforcing legislative agreements.

[49] It is worth noting that sometimes the pacts included some forms of fiscal rules. Also it is worth noting that gradually the pacts have been incorporating broader elements, such as attempting to delineate the components that the future Tax-Sharing Agreement should have, incorporating procedural restrictions on the national budget, etc.

[50] See Tommasi and Spiller (2000) and Iaryczower, Sanguinetti and Tommasi (2000). As stated before, several of the details of the proposal are subject to improvement, and these things need periodic readjustment in light of ongoing political moments.

[51] Those rules include a moving average mechanism to smooth out and to make more foreseable the flow of tax revenue received by the provinces. (See González, Rosenblatt and Webb, 2002).

[52] Although the terrible crisis that Argentina is living today (early 2002) might open the door for more ambitious political reforms. Unfortunately, it is not obvious at this point that the window of opportunity will lead to reforms in the right direction.

[53] The Constitution requires that the new law be a "ley Convenio", i.e., a law that has to be agreed by the national and all provincial executives, and then ratified by the national and provincial legislators. This is a way of insuring "unanimity", so that no one is harmed by the reform. Even though this represents an obstacle at first, it is important for the stability and credibility of the norms, as stressed by Kopits (2001) in his discussion of the statutory level of fiscal rules (see also Drazen 2002).

[54] See Saiegh and Tommasi (2000) for more detailed references to the incomplete contracts literature supporting this reasoning.

[55] It also attempts to move from the bilateral hub-spoke relationships that the federal government currently has with individual provinces towards more open multilateral arenas, as has been attempted in the Spanish case (Onrubia and Revenga, 2002).

[56] The details of the structure proposed for this Organo Fiscal Federal are in Iaryczower, Sanguinetti and Tommasi (2000). It includes an independent technical agency (along the lines suggested in Eichengreen, Hausmann and von Hagen, 1998), a definition of voting rights and voting rules among jursidictions, as well as the procedures for the interactions between the technical agency and the political body.