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Fiscal constitutions: An empirical assessment

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By Hansjörg Blöchliger and Jaroslaw Kantorowicz

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Abstract/Résumé

Fiscal constitutions: An empirical assessment

Fiscal constitutions comprise the set of rules and frameworks guiding fiscal policy that are enshrined in a country's fundamental laws. This paper compares the fiscal constitutions of 15 federal countries by empirically assessing five building blocks: 1) the power of sub-national governments to conduct their own fiscal policy; 2) the degree to which sub-national governments are held responsible for fiscal policy outcomes; 3) the extent to which sub-national governments can shape fiscal policy of the federal level; 4) the strength of intergovernmental budget rules; and 5) the stability of fiscal policy arrangements. The results can be summarised as follows: Countries can be ranked along a single indicator, namely the degree of *constitutionally guaranteed decentralisation*. They can also be ranked along an indicator of *institutional coherence* which measures the extent to which building blocks "fit together". From 1917 to 2013, fiscal autonomy and responsibility declined – except in the 80s and 90s of the 20th century – while co-determination and budget frameworks were strengthened, and institutional coherence rose. Simple correlations suggest that the extent of decentralisation hardly affects fiscal outcomes such as deficits, debt or vulnerability to crises, while institutional coherence (or incoherence for that purpose) does.

JEL codes: E62; H10; H70

Keywords: Fiscal constitutions, intergovernmental fiscal frameworks, constitutional fiscal policy, fiscal federalism

Une évaluation empirique des constitutions budgétaires

Une constitution budgétaire est composée d'un ensemble de règles et de dispositions d'orientation de la politique budgétaire, qui sont inscrites dans la loi fondamentale d'un pays. Ce document compare la constitution budgétaire de 15 pays à structure fédérale en procédant à une évaluation empirique de cinq de leurs éléments constitutifs : 1) le pouvoir conféré aux administrations infranationales pour conduire leur propre politique budgétaire ; 2) le degré de responsabilité des administrations infranationales vis-à-vis des résultats de leur politique budgétaire ; 3) la marge de manœuvre des administrations infranationales dans l'élaboration de la politique budgétaire de l'État fédéral ; 4) la solidité de règles budgétaires inter-administrations, et 5) la stabilité des dispositions de politique budgétaire. Les résultats peuvent se résumer ainsi : les pays peuvent être classés à l'aune d'un indicateur unique, en l'espèce le degré de *décentralisation constitutionnelle.* Ils peuvent également être classés en fonction d'un indicateur de *cohérence institutionnelle*, qui mesure le degré de cohésion entre les différents éléments constitutifs. Le degré d'autonomie et de responsabilité sur les questions budgétaires a reculé de 1917 à 2013 – sauf dans les années 80 et 90 du siècle dernier – alors que les mécanismes de codécision et les cadres budgétaires se renforçaient et que la cohérence institutionnelle gagnait du terrain. Des corrélations simples laissent à penser que le degré de décentralisation joue à peine sur la situation budgétaire et notamment sur les déficits, l'endettement ou la vulnérabilité aux crises, alors que la cohérence institutionnelle (ou l'incohérence, en l'espèce) joue un rôle.

Classification JEL : E62 ; H10 ; H70

Mots-clés : constitution budgétaire, cadre budgétaire interadministrations, politique budgétaire constitutionnelle, fédéralisme budgétaire

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FISCAL CONSTITUTIONS: AN EMPIRICAL ASSESSMENT

By Hansjörg Blöchliger and Jaroslaw Kantorowicz[1]

Key messages

- Fiscal constitutions differ in the degree of *constitutionally guaranteed decentralisation*. More specifically, two types of fiscal constitutions can be distinguished: *decentralised* versus *integrated.*
- In *decentralised* federations states enjoy high tax and spending autonomy; face high responsibility (constraints) for their own fiscal policy, have little co-determination power at the federal level; and intergovernmental budget rules and frameworks are relatively weak. The opposite is the case in *integrated* federations.
- A cluster analysis suggests that the United States, Canada, Switzerland, Australia, Argentina and Mexico feature *decentralised* fiscal constitutions, while Austria, Belgium, Brazil, Germany, India, Italy, Russia, South Africa and Spain feature *integrated* fiscal constitutions.
- Fiscal constitutions vary in terms of *coherence* (or alignment) of institutional arrangements. Coherent (aligned) fiscal constitutions combine arrangements in a way that "fits well" together. Less coherent fiscal constitutions combine arrangements in a less balanced manner, for instance by combining low tax autonomy with high spending autonomy or low responsibility for fiscal policy with a weak budget framework.
- Reforms of fiscal constitutions usually follow events like economic and fiscal crises, the establishment or fall of authoritarian regimes or separatist threats. Overall, autonomy and responsibility of states declined over the last 100 years, while budget frameworks were strengthened. Also, the coherence of fiscal constitutions increased over the last three decades.
- Very tentative evidence suggests that the *degree* of decentralisation of fiscal constitutions hardly affects economic and fiscal outcomes, but *coherence* of fiscal constitutions does. Over the period 1980-2010, less coherent fiscal constitutions were associated with higher debt and spending growth, and more economic and sovereign debt crises. Moreover, federations with less coherent fiscal constitutions had somewhat lower GDP growth between 1980 and 2010.

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1. The authors are, respectively, Senior Economist at the OECD Economics Department, and candidate in the European Doctorate in Law & Economics when writing the paper. They would like to thank Jamila Botev, Peter Hoeller, Andreas Kappeler, Christian Kastrop, Jean-Luc Schneider, Stefan Voigt, participants of a workshop on "intergovernmental fiscal institutions" held at the OECD in November 2014, members of the research division of the German Ministry of Finance, and delegates of the OECD Fiscal Network for useful comments and suggestions. They also thank Debbie Bloch for statistical assistance and Celia Rutkoski for editorial assistance.

1. Introduction

1. Fiscal constitutions comprise a set of rules and frameworks which are usually enshrined in a country's fundamental laws. Fiscal constitutions guide fiscal policy and hence shape fiscal outcomes. The constitutional set- up of fiscal policy varies strongly across countries, and in the wake of economic and/or fiscal events, many countries amended their constitutions. Different constitutional frameworks and their changes might hence explain differences in fiscal policy outcomes across countries and over time. The variety of fiscal constitutions and the changes they were subject to could help in drawing conclusions as to which frameworks help underpin long-term sustainability, efficiency and equity of fiscal policy. Lastly, knowing how fiscal constitutions function allows developing policy guidance for countries that are in a secular decentralisation process or for supra-national entities such as the European Union.

2. This paper focuses on the fiscal constitutions of *federal* countries, because federal fiscal constitutions are overwhelmingly concerned with the conduct of fiscal policy and the distribution of fiscal power and responsibility *across levels of government*. The fiscal constitutions of 15 federations or quasi-federations are investigated. These are: Argentina, Australia, Austria, Belgium, Brazil, Canada, Germany, India, Italy, Mexico, Russia, South Africa, Spain, Switzerland and the United States. Besides Argentina, all countries are OECD members or key partners. Most of the information used in this paper draws on a questionnaire on federal fiscal constitutions sent to 15 national experts in February 2014. Additional information was extracted from the Comparative Constitutions Project[2] and other sources, such as national legal documents, historical statistical databases, indicator databases, the academic literature and OECD country surveys.

3. The paper is organised as follows. Section 2 provides an overview and definition of the term fiscal constitution. Section 3 discusses the building blocks of fiscal constitutions and assesses them empirically using a common coding framework. Section 4 combines and links the building blocks to characterise fiscal constitutions, i.e. to what extent they are decentralised or integrated. Section 5 traces the development of the fiscal constitutions over time, identifies main trends, and explains the major reforms and their driving forces. Lastly, Section 6 provides basic evidence on the association between constitutional characteristics and fiscal outcomes.

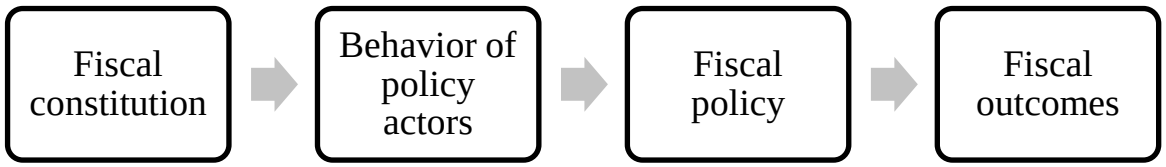
2. Fiscal constitutions: definition and scope

4. Fiscal constitutions contain a country-specific set of fundamental rules and regulations, which guide decision making in the area of fiscal policy. Fiscal constitutions cover constitutional law as well as selected post-constitutional legislation like basic fiscal and financial laws or rulings of the constitutional court. As such, the fiscal constitution encompasses all legislation that is subject to harsher amendment rules – usually qualified majorities – and hence provides a (relatively) stable institutional framework for fiscal policy over time. Fiscal constitutions set the rules of the public finance game, thereby providing a framework for policy makers and driving or discouraging certain policy patterns (Brennan and Buchanan, 1980). By shaping incentives and limiting arbitrariness, the fiscal constitution determines the course of fiscal policy and fiscal outcomes in the long term (Qian and Weingast, 1997). A simplified and somewhat mechanical causal relation from fiscal constitutions to fiscal outcomes is shown in Figure 1.

2. More information on the project can be found at http://comparativeconstitutionsproject.org/ (accessed on 21 April 2014). The authors thank Tom Ginsburg, Zahary Elkins and James Melton for making datasets on historical developments of the constitutions available.

Figure 1. Fiscal constitutions shape fiscal policy

The link from institutions to outcomes



Source: Based on Persson and Tabellini (2007) and Raudla (2010). The figure neglects endogeneity, i.e. the way fiscal outcomes may contribute to shaping fiscal constitutions, or when both fiscal outcomes and fiscal constitutions are simultaneously shaped by other factors.

5. Fiscal constitutions consist of several building blocks, which together shape fiscal outcomes. They comprise rules on taxation and spending, intergovernmental relations, budget rules and frameworks, or the political settings like the division of power between the executive, legislative and judiciary or the role of bicameralism. Different fiscal constitutions are likely to imply different outcomes. There is a rich literature on the relationship between certain elements of the institutional setup of a country and fiscal outcomes (see bibliography). Yet the interaction between building blocks is rarely analysed comprehensively, thereby neglecting that the manner in which various arrangements fit together is crucial for outcomes. Indeed, certain combinations of building blocks might be more conducive to achieving policy objectives such as sustainable fiscal outcomes or crisis prevention (Voigt 2011a, 2011b). For that reasons, much weight is put on analysing how building blocks are interlinked and identifying *coherent* (or *balanced*) fiscal constitutions.

6. This study focuses on the fiscal constitution of *federal countries*, and it does so for two reasons. *First*, federal fiscal constitutions are far more complex than those of unitary countries. In federal countries, a great deal of the fiscal constitution relates to intergovernmental relations, thereby establishing rules on the power-sharing between the federal level and the states.[3] In other words, the fiscal constitution of federal countries is mainly concerned with specifying the conduct of fiscal policy across government levels and the separation of fiscal authority between them. *Second*, federal countries may inspire institutional reforms in emerging "federations", either individual countries that are on a secular path towards decentralisation, or supra-national entities that are about to build their constitutional framework. In both cases, almost any potential fiscal policy question has a "who should do what" or "federal" dimension, and this paper may shed some light on the options for constitutional reform.

3. The building blocks of a fiscal constitution

3.1. Arrangements and their coherence

7. Fiscal constitutions consist of a set of building blocks (or arrangements), and in turn each building block comprises a series of constituting elements (Table 1). Five building blocks are distinguished, which together reflect the institutional background of fiscal policy-making across government levels. A constituting element represents a constitutional rule on a specific item, while the building blocks combine several items. For instance, "tax autonomy" of the states is a constituting element,

3. The term "state" is interchangeably used with the country-specific terms for the intermediate level. In Germany and Austria, a state is a *Land*. *Provinces* are equivalent to the state level in Canada and South Africa. In Belgium, Italy and Spain, the intermediate level is a *region* or *community*, in Switzerland a *canton*, and in Russia *oblast*. Finally, in Australia, Brazil, India, Mexico and the United States, the intermediate level of government is a *state* or *estado*.

while "autonomy" is the building block encompassing tax, spending, borrowing and budgeting autonomy. And while numerical fiscal rules are a single constituting element of the budget framework, the latter also includes procedural rules and the functioning of fiscal councils.

8. Fiscal constitutions, their building blocks and their elements are assessed by means of *institutional indicators*, which together form an indicator tree (Figure 2). Each element of the fiscal constitution is represented by a low-level indicator (LLI). These are then aggregated to intermediate-level indicators (ILIs) reflecting the building blocks. ILIs are again aggregated to form a summary indicator, which reflects the overall characteristics of the fiscal constitution. Indicator values depict whether the fiscal constitution features "more" or "less" of a certain element or building block and range from 0 to 1. A sixth building block measures the "completeness" of the fiscal constitution, i.e. the extent to which fiscal policy is bound by constitutional rules at all (Box 1). Finally, central bank independence and the political system are briefly assessed, which helps, among others, comparing institutions of fiscal policy against those of monetary policy.

9. Particular attention is given to *coherence* (or *alignment*) of the fiscal constitution. A coherent fiscal constitution combines institutional arrangements in a balanced manner. In a coherent fiscal arrangement indicator values across elements (LLIs) or building blocks (ILIs) are similar. For instance, a coherent fiscal constitution provides similar degrees of autonomy for various budget items (taxation, spending, borrowing etc.); or it aligns a certain level of autonomy with a similar level of responsibility. Conversely, a less coherent fiscal constitution combines elements and building blocks in an unbalanced manner, for example by combining large fiscal autonomy with a strict fiscal rules framework. Unlike indicator values which have no normative connotation, "coherence" contains a value judgment insofar as "more" coherence is considered better than "less" coherence. Coherence is measured as the variance around indicator values applying a technique called random weights.

Table 1. The building blocks of fiscal constitutions

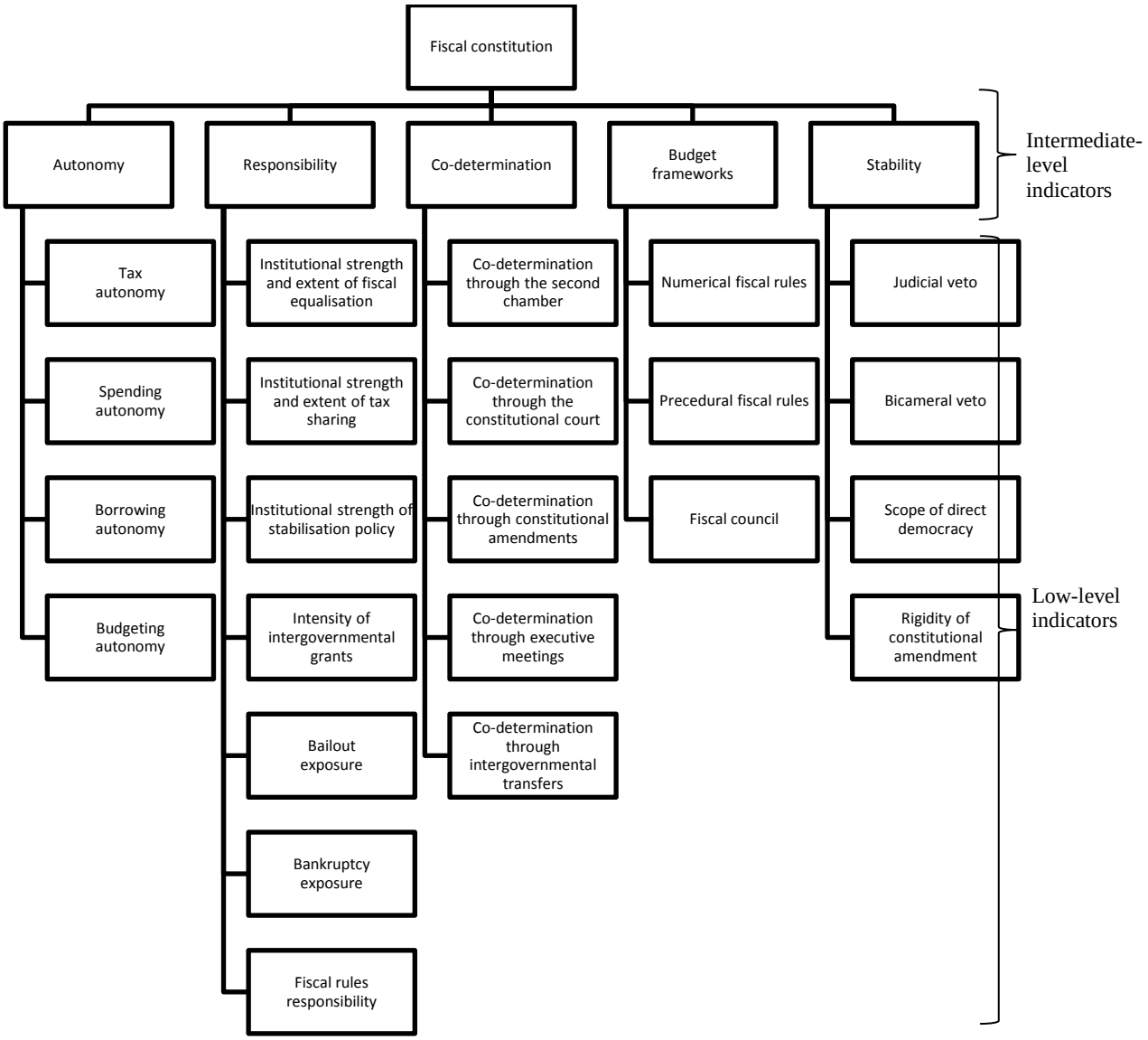
Depicting the overall institutional background

Building block or arrangement	Description	Constituting elements
Autonomy	The extent to which sub-federal governments can conduct their own fiscal policy.	Tax autonomy; spending autonomy in various policy areas; autonomy to borrow; autonomy over setting budget frameworks.
Responsibility	The degree to which sub-federal governments are exposed to budget constraints and must assume responsibility for their own fiscal policy.	Bankruptcy exposure; bailout expectations; responsibility for setting fiscal rules; state revenue mix; dependence on revenue from federal transfers.
Co-determination	The extent to which sub-federal governments can shape fiscal policy at the federal level.	The various channels through which states can co-determine fiscal policy at the federal level: bicameralism; review by constitutional courts; intergovernmental executive bodies and meetings; federal transfers.
Budget frameworks	The degree to which fiscal rules and budgetary frameworks constrain discretionary fiscal policymaking at all governmental levels.	Various elements shaping the strength of fiscal frameworks: numerical fiscal rules; procedural fiscal rules; fiscal councils and other independent or arms-length bodies
Stability	Ease at which constitutional rules affecting fiscal policy can be amended.	Elements include the strength of the second chamber; the power of constitutional courts; majorities needed to amend the constitution; scope of direct democracy/popular veto.

Source: OECD Secretariat

Figure 2. Fiscal constitutions: Indicator tree

Low-level indicators for the assessment of building blocks (intermediate-level indicators)



3.2. Autonomy

10. The autonomy indicator captures the assignment of fiscal power across government levels and the extent to which sub-federal governments can conduct policy in the area of taxation, spending, borrowing and budgeting. Fiscal constitutions provide very different degrees of autonomy to sub-national governments. In some federations the state level is a *de facto* branch of the federal level, while in others states enjoy large fiscal autonomy and little interference from the federal level. Coherence also varies: while some countries feature similar degrees of autonomy for all budget areas, some others combine large spending and borrowing autonomy with little tax autonomy.

Tax autonomy

11. Tax autonomy varies wildly across federal countries, although constitutionally guaranteed sub-national autonomy in levying taxes is seen as a crucial feature of federalism (Riker, 1975). In some countries only few taxes are assigned to the federal level, sometimes combined with a residual clause that

leaves remaining taxing powers to the states. In other federations taxation is largely a federal prerogative and is often combined with a general clause allowing central government to change the tax system by ordinary legislation. Some constitutions are very precise about assigning different taxes across government levels, while others are vague or simply silent.[4] In a few countries post-constitutional legislation and constitutional courts play a crucial role in shaping tax autonomy.

12. A few examples may shed light on the large institutional differences in tax autonomy. Austria's Fiscal Constitution Law assigns all tax legislation power to the federal level and restricts the states' power to levy own taxes. The constitutional law is likewise restrictive in Italy, where the federal level is responsible for tax legislation. Tax autonomy is a bit higher in Russia, where *subjects* may reduce the rate of corporate income taxes for certain taxpayers. On the other hand, in Switzerland, the federal government is only allowed to levy taxes which are listed in the constitution, and a change of personal income tax rates requires a constitutional amendment. In some countries constitutional voids had to be filled by legal interpretation. The Canadian constitution assigns exclusive power to provinces with respect to natural resource taxes and direct taxes. Creative interpretation of "direct taxation" at some time allowed including sales taxes, and hence both the federal and the provincial level have concurrent rights to levy all major taxes. Judicial review has strongly shaped Australian tax assignment. The constitutional court ruled that all consumption taxes should be considered "trade taxes and excises", which are the only levies constitutionally assigned to the federal level. As a result, the General Sales Tax is a federal tax. In Mexico, constitutionally guaranteed tax autonomy is undercut by another constitutional provision that makes actual use of tax autonomy very costly for the states.[5]

Spending autonomy and links between tax and spending autonomy

13. Spending autonomy captures the extent to which states have sovereignty in legislating and spending in certain policy areas.[6] Constitutional spending autonomy varies less than tax autonomy, as there is a core of public functions which is in most federations assigned in a similar way. Fiscal constitutions rely on two main sorts of assignments, i.e. exclusive assignment where only one sphere of government has the authority, and joint/concurrent assignments where both spheres of government are allowed to legislate and spend. The Austrian and Italian fiscal constitutions provide the most spending prerogatives to the federal level, while the Canadian or the United States constitutions provide the largest state autonomy. In the latter, the constitution does not prevent states from spending in any area as long as the Commerce Clause is not violated.[7]

14. Some further constitutional provisions may affect the degree and coherence of tax and spending powers:

4. The questionnaire asked about assignment rules for personal and corporate income tax, indirect taxes, natural resource taxes and social security contributions.

5. Although states could in principle exit the revenue sharing system and start levying its own taxes, there is a provision in the law that makes exit prohibitively expensive (*Convenio de Adhesion*). If a state exits the system, federal taxes continue to be leviedat the sub-national level, and revenue shares are calculated as though the state were still in the system, so the residual revenue is kept fully by the federation.

6. For the purpose of this study, 16 spending categories (policy areas) were selected based on the OECD's COFOG-2 classification. These are (1) national defence, (2) police services, (3) law courts, (4) prisons, (5) public transportation, (6) environmental protection, (7) housing development, (8) out-patient services, (9) hospital services, (10) primary education, (11) secondary education, (12) tertiary education, (13) sickness and disability, (14) old age, (15) family and children, and (16) unemployment.

7. The Commerce Clause says that states may not adopt regulations or taxes that place an 'undue burden' on interstate commerce, even if Congress has taken no action.

- Rather than governing every single policy area, some constitutions provide a template for tax and spending assignments, such as the subsidiarity principle or the principle of residual power, as enshrined in the Swiss and German constitutions for instance.[8] Austria also recognises the residual law-making powers of states in their constitutions. Conversely, in Canada, India, South Africa and Spain residual powers are assigned to the federal level.

- Some constitutions provide a link between tax and spending autonomy stipulating that all public expenditure of a government level should be covered by the own taxes of that level ("Wicksellian connection": Wicksell 1896; Breton, 1996; Bird and Slack 2013). Italy lists the principle in the constitutional law, although still deviates from it in practice. The German constitution contains a weaker form of Wicksellian connection insofar as funds are supposed to be commensurate with tasks.

- Some constitutions hardly followed the large evolutionary changes in the way governments spend money, but some provisions were flexible enough to adapt to new public tasks. Many explicitly enumerated federal powers listed in the United States constitution are quite specific to the late 18th century, but the power to "build post roads" enabled the federal government to build the highway network of the 20th century.

Borrowing and budgeting autonomy

15. Borrowing autonomy refers to a state's ability to borrow on financial markets and/or from public institutions. The federal level has various instruments to limit state borrowing. In the most extreme cases states have no right to borrow. The German constitution requires that budgets must be structurally balanced without recourse to borrowing. There are also milder forms of borrowing restrictions. The Mexican constitution prohibits state borrowing from abroad. The Brazilian constitution requires approval of state level borrowing by the federal level. Several countries use differentiated deficit and debt rules when restricting the power of states to add debt. Moreover, the federal level might restrict or entirely ban borrowing from state-owned banks, as is the case in Brazil. In Switzerland and the United States, the federal level imposes no restrictions on state borrowing.

16. Budgeting autonomy evaluates the extent to which states are able to set their budget according to their own rules. Federal involvement in the state's budgeting process varies considerably. Some countries such as Argentina and Germany explicitly forbid any federal meddling in state budgeting. On the other hand, some constitutions, such as the South African or Spanish, allow the federal level to intervene in the substance of the state budget. Specific budgeting frameworks are quite often prescribed. In Italy the federal level obliges the state level to establish medium-term budget frameworks and to co-ordinate medium-term objectives across states. In several countries the federal level imposes a set of fiscal rules on the states, thereby reducing their budgeting autonomy. Failure to comply may bring about further federal intervention in the sub-national budget process, as provided for by the Brazilian or Italian constitutions.

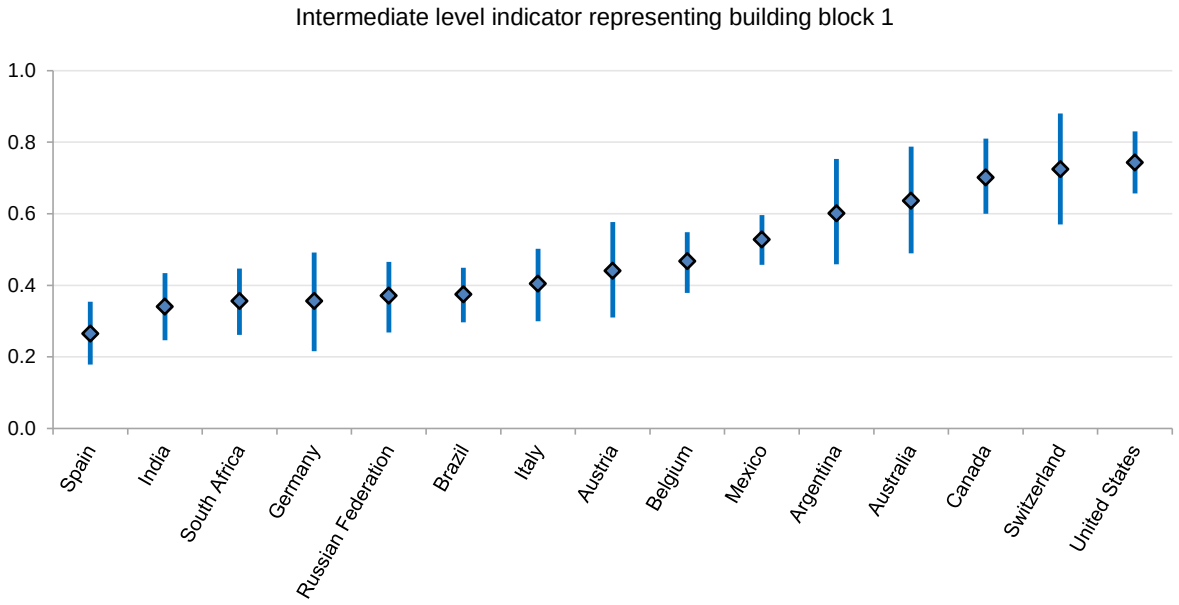
Results for the intermediate institutional indicator "autonomy"

17. Intermediate level indicators (ILI) representing autonomy are presented in Figure 3. High values of the indicator, i.e. large fiscal autonomy of the state level, are observed in the United States, Canada and

8. The principle of subsidiarity says that decentralising economic functions to lower levels of government should be favoured unless convincing arguments can be advanced for centralising them. Residual legislative power means that unless some policy area is assigned to one level, it is automatically within the authority of the other level.

Switzerland. Moderate levels of autonomy are found in Australia, Argentina and Mexico. The other countries – with a measure of fiscal autonomy below 0.5 – could be classified as countries with low sub-federal fiscal autonomy, with Spain, India and South Africa showing the lowest scores. *Coherence* of autonomy levels, as shown by confidence intervals – the vertical bars – varies considerably across countries. Mexico's autonomy setting is relatively balanced – the states enjoy moderate autonomy in all fiscal policy areas – while the autonomy arrangements in Argentina, Australia, Austria and Germany look less balanced. In particular, the Argentinian fiscal constitutions combine low tax autonomy with high budgeting and borrowing autonomy.

Figure 3. Fiscal autonomy of the state level



18. In some countries tax, spending and borrowing capacity of the state level is strongly limited by the federal level, while others leave much scope for spending and borrowing and simultaneously provide for wide-ranging tax autonomy. Both institutional settings can provide for effective long-term fiscal sustainability. Yet an uneven distribution of autonomy may result in undesirable fiscal policy outcomes. In Argentina and Germany the lack of sub-national tax autonomy combined with large borrowing autonomy led the states to behave opportunistically and failed to meet their budget targets despite deficit rules (Tommasi et al., 2011; Kirchgässner, 2013).

3.3. Responsibility

19. Responsibility refers to the extent to which states have to bear the consequences of their fiscal actions. While autonomy means the extent of states' freedom to conduct their policies, responsibility measures whether states internalise the costs of these policies. Responsibility is a central feature of federal constitutions as it defines the extent to which states can derail the fiscal position of general government and make fiscal outcomes unsustainable. As such, responsibility is analogous to the strength of the sub-national budget constraint in federal countries (Goodspeed, 2002). State responsibility is assessed by measuring the likelihood of bankruptcy or a bailout, the status (imposed or self-imposed) of fiscal rules as well as the strength and size of transfer mechanisms such as grants and equalisation payments. Responsibility arrangements are coherent if these fiscal policy constraints are similar.

Bailout and bankruptcy exposure

20. Going bankrupt and not being bailed out is arguably one of the strongest sticks to ensure state responsibility. The bailout clause and exposure to default are hence a central measure for the institutional anchoring and credibility of the budget constraint. The likelihood of default, the prevalence of insolvency frameworks and the probability of a bailout are likely to affect the long-term behaviour of sub-national governments. The extent to which governments assume responsibility relies on constitutional provisions as well as on actual experience:

- *Constitutional provisions*. Fiscal constitutions provide various rules for dealing with states in fiscal distress. Some countries such as South Africa forbid a state default outright, while others such as Brazil and Switzerland provide rules for an orderly default and an insolvency framework. Bailouts are particularly critical and tackled very differently. The constitutions of Brazil and Spain forbid bailouts, while the Argentinian and German constitutions enable, and the Italian constitution even requires them. Some fiscal constitutions do not contain explicit bailout provisions but offer alternatives such as federal borrowing guarantees, which come close to an implicit bailout.

- *Historical experience*. The credibility of no-bailout rules is shaped by a country's experience with past defaults and how the federal government reacted (Fasten, 2010). The experience of defaults and (non-)bailouts may affect sub-national behaviour for quite long. The defaults and ensuing non-bailouts of several states in the United States in the 1840s may have shaped fiscal behaviour of the states until these days. On the other hand, the bailout of two German states in the 1990s fuelled further bailout expectations and might have contributed to fiscal profligacy of some states in later years.

21. Constitutional courts have considerable influence on bailout expectations. In Germany a Federal Court ruling supported the two states of Saarland and Bremen in 1992, focusing on the solidarity principle enshrined in the constitution and providing an implicit bailout guarantee (Feld and Baskaran, 2010). In 2006, the Court changed course and denied the state of Berlin a bailout on grounds that it was able to cope itself. The Swiss Federal Court in 2003 confirmed the non-bailout rule after the bankruptcy of a municipality, thereby lowering the financing costs of cantonal governments.[9]

Responsibility for fiscal rules

22. Fiscal rules can serve as a signal to creditors that a state follows a prudent fiscal policy (OECD, 2013). While fiscal rules are a complement rather than a substitute for well-functioning fiscal frameworks, they help communicate that state finances are on a long-term sustainable track. Financial markets tend to reward prudent fiscal behaviour with lower yields (Schuknecht et al., 2009). In this respect, a rule that is self-imposed is supposed to provide a stronger signal of responsibility than a fiscal rule imposed by the federal government. An imposed rule assumes that the federal government is ultimately responsible for

9. The court ruled that the canton Valais was not liable for the debt of Leukerbad municipality, which went bankrupt in 1998. The case was brought to the Court by a group of creditors who claimed that the canton neglected its control duty and should hence assume municipal liabilities. With the court's ruling the no-bailout clause became confirmed and hence credible (Blankart and Klaiber, 2006). The court's decision cut the relation between cantonal risk premia and the financial situation of the municipalities and reduced cantonal risk premia by around 25 basis points. The ruling implicitly showed that weak no-bailout commitments impose high costs on potential guarantors (Feld et al., 2013).

state finances and that the states can shift the fiscal burden onto other governments. Also, self-imposed create "ownership", likely to increase the probability that states follow them.

23. The extent to which states self-impose fiscal rules varies across countries. While in Canada, Switzerland and the United States federal governments have no power over state fiscal policy, they impose rules on the states in Brazil, Germany and Russia. In some countries such as Argentina, Austria and Spain rules are negotiated across government levels, giving states more leeway but not full responsibility. In the United States, self-imposed rules provide a strong anchor for state fiscal policy. Following an array of defaults during the 1840s and again in the 1870s, virtually all states enshrined relatively tight fiscal rules in their constitutions, providing a framework for long-term sustainable state fiscal policy until today.[10]

Revenue responsibility

24. Revenue responsibility evaluates to what extent states have recourse to own revenue sources. Revenue responsibility is inversely related to external financing from the federal level and decreases with the extent of transfers. High reliance on transfers and other common pool resources may soften the budget constraint of state governments, create moral hazard on the side of states and distort tax enforcement (Rodden, 2003). The extent of responsibility over own resources are assessed using four indicators: (1) fiscal equalisation, (2) tax-sharing, (3) stabilisation transfers, and (4) other intergovernmental grants.

- *Fiscal equalisation*. Equalisation aims at reducing differences in fiscal capacity across states. The stronger equalisation, the weaker is revenue responsibility. *First*, equalisation mechanisms differ with respect to their institutional anchoring. While equalisation is part of the constitution e.g. in Canada and Switzerland, it is enshrined in secondary legislation e.g. in Australia and Mexico. While some constitutions are vague and limited to stating that revenue should meet spending obligations (e.g. Austria), others require an independent body responsible for equalisation policy, as in South Africa.[11] *Second*, while some countries require (almost) full equalisation of regional differences, such as in Australia and Germany, others require disparities to be equalised to a certain extent only, such as in Mexico and Switzerland. Other countries, such as Canada and Spain, are somewhere in between, requiring a "considerable" reduction in disparities.

- *Tax sharing*. In several federations certain taxes are not exclusively assigned to one level of government but shared among levels. Again, revenue responsibility is lower in federations with strong tax-sharing mechanisms. Some constitutions such as those of Argentina and Germany provide rules for tax sharing, while in Australia tax sharing is provided for in ordinary law. Some sharing systems cover major taxes, such as in Argentina and Germany.[12] In the United States, a tax sharing system prevailed in the 1970s and 1980s, but was easy to abandon since it was not enshrined in the constitution. Tax sharing arrangements differ in how detailed they are in constitutions. Some constitutional law provides sharing details, such as in Belgium and Germany.

10. Since the beginning of 19th century the states had accumulated a large amount of debt mostly to finance infrastructure projects. After a fiscal panic and shrinking revenues several states were unable to service their debt. A bailout was discussed in the federal legislature but ultimately rejected. This decision sent a clear message that state debt was a state responsibility. In order to tap the credit markets again, states made substantial reforms including the introduction of various balanced budget requirements. In the 1870s, after yet another banking panic and ensuing depression, states tightened their fiscal rules further (Dove, 2014).

11. In Australia, the Commonwealth Grants Commission, a non-partisan body, is responsible for equalisation. Unlike South Africa, the Commission's role is not defined in the constitution but only by ordinary law.

12. Strong tax sharing is defined as making up more than 10% of total general government revenue.

The South African and Spanish constitutions require an independent body responsible for setting and adjusting tax shares.

- *Stabilisation.* Transfers for stabilisation purposes constitute another form of co-financing states. The stronger stabilisation policy is, the lower is the revenue responsibility of states. Some constitutions provide that in times of economic distress, the federal government may deliver extra financial support to states. The "strength" of stabilisation policy varies across countries. *First*, stabilisation transfers can be specified in constitutional law, such as in Germany and Italy, or by ordinary legislation, as in Australia and Canada. *Second*, constitutional provisions attach a different thrust to stabilisation. While some constitutions state that stabilisation "must" be pursued (e.g. Italy and Russia), some others say that it "should" be pursued (e.g. Germany and Spain).

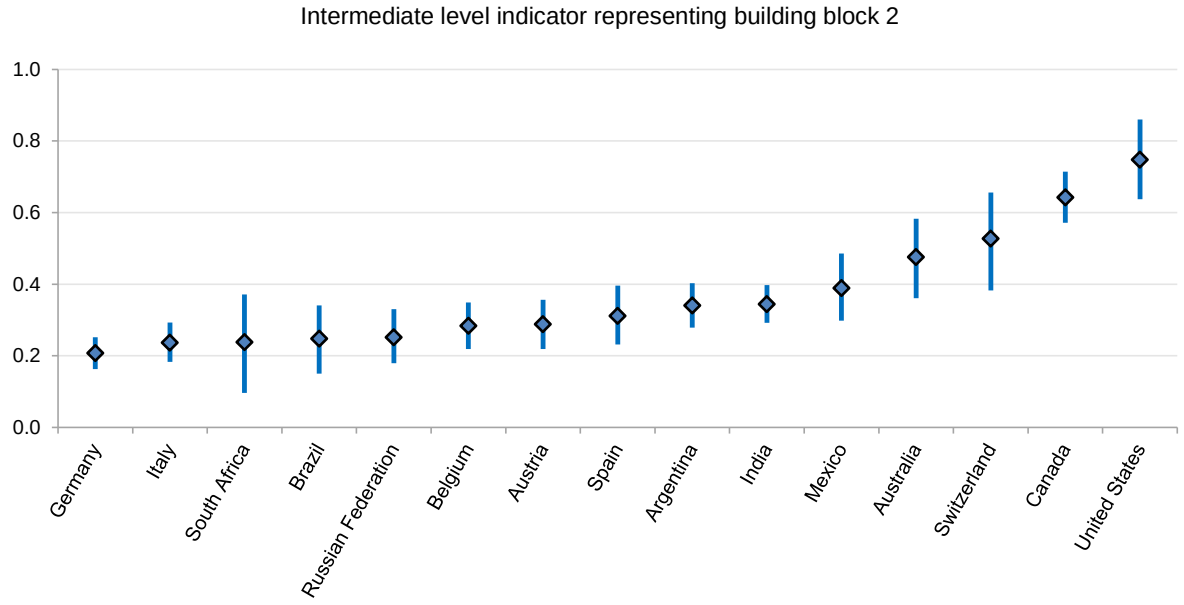
- *Other intergovernmental transfers*. Federal governments often support state activities through intergovernmental grants. These can be general (states are free in allocating grants) or special purpose grants (states have to spend them in a given policy area). In Germany and Switzerland grants are provided by the constitution, while they are shaped by ordinary legislation e.g. in Mexico and the United States. Some countries provide a constitutional background for quite extensive grant systems, such as in Belgium and the United States, while Australia and Canada provide for less extensive grant systems.

25. In most countries the various transfer systems are complements rather than substitutes, i.e. more equalisation tends to go together with more stabilisation and more tax sharing.

Results for the intermediate institutional indicator "responsibility"

26. Numerical results for the intermediate responsibility indicator are presented in Figure 4. The values of the indicator suggest that the states in Australia, Canada, Switzerland and the United States are highly responsible for their own fiscal policy, while responsibility is low in Germany, Italy, South Africa and Belgium. Responsibility is assigned in a relatively coherent way in Germany, India and Italy, all countries with relatively low responsibility. Less coherent fiscal arrangements are found in South Africa, Australia, Switzerland and the United States. The root cause of relatively little coherence in Switzerland is that the likelihood of a bailout is low but the grant system to help out governments in distress is extensive.

Figure 4. Fiscal responsibility of the state level



3.4. Co-determination

27. Co-determination is the extent to which states can shape fiscal policy-making at the federal level. While state autonomy refers to a state's power to legislate for its own jurisdiction, co-determination refers to the scope of a state or a group of states to influence fiscal policy of the whole country (Hooghe et al., 2008). States can influence overall fiscal policy through different channels, of which the most important is likely to be the second chamber of the federal parliament. Coherence of co-determination reflects the extent to which certain channels are complements rather than substitutes. A balanced-determination framework suggests that all channels are used concomitantly, while in a less balanced setting some channels are often used while others are barely available.

Bicameralism

28. Bicameralism is a central feature of federalism. The second chamber of the federal parliament (Senate) serves as an explicit forum for state representation and states' co-determination of national policies. The extent to which the state level can co-exercise some power at the national level depends on the institutional strength of the second chamber and the degree of representation of states' interests.

- *Institutional strength*. The Senate is formally the representation of states. However, the influence of the second chamber on national policy-making varies among countries. While in most federations the Senate has full legislative and veto power, in a few cases its power is constrained. In Canada and India, for instance, the second chamber can be excluded from initiating certain legislation. In Germany, the Senate can veto only legislation concerning the *Länder*. In Austria, the first chamber can overrule almost any Senate decision.
- *Representation of state's interests*. States' interests are represented to different extent in the second chamber. *First*, the electoral system plays a role. While senators elected by the state legislative or executive with a mandate – as in Germany – might represent their states interests tightly, representation might be weaker if Senators are elected at the ballot box. In Canada senators are selected by the general governor on advice of the prime minister, thereby reducing effective state representation. *Second*, state interests tend to be better reflected if seats are

distributed equally. If representation in the second chamber is (partially) proportional to population size – as e.g. in Belgium or South Africa – the federal government is more likely to align policies with the preferences of the larger states. *Third*, coordination and reconciliation mechanisms between the two chambers of parliament – as for instance in Germany and Switzerland – may further strengthen state representation.

29. While strong participation of states in federal policy-making may balance the interests of more stakeholders, it may also lead to a joint decision trap where no policy decisions are taken at all (Scharpf, 2006). Reducing the degree of joint decision-making was the main aim of the federalism reform in Germany in 2006 where overlapping competencies, intertwined responsibilities and political bargaining led to frequent policy deadlocks. The German reform strengthened both the federal government's decision-making capacity and the autonomy of the states (Moore et al., 2010).

Judicial review

30. The second channel through which states can co-determine national policy is via judicial review by an independent supreme or constitutional court. Except Switzerland, all countries under investigation have some form of constitutional review of federal laws. Judicial review may void unconstitutional laws. States can influence constitutional review in two ways.

- *Challenging federal laws*. The states – either directly as e.g. in Italy and Spain or via the second chamber as e.g. in Germany and South Africa – can trigger a judicial review of federal legislation. The law might then be abrogated or modified. The sole right of states and the second chamber to challenge federal legislation at the court can be perceived as a deterrence mechanism for legislating unfavourably for states (Stone Sweet, 2000).
- *Judicial appointment*. States or second chambers are often involved in nominations and approvals of the judges to courts, as is the case e.g. in Argentina and Germany. There is a vast literature conjecturing that preferences of the appointers and those of judges are strongly aligned.[13] Thus, once states or second chambers play an important role in nominating or approving judges, the court is likely to rule more in favour of the states.

31. In Argentina, Australia, Germany, Mexico and the United States, judicial reviews play an important role in resolving conflicts between the federal and state level. The US Supreme Court is a particularly important crossroads of federal and states interests. Following its rulings, the power of the federal government was cut back on several occasions because the Court insisted on a narrow interpretation of key clauses in the constitution.[14]

Other channels of co-determination

32. There are three other channels through which states influence policy-making at the federal level. These are co-determination via (1) constitutional amendments, (2) executive meetings and (3) intergovernmental transfers.

13. For Australia see Smyth and Narayan, 2004; for Canada see Songer et al., 1989; for Germany see Vanberg, 2005; for Italy see Della Pellegrina and Garoupa, 2012; for Spain see Garoupa et al., 2013.

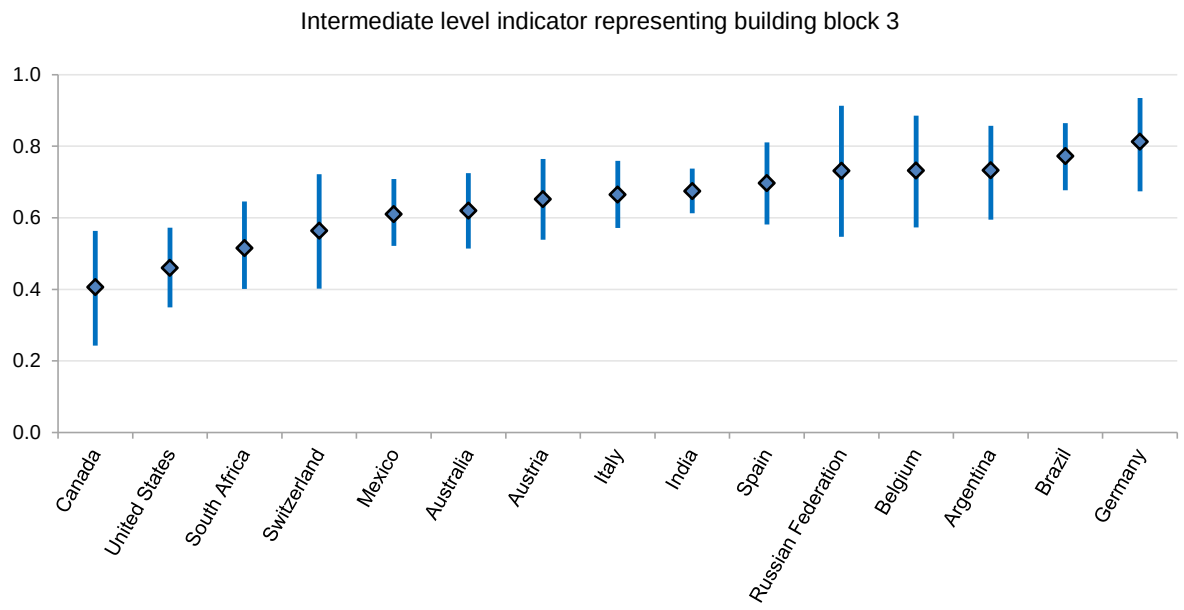
14. See for instance, the 1995 court case *United States v. Lopez*. Also, in a recent case *National Federation of Independent Business v. Sebelius* the justices adjudicated in favour of the states. They agreed that a significant expansion of Medicaid was not a valid exercise of Congress' spending power, since it forced states to accept the expansion at the risk of losing existing Medicaid funding.

- *Constitutional amendment*. There are two ways in which states can influence constitutional reforms. *First*, all federal constitutions require that the states – as e.g. in Canada and the United States – or the second chamber – as e.g. in Belgium and India – need to approve constitutional amendments. The extent to which states can influence a constitutional amendment varies, however. In some countries both the second chamber *and* the states have to approve a change, e.g. in Mexico and in Russia. *Second*, states may propose a constitutional change. While in some countries states may propose a constitutional amendment (e.g. Brazil and Mexico), in other cases this right is reserved to the second chamber (e.g. Italy and Switzerland). In some countries neither the states nor the second chamber may launch a constitutional reform (e.g. Canada and Argentina).
- *Intergovernmental executive meetings*. Intergovernmental meetings serve as a forum for negotiations between tiers of government and co-ordination of national and state policies. Executive meetings are often institutionalised and have routine character (e.g. the Consultation Committee in Belgium and the State Council in Russia). Some intergovernmental bodies can be authoritative and parties reach decisions that formally bind the participants, such as in Australia (Council of Australian Governments, COAG) or Argentina (*Consejo Federal de Inversiones*, or the *Consejo Federal de Educación)*.
- *Intergovernmental transfers*. States are able to influence transfers through different channels. Transfers are often determined through intergovernmental bargaining, in which receiving governments have a voice. Transfers can also be viewed as a response to lobbying of state politicians and their interest groups (Sato, 2007). There is a vast literature on how states may drive transfer allocation, which depends on how equalisation, tax sharing, stabilisation and other transfers, as described in Section 3.3, are constitutionally anchored (OECD, 2014).

Results for the intermediate institutional indicator "co-determination"

33. The numerical results for the intermediate level indicator "co-determination" are shown in Figure 5. High values, meaning extensive co-determination, are observed in Argentina, Germany and Brazil. On the other hand, little co-determination is found in Canada, the United States and South Africa. The most coherent institutional environment within this building block is observed in India. In India, states influence national policy moderately through all channels. Co-determination in Canada, Russia and Switzerland is less coherent. For instance, Belgium has a strong executive branch, and a relatively weak second chamber. The combination of a weak Federal Court – which is not allowed to review federal laws – with strong influence of the second chamber is responsible for less coherent co-determination in Switzerland.

Figure 5. Co-determination of national policy by the state level



3.5. Budget frameworks

34. Budget frameworks govern the budget process and aim at restraining discretionary fiscal policy. The framework is defined by three elements, i.e. numerical fiscal rules, procedural fiscal rules and fiscal councils. Tight fiscal frameworks (1) impose a set of well-defined numerical fiscal rules, (2) imply top-bottom (hierarchical) and transparent procedural and budgeting rules, and (3) feature fiscal councils or other arms-length agencies. Coherent budget frameworks are those where the three elements have similar strength. Less coherent frameworks are those where instruments are not uniform, e.g. where tight numerical fiscal rules go together with weak procedural rules.

Numerical fiscal rules

35. Numerical fiscal rules constrain policymakers' decision-making discretion. The main rationale for establishing fiscal rules is a perceived spending and deficit bias and reluctance of states to commit to fiscal discipline. As such, numerical fiscal rules have gained popularity since the 1990s when they were put in place to reduce the fiscal fallout from irresponsible fiscal behaviour at all government levels. There are four main types of numerical fiscal rules: budget balance (deficit), debt, expenditure and revenue rules. Discretion of policy-makers is constrained most when a country uses all four types of numerical fiscal rules.

36. Their strength can be assessed based on four criteria:

- *Legal basis*. While some rules are enshrined in the federal constitution (e.g. debt brakes in Germany and Switzerland), others are set in secondary legislation (e.g. rules in Argentina and Australia). Constitutional fiscal rules are more difficult to amend and hence more credible, and they may entail high reputation costs for the government if breached (Blume and Voigt, 2013). The use of a constitutional fiscal rule might signal that fiscal discipline is perceived as a fundamental policy objective (Drazen, 2002).

- *Status*. Sub-national rules are either imposed or self-imposed. Imposed rules are more likely to reflect a consistent and harmonised budget framework than self-imposed rules, which may differ across states. Rules are, for instance, imposed in Germany (e.g. budget balance rule for *Länder*) and in Spain (budget balance, debt and expenditure rules for regions). In some countries, rules are negotiated between government levels, such as in Austria (budget balance, debt and expenditure rules for *Länder*) and Belgium (budget balance rules for regions and communities). State fiscal rules are self-imposed – and often enshrined in state constitutions – in Switzerland and the United States.

- *Enforcement*. The constitutional setting may underpin the enforcement of fiscal rules. Self-enforcement works well when a government has an incentive to follow them. Rules are self-enforced in Australia, Canada, Switzerland and the United States. Rules tend to be stronger when enforced by a higher level government or by external bodies. State rules are enforced by the federal level in Spain and Russia, for instance. Courts and audit institutions have a strong role in Brazil[15] and the United States. In some countries enforcement is not explicitly specified. For instance, sanctions and their enforcement are not mentioned in the German constitution.

- *Coverage*. Some numerical fiscal rules cover the general government budget (e.g. budget balance, debt and expenditure rules in Spain), whereas some others cover only the federal or state level finances (e.g. the deficit rule in Mexico covers only central government and several rules in South Africa cover only the state level). In some cases separate federal and state fiscal rules complement each other, such as in Switzerland. Wide coverage limits policymaker's ability to bypass the rules and re-allocate fiscal resources between governments (Milesi-Ferretti, 1996, 2003).

Procedural fiscal rules

37. Procedural fiscal rules ensure that budget planning, approval and execution is subject to proper control and accountability, and that the annual budget law is consistent with medium and long-term fiscal plans and objectives. Two elements help assess the restrictiveness of procedural fiscal rules: (1) the extent to which top-down budgeting is applied and (2) the transparency of the budgeting process.

- *Top-down approach*. Top-down procedural rules aim at empowering a single actor in the budgeting process, in order to address the common pool problem of public decision making (Ljungman, 2009). Top-down approaches give strong prerogatives to the federal executive vis-à-vis the legislature in the approval stage of the budget and/or to a federal Prime or Finance Minister vis-à-vis other spending ministers, as in Argentina or Brazil (Alesina et al., 1999). In some countries, e.g. Belgium or Germany, constitutional law restricts the federal legislature's power to amend a budget proposed by the federal government

- *Transparency*. Budget transparency relies on three elements. *First*, some constitutions such as the German or Spanish ones require federal and state budgets to be assessed by an independent audit institution. In Brazil or India, the audit extends also to the state level. *Second*, medium-term

15. In Brazil the public officials at the state and local level are subject to criminal prosecution for non-compliance with the rules incorporated in the Fiscal Responsibility Law of 2000. The Law limits new funding for sub-national governments and denies credit guarantees in case of systematic violation (Goldfajn and Guardia, 2004). A special Fiscal Crime Law (*Lei dos Crimes Fiscais*) sets out a range of penalties for budget mismanagement such as fines, removal from the office and ineligibility for public office up to five years and even imprisonment.

budgetary frameworks are required by the Brazilian or Russian constitution, to ensure planning transparency over several years. Medium-term objectives might be further coordinated between the states and the federal government as is the case in Belgium and South Africa. *Third*, constitutions may require uniform accounting standards across levels of government, as in Italy and India.

Fiscal councils and other arms-length agencies

38. The strength of the budget framework is shaped by the prevalence and prerogatives of fiscal councils and other arms-length bodies. These are usually non-partisan public bodies that assess the fiscal stance and/or issue recommendations on fiscal policy matters. More specifically, fiscal councils may deliver independent analysis and review fiscal projections by governments. Finally, fiscal councils may assess compliance with fiscal rules and sustainability requirements or provide recommendations on specific items of budgetary policy. As such, councils raise awareness about short and long-term costs and benefits of budgetary measures both among policy-makers and the public (Calmfors, 2011; Calmfors and Wren-Lewis, 2011).

39. The strength of fiscal councils is assessed on three criteria.

- *Institutional anchoring*. Fiscal councils are likely to enjoy more stability, legitimacy and recognition if enshrined in the constitution, as in Germany or Spain than in ordinary law, as in Australia or Canada. In some countries such as Argentina and Brazil, fiscal councils have for long been enshrined in the constitution but have still not been established.

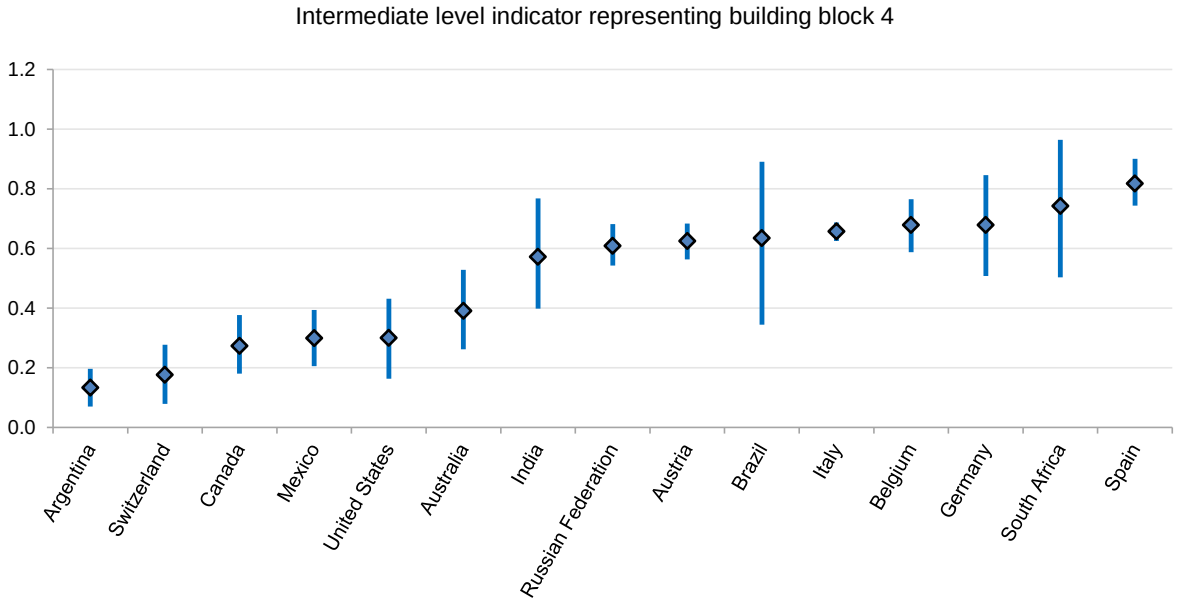
- *Prerogatives*. In some countries, fiscal councils have broad prerogatives as they have the right to assess the fiscal stance of both federal and state governments (e.g. the Parliamentary Budget Office in Italy and the High Council of Finance in Belgium). The Public Council in Russia and the Congressional Budget Office in the Unites States are allowed to evaluate the federal budget only.

- *Independence*. Independence depends on how the governing body of a fiscal council is composed (e.g. members of parliament, representatives of states, ministers, independent experts) and where the council is attached (e.g. to the parliament). Fiscal councils are largely independent, for instance, in Germany and Spain. Partially independent fiscal councils – parliamentary budget offices – exist in Italy and in the United States.

Results for the intermediate institutional indicator "budget frameworks"

40. The numerical results for the intermediate indicator are shown in Figure 6. High values are observed in Spain, South Africa and Germany, which appear to be endowed with strong and integrated budget frameworks. Argentina, Switzerland and Canada, on the other hand, have relatively weak budget institutions. Budget frameworks are coherent in Austria and Italy and rather less so in Brazil, South Africa and India. Brazil's budget framework is likely less coherent because numerical and procedural fiscal rules are strong but there is no fiscal council.

Figure 6. Strength of budget frameworks



3.6. Stability of fiscal constitutions

41. The stability of fiscal constitutions depends largely on the number and strength of actors and veto powers. Veto powers increase the transaction costs of reforms and bias the institutional framework towards the status quo (Tsebelis, 2002). Stability is hence a two-edged sword. Stable institutions may provide a basis for long-term fiscal planning at all government levels, but they may also prevent reform and adaptation to changing circumstances (Cox and McCubbins, 1991). Very stable constitutions may slow down the pace of structural reform and fiscal adjustment.

Bicameral veto

42. In most federal countries the second chamber is involved in the legislative process and can veto a reform of the fiscal constitution. The strength of a bicameral veto is gauged on two criteria, (1) the extent of veto power and (2) the distribution of seats in the second chamber.

- *Extent of veto powers*. The Senate has more veto power if it can veto all laws initiated by the first chamber, which is the case in a majority of federal countries. In some countries the second chamber has only partial veto power, however, e.g. in Germany or Mexico.

- *Distribution of seats*. A Senate with an equal distribution of seats among states should be more veto prone as it is more difficult in a highly fragmented chamber to gather support for reform. Under a proportional or partially proportional distribution of seats (e.g. Germany and India) the federal government must secure support only from the larger and probably less than half the states.

Judicial veto

43. The judicial veto depends on the degree of constitutional review and the power to strike down unconstitutional legislation (Gutmann et al., 2014). It might be evaluated based on four criteria.

- *Coverage*. Certain laws are off limits for judicial review. The Swiss Federal Court does not have the right to rule on laws passed by the federal government but only by state governments.
- *Right to petition*. The power of judicial review depends on the number of actors who can initiate a petition to the court. In some countries a broad range of political actors can file a court case, as is the case in Austria and Brazil. On the other hand, in Argentina and Australia, only few groups have access to the constitutional court.
- *Timing*. Judicial influence is broadest if the court has the competence to check the constitutionality of laws both *before* and *after* the adoption and implementation of a law, which is the case in e.g. India and South Africa. Judicial influence is weaker if the court can review the legislation only after the law is adopted, e.g. in Canada or Mexico.
- *Unconstitutionality*. There are different ways to deal with laws deemed unconstitutional: (1) the law can be repealed automatically (e.g. Russia and Italy), (2) the law can be returned to the legislature for revision or (3) the constitution can be silent on what happens with unconstitutional laws (e.g. Canada and India).

44. Judicial veto is strongest when no laws are excluded from court adjudications, a broad range of actors can challenge federal legislation in the court, challenging legislation can occur before and after the law is adopted, and when an unconstitutional law is automatically void.

Direct democracy

45. Direct democracy has two tools which are popular referendums and initiatives. They might have opposite effects on the stability of the fiscal constitution.

- *Referendum*. The possibility of referendums introduces an additional veto power. Referendums make the status quo more difficult to change. Referendums on federal legislation are compulsory for new legislation in Switzerland. Lately, the Swiss people vetoed two major tax initiatives, which would have had a large fiscal impact at both the cantonal and the federal level.[16]
- *Popular initiative*. Unlike referendums, popular initiatives can introduce additional instability into fiscal frameworks. Popular initiatives may translate changes in public opinion directly into policy changes. While the Swiss constitution provides a fundamental right to launch a popular initiative, the Argentinian constitution explicitly bans certain types of initiatives, such as on constitutional reform, international treaties, taxes, the budget and penal matters.

Constitutional amendment

46. All constitutions contain a section that lays out the way to amend them. The rules governing constitutional amendment determine the frequency of actual amendments and hence constitutional stability (Rasch and Congleton, 2006). There are five criteria which determine how easily constitutions can be changed.

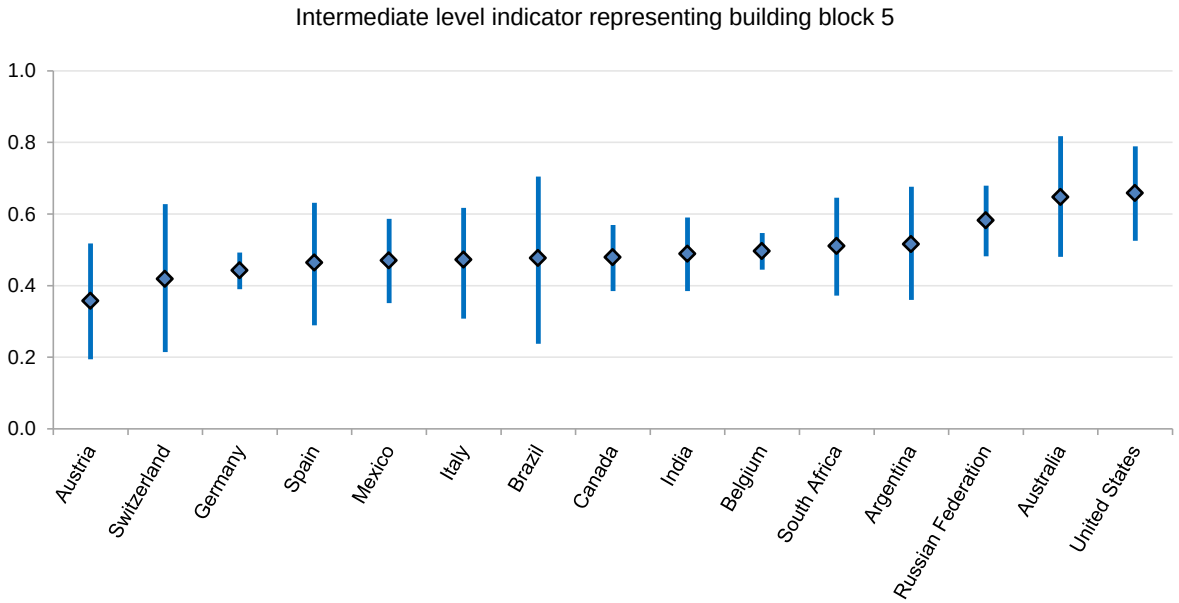
16. These were the family tax initiative (providing tax deductions for families with a stay-at-home parent), and the highways vignette proposal (increasing the annual price for using motorways).

- *Qualified majorities*. In most countries qualified majorities are required to approve a constitutional reform. Issues pertaining to the federal level can be amended with the consent of a ¾ majority in both chambers in Russia. Belgium and Germany require 2/3 majorities in both chambers to pass an amendment. An absolute majority is required in India and Italy.
- *Referendums*. National referendums on constitutional reforms are required or allowed in Australia, Austria, Italy and Switzerland.
- *Consent from the states*. In some countries such as Australia and Switzerland, constitutional changes must be approved by a majority of voters nationally and by a majority of states.
- *Number of actors that can propose a reform*. In some countries a broad range of actors can propose a constitutional reform. In Brazil the president, the first and second chambers separately and states can propose an amendment. In Germany, only the federal parliament can propose a constitutional change.
- *Unamendable parts*. The most radical constraint for constitutional amendment is non-amendability. For instance, in Italy the first 12 articles of the Constitution cannot be modified. One of them concerns the principle according to which local autonomy is recognised and administrative decentralisation has to be implemented.

Results for the intermediate institutional indicator "stability of fiscal constitutions"

47. The numerical results for the intermediate level indicator "stability of fiscal constitutions" are presented in Figure 7. Australia, Russia and the United States have highly stable fiscal constitutions. Low stability is found in Austria and Switzerland (Blöchliger and Frey, 1992). The remaining countries can be classified as having moderately stable fiscal constitutions. Germany has the most coherent institutional environment within this building block, while arrangements are less coherent in Brazil, where strong judicial and bicameral veto powers go along with a proliferation of actors that can propose a constitutional change.

Figure 7. Stability of fiscal constitutions

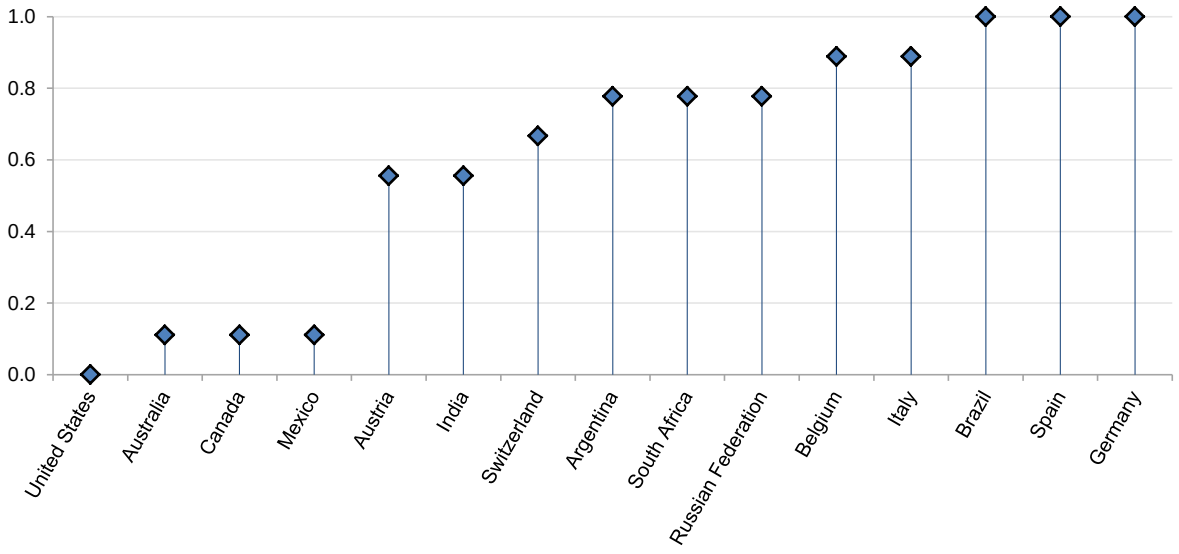


Box 1. Completeness of the fiscal constitution

The term "completeness" refers to the extent to which the fiscal constitution makes an explicit statement, i.e. allows, requires or bans certain actions by the federal or the state level. The degree of completeness measures the precision or concreteness of the fiscal constitution. Certain constitutions are very precise insofar as they rule on every possible issue, while others are quite vague and leave the question as to who has or is allowed to do something open to interpretation. Bearing in mind the building blocks of fiscal constitutions, an auxiliary "completeness indicator" is constructed reflecting the degree of constitutional precision in the following areas: (1) fiscal equalisation, (2) tax sharing, (3) stabilisation policy, (4) intergovernmental grants, (5) federal involvement in the state budget process, (6) bailout, (7) fiscal rules, (8) fiscal councils and (9) budget auditing. The completeness indicator is constructed in the same way as the other intermediate level indicators.

The numerical results for the auxiliary indicator "completeness of fiscal constitution" are presented in Figure 8. High values, which mean high precision (completeness) of a fiscal constitution, are observed in Germany, Spain and Brazil. One the other hand, low precision (vagueness) is found in the United States, Australia, Canada and Mexico. Older federations tend to have vaguer constitutions than younger ones.

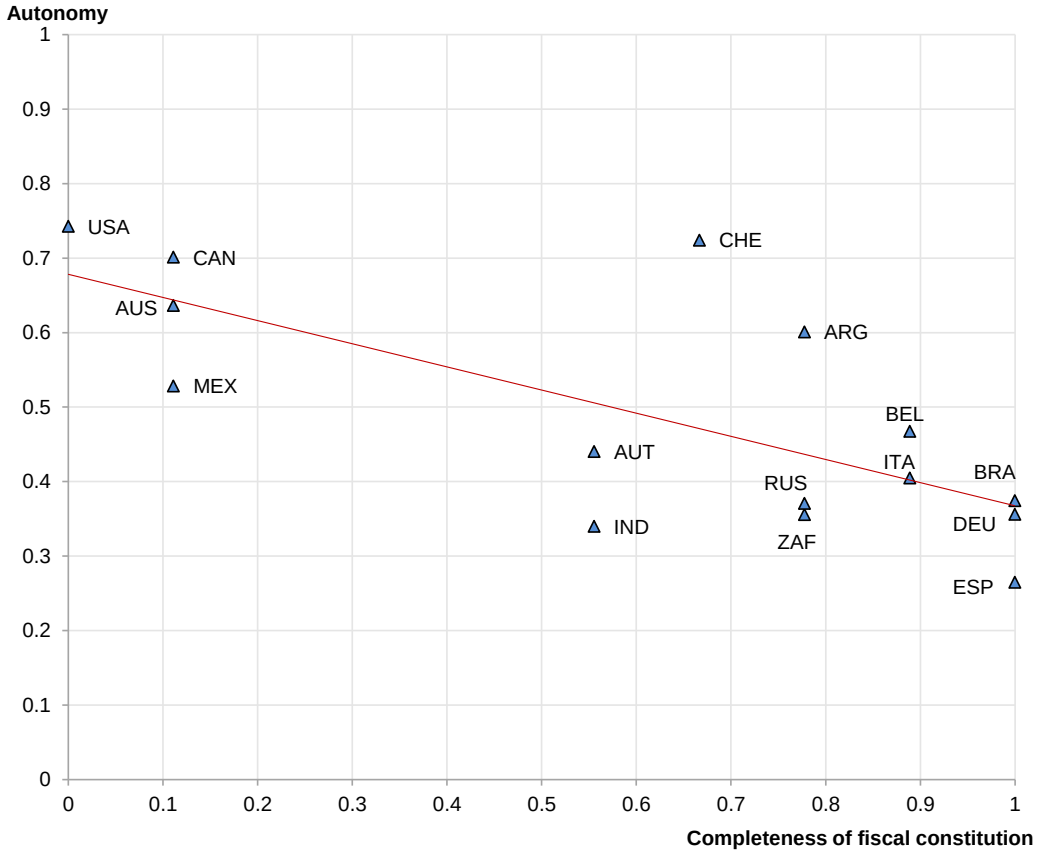
Figure 8. Completeness of fiscal constitutions



The completeness of the fiscal constitution seems to be negatively correlated with the autonomy of states (see Figure 9), suggesting that federations tend to complete their fiscal constitution with the aim to constrain the autonomy of the states. A centralist bias might creep into constitutional provisions. Vague fiscal constitutions, on the other hand, preserve more leeway for states. Less complete or more open fiscal constitutions also allow for more discretionary actions at both levels of governments.

Box 1. Completeness of the fiscal constitution *(cont.)*

Figure 9. Correlation between autonomy of states and the completeness of fiscal constitutions



4. Types of fiscal constitutions

48. The final step in the empirical assessment is to compare and rank all fiscal constitutions based on an aggregate classification. Such a classification helps better discern similarities as well as differences between fiscal constitutions, and it helps assess the meaning of terms such as "competitive", "co-operative", "executive", "dual" and other types of federalism. In the following two empirical methods are used to assess the overall character of fiscal constitutions: 1) *clustering* which helps identify groups that share similar fiscal constitutions but which are genuinely different from other groups, and 2) *factor analysis* which helps to calculate a single summary indicator reflecting the degree of decentralisation the fiscal constitution is granting.

4.1. Identifying similar fiscal constitutions: clustering

49. This section assesses the extent to which fiscal constitutions can be grouped or "clustered", i.e. to what extent certain fiscal constitutions are very similar to each other, while they differ from others. Cluster analysis is used to group countries with comparable fiscal constitutions, i.e. which combine building blocks in a similar manner. Cluster analysis is applied on all five building blocks for the 15 countries. Various clustering methods are used in order to find robust country clusters.

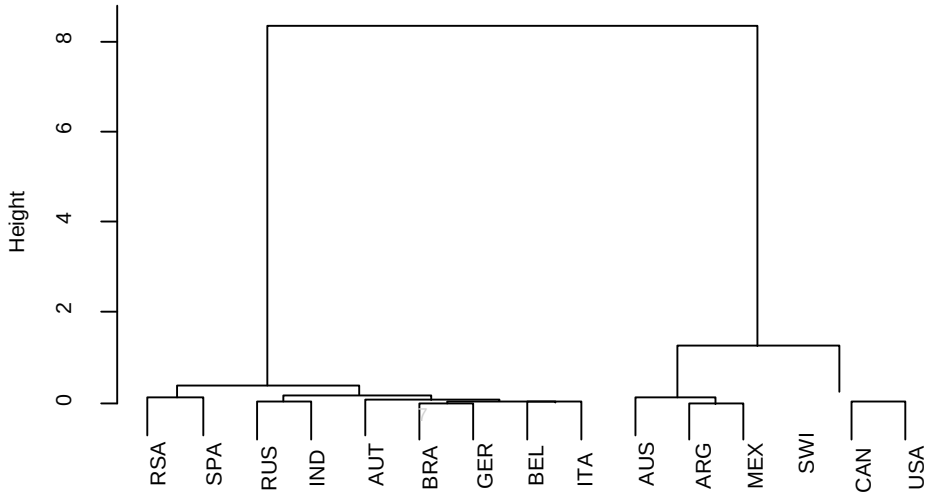
50. When clustered, two groups of distinct fiscal constitutions emerge, which can be divided further into sub-groups (Figure 10).

- The United States, Canada, Switzerland, Australia, Argentina and Mexico feature *decentralized* fiscal constitutions. These constitutions combine institutions that provide for high autonomy of states, relatively high responsibility, low co-determination and weak budget rules and frameworks. Decentralised constitutions tend to be quite stable as well (Switzerland is an exception). Although clustered together, decentralised fiscal constitutions still differ significantly in the degree of responsibility. While in the United States, Canada and Switzerland the state level is highly responsible for its actions, responsibility is somewhat lower in Argentina, Australia and Mexico. These countries create a separate cluster of quasi-decentralised federations.

- Austria, Belgium, Brazil, Germany, India, Italy, Russia, South Africa and Spain feature *cooperative* or *integrated* fiscal constitutions. As a mirror image of the previous cluster, these federations tend to combine low autonomy and responsibility with a high level of co-determination and strong fiscal rules and frameworks. On average, integrated fiscal constitutions are less stable. Overall, the cluster of integrated federations looks more coherent than the cluster of decentralised federations, as shown by the higher level of dissimilarity. Some outliers should be pointed out: South African states have relatively weak co-determination power; Belgium and Russia have quite stable fiscal constitutions.

Figure 10. Similarities and differences between fiscal constitutions

Dendrogram based on cluster analysis



Distance: correlation
Cluster method: ward.D

Note: The clustering height on the vertical axis is a measure of dissimilarity. The higher its value the more heterogeneous are units grouped in a given cluster. The horizontal axis has no meaning, i.e. clusters lying close to each other are not more similar than clusters farther apart.

4.2. The degree of constitutional decentralisation: composite indicator

51. The second method to gauge similarities and differences between fiscal constitutions is to develop a composite indicator reflecting the *degree of constitutionally provided decentralisation.* In order to do so, factor analysis is applied as the first step. Factor analysis gauges whether building blocks are always combined in the same fashion. Technically speaking, factor analysis tests to what extent the variances of the building blocks' indicator values are co-moving. Results of the factor analysis suggest that the various building blocks are indeed highly correlated, with around 85% of the total variation explained by two single factors (Table 2).

- *Factor 1,* strongly associated with autonomy, responsibility, co-determination and budget rules, represents around 66% of the variation in the original building blocks. The four building blocks are reduced to one single dimension, which can be described as the *extent of decentralisation*.

- *Factor 2*, explaining roughly 19% of the variation in the original variables, is mainly associated with the stability of the fiscal constitution. Differing degrees of *stability* are hence the second characteristic that helps differentiate fiscal constitutions.

- Decentralisation and stability are independent of each other, i.e. stable or unstable fiscal constitutions can be found in both decentralised or integrated federation

Table 2. Commonalities between the building blocks of fiscal constitutions

Results off factor analysis

Variable	Factor 1	Factor 2
Autonomy	**0.95**	0.17
Responsibility	**0.92**	0.20
Co-determination	**-0.81**	0.05
Budget frameworks	**-0.86**	-0.03
Stability	0.10	**0.99**
Variance explained	**66%**	**19%**

Source: OECD Secretariat calculation.

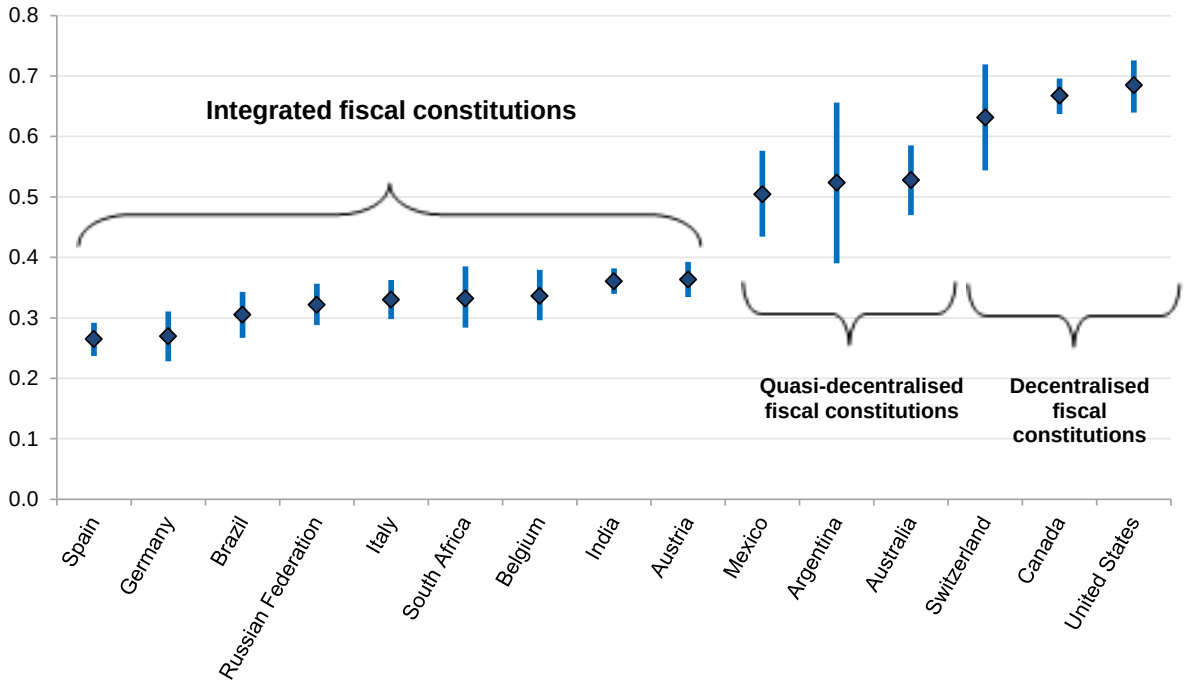
52. Given the correlation with the individual building blocks, Factor 1 reflects the degree of constitutionally provided decentralisation. A fiscal constitution is the more decentralised the higher fiscal autonomy and fiscal responsibility and the lower co-determination and the weaker budget frameworks are. Conversely, a fiscal constitution is the more *integrated*, the lower autonomy and responsibility, the higher co-determination and the stronger budget frameworks. Factor 2 covers the stability of fiscal constitutions and is only remotely linked to the degree of decentralisation. As such, a composite indicator reflecting a single dimension "decentralisation" can be constructed, using the four aforementioned building blocks. To aggregate the composite indicator, the random weights method is applied to the four intermediate-level indicators. Decentralisation and stability are not correlated, *i.e*. they are *independent* of each other: stable or unstable fiscal constitutions can be found in either decentralised or integrated federations.

53. Results are largely similar to the cluster analysis before, with two groups of constitutional settings emerging (Figure 11). The United States, Canada and Switzerland are federations with a highly *decentralised* fiscal constitution, featuring what is sometimes referred to as *competitive federalism*. Spain, Germany and Russia feature relatively *integrated* or co-*operative* fiscal constitutions. Mexico, Argentina

and Australia are in between. Confidence intervals indicate the level of coherence between building blocks. Spain and Canada have the most coherent fiscal constitution, while Argentina has the least.[17] Again, results show clearly that constitutional coherence is *independent* of whether a federation is decentralised or integrated. The fiscal constitution of the *European Union* – sometimes considered a proto-federation – is rather decentralised and less coherent (Box 2).

Figure 11. Decentralised versus integrated fiscal constitutions

Ranking order and coherence of the composite indicator



Note: The random weights technique is used to generate the composite indicator. Since co-determination and budget framework indicators are negatively correlated with Factor 1, their values are adjusted so that higher values of these variables indicate more decentralisation.

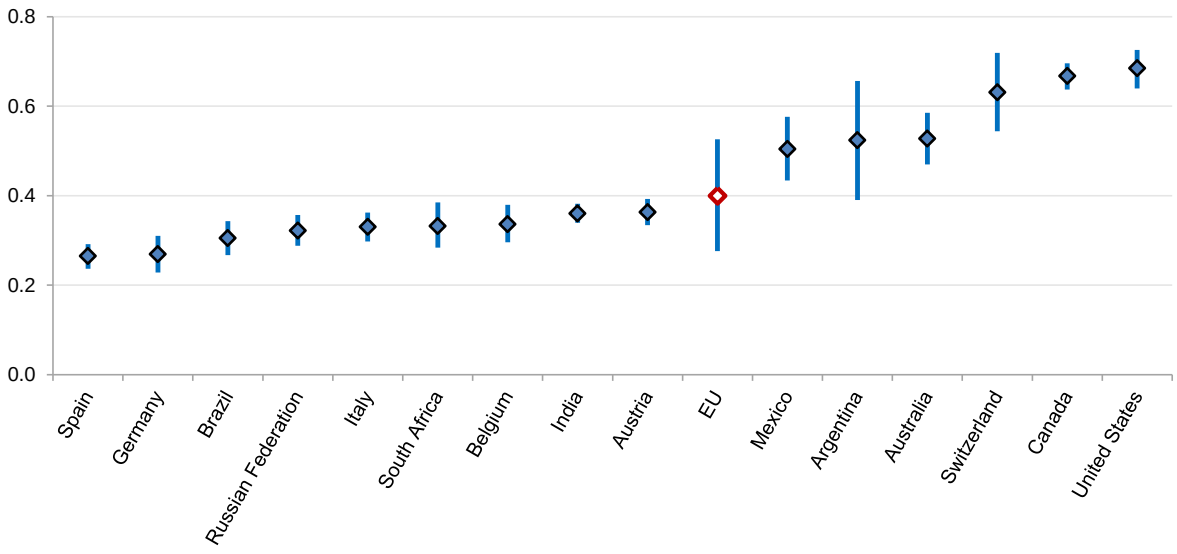
17. The random weights technique takes only coherence *between* the building blocks into account. An alternative method is to combine coherence *between* the building blocks with coherence *within* the building blocks. Hence, an alternative indicator was constructed where 50% of the variance within building blocks (between LLIs) and 50% of the variance between building blocks (between ILIs) are used. This alternative indicator delivers largely similar results, except for Mexico whose overall arrangement becomes more coherent.

Box 2. The EU fiscal constitution: How decentralised, how coherent?

Although the European Union is not usually seen as a true federation, some aspects of its institutional design and governance are akin to those observed in nation-state federations. As in all federations, many policy issues are related to institutional questions such as "who does what" and "how do procedures function". The single market, the (small) EU budget and majority voting in selected policy areas also suggest that the European Union has some features of a federation. Against this background, the Union's constitutional design and coherence can be ranked against nation-state federal countries. The same methodology as for the 15 federations is applied.

The EU fiscal constitution is moderately decentralized and less coherent than those of most federal countries (Figure 12). It is less decentralised than that of the United States, Canada and Switzerland, and less than quasi-decentralised federations like Mexico, Argentina and Australia. On the one hand, the EU fiscal constitution features relatively high autonomy and responsibility of the member states. On the other hand, the EU constitution is characterised by high co-determination and strong hierarchical budget rules and frameworks, i.e. the building blocks of co-operative federalism. The EU fiscal constitution mixes therefore elements from competitive and co-operative federal systems.

Figure 12. The European Union's fiscal constitution: Degree of decentralisation and coherence



This assessment appears to reflect well the EU's constitutional set up. Member states enjoy large fiscal autonomy but a lot of EU policies help co-ordinate fiscal policy across countries and impose constraints on national discretion. Since the EU budget is small, fiscal co-ordination is achieved by a set of rather stringent fiscal rules (OECD, 2014). These rules are imposed through the Maastricht Treaty and Excessive Deficit Procedure, the Stability and Growth Pact, regulations contained in the "Six Pack", the "Two Pack" and the "Fiscal Compact". Policies are also coordinated and subject to surveillance by the Commission and the Council within the annual cycle of the European Semester. Recent changes to the EU's fiscal constitution further reinforced fiscal and economic governance by amending surveillance procedures, sharpening sanction mechanisms and setting intermediate fiscal and economic targets and adjustment procedures, The encompassing fiscal constitution established over the last twenty years and especially in the wake of the economic and fiscal crisis stands in contrast with the wide-ranging autonomy of the member states in tax and spending matters (Wyplosz, 2013)

5. The evolution of fiscal constitutions

54. Fiscal constitutions evolve over time. There are three questions related to the dynamics of fiscal constitutions: (1) "what changes?", (2) "how does it change?", and (3) "why does it change?" (Benz and Broschek, 2013). The first and second question refers to the evolution of the five building blocks. The third question refers to mechanisms that produce constitutional reform. Fiscal constitutions may change because

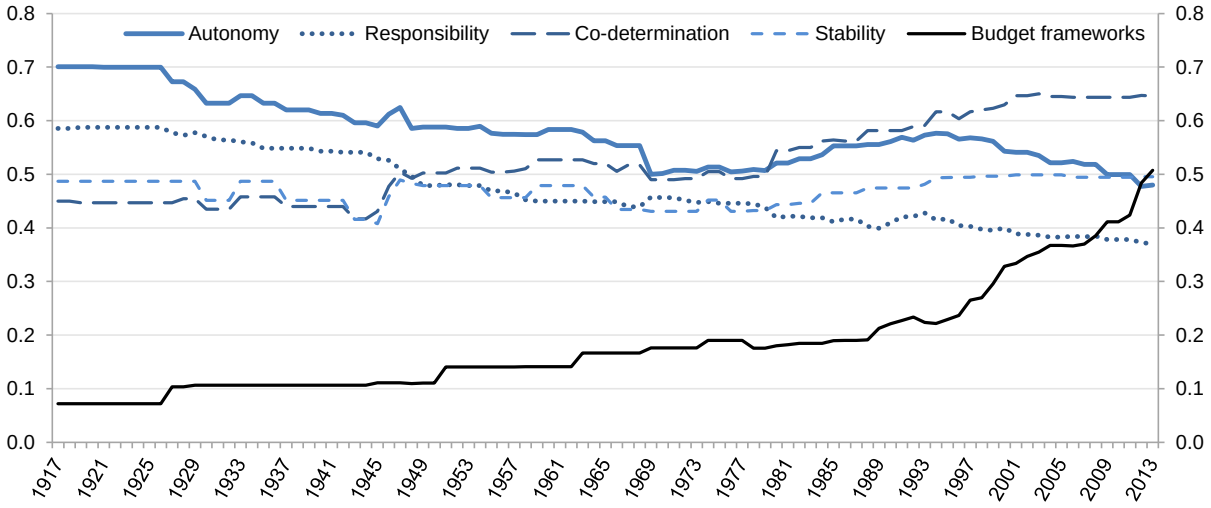
the fiscal or economic environment has changed (booms or crisis times), because the political setting has changed (large political swings; military or authoritarian regimes), or because of separatist movements or a looming break-up of a country. As such, fiscal constitutions do not only reflect fiscal policy considerations, but the wider environment within which countries thrive.

5.1. Evolution of building blocks

55. Fiscal constitutions have become less decentralised and more integrated over most of the time they have been in place, although a few countervailing episodes also occurred (Figure 13). To evaluate the evolution of fiscal constitutions, the average indicator values of all countries are calculated for the years between 1917 and 2013.[18] While autonomy and responsibility of sub-federal entities are trending downward – except autonomy which increased in the 1980s and 1990s – co-determination and budget frameworks tend to strengthen over time. The degree of stability has remained – well – relatively stable.

Figure 13. The evolution of fiscal constitutions

Changes in the five building blocks, 15 country average, 1917-2013



Note: The lines represent the annual average of indicator values for 15 countries. The panel is unbalanced, i.e. countries enter the sample at different points in time (Argentina, Australia, Brazil, Canada, Mexico, Switzerland and the United States in 1917, Austria in 1945, Italy in 1948, Germany and India in 1949, Belgium in 1969, Spain in 1978, Russia in 1993 and South Africa in 1996).

5.2. Explaining the evolution of fiscal constitutions

56. This section provides more insights into the changes to individual building blocks of fiscal constitutions. Since the club of federal countries grew over the last 100 years, these changes both reflect trends within old federations and the birth and subsequent evolution of new ones.

18. The indicators for the following countries and periods are coded: Argentina (1853-2013), Australia (1901-2013), Austria (1945-2013), Brazil (1891-2013), Belgium (1969-2013), Canada (1867-2013), Germany (1949-2013), India (1949-2013), Italy (1948-2013), Mexico (1917-2013), Russia (1993-2013), South Africa (1996-2013), Spain (1978-2013), Switzerland (1848-2013) and the United States (1791-2013).

Autonomy

57. The evolution of states' autonomy can be divided into three periods, (1) the period between 1917 and the early 1980s, (2) the span between the early1980s and mid-1990s, and (3) the period between the mid-1990s to 2013.

- *First period (1917-80*). During the first period (1917-80), lower autonomy was mostly linked to crisis times. Autonomy declined during the Great Depression in the early 1930s, World War II (WWII) and, less clearly, during the oil crises at the beginning of 1970s. Economic shocks and crises often went together with federal interference in the states' autonomy. In Switzerland, the federal government expanded taxing rights at the expense of the cantons. After the war, countries behaved differently. In Australia, the states kept the power to levy income tax, but no state has established its own income tax system. In Canada, on the other hand, provinces including Quebec and Ontario ended the "tax rental agreement" with the federal level and established their own tax base again shortly after the war.

- *Second period (1980 to mid-1990).* During that period, state autonomy increased. States started regaining power in the 1980s. In Australia, the credit limitations imposed by the Loan Council were phased out and the monitoring of states' debt was left to financial markets. Mexico experienced a considerable surge in state autonomy. During the education reform in the early 1990s several policy functions were delegated to the states. In the 1990s, the state level in the United States gained more power after a series of Supreme Court rulings and the reforms of the welfare state. The rulings prescribed devolution of substantial responsibility to the states in implementing welfare policies.

- *Third period (mid-1990s onwards*). The third phase in the dynamics of state autonomy, starting in the mid-1990s, is marked by a renewed decline in state autonomy. Most of this reversal is related to the financial crisis in emerging economies in 1998 and the global crisis of 2008. In the early 2000s, following a debt crisis and ensuing bailouts of sub-national government, the federal government in Brazil passed the Fiscal Responsibility Law in 2000, curbed state fiscal autonomy and re-centralised fiscal policy. In the European Union, the financial crisis of 2008 and debt crisis of 2010 led many countries to introduce or refine numerical fiscal rules. In 2009, Germany adopted a constitutional debt brake covering all levels of government, soon followed by Spain and Italy.

58. Authoritarian regimes tend to limit state autonomy. Direct elections of governors (heads of executive at the state level) are usually suspended in favour of governors appointed by the centre. In Argentina and Brazil, control over governors' appointment by military regimes began in the 1930s, intertwined with democratic episodes where governors were elected. The restoration of democracy in the 1980s in both countries resulted in a surge of state autonomy. In Mexico, state autonomy was limited by (almost) single-party rule at all government levels between 1929 and 1989. Single-party rule was also the norm at both government levels in India until the early 1990s.

Responsibility

59. The responsibility indicator has trended downward since 1917, largely commensurate with autonomy. The surge in the late 1980s can be related to institutional changes in Australia, Canada and the United States. During the 1980s, the federal government in the United States abolished the revenue sharing and equalisation mechanism and reduced the size of the intergovernmental grant system. In Australia and Canada, states and provinces self-imposed a set of fiscal rules, sending a message to financial markets that they will take fiscal sustainability seriously.

60. The main reasons for decreasing state responsibility throughout the 20th century are: (1) a rise in all sorts of intergovernmental transfers, and (2) bailouts. The rise in intergovernmental transfers was partly a response to crises, partly a response to regional disparities between sub-national units and the rise of inequality as a policy issue:

- *Tax sharing*. Tax sharing is a popular means of risk sharing across government levels in many federations, often dating back many decades. Argentina introduced its *Coparticipación* system in the mid-1930s in the form of ordinary legislation. Decreasing revenues during the economic crisis of 1930s led the federal level to unify all taxes into one pool under federal supervision. In 1994 the *Coparticipación* principle was finally anchored in the constitution. Germany's tax sharing mechanism is constitutional since 1955 and was further extended in 1969. A tax-sharing-*cum*-equalisation mechanism was introduced in the mid-1970s, but abolished in 1986 in the United States.

- *Equalisation.* Redistribution across sub-national units has become more important and more institutionalised over time, as reducing inequality gained in importance as a policy objective. Switzerland introduced equalisation in the constitution in 1958, while Canada did so in 1982. Although lacking a constitutional basis, Australia has followed the principle of full horizontal fiscal equalisation since the 1980s. In 2004, Russia introduced an equalisation formula in the Budget Code. Apart from the United States, nowadays all federations have explicit equalisation systems.

- *Stabilisation.* Stabilisation policy and counter-cyclical transfers were introduced in the second half of the 20th century in the wake of the Great Depression. In 1947, the Swiss were the first to adopt a constitutional provision promoting measures to cope with an economic slowdown, and the measures were strengthened in 1978. In Germany the right to pass counter-cyclical policy measures became constitutional in 1967. In Spain, the new constitution of 1978 endowed the federal level with the power to coordinate general economic planning. In Canada, the Federal-Provincial Fiscal Arrangements Act of 1985 enables the federal level to stabilise provincial revenues.

- *Other transfers*. Grant systems were gradually established in most federations, either co-financing policy areas under state jurisdiction or, more recently, compensating for decentralised spending responsibilities. The German and Swiss constitutions contain multiple provisions which stipulate that the federal level "should" or "must support" state activities. Russia increased earmarked transfers to *subjects* in 1999 to finance newly transferred spending mandates. In Belgium the decentralisation move of the last two decades was mostly met with more grants. In 1998, the Mexican *Ley de Coordinacion Fiscal* added transfers for education, health and infrastructure. In general, bar a few exceptions, the institutional anchoring of sectoral grants has increased with the ageing of federations.

- *Bailouts*. Bailouts are a specific form of ad-hoc intergovernmental transfer. Except in Switzerland, all federations bailed out a state or local government at some time. In Australia, New South Wales and in Canada Alberta, respectively, were bailed out during or in the aftermath of the Great Depression of the 1930s. In the United States, New York was bailed out in 1975, shortly after the first oil crisis. In Latin America a first round of bailouts occurred after the fiscal crisis and sudden stop episodes of the late 1980s. Although patterns were similar in Argentina and Brazil throughout the 1990s, the trend in the 2000s seems to diverge. While Argentina bailed out two other states in 2003 and 2011, Brazil managed to obey its constitutional no-bailout strategy during the 2000s.

Co-determination

61. There are two episodes in the dynamics of co-determination worth discussing: *first*, a surge in co-determination in the 1950s and 1960s, and *second* a slower upward trend since the early 1980s.

- Stronger co-determination in the late 1940s and early 1950s followed the end of authoritarian rule in some countries. The evolution during the 1960s was largely driven by Germany and Brazil. In the late 1960s, the power of the second chamber in Germany (Bundesrat) rose further, making Germany one of the federations with the strongest joint decision-making powers. However, the role of the second chamber was reduced again in 2006. On the other hand, co-determination rights were low in Brazil over that period due to authoritarian rule.

- Starting in the 1980s, several countries strengthened co-determination. In the 1980s, Belgium introduced the Consultation Committee composed of the prime ministers of both government levels, which – among others – approves the share of each government in the overall deficit needed to comply with the Stability and Growth Pact. The establishment of a Constitutional Court in 1980 also strengthened the Belgian states. In 1994, the Supreme Court in Mexico was endowed with the right to review federal legislation for compliance with the constitution. In 1982, the Canadian provinces obtained the right to approve constitutional amendments. Australia established the Council of Australian Governments (COAG) in 1992. Finally in Italy, since 1997 political negotiations between the central government and regions take place at the Standing Conference for the Relationship between the State and the Regions.

Budget rules and frameworks

62. Budget rules and frameworks were beefed up at an unprecedented scale over the last decade, after having changed little over a very long period. Numerical rules, procedural rules and other fiscal institutions underwent deep changes. The financial and debt crisis of 2010 was the driving force behind many reforms.

63. The introduction of "second generation" numerical fiscal rules was probably the most salient element of budgetary reform. Following Switzerland that adopted a constitutional debt brake – actually a balanced budget rule – in 2001, Germany, Italy and Spain implemented similar reforms in 2009, 2011 and 2012, respectively. The latter rules were more encompassing because they covered general government and not only – as in Switzerland – the federal level. A Spanish Organic Law also sets debt and expenditure rules for general government. In Italy, expenditure and deficit rules were introduced by the Internal Stability Pact in 1999. As a post-crisis and preventive measure Russia amended its Budget Code in 2012 and introduced a fiscal rule that sets a cap on federal government expenditure. In Germany, expenditure rules operating through political commitment were established already in 1982.

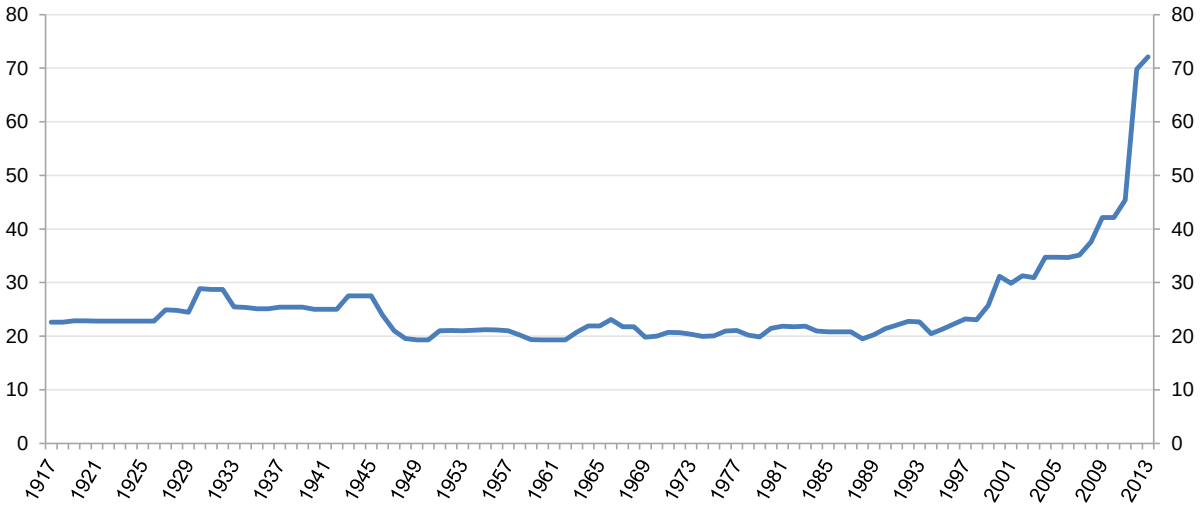
64. Budget institutions and frameworks were also strengthened. The 2012 fiscal reform in Spain introduced medium-term budgetary frameworks for both levels of government and enabled the Supreme Audit Institution to check the budget execution of the autonomous regions. In the same year, Italy harmonised medium-term budgetary frameworks across levels of government and unified accounting methods. Both countries also recently established fiscal councils. In Canada, the Parliamentary Budget Office started operating in 2008 and in Russia the Public Council did so in 2011. In Germany, the 2009 constitutional amendment established the Stability Council. In the United States, the Congressional Budget Office was established in 1974 and in Belgium the High Council of Finance - Section "Public Sector Borrowing Requirement" was launched in 1989.

5.3. Coherence of fiscal constitutions over time

65. Overall, coherence or alignment remained flat over long periods but has considerably increased since the 1980s (Figure 14). The increase over the last 30 years can be traced back to the strengthening of the budget framework in many federations, often in reaction to low state responsibility, and, to lesser extent, to a better alignment of autonomy and responsibility. Decentralised federations evolved less than integrated federations. Incoherence was highest during war periods and during authoritarian regimes. Some constitutions such as Argentina or the United States hardly moved with respect to the level of coherence (not shown in this document).

Figure 14. Constitutional coherence is rising

Average of 15 countries, 1917 to 2013



Note: Incoherence is measured as the average of the variance around intermediate level indicators for all 15 federations in each year. Coherence is measured as the inverse of incoherence, hence an upward sloping curve means rising coherence. The large jump in coherence after 2009 is related to new constitutional fiscal rules and improved budget frameworks in several countries.

66. The clear-cut distinction between decentralised and integrated fiscal constitutions that can be observed today is actually quite recent. A cluster analysis of fiscal constitutions for 1980 and 1996 reveals that the precise division of federations into two groups was impossible (not shown in this document). In 1980 and 1996, at least four clusters of federations could be distinguished, with no characteristic dividing line between them. Over time fiscal constitutions moved towards either of the two models. Put in other words: fiscal constitutions have become more distinct.

6. Fiscal constitutions and fiscal outcomes

67. This section provides a few simple bivariate correlations between selected features of the fiscal constitution and fiscal outcomes. The correlations link fiscal outcomes to both the *level* and the *coherence* of constitutional decentralisation, i.e. to both indicator values and variance. Correlation does not mean causation. Fiscal institutions and fiscal outcomes interact. Fiscal institutions may affect fiscal outcomes, but the latter might also trigger changes to the basic fiscal framework, as shown in Section 5. In some periods the relationship runs from institutions to outcomes, while in other periods outcomes trigger changes to the institutional framework. In order to capture long-term effects, average indicator values for the period 1980 to 2013 are taken.

68. The correlations suggest that fiscal outcomes are hardly related to the *level* of constitutional decentralisation (Figure 15) but more closely related to *coherence* of constitutional decentralisation (Figure 16). In other words, the extent to which fiscal constitutions are decentralised has less impact on outcomes than the extent to which the various arrangements within a fiscal constitution fit together. As such, the results of the simple bivariate correlations linking coherence to outcomes can be summarised as follows:

- *Coherence and spending*. Primary spending growth seems to be positively correlated with less coherence. An unbalanced setting might allow states to shift the consequences of excessive spending to other government levels or general government.

- *Coherence and debt*. Debt growth seems to be positively correlated with less balanced fiscal constitutions. In less coherent settings, e.g. when autonomy and responsibility are not aligned, sub-national units may be able to shift the consequences of fiscal profligacy onto the federal level or other states.

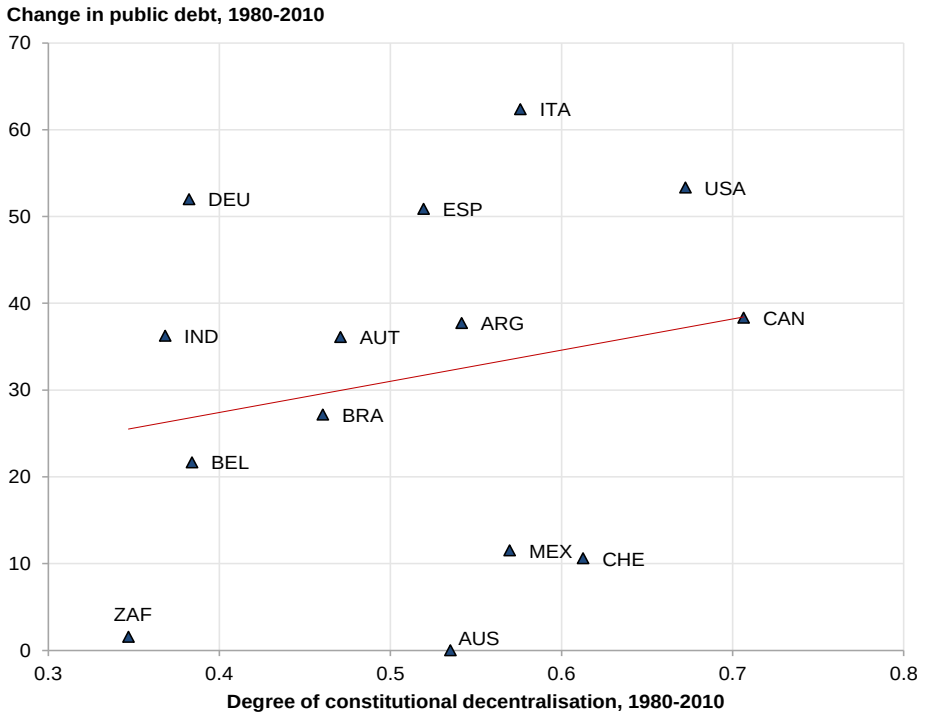
- *Coherence and crises*. There is a correlation between incoherence and the number of crises. In less balanced settings, deficit and debt might accumulate more easily, leading to a higher crisis probability.

- *Coherence and economic growth*. Finally, coherence is positively correlated with growth rates. On the other hand, unbalanced fiscal constitutions may affect the economic fabric negatively through different channels.

69. Linking the *level* of constitutional decentralisation to the same fiscal outcome variables as above (rising debt, growth of primary spending, economic crises, GDP growth) delivers very weak results, maybe with the exception of the relation between decentralisation and debt growth, which is slightly positive.

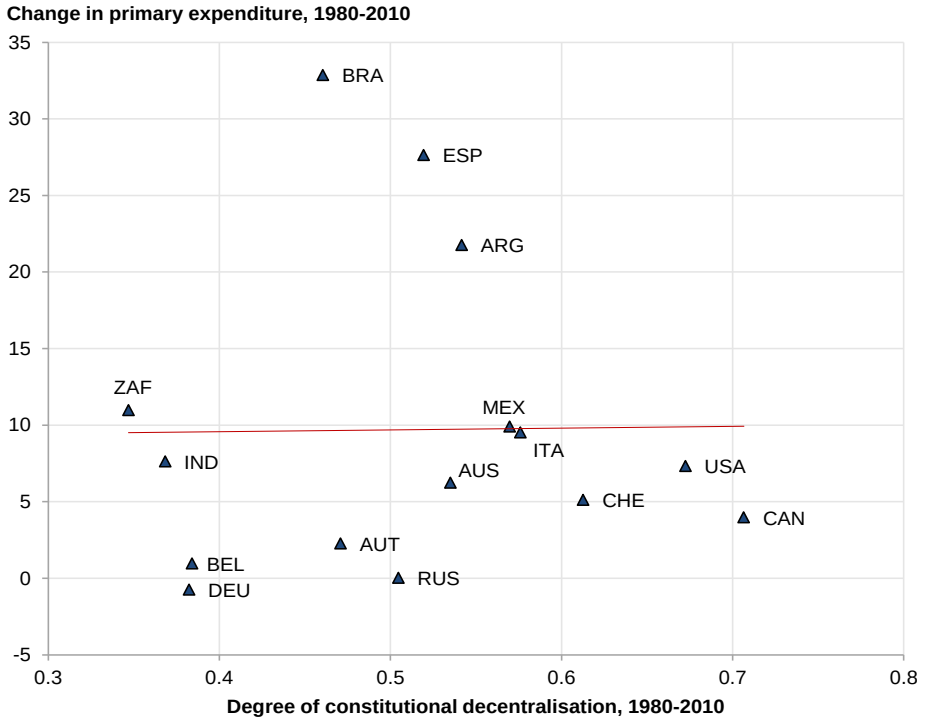
Figure 15. Correlations between the degree of decentralisation and fiscal/economic outcomes

a) Constitutional decentralisation and change in debt stock (% of GDP), 1980-2010

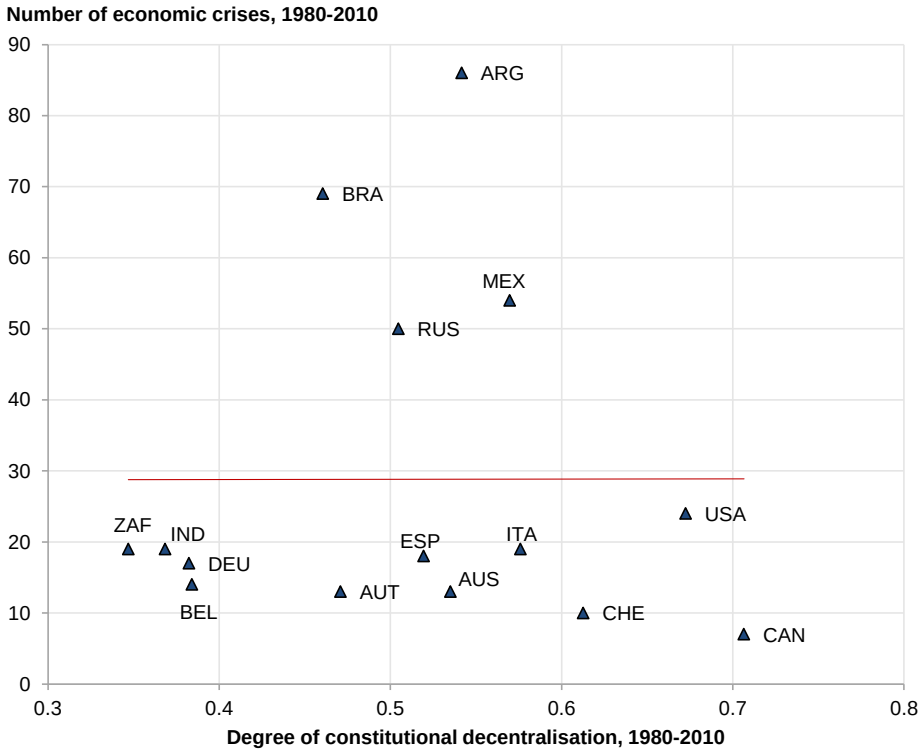


Note: Russia is dropped from the sample since in the period 1993-2010 (for which the fiscal constitution is coded) Russian public debt decreased by more than 100 percent points from 116% of GDP to 13% of GDP.

b) Constitutional decentralisation and change in primary expenditure (% of GDP) 1980-2010



c) Constitutional decentralisation and number of economic crises, 1980-2010



Note: An „economic crisis" is defined as the sum of crisis events such as currency, inflation, stock market, sovereign debt and banking crisis, as defined by Reinhardt and Rogoff (2010) and available at http://www.carmenreinhart.com/data/browse-by-topic

d) Constitutional decentralisation and GDP growth, 1980-2010

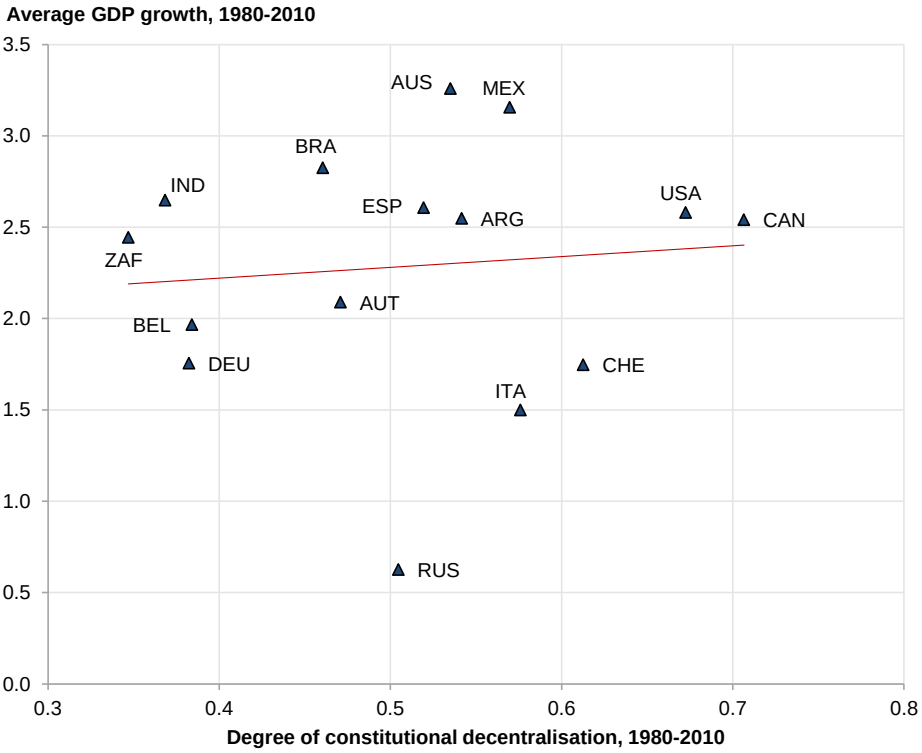
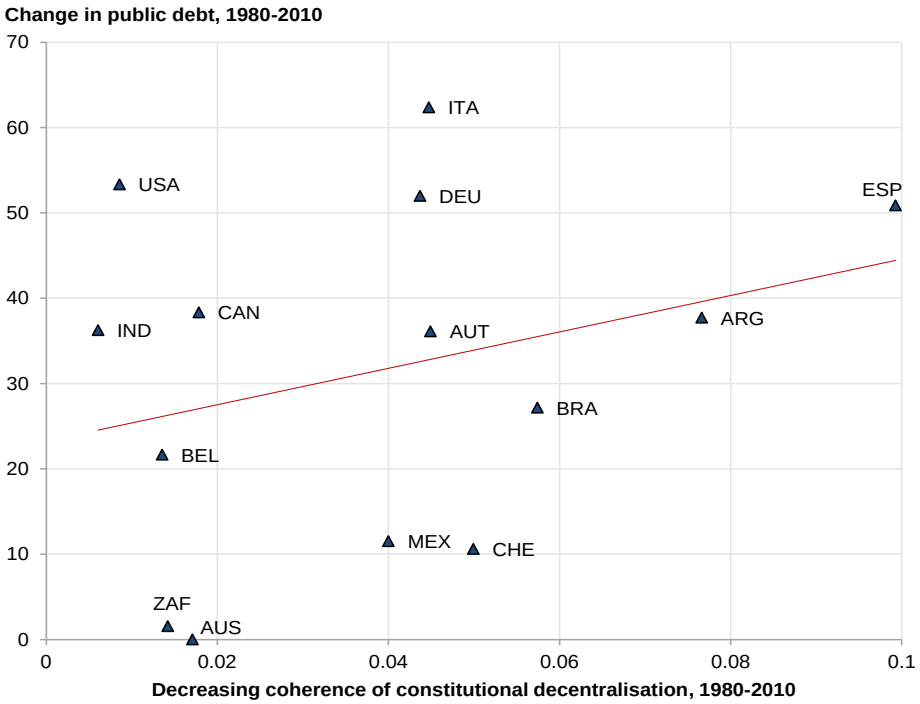


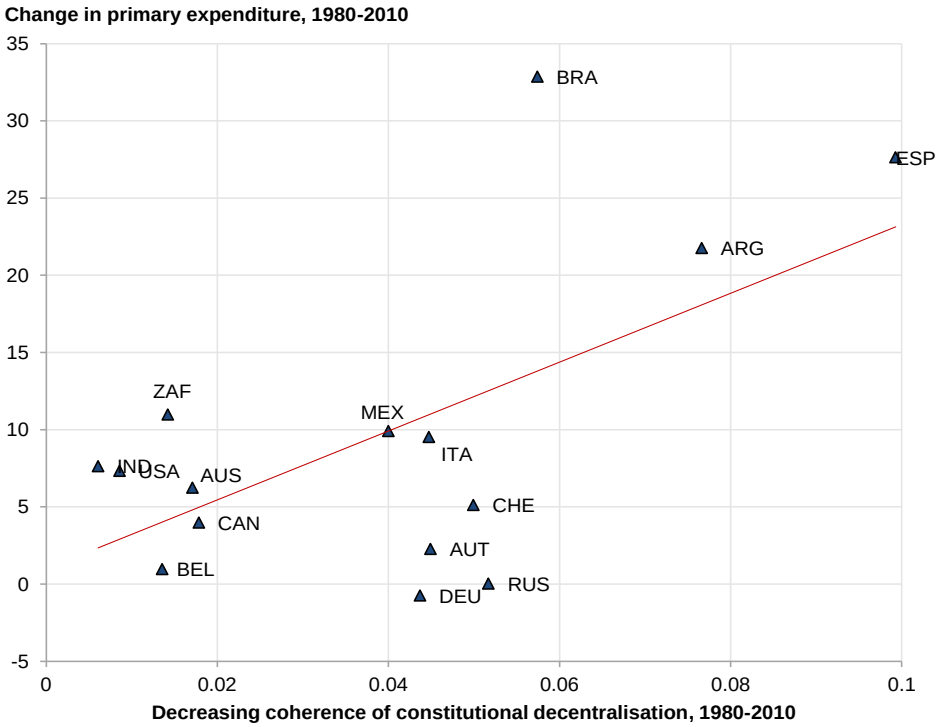
Figure 16. Correlations between the coherence of fiscal constitutions and fiscal/economic outcomes

a) Degree of coherence and change in debt stock, (%of GDP), 1980-2010

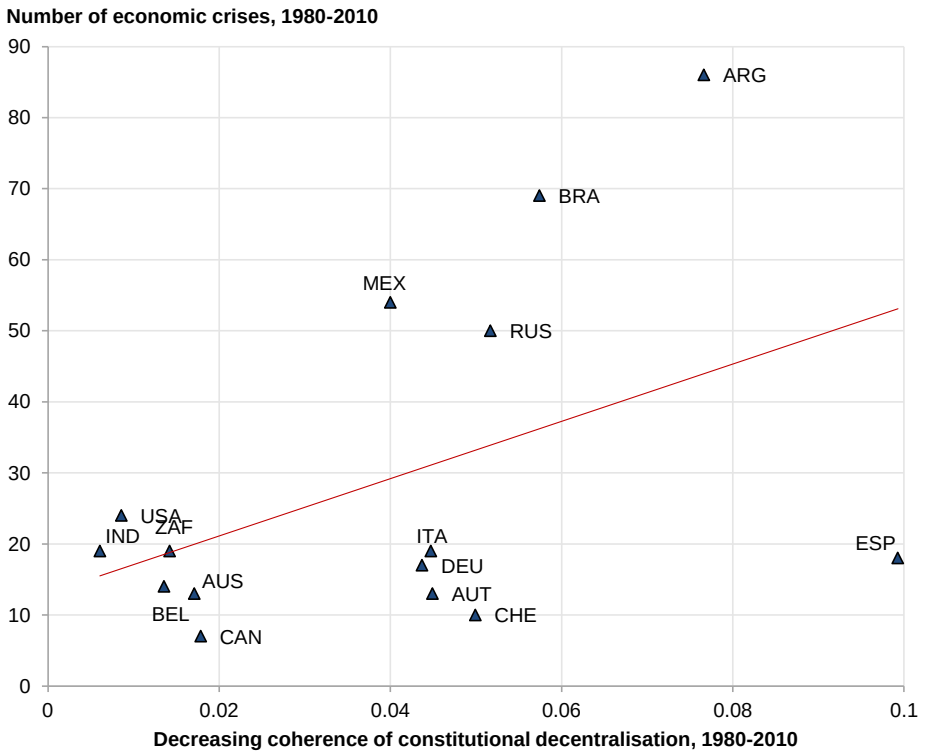


Note: Russia is dropped from the sample since in the period 1993-2010 (for which the fiscal constitution is coded) Russian public debt decreased by more than 100 percent points from 116% of GDP to 13% of GDP.

b) Degree of coherence and change in primary expenditure, (% of GDP), 1980-2010

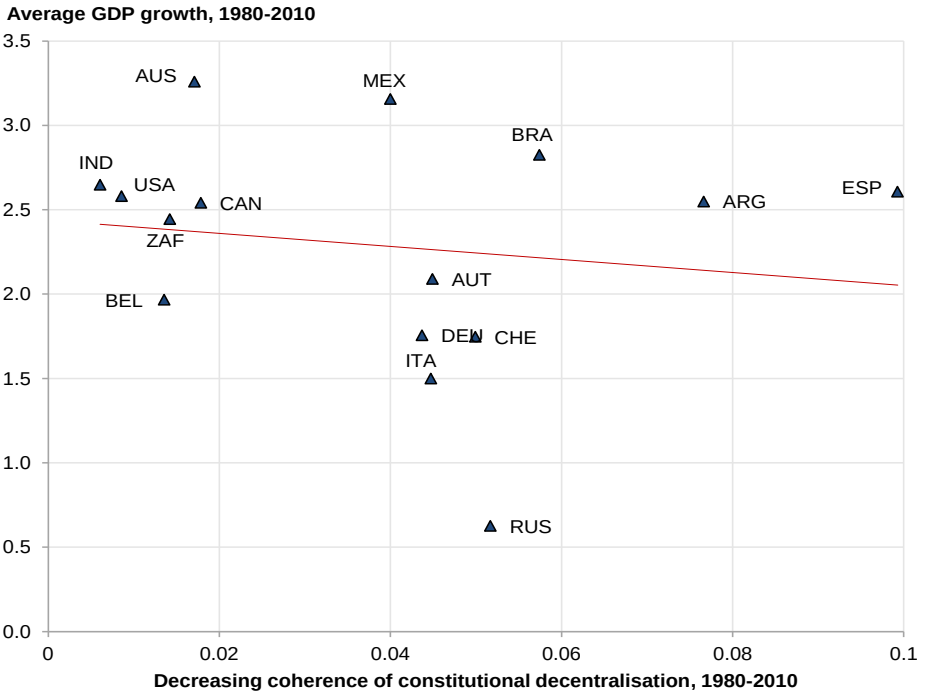


c) Degree of coherence and number of economic crises, 1980-2010



Note: An „economic crisis" is defined as the sum of crisis events such as currency, inflation, stock market, sovereign debt, and banking crisis, as defined by Reinhardt and Rogoff (2010) and available through http://www.carmenreinhart.com/data/browse-by-topic

d) Degree of coherence and GDP growth, 1980-2010



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