

Fiscal Constitutions:
An empirical approach

Fiscale constituties:
Een empirische benadering

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LIST OF ABBREVIATIONS

ATE	Average treatment effect
EU	European Union
GDP	Gross domestic product
IMF	International Monetary Fund
ILI	Intermediate-level indicator
LLI	Low-level indicator
OECD	Organisation for Economic Cooperation and Development
OLS	Ordinary least squares
OVB	Omitted variable bias
RD	Regression discontinuity
US	The United States
TK	Trybunał Konstytucyjny (the Constitutional Tribunal)
VFI	Vertical fiscal imbalance

CHAPTER 1

INTRODUCTION TO THE TOPIC

1.1. Fiscal constitutions: definition and scope

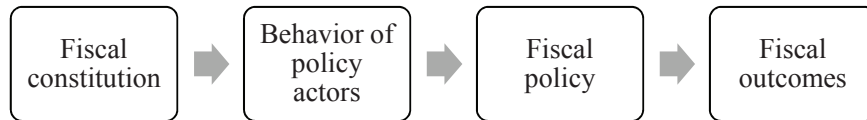
“Fiscal constitution” is a buzzword. The internet search engines now report more than three hundred thousand hits for the term “fiscal constitution”,¹ which indirectly establishes the popularity of the term. Although used frequently, particularly in the context of the recent sovereign debt crisis in the Eurozone, the notion of the fiscal constitution is rarely precisely defined. Since the concept of a fiscal constitution is at the core of this dissertation, it is both legitimate and desirable to start a “journey” into the fiscal constitution by defining this concept.

Fiscal constitutions contain a country-specific set of laws, rules and regulations, which affect decision-making in the area of fiscal policy.² Fiscal constitutions cover constitutional law as well as ordinary statutory law like basic fiscal and financial laws, rulings of the constitutional court, norms and cultural commitments. Fiscal constitutions determine 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, p. 5). By shaping incentives and limiting arbitrariness, the fiscal constitution can therefore determine the course of fiscal policy and fiscal outcomes (Diermeier and Krehbiel, 2003, p. 127). A simplified and somewhat mechanical causal relation from fiscal constitutions to fiscal outcomes is shown in figure 1.1.

¹ See, for instance, Google Scholar available at www.scholar.google.com (accessed on February 27, 2015).

² The notion of fiscal constitution was presumably coined by Buchanan and Wagner (1977, p. 23). According to them, fiscal constitution is a set of formal and informal rules governing fiscal choice. Note that James Buchanan was a Nobel Prize winning economist in 1986 (see http://www.nobelprize.org/nobel_prizes/economic-sciences/laureates/1986/buchanan-facts.html accessed on March 5, 2015).

Figure 1.1. Fiscal constitutions shape fiscal policy: the link from institutions to outcomes



Source: Raudla (2010, p. 111). 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.

Even though at first glance the notion of a fiscal constitution suggests a reference to the written constitution as a document such named, academic researchers also refer to the broader definition of a fiscal constitution. According to Berggren and Kurrild-Klitgaard (2002), one should distinguish between the fiscal constitution in a narrow sense and the broad (effective) fiscal constitution.

The narrow fiscal constitution will be perceived literally as a set of provisions affecting public finance, which are enshrined in the written constitution.³ As such, the narrow fiscal constitution provides a (relatively) stable institutional framework for fiscal policy over time.⁴ The stability of fiscal constitution is guaranteed by high and enforceable political costs for breaching, bypassing or changing constitutional law. According to Drazen (2004), there are two features of constitutional law that potentially impose high political costs.

First, constitutional law is granted a high status in a hierarchy of the legal sources by virtue of the fact that constitution is more difficult to amend or abolish. Constitutional law is typically subject to harsher amendment procedures than ordinary statutory laws.⁵ Stringent procedures increase the

³ Constitution is at the apex of the legal system. According to the hierarchy of legal sources applied in this thesis, ordinary statutory laws, regulation and administrative decisions are subordinated to the constitution and can be reviewed for compliance with the constitution (in Latin the concept is known as *lex superior derogat inferiori*) (Akehurst, 1975). See also Kelsen (1958, translation 1982).

⁴ There is an inherent trade-off between stability and flexibility of the constitution. Constitutional law cannot easily adapt to a changing environment because amending the constitution is usually a tough exercise. Given this inflexibility, an ill-designed fiscal constitution could be therefore a persistent burden. A careful ex-ante design of a fiscal constitution is, hence, essential (Campanella, 2011).

⁵ Besides qualified-majorities and popular referendums, waiting periods and (in federal systems) ratifications by states are often required to amend a constitutional provision. Due to these restrictions, the constitutional law is rarely changed even under tempting circumstances. For instance, in Australia the constitution was changed merely eight times since its outset in 1901. It is because the Constitution of Australia requires a referendum in which double majority is needed to pass an amendment, i.e. eligible citizens need to vote 'yes' nationally, as well as in the majority of states.

costs of amending the constitution, i.e. transaction costs to build a coalition for constitutional amendment.

Secondly, constitutional law refers to issues that are considered fundamental to society in a deeper conceptual sense, similarly to basic rights or liberties (Drazen, 2004, p. 26). The elevation of the principle of fiscal sustainability to constitutional law, ranked at the apex of the hierarchy of legal sources, may signal the fact that fiscal discipline is perceived as a basic goal of society or that the society attaches fundamental significance to it (similarly to freedom of speech, for instance). A fundamental right enshrined in the constitution is one that is seen by its very nature as being more persistent than an ordinary legislation (Drazen, 2004, p. 26). Additionally, non-compliance with a fundamental right may bring a more fierce reaction, strong criticism from the public and incur more negative publicity, as compared to the breach of an ordinary legislation (Blume and Voigt, 2013). This imposes high reputational (prestige) costs on the incumbents, which harm their re-election prospects. It is also of note that constitutional provision ensures greater visibility, which reduces the costs of monitoring for compliance. In every society, constitutions attract special attention. People are willing to discover what their rights are and whether or not they are violated. The legalization of a fiscal rule on a constitutional level may therefore induce the creation of mechanisms to monitor compliance that had not previously existed (Drazen, 2004, p. 22). These mechanisms may be created outside the political system, for example, within civil society (especially through non-governmental watchdogs) or in the press.

From their early days, constitutions have contained some provisions pertaining to public finance (Kosikowski, 2004). The very first constitutions were focused, however, on general procedural rules regarding taxes and state budgets.⁶ More restrictive constitutional regulations on public

⁶ The *French Constitution 1791* – one of the first constitution ever enacted – has devoted the whole chapter to issues related to public finance. The section was entitled “About public taxation”. To some extent, this practice of placing public finance provisions within a stand-alone chapter was continued in the next centuries. For instance, the section entitled “Finance” can be found in the *Belgian Constitution 1831* and the *Prussian Constitution 1850*. The separated chapters on public finance under different labels were entrenched in the *Finnish Constitution 1919*, the *Estonian Constitution 1920*, the *Lithuanian Constitution 1922* and the *Romanian Constitution 1923*. Constitutions launched after the World War II seem to recognize the pattern of devoting the entire chapter to issues pertaining to public finance. For example, these were the cases in Japan (1946), Germany (1949), Greece (1975) and Spain (1978). Also Israel devotes one of its basic laws of 1975 to *the State Economy* to regulate financial flows from and to the state. The separated chapters on public finance are included also in the new constitutions of some post-socialist countries, i.e. Slovenia (1991), Lithuania (1992), Bosnia and Herzegovina (1995), Poland (1997), Albania (1998) and Hungary (2011). The primary purpose of having an exclusive chapter on public finance in

finance, i.e. especially numerical fiscal rules⁷, have begun operating within a constitutional framework only recently. Notwithstanding that, constitutions are somewhat crude documents and their meaning is made precise, and thus workable, only by ordinary statutory laws, constitutional court decisions and overarching norms. Although the country's constitution is the most important contract for a given country and it sets the framework for all other contracts, i.e. statutory laws, regulations and judicial decisions, it is also a vastly incomplete contract⁸. Constitutions frequently contain broad and imprecise provisions, which leave ample leeway for reinterpretations⁹ (Rodden, 2006, p. 358). As a result, a plethora of other legal arrangements with lower status in the hierarchy of legal sources (e.g. secondary statutory laws, specific regulations, judicial decisions) attempt to fill the grey areas uncovered by the constitution or simply complement broad and vague constitutional provisions. Another problem with the "black letter" constitution relates to an implicit constitutional change (Voigt, 1999). This is the change that relies on the modified interpretation of the constitutional document and not on its explicit amendment. While the meaning of the constitution might change, the constitutional document itself remains unchanged. For that reason, one may argue that the broad definition of fiscal constitution is somewhat more accurate than the narrow definition as it allows the inclusion of all actual rules guiding fiscal policy, both on constitutional and "sub-constitutional" level in written and unwritten form. Due to the fact that constitutional law provides only a general framework for conducting fiscal policy and is, therefore, very incomplete institutional framework, this dissertation applies the broad definition of fiscal constitution, although in some parts the emphasis is specifically placed on the fiscal constitution in a narrow sense. Consequently, for the purpose of this dissertation, the fiscal

constitutional law is to stress the importance of fiscal framework in the whole subject-matter regulated by the constitution. For more on history of fiscal aspects of constitutions see Sokolewicz (2005).

⁷ Numerical fiscal rules are defined as enduring institutional (legal) restraints on public finance, typically expressed in terms of a quantitative indicator for fiscal performance (Kopits and Symansky, 1998, p. 2). One of the best-known examples of the numerical fiscal rule is the deficit ceiling of 3% of GDP imposed by the Maastricht Treaty (formally Treaty on the European Union).

⁸ Constitutions, as any other contracts, are incomplete, i.e. they do not regulate for all possible contingencies. This is due to the insurmountable transaction costs hypothetically involved in designing a complete (fully specified) constitution covering all possible states of the world (Schäfer and Ott, 2004, pp. 278-280).

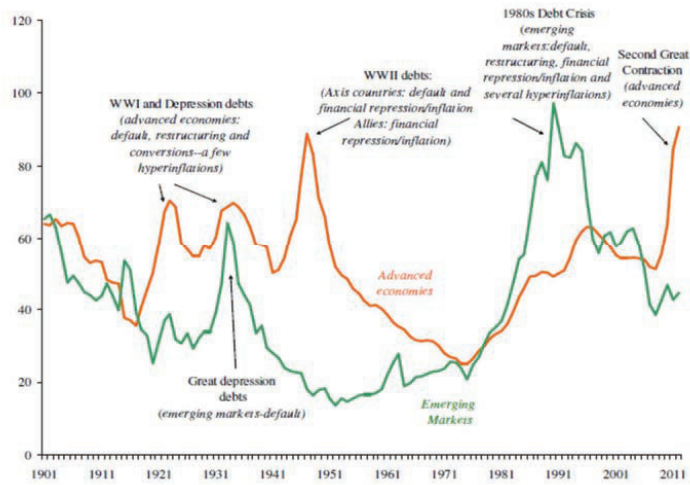
⁹ For instance, in Canada constitution assigns the power to spend on anything needed for "peace, order and good government" to the federal level. On the other hand, it endows provinces with the right to spend on "property and civil rights". Over the last 150 years since 1867 a system has evolved with respect to spending in which anybody can do almost anything since almost anything can be interpreted as having to do with "peace, order and good government" or "property and civil rights" (Bird, 2014).

constitution consists of all legal arrangements – irrespective of their status in the hierarchy of legal sources – and norms, which influence the conduct of fiscal policy and, thus, fiscal outcomes.

1.2. Description of the problem and purpose of this dissertation

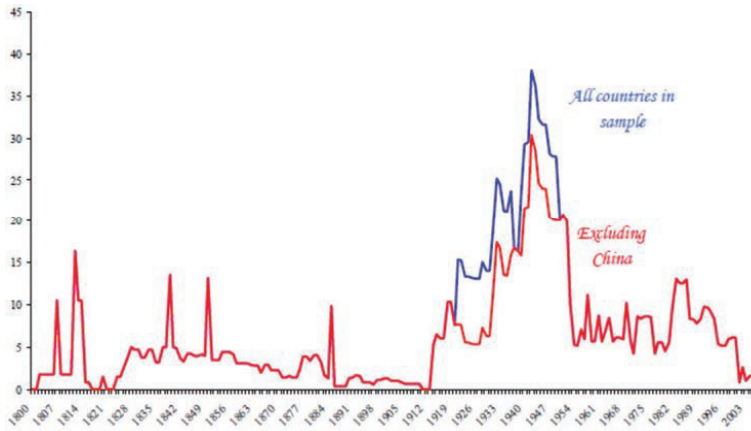
An overarching question posed by this dissertation is: *why does the public debt grow* (see figure 1.2), and *why are fiscal (debt) crises repetitive and so widespread* (see figure 1.3)? In other words, why do countries not learn from their own mistakes and the mistakes of their counterparts in preventing the growth of public debt and fiscal crises? From the behavioral point of view, one might argue that the problem is with the fallacy of the “this time is different” perception. “This time is different” syndrome relates to over-optimism regarding the risks stemming from high public debt and the likelihood of the fiscal crisis occurrence (Reinhart and Rogoff, 2011, p. xxxiv). Irrespective of past events, the subsequent governments continuously claim that they apply better policies than their predecessors, that they are more knowledgeable, and that they learn from past failures. If fiscal crisis occurs due to high public debt, the governments tend to attribute it to the external shocks and mistakes committed by the predecessors, rather than to their own policies. Likewise society persuades itself that the contemporary boom, unlike many booms that preceded collapses in the past, is built on sound bases, structural reforms, technological innovation, and decent governance (Reinhart and Rogoff, 2011, xxxiv). However, “this time” is almost never different. A recent sovereign debt crisis in the euro area, which can be traced back to 2010, exemplifies it perfectly.

Figure 1.2. Evolution of central government public debt in advanced and emerging economies



Source: Reinhart and Sbrancia (2011, p. 8).

Figure 1.3. Countries in default by their share of world income in the period 1800-2006



Source: Reinhart and Rogoff (2008, p. 6).

The behavioral fallacy of “this time is different” attitude still does not provide a full answer to the question: *why do governments generate permanent deficits that cause ever-growing debt and trigger fiscal crisis?* It seems the main problem relates to the fact that fiscal policy is a result of the political process, which turns out to be biased toward a deficit.¹⁰ The public choice literature provides an insight into this “political deficit bias” problem.¹¹ This literature emphasizes that politicians – similarly to other individuals – are interested in pursuing their own objectives. For politicians these are re-election prospects, reputational rewards, and maximization of private gains. These objectives are often pursued by means of budget deficits. What is attractive about deficit is its short-run effect (short-term economic boost, if any), which might come at the expense of some negative short- and long-term consequences (see section 1.3).

¹⁰ Deficit as a fiscal phenomenon has its economic rationale conceptualized by Barro (1979). According to Barro’s tax smoothing hypothesis, the deficit and the surplus should be used optimally in order to minimize the distortionary effect of taxation. To avoid the negative effect of increased taxation, the optimal solution is to keep the tax rate constant over the business cycle, i.e. to allow for the budget deficits during the economic downturn and surpluses during the economic upturn. The tax smoothing hypothesis states that under the assumption of symmetric business cycles, both the deficits and surpluses are supposed to equalize and be neutral for the accumulation of debt. Therefore, the more permanent accumulation of debt occurs only when periods of stagnations, recessions and wars prevail over the economic prosperity and peacetime. However, as pointed out by Roubini and Sachs (1989), the tax smoothing hypothesis cannot explain a sharp debt accumulation in developed countries in 1970s and 1980s. The actual deficits of this time were too large as compared to what would have been justified by the unfavorable economic conditions. Barro’s model also fails to explain why debt accumulation occurred in some countries and not in others. Consequently, Roubini and Sachs stressed that the driving forces of the excessive and persistent deficits are rather political in nature.

¹¹ There are at least six well established hypotheses explaining the political deficit bias. (1) *The political business cycle hypothesis*, which says that fiscal loosening occurs prior to elections and is only rarely compensated by fiscal tightening after the elections (Nordhaus, 1975). (2) *The fiscal (deficit) illusion hypothesis* relies on the fact that electorate underestimates the future tax burden related to the current debt (Alesina and Perotti, 1996). Owing to the bounded rationality of electorate (Simon, 1985), politicians are prone to spend excessively while keeping current taxation unchanged. (3) *Intergenerational conflict hypothesis* stems from the fact that future generations are under-represented in collective decision-making (Tabellini, 1991). Since incumbent governments do not face opposition from the next generations, they increase current spending knowingly that burden of public debt will be shifted to future generations. (4) *Hypothesis on strategic use of public debt* says that if the government is not sure of being re-elected, it will behave strategically by reducing a room-for-budget maneuver of future government through excessive deficit policy (Tabellini and Alesina, 1990) (5) *The conflict of interest (war of attrition)* between political parties within the coalition government results in a strategic political bargaining leading to a delayed fiscal reform and, thus, to excessive deficit over a longer period of time (Alesina and Drazen, 1991). (6) *The fiscal common problem* results from the fact that general taxation is used to finance the needs of specific constituencies or targeted public policies (Weingast et al., 1981). Under these circumstances, it is rational for politicians to increase spending for their electoral districts because the benefits are internalized by the district voters while the costs are spread among general taxpayers. Since all politicians might think along these lines, the consequence is the tragedy of “fiscal common” (Alesina et al., 1997).

Fiscal constitutions should be crucial in reducing “political deficit bias”. Fiscal constitutions – if complied with¹² – should set credible rules that drive or discourage certain policy patterns and reduce political discretion in the area of fiscal policy. Given the occurrence of permanent deficits, excessive debts and repetitive fiscal crises, immediate questions that arise are as follows: Why are the current fiscal constitutions unable to prevent political deficit bias? Are fiscal constitutions ill-designed? Alternatively, is our knowledge about fiscal constitutions and how they influence fiscal behavior and outcomes really sufficient to give proper policy recommendations?

This dissertation presents a rather critical and conservative view concerning the questions posed. The claim here is that the current knowledge about the working of fiscal constitutions and how they influence deficit and debt is deficient, and not sufficiently robust to achieve educated policy advice. Facing a trade-off between exhaustiveness and precision, this dissertation pays particular attention to precision. Consequently this dissertation, instead of searching for an exhaustive answer to the overarching question: “*why does the public debt grow and why are fiscal crises repetitive?*”, rather takes a step back and asks much narrower questions. Those narrow questions are selected after reviewing and identifying the main weaknesses and critical gaps in the modern literature on fiscal constitutions.

The literature on fiscal constitutions and their effects is organized within three main streams, i.e. numerical fiscal rules, procedural fiscal rules and political institutions. The former refers to Buchanan’s concept of rules, such as balanced budget¹³, expenditure¹⁴, revenue¹⁵ and debt rules¹⁶.

¹² It almost goes without saying that for fiscal constitutions to be effective (i.e. successfully correct for political deficit bias and make fiscal policy more predictable and disciplined) they must be complied with. If fiscal rules and norms are permanently violated or changed, they cannot really be considered as elements of the fiscal constitution (see continuous amendments to *Gramm-Rudman-Hollings Deficit Reduction Act 1988* in the US and the *Israeli Deficit Reduction Law 1991*) (Drazen, 2004, p. 25).

¹³ For instance, the constitutional debt brake enacted in Switzerland in 2001 is one of the examples of the balance-budget rules (see Article 126 of the *Swiss Federal Constitution 1999*). This rule dictates the budget balance over the business cycle, i.e. practically ‘zero’ deficit (any deficits and surpluses are supposed to cancel out within the economic cycle).

¹⁴ For instance, in Poland the expenditure growth is limited to the real GDP growth rate, taking into consideration the inflation forecast for the upcoming year (Article 112aa of *Public Finance Act 2009*).

¹⁵ For instance, Lithuania introduced a revenue rule in 2007. According to it, any unexpected revenue within the year should serve to cut the general government deficit (see Article 3(4) of the *Law on Fiscal Discipline 2007*).

¹⁶ A good example of the debt rule is the Polish constitutional debt ceiling established in 1997, which sets the upper limit of 60% of GDP for the public indebtedness (see Article 216(5) of the *Polish Constitution 1997*).

The second stream of literature was developed by von Hagen (1992). This literature focuses on effects of procedures guiding the preparation, adoption and implementation of the state budget. The third stream of literature is best conceptualized by Persson and Tabellini (2003). They investigate the effects of political institutions on different fiscal variables.¹⁷ Their main inquiries pertain therefore to fiscal effects of basic institutional choices such as (1) parliamentary versus presidential system, (2) unicameral versus bicameral parliament,¹⁸ (3) proportional versus majoritarian electoral system, (4) unitary (centralized) versus federal (decentralized) countries, (5) strong versus weak judiciary, and (6) broad versus narrow direct democracy. A concise literature review of empirical research on the fiscal constitutions follows.

The pioneering empirical studies on the effectiveness of the numerical fiscal rules were conducted in the United States (hereinafter the US). For instance, Bohn and Inman (1996) demonstrate that restrictive budget balance laws are conducive to fiscal discipline. Their empirical investigation is pursued for 47 U.S. states over the period 1970-1991. The overall results suggest that the states with end-of-the-year no-carryover balance budget rules have lower deficits than the states where the fiscal rules are less stringent. Besides the rules' design, the effectiveness of the fiscal rules is also dependent on their legal status and enforcement mechanism. It turns out that states where rules are embedded in the states' constitution and the Supreme Court judges are independently elected have better fiscal position than states with only statutory enshrined rules and politically appointed judges. Moreover, in states with tighter fiscal rules, adjustments are mostly achieved through the reduction of current spending rather than through the increase in taxes. Primo (2007), on the other hand, conducts an empirical examination of constitutional and statutory budget balance laws for 47 U.S. states for the period 1969-2000. Contrary to Bohn and Inman (1996), Primo investigates the effectiveness of the rules in constraining the overall level of spending. Results suggest that constitutional budget balance provisions that prohibit deficit carryover, enforced by the Supreme Courts, by which judges are elected (and not appointed), are effective in

¹⁷ Political institutions only implicitly (indirectly) influence fiscal performance. It means that certain fiscal outcomes are actually the byproducts of particular political interactions and incentives. This is contrary to the numerical and procedural fiscal rules, which are considered as direct constraints of political fiscal incentives and serve as explicit guidelines for budgetary policy.

¹⁸ Bicameralism is the separation of the parliament into two chambers (so called upper and lower chamber, or first and second chamber). Importantly, once this separation is in place, law to be enacted usually requires the approval of each chamber (Hickey, 2013). Contrary to this, unicameralism relies on existence of only one chamber of the parliament.

keeping down states expenditure. The author also provides evidence that statutory rules, enacted in 1970s in order to explicitly limit tax and expenditure, are not effective in restraining the growth of states' spending.

Feld and Kirchgässner (2008), on the other hand, investigate the effectiveness of the statutory debt brakes (balance budget rules) in the Swiss cantons. The empirical examination conducted for 16 Swiss cantons over the time span 1980-1998 suggests that debt brakes positively influence cantonal and local budget balance. Consequently, they are effective in constraining short-run fiscal policy incentives. Furthermore, Krogstrup and Wälti (2008) find a positive effect of the fiscal rules on the cantonal fiscal performance, i.e. restrictive rules lead to a drop in budget deficits. Their panel investigation encompasses 25 cantons in the years 1955-1999. Tellier and Imbeau (2004) and Grembi et al. (2011) investigate fiscal rules' effectiveness in Canadian provinces and Italian municipalities, respectively. The former study analyses the stringency of anti-deficit laws in the panel of 10 Canadian provinces over the period 1968-2000. Since stricter fiscal rules are associated with lower deficits, the authors conclude that rules are effective tools in restraining opportunistic politicians. In addition, Grembi et al. (2011) find that fiscal rules matter for a fiscal performance. The authors exploit a quasi-experimental setting of the fiscal reform, which was carried out in the Italian municipalities in 2001. Overall, as demonstrated by the authors, the abolishment of the balanced budget rule led to a 40-60% larger budget deficit in the exempted municipalities. This fiscal gap was largely due to the tax reliefs and consequently reduced municipal income.

One of the first cross-country analyses of numerical fiscal rules was pursued by Alesina et al. (1999). These authors measure the stringency of the rules by means of a composite indicator of budgetary process. The indicator quantifies all procedures and rules which guide drafting, approval and implementation of the budget for 20 Latin America and Caribbean countries in the years 1980-1992. The empirical results suggest that the value of the index negatively correlates with the primary budget deficit. After decomposing the index into three sub-indices, i.e. borrowing constraint, agenda setting, and transparency sub-indices, it turns out that only the borrowing constraint component is precisely estimated and reaches standard level of significance. Therefore, fiscal targets and debt ceilings are the most crucial in limiting the scope of public deficit.

Ayuso-i-Casals et al. (2007) is one of the first studies to investigate the effectiveness of national numerical fiscal rules in the European Union (hereinafter the EU). Their empirical examination comprises 22 EU member states over the period 1990-2005. To capture the rules' effectiveness, a synthetic indicator of numerical fiscal rules was created. It encompasses the qualitative features of the fiscal rules such as their coverage (general, central and local government), legal status, monitoring, enforcement (whether certain actions are taken in case of rules' violation) and media visibility. Stronger fiscal rules are reflected in a higher indicator. Overall, the authors show that the existence and strength of numerical fiscal rules positively correlates with fiscal discipline. The coverage and the enforcement turn out to be the most crucial dimensions of the numerical fiscal rules, which matter for the capacity to guarantee fiscal discipline. Consequently, the larger the coverage (preferably general government) and the stronger the enforcement mechanism of the rules, the more successful the rules in constraining fiscal profligacy.

The effectiveness of constitutionally embedded fiscal rules in constraining a growth of public expenditure is studied by Blume and Voigt (2013). Their cross-section analysis investigating 47 countries suggests that constitutional numerical fiscal constraints are marginally effective in restraining the growth of total public spending. Blume and Voigt also conclude that numerical fiscal rules imposed by the Maastricht Treaty have no effects.

The positive effects of numerical fiscal rules on fiscal discipline can be found in many other studies. These are among others: Woo (2003), Alt and Lassen (2006), Lagona and Padovano (2007), Tapsoba (2012), Foremny (2014), Kantorowicz (2015). The negative effects of rules such as fiscal gimmickry¹⁹ or crowding out of capital investments²⁰ are discussed by, for instance, Kopits (2001), Milesi-Ferretti (2003), Blanchard and Giavazzi (2004).

¹⁹ In order to comply with the rules, countries often resort to the so-called "fiscal gimmicks". Fiscal gimmickry is typically materialized through the creative accounting methods, one-off measures and off-budgeting. Creative accounting methods refer to the financial operations which influence fiscal deficits and debt (typically downward). Among others, the most usual accounting gimmicks are the misclassifications of the capital injections (e.g. to the chronically loss-making public enterprises), overoptimistic growth forecasts and favorable methodologies of estimating potential output (e.g. Hodrick-Prescott filtering of real GDP). One-off measures, in turn, are classified as government decisions of a non-recurrent nature. Most typically, they influence government budget balance in a given year and not permanently. For instance, the privatization of non-financial assets owned by the state, tax amnesties and accelerations of tax intakes are among the most frequently used one-off measures. Lastly, off-budgeting methods refer to the creation of extra-budgetary funds, which serve to execute government spending without revealing them in the official budget statistics (e.g. corporatization of entities in charge of

Contrary to the numerical fiscal rules, which contain binding numeric targets, the procedural fiscal rules focus on the budgetary process. The procedural fiscal rules consist of all regulations governing the decision-making process leading to the formulation of the budget by the government, its approval by the parliament and its implementation by the executive (von Hagen, 1992; von Hagen and Harden, 1994, 1995). There are two models of procedural rules, i.e. centralized procedural rules and fragmented (decentralized) procedural rules. A greater number of agencies with decision-making power over the budget and representing the interests of different constituencies (e.g. ministers, political parties) leads to the fragmentation of budget process. The fragmentation, in turn, induces aggravation of the fiscal common problem²¹ and thus leads to deficit bias (Kontopoulos and Perotti, 1999). To prevent fragmentation, more centralized procedural rules need to be adopted. The hypothesis that centralization of the budget process reduces the fiscal imbalances via elimination of the fiscal common problem was tested empirically. On the one hand, the studies underline the crucial role of finance ministers as fiscal entrepreneurs able to centralize the budget process. Strong finance ministers are powerful in reducing the number of amendments at the parliamentary stage and limiting changes at the execution stage (Hallerberg et al., 2006; 2009; Fabrizio and Mody, 2006). On the other hand, there is also some empirical evidence in favor of the contract approach. Contracts, which are signed at the planning stage of the budget, are a set of binding fiscal agreements that include fiscal objectives and limitations negotiated among all members of the government. The negative correlation between the degree of centralization through contracts and debt-to-GDP was found, for example, in 10 CEE countries (Gleich and von Hagen, 2000; Gleich, 2003).

Various political institutions also have effects on fiscal variables. For instance, Persson and Tabellini (2003) investigate the fiscal effects of two constitutional institutions, namely the form of government (presidential versus parliamentary systems) and the electoral system (majoritarian versus proportional). They consider four groups of fiscal outcomes: (1) government expenditure, (2) tax revenue, (3) budget balance, and (4) share of social welfare spending. Persson and

infrastructure with the aim to exclude them and associated risks from the government's balance sheet). The description of fiscal gimmicks is based on Koen and van den Noord (2005).

²⁰ In order to meet the numerical fiscal targets, policy-makers are occasionally required to cut spending. Typically, the capital investment is the category of spending where reductions can be pursued easily from a political point of view. Note that, contrary to people, "roads" cannot protest against spending reduction.

²¹ See footnote 11 for the description of the fiscal common problem.

Tabellini demonstrate that presidential and majoritarian systems have significantly lower government expenditure than parliamentary and proportional regimes, but also lower tax revenue, smaller budget deficit, and spend less on social and welfare programs.

The form of government and the electoral systems are not the only political institutions which are important for fiscal outcomes. For instance, the literature argues that the prevalence of a bicameral legislature might decrease the size of government (Crepaz and Moser, 2004) and negatively influence fiscal discipline (Schwarz, 2006). Some positive effect of the direct democracy mechanisms on fiscal discipline is found, on the other hand, by Blume and Voigt (2006) as well as Kiewiet and Szakaly (1996). Moreover, Eslava (2006) shows that the stronger the involvement of constitutional courts in policy-making, the harder it is for the government to undertake fiscal adjustment to reduce budget deficit. Evidence of judiciary shaping fiscal outcomes is also found in Tridimias (2006), Vaubel (2009) and Kantorowicz (2014). In addition to that, a secular trend towards decentralization triggered a debate on fiscal effects of decentralization and federalism (Stegarescu, 2005). In this context, Eyraud and Lusinyan (2013) show that vertical fiscal imbalances (hereinafter VFI) – mismatch between local spending and local revenue – are associated with higher general government deficit and consequently also greater public debt. On average, the general government deficit is found to deteriorate by 1% of GDP for each 10 percentage point increase in VFI (Eyraud and Lusinyan, 2013, p. 571).

Although, as presented, a plethora of research exists linking the elements of fiscal constitutions with fiscal outcomes, their credibility is questionable as they rarely find a causal relationship between institutions and outcomes (Eslava, 2011). Most of the research linking institutions and fiscal outcomes relies on correlations between the two. However, correlations do not always mean causality, due to omitted variable bias or self-selection (see section 1.4). Also whereas research on numerical fiscal rules and to some extent on the procedural fiscal rules is abundant, the political institutions seem to be less well-researched in the context of fiscal outcomes, largely due to the fact that they affect fiscal outcome only indirectly.

Another problem with the studies linking institutions with outcomes is that they rarely analyse the interaction between institutions comprehensively, thereby neglecting that the manner in which various arrangements fit together might be crucial for outcomes. Indeed, certain combinations and

interactions of building blocks might be more conducive to achieving policy objectives such as sustainable fiscal outcomes or crisis prevention (Eslava, 2011; Voigt, 2011a; 2011b; 2013).

There are three further under-researched analytical dimensions of the fiscal constitutions. First, fiscal constitutions are rarely studied in a dynamic – historical – context. Therefore, the literature almost entirely ignores the question: *how are distant historical events able to influence the contemporary fiscal outcomes?* Second, most of the research concentrates on the horizontal fiscal relations i.e. fiscal relations within the same tier of government (i.e. central or sub-central level). A vertical dimension of fiscal constitution, which focuses on relations between the levels of government (i.e. relation between central and sub-central level) is examined to a lesser extent. Lastly, the vast majority of the research on fiscal constitutions is interested in finding the effects of fiscal arrangements. Questions regarding the origins and the driving-forces behind reforms of the fiscal constitutions are rarely asked.

Given the overarching question of this dissertation – “*why does the public debt grow, and why are fiscal crises repetitive?*” – as well as gaps in the literature on the fiscal constitutions, four sets of narrow and precise questions are selected. These questions help shed some light on the overarching question. Occasionally, as explicitly mentioned, they also touch upon some other fiscal phenomena. The narrow questions asked in this dissertation are as follows:

- Question 1: What is a genuine causal relationship between the electoral systems and fiscal outcomes? How do electoral systems influence vertical fiscal imbalance, i.e. mismatch between local spending and revenue? Additionally, is there any relation between the electoral regimes and the composition of public spending?
- Question 2: Does history matter for fiscal outcomes? More precisely, can distant historical events impact vertical fiscal imbalance in a causal way?
- Question 3: How do judges adjudicate in fiscal cases (cases with some budgetary implications) as opposed to other cases? Is the judiciary able to shape fiscal outcomes, such as for instance fiscal deficits, in any systematic way?
- Question 4: How do the building blocks of fiscal constitutions interact? Does the manner in which the building blocks are combined influence a growth of public

expenditure and public debt as well as the likelihood of fiscal crises? Also, what are the driving forces behind the reforms of the fiscal constitution?

Overall, the main purpose and scientific contribution of this dissertation is threefold. First, this dissertation establishes a genuine causal relationship between the selected elements of fiscal constitutions and outcomes by applying cutting-edge econometric tools (question 1 and 2). Second, it sheds some light on largely neglected institutions and institutional interactions that might play a role in shaping fiscal outcomes (question 2, 3 and 4). Third, this dissertation is interested in examining the effects of fiscal constitutions in the intergovernmental context (question 1, 2 and 4). The detailed structure of this dissertation is given in section 1.6.

1.3. Societal and scientific relevance

Before the Keynesian revolution, i.e. in the pre-World War II period, the national budgets around the world were generally managed in a fiscally responsible manner (Buchanan and Wagner, 1977, pp. 13-16). An overarching philosophy was that the federal budget is like a household budget, which should be managed in a sustainable manner. That is not to say that deficits did not occur at all. The departures from fiscal discipline were, however, justified publicly and analytically. Typically, the budget deficits were emerging in the aftermath of the economic crises and wars. However, the subsequent debts were usually repaid shortly after these unforeseen circumstances. After World War II, the fiscal prudence largely deteriorated. According to Buchanan and Wagner (1977, pp. 21-22), the main reason for fiscal deterioration was a new legacy of aggregate demand management by the government (the Keynesian approach). The demand management, instead of being neutral for the budget in the medium-term, has resulted in a permanent increase in public expenditure that outpaced revenue collection (Kopits, 2001). It turned out that politicians were very eager to use their mandate to spend excessively or reduce taxation during recessions in order to stimulate aggregated demand. However, the political incentives set in the fiscal constitutions to offset the deficits in the time of economic prosperity were very weak. The overall result of this switch in the “fiscal philosophy” was a pro-cyclical budgeting, enduring deficit and debt, which

triggered a chain of social and welfare implications. Selected social and welfare implications are as follows.

First, the maturing debt and its servicing costs, i.e. the interest rate for borrowing, need to be paid off. This can be done by two means: firstly, through an increase in taxation and, secondly, expenditure reduction (Ball et al., 1995). A politically easier method to cover debt and its servicing costs is usually through a revenue (tax) increase (Rzońca, 2008). A spending reduction might cause protests by strong interest groups benefiting from particular expenditure categories that are meant to be cut. A revenue increase may be even greater once the debt reaches an unsustainable level, i.e. when financial markets require greater risk premia for lending. High taxes imposed due to debt and its servicing cost might have negative economic consequences. They may discourage people from work, from pursuing a high level of education and from saving (Rzońca et al., 2008). Due to increased taxation, some people may also transfer their activity to the black market where the level of business uncertainty is relatively high (Rzońca et al., 2008).

Second, deficits might deepen the income inequality between high and low-income persons (Mankiw, 2000). On the one hand, the interest payments go to the wealthy individuals who have sufficient resources to purchase government treasuries. On the other hand, higher taxes due to interest payments on debt are imposed on general taxpayers and, hence, also on the low-income individuals. In order to mitigate the social inequality, the government may decide to increase taxes only for the rich and, therefore, to overburden this social group with excessive taxation. However, excessively high taxes have negative effects, which were already mentioned above.

Third, deficits, which are covered by private savings, may crowd out private investments (Fischer and Easterly, 1990; Friedman, 2005). Competition between government and investors for savings might result in higher interest rates. Higher interest rates, in turn, eliminate a pool of private projects that could have been pursued once the interest rate was lower.

Fourth, if the deficit is covered (even partially) by foreign capital, this may lead to higher exchange rate volatility (Calvo and Mishkin, 2003). Yet, currency fluctuations make return from exportation unpredictable and thus may discourage business from undertaking export activity. The result might be a lower international integration of the indebted country (Rzońca, 2008).

Fifth, an increase in debt is typically inflationary in countries with large indebtedness (Fischer and Easterly, 1990; Kwon et al., 2006). If financial markets deny loans or require too high risk premiums, countries might be tempted to finance their deficits by money printing, i.e. deficit monetization.

Lastly, the excessive public debt can materialize in the sovereign debt crisis, which usually leads to an *ad hoc* decrease in public expenditure, and an increase in taxation or sovereign default. Fiscal crisis frequently coincides with recession, which leads to even greater cuts in public spending and/or increase in taxes. The final outcome is growing unemployment rate and declining consumption, which negatively influence economic welfare (Huntley, 2010).

The research on fiscal constitutions, which can be traced back to the 1970s, is primarily focused on detecting which institutions cause profligate fiscal outcomes, and also which institutions are able to correct for the “political deficit bias”. Therefore, the societal relevance of this dissertation stems from the fact that it aims at deepening the knowledge regarding the effects of the fiscal constitutions, which – as convincingly shown above – might translate into non-negligible social and welfare effects.

Since the vast majority of this dissertation deals with questions that are relevant for the multilateral or intergovernmental settings, it therefore provides a valuable addition to an ongoing debate on the fiscal union for the EU – the union comprising 28 sovereign countries and more than half a billion inhabitants²². This dissertation contains dedicated sections where tentative policy implications for the EU are discussed. Issues pertaining to the fiscal union are not only discussed within the EU political institutions but are also at the core of academic research and debate internationally.²³ International organizations such as the International Monetary Fund (hereinafter IMF) and the Organisation for Economic Cooperation and Development (hereinafter OECD) have important contributions in that respect.

²² See, for instance, “Facts and figures about the EU and the G20” available at http://ec.europa.eu/priorities/docs/g20-brisbane_en.pdf (accessed on February 28, 2015).

²³ See, for instance, Cottarelli and Guerguil (2014) and Bordo et al. (2011).

1.4. Methodology

This dissertation is mostly driven and based on empirical research. All narrow questions put forth in section 1.2 are about “cause and effect”. However, disentangling the effect of fiscal constitutions from the other causes of fiscal outcomes is a nontrivial task in empirical analysis. Aghion et al. (2004, p. 568) rightly points out that it is controversial in the empirical analysis of the institutions to include institutional variables on the “right-hand side” of the regression equation, due to the serious and non-negligible self-selection issues or omitted variable bias (hereinafter OVB).²⁴ Self-selection or OVB refers to the situation when a researcher cannot control for all confounding variables, which are associated both with potential cause and with possible outcome (Dunning, 2012, pp. 5-6). The following example illustrates the problem. As argued in section 1.2, numerical fiscal rules are the most researched fiscal institutions and are shown to be effective in reducing the deficit bias. However, is this research fully credible? An often raised caveat against these studies is that the researchers often overlook a basic fact that enactment of fiscal rules might be a mere reflection of deep social preferences for fiscal discipline (Debrun et al., 2008). The fact that deep social preference for fiscal discipline is not controlled for in the econometric models has profound statistical implications. Namely, the numerical fiscal rules are shown to be associated with improved fiscal outcomes, while in reality both the fiscal rules and improved fiscal outcomes are caused by the third (omitted) factor – deep social preference for fiscal discipline (fiscal conservatism). In other words, fiscal discipline is not caused by the rule itself but by fiscal conservatism, which also led to the enactment of the fiscal rules. The fiscal rules in that context might serve as a mere signaling device of fiscal discipline. According to Poterba (1996, p. 12), to alleviate the self-selection or OVB problem in the empirical studies on fiscal institutions, it is necessary to control for some measures of the electorate’s fiscal preferences. This would eliminate potential spurious correlation between the fiscal constitutions and the fiscal outcomes. To measure social preferences is certainly not a trivial task, however. This is not even the entire story as in practice the identification of all confounding factors (social preferences being one of them) is practically impossible. Consequently, due to OVB or self-selection, the conventional empirical models lack credibility.

²⁴ Both the omitted variable bias and self-selection are terms which describe the same phenomenon. Hence, there are used interchangeably.

Given a recent revolution in empirical economics (Angrist and Pischke, 2010), or law and economics for that purpose, this dissertation attempts to “take the con out of econometrics” and rely – where possible – on credible empirical designs (Leamer, 1983). By credible empirical designs, it is understood that they should allow for a genuine causal inference from fiscal constitutions to outcomes. The genuine causal inference is possible only in a situation when the researcher has full control over the confounding factors, such as social preference for fiscal discipline in the context of fiscal constitution, or when the researcher does not need to control for confounders. A key concept which obviates the need to control for confounders is a random or as-if random assignment (Dunning, 2012, pp. 6-8). The following example should provide a good illustration. The numerical fiscal rules are enacted by the governments in countries which have an appetite for fiscal discipline (fiscally conservative countries). If that is the case, any link between the numerical fiscal rules and fiscal outcomes is spurious. Now imagine the situation in which numerical fiscal rules are randomly distributed across jurisdictions, randomly in the sense that both jurisdictions with and without taste for fiscal discipline enact numerical fiscal rules with the same chance. In that situation, nobody can argue that the enactment of the numerical fiscal rules is associated with preferences for fiscal discipline. The randomization therefore enables the breaking of a link between confounding factors and causal variable of interest, here numerical fiscal rules. If in a randomized setting any correlation is found between the fiscal rules and fiscal discipline, this correlation can be interpreted in a causal fashion. As in medicine and clinical trials, also in social science the way to reassure randomization is through experimentation. Likewise, the terminology for experiments in social science is drawn from medicine, such as control, treatment and treatment effect. In the context of fiscal constitutions, those treated are for instance those jurisdictions which get the numerical fiscal rules and control jurisdictions are those without the rules. The (average) treatment effect (hereinafter ATE) refers to the causal effect of numerical rules on fiscal discipline, i.e. the difference between the average fiscal deficit in the treated jurisdictions and control jurisdictions.

While laboratory experiments are widely used nowadays in law and economics research to unravel a causal relationship between institutions and outcomes, this dissertation does not resort to them. Particularly in the politicized area of public finance, experiments would simply lack an external validity. An immanent drawback of the laboratory experiments is that outside the specific experimental context they do not have too much of the predictive value (Angrist and Pischke,

2009, p. 151). For instance, it is very unlikely that the results on the numerical fiscal rules obtained in the laboratory would be able to convince the policy-makers to change their fiscal strategy as the environment in the laboratory has nothing to do with the real, day-to-day fiscal policy or fiscal politics. For that reason, this dissertation, wherever possible, employs so-called natural or quasi-experiments, i.e. experiments which are delivered by the real world conditions (Angrist and Krueger, 2001). This design-based approach not only allows for data-driven causal inference but also allows focusing of investigators' attention on the institutional details (Angrist and Pischke, 2010).

A natural experiment or, in other words, design-based approach is applied in chapters 2 and 3, which aim at finding the causal relationship between fiscal constitutions and selected outcomes. These two chapters employ a rigorous methodology of regression discontinuity (hereinafter RD) design. A standard RD research design exploits precise knowledge of the rules (laws) defining treatment. RD identification relies on the fact that in a vastly rule-based world, some rules are discretionary and, hence, provide a good experimental framework as they imitate randomization (Angrist and Pischke, 2009, p. 251). For instance, in the Polish municipalities the assignment of electoral rules (majoritarian or proportional) is a deterministic function of the population size. Since the population threshold chosen for delineating majoritarian and proportional system (20,000 inhabitants) was set rather arbitrarily, this allows for a local randomization of treatment and obviates the need to control for confounding factors. The fact that a municipality with 19,950 inhabitants obtained a majoritarian system and municipality with 20,050 inhabitants and is exposed to proportional system is simply by chance. The municipalities close to the 20,000 thresholds are considered similar and the major difference between those municipalities just below and just above the threshold is that they apply a different electoral system. As a result, jumps in the relationship between population size and fiscal outcomes in the neighborhood of the population threshold are taken as evidence of a treatment effect of various electoral systems. This so-called "electoral experiment" is applied in chapter 2. Chapter 3, in turn, employs a spatial RD or so-called "partition experiment". It allows testing for a break (jump) in the fiscal outcomes in today's Poland exactly at the border between former empires, i.e. Prussia, Russia and Austria. The spatial RD relies on the fact that the frontiers between empires were imposed exogenously. The borders were a consequence of the political bargaining and – as historical narrative shows – were

set in a rather discretionary manner. Thus, the municipalities located very close to the border were exposed to as-if random assignment to Prussia, Russia or Austria.

Natural experiments are rare, they cannot be planned and to discover them often involves a dose of luck (Dunning, 2012, p. 3). For that reason, chapters 4 and 5 do not apply the design-based approach. As a result, their outcomes are not interpreted in a definite causal framework. They demonstrate rather suggestive evidence and invite further research to disentangle causal effects. The main asset of chapters 4 and 5 relies, however, on their novel institutional approach and unique datasets, which were collected and coded for the purpose of these chapters. While chapter 4 investigates judges' behavior in adjudicating cases that impose a budgetary burden, chapter 5 studies interactions between the building blocks of federal fiscal constitutions and coins the term of *coherent (aligned)* fiscal constitution, i.e. whether building blocks "fit" well together. Institutional novelty can also be found in chapter 3. It shows how history matters, or more precisely, how an institutional feature might persist for decades and shape contemporary fiscal outcome.

1.5. The case of Poland and federal countries

Three chapters of this dissertation are devoted to studying the case of Poland. One chapter of this dissertation deals solely with federal and quasi-federal countries. Two out of three chapters that deal with the case of Poland relate, in one way or another, to the intergovernmental fiscal relations, i.e. relations between central and local governments. One chapter on Poland deals exclusively with fiscal constitution at central level. The attention given to Poland does not stem from the fact that the author of this dissertation wants to find solutions specifically for Poland; but rather because Poland delivers credible empirical designs (see section 1.4), which have never been applied before or never applied in the fiscal context. One could argue that Poland as a former socialist country might provide a rather biased image or that effect found for Poland might hold only for the post-socialist countries. It is argued here that it is not the case. Since the outset of transition, the post-socialist countries – and Poland in particular – have grown swiftly. Their citizens today live wealthier, lengthier, and happier lives. In most terms they look nowadays like

other countries at comparable levels of economic prosperity. As argued by Shleifer and Treisman (2014), post-socialist countries became normal. A closer look at Poland is taken in chapters 2-4 (see section 1.6).

Chapter 5 investigates fiscal constitutions of 15 federations. These are members of the OECD, such as Australia, Austria, Belgium, Canada, Germany, Italy, Mexico, Spain, Switzerland and the United States; and developing economies, such as Argentina, Brazil, India, Republic of South Africa and Russia. Besides Argentina, all developing economies under investigation are OECD partners. Argentina, however, serves as a good counterfactual to Brazil. Also, its inclusion contributes to a more equal balance in the sample between developed and emerging economies. Some of the countries under investigation in chapter 5 may not be federations from the constitutional (*de jure*) point of view. Those quasi-federations in a sample are, for example, Italy and Spain. Nevertheless, the distinct feature of these countries is that they all have an intermediate (state) level of government between the central and the local level, which is given relatively broad fiscal autonomy. The relations between the central government and the state level government in countries under investigation are thus qualitatively different from those observed in unitary countries. For the limited purpose of this dissertation, this feature allows for the classifying of some of the countries as *de facto* federations (Italy, South Africa and Spain).

1.6. Structure of the dissertation

This dissertation consists of four stand-alone content chapters and original contributions, which are related to the narrow questions asked in section 1.2. The chapters are as follows.

Chapter 2 examines electoral systems and their impact on selected fiscal variables, such as vertical fiscal imbalance (mismatch between local spending and revenue) and allocation of public spending. The political economy literature theorizes various channels through which electoral systems might determine fiscal outcomes. Empirical evidence supporting or rejecting theoretical arguments is not abundant and not sufficiently robust, however. It is vastly recognized that the existing empirical literature linking electoral systems and fiscal outcomes does not identify the causal relationship. Reasons for this are omitted variable bias (see section 1.4), infrequent

institutional changes and small samples. Chapter 2 tries to overcome these problems. It uses a quasi-experimental empirical setting and provides evidence that electoral systems influence selected fiscal outcomes. The empirical design employed in chapter 2 rests on a discontinuity in the application of electoral rules in Polish municipalities in the period 2002-2012. The results presented confirm existing theoretical arguments only to some extent. As compared to the majoritarian regimes, proportional electoral systems tend to promote broad public expenditure and undermine narrow public spending.²⁵ However, these effects seem to be weaker as compared to previous findings in the cross-country studies. More crucially, proportional systems lead to a larger VFI, which is measured as a share of local expenditure covered through intergovernmental transfers and borrowings. The average treatment effects of electoral rules on fiscal imbalance are not only statistically significant but also non-negligible from the economic point of view and robust to numerous alternative specifications and falsification tests. This result is important forasmuch as larger VFI leads to greater general government deficits and, consequently, to larger public debt.

Chapter 3 subscribes to the literature stream that attempts to answer the question regarding whether history matters. However, in chapter 3 a more specific question is asked concerning whether history matters for fiscal outcomes. In the context of the Polish municipalities the answer is positive. To confirm it, this chapter exploits a natural experiment, which was provided by Poland's partition. After Poland lost its independence in 1795, its territory was divided between three empires (Prussia, Russia, and Austria-Hungary), was governed by foreign institutions, and was influenced by the culture and norms of these countries for more than 120 years. By means of spatial RD, it is shown that municipalities from the former Prussian empire impose contemporarily higher property tax rates as compared to municipalities that were exposed to the Russian ruling. Higher property tax rates lead to larger own revenue and higher fiscal autonomy. As a consequence of it, there is a smaller VFI in the municipalities belonging to the former Prussian partition than in the municipalities from the former Russian part. A discontinuity in the property tax rates is not observed at the Austria-Russia border. Chapter 3 offers potential explanations for the occurrence of the discontinuity at the Prussia-Russia border and the lack thereof at the Austria-Russia border. Given the link between VFI and general government deficits

²⁵ See section 2.2 for theoretical underpinnings of association between the electoral system and types of spending.

and debt, these results can shed some light on the overarching question: “*why is the public debt growing?*”

Chapter 4 analyzes overall judicial behavior and contrasts it with the judicial behavior in adjudicating fiscal cases. Different theories have been developed, mainly in the context of the US, to explain judicial decision-making.²⁶ In this respect, there is an important ongoing debate over whether judges are guided by the law or by personal ideology. The analysis of the decision-making in the Polish Constitutional Tribunal seems to support the existence of some party alignment. That is to say that judicial behavior is influenced by the ideology, either because judges’ preferences coincide with the interests of a specific party or because the judges are incentivized to show their loyalty to the nominating party. The party alignment exists but is subject to institutional constraints. These results are in line with previous findings for other Kelsenian constitutional courts in Europe²⁷. Crucially, although to a lesser extent, the ideological vote is also cast in fiscal cases. The identified institutional constraints²⁸ limit the ideological vote in fiscal cases but are not able to entirely eliminate it. The fact that ideological bias is also present in fiscal cases might have important implications for public finance. Given that the majority of judges in the adjudicating benches are occasionally politically aligned with petitioners (typically opposition parties), it might be harder for the governing party to pursue major reforms of public finance, such as fiscal consolidation and public debt reduction. For instance, in times of economic distress necessary fiscal adjustments might be severely delayed or entirely damped by the Tribunal. Under these circumstances, the Tribunal can be perceived as a veto player biasing fiscal policy towards a status quo, hampering fiscal adjustments and leading to the accumulation of public debt.

²⁶ See section 4.1 for an overview of the different theories on judicial decision-making.

²⁷ In the Kelsenian tradition, a constitutional court is explicitly designed to intervene in politics (Kelsen, 1942). The Kelsenian approach views the court as a negative legislator able to reject a legislation from an *ex ante* perspective, thus executing the right of an abstract review.

²⁸ There are two important institutional restraints which might mitigate politicization in fiscal cases. First, the Tribunal case law mentions the budget balance as one of the constitutional principles, which judges should respect. Second, in adjudicating the cases with budgetary implications judges are procedurally obliged to officially question the government about fiscal consequences of potentially voting the legislation unconstitutional. Being fully aware of fiscal consequences and being under strict public and media scrutiny, judges should have more reservations regarding voting the legislation unconstitutional as their decisions might lead to budget imbalance. For a more systematic account of these institutional constraints see section 4.3.

Chapter 5 provides an empirical assessment of federal fiscal constitutions and the interaction between constitutional arrangements. It demonstrates that federal fiscal constitutions differ in the degree of constitutionally guaranteed decentralization. More specifically, two types of fiscal constitutions can be distinguished: decentralized and integrated. Decentralized federations are those federations where states (sub-central units) enjoy high tax and spending autonomy; face high responsibility for their own fiscal policy²⁹, have little co-determination power at the federal level³⁰; and have intergovernmental budget rules and frameworks that 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 decentralized fiscal constitutions, while Austria, Belgium, Brazil, Germany, India, Italy, Russia, South Africa and Spain feature integrated fiscal constitutions. An important contribution of this chapter is to show that fiscal constitutions vary in terms of coherence (or alignment) of institutional arrangements³¹. Coherent (aligned) fiscal constitutions combine arrangements in a balanced manner or in a way that “fits well” together³². For instance, an aligned fiscal constitution provides similar degrees of autonomy for various budget items (taxation and spending); or the fiscal constitution aligns a certain level of autonomy with a similar level of responsibility. Incoherent fiscal constitutions combine arrangements in an unbalanced manner, for instance by combining low tax autonomy with high spending autonomy or low responsibility for fiscal policy with high fiscal autonomy. There is some preliminary evidence that the degree of decentralization of fiscal constitutions is hardly associated with economic and fiscal outcomes, but alignment (or coherence) of fiscal constitutions is correlated with the selected outcomes. Over the period 1980-2010, less coherent fiscal constitutions were correlated with higher debt and spending growth, and more economic and sovereign debt crises. Moreover, federations with less coherent fiscal constitutions had somewhat

²⁹ 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 internalize the costs of these policies.

³⁰ 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.

³¹ Unlike indicator values which have no normative connotation, “alignment” contains a value judgment insofar as “more” alignment is considered better than “less”. “Alignment” is measured as the variance around indicator values applying a technique called random weights

³² In technical terms, the notion “fits well” means that the values of indicators capturing certain institutional arrangements are similar. The larger one is the difference between the values of indicators, the smaller is coherence between the institutional arrangements.

lower GDP growth between 1980 and 2010. In addition, chapter 5 examines causes and driving-forces of reforms and amendments of fiscal constitutions since their inception. The findings suggest that reforms of fiscal constitutions usually follow events like economic and fiscal crises, the establishment or fall of authoritarian regimes or separatist threats. Overall, it is shown that autonomy and responsibility of states declined over the last 100 years, while co-determination and budget frameworks were strengthened. In addition, the coherence of fiscal constitutions increased over the last three decades.

Chapter 6 comprises the conclusions. However, it not only summarizes the overall content but also sets a general agenda for future research.

CHAPTER 2

ELECTORAL SYSTEMS AND FISCAL OUTCOMES: EVIDENCE FROM POLISH MUNICIPALITIES³³

2.1. Introduction

Electoral systems are part of the fiscal constitution and as such belong to broadly conceived political institutions. Electoral systems are legal tools (often enshrined in the country's constitution), which help aggregate conflicting public preferences and reflect them through the representation in the political institutions, such as legislature (Persson and Tabellini, 2006, p. 730). The institutional details of electoral systems matter for how public preferences are actually translated into political representation and further into policy-making. The main institutional details, which shape electoral rules, are district magnitudes³⁴ and electoral formulas (Persson and Tabellini, 2003, p. 16). Based on those two criteria, the most frequent distinction of electoral systems is made between *majoritarian* and *proportional* systems. The former combines small district magnitude (often single-member districts) with plurality vote³⁵. The proportional system, on the other hand, relies on large districts (i.e. multi-member districts) and proportional representation³⁶. One more crucial dimension that differentiates electoral systems is a ballot

³³ This chapter under the same title is submitted to the European Journal of Political Economy. Currently, it has a 'revise and resubmit' status. I would like to thank Mateusz Trojanowski for his valuable assistance in merging datasets used in this project, to Kaj Thomsson for giving comments on this paper during the 2014 Future of Law and Economics Conference held in Maastricht, to participants of the workshop on the European Union Decision-Making and Challenges to Economic and Financial Governance held at the Netherlands Institute for Advanced Study and to participants of the inner seminar at the University of Hamburg, in particular to Matthias Dauner, Marek Endrich, Jerg Gutmann, Rahul Sapkal, Agnes Strauss and Stefan Voigt. I am also grateful to Alessio Paccas for his valuable comments on this chapter. Yet again special thank goes to Elena Kantorowicz for her valuable feedback and constant support. The usual disclaimers apply.

³⁴ District magnitude refers to a number of candidates being elected from a single electoral district.

³⁵ Candidates that gather the largest amount of votes are elected.

³⁶ Mandates are distributed among candidates in proportion to the votes gathered by their political parties.

structure³⁷, i.e. whether votes are cast for individual candidates or for party lists. The ballot structure is not of interest here since the electoral systems studied in this chapter do not vary with this respect.³⁸ The primary attention is given therefore to only two institutional elements of electoral systems – district magnitude and electoral formula.

It is well recognized in the literature that different electoral systems induce various incentives for politicians and, therefore, lead to different economic outcomes. The public choice literature³⁹ is particularly interested in studying the impact of electoral systems on fiscal outcomes. This interest was boosted by Persson and Tabellini's (2003) seminal book on the economic effects of constitutions. In this book, the authors investigate both theoretically and empirically the impact of electoral systems on fiscal outcomes, such as the composition of public expenditure, the size of government, and the budget balance. In the cross-country setting, Persson and Tabellini demonstrate three important results. They show that the majoritarian electoral system, as compared to the proportional system leads to (1) smaller welfare states by 2-3% of GDP, (2) smaller governments by 5% of GDP, and (3) smaller fiscal deficits by 1-2% of GDP.

Although being the first reference for students of (constitutional) political economy, Persson and Tabellini's contribution did not avoid criticism. The most powerful criticism of their book was provided by Acemoglu (2005) who rightly claims that the empirical methods used by the authors do not allow for the identification of causal effects. First, due to relatively infrequent changes in the electoral systems⁴⁰, the identification relies mostly on cross-country variation in electoral systems leaving researchers with a small number of observations. Second, the choice of electoral rules might be endogenous and causally related to other determinants of fiscal outcomes (confounding factors; recall discussion in section 1.4). If this holds, omitted variables bias the estimates. For these reasons, estimates and conclusions presented by Persson and Tabellini (2003) should be treated with some caution.

³⁷ Some residual and less discussed attributes of electoral systems are electoral thresholds, total membership of the legislative body and district malapportionment (Lijphart, 2012, pp. 140-144).

³⁸ In the Polish municipalities voters only vote for the individual candidates.

³⁹ Public choice is a branch of economics. It applies rational choice theory to the political sphere and therefore assumes that politicians as any other individuals try to maximize their own well-being.

⁴⁰ Electoral rules are often enshrined in the constitutions which are subject to quite infrequent changes. Yet, the local electoral systems in Poland are enshrined in the ordinary statutory law (see section 2.3).

This chapter attempts to overcome the abovementioned problems. The approach in this chapter is novel as it provides for a causal inference of the impact of electoral systems on selected fiscal outcomes by using exogenous variation in the electoral rules in the Polish municipalities and by dealing with an unusually large dataset. The data collected for this chapter covers the total of 2479 Polish municipalities over the period 2002-2012. The employed empirical approach exploits a local randomization⁴¹ of the electoral systems or, in different words, a sharp discontinuity in the application of two distinct electoral rules. The local randomization is imposed exogenously by the law, which prescribes quite discretionary the following rule. In municipalities up to 20,000 inhabitants the representatives to local councils are elected through the majoritarian system (i.e. small electoral districts⁴² combined with plurality rule). The proportional system (i.e. large electoral districts⁴³ and proportional rule) is applied in municipalities with a population above 20,000. The assumption of the random assignment of the electoral systems at the threshold of 20,000 inhabitants and its proximity is the cornerstone for the analysis pursued in this chapter.

The results demonstrated in this chapter confirm existing theoretical arguments in the constitutional political economy literature (see section 2.2) only to some extent. For instance, it is shown that proportional systems lead to a larger vertical fiscal imbalance (VFI)⁴⁴, which is a crucial feature in intergovernmental fiscal relations. The average treatment effects (ATE)⁴⁵ of electoral regimes on VFI are not only statistically significant but also non-negligible from an economic point of view and robust to the alternative specifications and falsification tests. However, the link between electoral systems system and composition of public spending⁴⁶ is very weak as this relationship is sensitive to various robustness checks.

⁴¹ Due to the fact that 20,000 threshold delineating majoritarian and proportional elections was set arbitrarily, the municipalities with the number of inhabitants close to this threshold can be perceived as having electoral system assigned at random.

⁴² Small electoral district means that only few candidates are elected from the district.

⁴³ Large electoral district refer to a district from which many candidates are elected.

⁴⁴ Mismatch between local spending and local revenue.

⁴⁵ Average treatment effect is defined in section 1.4.

⁴⁶ As shown in section 2.2, there are theoretical arguments and some empirical evidence supporting the association between the electoral systems and the allocation of public spending. According to these contributions, proportional electoral systems tend to promote broad public expenditure (for instance social policy and education expenditure) and undermine narrow public spending (for instance transport/infrastructure expenditure) as compared to the majoritarian regimes.

The chapter is structured as follows. Section 2.2 provides a conceptual framework and a concise literature review. Section 2.3 explains the political and electoral regimes at the municipal level in Poland together with their main reforms. The data and the estimation approach are presented in section 2.4. Internal validity checks follow in section 2.5. Section 2.6 and section 2.7 demonstrate estimation results and robustness checks, respectively. Section 2.8 derives tentative policy implications based on the results of this chapter. Finally, closing remarks of chapter 2 are comprised in section 2.9.

2.2. Conceptual framework and literature review

In this section, the main transmission channels from electoral systems to fiscal outcomes are elaborated together with a brief literature review of empirical evidence (largely based on Persson and Tabellini, 2006). Overall, three fiscal outcomes are discussed in this section, i.e. the composition of public expenditure, the size of the government and budget balance. A slightly modified hypothesis is presented for the context of the Polish municipalities as it takes into account the intergovernmental realities.

Electoral systems and composition of public expenditure

Theoretical deliberations suggest that a plurality rule and single-member districts⁴⁷ tend to promote “narrowly targeted spending benefiting relatively small geographical areas and constituencies” (Persson and Tabellini, 2004, p. 730). One example of narrowly targeted spending could be public investment in local road infrastructure. On the contrary, a proportional rule and multi-member districts induce incumbents to favor broad groups of electorate. A good example of expenditure, which covers the interests of broad constituencies, is that on social policy and education. The arguments supporting these relationships are threefold.

The first argument is based on the fact that the minimum fraction of votes required to win the elections differ in proportional and majoritarian systems. Under the plurality rule with single-

⁴⁷ Single-member district means that only one candidate is elected from this district.

member districts⁴⁸ (the winner-takes-all⁴⁹), a party can control the legislature with only 25% of the total vote (Persson and Tabellini, 2006, p. 731). The logic is straightforward as in winner-takes-all systems the party needs to gather half of the votes in half of the districts. Under the proportional rule with one electoral district, 50% of the national votes is required to win the election (Persson and Tabellini, 2006, p. 731).⁵⁰ The difference in the minimum winning coalition between majoritarian and proportional systems results in a diverse composition of the public expenditure in majoritarian and proportional systems (Lizzeri and Persico, 2001; Persson and Tabellini, 2003 p. 17; 2006, p. 731). Under the former rule the incumbents focus on more specific expenditure, which target relatively narrow groups of voters, to win elections. Under the proportional rule re-election-seeking incumbents promote broad programs, which benefit larger groups of voters, such as welfare state programs.

The second argument stems from the fact that electoral systems induce different types of electoral competition (Persson and Tabellini, 1999; 2000, p. 206; 2006, p. 731). Single-member districts and plurality rule typically make each party an undisputable winner in some of the districts and concentrate electoral competition in the other (marginal) districts where the winner is not certain. Hence, parties have a strong motivation to target voters in these marginal districts through expenditure which has a local specification, such as “pork barrel” expenditure⁵¹. In contrast, multimember districts and proportional rule diffuse electoral competition and incentivize the parties to promote expenditure which benefits broad coalitions of voters.

The third, and last, argument considers the partisanship of political parties elected through different electoral systems. It is recognized that progressive governments tend to rule more often under proportional systems, whereas conservative governments are more frequent under majoritarian systems. For theoretical underpinning of this association see Iversen and Soskice (2006). The evidence from 14 developed countries in the period 1945-1998 demonstrates that in the proportional systems right-of-center governments ruled 26% of the time, while in the

⁴⁸ For instance, in the United Kingdom, representatives to the House of Commons are elected in the single-member districts through plurality rule (winner-takes-all or first-past-the-post system).

⁴⁹ Only one candidate with the largest amount of individual votes is elected.

⁵⁰ This kind of electoral system is present in Israel for electing the Knesset.

⁵¹ “Pork barrel” refers to the expenditure which funds projects that benefit a particular constituency in return for that constituency’s support. This expenditure mostly benefits the needs of small and geographically concentrated groups.

majoritarian systems 75% of the time (Iversen and Soskice, 2006, p. 166). One can presume therefore that the jurisdictions with proportional representation and more frequent left-of-center governments should observe higher redistribution and, thus, larger spending on welfare state as compared to the jurisdictions with majoritarian elections. This argument does not hold in the context of the Polish municipalities, however. The reason for this is that at the local level parties and political associations are not clearly aligned with left or right ideology.

Some empirical support of the effects of electoral systems on the composition of public spending can be found in the literature. For instance, without controlling for other determinants of welfare spending, countries with legislative bodies elected under proportional regimes spend more by approx. 8% of GDP on welfare state as compared to jurisdictions with legislatures elected by the majoritarian rule. When adding other covariates, such as for instance, demographics, GDP per capita, and the quality of institutions, the estimated effect shrinks to 2-3% of GDP but remains statistically significant. This result seems to be robust to the selection of different samples of countries (see Milesi-Ferretti et al., 2002 and Persson and Tabellini, 2003, p. 169; 2004; 2006, p. 731). A similar pattern is also found in the federal context of Switzerland (Funk and Gathmann, 2013). The Swiss cantons with proportional system tend to have larger broad expenditure (precisely on social policy and education) and lower narrow expenditure (such as on local road infrastructure) than cantons which apply a majoritarian system. It is important to note that none of these studies establishes the genuine causal link between institutions and outcomes as they are not based on “natural experiments” (see section 1.4).

Electoral systems and the size of government

The composition of public expenditure is not the only fiscal outcome influenced by the electoral systems. The size of the government, measured as the country’s spending or revenue to GDP, is yet another fiscal variable shaped by the electoral systems. According to the so-called Duverger’s law, “plurality rule and small district magnitude produce fewer parties and more concentrated distribution of seats than proportional representation and large district magnitude” (Persson and Tabellini, 2006, p. 732). Fewer parties in the parliament, in turn, lead to more frequent single-party majorities, and less often coalitions (Taagepera and Shugart, 1989; Persson and Tabellini, 2006, p. 732). Evidence presented in Persson et al. (2003) suggests that in most of the parliamentary democracies, majoritarian systems are indeed more associated with concentrated

party systems, and less frequent coalitions than proportional systems. The difference in party systems induced by electoral rules should not be irrelevant for fiscal outcomes.

The “fiscal common-pool problem” (see section 1.2) is particularly relevant in explaining various fiscal outcomes under different party systems. Public revenue or general tax fund is often referred to as the fiscal common-pool. “Grazers” (users) of the common pool are able to internalize benefits of spending programs (by satisfying their own constituencies) but they are also able to externalize most of the cost of these programs. Importantly, by extracting resources from the general tax fund, the incumbent’s constituencies cover only a fraction of costs of the programs that benefit them. This causes a mismatch between the benefits and the costs of the public programs for incumbents and, consequently, induce overspending and over-taxation. Coalition governments face a more severe “fiscal common-pool problem” than single party governments. More fractionalized party systems and, hence, multi-party coalitions present under proportional systems lead to a greater overall size of government (spending and revenue) as the number of “grazers” exploiting the common-pool (general tax fund) is larger. Theoretical underpinnings of this logic are presented, for instance, by Persson et al. (2003).

There is some conventional empirical evidence in favor of a larger government size under proportional system vis-à-vis majoritarian system. For example, Persson and Tabellini (2003, p. 168; 2004) deal with a sample of 80 democracies in the 1990s and an empirical approach that allows conditioning on a variety of other determinants of the size of government. Their estimates lead to the conclusion that a proportional system increases central government expenditure by around 5% of GDP as compared to a majoritarian system. In more recent publication, Blume et al. (2009) confirm the results obtained by Persson and Tabellini (2003) based on an extended sample. Earlier empirical work also finds evidence that larger parliamentary coalitions spend more (see, for instance, Kontopoulos and Perotti, 1999; Baqir, 2002, Persson and Tabellini, 2006, p. 733). However, some other works question the link between electoral systems and the government size. For instance, Funk and Gathmann (2013), who have studied historical developments of electoral rules in the Swiss cantons since 1890, do not find any evidence in favor of a positive association between a proportional system and larger governments.

Electoral systems and fiscal balance

The third fiscal policy outcome under investigation is budget balance (i.e. net lending/borrowing or budget surplus/deficit). An over-exploitation of the fiscal common-pool by coalition governments, once put in the dynamic context, leads to a constant mismatch between the expenditure and the revenue, causing budget deficits (Velasco, 1999). In the dynamic setting, spending can be also covered through public borrowing. As compared to single party governments, coalition governments consist of numerous “grazers” who might to a larger extent exploit the borrowings to finance current public expenditure. By means of the current borrowing, governments externalize the cost of present policies to future generations (future general tax fund) and then-governing coalitions. In other words, current spending is financed through taxes imposed on future generations.

There is, however, another reason why coalitions tend to run budget deficits. Numerous veto players are prone to lock-in fiscal policy and reduce its ability to respond to external shocks. In other words, many veto players involved in policy-making result in the status quo bias, i.e. reduced policy flexibility (Tsebelis, 2002, p. 2). Since coalitions have more players who can possibly veto a policy change, coalition governments are less able to adapt fiscal policies during the adverse economic shocks (Roubini and Sachs, 1989; Alesina and Drazen, 1991⁵²; Persson and Tabellini, 2006, p. 734). Proportional electoral regimes cause therefore more persistent budget deficits as coalition members cannot agree promptly on consolidation and deficit reducing policies (tax increases or spending reduction).

Very suggestive empirical evidence confirms that jurisdictions with proportional electoral systems observe greater budget deficits by about 2% of GDP as compared to jurisdictions with majoritarian systems (Persson and Tabellini, 2003, p. 180). If one controls for self-selection (Heckman procedure), the effect drops to approx. 1% of GDP and the estimate is statistically significant in a large sample of countries (Persson and Tabellini, 2003, p. 182). There is also some

⁵² Alesina and Drazen (1991) refer to the “war of attrition” argument (see also appendix 1.2). The argument goes as follows. In time of fiscal distress, the coalition members engage in a long-lasting bargaining on a consolidation (austerity) measures. These prolonged negotiations arise since none of the coalition partners want to impose burden of the fiscal adjustment on its own constituency. The heterogeneity in the government coalition might lead to even longer negotiations and delays in the austerity measures. This inevitably leads to persistence and a gradual increase of public deficits.

conventional evidence that in proportional systems expenditure as a share of GDP rises in recessions but is not reduced in upturns (Roubini and Sachs, 1989).

Testable hypotheses

In this chapter, two hypotheses are offered with respect to fiscal outcomes in the Polish municipalities. The first hypothesis relates to the composition of public spending. It is proposed that broad public expenditure, such as that on welfare and education, is larger in municipalities with proportional electoral systems than in the municipalities with majoritarian systems. It is due to a larger minimal coalition of voters required to win election under the proportional rule as compared to the majoritarian rule and more diffuse political competition in a proportional system. For the narrow public expenditure (e.g. local road infrastructure), the reverse logic applies.

The second hypothesis relates to the common-pool problem of multi-party coalitions and their status quo bias. However, this hypothesis does not refer explicitly to the size of government or fiscal balance but is slightly modified to account for the intergovernmental twist and realities studied in the Polish context. Notice that intergovernmental structure induces more complexity; particularly external funds do not refer only to borrowings but also to intergovernmental grants. In the country or central government context, the external funds mean solely borrowings.

As a result – in the context of the Polish municipalities – the argument goes as follows. The municipal councils (local legislatures) finance programs from three main revenue sources. They use their own revenue (revenue generated on the territory of the municipality), the central revenue (intergovernmental transfers and subsidies) and borrowings. It is hypothesized, however, that the central revenue should be subject to much larger over-exploitation than the own revenue. By financing local programs from the central revenue, the cost of a program is entirely externalized to the general (national) taxpayers. This is not the case with financing through own revenue as it comes from taxes and fees imposed on the local population, and thus potential local voters. Thus, the cost of financing programs via own revenue is to a large extent internalized by the municipal councils, or precisely voters who reside in the given municipality. Yet another way to externalize the cost of financing the program is via borrowing in the financial markets. Through borrowing, the local council can externalize the cost of programs to the future generations and the prospect municipal authorities. The extent of external financing in the form of central revenue and

borrowing is crucial in determining the VFI, which increases with larger external financing.⁵³ In the proportional systems one should observe larger VFI as those systems generate more “grazers” of the common-pool (here namely central and future revenue) than majoritarian systems. Owing to the “lock-in” effect in the proportional electoral systems, it is likewise more difficult for coalitions to decide on tax increases or spending cuts in time of economic stress, when consolidation efforts are needed. Instead of cutting expenditure or increasing taxes, a multi-party coalition might be more eager to cover fiscal deficit by borrowings or claim for additional transfers from the central government. This is a further argument to reinforce the hypothesis that VFI should be larger in the municipalities with proportional electoral systems than in municipalities with majoritarian representation.

As VFI is one of the key variables studied in this chapter, it is crucial to highlight its negative consequences and how it impacts general government finance. High reliance on intergovernmental transfers and borrowings induces moral hazard on the side of municipalities and distorts their tax enforcement (Baretti et al. 2002). According to Rodden (2003, p. 14), “transfer [municipalities]⁵⁴ face weak incentives to be fiscally responsible, since it is more rewarding to position themselves for a bailout”. Municipalities endowed with high transfers from the federal level and borrowings usually do not have a sufficient tax capacity to cope with idiosyncratic economic shocks (von Hagen and Eichengreen, 1996). Since resources anyway come mainly from the central transfers and borrowings, municipalities may claim that they are not responsible for coping with the crisis and, thus, shift the burden to the central level derailing the position of the whole general government. As recently shown by Eyraud and Lusinyan (2013), vertical fiscal imbalances are positively associated with deficit of the general government. It does not come as a surprise as local governments with high imbalance are likely to externalize the negative consequences of their fiscal policy to the central government.

⁵³ VFI is measured as a share of spending covered by central (intergovernmental) transfers and borrowings from the financial markets (Eyraud and Lusinyan, 2013). Alternatively, one could think of an indicator *I-VFI* as a share of the public expenditure covered through own revenue.

⁵⁴ In the original quotation “governments”.

2.3. Institutional background

There are 2479 municipalities (*gmina*) in Poland, which constitute the lowest tier of government. By international standards, Polish municipalities enjoy relatively large independence and high tax autonomy.⁵⁵ On average, around 40% of the municipal revenues come from taxes and fees collected in the municipality (Guziejewska, 2008). Municipalities can set their own property, forest and agricultural taxes as well as user fees. In addition, municipalities are eligible to almost 40% of the personal income tax collected on their territory and 7% of the corporate income tax.⁵⁶ The residual resources come from the central (intergovernmental) grants and subsidies, and from borrowings in the financial markets. The amount of debt the municipality can incur is legally constrained, however. The borrowing rule imposed by the central government dictates that the municipal debt may not be larger than 60% of the total revenue.⁵⁷ However, indebtedness of individual municipalities occasionally exceeds this level. Besides the borrowing rule, Polish municipalities have no institutional incentives to keep their debt at a low level. Specifically, municipalities cannot go bankrupt and in critical situations the Ministry of Finance is obliged to rescue local units by offering loans.⁵⁸ On the expenditure side, municipalities are important providers of public goods and services. Municipalities finance and decide, among others, on local road infrastructure, primary education, and social and health services. Some of the municipalities have special status and their spending obligations differ from those of regular municipalities (*miasto na prawach powiatu*). This special status is given to medium and large cities. As of 2014, there are 66 cities (municipalities) with special status. Due to the lack of comparability to other municipalities, they are excluded from the analysis.

The municipalities have the constitutionally guaranteed right of self-management. Since 2002, a political system that has been applied was the mayor-council system. This system features direct elections of the mayor and council members, which are held every four years. However, the

⁵⁵ Out of 24 unitary countries in the OECD, Poland ranks 9th with respect to the value of local taxes as a share of the total tax revenue (12.4%). See <http://www.oecd.org/ctp/federalism/oecdifiscaldecentralisation/database.htm> (accessed March 5, 2015).

⁵⁶ See Article 4 of the *Law on Financing of Self-governance Units 2003*.

⁵⁷ See Article 242 and article 243 of the *Public Finance Law 2009*.

⁵⁸ See Article 6 of the *Bankruptcy and Resolution Law 2003*.

position of the mayor is weak from a *de jure* point of view and limited to the execution of laws enacted by the council.⁵⁹ Over time, the mayor's institutional position did not change significantly. Even though before 2002 the mayor was not elected directly but was chosen indirectly from the council representatives, his duties and functions were not meaningfully reformed.

The council – the legislative body of the municipality – comprises mostly representatives of the local associations and to a much lesser extent national parties.⁶⁰ In the local elections ideology plays much less important role than in the national elections and, consequently, it is impossible to define ideological commitments of the local parties (associations). An important feature of the political system is that the council representatives are elected directly by voters through two different electoral systems depending on the population size of the municipality. In municipalities with a population of up to 20,000 inhabitants (for simplicity called small municipalities) the council members are elected in majoritarian elections. The members of the council in large municipalities (with more than 20,000 inhabitants), on the other hand, are elected through proportional elections. This electoral setting was introduced by the law on *Elections to Municipal councils, District Councils and Regional Assemblies* from July 1998.⁶¹ It was applied for the first

⁵⁹ The position of a mayor vis-à-vis the council is weak for several reasons. First, the council decides on the mayor's salary (see Article 18(2) of the *Law on Local Self-governance 1990*). Second, the council might defeat the mayor with a motion of no confidence, which leads to a referendum on the mayor's recall (see Article 28a of the *Law on Local Self-governance 1990*). Third, the council determines the course of the mayor's action and controls the execution of actions (see Article 18(2) and 18a of the *Law on Local Self-governance 1990*). Fourth, the council is the main body to vote on the municipal budget, bonds issuance, and borrowing (see Article 18(2) of the *Law on Local Self-governance 1990*).

⁶⁰ At the local level, national parties are mostly present in large cities.

⁶¹ In the period of 1990-1998, representatives to the municipal councils were elected by the winner-takes-all rule in the municipalities of up to 40,000 inhabitants and through proportional elections in the municipalities with population above 40,000. By setting a cutoff point on 20,000 inhabitants in 1998, the legislators decided to expand the application of proportional elections. The main argument supporting this expansion was that in the middle range municipalities the municipal election are already anonymous in a sense that voters might prefer to identify themselves with local associations and parties rather than with individual candidates. The drafters of the new rule argued that only in case of the small municipalities it makes sense to maintain the majoritarian system where local communities know well individual candidates and associate with them rather than with associations and political parties. Nevertheless, a threshold of 20,000 inhabitants was picked up rather arbitrary without a specific rationale behind this number. The comprehensive administrative reform of 1998, besides changing the electoral rules in the municipalities, introduced one more tier of regional government, i.e. districts (*powiat*), and reduced the number of voivodeships (*województwo*) from 49 to 16.

time in the municipal election in October 1998.⁶² It is worth noting that during each election around 85% of municipalities are subject to the majoritarian system, and the rest to the proportional systems.

In the small municipalities, the majoritarian elections of council representatives combine plurality rule with small district magnitude. According to the electoral law, the council representatives in municipalities of up to 20,000 inhabitants should be elected from districts where 1 to 5 candidates with the largest amount of votes are elected. In practice most of the municipalities tend to set single or two-member districts. For instance in the 2002 elections, in approx. 75% of municipalities the average district magnitude was less than two. In single-member districts the representatives are elected via a winner-takes-all rule. In the larger districts, which count 2 to 5 members, the representatives are elected through plurality at large voting (block vote). Under this voting system, voters are requested to tick as many boxes as candidates being elected from a given district. Block voting is not a system for obtaining proportional representation. Instead, the typical result is that the most popular party wins all seats leading to even higher disproportionality than in the majoritarian systems with single-member districts (Flis, 2009; Lijphart, 2012, p. 138).

In large municipalities, council representatives are elected through a proportional rule from multi-member districts. Since 2002, a d'Hondt formula has been applied to assign council seats to the political associations and parties (recall that in the proportional system mandates are distributed according to the vote share of political associations and parties). As compared to the Sainte-Laguë method which was in use before 2002, the d'Hondt method tends to favor winning political associations and parties⁶³ (Lijphart, 2012, p. 135). Crucially, in large municipalities 5 to 8 representatives need to be elected from each district. However, differently than in the small municipalities, voters are allowed to tick the name of only one candidate. A clear discontinuity in the average district magnitude at the threshold of 20,000 inhabitants is illustrated in figure 2.1. Some further differences in the electoral systems are presented in table 2.1.

⁶² Since 2014, the electoral rules have been standardized across all municipalities. Precisely, all council representatives are elected through the plurality rule with single-member districts. The first election under the new regime was scheduled for November 2014.

⁶³ Sainte-Laguë and d'Hondt are methods (formulas) according to which votes for political parties are translated into seats in the legislative bodies. The d'Hondt method is the most common and it tends to favor the winners, i.e. to assign relatively more seats as a share of votes would justify. The Sainte-Laguë method, on the other hand, offers the most equal relationship between share of votes and seats distribution. For a more detailed description of these two methods see Lijphart (2012, p. 135).

It needs to be clear at this point that the main difference between the two electoral regimes boils down to the differences in application of electoral formula and district magnitude (i.e. how many candidates are elected to the council from the particular district). The municipalities of up to 20,000 inhabitants combine a plurality voting and small districts, whereas the municipalities above this threshold use a proportional formula and large districts. Both the application of the proportional formula and large districts lead to more proportional electoral outcomes, i.e. the share of vote for a given association/party corresponds well with the share of seats allocated to this association/party. The plurality voting and small district lead to the opposite effect, i.e. the electoral outcomes are more disproportional in the sense that the share of votes for a given association or party, does not correspond well with the share of seats gained by this association or party.

Figure 2.1. Discontinuity in the average district magnitude in 2002 at the threshold of 20,000 inhabitants

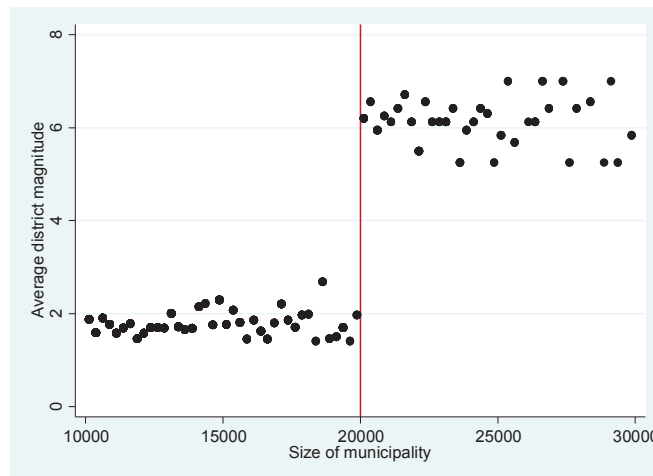


Table 2.1. Some characteristics of proportional and majoritarian electoral systems in 2002 and 2006

	2002	2006	2002	2006
	Proportional election		Majoritarian election	
Number of districts	1,245	1,226	20,692	20,556
Number of elected representatives	7,374	7,273	32,205	32,265
Average district magnitude	5.9	5.9	1.6	1.6
Average number of candidates per one council mandate	11.5	11.5	4.4	3.4

Source: Ptak (2010, pp. 144-145).

The empirical investigation in this chapter is performed on the data from 2002 to 2012. The reforms in 2002 led to the last major changes of the political and electoral systems at the municipal level. In 2002 the current mayor-council system was introduced, replacing the old system where mayor was elected indirectly from the council representatives. In addition, the d'Hondt method replaced the Sainte-Laguë method for allocating seats in the proportional system and most crucially the number of council representatives was scaled down. After 2002, the institutional setup in the Polish municipalities was rather stable. Thus, the risk that the electoral systems are confounded by other policy changes is minimized. The last year of the analysis is delineated by the availability of the fiscal data. In the period under investigation three elections at the municipal level took place, consecutively in 2002, 2006 and 2010. It is important to emphasize that the electoral rules applied in the elections in 2002, 2006 and 2010 depended on the population size at the end of the year prior to the election. Hence, the electoral rules were determined by the population size in 2001, 2005 and 2009, respectively.

It needs to be stressed that the population size determines also some other institutional shifts at the municipal level. Most importantly, population size governs the number of representatives elected

to the councils.⁶⁴ Whereas in the small municipalities (up to 20,000 inhabitants) councils comprise 15 representatives, in the large municipalities (above 20,000 inhabitants) they consist of 21 representatives. This arrangement has been in place since 2002. Before that, there were six different thresholds determining council size. The overall aim of this reform was to radically reduce the number of municipal representatives. Consequently, in the election of 2002 the number of elected representatives dropped by nearly 13,000 as compared to the 1998 election (Ptak 2010).

A theoretical argument presented by Weingast et al. (1989) states that larger councils are associated with larger size of government. The authors base their argument on the assumption that the larger number of legislators as such aggravates the common-pool problem. In contrast, Primo and Snyder (2008) and Petterson-Libdom (2012) present quite a different theoretical argument. They argue that the larger number of legislators essentially reduce the size of government. According to these authors, a growing size of government is caused by the bureaucrats (the public administration)⁶⁵ and not legislators. A larger number of legislators actually reduces the size of government since more legislators are able to better monitor the public administration (bureaucrats) and, hence, exert a better control over the public spending.

The empirical evidence does not provide a clear answer to those theoretical divagations. On the one hand, Egger and Koethenburger (2010) find a positive influence of the council size on the total public spending in the Bavarian municipalities. On the other hand, Petterson-Libdom (2012) finds a negative relationship between public expenditure per capita and the council size in the Finnish and Swedish municipalities. This chapter does not resolve the discussion regarding the council members and the size of government but rather asserts that both abovementioned contributions overlooked taking into account the intergovernmental realities (interactions between central and sub-central governments) in Germany, on the one hand, and Finland and Sweden, on the other hand. Contradicting results might be therefore the result of this omission. Crucially, in

⁶⁴ There are some minor rules that abruptly change at the 20,000 threshold. For instance, in the municipalities of up to 20,000 inhabitants there is only one deputy-mayor, while in the municipalities above 20,000 inhabitants there are maximum two deputy-mayors. The 20,000 cut-off determines also the maximum number of assistants a mayor can employ, i.e. maximum three persons in the municipalities of up to 20,000 inhabitants and maximum five persons in the municipalities above 20,000 inhabitants. These changes might influence personnel expenditure, they should not, however, have any effect on the dependent variables of interest, i.e. broad and narrow public expenditure or vertical fiscal imbalance.

⁶⁵ Niskanen (1971) was the first to put forth the argument on bureaucracy that tends to maximize its own budget.

the empirical part of this chapter, some robustness checks are provided in order to demonstrate that the number of council representatives has no effect on the underlying dependent variables, particularly on the composition of public expenditure and, more importantly, on VFI.

2.4. Data and estimation approach

The dataset constructed for the purpose of this chapter originates from two sources. Data on the population size and elections were officially requested from the National Election Commission. The fiscal data on different categories of expenditure and revenue as well as on VFI was extracted from the Bank of Regional Data, which is publicly available at the Central Statistical Office website.⁶⁶ The dataset covers the years 2002-2012. For some dependent variables only shorter time series are available, however. This applies to the broad expenditure (social and education expenditure) for which the dataset covers timespan of 2008-2012.⁶⁷ Data on the narrow expenditure (local road infrastructure spending) and on VFI are available for the whole period under consideration. Descriptive statistics are presented in appendix 2.1.

Disentangling the effect of electoral rules from other causes of fiscal policy outcomes is a nontrivial task in empirical analysis. Ideally, causal inference relies on a randomized experiment where the electoral rules are assigned randomly across jurisdictions. Such an experiment does not exist for electoral systems. The second best option is to adopt a quasi-experimental design to approximate real randomization. The discontinuous relationship of population size and electoral rules in the Polish context allows exploiting one of these quasi-experimental designs. Since in the Polish municipalities the assignment of electoral rules (majoritarian or proportional) is a deterministic function of the population size, the application of a regression-discontinuity (RD) design seems natural.⁶⁸ In this chapter, the relationship between population size and electoral rules

⁶⁶ Data available at www.stat.gov.pl (last accessed on November 14, 2014).

⁶⁷ Consistent long time series could not be obtained for social expenditure since in some sub-periods social expenditure aggregate takes into account also “other social expenditure”, which according to the budgetary classification should constitute separate spending block. To assure comparability of time series only sub-period 2008-2012 was extracted.

⁶⁸ A couple of recent studies apply similar research design to estimate the effect of various political institutions which are determined by the population size: Petterson-Libdom (2008, 2012), Egger and

entails a sharp RD design. The assignment of a municipality to different electoral rules in election years (i.e. 2002, 2006 and 2010) and four year thereafter, is solely determined by the population size in the years prior to the elections (i.e. 2001, 2005 and 2009).

The RD model for a pooled cross-section of data around a single discontinuity is as follows. Denote by N_{it} a population size based on which municipality i was qualified to certain electoral rule at time t , then define an indicator variable for observations i such as:

$$D_{it} = \begin{cases} 1 & \text{if } N_{it} > 20,000 \\ 0 & \text{if } N_{it} \leq 20,000 \end{cases}$$

Consequently, the RD model for observations i may be formulated as:

$$FP_{it} = \alpha + \beta D_{it} + k(N_{it}) + \dots + \varepsilon_{it}$$

where FP_{it} is a selected fiscal outcome in municipality i (i.e. composition of public expenditure or VFI) at time t ; k is a polynomial function of N_{it} , which captures the continuous relationship between N_{it} and FP_{it} ; α is a constant; β corresponds to a discontinuous effect of the proportional system at the cutoff of 20,000, and ε_{it} is an error term. Inference about the discontinuity at the cutoff of 20,000 for all i is therefore made by means of polynomial regressions where the polynomial function, $k(N_{it})$, is based upon degree-1 (linear specification), degree-2 and degree-3 polynomials. Application of different polynomials should ensure that the findings are not driven by a particular functional form. In addition, in the baseline specification different slopes of the regression functions on both sides of the cutoff are permitted.

Since a major institutional shift, which occurs at the 20,000 threshold, is the change in the electoral regimes, any discontinuity (jump) in outcome variables at this threshold should be driven by the switch in electoral regimes. To estimate β and, hence, the causal impact of a change from majoritarian to proportional at the threshold of 20,000 inhabitants, one may use all data or data within a more or less narrowly defined window only. Using data only within a certain window around 20,000 exhibits the advantage that misspecification of the functional form of the

Koethenbuerger (2010), Barone and de Blasio (2013), Arnold and Freier (2013), Litschig and Morrison (2013), Brollo et al. 2013, and Eggers (2014). Methodological concerns of RD design are well developed by Ade and Freier (2011).

polynomial is less likely than when using all data. For that reason, in the baseline regression, two narrow bandwidths are used, i.e. bandwidth of 10,000-30,000 inhabitants, and 15,000-25,000 inhabitants, respectively. The main estimation approach is therefore to use polynomial regressions in narrow samples around the discontinuity of 20,000 inhabitants.

Compared to other observational studies RD analysis enjoys relatively high internal validity⁶⁹. This comes at the expense of external validity⁷⁰ as a treatment effect is calculated for the subsample located at the cutoff. Hence, the effects presented in this chapter (as in any RD analysis) apply to the units near the relevant cutoff – in this chapter, to the municipalities near the population threshold of 20,000. It is up to the researcher and reader, however, to decide whether these narrow results carry some more general meaning. Lastly, it is worth noting that neither covariates nor state fixed effects are needed for identification. In some robustness checks, some baseline covariates are inserted, however, to substantiate the results.

2.5. Internal validity checks

An extensive and precise manipulation of the population data⁷¹, on which electoral rules assignment is based, would cast serious doubts about the internal validity of the RD analysis. Therefore, it is crucial to check for any evidence of sorting, i.e. for any discontinuous population distributions. Figure 2.2 plots the histograms with different bins for the municipal population size at the end of 2001, 2005 and 2009. Visual inspection of figure 2.2 demonstrates that the

⁶⁹ A high internal validity means that a given empirical model successfully identifies causal effects for the population being studied (Angrist and Pischke, 2009, p. 151).

⁷⁰ The external validity uncovers the predictive power of the outcome outside the given context (Angrist and Pischke, 2009, p. 151) – here outside the context of the Polish municipalities.

⁷¹ *A priori*, it is not clear which electoral system should be preferred by the politicians at the municipal level. While for the popular local politicians a majoritarian system could be more beneficial, less popular politicians could favor a proportional election as it increases their chances of being elected to the council even with a moderate support. Less popular politicians might also favor proportional system for some other reason. Coincidentally, in the municipalities above 20,000 inhabitants 21 representatives are elected to the council, i.e. by six more than in the municipalities with less than 20,000 inhabitants. A larger number of elected representatives increases the chance that less popular and less recognized politicians are elected to the council. Lastly, it seems that all municipalities should be interested in overestimating the number of inhabitants as the higher population size determines the higher amounts of some intergovernmental grants. This, however, goes beyond a manipulation at the specific threshold.

distribution is positively skewed and that a small positive increase in the probability mass is observed just after the cutoff of 20,000. Nevertheless, no substantial discontinuity can be identified. This serves as an initial identification that the local officials do not precisely manipulate the population size. Another way of checking the validity of the RD involves testing for a jump in the density of the forcing variable at the cutoff (McCrary, 2008). The result of McCrary density test reassures that manipulation of the population size does not occur at the threshold (see Appendix 2.2).

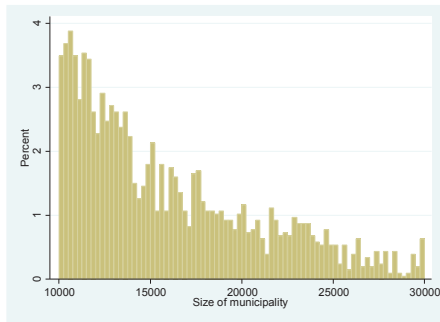
Policy-makers at the municipal level cannot significantly manipulate the size of the population due to two reasons. First, although the population registrations and records are the responsibility of the municipalities, these records are verified by local delegations of the National Electoral Commission.⁷² Second, the population records are also collected by the independent Central Statistical Office.⁷³ Significant disparity between population size reported by the municipalities and the Central Statistical Office would raise serious concerns. This double check by the Central Statistical Office minimizes therefore a chance that the population data are subject to significant manipulation. The comparison of the municipal data with those of the Central Statistical Office in the bandwidth 19,000-20,000 inhabitants leads to the conclusion that municipalities did not manipulate their population records in order to be on one or the other side of the threshold, although reported numbers differ partially.

⁷² See Article 25(3) of the *Electoral Code 2011*.

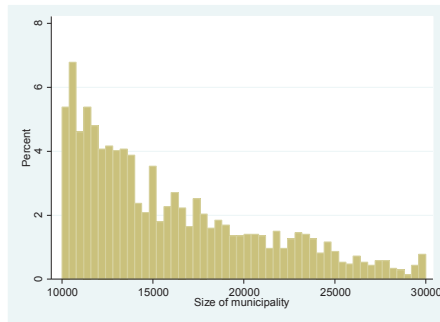
⁷³ The population data of the Central Statistical Office is available http://stat.gov.pl/bdl/app/dane_podgrup.dims?p_id=421295&p_token=0.5047641049515861 (accessed on February 28, 2015).

Figure 2.2. Population density around the threshold at the end of 2001, 2005, and 2009 (different bins applied)

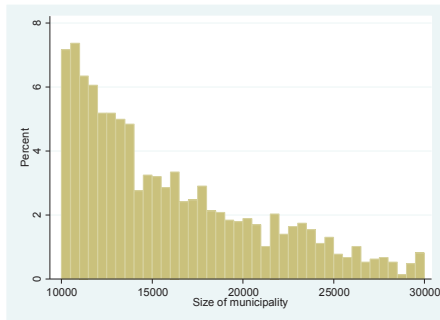
Panel A. Bin = 250 inhabitants



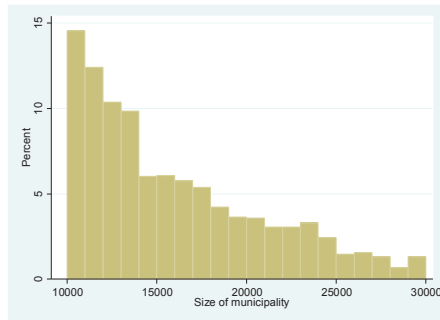
Panel B. Bin = 400 inhabitants



Panel C. Bin = 500 inhabitants



Panel D. Bin = 1,000 inhabitants



It is also important to verify whether municipalities just below and just above the threshold of 20,000 inhabitants were similar before the introduction of new electoral regime. Table 2.2 demonstrates the estimations for several pre-treatment covariates⁷⁴ (values registered in between 1995 and 1998). The results show that around the cutoff point there is no statistical evidence of discontinuities in pre-treatment covariates capturing economic activity (number of registered

⁷⁴ In the context of this chapter, pre-treatment covariates are – demographic, institutional, fiscal – variables which allow verifying whether major qualitative differences between the municipalities close to 20,000 inhabitants were present prior to the experiment. This helps rule out the possibility that legislators were driven by certain qualitative differences between municipalities when deciding the threshold of 20,000 inhabitants.

economic units in column 1) or demographic structure (share of working age population in column 2). Neither there is evidence of discontinuity in pre-treatment values of the selected fiscal outcomes, such as expenditure on administration (column 3), expenditure on social welfare (column 4), expenditure on transportation (column 5) and, lastly, VFI (column 6). In other words, from a statistical point of view, there is no evidence that treated (municipalities with the number of inhabitants above 20,000) and control groups (municipalities with the number of inhabitants up to 20,000) were systematically different in fiscal, economic and demographic terms before the new electoral system was introduced in 1998. This confirms the claim that threshold was set arbitrary by the legislators.

Table 2.2. Balancing properties for the pre-treatment variables

	(1) Degree-3	(2) Degree-3	(3) Degree-3	(4) Degree-3	(5) Degree-3	(6) Degree-3
VARIABLES	Economic units	Share of population in working age	Expenditure on administration per capita	Expenditure on social welfare per capita	Expenditure on transport per capita	Vertical fiscal imbalance
Proportional (<i>D</i>)	-86.89838 (149.86314)	-0.00322 (0.00765)	-10.26525 (10.66239)	14.69743 (10.22025)	-3.85248 (7.11918)	0.04362 (0.03230)
Constant	1,110.36699*** (122.59075)	0.58360*** (0.00573)	86.96864*** (9.39059)	76.82660*** (7.79165)	25.30155*** (6.00403)	0.63644*** (0.02782)
Observations	2,203	2,203	2,203	2,203	2,203	2,203
R-squared	0.51218	0.16768	0.01289	0.03719	0.07243	0.04081

Note: The polynomial in the forcing variable is of degree-3 (corresponding parameters are not reported). All columns employ the bandwidth of 10,000-30,000 inhabitants. All regressions use pooled OLS estimation method. Standard errors in parentheses are clustered at the municipality level. *** p<0.01, ** p<0.05, * p<0.1.

The break in the fiscal outcomes at the cutoff can be unquestionably attributed to the role of the electoral systems only if no other policy shifts occur at the threshold of 20,000 inhabitants. This is a cause of concern forasmuch as many other regulatory changes for the Polish municipalities are implemented as a function of the population size. Crucially, as it was already mentioned, at the threshold of 20,000 inhabitants one more important change occurs beyond the local electoral rules. At this cutoff, the council size increases from 15 to 21 members. Two responses to this potential problem are offered. First, with respect to one dependent variable (i.e. composition of the public expenditure) there is no theoretical argument that council size might affect it. Second, in the robustness check section (section 2.7) some further tests are performed to exclude the possibility that an increase in the council size confounds the results.

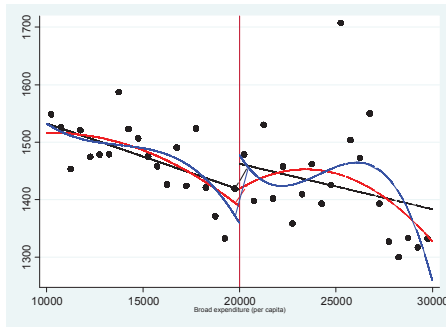
2.6. Estimation results

The main empirical part of this chapter starts with some graphical evidence for the discontinuity in fiscal policy outcomes at the 20,000 cutoff. The plots in figure 2.3 show the means of the outcome variables using different bin sizes⁷⁵ (250 and 500 inhabitants) for the municipalities whose distance from the cutoff is no more than 10,000 inhabitants. The plots superimpose the fit of a polynomial function (degree-1, degree-2 and degree-3 polynomials) allowing for the discontinuity at the cutoff and different slopes of polynomials on both sides of the cutoff. The visual evidence presented in figure 2.3 suggests that the change in the electoral rule induces a shift in fiscal outcomes. In panel A of figure 2.3, one can observe that there is a raise in broad expenditure per capita at the cutoff. That means that in municipalities with proportional representation broad expenditure per head of population is higher than in the municipalities with majoritarian representation. In panel B of the same figure, it is noticeable that the change of the electoral rule at the cutoff induces a drop in narrow expenditure per capita. Thus, narrow expenditure (local road infrastructure expenditure) is lower in the municipalities with proportional representation than in the municipalities with majoritarian electoral system. Lastly, in panel C of figure 2.3, one should be able to identify a jump in VFI at the 20,000 cutoff. The meaning of the jump is that VFI is much more pronounced in the municipalities with proportional electoral system than in the municipalities with the majoritarian representation.

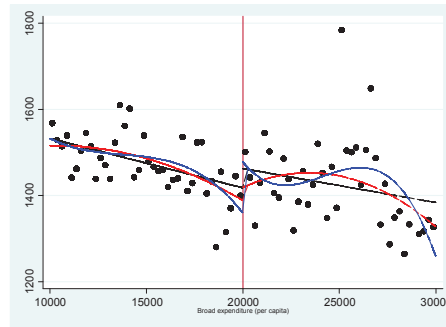
⁷⁵ Bins are intervals for which averages of certain variables are calculated. The bin size of 500 inhabitants means that, for instance, average VFI is calculated for the intervals (19,500;20,000>, (19,000;19,500>, (18,500;19,000> and so on.

Figure 2.3. The effect of the proportional electoral system on underlying fiscal policy outcomes

Panel A. The effect of the proportional electoral system on broad expenditure per capita

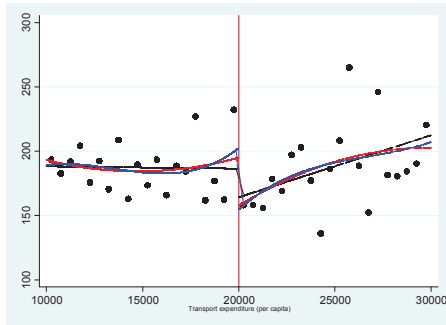


Bin = 500

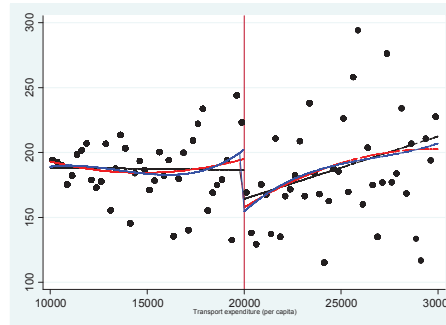


Bin = 250

Panel B. The effect of the proportional electoral system on narrow expenditure per capita

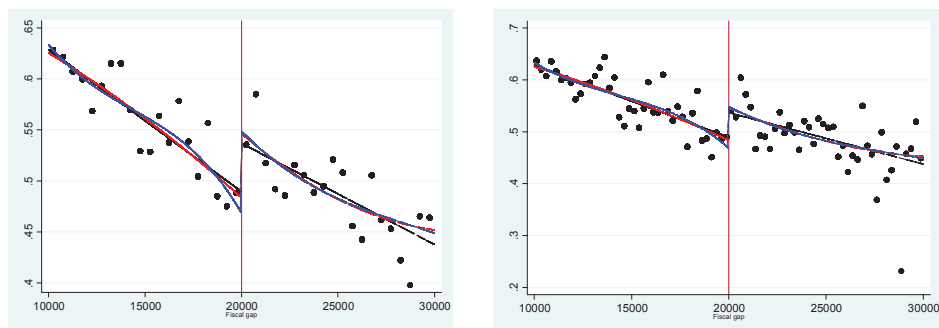


Bin = 500



Bin = 250

Panel C. The effect of the proportional electoral system on vertical fiscal imbalance



Bin = 500

Bin = 250

Note: Each dot represents the sample average of the dependent variables in a given bin. The bin width is 250 or 500. The black line represents degree-1 polynomial function (linear); the red curve stands for degree-2 polynomial function; and the blue curve represents degree-3 polynomial function. Bandwidth of 10,000-30,000.

A further step encounters a more formal estimation of the effect of the electoral rules. Table 2.3, 2.4 and 2.5 demonstrate the RD estimates of the effect of change in electoral rules on the fiscal policy outcomes (i.e. broad expenditure, narrow expenditure and VFI, respectively) at the threshold of 20,000. The reported coefficients can be interpreted as the average treatment effect (ATE) of the proportional system (see section 1.4). Standard errors reported in the tables are clustered at the municipality level and are robust to unknown heteroscedasticity and autocorrelation.⁷⁶ Columns 1-3 of table 2.3, 2.4 and 2.5 report the results for degree-1, degree-2 and, lastly, degree-3 polynomials for the bandwidth 10,000-30,000 inhabitants. Columns 4-6 present the polynomials of the same degrees, however, for a narrower bandwidth of 15,000-25,000 inhabitants.

Table 2.3 presents the average treatment effects of proportional system on broad public expenditure (i.e. expenditure on social policy and education). Coefficients have the expected signs. By browsing through the coefficients, one can infer that the proportional electoral system

⁷⁶ Whereas heteroscedasticity refers to the situation where the errors do not have the same variance, autocorrelation means that errors are correlated with one another (Kennedy, 2008, p. 41). Without correcting for heteroscedasticity and autocorrelation, one risks that hypothesis testing cannot be trusted (Kennedy, 2008, p. 113). A standard remedy to correct for heteroscedasticity and autocorrelation is to apply the so-called “robust” or “clustered” standard errors (Angrist and Pischke, 2009, p. 293).

leads to an increase in broad expenditure by as much as 128 PLN (the Polish zloty) per capita as compared to the majoritarian system. This value represents approximately 8% of the average broad spending per capita. Besides two specifications (columns 2 and 4), the reported coefficients are statistically significant at the conventional level of at least 10%.

Table 2.3. The effect of proportional electoral system (ATE) on broad public expenditure

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)
	Degree-1 Broad pc	Degree-2 Broad pc	Degree-3 Broad pc	Degree-1 Broad pc	Degree-2 Broad pc	Degree-3 Broad pc
Proportional (<i>D</i>)	46.96480* (28.04417)	31.19937 (45.62426)	116.23208** (54.21652)	57.81313 (38.39814)	122.75911** (55.54442)	128.38588* (72.64050)
Constant	1,384.23067*** (16.97836)	1,353.14131*** (24.53307)	1,334.28974*** (27.71837)	1,366.84356*** (21.66119)	1,334.71190*** (29.15277)	1,345.69896*** (35.60759)
Observations	2,718	2,718	2,718	1,099	1,099	1,099
R-squared	0.01845	0.02100	0.02378	0.01125	0.01585	0.01653

Note: The polynomial in the forcing variable is of degree-1 in columns 1 and 4, of degree-2 in columns 2 and 5, and of degree-3 in columns 3 and 6 (corresponding parameters are not reported). Columns 1-3 employ the bandwidth of 10,000-30,000 inhabitants and columns 4-6 the bandwidth of 15,000-25,000 inhabitants. All regressions use pooled OLS estimation method. Standard errors in parentheses are clustered at the municipality level. *** p<0.01, ** p<0.05, * p<0.1.

The average treatment effects of proportional system on narrow public expenditure (i.e. expenditure on local road infrastructure) are presented in table 2.4. They have the expected sign and could be interpreted as follows. A switch from majoritarian to proportional electoral regime leads to a decrease in narrow public expenditure by as much as 51 PLN per capita. This amount represents approx. 30% of the average road spending per capita. However, the coefficients in table 4 are statistically significant at the 10% level only in three specifications (columns 2, 3 and 4). In remaining specification coefficients are not statistically significant at conventional levels.

Table 2.4. The effect of proportional electoral system (ATE) on narrow public expenditure

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)
	Degree-1 Narrow pc	Degree-2 Narrow pc	Degree-3 Narrow pc	Degree-1 Narrow pc	Degree-2 Narrow pc	Degree-3 Narrow pc
Proportional (<i>D</i>)	-21.00277 (13.00827)	-34.43684* (20.31532)	-48.53179* (28.09908)	-33.25191* (18.17035)	-45.73298 (30.25158)	-50.89698 (44.53767)
Constant	175.72189*** (8.61212)	183.46789*** (13.84874)	193.10284*** (18.82161)	187.46206*** (13.20147)	187.65249*** (20.44311)	202.25420*** (28.52230)
Observations	7,263	7,263	7,263	2,964	2,964	2,964
R-squared	0.00106	0.00129	0.00151	0.00259	0.00314	0.00401

Note: The polynomial in the forcing variable is of degree-1 in columns 1 and 4, of degree-2 in columns 2 and 5, and of degree-3 in columns 3 and 6 (parameters are not reported). Columns 1-3 employ the bandwidth of 10,000-30,000 inhabitants and columns 4-6 the bandwidth of 15,000-25,000 inhabitants. All regressions use pooled OLS estimation method. Standard errors in parentheses are clustered at the municipality level. *** p<0.01, ** p<0.05, * p<0.1.

Lastly, table 2.5 reports average treatment effects of proportional regime on VFI. Coefficients suggest that change from a majoritarian to a proportional system leads to an increase in VFI by as much as 10 percentage points. That means that the share of local expenditure covered by the central (intergovernmental) transfers and borrowings of municipalities is noticeably larger in proportional systems than in majoritarian systems. Besides one estimate, all remaining reported coefficients are statistically significant at 1% level.

Table 2.5. The effect of proportional electoral system (ATE) on vertical fiscal imbalance

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)
	Degree-1 Fiscal imbalance	Degree-2 Fiscal imbalance	Degree-3 Fiscal imbalance	Degree-1 Fiscal imbalance	Degree-2 Fiscal imbalance	Degree-3 Fiscal imbalance
Proportional (<i>D</i>)	0.04657*** (0.01292)	0.06250*** (0.01880)	0.07846*** (0.02461)	0.05004*** (0.01782)	0.10132*** (0.02636)	0.07696** (0.03394)
Constant	0.49263*** (0.00853)	0.48560*** (0.01361)	0.47147*** (0.01911)	0.48957*** (0.01306)	0.46183*** (0.02087)	0.48134*** (0.02803)
Observations	7,298	7,298	7,298	2,977	2,977	2,977
R-squared	0.09826	0.09865	0.09914	0.01944	0.02573	0.02717

Note: The polynomial in the forcing variable is of degree-1 in columns 1 and 4, of degree-2 in columns 2 and 5, and of degree-3 in columns 3 and 6 (corresponding parameters are not reported). Columns 1-3 employ the bandwidth of 10,000-30,000 inhabitants and columns 4-6 the bandwidth of 15,000-25,000 inhabitants. All regressions use pooled OLS estimation method. Standard errors in parentheses are clustered at the municipality level. *** p<0.01, ** p<0.05, * p<0.1.

2.7. Robustness checks

In the current section, numerous robustness checks are performed. Firstly, to exclude the possibility that the estimates presented in section 2.6 are driven by the change in the council size instead of the change in the electoral systems, RD analysis is performed at the population cutoffs that determined council sizes in years 1990-2002. In that period, population size defined six different council sizes from 12 to 32 representatives. The analysis is run for three thresholds which determined the council sizes similar to the current council sizes, i.e. 15 and 21 representatives.

In table 2.6, columns 1-2 provide estimates of degree-3 polynomial functions at the cutoff of 4,000 inhabitants in 1998-2002. In that period, the 4,000 threshold was crucial as it was delineating the council size of 16 representatives (below that threshold) and 20 representatives

(above that threshold). Columns 3-4 reports RD estimates of the degree-3 polynomials at the cutoff of 7,000 in the timespan 1998-2002. Until 2002, in the municipalities of up to 7,000 inhabitants the council was composed of 20 representatives; above this threshold 24 representatives were elected. Lastly, columns 5-6 contain the RD coefficients for degree-3 polynomials at the 10,000 threshold in the same period of 1998-2002. Below this threshold there were 24 representatives in the council; and above it 26 representatives. The dataset available at the Central Statistics Office's website does not contain consistent information on the local social policy and education expenditure in years 1998-2002. Thus the estimations are run only for narrow public expenditure per capita and VFI for which data are available. As seen in table 2.6, the changes in the council size have no impact on the dependent variables of interest. The estimated coefficients are not statistically different from zero. This result can be used as an argument substantiating the ATE of the proportional system at the cutoff point. An initial concern was that a council size could bias the underlying ATE. It is convincingly shown, however, that similar council sizes at different population thresholds did not affect the dependent variables of interest (VFI and narrow public expenditure per capita) in the years 1998-2002.

Table 2.6. Robustness check: effect of council size at the thresholds of 4,000, 7,000 and 10,000 inhabitants in 1998-2002

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)
	Degree-3 Fiscal imb	Degree-3 Narrow pc	Degree-3 Fiscal imb	Degree-3 Narrow pc	Degree-3 Fiscal imb	Degree-3 Narrow pc
Fake treatment	0.00229 (0.01934)	-26.07500 (18.80048)	0.01250 (0.01392)	15.39596 (14.81786)	-0.01193 (0.02984)	1.81793 (17.17908)
Constant	0.69398*** (0.01597)	84.52559*** (17.77772)	0.66576*** (0.01044)	57.09875*** (7.08388)	0.63748*** (0.01916)	60.09755*** (10.28849)
Observations	5,753	2,280	5,461	1,338	2,994	734
R-squared	0.01824	0.00265	0.00907	0.01281	0.02918	0.00867

Note: The polynomial in the forcing variable is of degree-3 in all columns (corresponding parameters are not reported). Columns 1-2 exploit the cutoff of 4,000 inhabitants and the bandwidth of 0-7,000 inhabitants. Columns 3-4 employ the cutoff of 7,000 inhabitants and the bandwidth of 4,000-10,000 inhabitants. Lastly, columns 5-6 employ the cutoff of 10,000 inhabitants and the bandwidth of 7-13,000 inhabitants. All regressions use pooled OLS estimation method. Standard errors in parentheses are clustered at the municipality level. *** p<0.01, ** p<0.05, * p<0.1.

The second robustness check concerns the functional form of the econometric model. In table 2.7 the results are reported for models which exclude a possibility of different slopes of the polynomial functions on both sides of the cutoff. Baseline regressions assume various slopes of polynomials at both sides of the cutoff. The results remain undisputed, i.e. coefficients of degree-3

polynomial functions for two different bandwidths are statistically significant at least at the 10% level and preserve the expected signs.

Table 2.7. Robustness check: the same slopes at both sides of the cutoff

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)
	Degree-3 Broad pc	Degree-3 Narrow pc	Degree-3 Fiscal imbalance	Degree-3 Broad pc	Degree-3 Narrow pc	Degree-3 Fiscal imbalance
Proportional (<i>D</i>)	55.86229* (31.84909)	-125.20706*** (15.12765)	0.12150*** (0.01305)	62.26327* (36.33755)	-29.27587* (16.03583)	0.04790*** (0.01659)
Constant	1,403.60825*** (70.71944)	-251.96471*** (37.16888)	0.79293*** (0.02493)	1,221.39430*** (120.89993)	-383.73194*** (67.15114)	0.90794*** (0.03848)
Observations	2,718	7,263	7,298	1,099	2,964	2,977
R-squared	0.01835	0.09288	0.14851	0.01667	0.17986	0.12559

Note: The polynomial in the forcing variable is of degree-3 in all columns (corresponding parameters are not reported). All columns assume the same slopes of the function at both sides of the cutoff. Columns 1-3 employ the bandwidth of 10,000-30,000 inhabitants and columns 4-6 employ the bandwidth of 15,000-25,000 inhabitants. All regressions use pooled OLS estimation method. Standard errors in parentheses are clustered at the municipality level. *** p<0.01, ** p<0.05, * p<0.1.

The third type of a robustness check applies different windows/bandwidths around the threshold of 20,000 inhabitants. Table 2.8 demonstrates the estimates for two different bandwidths. Columns 1-3 present estimates of degree-1 polynomials for the narrow bandwidth of 17,500-22,500 inhabitants. In turn, columns 4-6 show estimates of degree-3 polynomials for the negatively skewed bandwidth of 15,000-45,000 inhabitants. The aim of this last bandwidth is to include more treated municipalities, i.e. those with a proportional system. As seen from the table, the results are still confirmed, i.e. besides one estimate for narrow expenditure (column 2), coefficients are statistically significant at least at 10% level.

Table 2.8. Robustness check: different bandwidths applied

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)
	Degree-1 Broad pc	Degree-1 Narrow pc	Degree-1 Fiscal imbalance	Degree-3 Broad pc	Degree-3 Narrow pc	Degree-3 Fiscal imbalance
Proportional (<i>D</i>)	140.20459*** (52.23191)	0.27196 (26.42464)	0.06843*** (0.02314)	54.21913* (31.38231)	-26.65683* (15.00494)	0.05735*** (0.01469)
Constant	1,076.10356*** (200.23683)	-491.55930*** (117.26484)	0.94552*** (0.06010)	1,261.20293*** (114.80497)	-552.79809*** (71.50157)	0.94518*** (0.04398)
Observations	499	1,334	1,346	1,566	4,237	4,251
R-squared	0.03696	0.16066	0.13782	0.03386	0.17260	0.16757

Note: The polynomial in the forcing variable is of degree-1 (Columns 1-3) or degree-3 (Columns 4-5). Corresponding parameters are not reported. Columns 1-3 employ the narrow bandwidth of 17,500-22,500 inhabitants and columns 4-6 employ the bandwidth of 15,000-45,000 inhabitants. All regressions use pooled OLS estimation method. Standard errors in parentheses are clustered at the municipality level. *** p<0.01, ** p<0.05, * p<0.1.

The fourth robustness check relies on showing the effects of local electoral rules at a fake cutoff. These are called placebo (falsification) experiments as no treatment should take place at the fake threshold. Four different placebo thresholds are selected. They are as follows: (1) 19,000 inhabitants (threshold being sufficiently close to the investigated threshold); (2) 15,983 inhabitants (the average of the population size); (3) 7,873 inhabitants (the median of the population size after considering a sub-sample below 20,000 inhabitants); and (4) 33,367 inhabitants (median of the population size after considering a sub-sample above 20,000 inhabitants)⁷⁷. All estimations are performed for degree-3 polynomial function and are reported in table 2.10, 2.11, 2.12 and 2.13, respectively. Besides one case, in all the remaining cases, the treatment effects are never significantly different from zero. This substantiates the empirical design and suggests that treatments are correctly identified.

Table 2.9. Robustness check: placebo experiment at the threshold of 19,000

VARIABLES	(1)	(2)	(3)
	Degree-3 Broad pc	Degree-3 Narrow pc	Degree-3 Fiscal imbalance
Proportional (<i>D</i>)	39.60004 (49.94220)	-4.32351 (24.28498)	-0.00855 (0.02414)
Constant	1,359.03231*** (33.36205)	182.02344*** (17.23868)	0.49725*** (0.01601)
Observations	3,223	8,701	8,752
R-squared	0.02643	0.00056	0.11391

Note: The polynomial in the forcing variable is of degree-3 in all columns (corresponding parameters are not reported). All columns employ the fake cutoff of 19,000 inhabitants and the bandwidth of 9,000-29,000 inhabitants. All regressions use pooled OLS estimation method. Standard errors in parentheses are clustered at the municipality level. *** p<0.01, ** p<0.05, * p<0.1.

⁷⁷ The strategy of selecting fake threshold at average or median of sub-samples is suggested by, for instance, Imbens and Lemieux (2007).

Table 2.10. Robustness check: placebo experiment at the threshold of 15,983

VARIABLES	(1)	(2)	(3)
	Degree-3 Broad pc	Degree-3 Narrow pc	Degree-3 Fiscal imbalance
Proportional (<i>D</i>)	-33.92119 (39.26876)	-21.59090 (19.38878)	0.01480 (0.02009)
Constant	1,451.50872*** (26.42967)	180,89136*** (13.12976)	0.54832*** (0.01329)
Observations	6,636	18,316	18,429
R-squared	0.03227	0.00079	0.12460

Note: The polynomial in the forcing variable is of degree-3 in all columns (corresponding parameters are not reported). All columns employ the fake cutoff of 15,983 inhabitants and the bandwidth of 5,000-25,000 inhabitants. All regressions use pooled OLS estimation method. Standard errors in parentheses are clustered at the municipality level. *** p<0.01, ** p<0.05, * p<0.1.

Table 2.11. Robustness check: placebo experiment at the threshold of 7,873

VARIABLES	(1)	(2)	(3)
	Degree-3 Broad pc	Degree-3 Narrow pc	Degree-3 Fiscal imbalance
Proportional (<i>D</i>)	-9.13340 (30.00604)	11.21368 (16.84875)	-0.01888 (0.01493)
Constant	1,514.83987*** (22.52767)	170,88474*** (15.02319)	0.67486*** (0.01291)
Observations	8,242	22,566	22,679
R-squared	0.01164	0.00248	0.05031

Note: The polynomial in the forcing variable is of degree-3 in all columns (corresponding parameters are not reported). All columns employ the fake cutoff of 7,873 inhabitants and the bandwidth of 0-17,000 inhabitants. All regressions use pooled OLS estimation method. Standard errors in parentheses are clustered at the municipality level. *** p<0.01, ** p<0.05, * p<0.1.

Table 2.12. Robustness check: placebo experiment at the threshold of 33,367

VARIABLES	(1)	(2)	(3)
	Degree-3 Broad pc	Degree-3 Narrow pc	Degree-3 Fiscal imbalance
Proportional (<i>D</i>)	-1.69804 (67.12831)	-67.89824* (36.03708)	-0.01563 (0.02201)
Constant	1,266.94432*** (44.51576)	233,82882*** (29.97493)	0.42739*** (0.01706)
Observations	1,566	4,237	4,251
R-squared	0.03111	0.00571	0.09181

Note: The polynomial in the forcing variable is of degree-3 in all columns (corresponding parameters are not reported). All columns employ the fake cutoff of 33,367 inhabitants and the bandwidth of 15,000-45,000 inhabitants. All regressions use pooled OLS estimation method. Standard errors in parentheses are clustered at the municipality level. *** p<0.01, ** p<0.05, * p<0.1.

The last (fifth) robustness check augments baseline specifications with a number of additional covariates (control variables). Regressions are augmented by the following variables: unemployment rate, demographic burden, number of registered economic units per 1,000 inhabitants. As discussed by Lee and Lemieux (2009), because of its local randomized experimental nature it is not necessary to include additional controls in a RD setting to obtain consistent estimates. However, doing so might reduce the sample variability and therefore increase the precision of an estimator. For VFI, the identification strategy is validated as coefficient in column 3 of table 2.14 remains statistically significant at the 5% level. Much less robust results are observed for broad and narrow public expenditure, casting one more time some doubts about causal relationship between the electoral rules and the composition of public spending.

Table 2.13. Robustness check: augmenting baseline regressions by adding covariates

VARIABLES	(1)	(2)	(3)
	Degree-3 Broad pc	Degree-3 Narrow pc	Degree-3 Fiscal imbalance
Proportional (<i>D</i>)	39.27025 (53.34691)	-0.86089 (19.21859)	0.05133** (0.02186)
Constant	681.17712*** (125.04487)	119.09698** (46.81873)	0.12808*** (0.03959)
Observations	664	4,577	4,597
R-squared	0.14604	0.18151	0.53817

Note: The polynomial in the forcing variable is of degree-3 in all columns (corresponding parameters are not reported). All columns employ the bandwidth of 10,000-30,000 inhabitants. All regressions use pooled OLS estimation method. Standard errors in parentheses are clustered at the municipality level. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

2.8. Policy implications

This chapter furthers our understanding on causal effects of electoral regimes on selected fiscal variables. First of all, it is demonstrated that the link between the electoral regimes and the composition of spending is weaker than it is argued in the existing literature. Most importantly however, in the intergovernmental context, it is shown that proportional electoral regime causes larger VFI. The effect is statistically significant and non-negligible from an economic point of view as the proportional regime causes an increase in VFI by approx. 10 percentage points. At a minimum, policy-makers should be aware of these effects since once in place the electoral

regimes might prove to be difficult to amend – especially if they are enshrined in the constitution – leading to persistent inefficiencies. For instance, large VFI results in a soft budget problem and poor fiscal performance of the whole general government. To be more specific, the general government fiscal balance is found to deteriorate by 1 percent of GDP for each 10 percentage point increase in VFI (Eyraud and Lusinyan, 2013).

Furthermore, as underscored by Eyraud and Lusinyan (2013), VFI will likely be at the center of the policy discussions concerning the prospect fiscal integration in the EU (so-called fiscal union project). If the project of fiscal union for the EU gets momentum and a fully-fledged fiscal union is created, it will necessitate major shifts in the vertical fiscal relations between “Brussels” and the EU member states. Particularly, transfers from the EU budget to individual countries may need to be increased to provide for a better insurance against idiosyncratic shocks or even redistribution of income with the aim of eliminating economic disparities between countries (Guiso et al., 2014a). This chapter gives a potential prediction that the member states with a proportional electoral system will tend to cover a larger portion of local spending through intergovernmental transfers leading to larger VFI, and, in consequence, to larger deficits in an expanded EU budget. Knowing that, “Brussels” might like to prevent this sort of cost externalization by the member states *a priori* by establishing rules-based and stringent system of intergovernmental transfers.

2.9. Closing remarks for chapter 2

The results presented in this chapter confirm, to some extent, the theoretical arguments found in the (constitutional) political economy literature. Although empirical investigation exists on the topic at hand, due to the lack of credible empirical designs, up-to-date hypotheses could be tested only in a suggestive manner. The lack of those credible designs is fully understandable as the assignment of electoral systems cannot be randomized across the jurisdictional units and quasi-experimental designs are rarely available.

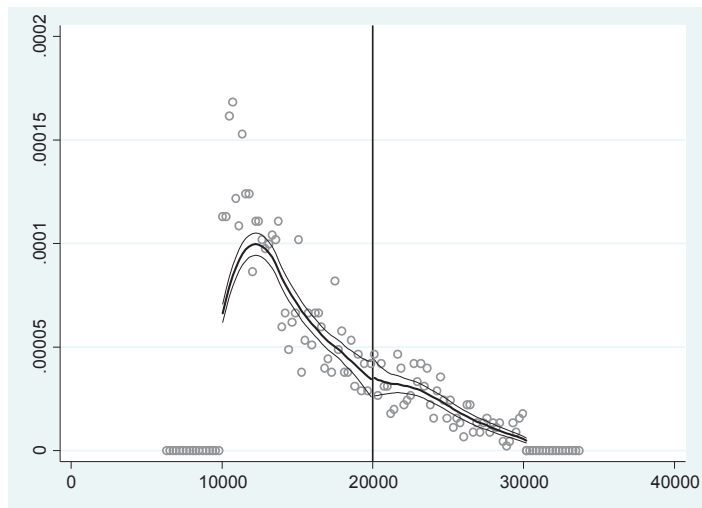
This chapter used the unique empirical setting allowing for as-if random assignment and provided a causal inference of electoral systems on selected fiscal policy outcomes. It exploited the discontinuity in assignment of the electoral systems in Polish municipalities and, thus, applied the

RD analysis. The estimates demonstrate that the relationship between electoral system and spending composition is weak. There are no robust results suggesting that proportional systems lead to larger broad public expenditure (proxied by welfare and education expenditure) or lower narrow public expenditure (proxied by local road infrastructure expenditure) as compared to the majoritarian system. This therefore casts some doubts about a causal relationship between electoral rules and the composition of public spending found in the previous literature. More importantly, however, it is shown that a proportional system leads to a larger VFI than majoritarian representation. The average treatment effects of electoral rules on VFI are not only statistically significant but also non-negligible from the economic point of view and robust to numerous alternative specifications and falsification tests. Results on VFI are crucial as larger VFI influences negatively the budget balance of the general government leading in the long run to a higher public debt. The chapter also derives some tentative policy implications in the context of the EU.

Appendix 2.1. Descriptive statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
Broad public expenditure per capita	12425	1548.027	332.2248	691.8394	16351.61
Local road infrastructure expenditure per capita	29858	190.5043	250.0354	0	11936.33
Vertical fiscal imbalance	37659	.6270113	.1671281	0	.9638877
Population size	28096	15983.67	56806.41	1246	1598724
Economic Units	29740	64.48846	30.22202	14.19044	438.7198
Unemployment	24783	.1094301	.0514746	.009	.512
Demographic burden	27260	.6177088	.088568	.362	1.213
Total revenue	37659	3.60e+07	2.04e+08	1714053	1.19e+10
Total expenditure	37659	3.73e+07	2.16e+08	1778986	1.26e+10

Appendix 2.2. McCrary density test



CHAPTER 3

THE SHADOWS OF HISTORY FOR TODAY'S FISCAL OUTCOMES: EVIDENCE FROM POLISH MUNICIPALITIES⁷⁸

3.1. Introduction

Does history matter? Do institutions, customs and norms have a persistent effect? Do institutions of former conquerors have any long-lasting effects on countries which regained their independence? Particularly in the context of Poland, historians tend to answer these questions affirmatively.

The economic and political decline of the Commonwealth of Poland and Lithuania (hereinafter Poland) throughout the 18th century triggered partition of the country by three empires: Prussia (Germany since 1871), Russia and the Habsburg monarchy (Austria-Hungary, hereinafter Austria). In 1795 these three empires completed the third and last partition of the Polish state (Davies, 2001, p. 139). After the third partition, Poland and its institutional environment ceased to exist for 123 years – a period of roughly five generations. Conquerors' institutions were subsequently transplanted, i.e. Prussian institutions in the North-West, Russian institutions in the East and Austrian institutions in the South-East (see figure 3.1). Poland lost its independence not only for a very long period of time but also at a very crucial moment. Europe in the 19th century experienced numerous events, which changed the face of the old continent. This was a time of

⁷⁸ This chapter was accepted to the 19th Annual Conference of the International Society for New Institutional Economics, which takes place at the Harvard University in Cambridge on June 18-20, 2015. I would like to thank Mateusz Trojanowski who coded the distances from the municipalities to the former partition borders. I appreciate comments by Mathias Dauner, Marek Endrich, Jerg Gutmann, Tobias Hlobil, Alessio Paccas, Agnes Strauss and Stefan Voigt. Special thank is devoted to Elena Kantorowicz for her valuable feedback, constant support and patience too. I am also grateful to Irena Grosfeld for sharing data on luminosity in the Polish municipalities. The usual disclaimers apply.

development of national identities, modern states and their institutions such as legal systems and constitutions (Davies, 2001). Moreover, the economic and social foundations were rapidly changed by the Industrial Revolution and the abolishment of serfdom (Markevich and Zhuravskaya, 2015).

Figure 3.1. The borders between Prussian, Russian and Austrian empires established after Vienna Congress in 1815



Source: bezgranica.pl (accessed on December 27, 2014).

Historians agree that empires varied significantly in terms of their policies toward Polish territories (Davies, 2001). For more than a century, Poles living in different regions were therefore exposed to significantly different institutions, customs and norms. As a result, the Polish population – particularly those located close to the newly established empires’ borders – could be considered as being subject to a large-scale “institutional and cultural experiment”. Since the partition borders were rather an outcome of political bargaining and were irrelevant with respect to the geographical and economic conditions (see section 3.4 for details), the assignment of subjects in this partition experiment could be perceived as-if it was random. Given this empirical framework, the underlying question is whether the differences in institutional performance observed under empires can be transmitted through centuries and shape the fiscal outcomes in today’s Poland. In other words, it is to be verified whether past experience with different

institutions continues to influence fiscal outcomes contemporarily, that is, to produce a kind of path-dependency of fiscal outcomes.

While the novelty of chapter 2 relies on the fact that it applies a causal framework to a relatively well established research question, the novelty of chapter 3 is twofold. First, similarly to chapter 2 it applies a design-based framework which enables the inferring of a genuine causality. Second, it analyses how history and institutional path-dependence might matter for the fiscal outcomes. This channel of influence of fiscal outcomes is up to date entirely neglected in the literature. More precisely, this chapter is interested in revealing whether there are any differences in fiscal outcomes between the Polish municipalities which were ruled by different empires and therefore were exposed to different institutional environments. The attention is given to the institution of property tax as municipalities in Poland have a major autonomy in setting the rates of this tax subject to the ceiling imposed by the Ministry of Finance (see section 3.3 for details). Specifically, it is argued here that due to the differences in empires' legacies, partitions are responsible for differing property tax rates (high in the Prussian part and low in the Russian part), and the resulting policy outcomes, such as fiscal autonomy and vertical fiscal imbalance (VFI). Similarly to chapter 2, the latter variable is measured as a share of spending covered by external resources such as subsidies and borrowings and it approximates the soft budget constraints of municipalities. As already mentioned in chapter 2, VFI is positively associated with the deficit of the general government. It is because local governments with a high VFI are likely to externalize the negative consequences of their fiscal policy to the central government.

This chapter not only shows that the difference in property tax rates and resulting fiscal outcomes between municipalities – due to the partition of Poland – exists. It also presents the most probable transmission channels to explain those differences. Three transmission channels are discussed as possible explanations regarding why in the former Prussian municipalities the property tax rates should be higher and, consequently, VFI lower as compared to Russian and Austrian partition. First, the empires significantly differed with respect to the tax system imposed and the functioning of the cadaster, with Prussian tax administration and the cadaster being the most developed, particularly when property taxes are considered. Moreover, in the Prussian partition the property tax was local in nature and not imposed by the central government. It is different than in Austrian and Russian parts where property tax was a competence of the central tier of the government.

Both the effectiveness and the local character of the property tax could shape the favorable perception of citizens and, hence, their willingness to pay this tax, which persisted for decades.

The second transmission channel relates to institutions and cultural traits influencing the general tax morale, such as for instance religiosity and social capital. Tax morale is relevant inasmuch as public authorities might be more willing to impose high tax burdens on individuals with high tax morale (Dorrenberg et al. 2014). Individuals with high tax morale face high costs of evading taxation, and therefore are less responsive to higher taxes. Given that particular institutions and norms (described in details in section 3.3) persisted over the period of a century, it is expected that the highest tax morale and, thus, the highest property taxes in the Prussian partition prevail.

The third transmission channel is linked to infrastructural differences of land and building properties. These infrastructural differences due to variances in water, electricity and gas supply as well as sewerage might influence the value of the property (see section 3.3 for details). Given the infrastructural differences, public authorities might levy higher taxes on more valuable land and buildings, i.e. those with municipal service providers. Based on this argumentation, it is yet again expected that the highest property tax rates in the former Prussian partition prevail as, historically, this partition was the most fully developed in terms of utility supply. All channels and their interactions might have some merit in explaining the difference in the property tax rates and fiscal policy outcomes in Polish municipalities nowadays. Yet, as it is argued later in the chapter, the most robust seems to be the first channel.

This chapter analyzes the difference in fiscal institutions and outcomes between Polish municipalities from the former Prussian, Russian and Austrian partitions. However, the greatest effects are presumably to be found at the Prussian-Russian border. At this border, the socio-economic and institutional differences were the most encompassing. “Prussian Poland” was not only much more industrialized than “Russian Poland” but there were also large differences in the access to education, efficiency of the public administration (also in taxation and cadaster), religiosity, urbanization, centralization of power, agricultural reform and social capital. However, it should be acknowledged that the political and cultural freedom of Poles in Prussia was not as high as under Austrian ruling (see section 3.3). However, Prussian oppression was not as severe as Russian coercion, under which many freedom-seeking Poles lost their lives in Siberia. Even though special attention is given to the Prussia-Russia border, the results for the Austria-Russia

border are also reported and they serve as a robustness or placebo check⁷⁹. At the Austria-Russia border, there should be no differences in property tax rates and other resulting fiscal variables or at least these differences should be much smaller than those observed at the Prussia-Russia border. Due to a limited number of observations, this chapter does not report the results for the Austria-Prussia border. This border was the shortest and the least stable (see figure 3.1).

This chapter employs a spatial regression discontinuity (RD) design, which allows testing for a break (jump) in the outcome variables exactly at the border between the former empires. RD design relies on the fact that the partition frontiers between empires were imposed exogenously (Grosfeld and Zhuravskaya, 2015). The borders were the consequence of the political bargaining and were set – at least to some extent – arbitrarily (see section 3.4 for details). Importantly, the drawing of the border was neither pursued according to any geographical feature of the land, nor according to economic development at that time. An assumption of exogeneity of the border is crucial and it allows the inferring of causality. Under this assumption, any sharp break in the outcome variable at the partition border should be interpreted as a causal effect of the partitions. The RD offers a clean evaluation of the historical legacies, simply because estimates are not blurred by omitted variables or the self-selection problem (see section 1.4). Importantly, the partition borders established by the Vienna Congress in 1815⁸⁰ coincides neither with the borders of the previous Polish-Lithuanian Commonwealth, nor with the borders of the newly established Polish state in 1918 and then in 1945 (see map in appendix 3.1). This substantiates the result as the partition border is not confounded by any other frontier and can be uniquely subscribed to the effect of empires. To further strengthen the causal inference, the analysis is confined to the territories with relatively steady conditions on both sides of the Prussia-Russia and Austria-Russia borders before and after the partition. For instance, territories which experienced huge population shifts after the World War II, such as North part of Poland (namely Mazuren) and New Territories (Pommern) and Lower Silesia (Niederschlesien) are explicitly excluded from the analysis (see the map in appendix 3.1).

⁷⁹ Since historical narratives suggest that the differences on the Austria-Russia borders are less appealing, there should be no effect on the Austria-Russia border or those effects should be smaller.

⁸⁰ Although the three empires annexed Poland already in 1795, the final frontiers among them were set only in 1815 (Davies, 2001, pp. 142-143).

The chapter proceeds as follows. Section 3.2 concisely discusses the literature related to historical persistence. Section 3.3 provides a short description of the property tax regime in Poland as well as giving a brief historical overview of institutions in the former Prussian, Russian and Austrian empires and derives main hypotheses along with transmission channels. The data and the empirical method applied in the chapter – namely spatial RDD – are described in section 3.4. The baseline results on the effects of empires on property tax rates are subsequently demonstrated and discussed in section 3.5. Section 3.6 presents results on further fiscal outcomes, such as fiscal autonomy and VFI. Some tentative policy recommendations which stem from this chapter are discussed in section 3.7. Lastly, section 3.8 concludes.

3.2. A concise literature review

This chapter contributes to a recently growing body of empirical literature that points toward important long-term effects of historical events on currently observed economic outcomes (Nunn, 2009). For instance, early studies such as La Porta et al. (1998), Acemoglu et al. (2001) as well as Engerman and Sokoloff (2002) examine the persistent impact of Europe's colonization on the development of former colonies. More specifically, they look at the impact of colonial legacy on the local institutions that persisted after the colonized countries became independent. Dell (2010) provides an important contribution on the methodological ground. By utilizing a spatial RDD, she finds an adverse effect of forced mining labor in Peru and Bolivia in the period 1573-1812 on household consumption and the prevalence of stunted growth in children.

Although historical determinants of institutions in the former European colonies received most of the attention, the persistence of empires' legacies in Europe was also researched. For instance, Becker et al. (2014) argue that populations from territories previously occupied by the former Habsburg monarchy display on average higher trust in government institutions than territories which did not experience the Habsburg's ruling. A great deal of empirical research uses the German context to study the long-term persistence of institutions and customs. For example, Voigtländer and Voth (2012) analyze the historical roots of anti-Semitism in interwar Germany. They show the persistence of interethnic hatred as medieval pogroms of Jews appeared to be a

good predictor of the Nazi party's share of votes in 1928. Furthermore, Schumann (2014) shows the persistent difference in the size of the population between the German municipalities occupied by France and the US after the Second World War. Contrary to the US decision, France refused to admit German expellees who were forced to resettle after the new borders were set after the war. This setting allows for quasi-experiment at the former borders of occupational zones. Furthermore, Hornung (2014) finds substantial long-term effects of Huguenot settlement in the 17th century on the productivity of textile factories in Germany in the 19th century. For the Italian context, Guiso et al. (2014b) constitutes an important input. They ascertain that today's notable differences in civic capital between the North and South of Italy are the legacy of the medieval free city-state experience.

The persistence of historical institutions in the Polish context has recently been studied by Grosfeld and Zhuravskaya (2015). They provide evidence of some ideological and customary differences at the borders of the former empires. For instance, the authors demonstrate variations in the religious practices (attending mass) and beliefs in democratic institutions at the partition borders. They also find that empires have an effect on the political outcomes in modern Poland. Precisely, the number of votes for the post-communist party in the parliamentary election is systematically higher in the municipalities from the former Russian occupation. Despite common wisdom, Grosfeld and Zhuravskaya do not find, however, any differences in economic development between municipalities occupied by the three empires. Nonetheless the authors find some systematic differences in the density of the railway network between former Prussian and Russian occupation zones. The difference in 'hard' infrastructure seems to be persistent. Besides Grosfeld and Zhuravskaya (2015), the effects of empires in contemporary Poland are also studied by Wysokińska (2011). She documents a higher average generalized trust, voter turnouts and economic development on the Prussian side of the Prussia-Russia border in today's Poland. Although this chapter employs methodological designs from Grosfeld and Zhuravskaya (2015), it differs significantly with respect to the phenomenon it tries to explain. This chapter is one of the first attempts to isolate history's influence on the fiscal institutions and outcomes. Besides this contribution, the persistence of the tax morale in the UK has been studied very recently by Besley et al. (2015).

3.3. Institutional background, historical framework and hypotheses

As already mentioned in section 2.3, by international standards, Polish municipalities enjoy high or moderately high fiscal autonomy. On the expenditure side, they are responsible, among other aspects, for a provision of important public goods and services, such as primary education, health care, police services and local public infrastructure and transportation. On the revenue side, Polish municipalities are eligible to shares of personal and corporate incomes taxes levied on their territories. However, municipalities are also allowed to set rates of selected types of taxes, of which property tax is the most important. Property tax income constitutes approximately 10% of all municipal revenue in Poland – the largest share of all taxes imposed by the municipalities and similar to the revenue from personal income tax, for which municipalities are eligible.⁸¹

Considering property tax, municipalities are free to set the tax rates on land and building properties up to the ceiling established by the Ministry of Finance, which amends the rates on a yearly basis.⁸² Rate ceilings on buildings are higher, however, than rate ceilings on land, giving more leeway to the municipalities to levy building taxes. There are two main categories of taxpayers of property tax: individuals and companies. As of 2013, the maximum rates on individuals are 0.73 PLN per square meter for residential building and 0.45 PLN per square meter of land. Companies, on the other hand, are charged with a maximum of 22.82 PLN per square meter of building space and 0.88 PLN per square meter of land.⁸³

As mentioned in the introduction to this chapter, an overarching question posed by this chapter is whether the empires' legacy can explain the differences in rates of property taxes levied contemporaneously by the municipalities in Poland. Based on historical narratives, three transmission channels are described that can potentially explain path-dependence between empires' legacy and current fiscal outcomes.

⁸¹ Own calculations based on the data from the *Moja Polis* (<http://www.mojapolis.pl/>, accessed on February 25, 2015).

⁸² Article 5 § 1 of the *Act on Local Taxes and Fees 1991*.

⁸³ The maximum taxes rates for 2013 were set by the *Statement of the Minister of Finance dated 02.08.2012 r. on the upper limits of rates of local taxes and fees in 2013*.

First, it is argued that Poles in different empires had diverse reference points regarding the property tax institution, which shaped their perception and preferences regarding these taxes (Kahneman, 1992).⁸⁴ Perception and preferences with reference to property taxes could, in turn, persist over time through the intergenerational transmission of perception and preferences. Yet, what are the causes of differing perceptions and preferences for property taxes?

Before the partition of Poland, the property tax was known under the name ‘chimney’ tax (*podymne*) and it was imposed centrally on dwellings possessing a chimney (Owsiak, 2000). Chimney tax was abolished and replaced by the various institutional arrangements of the conquerors after the partitioning of Poland. The most modern property tax system was established in “Prussian Poland”, where this tax together with the income tax generated the largest share of government income. In other parts, i.e. Russian and Austrian partitions, the indirect taxes prevailed, particularly those concerning consumption, such as excise (Jaśkiewiczowa and Jaśkiewicz, 1969, p. 81). In Prussian partition, the property tax system was also more formalized and had a more local character as compared to the property tax regimes in the Russian and Austrian parts. The local character of the Prussian system relied on the fact that property taxes were set and levied by the local governments and the income from these taxes constituted local income (Rembikowska, 2009, p. 31; Stankiewicz, 2013, pp. 199-200; Tarnowska, 2013). Formalization of the property tax in Prussia stemmed from the fact that tax rates were set based on the cadastre (both land and building cadastre⁸⁵) (Mika, 2010). A cadastre contains a detailed description (measures and maps) of all lands and capital inventory which is located on the land, and hence contains the information on the estimated value of the property, which serves as a basis to set the property tax. Cadastre facilitated acquisition of the land and buildings as property rights were clearly defined, increasing the legal certainty of the transactions (Centralne Stowarzyszenie Państwowych Inżynierów Mierniczych we Lwowie, 1933). Cadastre also facilitated the procurement of credits and loans as cadastre eased the estimation of the value of the property which could be used as collateral. In contrast to the Prussian partition, in Austria and in Russia,

⁸⁴ Alternatively, one could employ the ‘imprinting’ concept to explain persistence of certain characteristics (see for instance Marquis and Tilcsik, 2013).

⁸⁵ Historically, a rationale for the establishment of cadastre was to properly define the borders/limitations of the property rights. For instance, in the ancient Rome, only this property was respected in a legal sense which was measured.

property taxes were set centrally and, particularly in Russia⁸⁶, they were not based on the cadastre (in Austria only the land cadastre was established, not the building cadastre) (Centralne Stowarzyszenie Państwowych Inżynierów Mierniczych we Lwowie, 1933; Mika, 2010).

Based on this discussion, it is hypothesized that today's property tax rates are higher in the municipalities from the former "Prussian Poland" than in municipalities with a Russian and Austrian legacy. Different property tax regimes imposed by empires⁸⁷ served as reference points shaping people's perception and preferences for property taxes (Kahneman, 1992), which were transmitted vertically from generation to generation. In municipalities with a Prussian legacy, taxpayers should persistently have a more positive perception of property taxes than in the Russian and Austrian parts. It is because the Prussian property tax system had a more local character, i.e. tax revenue was spent locally and was not just a contribution to the general (central) tax fund (taxpayers could internalize the benefit of this tax). In addition, the Prussian property tax system was based on the cadastre which enhanced legal certainty over the property as property rights were well defined, protected and more easily transferable. In Prussia, paying property taxes was therefore associated with more protection over the property. This more positive perception of property tax in Prussia should further be reflected in the willingness to pay higher taxes on properties.

While the first argument refers to institutional differences in property taxation among empires, the second argument relates to other institutional and cultural traits – beyond the tax system itself – that can influence the general tax morale. Certain individual features tend to be associated with higher tax morale. Recent literature on tax morale investigates the determinants of people's willingness to pay taxes.⁸⁸ Among others, it is claimed that income, religiosity, education, generalized trust (Frey and Torgler, 2007; Torgler, 2007; Torgler and Schneider, 2007), the

⁸⁶ Moreover, in Prussia the property tax on buildings was introduced already in 1861 – much earlier than in Russian part of Poland, where the property tax on building was introduced at the outset of the 20th century.

⁸⁷ Although after regaining independence in 1918, much effort was put to unify the property tax system in Poland, a great deal of institutional differences persisted until the mid-1940 (Stankiewicz, 2013, p. 197). After 1918, some legal harmonization was achieved only with respect to the property tax regime in the former Austrian and Russian partitions, while the Prussian system remained quite distinct until after the World War II. The unification of the property tax system was accomplished by the socialist regime, which introduced in 1951 standardized and centrally set property tax rates across the country both for land and buildings. The current property tax system was established after restoring democracy in 1991.

⁸⁸ It is not an abstract idea not to comply with property taxes. First, registration of the buildings might be delayed. Second, declaration of the property surface or the way surface is used might be misspecified.

efficiency of public administration (Frey, 1997; Barone and Mocetti, 2011) are positively associated with tax morale. According to Doerrenberg et al. (2014), there are three main reasons why higher tax morale might be associated with higher tax rates. First, in order to minimize tax evasion public officials tend to levy high rates on groups with less elastic responses to tax rate changes (high tax morale individuals) and lower rates on groups with elastic responses (low tax morale individuals). Second, politicians facing re-election might impose higher taxes on high tax morale groups since these groups oppose less high rates and, hence, it is less politically costly to charge them high rates. Third, imposing high rates on high tax morale groups is also cost-efficient since enforcement costs are lower in case of collecting taxes from groups with high tax morale. Those three arguments suggest that – from an economic and political point of view – it is beneficial to levy high tax rates on high tax morale groups of people.

Based on the historical account of institutional and cultural differences between empires, one can hypothesize that in Prussian municipalities, individuals have higher tax morale as compared to municipalities with Russian and Austrian legacy in particular. The following differences could have implications for tax morale and, hence, for the level of property tax rates.

Economic development and income: Both Russia and Austria were lagging behind Prussia in terms of industrializing their territories. Hence, the differences were visible in the scale and depth of industrialization. Those differences had an important effect on economic development at the Polish territory (Grosfeld and Zhuravskaya, 2015). Consequently, at the outset of World War I – after which Poland regained independence – the average income of Poles from the Prussian territory was 79% higher than of Poles from the Russian part and roughly twice as compared to Poles from the Austrian partition (Zdrada, 2005, p. 693; Wolf, 2007).

Education: The education systems also varied in the empires (Grosfeld and Zhuravskaya, 2015). In the ‘Russian Poland’ there was no mandatory secondary education and consequently at the beginning of the 20th century, on average, pupils spent only 3-4 years in schools. In the “Prussian Poland”, eight years of education were mandatory and strictly enforced. In Austria, school was proscribed for six years in rural regions and for seven years in urban areas. Consequently, illiteracy differed considerably across partitions. The illiteracy rates amounted to 65% in the Russian partition, 56% in the Austrian part and only 0.6% in

the Prussian partition (Grosfeld and Zhuravskaya, 2015; Gawryczewski, 2005, p. 319). The Prussian education system was superior not only vis-à-vis the Russian and Austrian systems but was also path-breaking for the Western world at that time. In Prussia, there was one teacher for every six pupils. In France this ratio was 1:9 and in Russia 1:66 (Wysokińska, 2011).

Public administration: In Prussia, Poles were subject to an administration (including judiciary) that was effective, candid, well-organized, predictable and based on neutral and impersonal procedures (Davies, 2001; Grosfeld and Zhuravskaya, 2015). A similar type of administration was present in the Austrian partition. Poles under Russian rule, on the other hand, were often exposed to inefficient and corrupt bureaucracy without rule-of-law procedures (Grosfeld and Zhuravskaya, 2015). In Russia, bureaucrats were characterized by a high degree of conformism and loyalty toward the Russian regime. The administration was strictly controlled by the State by means of police and army (Davies, 2001; Wysokińska, 2011).

Social capital (trust) and religiosity: The Russian part was the most repressive to Poles among the three empires. The Polish land was never treated equally to other Russian territories. Rather colonial type of relationship prevailed, with Polish territory constituting a buffer between the West and the East (Davies, 2001). Polish territories were under the full control of the Russian *Tsar*, who launched policies aimed at complete integration without regard to Polish culture and customs (Grosfeld and Zhuravskaya, 2015). The Polish language was banned, teaching was entirely in Russian and the Catholic church was oppressed. Poles under the Russian administration had no opportunity to formalize their activities in associations and social networks. The main political and social activity was of a conspiratorial type, with underground political structures, organizations and press. ‘Russification’ was fiercely opposed by Poles as the Russian regime was perceived as a backward and underdeveloped (Grosfeld and Zhuravskaya, 2015). Contrary, the influence of ‘Germanization’ on Poles was more compound. Many Poles found themselves struggling. On the one hand, they wished to preserve their Polish identity and, on the other hand, they recognized the superiority and efficiency of the German political and economic institutions (Hryniewicz, 2003). Importantly, the Prussian constitution granted legal equality, individual

freedom of faith, education, association and press (Wysokińska, 2011). Therefore, Poles often successfully appealed on the decisions which violated their rights in independent Prussian courts. The possibility to fully participate in a social and economic life boosted economic and social self-organization of Poles and led to the creation of numerous formal and informal associations (Bielecka, 2006). It is of note also that Poles had some representation in the Prussian Landtag (parliament) (Slavenas, 1974). Therefore, at least formally they could demand more rights for the Polish population. The conditions of Poles deteriorated after the introduction of *Kulturkampf* in 1871 (Davies, 1991; Davies, 2001, p. 150). For a short period of time, the Prussian occupation became culturally and politically somewhat more oppressive towards Poles. The *Kulturkampf* of 1871 introduced restrictions on the religious practices and state surveillance of the church internal affairs (Grosfeld and Zhuravskaya, 2015). In contrast to the Prussian and Russian parts, in Austria Poles were subject to the most liberal law. The Habsburgs in the Austrian part gave large governmental and cultural autonomy to their Polish territories (Grosfeld and Zhuravskaya, 2015). From this discussion it should be clear that social capital and religiosity of Poles in the previously Prussian and Austrian regions should be higher than in the Russian partition. The reason for this is that Poles from the Austrian and Prussian partitions received a wide range of rights of self-organization and formation of associations, which were banned in 'Russian Poland'. Poles from Prussian and Austrian partitions also experienced personal freedom of religion. In 'Russian Poland' religious organizations (particularly the Catholic church) were annihilated.

As mentioned earlier in this section, theory suggests that income, education, public administration effectiveness, religiosity and social capital positively associates with tax morale (for theoretical underpinnings see Frey and Torgler, 2007; Torgler, 2007; Torgler and Schneider, 2007). Given that described institutional and cultural differences among partitions persisted, it could be argued that tax morale is the highest in the Prussian partition, moderate in the Austrian partition and rather low in the Russian partition. Levying higher taxes from high tax morale individuals has both economic and political economy rationale. According to this rationale, higher taxes should be imposed on individuals that are less likely to evade taxes and less likely to politically punish parties by voting them out of office when taxes are increased.

The third hypothesis explaining differing property tax rates relates to the extent of utility supply at the properties from former Prussian, Russian and Austrian partitions. Since the drawing of the partition borders was not driven by any geographical or economic features (see section 3.4), initially there should have been no difference in utility supply at the borders. These differences could emerge afterwards, given particularly the fact that the 18th century was marked by the process of industrialization. The extent of utility supply is crucial because it could impact the value of property (more utility supply resulting in higher value) and legitimize higher taxes in case of higher value properties. In Prussia, the utility supply, such as water, gas, sewerage, was the most extensive, i.e. the share of population using these utilities was the largest (Jeziński and Leszczyńska, 2003, p. 164; Tarnowska, 2013). Prussia had the highest number of cities with access to sewerage. Gdansk (Prussian partition) was the first city with sewerage already established in 1869. In Warsaw, sewerage began being constructed in 1881. However, up to 1890 only 4% of all housing had access to sewerage (Jeziński and Leszczyńska, 2003, p. 164). Since the mid-1850s gas supply to households also started to become wide-spread. In 1913, in the Prussian partition one gasworks was covering approx. 40 thousands inhabitants, in the Austrian partition 700 thousands inhabitants and in the Russian partition 1.7 million inhabitants (Jeziński and Leszczyńska, 2003, p. 164). Water supply was densest in the cities from the Austrian and Prussian partition, and the least dense in the Russian partition (Jeziński and Leszczyńska, 2003, p. 164). Additionally, the phone network differed greatly across partitions. In the Prussian partition 9.3 households per one thousand were equipped with a phone, in Russia 3.4 and in the Austrian partition 0.9 (Jeziński and Leszczyńska, 2003, p. 164). Given the differences in the utility supply at the end of a partition and given that these differences persisted, one should observe higher property taxes in the municipalities from the former Prussian partition (high utility supply) as compared to the municipalities from the Austrian partition (moderate utility supply) and the Russian partition (low utility supply). This is due to the fact that dense utility supply increases the value of the property and, therefore, the property tax rate.

Summarizing the discussion in the current section, it is likely that municipalities with varied empires' legacy set property tax rates differently. Overall, there are three arguments (hypotheses) put forward to explain the potential differences: (1) the differences in the institutional environment of property taxation between the empires which shaped perception and preferences for property taxes; (2) differences in the determinants of tax morale such as income, education,

effectiveness of administration, religiosity and social capital, and (3) differences in utility supply that influence the value of properties and, therefore, the property taxes. The basic assumption is that the differences between the partitions existed but also that they persisted for more than a century. It is expected that the municipalities with the Prussian legacy levy higher rates of property taxes as compared to the municipalities with the Russian partition. Given the institutional dissimilarities one could also presume that differences also exist between the Austrian and Russian municipalities. However, the differences, if any, should be much smaller than those between the Prussian and Russian partitions.

It is further argued that once differences in property tax rates are found, this should have an impact on fiscal autonomy and VFI in the Polish municipalities. As such, higher property tax rates should influence positively municipalities' own income, increasing fiscal autonomy and leading to lesser VFI. Smaller VFI means that a larger share of spending is covered from own revenue.

3.4. Data and empirical identification

The dataset constructed for the purpose of this chapter originates from different sources. Below, the detailed description of fiscal, economic and demographic variables follows, as well as geographical data. Since the unit of observation in this study is a municipality, all relevant data are collected for this tier of government. Summary statistics are demonstrated in appendix 3.2.

Property tax rates: The main fiscal variables to be explained in this chapter are property tax rates. As explained in section 3.3, there are two main types of property taxes, i.e. on land and buildings. In the context of the Polish tax system, the latter are clearly defined on residential and business (commercial) buildings. The tax on land is levied on land used for business purposes and on land used for "other purposes". The data on the property tax rates in 2013 are extracted from the municipal resolutions on tax rates, which are available through the Voivodeship Law Journal.⁸⁹

Other fiscal variables: Measures of the property tax income to total income, fiscal autonomy and VFI are extracted from the *Moja Polis* website, which relies on the data from the Ministry of

⁸⁹ The Voivodeship Law Journal can be accessed via <http://www.dziennikiurzedowe.gov.pl/dzienniki-wojewodztw.html> (accessed on December 28, 2014).

Finance.⁹⁰ The longest time series available for these indicators encompasses the years 2006-2013. For each municipality the average value within this period is calculated.

Economic development: Two measures of economic development of municipalities are offered. The first measure refers to the number of companies⁹¹ per 10,000 inhabitants. For each municipality the average values for the time period of 2006-2013 are calculated based on the *Moja Polis* dataset. The second variable to proxy economic development is luminosity in the municipalities. This variable is extracted from Grosfeld and Zhuravskaya (2015). Luminosity is nowadays the most common proxy for economic development in case the measure of GDP per capita is not available or if there are doubts about the precision of GDP per capita estimates (Chen and Nordhaus, 2010). The level of economic activity can also be grasped by the unemployment rate. Since the unemployment rate measures economic activity and not economic development, this is only an alternative indicator.

Education: Census data is used to gauge the education level of the municipal population. Specifically, the percentage of the population with at least secondary education in 2002 was extracted from the Bank of Regional Data (Central Statistical Office). Although a Census was also conducted in 2011, the municipal data on education attainment for municipalities are not available.

Public administration: To approximate the efficiency of public administration, the results of the “Friendly municipality” survey conducted by an independent association are employed. Based on public records, administration is graded in four areas: (1) cooperation with non-governmental organizations, (2) outsourcing of tasks to non-governmental organizations, (3) consultation of the municipality’s policy and legal acts with local stakeholders and information availability, (4) municipal support of non-governmental organizations. The grades vary from 0 to 5. The results of the 2010 report on “Friendly municipality” are extracted from the *Moja Polis* dataset and are taken to proxy efficiency (friendliness) of the public administration at municipal level.

⁹⁰ *Moja Polis* is a watchdog monitoring the municipalities’ performance in different areas.

⁹¹ Companies are mainly corporations and individuals engaged in business activity. All economic entities need to be registered in the REGON system. The *Moja Polis* dataset relies exactly on official REGON data.

Social capital and religiosity: As a proxy of social capital, the number of foundations and associations per 1,000 inhabitants is used. This variable is extracted from the *Moja Polis* dataset. For each municipality the average for the period of 2006-2013 is calculated. Additionally, the level of social capital is captured by the voter turnout in the European accession referendum in 2004. Religiosity is captured by the declared number of mass attendances per month collected through the ‘National Diagnose’ survey.

Geographical data: Based on the map of partition borders prepared by the *BezGranica* project⁹², the shortest distance (straight line) from the central points of municipalities to the closest borders are readily calculated. The data on altitude and geographical coordinates (longitude and latitude) are extracted from <http://www.bazamiejscowosci.pl/> (accessed on March 1, 2015) and <http://www.wysokosc.mapa.info.pl/> (accessed on March 1, 2015), respectively.

In order to identify the impact of the empires on property tax rates, spatial RD methodology is employed. The main logic behind the RD identification strategy is that in case of the absence of a causal influence of empires, the spatial pattern of outcomes should be smooth at the previous Prussia-Russia and Austria-Russia border (Grosfeld and Zhuravskaya, 2015). If the empires matter then a sharp discontinuity in the outcomes should be detected exactly at the previous partition borders. Consequently, one could consider all variables that display a significant jump at the borders as an outcome of the empires’ influence. Of course, the existence of a discontinuity must be supported by the historical narratives.

An important assumption is that borders are not associated with any pre-existing discontinuous changes. This assumption is in essence untestable as historical data to support it are not available (Grosfeld and Zhuravskaya, 2015). The historical narrative supports, however, the claim that the frontiers were set rather arbitrarily by the empires. As historical narratives reveal, there is no reason to believe that any social or economic outcomes at that time determined the delineation of the border. For instance, during the negotiation process none of the empires ever referred to economic development of a territory as an argument for partition (Lukowski, 1999). All empires wanted to receive as much of the former Polish land as possible, irrespective of the conditions on the ground. The process of establishing borders was political in nature with the bargaining

⁹² The map of the partition borders is available at <http://bezgranica.pl/mapy> (accessed on December 15, 2014).

position of Russia strengthened after the Napoleonic wars (Nicolson, 2000). There are further two anecdotal proofs of the arbitrariness of the partition border. First, in many cases the frontier divided the agrarian areas of landowners (Lukowski, 1999). Second, the historical region of Wielkopolska was separated and governed by two empires: Prussia and Russia (Wysokińska, 2011). Therefore, empires did not respect previous administrative-historical borders within Poland. Moreover, with respect to geographical variables, Grosfeld and Zhuravkaya (2015) demonstrated that geographical indicators change smoothly at the empire borders, besides altitude at the Austria-Russia border. Therefore, in general there is no risk that due to some geographical characteristics (latitude, longitude, precipitation, temperature and large city dummy) some regions could be economically favored or disadvantaged. However, in order to make the estimates more precise and controlled for sporadic discontinuous changes in geographical parameters, variables such as altitude, longitude, latitude, and large city dummy are used in the regression analysis.

Similarly to Dell (2010) as well as Grosfeld and Zhuravskaya (2015), two main empirical models are applied, i.e. one-dimensional and two-dimensional spatial RD models. The one-dimensional model employs Euclidean distances⁹³ to the empires' frontier as the forcing variable. The cross-sectional one-dimensional RD specification is as follows:

$$y_i = \alpha + \beta_1 Russia_i + \beta_2 Dist_i + \beta_3 Russia_i \times Dist_i + \beta_4 X_i + \varepsilon_i \quad (1)$$

where i stands for municipality, y_i is the outcome variable, such as property tax rate but also other variables such as VFI. $Russia_i$ is a dummy informing that the municipality lies at the former Russian territory. $Dist_i$ captures (the shortest) Euclidean distance from each municipality to the partition frontier and allows controlling for a continuous relationship between distance and outcome variable y_i . Interaction $Russia_i \times Dist_i$ allows specifying different slopes of the regression functions at both sides of the partition border. Vector X_i contains baseline control variables such as altitude, longitude, latitude and large city dummy. Standard errors ε_i are robust to unknown heteroscedasticity (see section 2.4). The most crucial is the estimation of β_1 as it tells about the discontinuous jump in the outcome variable at the partition border.

⁹³ Euclidean distance refers to the length of a straight line between two points. In the context of this paper, the distance is measured from the central point of municipality to the closest point on the former border of empires.

The two-dimensional RD model allows flexible controlling for the geographical location instead of employing Euclidean distance to the frontier as a forcing variable (Dell, 2010; Grosfeld and Zhuravskaya, 2015). The model is of the following form:

$$y_i = \alpha + \beta_1 Russia_i + f(w_i, z_i) + \beta_4 X_i + \varepsilon_i \quad (2)$$

where $f(w_i, z_i)$ is a third-order polynomial of geographic coordinates (latitude, longitude) such as $f(w_i, z_i) = w_i + z_i + w_i^2 + z_i^2 + w_i z_i + w_i^3 + z_i^3 + w_i z_i^2 + w_i^2 z_i$. The rest of the notation is as presented above.

In order to estimate a discontinuity at the frontiers of empires, one also have to select the bandwidth (see section 2.4). Restraining the sample to only the municipalities that are located sufficiently close to the border allows linear functions to provide a good fit to the data. On the other hand, the samples should be relatively large to have enough statistical power to estimate the jump. Similarly to Grosfeld and Zhuravskaya (2015) – who study the effects of empires on political outcomes in the contemporary Poland – a bandwidth of 60 km from the partition frontier is chosen.

3.5. Results: property tax rates

The central question of this chapter is whether the differences in property tax rates in Polish municipalities are caused by the empires' legacy. Existence of the discontinuous jump in tax rates at the Prussia-Russia or Austria-Russia borders would be a direct proof confirming this hypothesis. A standard procedure in RD is to start the investigation by visual inspection of the discontinuity at the threshold, here, at the border.

Figure 3.2 and figure 3.3 for Prussia-Russia and Austria-Russia borders respectively allows for this graphical representation of discontinuity. The graphs present the average level of property tax

rates by a distance bin of 5- and 3-km⁹⁴ on both sides of the border with superimposed polynomial functions of degree-1 (linear function), degree-2 (quadratic function) and degree-3.⁹⁵

As for the Prussia-Russia border (figure 3.2), it is evident that property tax rates on residential and business buildings as well as on land used for business purposes are higher in the former Prussian municipalities as compared to their Russian counterfactuals (see section 1.4. where a concept of counterfactuals is explained). The rates of these three types of property taxes discontinuously change at the former partition border between Prussia and Russia, which is not the case for the tax on a land that is used for “other purposes”. In the case of these three categories of taxes, for which a sharp jump is identified, municipalities have more leeway to act arbitrarily. The tax rates ceilings in their case are higher as compared to the tax rate imposed on land that is used for “other purposes”.⁹⁶ Figure 3.2 also demonstrates that the relationship between the outcomes and the distance to the former empires’ border is relatively well approximated by the linear relationship within 60 km of the borders.

Besides the tax levied on land that is used for “other purposes”, less clear-cut results are observed at the Austria-Russia border (figure 3.3). Although graphs with 5-km bins suggest that the municipalities from the former Russian partition levy higher tax rates than Austrian counterparts, the figures with 3-km bins are ambiguous. This calls for more formal investigation, which is done in the next step. Notice also that in the figures depicting the Austria-Russia border, linear function has a much worse fit as compared to the figures for the Prussia-Russia border. Using high level polynomials in RD is, however, sometimes discouraged (Gelman and Imbens, 2014). This further complicates deriving any conclusions for the Austria-Russia border.⁹⁷

⁹⁴ Bins refer to intervals for which the average of selected variables is calculated. For instance, the bin size of 5 km means that averages are calculated for the intervals (0; 5>, (5; 10>, (10; 15> and so on.

⁹⁵ The application of polynomial functions in the context of RDD is discussed, for instance, by Imbens and Lemieux (2007) or Lee and Lemieux (2010).

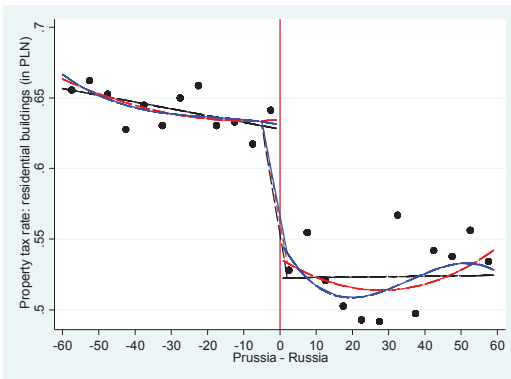
⁹⁶ *Statement of the Minister of Finance dated 08.02.2012 r. on the upper limits of rates of local taxes and fees in 2013.*

⁹⁷ As argued by Gelman and Imbens (2014), high-degree polynomials are sensitive to the degree of the polynomial and there are no tools to choose the “optimal degree”. Likewise, high-degree polynomials offer poor inference, i.e. they result in too frequent detection of the jump.

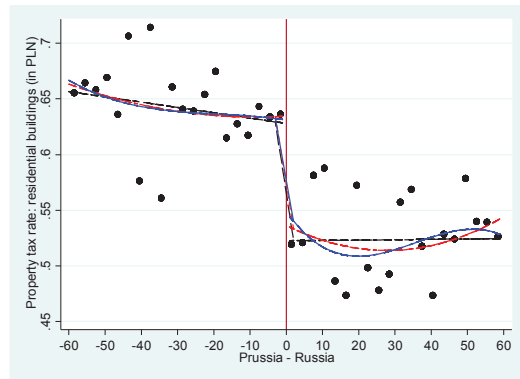
Figure 3.2. Mean property tax rates by 5- and 3- km distance and parametric regression lines at the Prussia-Russia border

Tax on residential buildings

Panel A. Bin = 5 km

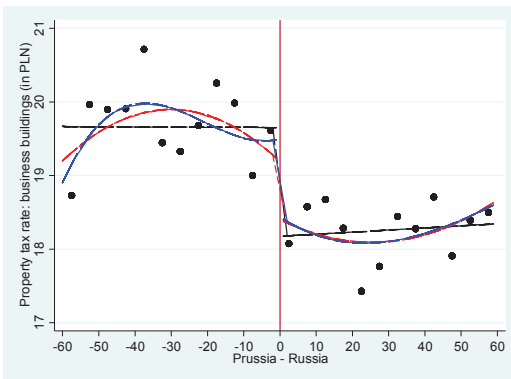


Panel B. Bin = 3 km

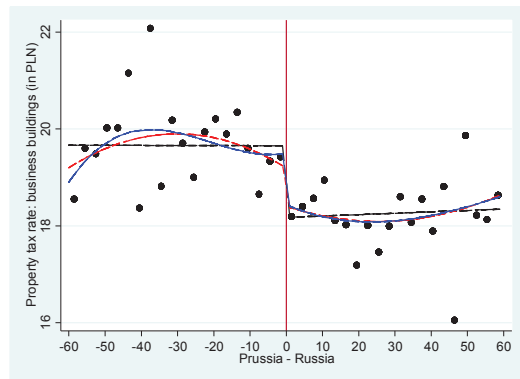


Tax on business buildings

Panel C. Bin = 5 km

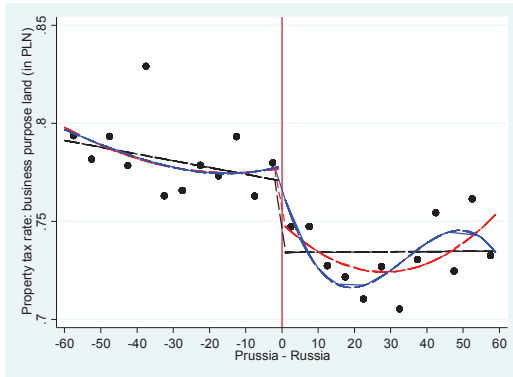


Panel D. Bin = 3 km

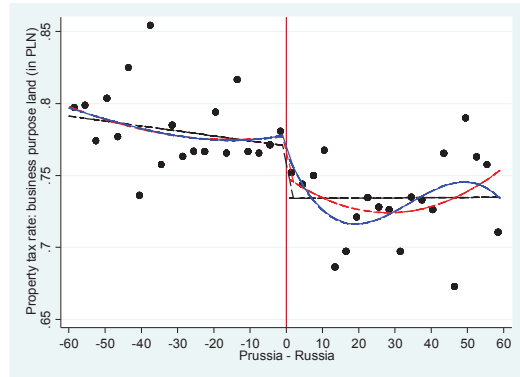


Tax on land used for business purpose

Panel E. Bin = 5 km

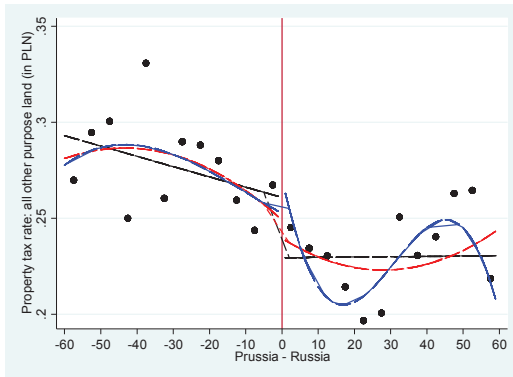


Panel F. Bin = 3 km

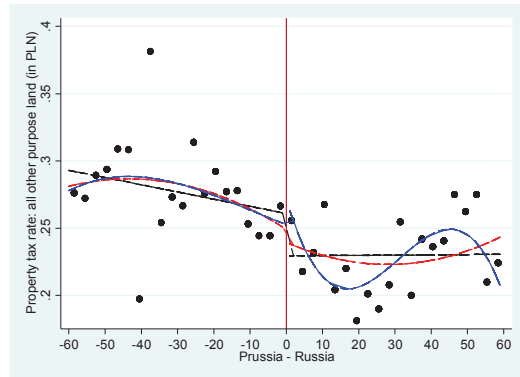


Tax on land used for "other purposes"

Panel G. Bin = 5 km



Panel H. Bin = 3 km

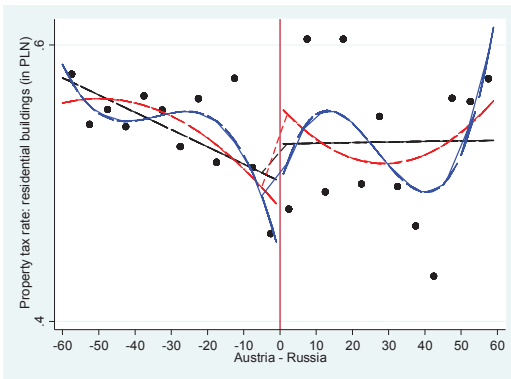


Note: Each dot represents the sample average of the dependent variables in a given bin. The bin width is 5 km or 3 km. The black line represents degree-1 polynomial function; the red curve stands for degree-2 polynomial function; and the blue curve represents degree-3 polynomial function. Bandwidth of 60 km.

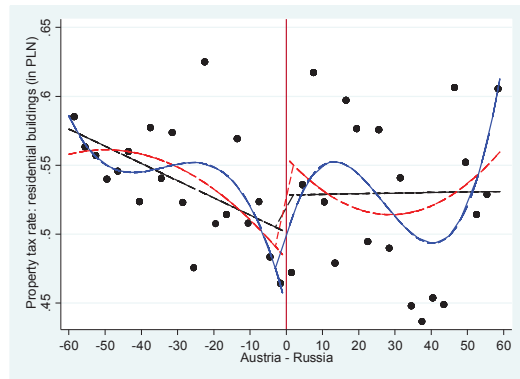
Figure 3.3. Mean property tax rates by 5- and 3- km distance and parametric regression lines at the Austria-Russia border

Tax on residential buildings

Panel A. Bin = 5 km

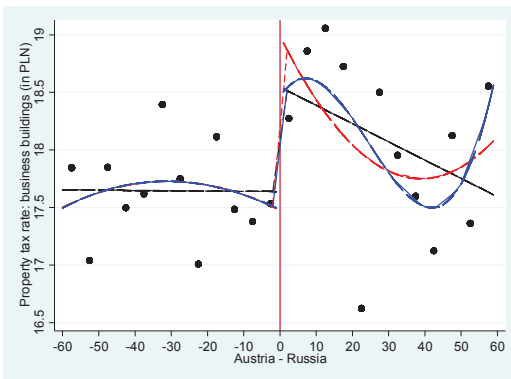


Panel B. Bin = 3 km

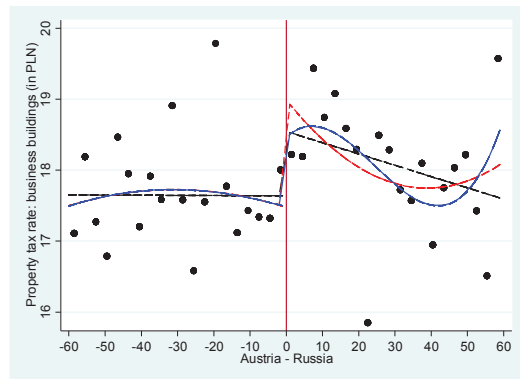


Tax on business buildings

Panel C. Bin = 5 km

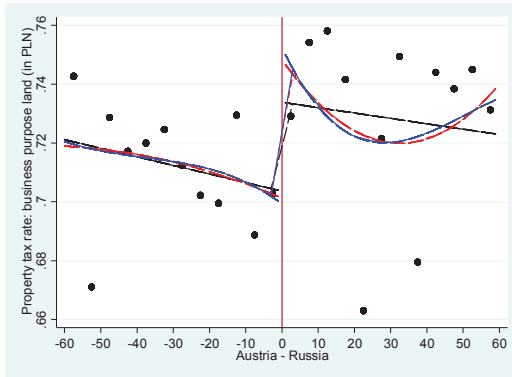


Panel D. Bin = 3 km

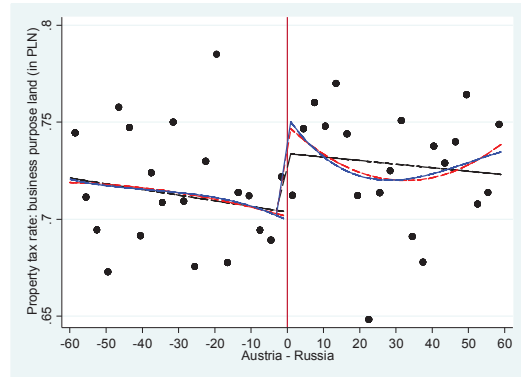


Tax on land used for business purpose

Panel E. Bin = 5 km

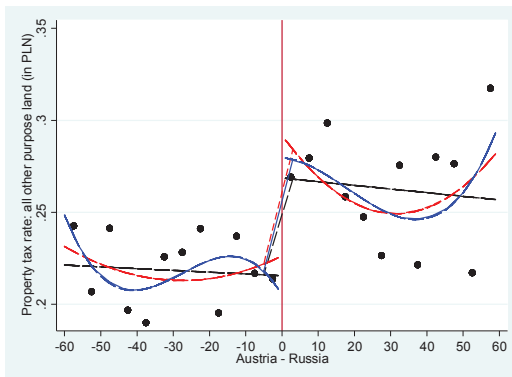


Panel F. Bin = 3 km

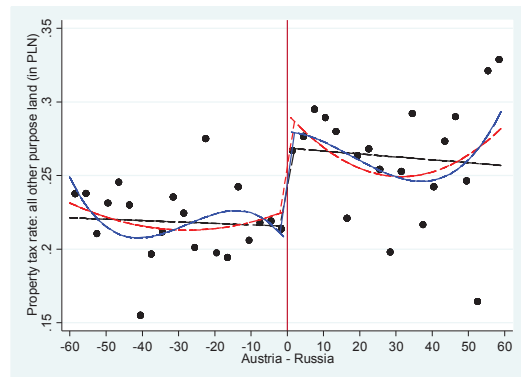


Tax on land used for "other purposes"

Panel G. Bin = 5 km



Panel H. Bin = 3 km



Note: Each dot represents the sample average of the dependent variables in a given bin. The bin width is 5 km or 3 km. The black line represents degree-1 polynomial function; the red curve stands for degree-2 polynomial function; and the blue curve represents degree-3 polynomial function. Bandwidth of 60 km.

A more formal investigation is presented in table 3.1 and table 3.2, which report the estimates of the discontinuous jump in property tax rates at the Prussia-Russia and Austria-Russia border, respectively. In both tables, panel A demonstrates estimates for the tax rates on residential buildings, panel B on business (commercial) buildings, panel C on land used for a business purpose and panel D on land used for “other purposes”. Columns 1 and 2 display results for one-dimensional RD (Grosfeld and Zhuravskaya, 2015) and columns 3 and 4 two-dimensional RD (Dell, 2010; Grosfeld and Zhuravskaya, 2015). Columns 1 and 3 do not control for additional covariates, whereas columns 2 and 4 contain baseline covariates (altitude, longitude, latitude and large city dummy).

The results in table 3.1 confirm the graphical illustration from figure 3.2. Namely, at the Prussia-Russia border, Russian legacy leads to lower rates in case of tax levied on residential and business buildings as well as on land used for business purposes. With one exception (column 2 in panel C), all estimates are significant at the 1% level. The average treatment effect of Russian partition on tax rates levied on residential buildings ranges between 0.09 and 0.11 PLN, which accounts for 17-20% of the average tax rate for this tax. The rates of tax imposed on business (commercial) buildings are lower on average by 1.22-1.48 PLN on the Russian side, which is roughly 6-8% of the average rate for this tax. The average treatment effect for tax levied on land used for business purposes varies from 0.03 to 0.04, which is approx. 4-5% of this tax average. Therefore, the estimates are not only highly statistically significant but also meaningful from an economic point of view. The tax rate levied on land used for “other purposes” does not change discontinuously at the Prussia-Russia border, although the sign of estimates is always negative and significant in one case (column 1 in panel D).

Regression analysis in table 3.2 also confirms a lack of discontinuity at the Austria-Russia border for a tax levied on residential and business (commercial) buildings as well as on business land. Statistically significant is, however, the average treatment effect for the tax imposed on land used for “other purposes”. Russian partition affects this tax rate positively by 0.05-0.06 PLN, which is 16-20% of the average rate of this tax. This tax has, however, the lowest ceiling set by the Ministry of Finance of only 0.45 PLN, and therefore gives the least space for discretion.

Table 3.1. The effect of partitions on property tax rates at the Prussia-Russia border

PANEL A				
	(1)	(2)	(3)	(4)
VARIABLES	Property tax Residential buildings	Property tax Residential buildings	Property tax Residential buildings	Property tax Residential buildings
Russia	-0.10548*** (0.01977)	-0.09586*** (0.01842)	-0.11119*** (0.01825)	-0.11426*** (0.01841)
Constant	0.62798*** (0.01043)	0.97556* (0.52541)	-1,361.01670 (989.10480)	340.58662 (464.54847)
Observations	530	530	530	530
R-squared	0.17405	0.25024	0.26086	0.25965

PANEL B				
	(1)	(2)	(3)	(4)
VARIABLES	Property tax Business buildings	Property tax Business buildings	Property tax Business buildings	Property tax Business buildings
Russia	-1.47862*** (0.37839)	-1.26063*** (0.34777)	-1.26872*** (0.33108)	-1.22423*** (0.31614)
Constant	19.65163*** (0.29480)	39.22353*** (10.74162)	29,087.10534 (19,462.02816)	18,391.00933** (9,348.53863)
Observations	530	530	530	530
R-squared	0.07972	0.18180	0.18181	0.21523

PANEL C				
	(1)	(2)	(3)	(4)
VARIABLES	Property tax Business land	Property tax Business land	Property tax Business land	Property tax Business land
Russia	-0.03646*** (0.01358)	-0.03084** (0.01291)	-0.03563*** (0.01205)	-0.03715*** (0.01172)
Constant	0.77061*** (0.00951)	1.92253*** (0.38172)	761.62819 (742.02907)	45.03081 (365.57352)
Observations	530	530	530	530
R-squared	0.05911	0.12557	0.14705	0.16410

PANEL D				
VARIABLES	(1)	(2)	(3)	(4)
	Property tax Other purpose land	Property tax Other purpose land	Property tax Other purpose land	Property tax Other purpose land
Russia	-0.03138** (0.01564)	-0.02263 (0.01448)	-0.01632 (0.01315)	-0.01169 (0.01287)
Constant	0.26089*** (0.01191)	0.88833** (0.44302)	1,079.39919 (725.37996)	556.98763 (371.13739)
Observations	530	530	530	530
R-squared	0.05683	0.15565	0.14805	0.18133

Note: The polynomial in the forcing variable is of degree-1 in all columns. Columns 1-2 employ one-dimensional RD and columns 3-4 two-dimensional RD. Columns 1 and 3 do not control for additional covariates, columns 2 and 4 contain baseline covariates (altitude, longitude, latitude and large city dummy). Standard errors in parentheses are clustered at the municipality level. *** p<0.01, ** p<0.05, * p<0.1.

Table 3.2. The effect of partitions on property tax rates at the Austria-Russia border

PANEL A				
VARIABLES	(1)	(2)	(3)	(4)
	Property tax Residential buildings	Property tax Residential buildings	Property tax Residential buildings	Property tax Residential buildings
Russia	0.02715 (0.02756)	0.01031 (0.02843)	0.01754 (0.02491)	0.01084 (0.02631)
Constant	0.50134*** (0.01906)	3.89154 (2.46916)	-269.17332 (554.11132)	-954.89216 (1,158.30547)
Observations	494	494	494	494
R-squared	0.01170	0.05146	0.13908	0.14116

PANEL B				
VARIABLES	(1)	(2)	(3)	(4)
	Property tax Business buildings	Property tax Business buildings	Property tax Business buildings	Property tax Business buildings
Russia	0.90884 (0.55949)	1.31650** (0.59307)	0.43907 (0.48759)	0.85389 (0.52579)
Constant	17.63802*** (0.42049)	86.51159* (50.55532)	-29087.67621*** (10,846.67895)	-44686.15959** (20,606.54820)
Observations	494	494	494	494
R-squared	0.01008	0.07409	0.16467	0.18727

PANEL C				
VARIABLES	(1) Property tax Business land	(2) Property tax Business land	(3) Property tax Business land	(4) Property tax Business land
Russia	0.03022 (0.01992)	0.04167** (0.02062)	0.02774 (0.01782)	0.03429* (0.01843)
Constant	0.70364*** (0.01562)	4.91807*** (1.85490)	-722.40033* (413.41059)	-1,238.15263 (821.06482)
Observations	494	494	494	494
R-squared	0.00639	0.06005	0.10669	0.11438

PANEL D				
VARIABLES	(1) Property tax Other purpose land	(2) Property tax Other purpose land	(3) Property tax Other purpose land	(4) Property tax Other purpose land
Russia	0.05307*** (0.01762)	0.04897*** (0.01883)	0.05763*** (0.01712)	0.05625*** (0.01844)
Constant	0.21556*** (0.01100)	2.25858 (1.75870)	-885.03467** (415.97843)	-1,929.02951** (870.88617)
Observations	494	494	494	494
R-squared	0.04696	0.07153	0.11091	0.11827

Note: The polynomial in the forcing variable is of degree-1 in all columns. Columns 1-2 employ one-dimensional RD and columns 3-4 two-dimensional RD. Columns 1 and 3 do not control for additional covariates, columns 2 and 4 contains baseline covariates (altitude, longitude, latitude and large city dummy). Standard errors in parentheses are clustered at the municipality level. *** p<0.01, ** p<0.05, * p<0.1.

Recall that the historical narratives suggest three transmission channels explaining how the former empires could influence the rates of property tax in the modern Poland: (1) the differences in perception of property taxes, (2) the differences in institutional and cultural features influencing tax morale, and (3) the differences in the extent of utility supply. Due to the data limitation, it is possible to verify two out of three transmission channels, namely channel (2) and (3). In fact, the “tax morale” argument (due to religiosity, social capital, effectiveness of administration) and the “utility supply” argument do not seem to be relevant in explaining the difference in tax rates. It is because at the Austria-Russia border similar differences occur as at the Prussia-Russia border in terms of tax morale determinants and utility supply but the tax rates differ substantially only at the Prussia-Russia border (see appendix 3.3). Since the first transmission channel cannot be verified empirically – due to the data constraints – and two other transmission channels are empirically

refuted, it is argued here that the first transmission channel might be the most valid in explaining the differences in the property tax rates. Namely, the initial differences in property taxes and infrastructure that enable their levy, such as cadastre, could shape people's perception regarding the property tax and their willingness to pay this tax, which was transmitted through generations. Importantly, the largest differences in this respect were observed at the Prussia-Russia border. It is of note that the institutional settings of property taxes were somewhat similar between the Austrian and Russian partitions, which would suggest lack of discontinuity in regression analysis.

Overall, the empirical investigation pursued in this section confirms that at the Prussia-Russia border empires' legacy seems to be crucial in explaining the differences in tax rates. The differences in property tax rates at Austria-Russia border are not conclusive, however.

3.6. Results: other fiscal outcomes

Higher property tax rates might have further budgetary implications. Three implications are discussed below. First, higher property tax rates might result in a larger share of income coming from property taxes. Second, higher property tax rates might lead to a larger share of own revenue in the total municipal revenue, causing greater fiscal autonomy of municipalities. This concept of fiscal autonomy is suggested by Stegarescu (2005) and OECD/Korea Institute of Public Finance (2013). Own revenues are primarily generated by taxes and levies imposed on local residents and businesses but they can also originate from the municipality's investment and loans. The share of own revenue in the total municipal income indicates the municipality's independence from central subsidies. Municipalities with higher shares of their own revenue have more fiscal autonomy as they can arbitrarily decide how this revenue is spent. Subsidies are usually associated with conditions which prevent discretionary decision-making (Heller and Farelnik, 2013).

The third budget implication is as follows. Higher property tax rates by increasing own revenue of municipalities might result in smaller VFI, i.e. the share of spending covered by subsidies and borrowings. As mentioned in section 2.2, it is widely recognized in the literature on fiscal federalism that a high reliance on intergovernmental transfers and borrowings "softens" the budget constraint of local governments, induces moral hazard on the side of local governments

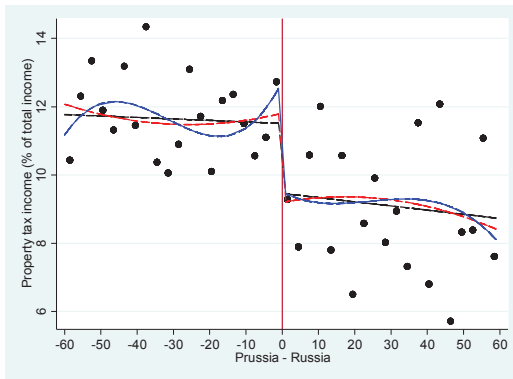
and distorts their tax enforcement (Baretti et al., 2002). Municipalities endowed with high transfers from the federal level and borrowing typically do not have sufficient tax authority to cope with idiosyncratic economic shocks (von Hagen and Eichengreen, 1996). Municipalities with high VFI may claim that they are not responsible for coping with the crisis and, thus, shift the burden to central level. Furthermore, the pressure from voters and creditors is likely to be directed at central level, providing no choice but to bail out the municipalities. Expecting this chain of actions, municipalities have an incentive to engage in riskier fiscal policies (moral hazard).

The main differences in the property tax rates are observed at the Prussia-Russia border, hence, discontinuity in aforementioned fiscal variables is expected to occur at this border. The Austria-Russia border serves as a counterfactual as differences in tax rates at this border are much less prominent. Therefore, the analysis here is as follows. First, it visually investigates whether the discontinuity in fiscal outcomes exists at the Prussia-Russia frontier. Second, it verifies whether fiscal outcomes change smoothly at the Austria-Russia border, i.e. the border at which fiscal variables should not be affected.

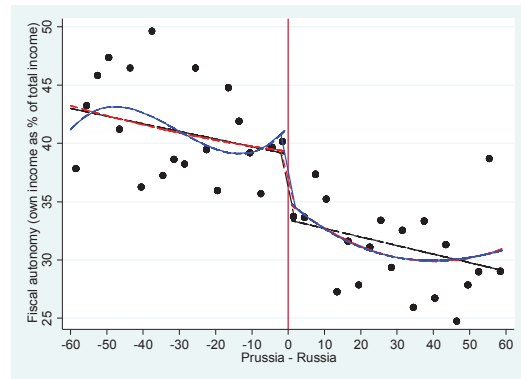
Figure 3.4 portrays graphically the existence of discontinuous jumps in several fiscal variables at the Prussia-Russia border. The lack thereof at the Austria-Russia border is shown in figure 3.5. Crossing the former partition border between Prussia and Russia from West to East (figure 3.4) decreases property tax income as a share of the total income and, hence, decreases fiscal autonomy, and consequently, increases VFI. Figure 3.5 shows, on the other hand, smooth distribution of fiscal outcomes at the Austria-Russia border. Yet again the graphs suggest that the outcomes at the Prussia-Russia border are fairly well approximated by the linear relationship within 60 km to the borders.

**Figure 3.4. Mean property tax rates by 3- km distance and parametric regression lines:
Prussia-Russia border**

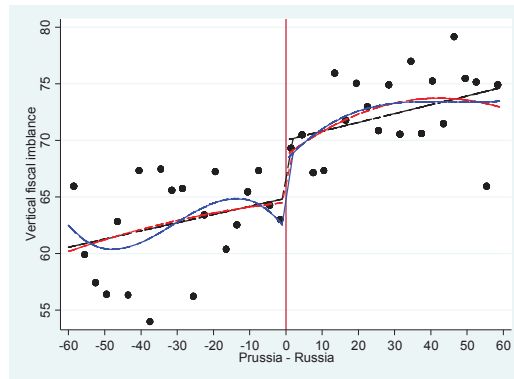
Panel A. Property tax income to total local income



Panel B. Fiscal autonomy



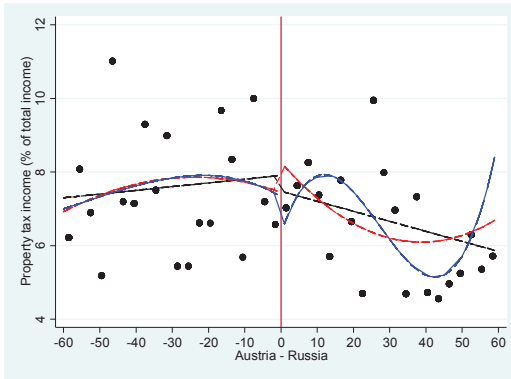
Panel C. Vertical fiscal imbalance



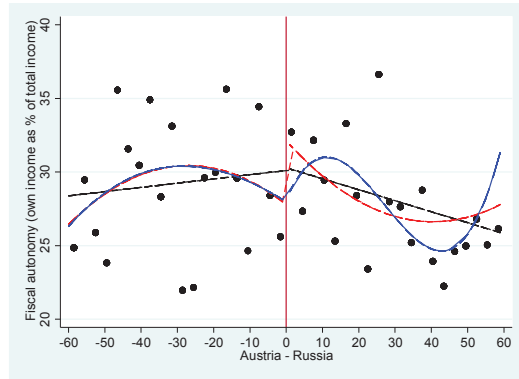
Note: Each dot represents the sample average of the dependent variables in a given bin. The bin width is 3 km. The black line represents degree-1 polynomial function; the red curve stands for degree-2 polynomial function; and the blue curve represents degree-3 polynomial function. Bandwidth of 60 km.

**Figure 3.5. Mean property tax rates by 3- km distance and parametric regression lines:
Austria-Russia border**

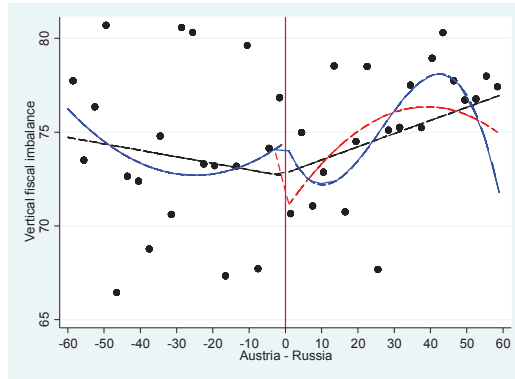
Panel A. Property tax income to total local income



Panel B. Fiscal autonomy



Panel. C. Vertical fiscal imbalance



Note: Each dot represents the sample average of the dependent variables in a given bin. The bin width is 3 km. The black line represents degree-1 polynomial function; the red curve stands for degree-2 polynomial function; and the blue curve represents degree-3 polynomial function. Bandwidth of 60 km.

The formal regression analysis is consistent with the graphical illustration of discontinuity at the Prussia-Russia border and lack thereof at the Austria-Russia border. In the municipalities with the

Russian legacy, a share of property tax income in the total income is smaller by 2-3 percentage points as compared to municipalities from the former Prussian occupation (table 3.3 panel A). A lower property tax income in the Russian municipalities contributes to a smaller fiscal autonomy in these municipalities as compared to the municipalities from the former Prussian empire. As reported in table 3.3 panel B, in the former Russian municipalities the fiscal autonomy – share of own revenue in the total revenue – is smaller by approx. 5 percentage points. Lastly, due to a smaller own revenue in “Russian Poland”, VFI is consequently larger there. Estimates reported in table 3.3 panel C suggest that in municipalities located in “Russian Poland” the share of spending covered by own revenue is lower by approx. 4-5 percentage points as compared to municipalities from “Prussian Poland”.

Table 3.3. The effect of partitions on various fiscal variables at the Prussia-Russia border

PANEL A				
VARIABLES	(1) Property tax income as a share of total income	(2) Property tax income as a share of total income	(3) Property tax income as a share of total income	(4) Property tax income as a share of total income
Russia	-2.04906** (0.92520)	-1.90882** (0.89789)	-2.64351*** (0.83143)	-2.34247*** (0.84620)
Constant	11.51083*** (0.64441)	91.86725*** (24.36807)	105378.80585** (40,789.64042)	-44496.15840** (21,159.30598)
Observations	530	530	530	530
R-squared	0.04251	0.08512	0.14524	0.13242
PANEL B				
VARIABLES	(1) Fiscal autonomy	(2) Fiscal autonomy	(3) Fiscal autonomy	(4) Fiscal autonomy
Russia	-5.62221** (2.19989)	-4.44728** (1.92405)	-5.50328*** (1.74979)	-4.64197*** (1.76809)
Constant	39.06428*** (1.68568)	314.20242*** (55.06126)	270399.12841*** (82,686.58187)	-1.13532e+05** (45,533.25234)
Observations	530	530	530	530
R-squared	0.12120	0.29731	0.39212	0.38480

PANEL C				
VARIABLES	(1)	(2)	(3)	(4)
	Vertical fiscal imbalance	Vertical fiscal imbalance	Vertical fiscal imbalance	Vertical fiscal imbalance
Russia	5.14404** (2.22416)	3.98518** (1.93303)	5.43076*** (1.72923)	4.57742*** (1.75296)
Constant	64.88170*** (1.70892)	-218.19090*** (56.93351)	-2.87924e+05*** (84,316.21204)	98,514.75187** (48,610.70702)
Observations	530	530	530	530
R-squared	0.11823	0.30284	0.40323	0.39554

Note: The polynomial in the forcing variable is of degree-1 in all columns. Columns 1-2 employ one-dimensional RD and columns 3-4 two-dimensional RD. Columns 1 and 3 do not control for additional covariates, columns 2 and 4 contains baseline covariates (altitude, longitude, latitude and large city dummy). Standard errors in parentheses are clustered at the municipality level. *** p<0.01, ** p<0.05, * p<0.1.

In contrast to the Prussia-Russia border, where discontinuous jumps in outcome variables are observed, the fiscal variables change smoothly at the Austria-Russia border (see table 3.4). As there are no large differences in the tax rates between Austrian and Russian partitions, the property tax income is fairly similar on both sides of the partition border. This further implies that fiscal autonomy and VFI are comparable close to the partition border. This result substantiates the outcomes for the Prussia-Russia border, where differences in property tax rates have further implications with respect to other fiscal variables such as fiscal autonomy and VFI. Crucially, the latter variable is positively associated with general government deficit and, ensuing public debt (see, for instance, section 2.8).

Table 3.4. The effect of partitions on various fiscal variables at the Austria-Russia border

PANEL A				
VARIABLES	(1)	(2)	(3)	(4)
	Property tax income as a share of total income	Property tax income as a share of total income	Property tax income as a share of total income	Property tax income as a share of total income
Russia	-0.43099 (1.00291)	-0.29787 (1.03342)	-1.85137** (0.79767)	-1.37860 (0.90932)
Constant	7.90739*** (0.62593)	-60.68855 (82.59759)	-41451.37267** (19,886.19578)	-63559.57631 (44,551.40838)
Observations	494	494	494	494
R-squared	0.01216	0.11308	0.20924	0.21994

PANEL B				
VARIABLES	(1) Fiscal autonomy	(2) Fiscal autonomy	(3) Fiscal autonomy	(4) Fiscal autonomy
Russia	0.18284 (2.40519)	0.53790 (2.22787)	-4.11360** (1.71723)	-2.36152 (1.83317)
Constant	30.10418*** (1.65455)	-67.10910 (177.94949)	-2.25443e+05*** (41,440.63287)	-3.77607e+05*** (87,183.51180)
Observations	494	494	494	494
R-squared	0.00791	0.21591	0.36265	0.38620

PANEL C				
VARIABLES	(1) Vertical fiscal imbalance	(2) Vertical fiscal imbalance	(3) Vertical fiscal imbalance	(4) Vertical fiscal imbalance
Russia	0.16945 (2.40309)	-0.16182 (2.25000)	4.23405** (1.73495)	2.50495 (1.84948)
Constant	72.64790*** (1.66604)	134.56889 (176.08389)	208363.59180*** (40,868.03048)	342108.71476*** (87,973.08463)
Observations	494	494	494	494
R-squared	0.00782	0.21309	0.35840	0.38131

Note: The polynomial in the forcing variable is of degree-1 in all columns. Columns 1-2 employ one-dimensional RD and columns 3-4 two-dimensional RD. Columns 1 and 3 do not control for additional covariates, columns 2 and 4 contains baseline covariates (altitude, longitude, latitude and large city dummy). Standard errors in parentheses are clustered at the municipality level. *** p<0.01, ** p<0.05, * p<0.1.

3.7. Policy implications

The findings from this chapter may have significant policy implications. When thinking about transplanting a tax system – or for that purpose also other institutions – it is important to bear in mind that outcomes of transplanting might depend on the rules and norms that prevailed in the past. This conclusion was already raised by other authors (see, for instance, Berkowitz et al. (2003)). Against this backdrop, some preliminary conjecture might be derived for the EU institutions. There are many areas of law which the EU wants to harmonize across the member states. It seems likely, however, that the path-dependence might hinder harmonization in a sense that rules that prevailed before the harmonization might continue to influence outcomes. Impact of

old rules and historical developments on outcomes might be persistent and durable (Bruttel and Friehe, 2014).

To some extent, the implementation of the European “Fiscal Compact” is driven by these path-dependencies and imprints. A recently ratified European “Fiscal compact” (formally the Treaty on Stability, Coordination and Governance in the Economic and Monetary Union⁹⁸) obliges countries to, *inter alia*, legislate in their national fiscal frameworks (preferably at the constitutional level) structural budget rules and strict corrective mechanisms for non-compliance⁹⁹. The implementation of the “Fiscal Compact” into national legal systems is not fully satisfactory however. For instance, Greece – once again – lags behind in the implementation of the “Fiscal Compact”, notoriously missing deadlines for enacting the rules (Burret and Schnellenbach, 2013). Thus, even in times of a huge economic uncertainty and looming bankruptcy, Greece is not able to be “tough on deficit”, proving that it is difficult to overcome the persistent culture of fiscal profligacy.

3.8. Closing remarks for chapter 3

Overall, this chapter contributes to the discussion on the path-dependence and historical persistence of institutions, perceptions and preferences. It is shown that empires’ legacy in today’s Poland can still be observed. The novelty of this chapter is that it demonstrates that history matters for fiscal outcomes, namely for the property tax rates imposed by the municipalities. The historical narrative suggests that Prussian partition had the most “effective” property tax system among the empires. Prussia was unique for its cadastre, which included the building coordinates, and served to set the tax according to the real value of the property. The cadastre therefore did not only ensure property rights, as lands and building properties were officially registered in the

⁹⁸ Almost all European Union signed the fiscal compact with notable exception of the Czech Republic and the United Kingdom, which abstained from signing it (Burret and Schnellenbach, 2013). For a legal perspective on the fiscal compact see Amtenbrink (2012).

⁹⁹ Article 3 paragraph 1(a), 1(b) and 1(e) of the *Treaty on Stability, Coordination and Governance in the Economic and Monetary Union 2012*. It is worth noticing that the “Fiscal Compact” and common principles on national fiscal correction mechanism (COM(2012) 342) do not precisely indicate how the rules and corrective mechanisms should be designed but instead leaves the precise legal wording to the signatory countries (Burret and Schnellenbach, 2013).

repository, but also made the property tax fairer as the tax rate depended on the value of the property, which was extracted from the cadastre. Importantly, in the Prussian part of Poland the property tax was a competence of the lower tier of government and income levied through this tax was used for a local purpose. In the Austrian and, particularly, Russian partition cadastre was used to a lesser extent and property taxes were centrally imposed. All these institutional details may have served as reference points and shaped perception and preferences over the property tax differently in the three empires. Namely, they increased the willingness to pay property taxes to a greater extent in “Prussian Poland” than in the Austrian and Russian partitions. This willingness to pay higher property tax seemed to persist as in the former Prussian municipalities the rates of the most common property taxes are higher as compared to their Russian counterparts. At the Austria-Russia border, where the differences in property tax institutions were less striking, the differences in rates are not systematically observed.

The differences in property tax rates have further fiscal implications, particularly with regard to fiscal autonomy and VFI. Namely, larger property tax rates result in greater fiscal autonomy and smaller VFI. Consequently, the municipalities from former Prussian occupation impose smaller fiscal burdens on the central government, contrary to the municipalities from the “Russian Poland”, which exert more pressure on the central government finance. Larger VFI observed in the municipalities from the former Russian partition might have destabilizing effect on the general government budget balance and debt. Besides that, this chapter also tentatively demonstrated how historical persistence might matter in the European Union context.

Appendix 3.1. Former borders

Borders of contemporary Poland, borders of the Second Polish Republic in 1918-1939 and partition frontiers in 1815-1918



Blue: contemporary borders of Poland (since 1945)

Black: borders of the Second Republic (1918-1939)

Green: partition borders (1815-1918)

Source: own map based on several internet sources

Appendix 3.2. Summary statistics

Variable	Observations	Mean	Standard deviation	Minimum	Maximum
Property tax: residential buildings	1094	0.55787	.139774	.02	.73
Property tax: business buildings	1094	18.3766	2.492789	9	22.82
Property tax: land used for business purpose	1094	0.73753	.0968916	.37	.88
Property tax: land used for other purpose	1094	0.24658	.1026558	.02	.45
Share of property tax income in total income	2478	9.596184	5.933893	1.146481	51.22268
Fiscal autonomy	2478	.3396254	.138855	.0878153	1.271392
Vertical fiscal imbalance	2478	69.5917	14.86809	2.612559	94.5357
Number of companies per 10,000 inhabitants	2478	736.5408	317.6458	280.778	3675.487
Luminosity	2465	6.562086	10.83182	0	61.1271
Unemployment rate	2478	9.438696	3.781679	2.006725	26.80711
Share of population with at least secondary education	2478	21.90544	6.059679	7.6071	42.6
Effectiveness of administration	2193	2.248974	1.066972	0	5
Number of foundations and associations per 10,000 inhabitants	2473	15.67147	8.242992	0	81.12563
Voter turnout in the EU accession referendum	2478	52.83171	7.272536	27.7397	5.5776
Number of mess attendances (monthly)	1094	2.740867	.9526309	.5	6.6
Share of houses connected to gas supply	2469	24.41798	31.07147	0	99.5307
Share of houses connected to water supply	2475	90.37644	8.795973	38.3085	100
Share of houses connected to sewerage	2289	39.44828	26.09172	0	99.4393

Appendix 3.3. Testing for transmission channels

Table 3.5 reports estimates for the determinants of tax morale at the Prussia-Russia border, such as income, education, effectiveness of administration, social capital and religiosity. Panels A, B and C suggest that there is no difference in economic development or economic activity between municipalities from the former Prussian and Russian partitions. Variables such as number of companies per 10,000 inhabitants, luminosity and unemployment rate change smoothly at the partition border. This largely confirms the hypothesis that Poland managed to mitigate the economic differences between the former Prussian and Russian empires. Furthermore, the share of population with at least secondary education does not change abruptly at the Prussia-Russia border (panel D). Neither does this come as a surprise as during the socialism in Poland much effort was put into levelling the education attainment of population. In panel E the estimates are reported for an indicator depicting how “effective” (friendly) public administration is at municipal level. Given that estimates reach a significant level, it seems plausible to conclude that the efficiency (friendliness) of administration persists as on the Russian side of the border the efficiency of administration is significantly lower. Social capital is proxied by two variables – number of foundations and associations per 10,000 inhabitants as well as voter turnout in the EU accession referendum in 2003. In the case of both variables estimates are significant, suggesting that social capital is lower on the Russian side of the frontier (panel F and G). Lastly, religiosity too changes discontinuously at the partition border, with significantly lower mass attendance in the municipalities from the former Russian part. Table 3.6, in turn, reports estimates for the same variables but at the Austria-Russia border. Besides estimations for the unemployment rate suggesting that economic activity is higher on the Russian side, all other variables display the same pattern as at the Prussia-Russia border. Given that at the Prussia-Russia frontier a change in property tax rate is identified and not at the Austria-Russia border, tax morale transmission channel seems to be unsuitable to explain the shift in tax rates. It is because similar determinants of tax morale are present at the Austria-Russia border but a switch in property tax rates is not observed there.

Table 3.5. The effect of partitions on tax morale determinants at the Prussia-Russia border

PANEL A				
VARIABLES	(1)	(2)	(3)	(4)
	Number of companies per 10,000 inhabitants	Number of companies per 10,000 inhabitants	Number of companies per 10,000 inhabitants	Number of companies per 10,000 inhabitants
Russia	3.54749 (36.26164)	18.41168 (32.14501)	6.81848 (29.93923)	11.94208 (28.47786)
Constant	744.11245*** (27.89534)	1,061.54855 (977.42785)	-3.10361e+06** (1.53450e+06)	-2.20575e+06*** (823973.08920)
Observations	530	530	530	530
R-squared	0.10292	0.24853	0.29933	0.35060

PANEL B				
VARIABLES	(1)	(2)	(3)	(4)
	Luminosity	Luminosity	Luminosity	Luminosity
Russia	-4.06060 (2.57237)	-1.75244 (1.79190)	-2.07511 (1.80030)	-0.56824 (1.56318)
Constant	12.04408*** (2.20609)	296.10410*** (43.80417)	264891.87534*** (83,555.45094)	-1.60374e+05*** (43,353.20203)
Observations	530	530	530	530
R-squared	0.05378	0.48420	0.39878	0.55607

PANEL C				
VARIABLES	(1)	(2)	(3)	(4)
	Unemployment rate	Unemployment rate	Unemployment rate	Unemployment rate
Russia	0.78090 (0.54222)	0.55243 (0.38223)	0.31280 (0.33920)	0.50069 (0.34571)
Constant	8.69173*** (0.42441)	-122.45192*** (11.57044)	74,676.37897*** (17,716.62652)	9,051.44203 (9,175.61728)
Observations	530	530	530	530
R-squared	0.11752	0.51653	0.58966	0.57954

PANEL D				
VARIABLES	(1) Share of population with at least secondary education	(2) Share of population with at least secondary education	(3) Share of population with at least secondary education	(4) Share of population with at least secondary education
Russia	-1.14163 (0.97455)	-0.38822 (0.80396)	-1.05297 (0.81727)	-0.83202 (0.77532)
Constant	23.52138*** (0.71536)	74.95557*** (23.06155)	-83951.09761* (48,777.82486)	-68193.69427*** (24,806.89966)
Observations	530	530	530	530
R-squared	0.04652	0.29383	0.23889	0.32059

PANEL E				
VARIABLES	(1) Administration effectiveness	(2) Administration effectiveness	(3) Administration effectiveness	(4) Administration effectiveness
Russia	-0.64748*** (0.18293)	-0.54886*** (0.16311)	-0.44837*** (0.16858)	-0.35440** (0.16119)
Constant	2.59173*** (0.14305)	3.30341 (4.97707)	2,509.83904 (9,784.01514)	-1,921.20714 (4,572.66327)
Observations	475	475	475	475
R-squared	0.10170	0.26513	0.18786	0.26658

PANEL F				
VARIABLES	(1) Number of foundations per 10,000 individuals	(2) Number of foundations per 10,000 individuals	(3) Number of foundations per 10,000 individuals	(4) Number of foundations per 10,000 individuals
Russia	-2.99091*** (1.08671)	-2.92719*** (1.01663)	-2.50689** (1.01332)	-2.34452** (0.97087)
Constant	16.09043*** (0.79107)	7.56686 (27.00661)	-73792.37095 (49,527.83267)	-37124.33714 (24,887.42945)
Observations	530	530	530	530
R-squared	0.09266	0.19126	0.14535	0.19881

PANEL G				
VARIABLES	(1) Referendum turnout	(2) Referendum turnout	(3) Referendum turnout	(4) Referendum turnout
Russia	-4.13523*** (0.98126)	-3.62758*** (0.82842)	-4.20713*** (0.82627)	-4.09926*** (0.81480)
Constant	56.50591*** (0.72021)	172.26337*** (27.19133)	-1.15752e+05** (48,909.35175)	-1.10298e+05*** (26,231.56371)
Observations	530	530	530	530
R-squared	0.31283	0.47759	0.48729	0.50890

PANEL H				
VARIABLES	(1) Religiosity	(2) Religiosity	(3) Religiosity	(4) Religiosity
Russia	-0.59627*** (0.15612)	-0.58204*** (0.13752)	-0.38331*** (0.11819)	-0.43033*** (0.11282)
Constant	3.16464*** (0.12094)	27.70245*** (3.45251)	-18801.47425*** (6,251.72063)	-5,938.66235* (3,137.65108)
Observations	530	530	530	530
R-squared	0.11313	0.34117	0.38578	0.40248

Note: The polynomial in the forcing variable is of degree-1 in all columns. Columns 1-2 employ one-dimensional RD and columns 3-4 two-dimensional RD. Columns 1 and 3 do not control for additional covariates, columns 2 and 4 contains baseline covariates (altitude, longitude, latitude and large city dummy). Standard errors in parentheses are clustered at the municipality level. *** p<0.01, ** p<0.05, * p<0.1.

Table 3.6. The effect of partitions on tax morale determinants at the Austria-Russia border

PANEL A				
VARIABLES	(1) Number of companies per 10,000 inhabitants	(2) Number of companies per 10,000 inhabitants	(3) Number of companies per 10,000 inhabitants	(4) Number of companies per 10,000 inhabitants
Russia	40.97176 (45.82902)	-7.64538 (40.34609)	-9.42003 (35.01888)	-8.14768 (36.39205)
Constant	632.48700*** (34.09851)	-2,205.02128 (3,397.38185)	-26637.27897 (843355.94486)	166656.10935 (1.71142e+06)
Observations	494	494	494	494
R-squared	0.02168	0.30882	0.32672	0.36418

PANEL B				
	(1)	(2)	(3)	(4)
VARIABLES	Luminosity	Luminosity	Luminosity	Luminosity
Russia	-0.04406 (1.96725)	0.31674 (1.70052)	-2.92001** (1.40682)	-1.43392 (1.44358)
Constant	8.84920*** (1.33111)	-30.82913 (123.55303)	-2.05472e+05*** (41,830.37696)	-3.07383e+05*** (79,752.94559)
Observations	494	494	494	494
R-squared	0.04856	0.31602	0.25473	0.39477

PANEL C				
	(1)	(2)	(3)	(4)
VARIABLES	Unemployment rate	Unemployment rate	Unemployment rate	Unemployment rate
Russia	-0.64316 (0.54346)	-0.98969** (0.45931)	-1.23727*** (0.40851)	-1.91384*** (0.42041)
Constant	9.06453*** (0.41379)	-196.98792*** (37.08802)	40,066.33422*** (14,527.91362)	54,610.35694* (29,607.82452)
Observations	494	494	494	494
R-squared	0.03039	0.33590	0.42654	0.45307

PANEL D				
	(1)	(2)	(3)	(4)
VARIABLES	Share of population with at least secondary education	Share of population with at least secondary education	Share of population with at least secondary education	Share of population with at least secondary education
Russia	0.94745 (1.06272)	1.13979 (1.05415)	-0.65661 (0.90888)	-0.06658 (0.97096)
Constant	22.43078*** (0.72830)	-53.83633 (87.81820)	-87174.59766*** (21,602.01287)	-1.33848e+05*** (46,572.66475)
Observations	494	494	494	494
R-squared	0.02301	0.13058	0.14095	0.19425

PANEL E				
VARIABLES	(1) Administration effectiveness	(2) Administration effectiveness	(3) Administration effectiveness	(4) Administration effectiveness
Russia	-0.34237* (0.18321)	-0.37648** (0.18356)	-0.53536*** (0.16335)	-0.43755** (0.17736)
Constant	2.54242*** (0.14159)	-10.84058 (15.81256)	-3,549.74935 (3,725.04585)	-700.36786 (7,866.98718)
Observations	432	432	432	432
R-squared	0.06885	0.15291	0.13863	0.16681

PANEL F				
VARIABLES	(1) Number of foundations per 10,000 individuals	(2) Number of foundations per 10,000 individuals	(3) Number of foundations per 10,000 individuals	(4) Number of foundations per 10,000 individuals
Russia	-4.51784*** (1.20037)	-3.88133*** (1.25004)	-4.45913*** (1.12245)	-3.83777*** (1.17108)
Constant	16.75593*** (0.97943)	16.16449 (124.93197)	-9,134.81874 (33,032.94874)	19,589.79319 (61,254.45442)
Observations	494	494	494	494
R-squared	0.07733	0.11682	0.09727	0.13955

PANEL G				
VARIABLES	(1) Referendum turnout	(2) Referendum turnout	(3) Referendum turnout	(4) Referendum turnout
Russia	-4.42986*** (1.19191)	-5.18811*** (1.22248)	-6.26000*** (0.92804)	-5.99394*** (1.02125)
Constant	53.72488*** (0.74448)	-219.75334** (98.65190)	-36376.26978 (24,886.04329)	-56623.54601 (53,564.96172)
Observations	494	494	494	494
R-squared	0.25289	0.34420	0.50350	0.51941

Note: The polynomial in the forcing variable is of degree-1 in all columns. Columns 1-2 employ one-dimensional RD and columns 3-4 two-dimensional RD. Columns 1 and 3 do not control for additional covariates, columns 2 and 4 contains baseline covariates (altitude, longitude, latitude and large city dummy). Standard errors in parentheses are clustered at the municipality level. *** p<0.01, ** p<0.05, * p<0.1.

The same conclusion as for the ‘tax morale’ argument can be derived for the ‘utility supply’ argument. Tables 3.7 and 3.8 suggest that at both borders important differences in utility supply persisted, with the notable exception of the water supply at the Austria-Russia border. Yet again, given that at both borders changes in utility supply are identified but change in property tax rates

is observed only at the Prussia-Russia border, this makes the ‘utility supply’ argument ineffective to explain the difference in tax rates.

Table 3.7. The effect of partitions on utility supply at the Prussia-Russia border

PANEL A				
VARIABLES	(1) Share of houses equipped with gas installation	(2) Share of houses equipped with gas installation	(3) Share of houses equipped with gas installation	(4) Share of houses equipped with gas installation
Russia	-12.54899*** (4.45825)	-8.98315** (3.67535)	-10.88174*** (3.56109)	-8.49515** (3.28696)
Constant	25.31209*** (3.76444)	11.52337 (127.39846)	15,104.26668 (178335.03998)	-4.02263e+05*** (89,074.63863)
Observations	530	530	530	530
R-squared	0.12755	0.34695	0.37462	0.45613
PANEL B				
VARIABLES	(1) Share of houses equipped with water installation	(2) Share of houses equipped with water installation	(3) Share of houses equipped with water installation	(4) Share of houses equipped with water installation
Russia	-2.86704*** (0.65091)	-2.56831*** (0.60891)	-3.34818*** (0.66885)	-2.74184*** (0.63757)
Constant	96.37452*** (0.34431)	95.79351*** (18.85062)	19,308.97937 (68,742.73166)	-59172.79106 (38,203.28976)
Observations	530	530	530	530
R-squared	0.42321	0.46608	0.43964	0.45089
PANEL C				
VARIABLES	(1) Share of houses equipped with sewerage	(2) Share of houses equipped with sewerage	(3) Share of houses equipped with sewerage	(4) Share of houses equipped with sewerage
Russia	-14.72872*** (4.13822)	-12.76815*** (3.81378)	-14.48787*** (3.89730)	-13.23600*** (3.69361)
Constant	51.63370*** (3.09418)	84.39973 (114.75688)	-2.09311e+05 (211119.76411)	-3.60045e+05*** (106980.40648)
Observations	509	509	509	509
R-squared	0.11816	0.22963	0.15742	0.24960

Note: The polynomial in the forcing variable is of degree-1 in all columns. Columns 1-2 employ one-dimensional RD and columns 3-4 two-dimensional RD. Columns 1 and 3 do not control for additional covariates, columns 2 and 4 contains baseline covariates. Standard errors clustered at the municipality level. *** p<0.01, ** p<0.05, * p<0.1.

Table 3.8. The effect of partitions on utility supply at the Austria-Russia border

PANEL A				
VARIABLES	(1) Share of houses equipped with gas installation	(2) Share of houses equipped with gas installation	(3) Share of houses equipped with gas installation	(4) Share of houses equipped with gas installation
Russia	-28.91264*** (5.14485)	-26.37195*** (5.02899)	-37.20405*** (4.16510)	-31.79213*** (4.51412)
Constant	61.22156*** (3.84808)	-735.39275* (413.27680)	-8.42512e+05*** (117483.62916)	-1.46635e+06*** (229742.98259)
Observations	494	494	494	494
R-squared	0.35180	0.44153	0.46002	0.48468
PANEL B				
VARIABLES	(1) Share of houses equipped with water installation	(2) Share of houses equipped with water installation	(3) Share of houses equipped with water installation	(4) Share of houses equipped with water installation
Russia	-0.16432 (1.34976)	-1.29654 (1.25625)	-1.33389 (1.12242)	-1.56079 (1.14669)
Constant	89.81115*** (0.87733)	143.40201 (134.17954)	33,944.75536 (30,535.87734)	52,219.80917 (64,376.08129)
Observations	494	494	494	494
R-squared	0.24044	0.37452	0.39025	0.39573
PANEL C				
VARIABLES	(1) Share of houses equipped with sewerage	(2) Share of houses equipped with sewerage	(3) Share of houses equipped with sewerage	(4) Share of houses equipped with sewerage
Russia	-16.71666*** (4.48579)	-15.41815*** (4.47518)	-17.57733*** (3.98924)	-16.51854*** (4.09459)
Constant	45.45201*** (3.20077)	-128.57081 (370.94735)	-48259.52695 (105117.55465)	5,905.47047 (220298.22622)
Observations	442	442	442	442
R-squared	0.08597	0.16690	0.17398	0.23223

Note: The polynomial in the forcing variable is of degree-1 in all columns. Columns 1-2 employ one-dimensional RD and columns 3-4 two-dimensional RD. Columns 1 and 3 do not control for additional covariates, columns 2 and 4 contains baseline covariates (altitude, longitude, latitude and large city dummy). Standard errors in parentheses are clustered at the municipality level. *** p<0.01, ** p<0.05, * p<0.1.

CHAPTER 4

JUDGES AS FISCAL ACTIVISTS: EVIDENCE FROM THE POLISH CONSTITUTIONAL TRIBUNAL¹⁰⁰

4.1. Introduction

Similarly to chapter 2, which demonstrates the impact of electoral regimes on fiscal outcomes, this chapter analyzes another element of the broader political (legal) setting, namely the judiciary. The general observation in the research covering the topic of political science and law is that policy-making becomes “judicialized” (e.g. Stone Sweet, 2000, pp. 12-13; Garoupa, 2011; Garoupa and Ginsburg, 2012). According to Vallinder (1995), the judicialization of politics refers to the shifting of decision-making powers from the legislature and the executive to the courts. To a large extent, if not exclusively, the judicialization of politics is due to the presence of Constitutional (Supreme) Courts and especially judicial (constitutional) review.¹⁰¹ Their presence triggers constitutional adjudication, which according to Stone Sweet (2007, p. 72) constitutes a lawmaking process.

¹⁰⁰ This chapter is in parts co-authored with Nuno Garoupa (University of Illinois). A modified version of this chapter titled “An Empirical Analysis of Constitutional Review Voting in the Polish Constitutional Tribunal, 2003-2014” is submitted to the Constitutional Political Economy Journal. Few descriptive parts of this chapter are extracted from Kantorowicz (2014). I am grateful to Jarosław Beldowski, Matthias Dauner, Nora El-Bialy, Jerg Gutmann, Elena Kantorowicz, Alessio Paccas, Agnes Strauss, Stefan Voigt, Franziska Weber, the participants of the EDLE seminar held in Bologna on November 6, 2013 and the participants of the ‘Empirical Legal Studies at Erasmus School of Law’ seminar held at the Erasmus University Rotterdam on November 27, 2013 for useful comments on that paper. The usual disclaimers apply.

¹⁰¹ In this paper the terms judicial and constitutional review are used interchangeably. This is despite a slight difference between these two notions. While constitutional review might be pursued by any institutional body, judicial review is strictly conducted by the judiciary.

In the Kelsenian tradition, a special Constitutional Court is explicitly viewed as a negative legislator¹⁰² able to annul a law by declaring it unconstitutional (Kelsen, 1942, p. 187).¹⁰³ A constitutional review is the main legal device through which the Court factually intervenes in the political sphere and by which the Court performs its legislative function (Kelsen, 1942, p. 187). In this chapter, judicial (constitutional) review is defined as the ability of the Court or another judicial body to verify whether the laws and regulations enacted by the legislature are in line with the constitutional provisions and in accordance with procedural requirements (Ginsburg, 2008). The crucial consequence of the constitutional review, at least from a theoretical standpoint, is that laws and regulations which fail to comply with the constitutional provisions are invalidated or revised by the legislature in line with the Court's decision.

Undoubtedly, the overall tendency of the judicialization of policy extends to the area of public finance (see, for instance, Kantorowicz (2014, pp. 82-85) for an overview of recent Constitutional Courts' decisions in cases which had nonnegligible budgetary implications). Notwithstanding it, the mainstream literature on fiscal constitutions largely disregards judges as key institutional players in fiscal policy. This chapter attempts, at least partially, to fill this gap in the research. At the general level, this chapter inquires therefore whether – by executing a constitutional review – the judiciary is able to shape the course of a fiscal policy. To answer this question, this chapter delves chiefly into the judicial decision-making and searches for systematic behavioral patterns of judges, with an emphasis on examining judicial behavioral patterns in adjudicating cases with budgetary implications.

Judicial behavior, and hence decision-making, in any court around the world can be conceptually explained by the same determinants even though they might vary in degree. They include individual preferences¹⁰⁴, intra-court interaction (collegiality)¹⁰⁵ and the influence of other

¹⁰² Stone Sweet (2000, p. 61) goes even further when referring to the Constitutional Court as a specialized legislative chamber able to reject legislative statutes.

¹⁰³ In fact, the role of today's Constitutional Courts is much broader and their power goes far beyond the negative legislator concept. For instance, the Courts might be engaged in the law-making process at the parliamentary stage (e.g. Slovenia), the verification of the legality of elections (e.g. Lithuania) and the legalization of political parties (e.g. Bulgaria). Interestingly, some of these ancillary duties do not even rely on the interpretation of the constitutional text (Ginsburg and Elkins, 2009). This indicates that judicial power expands far beyond its traditional domain.

¹⁰⁴ For judicial preferences, see Posner (1993; 2005; 2010; 2011).

relevant actors, including the political branches of government and the general public¹⁰⁶. It is the exact mix of these three factors that divides academics and varies across jurisdictions.

Different theories have been developed, mainly in the context of the United States, to explain judicial decision-making.¹⁰⁷ In this respect, there is an important ongoing debate over whether judges are guided by the law or by personal ideology. Formalists take the stance that judges simply interpret and apply the constitution and the law in a conformist view of precedents. Judges are largely guided by what the law says and abide by a strict legal authoritative interpretation. Under a completely different perspective, the attitudinal model sees judicial preferences, with special emphasis on ideology, as the main explanatory factor. Finally, the proponents of the strategic model recognize the importance of judicial preferences but argue that they are implemented taking into account political and institutional realities.

These different theories of judicial behavior cannot be convincingly addressed without an adequate empirical assessment. Legal scholars and political scientists have focused much empirical attention on the U.S. Supreme Court. Empirical debate about other higher courts is now an emerging literature, with notable applications in Europe and North America,¹⁰⁸ in Asia¹⁰⁹ and

¹⁰⁵ See Cameron and Kornhauser (2010). The authors show that the final outcome might not be the position of the median justice because it depends on the entire distribution of ideal points. The model also suggests the importance of opinion assignment. See also Kornhauser (1992) explaining that path-dependence in collegial courts results from the fact that no single judge controls lawmaking, and Kornhauser (2003) pointing out that, due to collective decision-making, case-by-case and issue-by-issue approaches can result in different outcomes. The development of legal doctrines is determined crucially by how collegial courts operate.

¹⁰⁶ See generally Garoupa and Ginsburg (2010).

¹⁰⁷ For discussion, see among others, Brenner and Spaeth (1988), Segal and Cover (1989), Gely and Spiller (1990), George and Epstein (1992), Epstein and Knight (1998), Epstein et al. (2001), Segal and Spaeth (2002), Goff (2006), Hansford and Springgs (2006), Lax and Cameron (2007), and Spiller and Gely (2007).

¹⁰⁸ On Canada, see Tate and Sittiwong (1989), Alarie and Green (2008), Green and Alarie (2009), and Songer et al. (2011). On Germany, see Schneider (2005) and Vanberg (2005). On Italy, see Breton and Fraschini (2003), Fiorino et al. (2007), Padovano (2009) and Dalla Pellegrina and Garoupa (2013). On Portugal, see Amaral Garcia et al. (2009). On France, see Franck (2009 & 2010). On Spain, see Garoupa et al. (2013). On Israel, see Shachar et al. (1997) and Eisenberg et al. (2012). On Australia, see Smyth and Narayan (2004).

¹⁰⁹ On Japan, see Ramseyer and Rasmusen (2003), and in particular on the Japanese Supreme Court, see Ramseyer and Rasmusen (2006). On Taiwan, see Ginsburg (2003) and Garoupa et al. (2011). On the Philippines, see Escresa and Garoupa (2012).

in Latin America.¹¹⁰ However, the question whether judicial behavior changes once judges are faced with fiscal cases (cases that have budgetary implications) is entirely neglected by this stream of literature, not to mention traditional literature on fiscal constitutions.¹¹¹ Consequently, the contribution of this chapter is to look at judicial behavior in the particular court, i.e. the Polish Constitutional Tribunal¹¹² (Trybunał Konstytucyjny, hereinafter TK), and to verify whether this judicial behavior is somewhat modified once judges adjudicate in cases that have budgetary implications.

The creation and the major reforms of judicial review in Poland coincide with a transition from the socialist regime to democracy. After Former Yugoslavia, in 1985¹¹³, Poland was the second socialist country to establish a Kelsenian-type constitutional court with an exclusive right to review laws for their conformity with the (then socialist) Constitution.¹¹⁴ In spite of its limited powers (e.g. the court could review the legislation passed only after its promulgation and the Court decisions were legally inconclusive), the TK managed to develop valuable case law even in its first years of existence under the then still prevailing socialist regime.¹¹⁵ Yet, more significant jurisprudence, on which TK managed to build its strong reputation, was developed shortly after

¹¹⁰ On Argentina, see Chávez (2004) and Helmke (2004) as well as Iaryczower et al. (2002 & 2006). On Chile, see Hilbink (2007) and Carroll and Tiede (2011). More generally, see Kapiszewski and Taylor (2008).

¹¹¹ A handful of empirical studies investigate the role of Constitutional Courts in shaping fiscal outcomes. None of these studies specifically look at judicial behavior, i.e. how judges make their decisions. These studies take more ‘macro’ view on the court, treating it as a single institution and disregarding the fact that courts consist of individuals with differing backgrounds and preferences. For instance, Vaubel (1996) suggests that the existence of Constitutional Court is an important factor of expenditure centralization. Similarly, Tridimas (2005) shows theoretically and empirically that a stronger judicial review and judicial independence are associated with a relatively lower size of government. In addition, Eslava (2006) presents suggestive empirical evidence that judicial activism in fiscal policy results in a larger public deficit. Lastly, Raudla (2011) demonstrates the impact of the Constitutional Court on the tax system, based on the case study of Estonia. More established is, however, the literature that takes judiciary as an explaining factor of the economic growth. Here the most notable are studies by Henisz (2000), Feld and Voigt (2003, 2006), Voigt et al. (2015). La Porta et al. (2004), on the other hand, discuss how judicial independence and constitutional review ensure economic and political freedom.

¹¹² It was chosen to call it “tribunal” rather than “court” to underscore the fact that it is a specialized entity to deal only with constitutional matters.

¹¹³ The constitutional amendment enabling the establishment of the constitutional court was introduced in 1982. However, the subsequent political conflict over the *Constitutional Tribunal Act* delayed its adoption. Consequently, it was only in 1985 when the Court started operating and, in 1986, when it issued its first judgment (see, for instance, historical outline of the Tribunal available at <http://trybunal.gov.pl/en/about-the-tribunal/constitutional-tribunal/historical-outline/>, accessed on November 16, 2014).

¹¹⁴ See Sadurski (2002).

¹¹⁵ See Garlicki (2002) and Stawecki et al. (2008).

the fall of the socialism regime in 1989. The TK legal doctrines were particularly crucial in filling the constitutional gaps of the early transitional period. It is of note that until 1997 Poland was operating under the old Stalinist Constitution of 1952, which was of minor relevance in the freshly-restored democratic regime.¹¹⁶ The importance of the TK legal doctrines was reflected in the new Constitution of 1997, which was largely grounded on the principles and rules designed by the Court at the outset of the transition.¹¹⁷ However, one should emphasize that the new Constitution of 1997 constitutes an important breakthrough in the history of the TK itself. Specifically, the Constitution brought many reforms with regard to the TK organization and strengthened its position vis-à-vis the legislature.

The contributions of the TK to the process of governing the political transformation of Poland and its current strong position within the Polish public institutions are unquestionable.¹¹⁸ However, as it is often raised in the debates over the TK, one point of concern is the potential ideological bias and party allegiance of the constitutional judges.¹¹⁹ In Poland, the nominations to the Court are exclusively vested upon the Sejm, i.e. the lower chamber of the Parliament. As a partisan body, the Sejm perceives the nominations to the TK as important political decisions possibly assuring that judges elected to the Court have congruent policy preferences with the occasional parliamentary majority. This largely politicized process of appointments, which is described in

¹¹⁶ It is important to stress that in 1992 the interim Little Constitution was promulgated in Poland. This Constitution did not repeal all of the rules of the Stalinist Constitution of 1952. It aimed, however, at reducing institutional uncertainty through amending and facilitating the main functional and organizational features of the state. The most important was to bring order and regularity to the confused relations between the parliament, the government and the President. Among the hottest issues, the interim Constitution was supposed to remove dual authority over foreign affairs and security matters as well as clarify the process for appointing the Prime Minister (see, for instance, Elster 1993).

¹¹⁷ See Garlicki (2002) and Stawecki et al. (2008).

¹¹⁸ The TK enjoys fairly good reputation in the Polish society, but the proportion of surveyed opinions perceiving the Court as a good political actor has decreased since 2008. According to the public opinion survey (CBOS), at the beginning of 2008 roughly 55% of surveyed individuals had good opinion about the work of the TK. In 2013 this percentage dropped to 37%. This still should be considered high since, by comparison, only 15% of the same surveyed individuals assessed positively the work of the Parliament (for more information see http://www.cbos.pl/SPISKOM.POL/2013/K_044_13.PDF accessed on November 16, 2014).

¹¹⁹ See, for instance, the following press articles: (i) Andrzej Dryszel. 15 politycznych ludzi. Przegląd, 41/2010, (ii) 15 prawych ludzi. Rozmowa z Bohdanem Zdziennickim. Polityka, November 26, 2010, (iii) Krzysztof Burnetko. Bój o Trybunał. Polityka, November 26, 2010, (iv) Opozycja: Nowi sędziowie w TK to polityczny wybór. Portal Money.pl, November 26, 2010 (<http://prawo.money.pl/aktualnosci/wiadomosci/artykul/opozycja.nowi:sedziowie:w:tk:to:polityczny:wybor.99.0.723299.html> accessed on November 14, 2014), (v) Ewa Siedlecka. Trybunał z łapanki. Gazeta Wyborcza, December 11, 2006, (vi) Stankiewicz, Śmiłowicz. Sędziowie z partyjnymi sympatiami. Rzeczpospolita, July 14, 2006.

details in section 4.2, can potentially endanger the impartiality of the court. Judges nominated by the partisan bodies instead of being of the highest merits and subject exclusively to the law might be too easily driven by individual ideologies and party's interests in adjudicating specific cases. They might be further incentivized to cast ideological votes while hoping for future appointment to other public offices since constitutional judges in Poland do not serve for lifetime, but for a fixed term of nine years after the 1997 changes. In addition, on many occasions, judges are obliged to adjudicate in cases where ideological differences are large and political stakes are significant. The reason for this is that a wide range of partisan bodies can initiate judicial review before the Court in an abstract form (that is, outside of a concrete case).¹²⁰

Not surprisingly, the conjecture of this chapter is that the Polish constitutional court is politicized and ideology plays a role in judicial voting. Importantly, however, it is further conjectured that ideological bias should be somewhat weaker in cases with budgetary implications. There are two important institutional restraints which might mitigate politicization in budgetary cases (for a detailed discussion see section 4.3). First, the TK case law mentions the budgetary balance as one of the constitutional principles, which judges have to respect. Second, in cases with budgetary implications TK judges are procedurally obliged to officially question the government about the fiscal consequence of potentially voting the law unconstitutional. Being fully aware of fiscal consequence and being under strict public and media scrutiny, judges should have more reservations of voting ideologically.

This is the first attempt of studying judicial behavior in the Polish TK. It is also the first contribution that explicitly explores judicial behavior in the budgetary cases. The results presented in this chapter confirm the hypothesis that judges' decisions might be driven by their ideologies, thus convincingly refuting the conventional formalist account of judicial behavior prevalent in civil law academic scholarship. Those results hold particularly for judges chosen by the most

¹²⁰ The basic distinction done in the literature is between abstract and concrete judicial review. Abstract review is triggered by officials – usually the parliamentary opposition – “in the absence of a concrete judicial case” (Stone Sweet, 2009). The constitutional court therefore compares the constitutional provisions and the statutory law, in the abstract, to verify if the latter conforms to the constitution. Abstract review is also called “preventive review,” when it is pursued before the law is promulgated (i.e. before it can harm people). Concrete review, on the other hand, can be triggered by any court in relation to the case, which is currently before the court (Information on the TK's website available at <http://trybunal.gov.pl/en/about-the-tribunal/constitutional-tribunal/posterior-review-of-norms/> accessed on February 26, 2015).

ideologically polarized political camps, such as the left and extreme right parties. Most importantly, although to a lesser extent, ideological bias is also present in cases which have budgetary implications. This therefore refutes the hypothesis that additional institutional constraints are able to mitigate ideological voting in fiscal cases. A key conclusion of this chapter is that the fiscal outcomes might be indeed shaped by judges who drive the results in line with the preferences of their appointers, hence, political parties. It is to stress, however, that the pure attitudinal model might not be entirely correct. Thus, also the institutional constraints are recognized in driving the behavior of the constitutional judges, although only to a minor extent.

The remainder of this chapter is structured as follows. An overview of the constitutional review in Poland is presented in section 4.2. Section 4.3 illustrates potential sources of the ideological bias in the TK and demonstrates possible institutional constraints of casting ideological vote, particularly in fiscal cases. A preliminary quantitative analysis is introduced and discussed in section 4.4. A regression analysis is discussed in section 4.5. Section 4.6 derives preliminary policy implications and gives an outlook for a possible institutional reform. Finally, section 4.6 concludes.

4.2. The case of Poland

The Polish Constitution of 1997 was the result of a long-lasting political bargaining and log-rolling¹²¹. Although the Constitutional Assembly (responsible for drafting the new constitution) was largely dominated by the left leaning parties, some conservative ideas were embedded in order to guarantee a more widespread political support for the constitution.¹²² Overall, it took almost five years for the Assembly to accomplish the drafting of the document, which is exceptionally long as compared to the average constitutional deliberation of 16 months (Ginsburg et al., 2009, p. 209). Delays in drafting the constitution resulted in the loss of the constitutional

¹²¹ Log-rolling refers to an informal process where political party X supports certain issues which matter for party Y in exchange for party's Y support in the future (Mueller, 2000, p. 105).

¹²² For instance, the constitutional drafters introduced an innovative fiscal rule limiting the country's debt ratio to 60% of GDP (the rule has been already mentioned in section 1.2).

momentum. Consequently, the final draft of the constitution was approved in referendum by only a slight majority of 52.7%. Moreover, the voting turnout was low since it did not reach 50% of the eligible voters.¹²³

Albeit some opposition against strengthening the institutional locus of the TK was present, the Constitution of 1997 significantly reinforced the position of the TK vis-à-vis the legislative body of the state. The establishment of the TK in 1985 under the non-democratic regime (keep in mind that socialism in Poland collapsed only in 1989) resulted in highly restrained powers for the Court as compared to its Western counterparts. Most importantly, the decisions of the court were not final. The judgments on unconstitutionality of the law with the constitution were subject to a possible later consideration by the Sejm¹²⁴, which could reject the TK decisions by 2/3 majority.¹²⁵ The new Constitution of 1997 and the Constitutional Tribunal Act of 1997¹²⁶, i.e. two basic laws shaping the modern TK, banned this provision. Ultimately, after two years of transitory period, effectively in October 1999, the decisions of the TK started being final, conclusive in character, and not subject to further appeals. Under the currently binding procedures, whenever the Court adjudicates the unconstitutionality of a particular law, the challenged statute or its relevant articles become null and void. Unless it is formulated differently, the unconstitutional provisions cease to have binding legal effect at the moment of announcing the judgment.¹²⁷ In some cases where the

¹²³ Although the *Referendum Act 1995* required at least 50% turnout for a referendum to have a binding effect, the *Constitutional Act 1992* instructed that the new constitution should be adopted in a referendum regardless of the turnout rate. The common belief in the early 1990s was that the turnout in the constitutional referendum would never achieve 50%. Therefore, the establishment of a 50% turnout threshold put the constitutional project at high risk (see, for instance, *Supreme Court Resolution* from July 15, 1997).

¹²⁴ In Poland, the parliament has a bicameral structure with the *Sejm* (460 deputies) constituting the lower chamber of the parliament and the *Senate* (100 senators) forming the upper chamber. The representatives of both chambers are elected for four years. It is important to stress that the *Sejm* enjoys larger prerogatives than the *Senate* and ultimately is responsible for promulgating (voting) laws. Albeit the *Senate* can initiate legislation or amendments, the final word on adopting or amending the law belongs to the *Sejm*.

¹²⁵ Being dominated by the Communist Party MPs until 1989, the Sejm usually did not face significant problems of reversing the Court's decision whenever it was politically relevant. This situation largely changed in the early 1990s, when democratic elections resulted in a much more pluralistic and fragmented Sejm. Under these new circumstances, in order to strike down the judgment of the TK, the governing majority needed to secure the support of the opposition parties.

¹²⁶ Whereas the *Constitution 1997* sets only general rules for the TK functioning, the *Constitutional Tribunal Act 1997* – the ordinary statutory law – comprises detailed institutional framework of the TK.

¹²⁷ Although according to the law, the unconstitutional statutes or articles cease to have any effective binding legal status, it is important to note that on many occasions the legislative bodies are obliged to further

unconstitutionality of the law imposes a high burden on the state budget or the law annulment results in a legal uncertainty, the Court allows a temporary preservation of the statute (up to 18 months).¹²⁸

Before the reforms of 1997, the Court was composed of 12 judges, who were elected for a non-renewable term of eight years (Garlicki, 2002). The new Constitution of 1997 increased the number of judges to 15 and lengthened their term to nine years. With respect to the nominations and appointments of the judges, the regulations before and after the 1997 reform remained almost untouched although a major change concerned the appointment of the President and Vice-President of the Court. The candidates to the TK are put forward by a group of minimum 50 deputies sitting in the Sejm or the Presidium of the Sejm.¹²⁹ From those candidates, the Sejm elects the judges to the TK by an absolute majority of votes with no less than half of the deputies present.¹³⁰ As a consequence of this procedure, the majority in the Sejm can largely influence the elections of the constitutional judges, and give precedence to the candidates of their preference. It is to stress that unlike the judicial appointment mechanism in Germany, Italy, Portugal, or Spain, a *de facto* quota system¹³¹ does not exist in Poland (that is, there is no stable arrangement of allocating seats to the political parties). Therefore, at different point in time, changing political majorities are reflected in appointments to the TK.

Against this backdrop, it is important to note that there are several mechanisms formally entrenched in the law to secure judges' independence. First, judges are irremovable from office¹³²,

enforce specific TK judgments. It is particularly the case when the TK derogates the law and creates a legal vacuum. In the years 2005-2008, approximately 70% (112/160) of judgments posed some enforcement obligation on the legislative bodies. However, 47% (52/112) of those judgments were not enforced by the relevant institutions (see Radziewicz, 2010).

¹²⁸ See Article 190 of the *Constitution 1997* and Article 71 of the *Constitutional Tribunal Act 1997*.

¹²⁹ The Presidium of the Sejm comprises the President and Deputy President of the Sejm. The main competence of the Presidium of the Sejm includes the setting of the Sejm's work agenda, organizing cooperation between the committees of the Sejm and coordinating their activities.

¹³⁰ See Article 5 of the *Constitutional Tribunal Act 1997*.

¹³¹ See Garoupa et al. (2013).

¹³² Removal from the office of the judge can be a consequence of the disciplinary punishment by the TK. A judge may be subject to the disciplinary punishment for an infringement of provisions of the law, for act which is inconsistent with the dignity of his office or for unethical conduct which might undermine judge's confidence (see Articles 8-10 of the *Constitutional Tribunal Act 1997*).

protected by the immunity and entitled to a permanent salary.¹³³ Second, judges to the Court must not belong to any political party or a trade union, nor hold high public offices.¹³⁴ However, past political activism does not exclude possible candidates from being appointed to the Court. Third, as already mentioned, judges are not allowed to be re-elected for the following terms. After terminating the duties at the court, they can retain the status of a judge¹³⁵ or continue their academic careers, provided that they were university professors prior to the appointment.¹³⁶ It is to underscore that former judges of the TK are not deprived from serving other state functions after finishing the term in the TK. In those cases, however, they cannot retain the status of the judge.

The Tribunal is headed by its President and Vice-President. Until 1997, these bodies were elected by the Sejm therefore making the Court even more reliant on partisan choices. The new regulations of 1997 abolished this provision and introduced a mechanism where the President and Vice-President of the TK are appointed by the President of the Republic¹³⁷. However, in his decision, the President of the Republic is constrained to only two candidates who are recommended by the Court and are chosen from its members.¹³⁸

Yet, another important change in 1997 concerned the prerogatives of the President of the TK. First, the President lost the privilege to decide which judge would be a rapporteur of the pending case¹³⁹ and was deprived of the right to determine the composition of the benches assigned to adjudicate in individual cases. It is of note that some cases, particularly those which are not excessively complicated and do not concern the *ex ante* preventive constitutional review, are adjudicated in small benches of three or five judges.¹⁴⁰ The existing law obliges the President of

¹³³ See Article 196 of the *Constitution 1997* and Article 6 of the *Constitutional Tribunal Act 1997*.

¹³⁴ See Article 195 of the *Constitution 1997*.

¹³⁵ Retention of a judicial status entitles the retiring judge to a “pension” irrespective of his/her age.

¹³⁶ See Garlicki (2002) and Article 6 of the *Constitutional Tribunal Act 1997*.

¹³⁷ Crucially, Article 126 (2) of the *Constitution 1997* says that “The President of the Republic shall ensure observance of the Constitution, safeguard the sovereignty and security of the State as well as the inviolability and integrity of its territory”.

¹³⁸ See Article 15 of the *Constitutional Tribunal Act 1997*.

¹³⁹ The rapporteur casts an important role in the adjudicating process since s/he is in charge of drafting the judgment together with its reasoning (see § 42 of the *Constitutional Court Statute 2006*).

¹⁴⁰ The TK adjudicates in three types of benches, i.e. in a full bench (at least 9 judges), five-judge bench and three-judge bench. The size of the adjudicating bench depends on the nature of the case and its complexity (see Article 25 of the *Constitutional Tribunal Act 1997*).

the TK to assign the new cases to the judges in alphabetical order of their surnames. The assignment of the judge rapporteur is accomplished in the same manner. The second reform referred to the fact that the President's vote was no longer decisive in situations where the number of votes for and against a particular judgment is equal.¹⁴¹ After the amendments of 1997, the law states explicitly that the decisions by the TK are made by the majority of votes and no special role for the President is defined.¹⁴²

As to the voting and decision-making by the TK, it is important to stress that judges who disagree with the decision of the majority of the bench are allowed to present dissenting opinions (*votum separatum*).¹⁴³ The dissenting opinion can concern the whole judgment or part of it. Judges are also allowed to present a different opinion with respect to the reasoning of the judgment (concurring opinions). Thus, judges may agree with the final decision of the bench but they disagree about the argumentation of the majority of the bench.¹⁴⁴

The Polish TK, similarly to its counterparts in Western Europe, is vested with much broader role than just reviewing the statutes for their conformity with the Constitution (Ginsburg and Elkins, 2009). Among others, the Court also (i) examines the constitutionality of the goals or activities of political parties, (ii) settles the disputes over the competence between central constitutional bodies of the state and, (iii) declares incapacity of the President of the Republic to discharge the duties of his/her office.¹⁴⁵ Importantly however, judicial review remains the largest part of the Court's docket.

¹⁴¹ In case of equal number of votes for and against the judgment, the adjudication is postponed. However, it is important to stress that this scenario is rare in practice. Most often judges adjudicate in benches comprising three or five judges. Consequently, the situation of equal votes can occur only in the situation of adjudicating in the full bench, when the number of judges is even due to absence or exclusion of some judges from the adjudicating stage (see Articles 25-26 of the *Constitutional Tribunal Act 1997*).

¹⁴² See Article 25 of the *Constitutional Tribunal Act 1997* and § 26 of the *Constitutional Court Statute 2006*.

¹⁴³ In 2012, 33% of the Court decisions included at least one dissenting opinion. This is, however, the record year. In previous years, the proportion of judgments with dissenting opinions is variable. It goes from 3% in 2006 to 29% in 2011 (see Trybunał Konstytucyjny 2013).

¹⁴⁴ See Article 68 of the *Constitutional Tribunal Act 1997*.

¹⁴⁵ See Article 188 of the *Constitution 1997* and Article 2 of the *Constitutional Tribunal Act 1997*.

In this chapter, the attention is exclusively given to abstract judicial review.¹⁴⁶ In this respect, a rather broad range of actors can initiate the petition: (i) the President of the Republic, (ii) the President of the Sejm or the President of the Senate, (iii) the Prime Minister, (iv) 50 deputies or 30 senators, (v) the First President of the Supreme Court, (vi) the President of the Chief Administrative Court, (vii) the Public Prosecutor-General, (viii) the President of the Supreme Chamber of Control, (ix) the Commissioner for Citizens' Rights (Ombudsmen), (x) the National Council of the Judiciary, (xi) the constitutive bodies of local self-government, (xii) the national bodies of trade unions as well as the national authorities of employers' organizations and occupational organizations, and (xiii) churches and religious organizations.¹⁴⁷ While all those actors can file for *ex post* abstract review, it is to stress that preventive (*ex ante*) abstract judicial review can be requested by the President of the Republic only.¹⁴⁸

There is no doubt that the cases in which actors (i)-(iv) serve as petitioners are mostly political in nature and where the political interests are easily identifiable. It is often the case that the political opposition which failed to strike down a particular legislation in the Parliament seeks to challenge it in the Tribunal. Those cases, naturally, enjoy the largest media cover and political visibility.

4.3. Ideological bias at the Polish Constitutional Court

Since the approach taken in this chapter is inspired by the attitudinal and strategic model, it is argued that the Polish TK judges advance their ideological goals. More precisely, given the potential arbitrariness in constitutional adjudication and interpretation (a possible variant of judicial activism)¹⁴⁹, judges rely on their ideological preferences in voting one way or the other.

¹⁴⁶ An abstract review of a law is not the only judicial review performed in the TK. Similarly to the U.S model of judicial review, any court in Poland can initiate concrete review. This occurs in the situation where the court has doubts about the constitutionality of legal provision that serves as a basis for the judgment (see Articles 31-44 of the *Constitutional Tribunal Act 1997*).

¹⁴⁷ See Article 191 of the *Constitution 1997*.

¹⁴⁸ See Article 2 of the *Constitutional Tribunal Act 1997*.

¹⁴⁹ Judges of the TK have relatively large freedom in interpreting the constitution. The law does not instruct that they need to apply a plain meaning (literal) interpretation of the constitution. The law says only that

There are three main arguments which allow for a conjecture that the behavior of the TK judges might be explained by such ideological bias. The first (and the main attitudinal) reason concerns the appointment procedure to the court. As already pointed out, the constitutional judges are elected to the TK through a mechanism that heavily (if not entirely) relies on the political influence of the parliamentary majorities.¹⁵⁰ An absolute majority of votes needed to appoint the judge by the Sejm gives no incentives to the timely majorities to appoint individuals that differ significantly from their policy preferences. The following numbers should be illustrative. In the years 1997-2012, 31 judges were appointed to the TK. From those, 29 judges were nominated by the groups belonging to the then governing majorities. In most cases the opposition also proposed some candidates. However, they never received the required majority. Consequently, the governing majorities, regardless of their political position, largely assume that they do not have to share decisions concerning appointments with the opposition (hence the inexistence of a quota system). As this political behavior is common practice, it became increasingly apparent that each change of political configuration of the Sejm is reflected in future appointments. In addition, given the political importance of the Court (actual extension of the legislative process), the parliamentary majorities have a clear benefit being careful in the selection of the judges they appoint. They want to minimize a mistake of appointing an individual with very different policy preferences. It is therefore safe to presume that the preferences of the political parties and those of appointed judges are strongly aligned.¹⁵¹ In other words, there might be a sincere correlation of political and judicial preferences. Some institutional safeguards such as comfortable retirement arrangements might reinforce sincere voting.

judges are impartial and subject to the constitution (see Article 195 of the *Constitution 1997* and Article 6 of the *Constitutional Tribunal Act 1997*).

¹⁵⁰ The political dominance is not the only weakness of the appointment process to the TK. There are several other problems. First, the short period of time given by the law to appoint the judges to the TK (30 days) reduces the transparency of the process and practically eliminates the possibility for public debate on the candidates. Second, the information about the candidates' merits given by the nominating bodies is very limited. It is often the case that the press investigation reveals some disgraceful facts about the candidates to the TK. Thirdly, the judicial and academic circles are not invited to recommend the candidates to the TK or to examine the merits of the candidates. Fourth, there is no fixed procedure for electing the judges. Judges are appointed individually but on several occasions they were elected *en banc* (voting on all candidates together) (see Bojarski 2010).

¹⁵¹ The judicial and academic circles do not present their views on the candidates.

The second argument supporting the conjecture of ideological bias of the judges is based on the limited tenure at the court (recall that judges in Poland serve their duties for nine years only¹⁵²). Due to the limited tenure, the judges' future career is not entirely insulated from the influence of the political parties. One could think that judges terminating their duties at the TK seek new appointments to other high level occupations in the political sphere or they hope to play an important role in consultancy of lawmaking in the future. On several occasions, former constitutional judges indeed continued their careers by being nominated to other public positions. For instance, after retiring from the TK, some judges were appointed as members of the Monetary Policy Council at the National Bank of Poland and the State Election Commission, as judges of the European Court of Justice and European Court of Human Rights, as members of the Legislative Council in the Prime Minister Office, as the President of the Chief Administrative Court and as Ombudsman.

At the same time, further strategic considerations could be relevant such as reputational gains with the relevant audiences, perceived personalization of case law, or enhancing academic prestige. All these factors might explain why constitutional judges are expected to take into account political determinants in strategic ways.

Finally, the third argument to support the conjecture on ideological bias is the fact that political actors challenge the laws through an abstract review, thus without a direct relation to a specific concrete dispute.¹⁵³ Unlike in the United States, the most controversial cases in the Polish Court are filed by various political actors since they are the key players in the access to abstract review. In those cases where political actors challenge legislation, the Court has limited docket control (i.e. control over which cases are adjudicated).¹⁵⁴ Thus, constitutional judges in Poland have to

¹⁵² In some supreme/constitutional courts around the world, judges hold life tenure. This is, for instance, the case in the US Supreme Court (Calabresi and Lindgren, 2006).

¹⁵³ About 20-30% of cases reviewed by the TK in an abstract form were initiated by the explicit political bodies, i.e. President of the Republic, deputies, senators and Presidents of the *Sejm* or the Senate (own calculation based on the dataset created for the purpose of this chapter).

¹⁵⁴ Although docket control is limited, the Court has some tools to dismiss the cases. This can be done only in the situation when the petition is evidently groundless (see Article 36 of the *Constitutional Tribunal Act 1997*). According to the practice, the TK dismisses very often also those cases which are filed by a group of MPs at the end of a parliamentary term. At the time of the constitutional discussion by the Court, very often this group already ceased its power to initiate judicial review due to the beginning of a new parliamentary term. See, for instance, the decision K 34/09. The judgment can be accessed through the electronic base of judgments: <http://otk.trybunal.gov.pl/orzeczenia/> (accessed on February 25, 2015).

decide on the constitutionality of specific laws precisely because political bodies want to know the Court's standpoint. It is in contrast to the US Supreme Court where constitutional adjudication can only be triggered by the courts by means of concrete constitutional review. In the US the constitutional review is more independent from the political process, as explicit political actors do not have access to the constitutional review. The consequence is that judges in the TK typically have to adjudicate since there are heavy ideological differences and non-negligible political interests at stake. One can expect therefore that, at least in these politicized cases, the pattern of ideological voting should prevail.

On numerous occasions, the TK decided on cases in which ideological differences and political stakes were significant. For instance, the TK was obliged to adjudicate in vulnerable cases on lustration process¹⁵⁵, pensions of the former secret service agents¹⁵⁶, relationship between the state and the church¹⁵⁷, financing of the catholic universities¹⁵⁸ and regulations of the credit unions¹⁵⁹. Those cases had straightforward political implications with distinct ideological consequences. The current (in place since 2001) ideological division in Poland is, yet, more subtle than the clear left-right fragmentation typical for the old democracies. Broadly speaking, the Polish political stage can be divided into left-of-center (Sojusz Lewicy Demokratycznej, hereinafter SLD), center (Platforma Obywatelska, hereinafter PO) and extreme right (Prawo i Sprawiedliwość, hereinafter PiS).¹⁶⁰ Under this setting, the largest ideological disparity should be observed between the left-wing SLD and the anti-socialist extreme right-wing party PiS. Interestingly, regarding economic aspects, the most conservative approach is taken by PO. PiS could be classified as moderately

¹⁵⁵ See judgment K 2/07. The judgment can be accessed through the electronic base of judgments: <http://otk.trybunal.gov.pl/orzeczenia/> (accessed on February 25, 2015).

¹⁵⁶ See judgment K 6/09. The judgment can be accessed through the electronic base of judgments: <http://otk.trybunal.gov.pl/orzeczenia/> (accessed on February 25, 2015).

¹⁵⁷ See judgment K 3/09. The judgment can be accessed through the electronic base of judgments: <http://otk.trybunal.gov.pl/orzeczenia/> (accessed on February 25, 2015).

¹⁵⁸ See judgment K 55/07. The judgment can be accessed through the electronic base of judgments: <http://otk.trybunal.gov.pl/orzeczenia/> (accessed on February 25, 2015).

¹⁵⁹ See judgment Kp 10/09. The judgment can be accessed through the electronic base of judgments: <http://otk.trybunal.gov.pl/orzeczenia/> (accessed on February 25, 2015).

¹⁶⁰ In the current parliamentary setting there are three other political parties present in the Sejm, i.e. Polish People's Party (Polskie Stronnictwo Ludowe, hereinafter PSL), Palikot's Movement (Twój Ruch, hereinafter TR) and United Poland (Solidarna Polska, hereinafter SP). PSL is currently the coalition partner of the PO (centrist party). In years 1993-1997 and 2001-2003, however, this party was the coalition junior partner of the leftist governments. TP and SP, in turn, are relatively new parties on the Polish political scene.

conservative as while supporting certain welfare programs during the ruling of this party the largest tax reduction was pursued.¹⁶¹

These three arguments explain why the ideology might be crucial in determining the behavior of the Polish constitutional judges, either by sincere voting or by pondering strategic interests. Nevertheless, some limitations as to which extent ideological goals can be advanced by judges need to be recognized. One should not expect all decisions to be polarized and ideology or party alignment to explain all voting. In fact, most importantly, judges might be simply dissent averse. This can be justified by different reasons. Crucially, dissenting requires additional work (judge needs to justify the reason of a dissenting opinion). Dissenting also leads to difficulties in collegial relationships, which might have detrimental effects on the workplace.¹⁶² Additionally, in the civil law tradition, to which Poland adheres, the emphasis is put on the consensus since dissent is perceived as harming legitimacy.¹⁶³ Excessive political and ideological division in the Court could reduce its prestige vis-à-vis other courts (in particular, the Supreme Court¹⁶⁴), and therefore diminish the influence of constitutional judges over judicial ranks, and ultimately, the legal system overall.¹⁶⁵ Finally, not all cases allow the same discretion or are open to identical ideological argumentation (there is an opportunity element to be considered).

An ideological vote can be particularly difficult to cast in cases which have fiscal implications, i.e. where decision on unconstitutionality might lead to an increase (decrease) of expenditure or increase (decrease) of tax income. There are two main reasons for this. First, the case law suggests that budget balance and public finance sustainability are treated as implicit constitutional principles, which are binding for the TK decisions. In its adjudication TK several times

¹⁶¹ The most prevailing personal income tax was decreased by PiS government from 32% to 18%.

¹⁶² See Edelman et al. (2012) and Epstein et al. (2011).

¹⁶³ See Merryman and Pérez-Perdomo (2007).

¹⁶⁴ The Supreme Court is a judicial body to administer the justice system in Poland and is considered the last instance in all sorts of cases (excluding constitutional adjudication). The Constitutional Tribunal – the TK – is a specialized court with a duty to review the legal acts for their conformity with the Constitution. The TK decisions cannot be challenged by the Supreme Court as the TK is not subordinate to the Supreme Court.

¹⁶⁵ The relationship between the TK and the Supreme Court in Poland is quite conflicting. For several years, the Constitutional Court and the Supreme Court could resolve the issue as whose judgments are more important. It is of particular tension in those cases where the decisions of the two courts are contradictory (see, for instance, Jankowski 2011). The conflict emerges from the fact that it is not clear to what extent the interpretation of statutes fixed by the TK is binding for the ordinary courts (see Garlicki 2002).

underscored that the public goods that should be particularly protected is the condition of public finance and safeguard against excessive indebtedness of the public sector.¹⁶⁶ The principle of budget balance and public finance sustainability is usually given priority when clashing principles are being applied.¹⁶⁷ The second reason relates to the obligation imposed by the *Constitution 1997* and the *Constitutional Tribunal Act 1997*. Both these documents require that a TK judgment that has financial consequences not provided for in the budget shall seek the opinion of the national government.¹⁶⁸ This allows clarifying fully the fiscal context and what are the actual fiscal consequences of the TK judgment. Hence, for fiscal cases the final decision of the TK is made having full awareness of the budget consequences. This awareness of budget consequences and of potential harm to the budget could have some sort of de-politicizing effect on judicial behavior. Also due to this special procedure, it is very likely that media visibility and public scrutiny over fiscal cases are more encompassing. Given that budget balance and sustainability of public finance stand as constitutional principles and that judges are more aware of budget consequences of their decisions, the ideological voting in fiscal cases should be less probable or – as formalist would argue – even entirely damped.¹⁶⁹

Summing-up, in this chapter the following approach is taken. The hypothesis is that Constitutional judges want to advance their ideological goals, either sincerely or strategically but they are constrained by a variety of institutional factors. When those ideological goals are important, judges will sacrifice other considerations and make decisions according to the most explicit party

¹⁶⁶ See judgment K 40/02. The judgment can be accessed through the electronic base of judgments: <http://otk.trybunal.gov.pl/orzeczenia/> (accessed on February 25, 2015).

¹⁶⁷ See judgment K 2/00. The judgment can be accessed through the electronic base of judgments: <http://otk.trybunal.gov.pl/orzeczenia/> (accessed on February 25, 2015).

¹⁶⁸ See Article 190 (3) of the *Constitution 1997* and Article 44 of the *Constitutional Tribunal Act 1997*.

¹⁶⁹ A couple of recent judgments seem to indicate that the TK is indeed concerned with the stance of public finance. For instance, in judgment K 9/12 the TK denied granting compensation to three million of retired people who were disadvantaged due to a change of indexation system of retirement. The TK decision protected the budget and held back a withdrawal of 1.8 billion PLN in compensation. In its non-unanimous judgment the TK acknowledged that a change of indexation is an essential part of the austerity program, which aims at breaking the growth of public debt. Similarly, in judgment K 1/12 the TK denied striking down a law that froze the remunerations of judges and prosecutors, asserting that a concern about the state of public finance is the responsibility of the authorities. The TK decision in that case was not unanimous. It is to stress that even the budget balance principle might be used strategically by judges. For instance, if the majority of judges in the adjudicating bench are aligned with the party which pursue the austerity programs, these judges might conveniently refer to the principle of budget balance in order to help the party which nominated them. The judgment can be accessed through the electronic base of judgments: <http://otk.trybunal.gov.pl/orzeczenia/> (accessed on February 25, 2015).

interests. In fiscal cases, which involve even more institutional restraints on voting in accordance with party alignment, it is expected that ideological bias is weaker or even entirely eliminated.

4.4. A preliminary quantitative exploration

This chapter applies regression analysis to a unique dataset collected and coded by the author. An emphasis is given to abstract judicial review of statutes, in cases initiated by explicit political actors (i.e. the President of the Republic, 50 deputies, 30 senators or the Presidents of Sejm and Senate) from July 2003 to October 2014.¹⁷⁰ As already mentioned, those cases are the most politicized and particular party interests can be easily identified. The sub-sample of fiscal cases refers to the adjudications that mention in their decisions budgetary consequences.

There are several reasons to constrain the cases analyzed to the period 2003-2014. First, in the late 1990s, the TK went through major institutional changes (see section 2). Most importantly, only since the end of 1999, the decisions by the TK are binding and parliamentary supermajorities cannot reject the judgments of the Court. It is argued that timespan until 2003 is sufficient to internalize the effect of these reforms and stabilize the role of the TK under the new constitutional provisions. It is of note that no major reforms of the TK were introduced or pursued after 2003. Second, all judges adjudicating over the period 2003-2013 were chosen after the institutional reforms of 1997. Specifically, they were part of the (new designed) Court consisting of 15 judges and they all were chosen for a period of nine years (with no possibility of reappointment). Third, at the beginning of 2000s one can observe an increase in the number of cases petitioned by the MPs, which most often have significant political context. For instance, while in the period 1997-

¹⁷⁰ Abstract judicial reviews of statutes are classified by the TK under two letter codes, i.e. K (*ex post* abstract review) and Kp (*ex ante* abstract review). Due to the fact that the availability of the documentation on the TK website is limited, it was impossible to identify petitioners in six cases, i.e. K 12/02, K 19/02, K 34/03, K 24/04, K 38/04 and K 17/12. Consequently, those cases are not part of the dataset. The judgments can be accessed through the electronic base of judgments: <http://otk.trybunal.gov.pl/orzeczenia/> (accessed on February 25, 2015).

2001, the Court decided an average of two cases filed by the deputies per year; in 2002-2006 it increased to six cases yearly.¹⁷¹

Overall the dataset includes 73 cases, 344 decisions (issues) and 3,595 individual decisions (votes). Out of these, 1,947 individual decisions were taken in fiscal cases, i.e. cases which had some budgetary implications. Some caveats to these numbers are in order. First, the number of decisions is much larger than the number of cases since a single judgment (case) might consist of several issues being analyzed. The reason for this is that petitioners usually challenge numerous articles of a particular legislation. Second, although the judges in the adjudicating benches vote on the whole judgment (case) at once, it is assumed that judges cast several votes depending on the number of issues comprised in the judgment. For instance, if the judgment consists of four issues, and the decision of the bench is that all the provisions are in conformity with the constitution, the judge who does not present a dissenting opinion will be counted as casting four votes for constitutionality.¹⁷² In case s/he presents a dissenting opinion with respect to one issue, three of his/her votes are considered in favor of the constitutionality and one against it. Lastly, specifically in the Polish TK, besides declaring the simple and partial¹⁷³ constitutionality or unconstitutionality of the provision¹⁷⁴, the adjudicating bench can decide that the provision ‘is not in unconformity’¹⁷⁵ with the constitution. This decision conveys that the control benchmark (constitutional provision), which was proposed by the petitioner to be the basis for judging in favor or against constitutionality of a specific article, is considered irrelevant by the Court. In this

¹⁷¹ See Trybunał Konstytucyjny (2006).

¹⁷² It is important to note that the decisions in the adjudicating benches are taken by a simple majority. Judges vote secretly and if they do not agree with the final judgment, they are allowed to present the dissenting opinions. In the view of this chapter, the absence of the dissenting opinion indicates that a judge, even if initially s/he voted differently than the majority, eventually s/he agrees with the decision of the adjudicating bench.

¹⁷³ In addition to judgments on the simple conformity to the constitution of a legal provision, the TK has also developed so-called partial decisions. Partial decisions refer to recognizing only a partial non-conformity of the reviewed provision, e.g. only to the extent to which the specific provision could have a retroactive application.

¹⁷⁴ The statute, article or portion of the article is counted as unconstitutional if it is struck down with respect to at least one control benchmark (constitutional provision). It is often the case that petitioners quote or propose several constitutional provisions to declare specific article or the entire law unconstitutional.

¹⁷⁵ This is an explicit translation of the Polish expression: “nie jest niezgodny z (...)”.

chapter, for the sake of empirical consistency, the view is taken as if this decision is in favor of constitutionality.¹⁷⁶

It is important to stress that among 344 decisions, unanimous decisions were an important fraction: 222 (roughly 65%). This could serve as a first indication of dissent aversion and constraining effect of institutional realities in the TK. The 344 decisions which are studied can be divided into 66 decisions from July 2003 to October 2005 (leftist government), 106 decisions from 2005 to November 2007 (extreme right government), 172 decisions from 2007 to 2014 (centrist government). Thus, the sample fairly represents all political cycles enabling to conclude that the econometric results are not primarily driven by a certain particular political context.

In the analyzed period, i.e. from July 2003 to October 2014, there have been in total 30 judges adjudicating in constitutional cases.¹⁷⁷ They were mostly male and, in general, they were academically oriented. Some judges had a political past, i.e. they were members of political parties or even served as MPs in the parliament. From among the 30 judges, seven were appointed by the left-wing SLD. The remaining judges were appointed by center and right-wing parties. However, it is of note that some of the parties which nominated judges in our dataset disappeared at some point before 2014 (Akcja Wyborcza Solidarność, hereinafter AWS; Unia Wolności, hereinafter UW) or lost representation in the parliament during the period we consider (Liga Polskich Rodzin, hereinafter LPR). For the summary of the individual characteristics see appendix 1.

The preliminary exploration starts by looking at simple conditional probabilities of voting for and against constitutionality. In the first step, the whole 3595 individual votes are divided into those for constitutionality (56.5%) and those against constitutionality (43.5%), in reference to the 344 decisions advanced by the Court. In the second step, it was identified whether the petitioners (i.e. the group of deputies, the President of the Republic or the President of the Sejm) represent the party which nominated a particular judge. Recall that a petitioner challenges the law and claims its

¹⁷⁶ The reason for such interpretation is that, on several occasions, judges presented a dissenting opinion stating that they found the law unconstitutional, when the majority had decided that the legal provision is not being in unconformity with the constitution (see, for instance, the judgment Kp 1/08). The judgment can be accessed through the electronic base of judgments: <http://otk.trybunal.gov.pl/orzeczenia/> (accessed on February 25, 2015).

¹⁷⁷ Overall, between July 2003 and April 2013, there were 31 judges appointed to the TK. However, one judge resigned from the post without adjudicating in any of the considered cases in our dataset.

unconstitutionality. Overall, table 4.1 shows that a vote against constitutionality is slightly more likely when the petitioner and the judge are of the same party (55.1%) as compared to the situation where the petitioner is associated with a different party (39.1%). Similarly, the vote for constitutionality is more probable when the petitioner and the judge are from different parties (60.9%) than when they are associated with the same parties (44.9%).

Table 4.1. Voting for constitutionality (all decisions)

	Vote against constitutionality	Vote for constitutionality	Total
A petitioner associated with the same party as judge	546 (55.1%)	445 (44.9%)	991 (27.6%)
A petitioner associated with a different party	1,017 (39.1%)	1,587 (60.9%)	2,604 (72.4%)
Total	1,563 (43.5%)	2,032 (56.5%)	3,595 (100%)

It is important to stress that the dataset includes the cases filed by Presidents Aleksander Kwaśniewski (left of center) and Bronisław Komorowski (centrist party), who occasionally challenged laws issued by parties from which they politically originated. In that situation, however, judges might be addressing a conflict of interest between two political bodies with the same political preferences. Thus, a vote for constitutionality does not necessary show that the judge goes against her/his ideological background. Similarly, a vote for unconstitutionality does not need to indicate straight ideological alignment. Table 4.2 introduces conditional probabilities where petitions by Presidents Kwaśniewski and Komorowski are excluded. To a large extent, the results are fairly similar.

Table 4.2. Voting for constitutionality (cases filed by Presidents Kwaśniewski and Komorowski are excluded)

	Vote against constitutionality	Vote for constitutionality	Total
A petitioner associated with the same party as judge	446 (54.5%)	373 (45.5%)	819 (25.5%)
A petitioner associated with a different party	873 (36.4%)	1,523 (63.6%)	2,396 (74.5%)
Total	1,319 (41.0%)	1,896 (59.0%)	3,215 (100%)

Table 4.3 depicts an additional contingency analysis¹⁷⁸ for nonunanimous decisions (122 decisions). The voting patterns for and against constitutionality seem to be even stronger associated with the background of the petitioner. A vote against constitutionality is much more likely when the petitioner and the judge are of the same party (66.7%) as compared to the situation where the petitioner is associated with a different party (38.9%). Similarly, the vote for constitutionality is more probable when the petitioner and the judge are from different parties (63.6%) than when they are associated with the same parties (45.5%).

Table 4.3. Voting for constitutionality (only nonunanimous decisions)

	Vote against constitutionality	Vote for constitutionality	Total
A petitioner associated with the same party as judge	294 (66.7%)	147 (33.3%)	441 (30.4%)
A petitioner associated with a different party	392 (38.9%)	616 (61.1%)	1,008 (69.6%)
Total	686 (47.3%)	763 (52.7%)	1,449 (100%)

Since the central inquiry of this chapter is to verify how judicial behavior changes once judges are faced with fiscal cases, table 4.4 shows contingency analysis for these cases only. Table 4.4 demonstrates a very similar pattern of voting for and against constitutionality as compared to the aforementioned contingency analyses. A vote against constitutionality is slightly more likely when the petitioner and the judge are of the same party (52.4%) as compared to the situation where the petitioner is associated with a different party (37.4%). Similarly, the vote for constitutionality is more probable when the petitioner and the judge are from different parties (62.6%) than when they are associated with the same parties (47.6%).

Table 4.4. Voting for constitutionality (only fiscal cases)

	Vote against constitutionality	Vote for constitutionality	Total
A petitioner associated with the same party as judge	218 (52.4%)	198 (47.6%)	416 (21.4%)
A petitioner associated with a different party	573 (37.4%)	958 (62.6%)	1,531 (78.6%)
Total	791 (40.6%)	1,156 (59.4%)	1,947 (100%)

¹⁷⁸ Contingency analysis is a statistical tool, which enables displaying frequency distributions of given variables (Rószkiewicz, 2002).

Another way of illustrating a potential ideological bias is by showing the votes for and against constitutionality distributed among judges nominated by different political camps when they are faced with cases filed by the SLD (left of center) and PiS (extreme right), i.e. parties considered having the largest ideological disparity. The distribution of votes by judges representing the main political parties (SLD – left of center, PO – center, PiS – extreme right) is shown in table 4.5. It can be observed from the table that judges appointed by SLD are more likely to vote against constitutionality in cases where the petitioner is associated with SLD. The results are reversed, i.e. ‘SLD judges’ tend to vote for constitutionality, when the case is filed by PiS. Also ‘PiS judges’ differ in their voting patterns when faced with PiS (more probable vote against constitutionality) and SLD petitioners (more probable vote for constitutionality). ‘PO judges’, in turn, are much more likely to vote for constitutionality in cases challenged by both SLD and PiS. However, a low number of observations for ‘PO judges’, when petitioner is associated with SLD, should be acknowledged.

Table 4.5. Vote for constitutionality after identifying petitioners and party nominations (all decisions)

	SLD petitioner (left)		PiS petitioner (extreme right)	
	Unconstitutional	Constitutional	Unconstitutional	Constitutional
Judges appointed by SLD (left of center)	361 (56.8%)	275 (43.2%)	83 (34.9%)	155 (65.1%)
Judges appointed by PO (center)	16 (39.0%)	25 (61.0%)	103 (26.4%)	287 (73.6%)
Judges appointed by PiS (extreme right)	127 (28.1%)	325 (71.9%)	162 (52.1%)	149 (47.9%)

The same exercise is replicated for the sample of fiscal cases. From table 4.6, it can be observed that judges appointed by PO (economic conservatives) are much more likely to vote for constitutionality in cases challenged by both SLD (economic left of center) and PiS (moderately conservative). ‘SLD judges’ are more likely to vote against constitutionality in cases where the petitioner is associated with SLD and to vote for constitutionality when the case is filed by PiS. A reverse pattern is observed in case of ‘PiS judges’. It is slightly more likely that ‘PiS judges’ vote against constitutionality when case is petitioned by PiS and also more likely that they vote for constitutionality if faced with SLD petitions.

Table 4.6. Vote for constitutionality after identifying petitioners and party nominations (only fiscal cases)

	SLD petitioner (economic left of center)		PiS petitioner (economic left of center)	
	Unconstitutional	Constitutional	Unconstitutional	Constitutional
Judges appointed by SLD (economic left of center)	100 (61%)	64 (39.0%)	52 (36.6%)	90 (63.4%)
Judges appointed by PO (economic conservative)	13 (39.4%)	20 (60.6%)	79 (24.5%)	243 (75.5%)
Judges appointed by PiS (economic left of center)	25 (38.5%)	40 (61.5%)	122 (51.9%)	113 (48.1%)

The contingency analysis suggests that, even though a significant number of decisions are unanimous, there is preliminary evidence to support the conjecture that, in general, judges seem to respond (sincerely or strategically) to the identity of the petitioner. The same holds for fiscal cases. Therefore, judges seem to cast ideological vote even in light of the fact that their decisions might have heavy budgetary implications.

4.5. Regression Analysis

In order to test more robustly the conjecture that judges vote in accordance with their ideological stance, a more sophisticated regression exercise is employed. A set of regressions is presented to support the above preliminary results, and further investigate determinants of judicial behavior in the Polish TK both at the general level and regarding fiscal cases. A dummy dependent variable, i.e. vote for constitutionality, takes value one when a judge votes for constitutionality and zero otherwise. A set of independent (explanatory) variables is summarized in table 4.7.

Table 4.7. Independent variables for regression analysis

<i>Political variables:</i>	
	Request: 1 if the party of the judge requested the judicial review, 0 otherwise;
	Government: 1 if the party of the judge is in the government, 0 otherwise.
<i>Personal characteristics of judges:</i>	
	SLD: 1 if the judge was nominated by SLD, 0 otherwise;
	PiS: 1 if the judge was nominated by PiS, 0 otherwise;
	PO: 1 if the judge was nominated by PO, 0 otherwise;
	LPR: 1 if the judge was nominated by LPR, 0 otherwise;
	PSL: if the judge was nominated by PSL; 0 otherwise;
	AWS/UW: if the judge was nominated by AWS or UW, 0 otherwise (due to the inclusion of the constant term, this category does not appear in the regressions, i.e. serves as a baseline category);
	Gender: 1 if the judge is female, 0 otherwise;
	Age: the age of the judge at the time of appointment;
	Prof: 1 if the judge pursued an academic career, 0 otherwise;
	Political involvement: 1 if the judge was politically involved in the past, 0 otherwise.
<i>Function of the judge in the adjudicating bench:</i>	
	Chair: 1 if the judge is a chairman in the adjudicating bench, 0 otherwise;
	Rapporteur: 1 if the judge is a rapporteur in the adjudicating bench, 0 otherwise.
<i>Characterization of the decisions:</i>	
	Big bench: 1 if the decision was taken by a big bench (i.e. minimum 9 judges), 0 otherwise;
	Unanimity: 1 if the decision was without dissenting opinion, 0 otherwise.

It is of note that several fixed effects per judge and per court¹⁷⁹ were included in the explanatory variables set as well. Usually with these types of regression, one should consider the signal and not put too much emphasis on the magnitude in the estimated coefficients. Although the purpose is mainly to assess qualitatively the impact of explanatory variables on the probability of a judge voting for constitutionality, the marginal effects¹⁸⁰ for main explanatory variables are also presented. Due to the non-independence of votes within cases and decisions (recall that each case might encompass more than one decision or issue¹⁸¹), the appropriate logit models with clustering by case and by decision are applied¹⁸².

According to strict legal formalism¹⁸³, there should be no systematic correlation between the dependent variable of interest (vote for or against constitutionality) and political variables (*Request*). In view of formalism, the constitutional disputes should be resolved in light of facts of the case and precedents with respect to the plain meaning of the constitution and intent of its drafters. Decision for or against constitutionality should not therefore depend on the fact that body challenging the law and the judge are associated with the same political party. In a formalist model, a coefficient of the *Request* should not be statistically significant.

In line with the attitudinal and the strategic models that propose ideology as the factor shaping judicial behavior, the prediction is that variable capturing ideology should be statistically significant. Regarding the variable *Request*, it is expected therefore that the vote for constitutionality is less likely when the law is challenged by the party that nominated the judge. In the cases analyzed in this chapter, the petitioner, who challenged the law, always claimed its

¹⁷⁹ Fixed effects per judges and court allow controlling for unobservable features that vary across judges and courts but do not change over time. To cover fixed effects, dummy variables per judge and per court are used.

¹⁸⁰ Marginal effects inform what a change in probability of voting constitutionality is if judges are from the same party as petitioner as compared to situation where judges are from different party than petitioner.

¹⁸¹ Note that almost each case adjudicated by the TK consists of several decisions as typically more than one provision of the statutory law is challenged.

¹⁸² Logit is a typical empirical model to apply in a situation where a dependent variable is of a binary nature, i.e. zero-one variable. In the context of this chapter, the dependent variable is whether judges vote for or against the constitutionality. Clustering is applied in order to control for specific interactions among judges adjudicating in specific decision or in specific case.

¹⁸³ Legal formalism takes the stance that judges simply interpret and apply the constitution and the law in a conformist view of precedents. Judges are largely guided by what the law says and abide by a strict legal authoritative interpretation (Robertson, 1998; 2010).

unconstitutionality. Consequently, it is anticipated that the coefficient of *Request* variable should be negative. Due to institutional restraints depicted in section 4.3, the expectation is that the absolute value of the coefficient should be smaller in the sample of fiscal cases. Several logit regressions with clustering by decisions are produced in table 4.8 and 4.9. While table 4.8 presents estimates for the general sample, table 4.9 focuses exclusively on fiscal cases. Table 4.12 and 4.13 in appendix 4.2 present the same regressions with clustering by cases.

The regression analysis largely confirms the preliminary analysis of the dataset. The influence of the ideologies and party politics seem to matter. As expected, coefficient for *Request* variable has a negative sign and is significant for almost all specifications. Particularly, the results are robust for selected subsamples and irrespective of clustering by decisions (table 4.8 and table 4.9) or by cases (table 4.12 and 4.13 in appendix 4.2). This strongly supports the view that constitutional judges respond to the interests of political bodies. Overall, the probability that a judge will vote for constitutionality decreases when the judge's party requests the judicial review. However, the absolute values of coefficients are somewhat smaller in the sample of fiscal cases. This supports the conjecture that ideological bias exists in fiscal cases but is weaker due to additional institutional restraints. The probability of voting for constitutionality decreases by 15-35%, if the judge is associated with the party which challenges the law in the general sample. For the sample with fiscal cases only, the likelihood of voting for constitutionality decreases by 7-22%, if the judge is related to the petitioning party. See table 4.14 and table 4.15 in appendix 4.3 for relevant marginal effects¹⁸⁴.

¹⁸⁴ For marginal effects see footnote 180.

Table 4.8. Vote for constitutionality (clustered logit estimation)

VARIABLES	(1) Full sample	(2) Without Kwaśniewski and Komorowski	(3) Nonunanimous decisions	(4) Full sample	(5) Without Kwaśniewski and Komorowski	(6) Nonunanimous decisions
Request	-0.80442*** (0.15947)	-0.72971*** (0.15913)	-1.46779*** (0.27647)	-0.65893*** (0.17011)	-0.59320*** (0.16847)	-0.65855** (0.29940)
Government	0.02773 (0.21852)	0.19006 (0.24191)	-0.59300* (0.33000)	0.25361 (0.20859)	0.44590* (0.25326)	0.26347 (0.38181)
Big bench	-0.02210 (0.26124)	0.01977 (0.27519)	-0.76284* (0.42694)	-0.04700 (0.25864)	-0.01026 (0.27378)	-1.00520*** (0.38969)
Unanimity	0.33510 (0.22497)	0.50733** (0.24355)		0.38971 (0.23782)	0.56271** (0.25793)	
PO	0.88862* (0.47093)	0.66881 (0.50691)	3.97543*** (0.76450)			
SLD	0.53527** (0.21961)	0.38711* (0.22010)	1.32767*** (0.33373)			
PiS	0.62761** (0.28294)	0.55479* (0.29343)	1.85857*** (0.41233)			
LPR	0.21422 (0.27512)	0.32685 (0.29787)	1.49684*** (0.41168)			
PSL	0.90498* (0.49268)	0.79653 (0.53677)	3.48457*** (0.76816)			
Gender	0.06765 (0.05609)	0.05897 (0.06216)	0.23842** (0.10786)			
Prof	-0.12388* (0.06701)	-0.10704 (0.07340)	-0.18489 (0.13415)			
Political involvement	0.05836 (0.05846)	0.03594 (0.06731)	0.04560 (0.09911)			
Age	0.01532*** (0.00377)	0.01544*** (0.00412)	0.03318*** (0.01002)			
Chair	0.17547** (0.08316)	0.15339* (0.09100)	0.29016 (0.21337)			
Rapporteur	0.22321*** (0.06130)	0.16788*** (0.06371)	0.39310*** (0.13289)			
Constant	-1.02574** (0.42610)	-1.05201** (0.46127)	-2.07941*** (0.71629)	0.00038 (0.34419)	0.12969 (0.37687)	1.80629*** (0.54240)
Court fixed effects	No	No	No	Yes	Yes	Yes
Judge fixed effects	No	No	No	Yes	Yes	Yes
Pseudo R ²	0.0709	0.0711	0.2652	0.0892	0.0817	0.2927
Observations	3,595	3,215	1,449	3,595	3,215	1,449

Note: All regressions apply clustering by decisions. Regressions (1)-(3) do not contain judge and court fixed effects. Regressions (4)-(6) employ judge and court fixed effects. Regression (1) and (4) use the whole dataset; regressions (2) and (5) exclude the cases challenged by Presidents Kwaśniewski and Komorowski (recall that Presidents Kwaśniewski and Komorowski challenged laws which were issued by their parties, i.e. SLD and PO respectively); regressions (3) and (6) employ only nonunanimous decisions. Clustered standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Table 4.9. Vote for constitutionality in fiscal cases (clustered logit estimation)

VARIABLES	(1) Full sample	(2) Without Kwaśniewski and Komorowski	(3) Nonunanimous decisions	(4) Full sample	(5) Without Kwaśniewski and Komorowski	(6) Nonunanimous decisions
Request	-0.58617*** (0.20832)	-0.79527*** (0.19555)	-1.04307*** (0.31435)	-0.47867** (0.24240)	-0.76376*** (0.23245)	-0.34202 (0.41241)
Government	-0.08181 (0.38815)	-0.05833 (0.40552)	-2.13241*** (0.40193)	0.34713 (0.30492)	0.27765 (0.33138)	1.39110*** (0.53530)
Big bench	0.26402 (0.35152)	0.30476 (0.36906)	-0.02751 (0.56521)	0.23670 (0.35270)	0.28913 (0.36937)	0.06891 (0.65133)
Unanimity	-0.40854 (0.33198)	-0.30263 (0.35391)		-0.40054 (0.34516)	-0.28793 (0.36285)	
PO	0.75313 (0.72394)	0.53775 (0.76398)	5.77269*** (1.05558)			
SLD	0.22263 (0.34530)	0.13971 (0.36218)	2.03083*** (0.70485)			
PiS	-0.07400 (0.39321)	0.02112 (0.38870)	1.54605** (0.67618)			
LPR	-0.14725 (0.38266)	0.02772 (0.40557)	1.46673** (0.66807)			
PSL	0.75885 (0.73581)	0.72961 (0.76816)	5.40807*** (1.05277)			
Gender	-0.03489 (0.07687)	-0.09645 (0.08359)	-0.20317 (0.19922)			
Prof	-0.29834*** (0.08579)	-0.28081*** (0.09550)	-0.87187*** (0.22924)			
Political involvement	-0.05884 (0.06985)	-0.06711 (0.07891)	0.00669 (0.14586)			
Age	0.00860 (0.00555)	0.01270** (0.00617)	0.03208* (0.01737)			
Chair	0.14600 (0.09946)	0.10695 (0.10449)	0.41139 (0.41285)			
Rapporteur	0.38060*** (0.07007)	0.32892*** (0.07024)	0.84697*** (0.26561)			
Constant	0.07361 (0.56728)	-0.12262 (0.60117)	-2.06953** (0.97375)	0.57547 (0.41992)	0.63297 (0.44103)	0.43450 (0.75149)
Court fixed effects	No	No	No	Yes	Yes	Yes
Judge fixed effects	No	No	No	Yes	Yes	Yes
Pseudo R ²	0.0404	0.0383	0.2281	0.0442	0.0421	0.2589
Observations	1,947	1,745	724	1,947	1,745	717

Note: All regressions apply clustering by decisions. Regressions (1)-(3) do not contain judge and court fixed effects. Regressions (4)-(6) employ judge and court fixed effects. Regression (1) and (4) use the whole dataset regarding fiscal cases; regressions (2) and (5) exclude the cases challenged by Presidents Kwaśniewski and Komorowski (recall that Presidents Kwaśniewski and Komorowski challenged laws which were issued by their parties, i.e. SLD and PO respectively); regressions (3) and (6) employ only nonunanimous decisions. Clustered standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

In addition, one can observe that a robust pattern of statistical significance is present in case of age and certain party affiliation variables. Some systematic patterns can also be noticed for variables representing specific functions of the judges in the adjudicating bench, i.e. rapporteur (table 4.8 and 4.9) or chairman (table 4.8). The same is noticed for the unanimity over the case (table 4.8) and the fact that a judge held a university position (table 4.9). As to other variables, the vote for constitutionality seems to be random and unexplained by them.

Institutional constraints may limit the ability of ideological voting. For instance, the fact that a judge is in charge of drafting the majority opinion (rapporteur) or chairs the adjudicating bench increases the probability of declaring that the law is in conformity with the constitution. Thus, it could be inferred that those judges who hold some functions in the adjudicating benches exert stronger presumption of the constitutionality.¹⁸⁵ Lower absolute values of estimates for the sample of fiscal cases also suggest that institutional constraints matter. However, these institutional constraints are not able to entirely eliminate the ideological bias. Going beyond institutional constraints, the presumption of the constitutionality seems to be stronger also for older judges who, consequently, might be less responsive to parties' interests. For instance, they might not expect further appointment after serving in the Court.

Overall, party affiliation plays an important role in explaining the behavior of the TK judges but with some limitations given the institutional realities in the TK. Therefore, not a simple attitudinal model is proposed but an adjusted model where the advancement of ideological goals coincides with limitations imposed by institutional realities of the TK. The econometric results provide support for this approach.

An alternative way to identify the ideological bias in the court could be by employing interaction terms¹⁸⁶ between the variables concerning which party appointed the judge and whether the petitioner is, for instance, a left wing party. The interpretation is that a judge appointed by a given

¹⁸⁵ Presumption of the constitutionality states that the starting assumption is that law is in conformity with the constitution forasmuch as the law was promulgated by the legitimate, democratic legislative body. Therefore, the decision against the constitutionality should be made only in cases of clear breach of the constitutional provisions (see Czarnocka 2002 and judgment K 19/96). The judgment can be accessed through the electronic base of judgments: <http://otk.trybunal.gov.pl/orzeczenia/> (accessed on February 25, 2015).

¹⁸⁶ Interactions allow for testing conditional hypotheses, such as "a decrease in Y is correlated with a decrease in X when condition Z is fulfilled" (Brambor et al., 2005).

party and confronted with a petition filed by the leftists is less (if appointed by the lefty) or more (if appointed by the other political camps) likely to vote for constitutionality.

Due to the limited number of observations where ‘PO, LPR and PSL judges’ voted on cases filed by SLD, the interaction terms for them are dropped. As a result, two interaction terms are considered for two most ideologically polarized parties, i.e. SLD and PiS. In the fiscal cases the largest ideological differences should be observed between SLD and PO. Yet again due to insufficient number of observations in which judges appointed by PO voted in case filed by SLD, it is impossible to robustly estimate the model for this political dimension. It is argued, however, that finding of ideological bias by comparing parties which are somewhat closer on the ideological spectrum is even more appealing.

If the hypothesis of ideological alignment holds, then the judge appointed by SLD should help SLD petitioners (vote against constitutionality) while the opposite should happen for the judges appointed by PiS (vote for constitutionality). Hence, for the interaction term with appointments by SLD one should expect a negative coefficient whereas for appointments by PiS, one should anticipate a positive coefficient. Table 4.10 and 4.11 contain the several logit regressions with clustering by decisions for the general sample and sample of fiscal cases, respectively. Table 4.16 and 4.17 in the appendix 4.4 demonstrate analogous regressions with clustering by cases.

Table 4.10. Vote for constitutionality (clustered logit estimation)

VARIABLES	(1) Full sample	(2) Without Kwaśniewski and Komorowski	(3) Nonunanimous decisions	(4) Full sample	(5) Without Kwaśniewski and Komorowski	(6) Nonunanimous decisions
SLD*law challenged by SLD	-0.51801** (0.20828)	-0.45656* (0.24028)	-3.10768*** (0.98548)	-0.47599** (0.21145)	-0.40884* (0.24652)	-3.17215*** (1.03896)
PiS*law challenged by SLD	1.68781*** (0.29542)	1.24548*** (0.26347)	1.83614*** (0.57352)	1.74988*** (0.30319)	1.32024*** (0.26939)	1.78339*** (0.60474)
Law challenged by SLD	-0.33192 (0.28319)	-0.20708 (0.29541)	1.16566 (0.87783)	-0.39823 (0.28530)	-0.28361 (0.29806)	1.14416 (0.91500)
PO	0.82683* (0.48136)	0.68691 (0.52051)	5.88726*** (1.45541)	0.89577* (0.50022)	0.74646 (0.53670)	5.89869*** (1.42386)
SLD	0.36605 (0.23399)	0.22296 (0.24107)	2.62970*** (0.90483)	0.45578* (0.25140)	0.29852 (0.25558)	2.68720*** (0.87698)
PIS	-0.45642 (0.28743)	-0.33195 (0.29377)	1.43166* (0.78868)	-0.44470 (0.29090)	-0.32544 (0.29731)	1.38445* (0.77996)
LPR	-0.00362 (0.29051)	0.17602 (0.29819)	1.92211*** (0.70200)	0.07770 (0.29975)	0.26411 (0.31153)	2.06215*** (0.69905)
PSL	0.51743 (0.48827)	0.41511 (0.52792)	5.02906*** (1.39019)	0.88462* (0.51729)	0.76130 (0.55465)	5.37460*** (1.35702)
Unanimity	0.30999 (0.22720)	0.47995* (0.24714)		0.32821 (0.22840)	0.49146** (0.24787)	
Government	-0.22716 (0.24025)	0.06189 (0.25827)	-1.96900*** (0.51938)	-0.24826 (0.24122)	0.04021 (0.25882)	-1.99746*** (0.52854)
Big bench	0.00493 (0.26259)	0.00874 (0.27374)	-0.91710** (0.39986)	0.05935 (0.26306)	0.04637 (0.27338)	-0.87502** (0.39379)
Gender				0.05087 (0.05585)	0.04862 (0.06079)	0.25362** (0.11871)
Prof				-0.15189** (0.06910)	-0.14402* (0.07589)	-0.15251 (0.14000)
Political involvement				0.08419 (0.05706)	0.06185 (0.06327)	-0.01188 (0.12071)
Age				0.01302*** (0.00366)	0.01350*** (0.00410)	0.02178** (0.00947)
Chair				0.22349*** (0.08541)	0.19689** (0.09116)	0.07467 (0.20832)
Rapporteur				0.21752*** (0.06264)	0.17277*** (0.06294)	0.23545* (0.12906)
Constant	0.05628 (0.37798)	-0.02977 (0.39518)	-0.91298 (0.75347)	-0.75048* (0.45356)	-0.82810* (0.48458)	-2.15588** (0.91245)
Pseudo R ²	0.0755	0.0729	0.2867	0.0794	0.0760	0.2949
Observations	3,595	3,215	1,449	3,595	3,215	1,449

Note: All regressions apply clustering by decisions. Regression (1) and (4) use the whole dataset; regressions (2) and (5) exclude the cases challenged by Presidents Kwaśniewski and Komorowski (recall that Presidents Kwaśniewski and Komorowski challenged laws which were issued by their parties, i.e. SLD and PO respectively); regressions (3) and (6) employ only nonunanimous decisions. Clustered standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Table 4.11. Vote for constitutionality in fiscal cases (clustered logit estimation)

VARIABLES	(1) Full sample	(2) Without Kwaśniewski and Komorowski	(3) Nonunanimous decisions	(4) Full sample	(5) Without Kwaśniewski and Komorowski	(6) Nonunanimous decisions
SLD*law challenged by SLD	-0.86797** (0.33788)	-1.14256** (0.44882)	-4.04332** (1.94511)	-0.87780** (0.34259)	-1.16425** (0.45753)	-4.09217** (2.08555)
PiS*law challenged by SLD	0.96077** (0.43461)	0.60672* (0.31507)	-0.04361 (0.92939)	1.00616** (0.44368)	0.66424** (0.32732)	0.11113 (1.05449)
Law challenged by SLD	-0.30023 (0.42508)	-0.02865 (0.48146)	2.37646 (1.84498)	-0.31111 (0.42950)	-0.03826 (0.48947)	2.39869 (2.01461)
PO	0.77118 (0.72826)	0.65992 (0.76255)	6.50380*** (1.53141)	0.83164 (0.74642)	0.69421 (0.78186)	6.75572*** (1.55751)
SLD	0.32394 (0.35504)	0.23262 (0.36905)	2.99843*** (1.13864)	0.43887 (0.37493)	0.31377 (0.38979)	3.26685*** (1.10021)
PIS	-0.65534* (0.39283)	-0.61636 (0.40114)	1.41775 (0.92127)	-0.62408 (0.39746)	-0.60070 (0.40649)	1.60710* (0.97529)
LPR	-0.09880 (0.37633)	0.06334 (0.38095)	1.86256** (0.87735)	-0.13397 (0.38178)	0.01827 (0.39187)	1.77614** (0.84692)
PSL	0.53942 (0.73538)	0.46531 (0.76623)	5.61178*** (1.43362)	0.81819 (0.76146)	0.76445 (0.79234)	6.50880*** (1.60678)
Unanimity	-0.42509 (0.33913)	-0.33312 (0.35991)		-0.42936 (0.34114)	-0.33740 (0.36222)	
Government	-0.24260 (0.41229)	-0.19013 (0.43370)	-2.46847*** (0.67736)	-0.27036 (0.41415)	-0.22102 (0.43694)	-2.50908*** (0.69335)
Big bench	0.27211 (0.35704)	0.25524 (0.36909)	-0.04544 (0.51251)	0.32295 (0.35662)	0.29430 (0.36862)	0.13777 (0.61983)
Gender				-0.04815 (0.07749)	-0.11195 (0.08595)	-0.40418 (0.29572)
Prof				-0.31814*** (0.08786)	-0.30008*** (0.09807)	-0.80697*** (0.24812)
Political involvement				-0.05122 (0.07097)	-0.07875 (0.07901)	-0.11153 (0.20894)
Age				0.00793 (0.00555)	0.01129* (0.00618)	0.03194 (0.02141)
Chair				0.14909 (0.10206)	0.08029 (0.10645)	0.10187 (0.50583)
Rapporteur				0.35219*** (0.07227)	0.31287*** (0.07375)	0.89867*** (0.34371)
Constant	0.46556 (0.49399)	0.46990 (0.50608)	-1.58968 (1.07963)	0.16129 (0.58182)	0.02374 (0.61975)	-3.06065 (1.90438)
Pseudo R ²	0.0445	0.0362	0.2575	0.0492	0.0410	0.2824
Observations	1,947	1,745	724	1,947	1,745	724

Note: All regressions apply clustering by decisions. Regression (1) and (4) use the whole dataset regarding fiscal cases; regressions (2) and (5) exclude the cases challenged by Presidents Kwaśniewski and Komorowski (recall that Presidents Kwaśniewski and Komorowski challenged laws which were issued by their parties, i.e. SLD and PO respectively); regressions (3) and (6) employ only nonunanimous decisions. Clustered standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

As seen from table 4.10 and 4.11, the interaction terms of interest are highly statistically significant in all specifications in table 4.10 and somewhat less statistically significant (or occasionally not significant) in table 4.11. With one exception, they have the expected signs, which are in line with party alignment of the judges. Thus, whenever a judge appointed by SLD is confronted with a case filed by SLD, it is less probable that s/he votes for constitutionality. In contrast, the judges nominated by PiS are more likely to vote for the constitutionality when facing a law challenged by the SLD. The conclusion seems to be that the TK judges cast ideological bias in the direction of the parties which nominated them. This is in particular for judges nominated by the two most polarized political parties. For the sample of fiscal cases the estimates are somewhat less robust as they occasionally do not reach conventional significance level. This could be another piece of evidence that in fiscal cases party alignment is somewhat weaker.

Similarly to previous regressions, also other variables are statistically robust. Once again institutional constraints seem to play a role. In particular, the fact that the judge is in charge of drafting the Court's judgment (rapporteur) or chairs the adjudicating bench increases the likelihood of voting in favor of constitutionality. Additionally, statistical significance is observed for party affiliation (SLD, PO), age at the appointment and for academic employment of the judge. Other variables do not seem to have a robust pattern of statistical significance.

4.6. Policy implications

At the general level, this chapter inquired whether – by executing constitutional review – the judiciary is able to shape the course of fiscal policy. The answer to this question should be positive. The fact that ideological bias is present also in fiscal cases – despite considerable institutional restraints – might have important implications for public finance. Given that the majority of judges in the adjudicating benches are occasionally politically aligned with the petitioners (opposition parties)¹⁸⁷, it might be harder for the governing party to pursue major

¹⁸⁷ It happens occasionally that the entire TK is dominated by the judges appointed by the opposition parties. Judges are replaced gradually only if tenure of other judges finishes. Therefore, particularly in the initial stage, after gaining the power, the winning party or coalition faces the TK which is dominated by the

reforms of public finance, such as fiscal consolidation and public debt reduction. For instance, in times of economic distress necessary fiscal adjustments might be severely delayed or entirely damped by the TK. Under these circumstances, the TK can be perceived as a veto player biasing policy towards a status quo and hampering adjustments. If one considers the non-Keynesian effects of fiscal consolidations¹⁸⁸, then lack of fiscal adjustment might result in economic growth forgone in the long- and short-run.¹⁸⁹ Moreover, the current government is unlikely to conduct fiscal policy which is aligned with the preferences of the majority if, even periodically, the TK is dominated by the judges nominated by the opposition party. For instance, the TK might block important reforms regarding the reallocation of the public spending, which is in line with the preferences of the majority. This might endanger the reputation of the TK and further fuel the criticism regarding undemocratic foundations of constitutional review. Opponents of constitutional review argue that review is illegitimate due to its anti-majoritarian nature (decisions of the parliamentary majorities might be struck down), but also due to the fact that final decisions on crucial political matters are taken out of the citizens' hands (see for discussion Waldron, 2006; Fallon, 2008; Tushnet, 2010; Doherty and Pevnick, 2013). Further argument against the constitutional review stems from the fact that review endangers judicial independence as judges need to take decisions on the political issues (Adams and Schyff, 2010).

The reform of the judicial appointment process could be a possible solution for reconciling ideological bias in the Polish TK, though not eliminating it entirely. One could think of more consensual process for appointing the judges in the Sejm. For instance, one could argue for employing 2/3 majority rule to appoint the judge. Under this rule the governing majorities would possibly need to secure the support of opposition parties for a particular candidate. In screening the candidates' merits, one could also guarantee the participation of judicial and academic circles. Experts from these fields are likely to be the most appropriate to assess the experience, reputation

opposition parties. Also, since the TK in most of the cases adjudicates in small benches it is possible that these benches are coincidentally dominated by the judges from the opposition party.

¹⁸⁸ According to the conventional Keynesian view, an increase in deficit during the economic recession stimulates the economic activity. Non-Keynesian view contradicts this conventional perception and argues that reduction of the deficit during the recession might stimulate economic growth. This is particularly in situations where the economy is close to bankruptcy and when fiscal consolidation is pursued on the spending side (Rzońca, 2007).

¹⁸⁹ According to some authors (e.g. Alesina and Ardagna, 2010), reducing fiscal deficits may contribute to a faster economic growth not only in the long term, but in the short run as well.

and political background of the candidates. As often raised in the debate over the TK in Poland, the Sejm should consider only those candidates who are successfully short-listed by the experts as suitable candidates. Alternatively, the appointment of the constitutional judges could be entirely vested upon a special committee comprised of the representatives of judicial circles, academia with some participation of political bodies (representatives of governing majorities and the opposition). This system is at work in many jurisdictions. One of those jurisdictions is Israel where the system works as follows.¹⁹⁰ A judge to the Supreme Court is appointed by the President of the State based on the nomination from a committee established for the selection of judges. This committee consists of nine members: three judges (president of the Israeli Supreme Court, and two other judges of the Supreme Court), two ministers (including the minister of justice), two parliament members and two representatives of the Israeli Bar Association. The selection of judges by the committee is based on the simple voting in the committee. The only requirement is that the majority of the participating members of the committee are present. Crucially, the committee includes representatives of the three state authorities (parliament, government, judiciary) and the bar association. Thus, decision on judicial appointments is in the hands of all the authorities together. The way judges are appointed to the Israeli Supreme Court and the structure of the selecting committee guarantee that the consideration for selecting a judge can be professional, substantive, and based on merits (mainly experience and integrity).¹⁹¹

4.7. Closing remarks for chapter 4

The empirical results presented in this chapter seem to support some version of the attitudinal and strategic model in the general sample of data and with regard to fiscal cases. It is to say that judicial behavior is influenced by the ideology, either because judges' preferences coincide with the interests of a specific party or because the judges are incentivized to show their loyalty to the party. Party alignment exists but subject to some institutional influences. In fiscal cases, these

¹⁹⁰ See Article 4 of the Israeli *Basic Law: Judiciary 1984*.

¹⁹¹ See official information on the website of the Israeli Supreme Court available at <http://elyon1.court.gov.il/heb/rashut/judges/judges.htm> (accessed on February 27, 2015).

institutional constraints seem to be mildly stronger as the likelihood of voting in accordance with party alignment is somewhat weaker in fiscal cases as compared to the general sample of cases. Overall, there is little evidence to support the hypothesis of formalist behavior in the Constitutional Court as advocated by traditional legal scholars. Formalists underscore that judges are driven by the law and are resilient to political influences (Robertson, 1998; 2010). The results of this chapter are in line with previous findings for the Kelsenian Constitutional Courts, i.e. evidence from France, Germany, Italy, Portugal and Spain (Vanberg, 2005; Fiorino et al., 2007; Padovano, 2009; Amaral Garcia et al., 2009; Franck, 2010; Dalla Pellegrina and Garoupa, 2013; Garoupa et al., 2013).

The fact that ideological bias is present also in fiscal cases – despite considerable institutional restraints – might have important implications for public finance. Given that the majority of judges in the adjudicating benches are occasionally politically aligned with the petitioners (opposition parties), it might be more difficult for the governing party to pursue major reforms of public finance, such as fiscal consolidation and public debt reduction. For instance, in times of economic distress necessary fiscal adjustments might be severely delayed or entirely damped by the TK. Under these circumstances, the TK can be perceived as a veto player biasing policy towards a status quo, hampering fiscal adjustments and leading to accumulation of debt.

Appendix 4.1. Basic characteristics of the dataset

	AWS-UW	SLD-PSL-UP	PiS	LPR	PO	PSL
In the government	1997-2001	2001-2005	2005-2007		2007-2014	
Academic career	6	7	3	1	1	1
Male	7	5	2	2	5	1
Female	2	2	2	0	2	0
Politically involved	4	2	2	1	1	0
Total	9	7	4	2	7	1

Appendix 4.2. Robustness check 1

Table 4.12. Vote for constitutionality (clustered logit estimation)

VARIABLES	(1) Full sample	(2) Without Kwaśniewski and Komorowski	(3) Nonunanimous decisions	(4) Full sample	(5) Without Kwaśniewski and Komorowski	(6) Nonunanimous decisions
Request	-0.73991*** (0.21095)	-0.80520*** (0.18969)	-1.61000*** (0.44732)	-0.56714** (0.23034)	-0.70191*** (0.17481)	-1.08153* (0.64322)
Government	0.07168 (0.30700)	0.04955 (0.28192)	0.05094 (0.66605)	0.48169* (0.27426)	0.41906* (0.24666)	0.56084 (0.64105)
Big bench	-0.13873 (0.45914)	0.12163 (0.48940)	-0.70495 (0.61449)	-0.24437 (0.39340)	-0.03665 (0.46104)	-1.13391** (0.55437)
Unanimity	0.36085 (0.62105)	0.60393 (0.71545)		0.46949 (0.68267)	0.62705 (0.73910)	
PO	1.04183** (0.51785)	1.03026** (0.51404)	2.76628** (1.29332)			
SLD	0.63976** (0.26183)	0.55527** (0.27569)	1.16912** (0.48384)			
PiS	0.71454** (0.33592)	0.72284** (0.34547)	1.11283 (0.70110)			
LPR	0.48840 (0.35656)	0.65598* (0.36248)	1.21020 (0.87049)			
PSL	1.00733* (0.56315)	1.11276* (0.59091)	2.15999* (1.22880)			
Gender	0.08886 (0.15267)	0.09326 (0.17266)	0.25644 (0.32222)			
Prof	-0.17743 (0.12573)	-0.11045 (0.14696)	-0.15050 (0.37344)			
Political involvement	0.11512 (0.08813)	0.06893 (0.09217)	-0.04275 (0.19386)			
Age	0.01771*** (0.00619)	0.01674** (0.00651)	0.04480** (0.02063)			
Chair	0.24271** (0.10500)	0.19781* (0.11234)	0.36632 (0.37738)			
Rapporteur	0.22554** (0.09113)	0.16644* (0.08945)	0.47218** (0.22845)			
Constant	-1.24071 (0.84844)	-1.28759 (0.91528)	-2.71258** (1.37859)	-0.23776 (0.76620)	0.05407 (0.74324)	0.72682 (0.91676)
Court fixed effects	No	No	No	Yes	Yes	Yes
Judge fixed effects	No	No	No	Yes	Yes	Yes
Pseudo R ²	0.0709	0.0711	0.2652	0.0892	0.0817	0.2927
Observations	3,595	3,215	1,449	3,595	3,215	1,449

Note: All regressions apply clustering by cases. Regressions (1)-(3) do not contain judge and court fixed effects. Regressions (4)-(6) employ judge and court fixed effects. Regression (1) and (4) use the whole dataset; regressions (2) and (5) exclude the cases challenged by Presidents Kwaśniewski and Komorowski (recall that Presidents Kwaśniewski and Komorowski challenged laws which were issued by their parties, i.e. SLD and PO respectively); regressions (3) and (6) employ only nonunanimous decisions. Clustered standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Table 4.13. Vote for constitutionality in fiscal cases (clustered logit estimation)

VARIABLES	(1) Full sample	(2) Without Kwaśniewski and Komorowski	(3) Nonunanimous decisions	(4) Full sample	(5) Without Kwaśniewski and Komorowski	(6) Nonunanimous decisions
Request	-0.58617** (0.29169)	-0.79527*** (0.25714)	-1.04307** (0.49390)	-0.47867 (0.34653)	-0.76376** (0.29921)	-0.34202 (0.67120)
Government	-0.08181 (0.33914)	-0.05833 (0.30054)	-2.13241*** (0.55041)	0.34713 (0.29672)	0.27765 (0.25522)	1.39110 (0.94496)
Big bench	0.26402 (0.44694)	0.30476 (0.46175)	-0.02751 (0.77304)	0.23670 (0.44507)	0.28913 (0.45528)	0.06891 (0.83783)
Unanimity	-0.40854 (0.58724)	-0.30263 (0.63591)		-0.40054 (0.60475)	-0.28793 (0.64360)	
PO	0.75313 (0.56864)	0.53775 (0.50938)	5.77269*** (1.54706)			
SLD	0.22263 (0.31081)	0.13971 (0.26867)	2.03083* (1.18056)			
PiS	-0.07400 (0.37321)	0.02112 (0.35325)	1.54605 (1.15810)			
LPR	-0.14725 (0.42284)	0.02772 (0.33469)	1.46673 (1.22071)			
PSL	0.75885 (0.63984)	0.72961 (0.58621)	5.40807*** (1.71298)			
Gender	-0.03489 (0.08280)	-0.09645 (0.07870)	-0.20317 (0.24097)			
Prof	-0.29834** (0.13793)	-0.28081* (0.14629)	-0.87187** (0.33870)			
Political involvement	-0.05884 (0.09744)	-0.06711 (0.10973)	0.00669 (0.26160)			
Age	0.00860 (0.00821)	0.01270 (0.00875)	0.03208 (0.02791)			
Chair	0.14600 (0.13964)	0.10695 (0.14338)	0.41139 (0.60233)			
Rapporteur	0.38060*** (0.10092)	0.32892*** (0.10072)	0.84697* (0.45299)			
Constant	0.07361 (0.71950)	-0.12262 (0.77076)	-2.06953 (1.44600)	0.57547 (0.64480)	0.63297 (0.70590)	0.43450 (1.03892)
Court fixed effects	No	No	No	Yes	Yes	Yes
Judge fixed effects	No	No	No	Yes	Yes	Yes
Pseudo R ²	0.0404	0.0383	0.2281	0.0442	0.0421	0.2589
Observations	1,947	1,745	724	1,947	1,745	717

Note: All regressions apply clustering by cases. Regressions (1)-(3) do not contain judge and court fixed effects. Regressions (4)-(6) employ judge and court fixed effects. Regression (1) and (4) use the whole dataset regarding fiscal cases; regressions (2) and (5) exclude the cases challenged by Presidents Kwaśniewski and Komorowski (recall that Presidents Kwaśniewski and Komorowski challenged laws which were issued by their parties, i.e. SLD and PO respectively); regressions (3) and (6) employ only nonunanimous decisions. Clustered standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Appendix 4.3. Marginal effects

Table 4.14 and 4.15 allow for interpretation of coefficients for *Request* variable. Row “Request=0” depicts the probability of voting for constitutionality given that judge is not associated with the party which challenges the law and the rest of the covariates are set to their mean values. Conversely, row “Request=1” informs on the probability of voting for constitutionality if the judge is associated with the petitioner who challenges the law and all other predictors are set to their mean values. The difference between these two row probabilities demonstrates a decrease in voting for constitutionality once the judge and petitioner represent the same political parties as compared to the situation when judge and petitioner represent different parties.

Table 4.14. Interpretation of coefficients for *Request* variable (full sample)

VARIABLES	(1) Full sample	(2) Without Kwaśniewski and Komorowski	(3) Nonunanimous decisions	(4) Full sample	(5) Without Kwaśniewski and Komorowski	(6) Nonunanimous decisions
Request	-0.80442*** (0.15947)	-0.72971*** (0.15913)	-1.46779*** (0.27647)	-0.65893*** (0.17011)	-0.59320*** (0.16847)	-0.65855** (0.29940)
Marginal effects						
Request=0	.423958	.459962	.309556	.450878	.486577	.432553
Request=1	.62196	.638582	.660515	.613443	.631694	.595586
Request(1)-Request(0)	-0.19800	-0.17862	-0.35100	-0.16257	-0.14512	-0.16303

Table 4.15. Interpretation of coefficients for *Request* variable (fiscal cases)

VARIABLES	(1) Full sample	(2) Without Kwaśniewski and Komorowski	(3) Nonunanimous decisions	(4) Full sample	(5) Without Kwaśniewski and Komorowski	(6) Nonunanimous decisions
Request	-0.58617*** (0.20832)	-0.79527*** (0.19555)	-1.04307*** (0.31435)	-0.47867** (0.24240)	-0.76376*** (0.23245)	-0.34202 (0.41241)
Marginal effects						
Request=0	.4858786	.4560408	.553734	.5071348	.4625547	.6808352
Request=1	.6294064	.6499871	.7788265	.6241513	.6487835	.7501906
Request(1)-Request(0)	-0.1435278	-0.1939463	-0.2250925	-0.1170165	-0.1862288	-0.0693554

Appendix 4.4. Robustness check 2

Table 4.16. Vote for constitutionality (clustered logit estimation)

VARIABLES	(1) Full sample	(2) Without Kwaśniewski and Komorowski	(3) Nonunanimous decisions	(4) Full sample	(5) Without Kwaśniewski and Komorowski	(6) Nonunanimous decisions
SLD*law challenged by SLD	-0.70224*** (0.25429)	-0.59935** (0.28392)	-3.34813** (1.32949)	-0.65300** (0.25655)	-0.55679* (0.29382)	-3.43586** (1.38170)
PiS*law challenged by SLD	1.56160*** (0.32756)	1.28954*** (0.26898)	2.78745*** (0.61740)	1.64640*** (0.34242)	1.37557*** (0.27573)	2.71506*** (0.62777)
Law challenged by SLD	-0.11175 (0.34272)	-0.35658 (0.34984)	1.06341 (1.16118)	-0.17477 (0.33839)	-0.42952 (0.34392)	1.05635 (1.18941)
PO	1.04660** (0.51818)	0.95606** (0.48196)	5.11198** (2.37116)	1.15748** (0.54771)	1.05864** (0.50365)	5.03172** (2.35317)
SLD	0.56253** (0.25739)	0.41024 (0.25050)	2.69046** (1.25845)	0.68983** (0.28319)	0.51856* (0.27678)	2.69574** (1.24659)
PIS	-0.29064 (0.28535)	-0.24948 (0.28199)	0.37950 (1.17102)	-0.26663 (0.28281)	-0.22838 (0.28013)	0.30206 (1.17314)
LPR	0.26614 (0.33587)	0.44333 (0.28376)	1.43232 (1.15294)	0.38106 (0.33645)	0.57579** (0.29270)	1.62704 (1.15743)
PSL	0.63111 (0.54690)	0.58204 (0.54216)	3.82055* (2.24547)	1.10567* (0.60077)	1.01938* (0.58683)	4.35411** (2.19593)
Unanimity	0.34126 (0.62976)	0.58172 (0.71981)		0.36001 (0.63261)	0.58915 (0.72291)	
Government	-0.23137 (0.28804)	-0.07681 (0.28243)	-1.81456* (1.01192)	-0.25681 (0.29000)	-0.10880 (0.28104)	-1.83862* (1.02304)
Big bench	-0.11611 (0.45783)	0.15874 (0.50890)	-0.95988* (0.54186)	-0.06640 (0.44535)	0.18827 (0.49848)	-0.92349* (0.52878)
Gender				0.08247 (0.15315)	0.08437 (0.16848)	0.25798 (0.35407)
Prof				-0.19538 (0.12985)	-0.15440 (0.15691)	-0.15737 (0.39722)
Political involvement				0.13065 (0.09339)	0.10238 (0.09036)	-0.08254 (0.20417)
Age				0.01555*** (0.00509)	0.01565*** (0.00556)	0.03556* (0.01817)
Chair				0.27943** (0.11936)	0.25133** (0.11941)	0.17883 (0.38617)
Rapporteur				0.21960** (0.10274)	0.17629* (0.09853)	0.32051 (0.21759)
Constant	-0.14770 (0.73120)	-0.05737 (0.77622)	-0.83619 (0.87941)	-1.14539 (0.94591)	-1.02997 (0.95943)	-2.84135** (1.44468)
Pseudo R ²	0.0755	0.0729	0.2867	0.0794	0.0760	0.2949
Observations	3,595	3,215	1,449	3,595	3,215	1,449

Note: All regressions apply clustering by cases. Regression (1) and (4) use the whole dataset; regressions (2) and (5) exclude the cases challenged by Presidents Kwaśniewski and Komorowski (recall that Presidents Kwaśniewski and Komorowski challenged laws which were issued by their parties, i.e. SLD and PO respectively); regressions (3) and (6) employ only nonunanimous decisions. Clustered standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Table 4.17. Vote for constitutionality in fiscal cases (clustered logit estimation)

VARIABLES	(1) Full sample	(2) Without Kwaśniewski and Komorowski	(3) Nonunanimous decisions	(4) Full sample	(5) Without Kwaśniewski and Komorowski	(6) Nonunanimous decisions
SLD*law challenged by SLD	-0.86797* (0.45172)	-1.14256* (0.64436)	-4.04332* (2.21969)	-0.87780* (0.45600)	-1.16425* (0.65108)	-4.09217* (2.40328)
PiS*law challenged by SLD	0.96077*** (0.35333)	0.60672 (0.37799)	-0.04361 (1.23599)	1.00616*** (0.36471)	0.66424* (0.39274)	0.11113 (1.43207)
Law challenged by SLD	-0.30023 (0.33077)	-0.02865 (0.37164)	2.37646 (2.02623)	-0.31111 (0.33286)	-0.03826 (0.37713)	2.39869 (2.24550)
PO	0.77118 (0.53252)	0.65992 (0.53845)	6.50380*** (1.86002)	0.83164 (0.54774)	0.69421 (0.54748)	6.75572*** (1.96930)
SLD	0.32394 (0.27793)	0.23262 (0.28021)	2.99843** (1.36662)	0.43887 (0.30875)	0.31377 (0.30982)	3.26685** (1.38323)
PIS	-0.65534** (0.28522)	-0.61636** (0.29572)	1.41775 (1.16710)	-0.62408** (0.28434)	-0.60070** (0.29614)	1.60710 (1.26640)
LPR	-0.09880 (0.43905)	0.06334 (0.37727)	1.86256 (1.27237)	-0.13397 (0.42268)	0.01827 (0.37362)	1.77614 (1.22545)
PSL	0.53942 (0.53860)	0.46531 (0.56134)	5.61178*** (1.83879)	0.81819 (0.59959)	0.76445 (0.63433)	6.50880*** (2.15015)
Unanimity	-0.42509 (0.59107)	-0.33312 (0.64258)		-0.42936 (0.59871)	-0.33740 (0.65180)	
Government	-0.24260 (0.32435)	-0.19013 (0.34250)	-2.46847*** (0.76309)	-0.27036 (0.32062)	-0.22102 (0.34538)	-2.50908*** (0.82361)
Big bench	0.27211 (0.44194)	0.25524 (0.45810)	-0.04544 (0.65508)	0.32295 (0.44124)	0.29430 (0.45918)	0.13777 (0.74213)
Gender				-0.04815 (0.07942)	-0.11195 (0.08226)	-0.40418 (0.36847)
Prof				-0.31814** (0.14816)	-0.30008* (0.16512)	-0.80697** (0.40032)
Political involvement				-0.05122 (0.10741)	-0.07875 (0.11340)	-0.11153 (0.30054)
Age				0.00793 (0.00734)	0.01129 (0.00811)	0.03194 (0.02952)
Chair				0.14909 (0.14676)	0.08029 (0.15310)	0.10187 (0.70677)
Rapporteur				0.35219*** (0.10543)	0.31287*** (0.10176)	0.89867* (0.52267)
Constant	0.46556 (0.69585)	0.46990 (0.75529)	-1.58968 (1.25334)	0.16129 (0.72762)	0.02374 (0.80189)	-3.06065 (2.24312)
Pseudo R ²	0.0445	0.0362	0.2575	0.0492	0.0410	0.2824
Observations	1,947	1,745	724	1,947	1,745	724

Note: All regressions apply clustering by cases. Regression (1) and (4) use the whole dataset regarding fiscal cases; regressions (2) and (5) exclude the cases challenged by Presidents Kwaśniewski and Komorowski (recall that Presidents Kwaśniewski and Komorowski challenged laws which were issued by their parties, i.e. SLD and PO respectively); regressions (3) and (6) employ only nonunanimous decisions. Clustered standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

CHAPTER 5

FEDERAL FISCAL CONSTITUTIONS: AN EMPIRICAL ASSESSMENT¹⁹²

5.1. Introduction

Contrary to the previous chapters which study particular elements of fiscal constitutions, this chapter is interested in finding links and interactions between constitutional building blocks. Whereas chapters 2-4 were focused on Poland, this chapter 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.¹⁹³ 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 decentralization, or supra-national entities that are about to build their constitutional framework.

¹⁹² Parts of this chapter are co-authored with Hansjörg Blöchliger (OECD). A modified version of this chapter entitled “Fiscal Constitutions: An Empirical Assessment” is forthcoming as an OECD Working Paper and as a book contribution in OECD (2015), *Fiscal Federalism 2016: Making decentralisation work*, Paris. I would like to thank participants of the OECD Workshop on the Institutions of Intergovernmental Relations held in Paris on November 6-7, 2014 and participants of Klaus Heine’s Intensive Seminar held in Rotterdam on December 4, 2014 for their valuable comments. This chapter particularly benefited from comments by Richard Bird, Cesare Colino, Peter Heller, Elena Jarocińska, Geert Jennes, Anton Matzinger, Alessio Paccas, Damiaan Persyn, and Stefan Voigt. Elena Kantorowicz is once again the one I need to thank the most for her patience and persistent support. The usual disclaimers apply.

¹⁹³ In terms of terminology, the term “state” is interchangeably used with the country-specific terms for the intermediate level. In Germany and Austria, a state is a Land (plural Länder). Provinces are equivalent to the state level in Canada and South Africa. In Belgium, Italy and Spain, states are regions or communities, in Switzerland cantons, and in Russia subjects. Finally, in Australia, Brazil, India, Mexico and the United States, the intermediate level of government is a state or estado.

In both cases, almost any potential fiscal policy question has a “who should do what” or “federal” dimension, and this chapter may shed some light on the options for constitutional reform.

This chapter emphasizes the narrow definition of fiscal constitutions, differently than previous chapters that mainly referred to ordinary statutory laws. Therefore, in this setting federal fiscal constitution covers constitutional law as well as selected statutory laws like organic laws, basic fiscal and financial laws or rulings of the constitutional court. As such, the federal fiscal constitution primarily encompasses this legislation that is subject to harsher amendment rules – usually qualified majorities – and hence provides a (relatively) stable institutional framework for fiscal policy over time. However, due to the constitutional vacuum in some cases, ordinary statutory laws occasionally are also taken into account. Main laws used for coding are listed in appendix 5.1.

Federal fiscal constitutions consist of several building blocks, which together shape fiscal outcomes. They comprise rules on intergovernmental relations and transfers, budget rules and fiscal councils, or the political settings like bicameralism and judiciary. 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 section 1.2). Yet the interaction between building blocks is rarely analyzed comprehensively, thereby neglecting the understanding 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 these reasons, much weight is put on analyzing how building blocks are interlinked and identifying *aligned* (or *coherent*) fiscal constitutions.

This chapter provides an empirical assessment of federal fiscal constitutions and the interaction between constitutional arrangements. 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 chapter draws on a questionnaire on federal fiscal constitutions sent to 15 national experts in February 2014 (list of country experts is provided in appendix 5.2 and template of the questionnaire in appendix 5.3). Additional information was extracted from the Comparative

Constitutions Project¹⁹⁴ and other sources, such as national legal documents, historical statistical databases, indicator databases, the academic literature and OECD country surveys.

Overall, the chapter demonstrates that federal fiscal constitutions differ in the degree of constitutionally guaranteed decentralization. More specifically, two types of fiscal constitutions can be distinguished: decentralized and integrated. In decentralized federations states (sub-central units) enjoy high tax and spending autonomy; face high responsibility 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. An important contribution of this chapter is to show that 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. For instance, incoherent fiscal constitution is the one which merges high state autonomy with low responsibility. Contrary, incoherent fiscal constitutions combine arrangements in an unbalanced manner, for instance by combining low tax autonomy with high spending autonomy or low responsibility for fiscal policy with a weak budget framework (see section 5.3. for theoretical underpinnings of these interactions). Tentative evidence suggests that the degree of decentralization of fiscal constitutions is hardly associated with economic and fiscal outcomes, but alignment (or coherence) of fiscal constitutions is correlated with selected outcomes. 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. This chapter also attempts to “endogenize” fiscal constitutions. In other words, it tries to identify the driving forces of constitutional reforms. It finds that reforms of fiscal constitutions usually follow events like economic and fiscal crises, the establishment or fall of authoritarian regimes or separatist threats. Additionally, the chapter traces back the evolution of fiscal constitutions since their inception. It is show that the 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.

¹⁹⁴ More information on the project can be found at <http://comparativeconstitutionsproject.org/> (accessed on April 21, 2014). The author of this dissertation would like to thank Tom Ginsburg, Zahary Elkins and James Melton for making datasets on historical developments of the constitutions available.

The chapter is organized as follows. Section 5.2 discusses the building blocks of federal fiscal constitutions and assesses them empirically using a common coding framework. Theoretical underpinning regarding interaction between building blocks and simple correlations between the building blocks are depicted in section 5.3. Section 5.4 combines and links the building blocks more systematically to characterize fiscal constitutions, i.e. to what extent they are decentralized or integrated. In section 5.4 some tentative policy implications for the EU are also included. Section 5.5 traces the development of the fiscal constitutions over time, identifies main trends, and explains the major reforms and their driving forces. Lastly, Section 5.6 provides basic evidence on the association between constitutional characteristics and fiscal outcomes. Finally, section 5.7 concludes.

5.2. The building blocks of a fiscal constitution

5.2.1. Arrangements and their alignment

Fiscal constitutions consist of a set of building blocks (or arrangements), and in turn each building block comprises a series of constituting elements (table 5.1). Five building blocks are distinguished: autonomy, responsibility, co-determination, budget frameworks and stability, which together reflect the institutional background of fiscal policy-making across government levels. A constituting element represents constitutional rules on a specific item, while the building blocks combine several items. For instance, “tax autonomy” of the states is a constituting element, 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 fiscal rules and the functioning of fiscal councils.

Fiscal constitutions, their building blocks and their elements are assessed by means of *institutional indicators*, which are created based on coding of particular constitutional arrangements¹⁹⁵. The

¹⁹⁵ Coding allows for numerical representation of qualitative features of fiscal constitutions. Coding comes at certain price, however. Namely, coding is pursued according to the coder’s discretion and therefore is subject to some biases and errors. To limit the errors arising from the fact that coding is based on discretionary assessment, the coding is typically pursued by more than one person. Multiple coding results are subsequently cross-validated minimizing the occurrence of errors (so-called inter-coder reliability).

indicator set is assembled in the form of an “indicator tree” with two levels of indicators, i.e. low-level indicators (hereinafter LLIs) and intermediate-level indicators (hereinafter ILIs) (figure 5.1). Each constituting 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, such as for instance to what extent fiscal constitution is decentralized or integrated. In total, there are 23 LLIs¹⁹⁶ and they are grouped to form five ILIs reflecting overarching building blocks. Indicator values depict whether the fiscal constitution features “more” or “less” of a certain element or building block and range from 0 to 1. For a detailed construction of indicators see appendix 5.4.

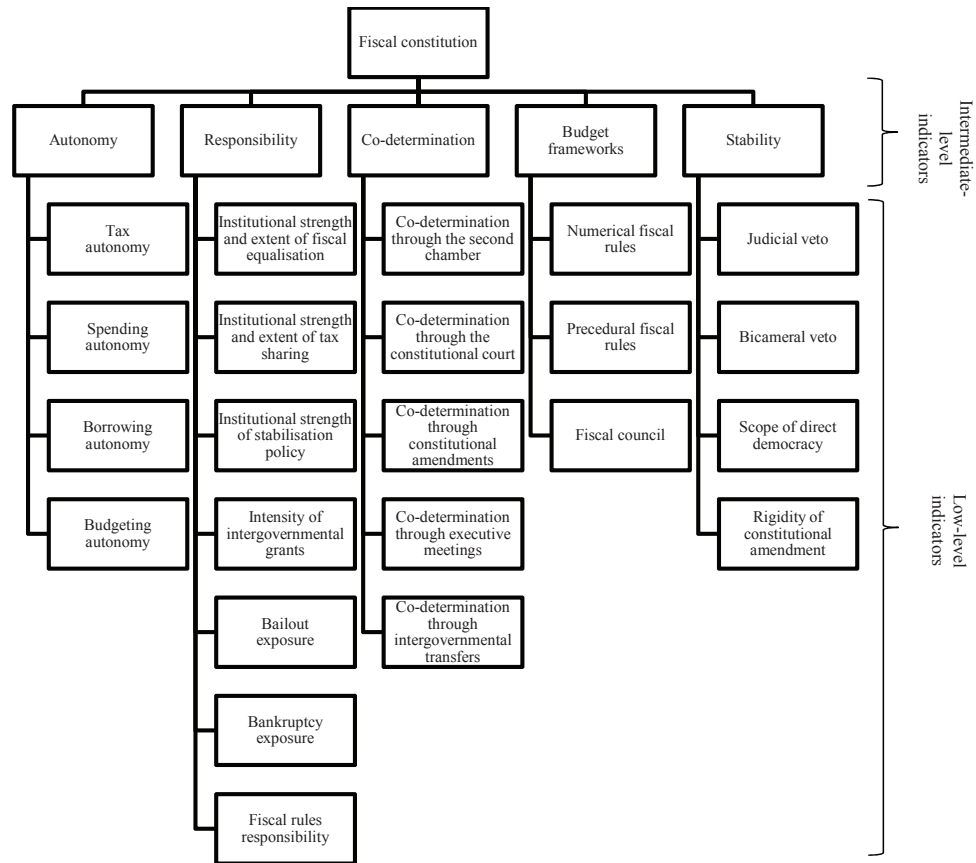
Table 5.1. The building blocks of fiscal constitutions: depicting the overall institutional background

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.

Coding pursued by the author of this dissertation was cross-validated by the delegates from the countries under investigation.

¹⁹⁶ None of the LLIs is dichotomous since binary indicators would not allow taking institutional details into consideration.

Figure 5.1. Indicator tree: low-level indicators for the assessment of building blocks (intermediate-level indicators)



Particular attention is given to *alignment* (or *coherence*) of the fiscal constitution. An aligned fiscal constitution combines institutional arrangements in a balanced manner. In an aligned fiscal arrangement indicator values across elements (LLIs) or building blocks (ILIs) are similar. For instance, an aligned fiscal constitution provides similar degrees of autonomy for various budget items (taxation, spending, borrowing etc.); or the fiscal constitution aligns a certain level of autonomy with a similar level of responsibility. Conversely, a less aligned fiscal constitution combines elements and building blocks in an unbalanced manner, for example by combining large

fiscal autonomy with little responsibility (see section 5.3. for theoretical underpinnings of these interactions). Unlike indicator values which have no normative connotation, alignment contains a value judgment insofar as “more” alignment is considered better than “less”.

Alignment is measured as the variance around indicator values applying a technique called random weights. Random weights technique allows calculating both the level of indicator values and the variance around them (Sutherland et al., 2005). By using random weights technique to construct ILIs (indicators for building blocks) one does not need to assess the relative importance ascribed to different LLIs. The advantage of random weights is therefore that it does not assume any prior knowledge about the importance of LLIs in a given setting. Crucially, random weights method allows identifying variation of possible values representing the ILIs, given that different weights are assigned to LLIs. This variance can be interpreted as the degree of coherence of an arrangement (Blöchliger, 2008). The smaller the variance, the higher is coherence. If each LLI (constituting element of a building block) has the same value, no variance around the average emerges since whatever weight is given to the LLIs, the resulting average ILI (a building block) is always the same. As applied here, the technique uses 1,000 sets of randomly generated weights applied to LLIs to calculate 1,000 overall ILIs. The weights are drawn from a uniform distribution between zero and one and are normalized so as to sum to one. Accordingly, the resulting distribution of indicators reflects the possible range of values of the building blocks (ILIs). Confidence intervals are calculated from these distributions and they are centered on the mean of each country’s 1,000 indicator values. The more similar are the values of the LLIs that form one ILI, the smaller are the confidence interval.

5.2.2. *Autonomy*

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.

Alignment 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

Tax autonomy varies wildly across federal countries¹⁹⁷, although constitutionally guaranteed sub-national autonomy in levying taxes is seen as a crucial feature of federalism (Boadway and Shah, 2009, p. 85). 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. In a few countries post-constitutional legislation and constitutional courts play a crucial role in shaping tax autonomy.

A few country examples may help clarify 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 indirect taxes¹⁹⁸. The constitutional law is likewise restrictive in Italy, where the federal level is responsible for tax legislation¹⁹⁹. Tax autonomy is a bit higher in Russia, where *subjects*²⁰⁰ 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 amendment²⁰¹. 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 taxes²⁰². Creative interpretation of "direct taxation" at some time allowed including sales taxes, and hence in Canada both the federal and the provincial level have concurrent rights to levy all major taxes. Judicial review has strongly shaped Australian tax assignment. The

¹⁹⁷ The questionnaire asked about assignment rules for personal and corporate income tax, indirect taxes, natural resource taxes and social security contributions.

¹⁹⁸ § 3, 6, 7, 8 of the *Austrian Financial Constitutional Law 1948* (Finanzverfassungsgesetz).

¹⁹⁹ Article 117, c. 2 of the *Italian Constitution 1947*.

²⁰⁰ *Subjects* are sub-federal governments in Russia (see footnote 193).

²⁰¹ Article 128 § 1 and art. 130 § 1 of the *Swiss Federal Constitution 1999*.

²⁰² Article 92A(4) of the *Canadian Constitution 1867*.

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 (Petchey, 2014). 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.²⁰³

Spending autonomy and links between tax and spending autonomy

Spending autonomy captures the extent to which states have sovereignty in legislating and spending in certain policy areas.²⁰⁴ 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 Clause²⁰⁵ is not violated (Rodden, 2014).

Some further constitutional provisions may affect the degree and alignment of tax and spending powers:

- 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 Swiss²⁰⁶ and German²⁰⁷ constitutions for instance.²⁰⁸

²⁰³ 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 levied at 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.

²⁰⁴ 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.

²⁰⁵ 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.

²⁰⁶ Article 5a of the *Swiss Federal Constitution 1999*.

²⁰⁷ Article 72(2) of the *German Constitution 1949*.

These two countries also recognize 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 this principle in the constitutional law²⁰⁹, although still deviates from it in practice.
- 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 (Rodden, 2014).

Borrowing and budgeting autonomy

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 forbids new state borrowing outright if the state’s budgets are not structurally balanced²¹⁰. There are also milder forms of borrowing restrictions. The Mexican constitution prohibits state borrowing from abroad²¹¹. The Brazilian constitution requires approval of state level borrowing by the federal level²¹². 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-

²⁰⁸ The principle of subsidiarity says that decentralizing economic functions to lower levels of government should be favored 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.

²⁰⁹ Article 119 of the *Italian Constitution 1947*.

²¹⁰ Article 109(3) of the *German Constitution 1949*.

²¹¹ Article 127.VIII of the *Mexican Constitution 1917*.

²¹² *The Complementary Law 101 2000* (the Fiscal Responsibility Law).

owned banks, as is the case in Brazil²¹³. In Switzerland and the United States, the federal level imposes no restrictions on state borrowing.

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 (Saiegh, 2014) and Germany²¹⁴ explicitly forbid any federal meddling in state budgeting. On the other hand, some constitutions, such as the South African²¹⁵ or Spanish (Solé-Ollé, 2014), allow the federal level to intervene in the substance of the state budget. Specific budgeting frameworks are quite often prescribed. In Italy²¹⁶ and in Germany²¹⁷ 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 (Pereira, 2014) or Italian (Scabrosetti, 2014) constitutions.

Results for the intermediate institutional indicator “autonomy”

Intermediate level indicators (ILI) representing autonomy are presented in figure 5.2 (for construction of the indicator see appendix 5.4). High values of the indicator, i.e. large fiscal autonomy of the state level, are observed in the United States, Canada and 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. *Alignment* of autonomy levels, as shown by confidence intervals – the vertical bars – varies considerably across countries. Mexico's autonomy setting is relatively aligned – the states enjoy moderate autonomy in all fiscal policy areas – while the autonomy arrangements in Argentina, Australia, Austria and Germany look less aligned. In particular, the Australian and Argentinian fiscal constitutions are

²¹³ *Ibid.*

²¹⁴ Article 109(1) of the *German Constitution 1949*.

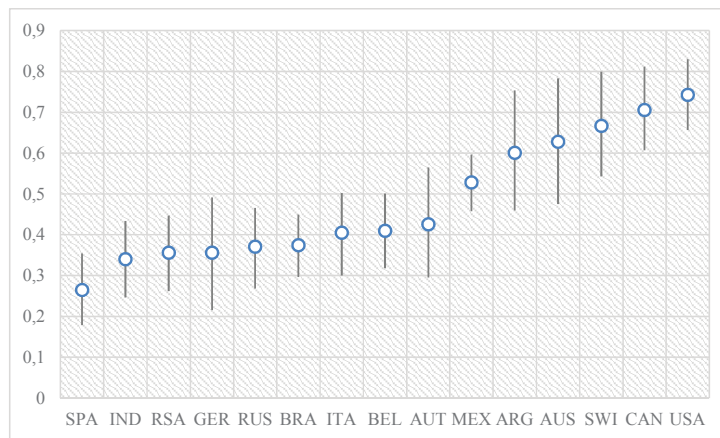
²¹⁵ Section 100 and 139 of the *South African Constitution 1996*.

²¹⁶ The law n. 39 from April 7, 2011 (Scabrosetti, 2014).

²¹⁷ § 50 of the *German Budget Law 1969* (Haushaltsgrundsatzgesetz).

less aligned since they combine low tax autonomy with relatively moderate spending autonomy and high budgeting and borrowing autonomy.

Figure 5.2. Fiscal autonomy of the state level: intermediate level indicator representing building block 1



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). In Austria, where borrowing autonomy is large but tax autonomy non-existing, the states often struggle to keep their deficits at bay and tend to miss the targets agreed within the Austrian Stability Pact (Schatzenstaller, 2008).

5.2.3. Responsibility

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 internalize 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 hardness or softness of the budget constraints (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 equalization payments. Responsibility arrangements are coherent if constituting elements of responsibility indicator have similar values.

Bailout and bankruptcy exposure

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 behavior 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 (Khumalo and Rakabe, 2014), while others such as Brazil (Pereira, 2014) and Switzerland (Schaltegger, 2014) provide rules for an orderly default and an insolvency framework. Bailouts are particularly critical and tackled very differently. The constitutions of Brazil²¹⁸ and Spain²¹⁹ forbid bailouts, while the Argentinian (Saiegh, 2014) and German²²⁰ constitutions enable, and the Italian constitution²²¹ even requires

²¹⁸ *The Complementary Law 101 2000* (the Fiscal Responsibility Law).

²¹⁹ Article 8(2) of the *Organic Law 02/2012*.

²²⁰ Article 104(1)(b) of the *German Constitution 1949*.

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 behavior for quite long. The defaults and ensuing non-bailouts of several states in the United States in the 1840s may have shaped fiscal behavior of the states until these days (Rodden, 2014). 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 (Fasten, 2010).

Constitutional courts have considerable influence on bailout expectations. In Germany a Federal Court ruling²²² 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 itself²²³. The Swiss Federal Court in 2003²²⁴ confirmed the non-bailout rule after the bankruptcy of a municipality, thereby lowering the financing costs of cantonal governments.²²⁵

Responsibility for fiscal rules

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 budgetary

²²¹ Article 120 of the *Italian Constitution 1947* and *Law 131/2003*.

²²² Decision BVerfGE 86, 148 - Finanzausgleich II from 1992.

²²³ Decision 2 BvF 3/03 from 2006.

²²⁴ Decisions 2C.1/2001, 2C.4/1999, 2C.4/2000 and 2C.5/1999 from 2003.

²²⁵ 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., 2011).

frameworks, they help communicate that state finances are on a long-term sustainable track. Financial markets tend to reward prudent fiscal behavior 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 state finances and that the states can shift the fiscal burden onto other governments. Also, self-imposed rules create “ownership”²²⁶, likely to increase the probability that states follow them (OECD, 2013).

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 Brazil²²⁷, Germany²²⁸ and Russia²²⁹. In some countries such as Belgium²³⁰ and Spain²³¹ 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 (Rodden, 2014). Following an array of defaults during the 1840s and again in the 1870s, virtually all states enshrined relatively tight fiscal rules in their constitutions²³², providing a framework for long-term sustainable state fiscal policy until today.²³³

Revenue responsibility

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

²²⁶ Self-imposed rules create “ownership” in a sense that rules are established and tailored according to the preferences of state governments (OECD, 2013). It is contrary to the rules which are imposed and therefore given by the higher level of government.

²²⁷ *The Complementary Law 101 2000* (the Fiscal Responsibility Law).

²²⁸ Article 109(3) of the *German Constitution 1949*.

²²⁹ *Federal Law N268 2012 on the Amendments to the Budget Code* (Jarocińska, 2014).

²³⁰ *The Special Financing Law 1988* (“3rd State Reform”) (Geert and Jannes, 2014).

²³¹ Article 135 of the *Spanish Constitution 1978*; Article 11(2), Article 12 and Article 13 of the *Organic Law 02/2012*.

²³² In almost all federal countries besides the federal constitution, states also promulgate their own constitutions, which regulate matters in which states have power.

²³³ 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 further tightened their fiscal rules (Dove, 2014).

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 is assessed using four indicators: (1) fiscal equalization²³⁴, (2) tax-sharing²³⁵, (3) stabilization transfers²³⁶, and (4) other intergovernmental grants²³⁷.

- *Fiscal equalization.* Equalization aims at reducing differences in fiscal capacity across states. The stronger equalization, the weaker is revenue responsibility. First, equalization mechanisms differ with respect to their institutional anchoring. While equalization is part of the constitution e.g. in Canada²³⁸ and Switzerland²³⁹, it is enshrined in secondary legislation e.g. in Australia²⁴⁰ and Mexico²⁴¹. While some constitutions are vague and limited to stating that fiscal equalization should be pursued (e.g. Austria²⁴² and Canada²⁴³), others require an independent body²⁴⁴ responsible for equalization policy, as in South Africa.²⁴⁵ Second, while some countries require (almost) full equalization of

²³⁴ Fiscal equalization deals with regional fiscal equity and its main goal is to achieve redistributive goals between states.

²³⁵ Some taxes are not assigned exclusively to one level of government but are shared among them according to sharing formula.

²³⁶ Stabilization is triggered in case of adverse economic shocks, either for the whole country or parts of it (risk sharing across states).

²³⁷ Other intergovernmental grants comprise financial support of some state activities/policies (other than for stabilization purposes or equalization).

²³⁸ Article 36 of the *Canadian Constitution 1867*.

²³⁹ Article 135 of the *Swiss Constitution 1999*. This article intends “to reduce the differences in financial capacity among the states; guarantees the states a minimum level of financial resources and compensates them for excessive financial burdens due to geo-graphical or socio-demographic factors”. This article requires therefore only weak form of fiscal equalization (juxtapose with the full fiscal equalization in Germany).

²⁴⁰ *The Commonwealth Grants Commission Act 1976*.

²⁴¹ *The Law on Fiscal Coordination 1953* (the *Ley de Coordinacion Fiscal*).

²⁴² § 4 of the *Austrian Financial Constitutional Law* (*Finanzverfassungsgesetz*).

²⁴³ Article 36 of the *Canadian Constitution 1867*.

²⁴⁴ Section 220 of the *South African Constitution 1996* establishing an independent Financial and Fiscal Commission.

²⁴⁵ 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.

regional differences, such as in Australia (Petchev, 2014) and Germany²⁴⁶, others require disparities to be equalized to a certain extent only, such as in Mexico²⁴⁷ and Switzerland²⁴⁸. Other countries, such as Spain²⁴⁹, 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 Argentina²⁵⁰ and Germany²⁵¹ 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.²⁵² In the United States, a tax sharing system prevailed in the 1970s and 1980s (Rodden, 2014), 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 constitutions provide sharing details, such as in Belgium²⁵³ and Germany²⁵⁴. The South African²⁵⁵ and Spanish²⁵⁶ constitutions require an independent body responsible for setting and adjusting tax shares.
- *Stabilization.* Transfers for stabilization purposes constitute another form of co-financing states. The stronger stabilization 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 stabilization

²⁴⁶ Article 72(2) of the *German Constitution 1949*. In this article the aim is to achieve equal life conditions across Länder (gleichwertige Lebensverhältnisse).

²⁴⁷ *The Law on Fiscal Coordination 1953* (the Ley de Coordinación Fiscal).

²⁴⁸ Article 135 of the *Swiss Constitution 1999*.

²⁴⁹ *The Organic Law 8/1980*.

²⁵⁰ Article 75 § 2 of the *Argentine Constitution 1853*.

²⁵¹ Article 106 of the *German Constitution 1949*.

²⁵² Strong tax sharing is defined as making up more than 10% of total general government revenue.

²⁵³ *The Special Financing Law 1980* (“2nd State Reform”) (Geert and Jannes, 2014).

²⁵⁴ Article 106 of the *German Constitution 1949*.

²⁵⁵ Section 220 of the *South African Constitution 1996* establishing an independent Financial and Fiscal Commission.

²⁵⁶ *The Organic Law 8/1980* establishing the Council of Fiscal and Financial Policy of the Autonomous Communities (Consejo de Política Fiscal y Financiera de las Comunidades Autónomas).

policy varies across countries. First, stabilization transfers can be specified in constitutional law, such as in Germany²⁵⁷ and Italy (Scabrosetti, 2014), or by ordinary legislation, as in Australia²⁵⁸ and Canada²⁵⁹. Second, constitutional provisions attach a different thrust to stabilization. While some constitutions state that stabilization “must” be pursued (e.g. Russia²⁶⁰), some others say that it “should” be pursued (e.g. Spain²⁶¹).

- *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 Germany²⁶² and Switzerland²⁶³ grants are prescribed by the constitution, while they are shaped by ordinary legislation e.g. in Mexico²⁶⁴ and the United States²⁶⁵. 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 (Blöchliger and Petzold, 2009).

Results for the intermediate institutional indicator “responsibility”

Numerical results for the intermediate responsibility indicator are presented in figure 5.3 (see appendix 5.4 for the construction of the indicator). 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. Incoherent fiscal arrangements are found in South Africa, Australia, Switzerland and the United States. The root cause of relatively little coherence in

²⁵⁷ Article 104(1) of the *German Constitution 1949*.

²⁵⁸ Equalization system plays a stabilizing role in Australia (Petchey, 2014).

²⁵⁹ *The Federal-Provincial Fiscal Arrangements Act* (various years) (Petchey, 2014).

²⁶⁰ Article 96.9 of the *Budget Code 1998* (Jarocińska, 2014).

²⁶¹ *The Financial Support Law 22/2009* (Solé-Ollé, 2014).

²⁶² Article 91 of the *German Constitution 1949*.

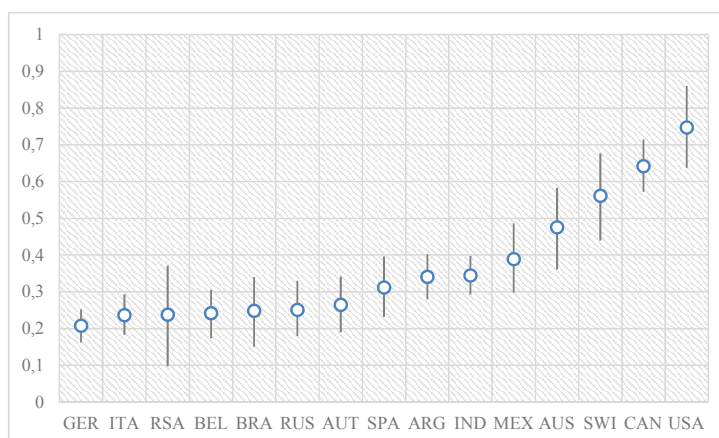
²⁶³ Article 63a § 2, Article 66 § 1, Article 70 § 4, Article 70 § 5, Article 75 § 2, Article 86 § 3, Article 88 § 2, article 123 § 3 of the *Swiss Constitution 1999*.

²⁶⁴ *The Law on Fiscal Coordination 1953* (the Ley de Coordinacion Fiscal).

²⁶⁵ Grants for the Medicaid are the fastest-growing intergovernmental grants (Rodden, 2014).

Switzerland is that the likelihood of a bailout is low but the grant system to help out governments in distress is extensive.

Figure 5.3. Fiscal responsibility of the state level: Intermediate level indicator representing building block 2



5.2.4. Co-determination

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 parliament²⁶⁶. “Alignment” of co-determination reflects the extent to which certain channels are complements rather than substitutes. An aligned co-determination framework suggests that all channels are used concomitantly, while in a less aligned setting some channels are often used while others are barely available.

²⁶⁶ The second chamber traditionally serves as a platform through which states in a federation can directly influence policy making. Out of 28 federations, 17 have the second chamber with regional representation, including all analyzed federations in this chapter (Hickey, 2013).

Bicameralism

Bicameralism is a central feature of federalism. The second chamber of the federal parliament (Senate) serves – at least from de jure point of view – as an explicit forum for state representation²⁶⁷ 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.* In all analysed countries, the Senate is formally the representation of states (Hickey, 2013). 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 (Bird, 2014) and India (Rao, 2014), for instance, the second chamber can be excluded from initiating certain legislation. In Germany, the Senate can veto only legislation concerning the *Länder* (Voigt, 2014). In Austria, the first chamber can overrule almost any Senate decision (Thöni, 2014).
- *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 (Voigt, 2014), representation might be weaker if Senators are elected in popular elections. In Canada senators are selected by the general governor on advice of the prime minister, thereby reducing effective state representation (Bird, 2014). 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 (Jennes and Persyn, 2014) or South Africa (Khumalo and Rekabe, 2014) – 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 (Voigt, 2014) and Switzerland (Schaltegger, 2014) – may further strengthen state representation.

²⁶⁷ In some countries only part of the second chamber serves as a representation of states. This is, for instance, the case in Italy. Article 5, c.1, of the Italian *Constitution 1947* says that: "The Senate of the Republic is elected on a regional basis, with the exception of the seats assigned to the overseas constituency".

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

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 (Ginsburg et al., 2014). 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 unfavorably 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 (Ginsburg et al., 2014). There is a vast literature conjecturing that preferences of the appointers and those of judges are strongly aligned (see, for instance, chapter 4 of this dissertation).²⁶⁸ Thus, once states or second chambers play an important role in nominating or approving judges, the court is likely to rule more in favor of the states.

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

²⁶⁸ 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).

of the federal government was cut back on several occasions because the Court insisted on a narrow interpretation of key clauses in the constitution (Rodden, 2014).²⁶⁹

Other channels of co-determination

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.

- *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 institutionalized and have routine character (e.g. the Consultation Committee in Belgium²⁷⁰ and the State Council in Russia²⁷¹). Some intergovernmental bodies can be authoritative and parties reach decisions that formally bind the participants, such as in Australia (Council of Australian Governments, COAG;

²⁶⁹ 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 favor of the states (Rodden, 2014). 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.

²⁷⁰ *The State Financing Law 1980* ("2nd State Reform) establishing the Consultation Committee between the Belgian governments (Geert and Jannes, 2014).

²⁷¹ *Decree N1602 2000* establishing the State Council (Государственный Совет) where president, the speakers of the first and second chambers and the leaders (governors and presidents) of Russian states are present (Jarocińska, 2014).

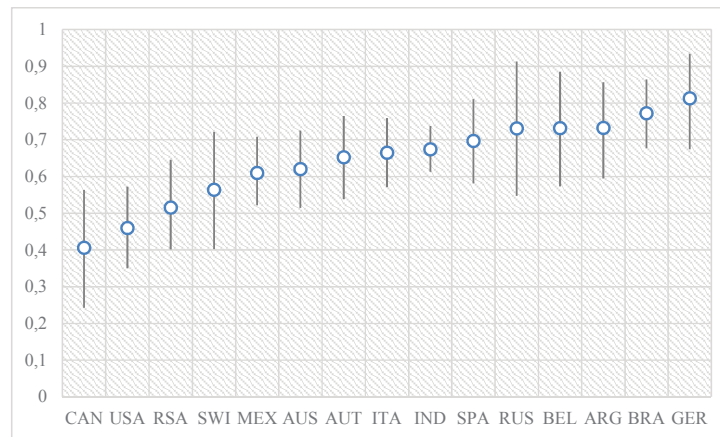
Petchey, 2014) or Argentina (*Consejo Federal de Inversiones*, or the *Consejo Federal de Educación*; Saiegh, 2014).

- *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 through equalization, tax sharing, stabilization and other transfers (see, for instance, OECD, 2014).

Results for the intermediate institutional indicator “co-determination”

The numerical results for the intermediate level indicator “co-determination” are shown in figure 5.4 (see appendix 5.4 for the technicalities regarding the construction of the indicator). High values, meaning extensive co-determination, are observed in Germany, Brazil and Argentina. On the other hand, little co-determination is found in Canada, the United States and South Africa. The most aligned institutional environment within this building block is observed in India. In India, states influence national policy moderately through all channels. Co-determination in Canada, Switzerland and Belgium is less aligned. For instance, Belgium has a strong executive, but 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 well-aligned co-determination in Switzerland.

Figure 5.4. Co-determination of national policy by the state level: intermediate level indicator representing building block 3



5.2.5. Budget frameworks

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. Aligned budget frameworks are those where the three elements have similar strength. Less aligned frameworks are those where instruments are not uniform, e.g. where tight numerical fiscal rules go together with weak procedural rules.

Numerical fiscal rules

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 behavior at all government levels (Schaechter et al. 2012). 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.

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 Germany²⁷² and Switzerland²⁷³), others are set in secondary legislation (e.g. rules in Argentina²⁷⁴ and Australia²⁷⁵). 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.* Status of the sub-national rules indicates whether rules are imposed or self-imposed. Imposed rules are more likely to reflect a consistent and harmonized 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*)²⁷⁶ and in Spain (budget balance, debt and expenditure rules for regions)²⁷⁷. In some countries, rules are negotiated between government levels, such as in Austria (budget balance, debt and expenditure rules for *Länder*)²⁷⁸ and Belgium (budget balance rules for regions)²⁷⁹. State fiscal rules are self-imposed – and often enshrined in state constitutions – in Switzerland (Kirchgässner, 2013; Schaltegger, 2014) and the United States (Primo, 2007).
- *Enforcement.* The constitutional setting may underpin the enforcement of fiscal rules, particularly who takes actions in case of non-compliance with the rules. Self-enforcement works well when a government has an incentive to follow them. Rules are self-enforced

²⁷² Article 109(3) of the *German Constitution 1949*.

²⁷³ Article 126 of the *Swiss Constitution 1999*.

²⁷⁴ *The Fiscal Pacts 1992 and 1993* (Saiegh, 2014).

²⁷⁵ States' constitutions (Petchey, 2014).

²⁷⁶ Article 109(3) of the *German Constitution 1949*.

²⁷⁷ Article 135 of the *Spanish Constitution 1978*, Article 11(2), Article 12 and Article 13 of the *Organic Law 02/2012*.

²⁷⁸ *The Austrian Stability Pact 2012* (Thöni, 2014).

²⁷⁹ The “financing requirements” branch of the High Council of Finance (Jennes and Persyn, 2014).

in Australia (Petchey, 2014), Canada (Bird, 2014), Switzerland (Schaltegger, 2014) and the United States (Rodden, 2014). 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 (Solé-Ollé, 2014) and Russia (Jarocińska, 2014), for instance. Courts and audit institutions have a strong role in Brazil²⁸⁰ and the United States (Bohn and Inman, 1996; Rodden, 2014). 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 Spain²⁸¹), 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) (Diaz-Cayeros, 2014; Khumalo and Rakabe, 2014). In some cases separate federal and state fiscal rules complement each other, such as in Switzerland (Schaltegger, 2014). Wide coverage limits policymaker's ability to bypass the rules and re-allocate fiscal resources between governments (Milesi-Ferretti, 1996, 2003).

Procedural fiscal rules

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

²⁸⁰ 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 a range of penalties for budget mismanagement such as fines, removal from the office, ineligibility for public office up to five years and even imprisonment.

²⁸¹ Article 135 of the *Spanish Constitution 1978*, Article 11(2), Article 12 and Article 13 of the *Organic Law 02/2012*.

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 (Saiegh, 2014) or Brazil (Pereira, 2014; Alesina et al., 1999). In some countries, e.g. Belgium (Jennes and Persyn, 2014) or Germany²⁸², the constitution restricts the federal legislature's power to amend a budget proposed by the government.

- *Transparency.* Budget transparency relies on three elements. First, some constitutions such as the German²⁸³ or Spanish (Solé-Ollé, 2014) ones require federal budgets to be assessed by an independent audit institution. In Brazil²⁸⁴ or India (Rao, 2014), the audit extends also to the state level. Second, medium-term budgetary frameworks are required by the Brazilian²⁸⁵ or Russian²⁸⁶ 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 Belgium²⁸⁷ and South Africa²⁸⁸. Third, constitutions may require uniform accounting standards across levels of government, as in Italy²⁸⁹ and India (Rao, 2014).

Fiscal councils and other arms-length agencies

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

²⁸² Article 113 of the *German Constitution 1949*.

²⁸³ Article 114(2) of the *German Constitution 1949*.

²⁸⁴ The *Tribunais de Contas* are constitutionally defined as ancillary bodies, with the purpose of examining the accounts of the three branches of government in terms of their compliance with the principles of public administration and fiscal responsibility (Pereira, 2014).

²⁸⁵ *The Complementary Law 101 2000 (the Fiscal Responsibility Law)*.

²⁸⁶ *The Budget Code 1998* (Jarocińska, 2014).

²⁸⁷ *The State Financing Law 1989* (“3rd State Reform”) establishing High Council of Finance, which advise annually on the “financial requirements” of the Belgian governments (Geert and Jannes, 2014).

²⁸⁸ The Medium Term Expenditure Framework (Khumalo and Rakabe, 2014).

²⁸⁹ *Decree n. 118 June 23, 2011* (Scabrosetti, 2014).

short and long-term costs and benefits of budgetary measures both among policy-makers and the public (Calmfors, 2011; Calmfors and Wren-Lewis, 2011; Kopits, 2011).

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 Germany²⁹⁰ or Spain²⁹¹, than in ordinary law, as in Australia or Canada (IMF, 2013a). In some countries such as Argentina and Brazil, fiscal councils have for long been enshrined in the constitution but have still not been established (Pereira, 2014; Saiegh, 2014).
- *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 Italy²⁹² and the High Council of Finance in Belgium²⁹³). The Public Council in Russia (Jarocińska, 2014) and the Congressional Budget Office in the United States (Rodden, 2014) are allowed to evaluate the federal budget only.
- *Independence.* Independence rests 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 Germany²⁹⁴ and Spain²⁹⁵. Partially independent fiscal councils – parliamentary budget offices – exist in Italy²⁹⁶ and in the United States (Rodden, 2014).

²⁹⁰ Article 109a of the *German Constitution 1949* establishing the Stability Council. Another fiscal council – German Council of Economic Experts is established by ordinary statutory law (*Act on the Appointment of a Council of Experts on Economic Development 1963*).

²⁹¹ *The Organic Law 06/2013* establishing Autoridad Independiente de Responsabilidad Fiscal.

²⁹² Article 16-19 of the *law n.243, ch. 7 December 24, 2012*.

²⁹³ *The State Financing Law 1989* (“3rd State Reform”) (Geert and Jannes, 2014).

²⁹⁴ *Act on the Appointment of a Council of Experts on Economic Development 1963*.

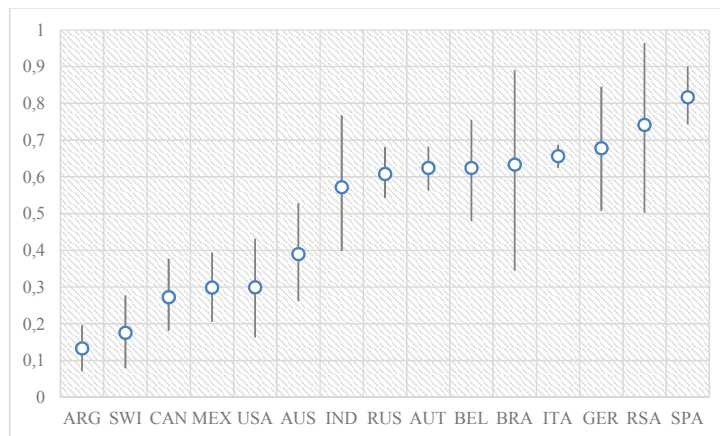
²⁹⁵ *The Organic Law 06/2013* establishing Autoridad Independiente de Responsabilidad Fiscal.

²⁹⁶ Article 16-19 of the *law n.243, ch. 7 December 24, 2012*.

Results for the intermediate institutional indicator “budget frameworks”

The numerical results for the intermediate indicator are shown in figure 5.5 (see appendix 5.4 for the technicalities regarding the construction of the indicator). 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 aligned in Austria and Italy and rather less aligned in Brazil, South Africa and India. Brazil’s budget framework is likely less aligned because numerical and procedural fiscal rules are strong but there is no fiscal council.

Figure 5.5. Strength of budget frameworks: intermediate level indicator representing building block 4



5.2.6. Stability of fiscal constitutions

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

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 (Voigt, 2014) or Mexico²⁹⁷.
- *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. Each state has the same number of seats in the Senate in Brazil (Pereira, 2014) and the US (Rodden, 2014). Under a proportional or partially proportional distribution of seats the federal government must secure support only from the larger states and probably less than half the states. Partially proportional distribution of seats takes effect in Germany (Voigt, 2014) and India (Rao, 2014).

Judicial veto

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-limit 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 governments²⁹⁸.
- *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

²⁹⁷ The Senate in Mexico has no authority in the approval of the revenue bill of each year (*Ley de Ingresos*), which is only approved by the lower chamber (Diaz-Cayeros, 2014).

²⁹⁸ Article 189 § 4 of the *Swiss Constitution 1999* says that acts of the federal parliament or the federal government may not be challenged in the Supreme Court. In accordance with this article and Article 190, federal acts are binding and not reviewable by the Supreme Court.

a court case, as is the case in Austria²⁹⁹ and Brazil³⁰⁰. On the other hand, in Argentina and Australia, only few political and institutional actors have access to the constitutional court (Ginsburg et al., 2014).

- *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. South Africa (Khumalo and Rakabe, 2014). Judicial influence is weaker if the court can review the legislation only after the law is adopted, e.g. in Canada (Bird, 2014) or Mexico (Diaz-Cayeros, 2014; Ginsburg et al., 2014).
- *Unconstitutionality*. There are different ways to deal with laws deemed unconstitutional: (1) the law can be repealed automatically (e.g. Russia (Jarocińska, 2014) and Italy³⁰¹)³⁰², (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).

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

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 (Schaltegger, 2014). Lately,

²⁹⁹ In Austria, those political and institutional actors are: Federal Assembly, federal government, Länder governments, local governments, Courts, Ombudsman, Austrian members of the European Parliament, local councillor, single person (Thöni, 2014).

³⁰⁰ In Brazil, those actors are: the President, Senate, States' Governors, General Public Prosecutor, Law Bar Association, political parties represented in Congress, National Unions and National Associations (Pereira, 2014).

³⁰¹ Article 136, c.1 of the *Italian Constitution 1947* says that "When the Court declares the constitutional illegitimacy of a law or enactment having force of law, the law ceases to have effect the day following the publication of the decision".

³⁰² In cases where the law is void certain actions are expected to be encountered by the national parliaments to fill a legal gap and prevent legal uncertainty.

the Swiss people vetoed two major tax initiatives, which would have had a large fiscal impact at both the cantonal and the federal level.³⁰³

- *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 (Shaltegger, 2014), the Argentinian constitution explicitly bans certain types of initiatives, such as on constitutional reform, international treaties, taxes, the budget and penal matters (Saiegh, 2014).

Constitutional amendment

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 that determine how easily constitutions can be changed.

- *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 $\frac{3}{4}$ majority in both chambers in Russia. Belgium and Germany require $\frac{2}{3}$ majorities in both chambers to pass an amendment (Ginsburg et al., 2014). An absolute majority is required in India and Italy³⁰⁴.
- *Referendums.* National referendums on constitutional reforms are required or allowed in Australia, Austria, Italy and Switzerland (Ginsburg et al., 2014).
- *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 (Ginsburg et al., 2014). In other words, to materialize a constitutional

³⁰³ 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) (descriptions and outcomes of referenda are available on website of “A service of the Confederation, cantons and communes” <https://www.ch.ch/en/> accessed on February 20, 2015).

³⁰⁴ If constitutional amendment in Italy is approved by absolute majority, referendum might be triggered when – within three months – such request is made by $\frac{1}{5}$ of the members of the House or 500 thousands voters or Regional Councils. If the amendment is approved by a majority of $\frac{2}{3}$ no such referendum can be triggered (Article 138 of the *Italian Constitution 1947*).

amendment not only half of the voters need to approve it globally, but majority needs to be also achieved in at least half of states.

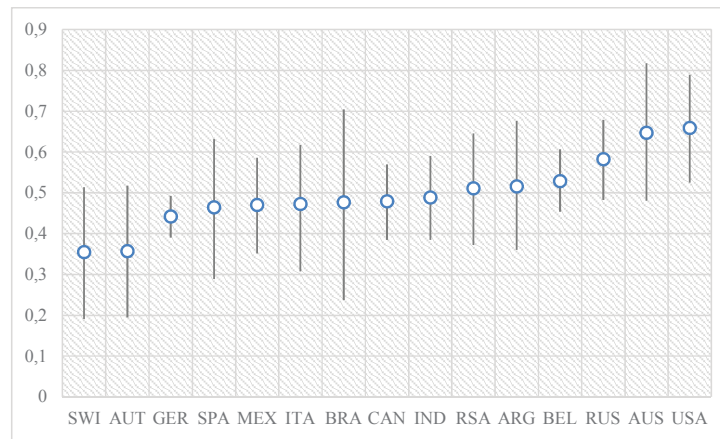
- *Number of actors that can propose a reform.* In some countries a broad range of actors can propose a constitutional reform. In Brazil the president, the first and second chambers separately and states can propose an amendment. In Germany, only the federal parliament can propose a constitutional change (Ginsburg et al., 2014).
- *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 recognized and administrative decentralization has to be implemented.³⁰⁵

Results for the intermediate institutional indicator “stability of fiscal constitutions”

The numerical results for the intermediate level indicator “stability of fiscal constitutions” are presented in figure 5.6 (refer to appendix 5.4 for the detailed content and construction of the indicator). Australia, Russia and the United States have highly stable fiscal constitutions. Low stability is found in Austria and Switzerland. The remaining countries can be classified as having moderately stable fiscal constitutions. The most aligned institutional environment within this building block is observed in Germany, while arrangements are less aligned in Brazil, where strong judicial and bicameral veto powers go along with a proliferation of actors that can propose a constitutional change.

³⁰⁵ Article 5 of the *Italian Constitution 1947* says “The Republic is one and indivisible. It recognises and promotes local autonomies, and implements the fullest measure of administrative decentralisation in those services which depend on the State. The Republic adapts the principles and methods of its legislation to the requirements of autonomy and decentralisation”.

Figure 5.6. Stability of fiscal constitutions: intermediate level indicator representing building block 5



5.3. Interaction between building blocks

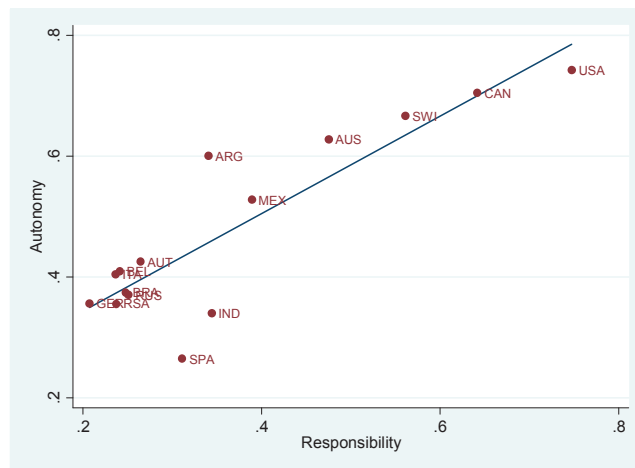
The various building blocks are not assigned randomly across a fiscal constitution. The characteristics of one building block are often aligned with the characteristics of another building block. The extent to which building blocks reflect certain constitutional patterns can be assessed by using bivariate correlation³⁰⁶ among selected building blocks. Such a procedure not only allows assessing common features across countries, but also to identify “outlier” countries whose constitutions do not fit an established pattern. Four main linkages between the building blocks are studied here: (1) autonomy versus responsibility of states, (2) responsibility of states versus strength of fiscal framework, (3) autonomy of states versus co-determination of national policy by states, and (4) autonomy of states versus the stability of fiscal constitution. The correlations are one step towards finding commonalities between fiscal constitutions and to develop a summary indicator.

³⁰⁶ Bivariate correlation shows simple empirical relation between two variables. One of the most common form to depict the relationship is a graphical representation of correlation.

5.3.1. *Autonomy versus responsibility*

Autonomy and responsibility of states are positively correlated: the higher autonomy, the higher the responsibility of the states (figure 5.9). Arrangements where both indicators have similar values can be considered aligned, reflecting that when states are given large freedom in conducting fiscal policy, they are in general more accountable for their policies. On the other hand, if the role of states is limited to executing federal functions, their responsibility might also be lower, including support in times of distress (von Hagen and Eichengreen, 1996). Spain and India are outliers compared to the established pattern. However, the building blocks autonomy and responsibility of these two federations are more aligned than those of other integrated federations, as the level of autonomy corresponds closely to the level of responsibility.

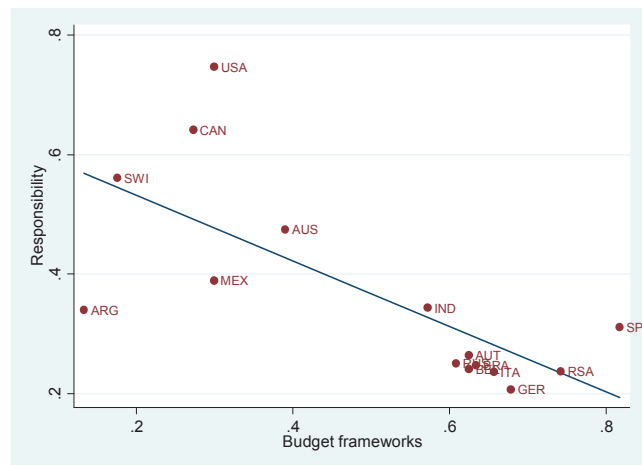
Figure 5.9. Correlation between autonomy and responsibility of states



5.3.2. Responsibility versus strength of budget framework

Responsibility and strength of fiscal frameworks are negatively correlated (figure 5.10). In an environment where states have to bear the consequences of their fiscal actions, strong budget frameworks and general government fiscal rules are hardly necessary. On the other hand, low state responsibility and ensuing soft budget constraint might induce the federal government to impose various fiscal rules and other constraints on state budgeting in order to commit general government fiscal discipline (Foremny, 2014). Most federations fit into the pattern between responsibility and budget frameworks. Budget frameworks in Argentina are however rather weak to cope with the low degree of state responsibility.

Figure 5.10. Correlation between responsibility of states and strength of budget framework

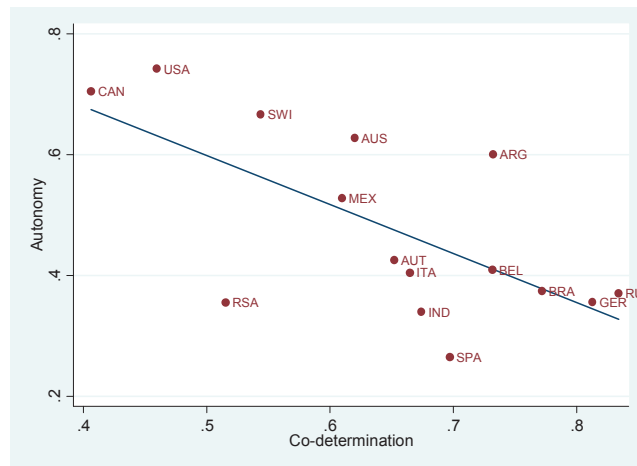


5.3.3. Autonomy versus co-determination

Autonomy of states and co-determination of national policy by states are negatively correlated (figure 5.11). The basic rationale for a negative correlation is that states agree to curtail autonomy only if they can exert influence over national policy and, therefore, have some impact on policies

that concern them (Moore et al. 2010). In most countries low autonomy is compensated by high participation at the federal level, an arrangement sometimes called co-operative federalism. The different evolution of autonomy and co-determination over time seems to confirm these findings. The correlation is a bit less significant, and several countries are quite far away from the line representing an established pattern of autonomy and co-determination. Especially South Africa seems to be an outlier, where states do not compensate low autonomy with large co-determination prerogatives.

Figure 5.11. Correlation between autonomy of states and co-determination of national policy by states



5.3.4. *Autonomy versus stability*

Autonomy and constitutional stability are positively correlated (figure 5.12). The explanation to this pattern could be the centrist bias in federal constitutions and states' interest in rigid amendment procedures in countries where they enjoy large autonomy (Ginsburg and Versteeg, 2013). In countries where the fiscal constitution is more stable and biased towards the status quo, the autonomy of states tends to be comparatively better preserved. The correlation is however relatively weak and several countries deviate widely from the supposed link. Especially in

Switzerland, autonomy of the states is much larger than suggested by the ease with which constitutional amendments could thwart it (Blöchliger and Frey, 1993)

Figure 5.12. Correlation between autonomy of states and stability



5.4. Types of fiscal constitutions

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. First, *clustering* which helps identify groups that share similar fiscal constitutions but which are genuinely different from other groups. It is common to present output of clustering in dendrogram, i.e. figure demonstrating how the groups of similar fiscal constitutions are created. Second, *factor analysis* allows reducing number of variables describing fiscal constitutions, provided that certain building blocks of fiscal constitutions are highly correlated. Factor analysis drives a construction of a single summary indicator reflecting over-arching feature of the fiscal

constitution, for instance the degree of decentralization the fiscal constitution is granting (for a description of both methods see appendix 5.5 and 5.6).

5.4.1. Identifying similar fiscal constitutions: clustering

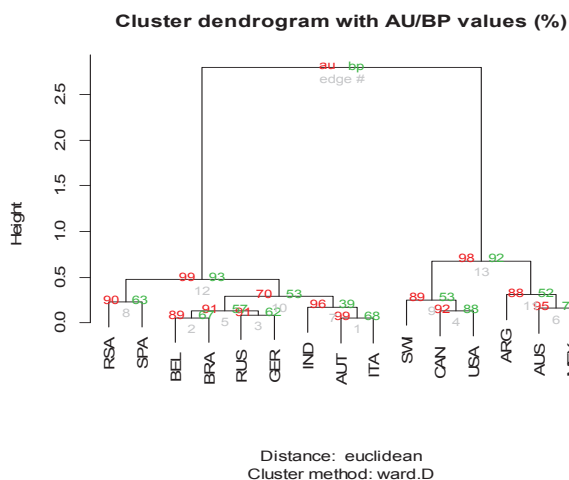
This section assesses the extent to which fiscal constitutions can be grouped or “clustered”, i.e. to what extent certain fiscal constitutions are very similar to each other, while they differ from others. Cluster analysis is used to group countries with comparable fiscal constitutions, i.e. which combine 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 (see appendix 5.5).

When clustered, two groups of distinct fiscal constitutions emerge, which can be divided further into sub-groups (see figure 5.13).

- 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. Decentralized constitutions tend to be quite stable as well (Switzerland is an exception). Although clustered together, decentralized 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-decentralized 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 decentralized 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 5.13. Similarities and differences between fiscal constitutions: dendrogram based on cluster analysis



Note: The clustering height on the vertical axis is a measure of dissimilarity. The higher its value the more heterogeneous are the units grouped in a given cluster. The horizontal axis has no meaning, i.e. clusters lying close to another one are not more similar than clusters farther apart. Values on top of the horizontal bars indicate probabilities. The approximately unbiased (AU) p-values computed by multi-scale bootstrap resampling are printed in red and bootstrap probabilities (BP) are printed in green. AU p-values are more accurate than the BP values as unbiased p-values (Suzuki and Shimodaira, 2006). Clusters for which AU values exceed 90 are strongly supported by data indicating stable clusters.

5.4.2. The degree of constitutional decentralization: composite indicator

The second method to gauge similarities and differences between fiscal constitutions is to develop a composite indicator reflecting the *degree of constitutionally provided decentralization*. 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, in other words to what extent building blocks are correlated or linked together. 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 5.2).

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

Table 5.2. Commonalities between the building blocks of fiscal constitutions: results off factor analysis

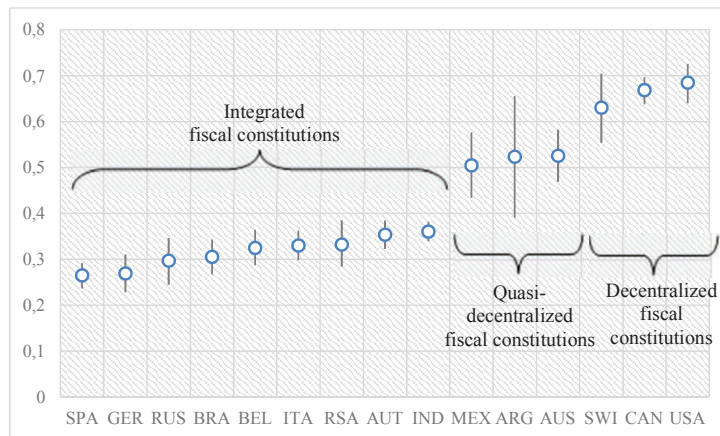
Variable	Factor 1	Factor 2
Autonomy	0.95	0.17
Responsibility	0.92	0.20
Co-determination	-0.81	0.05
Budget frameworks	-0.86	-0.03
Stability	0.10	0.99
Variance explained	66%	19%

Given the correlation with the individual building blocks, factor 1 reflects the degree of constitutionally provided decentralization. A fiscal constitution is the more decentralized 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 decentralization. As such, a composite indicator reflecting single dimension “decentralization” can be constructed, using the four aforementioned building blocks. To aggregate the composite

indicator, the random weights method (see section 5.2.1) is applied to the four intermediate-level indicators.

Results are largely similar to the cluster analysis before, with two groups of constitutional settings emerging (figure 5.14). The United States, Canada and Switzerland are federations with a highly *decentralized* 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 alignment between building blocks. Spain and Canada have the most aligned fiscal constitution, while Argentina has the least aligned.³⁰⁷ Again, the results show clearly that constitutional coherence is *independent* of whether a federation is decentralized or integrated.

Figure 5.14. Decentralized 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 decentralization.

³⁰⁷ The random weights technique takes only alignment between the building blocks into account. An alternative method is to combine alignment between the building blocks with alignment 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 aligned.

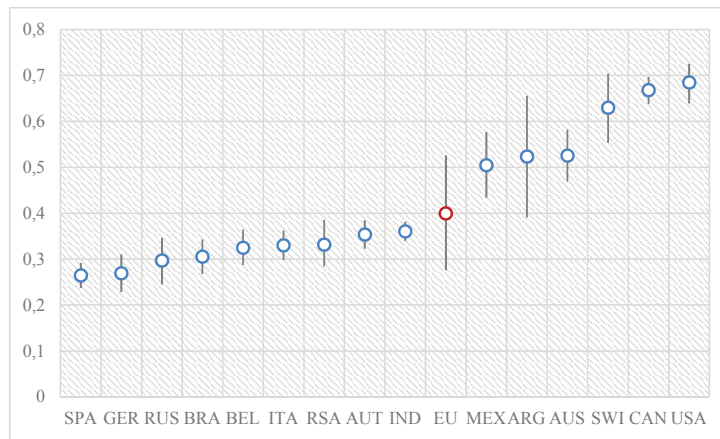
5.4.3. The degree of constitutional decentralization: European Union

Although the European Union is not usually seen as a true federation³⁰⁸, 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 or a proto-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 aligned than those of most federal countries (figure 5.15). It is less decentralized than that of the United States, Canada and Switzerland, and less than quasi-decentralized 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 characterized by high co-determination and strong hierarchical budget rules and frameworks, i.e. the building blocks of cooperative federalism. The EU fiscal constitution mixes therefore elements from decentralized and integrated federal systems. For that reason, fiscal constitution of the EU could be classified as a hybrid combining features of decentralized and centralized fiscal constitutions.

³⁰⁸ The comparison of the fiscal constitutions in the true federations and the EU should be pursued, however, with a few caveats. For example, labour mobility within the EU remains lower than in federal states. In addition, the EU is not yet a political union as all other federations (Cottarelli and Guerguil, 2014).

Figure 5.15. The European Union’s fiscal constitution: Degree of decentralization 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 (formally Treaty on the European Union) and Excessive Deficit Procedure, the Stability and Growth Pact, regulations contained in the “Six Pack”³⁰⁹, the “Two Pack”³¹⁰ and the “Fiscal Compact” (formally the Treaty on Stability, Coordination and Governance in the Economic and Monetary Union). Policies are also coordinated and subject to surveillance by the

³⁰⁹ Regulation 1173/2011 on the effective enforcement of budgetary surveillance in the euro area, OJ 2011 L 306/1; Regulation 1174/2011 on enforcement measures to correct excessive macroeconomic imbalances in the euro area, OJ 2011 L 306/8; Regulation 1175/2011 amending Council Regulation (EC) No. 1466/97 on the strengthening of the surveillance of budgetary positions and the surveillance and co-ordination of economic policies, OJ 2011 L 306/12; Regulation 1176/2011 of the European Parliament and of the Council of 16 November 2011 on the prevention and correction of macroeconomic imbalances, OJ 2011 L 306/25; Council Regulation 1177/2011 amending Regulation (EC) No. 1467/97 on speeding up and clarifying the implementation of the excessive deficit procedure, OJ 2011 L 306/33; Council Directive 2011/85/EU on requirements for budgetary frameworks of the Member States, OJ 2011 L 306/41.

³¹⁰ Regulation (EU) No 473/2013 of the European Parliament and of the Council on common provisions for monitoring and assessing draft budgetary plans and ensuring the correction of excessive deficit of the Member States in the euro area, OJ 2013 L 140, and, Regulation (EU) No 472/2013 of the European Parliament and of the Council on the strengthening of economic and budgetary surveillance of Member States in the euro area experiencing or threatened with serious difficulties with respect to their financial stability, OJ 2013 L 140.

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).

Based on these results, some tentative policy implications may be derived for the EU fiscal constitution, particularly in light of the on-going debate on the design of the European fiscal union. As revealed in the empirical analysis, the current EU fiscal constitution represents a hybrid system consisting, on the one hand, of elements from the decentralized model of fiscal constitution, and on the other hand, of composites from the integrated model. A question arises whether this hybrid model is sustainable. This is particularly in light of the fact that none of the federations resembles this model, and the model which is considered the closest to the European – Argentina's fiscal constitution – is perceived as ill-designed and crisis-prone (see section 5.6). If a hybrid model is unsustainable and unsuitable for the EU, what is then the preferred model for Europe: decentralized or integrated?

An integrated model of the EU fiscal constitution would inevitably push toward a larger common budget with ability to mitigate – via transfers – idiosyncratic economic shocks in the member states. Some observers suggest, however, that such a vehicle for cross-country fiscal transfers should not be rashly institutionalized (Balcerowicz, 2012). Particularly, given that the European solidarity or common identity – which should justify this kind of bailout transfers – is still weak in the EU (Guiso et al., 2014a). If transfers are prematurely institutionalized, they could actually hamper the solidarity as many EU citizens still do not perceive as a legitimate step to rescue countries affected by crises caused by their own policies (Balcerowicz, 2012). Political tensions between “Berlin” and “Athens” or broadly speaking between conservative “North” and profligate “South” were observed already during the recent euro area debt crisis. These tensions are likely to become an outrage, if transfer recipients are permanently the same countries (Balcerowicz, 2012). This kind of political tensions, and resulting threats of break-up of a country, are observed, for instance, in Belgium and Spain. Consequently, under the current circumstances, a decentralized

model of fiscal constitution with a credible no-bailout rule, well-functioning inter-jurisdictional competition, and smoothly operating financial market seems to fit better the EU (Balcerowicz, 2012). This is not to say that integrated model will be never appropriate. Rather a gradual process of building-up common European identity and solidarity is required (Balcerowicz, 2012). Common identity and solidarity seem to be preconditions for an integrated model of fiscal constitution, with a large EU budget and encompassing fiscal transfers.

5.5. The evolution of fiscal constitutions

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.

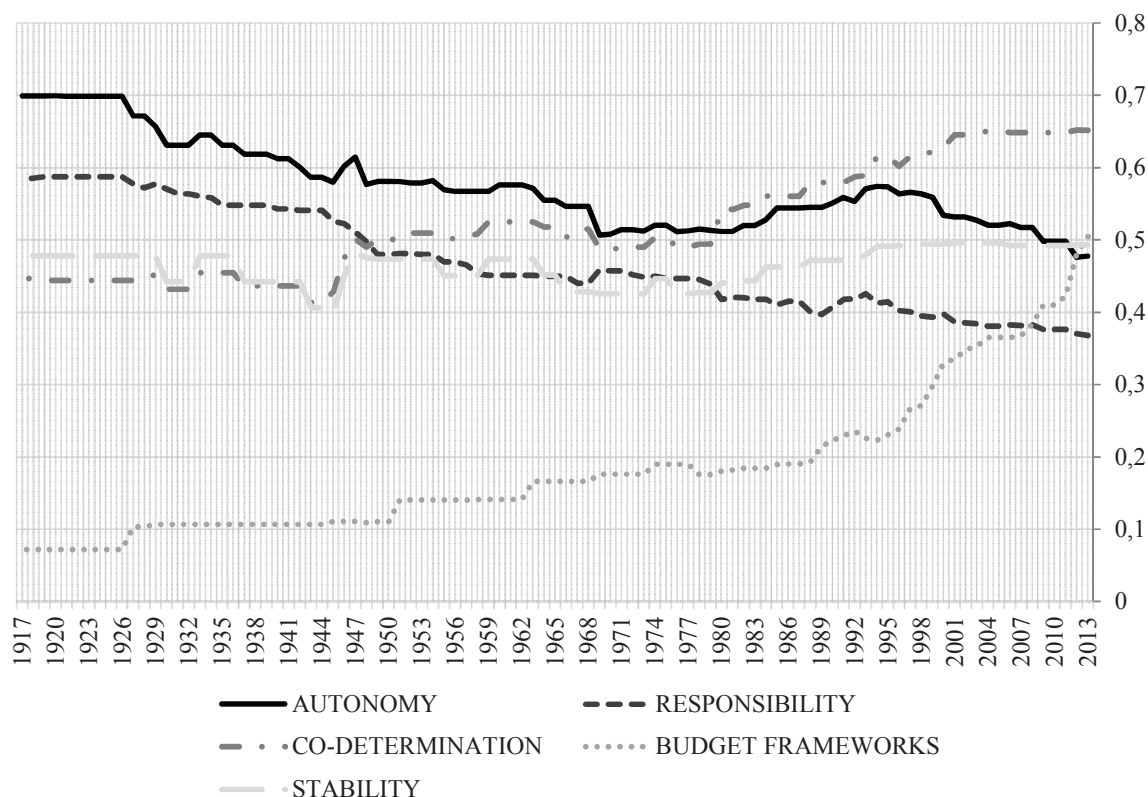
5.5.1. Evolution of building blocks

Fiscal constitutions have become less decentralized and more integrated over most of the time they have been in place, although a few countervailing episodes also occurred (figure 5.16). To evaluate the evolution of fiscal constitutions, the average indicator values of all countries are calculated for the years between 1917 and 2013.³¹¹ While autonomy and responsibility of sub-

³¹¹ 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).

federal entities are trending downward – except autonomy that increased in the 1980s and 1990s – co-determination and budget frameworks tend to strengthen over time. The degree of stability has remained – relatively unchanged. Dynamics for individual countries are presented in appendix 5.7.

Figure 5.16. The evolution of fiscal constitutions: changes in the five building blocks, 15 countries 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).

5.5.2. Explaining the evolution of fiscal constitutions

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 mature federations and the birth and subsequent evolution of new ones.

Autonomy

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 early 1980s 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 (Schaltegger, 2014). After the war, countries behaved differently. In Australia, the power to tax income was never returned to the states, mainly due to High Court rulings confirming the centralization of taxing powers (Petchey, 2014). 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 (Bird, 2014).
- *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 (Petchey, 2014). Mexico experienced a considerable surge in state autonomy. During the education reform in the early 1990s several policy functions were delegated to the states (Diaz-Cayeros, 2014). 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 (Rodden, 2014).
- *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-centralized fiscal policy (Pereira, 2014). 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 (Voigt, 2014), soon followed by Spain and Italy (Sollé-Ollé, 2014).

Authoritarian regimes tend to limit state autonomy. Direct elections of governors (heads of executive at the state level) are usually suspended in favor of governors appointed by the center. In Argentina and Brazil, control over governors' appointment by military regimes began in the 1930s, intertwined with democratic episodes where governors were elected (Pereira, 2014; Saiegh, 2014). 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 (Diaz-Cayeros, 2014). Single-party rule was also the norm at both government levels in India until the early 1990s (Rao, 2014).

Responsibility

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 equalization mechanism and reduced the size of the intergovernmental grant system (Rodden, 2014). 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 (Bird, 2014; Petchey, 2014).

The main reasons for decreasing state responsibility throughout the 20th century are: (1) a rise in all sorts of intergovernmental transfers, and (2) bailouts. Growing intergovernmental transfers decrease state responsibility as they need to mobilize less and less revenue by their own. 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 (see section 5.5.2 for a detailed description of various types of intergovernmental transfers):

- *Equalization.* Redistribution across sub-national units has become more important and more institutionalized over time, as reducing inequality gained in importance as a policy objective. Switzerland introduced equalization in the constitution in 1958 (Schaltegger, 2014), while Canada did so in 1982 (Bird, 2014). Although lacking a constitutional basis, Australia has followed the principle of full horizontal fiscal equalization since the 1980s (Petchey, 2014). In 2004, Russia introduced an equalization formula in the Budget Code (Jarocińska, 2014). Apart from the United States, nowadays all federations have explicit equalization systems.
- *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 (Saiegh, 2014). Germany's tax sharing mechanism is constitutional since 1955 and was further extended in 1969 (Voigt, 2014). A tax-sharing-cum-equalization mechanism was introduced in the mid-1970s, but abolished in 1986 in the United States (Rodden, 2014).
- *Stabilization.* Stabilization policy and counter-cyclical transfers³¹² 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 (Schaltegger, 2014). In Germany the right to pass counter-cyclical policy measures became constitutional in 1967 (Voigt, 2014). In Spain, the new constitution of 1978 endowed the federal level with the power to coordinate general economic planning (Solé-Ollé, 2014). In Canada, the Federal-Provincial Fiscal Arrangements Act of 1985 enables the federal level to stabilize provincial revenues (Bird, 2014).
- *Other transfers.* Grant systems were gradually established in most federations, either co-financing policy areas under state jurisdiction or, more recently, compensating for

³¹² Counter-cyclical transfers are granted to states in order to mitigate (idiosyncratic) adverse economic circumstances.

decentralized spending responsibilities. The German and Swiss constitutions contain multiple provisions stipulating that the federal level “should” or “must support” state activities (see section 5.3.2). Russia increased earmarked transfers to *subjects* in 1999 to finance newly transferred spending mandates (Jarocińska, 2014). In Belgium the decentralization move of the last two decades was met with more grants (Jennes and Persyn, 2014). In 1998, the Mexican *Ley de Coordinación Fiscal* added transfers for education, health and infrastructure (Diaz-Cayeros, 2014). In general, bar a few exceptions, the institutional anchoring of sectorial grants has increased with the ageing of federations.

- *Bailouts*. Bailouts are a specific form of ad-hoc intergovernmental transfer. Except for Switzerland, all federations bailed out a state 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 (Petchey, 2014). In the United States, New York was bailed out in 1975, shortly after the first oil crisis (Rodden, 2014). 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 (Saiegh, 2014), Brazil managed to obey its constitutional no-bailout strategy during the 2000s (Pereira, 2014).

Co-determination

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 (Voigt, 2014). However, the role of the second chamber was reduced again in 2006 (Voigt, 2014). On the other hand, co-determination rights were low in Brazil over that period due to authoritarian rule (Pereira, 2014).

- 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 (Jennes and Persyn, 2014). 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 (Ginsburg et al., 2014). In 1982, the Canadian provinces obtained the right to approve constitutional amendments (Bird, 2014). Australia established the Council of Australian Governments (COAG) in 1992 (Petchey, 2014). 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 (Scabrosetti, 2014).

Budget rules and frameworks

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.

The introduction of “second generation” numerical fiscal rules³¹³ was probably the most salient element of budgetary reform. Following Switzerland that adopted a constitutional debt brake – actually a balanced budget rule – in 2001 (Schaltegger, 2014), 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 (Solé-Ollé, 2014). In Italy, expenditure and deficit rules were introduced at the ordinary statutory level by the Internal Stability Pact in 1999 (Scabrosetti, 2014). As a post-crisis and preventive measure Russia amended its Budget Code in 2012 and introduced a fiscal rule that sets a cap on

³¹³ “Second generation” of the numerical fiscal rules refers to rules which are defined in structural (cyclical) terms as opposed to the rules of “first generation” which define ceilings in nominal terms. Structural rules take into account the working of automatic stabilizers during the crises (increased welfare spending and decrease of budget revenue), and therefore introduce flexibility in response to economic shocks (Schaechter et al., 2012).

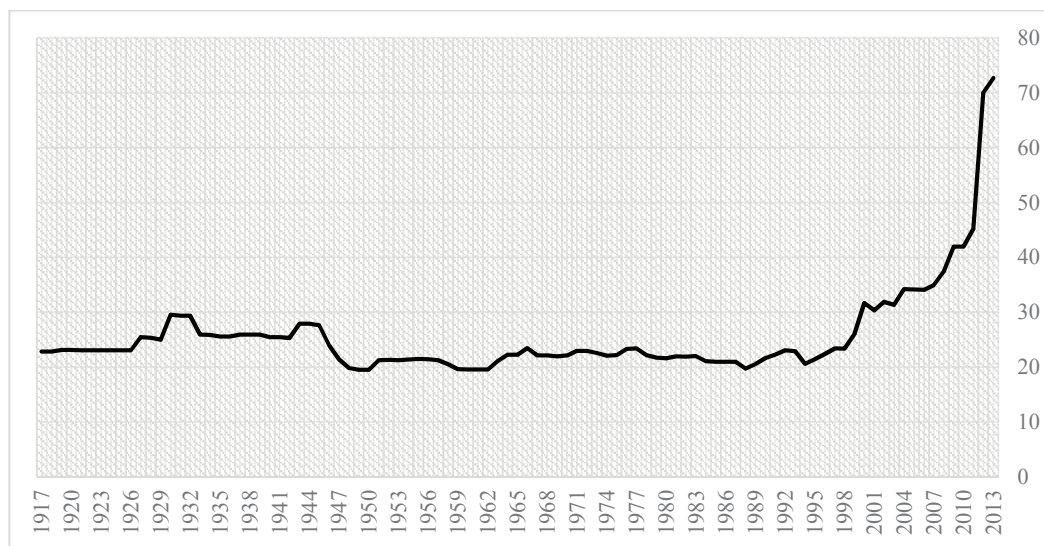
federal government expenditure (Jarocińska, 2014). In Germany, expenditure rules operating through political commitment were established already in 1982 (IMF, 2013b).

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 (Solé-Ollé, 2014). In the same year, Italy harmonized medium-term budgetary frameworks across levels of government and unified accounting methods (Scabrosetti, 2014). Both countries also recently established fiscal councils (IMF, 2013a). In Canada, the Parliamentary Budget Office started operating in 2008 and in Russia the Public Council did so in 2011 (Jarocińska, 2014). In Germany, the 2009 constitutional amendment established the Stability Council (Voigt, 2014). In the United States, the Congressional Budget Office was established in 1974 (IMF, 2013b) and in Belgium the High Council of Finance - Section "Public Sector Borrowing Requirement" was launched in 1988 (Jennes and Persyn, 2014).

5.5.3. Alignment of fiscal constitutions over time

Overall alignment (or coherence) remained flat over long periods but has considerably increased since the 1980s (figure 5.17). 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. Decentralized federations evolved less than integrated federations. Misalignment was highest during war periods and during authoritarian regimes. Some constitutions such as the Argentinian or the United States hardly moved with respect to the level of alignment (individual country figures for 1980, 1996 and 2013 are shown in appendix 5.8).

Figure 5.17. Alignment from 1917 to 2013: average of 15 countries



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 clear-cut distinction between decentralized and integrated fiscal constitutions that can be observed today is actually quite recent. As cluster analysis of fiscal constitutions for 1980 and 1996 reveals that the precise division of federations into two groups was impossible. 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.

5.6. Fiscal constitutions and fiscal outcomes

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 alignment of constitutional decentralization, 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 5.4. 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.

The correlations suggest that fiscal outcomes are hardly related to the *level* of constitutional decentralization (figure 5.18) but more closely related to alignment or coherence of constitutional decentralization (figure 5.19). In other words, the extent to which fiscal constitutions are decentralized is less associated with 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 alignment to outcomes can be summarised as follows:

- *Alignment (coherence) and spending.* Primary spending growth seems to be positively correlated with incoherence. Incoherence might allow states to shift the consequences of excessive spending to other government levels or to the general government.
- *Alignment (coherence) and debt.* Debt growth seems to be positively correlated with incoherence, at least for the period from 1980 to 2010. 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.
- *Alignment (coherence) and crises.* There is a correlation between incoherence and the number of crisis years. In less well-aligned settings, deficit and debt might accumulate more easily, leading to a higher crisis probability.
- *Alignment (coherence) and economic growth.* Finally, incoherence is negatively correlated with growth rates. Therefore, incoherent fiscal constitutions may affect the economic activity negatively.

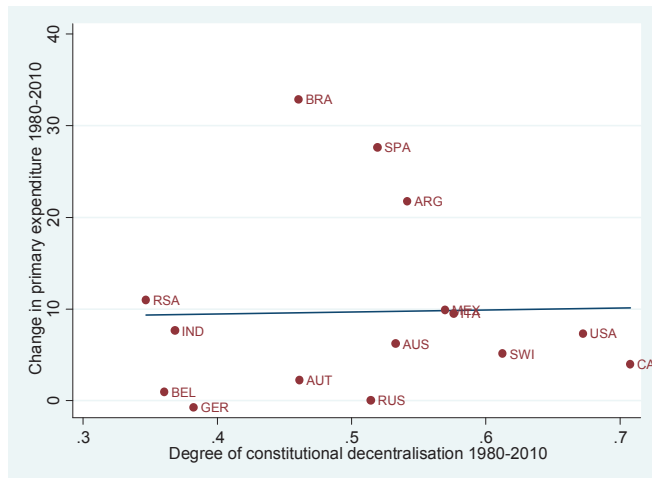
Linking the *level* of constitutional decentralization to the same fiscal outcome variables as above (growth of debt, growth of primary spending, economic crises, GDP growth) delivers very weak results, maybe with the exception of the relation between decentralization and debt growth, which is slightly positive. As it was already pointed out, correlations do not mean causation and, therefore, these results are very tentative. In the future, more research needs to be done to unravel a causal relationship between coherence and fiscal outcomes.

Figure 5.18. Correlations between the degree of decentralization and fiscal/economic outcomes

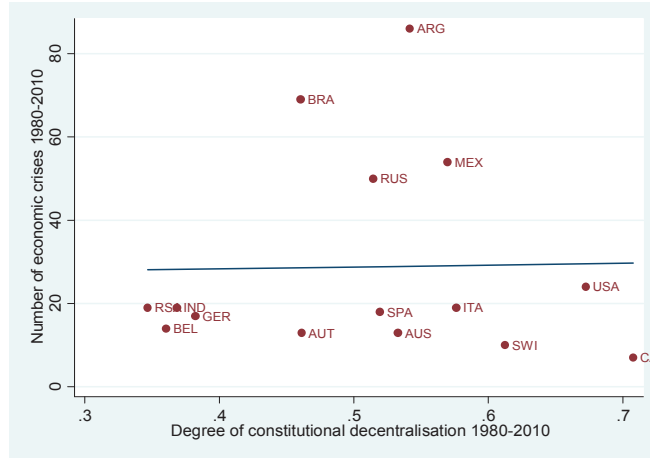
a) Constitutional decentralization and change in debt stock (% of GDP), 1980-2010



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



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



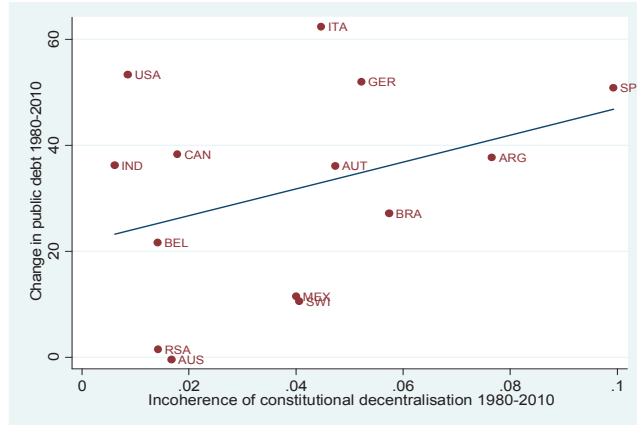
Note: “Crisis” is counted as a year in which specific crisis is observed, such as currency crisis, inflation crisis, stock market clash, sovereign debt crisis, and banking crisis. If in a single year two crises occur, for instance banking and sovereign debt crises, then this year is counted double. See <http://www.reinhartandrogoff.com/data/browse-by-topic/topics/7/> (accessed March 5, 2015).

d) Constitutional decentralization and GDP growth, 1980-2010



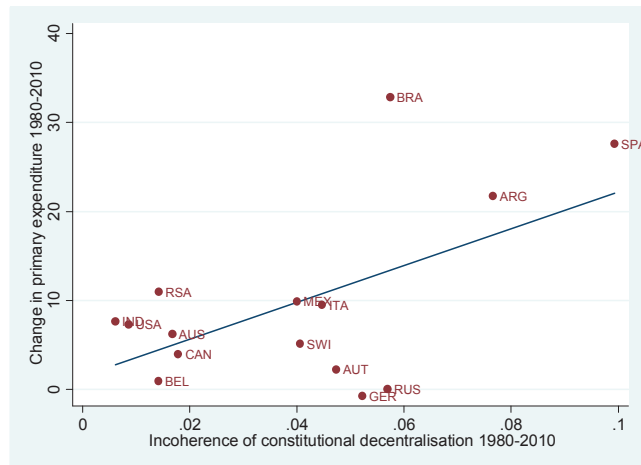
Figure 5.19. Correlations between incoherence of fiscal constitutions and fiscal/economic outcomes

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

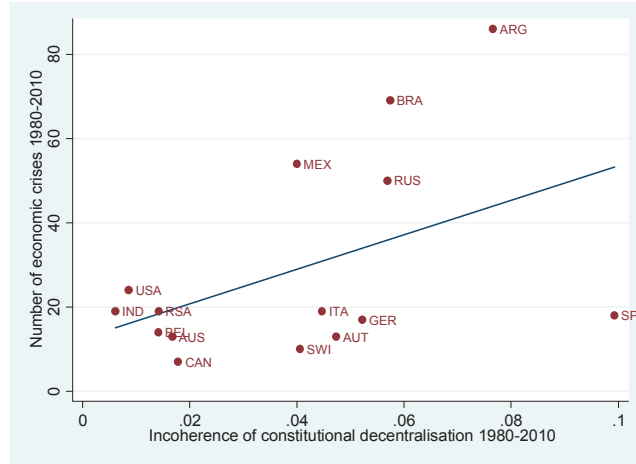


Note: Russia is dropped from the sample. In the period 1993-2010 (for which the fiscal constitution is coded) Russian public debt decreased by more than 100 percentage points from 116% of GDP to 13% of GDP.

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

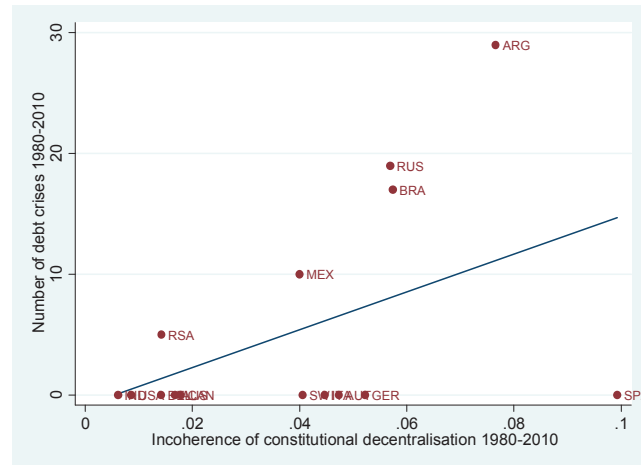


c) Degree of incoherence and number of economic crises, 1980-2010



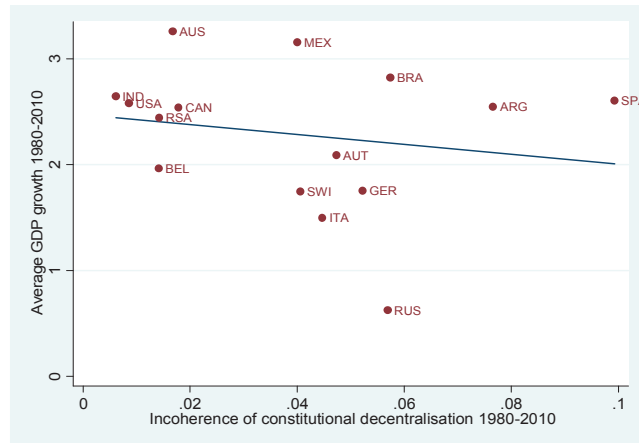
Note: “Crisis” is counted as a year in which specific crisis is observed, such as currency crisis, inflation crisis, stock market crash, sovereign debt crisis, and banking crisis. If in a single year two crises occur, for instance banking and sovereign debt crises, then this year is counted double. See <http://www.reinhartandrogoff.com/data/browse-by-topic/topics/7/> (accessed on March 5, 2015).

d) Degree of incoherence and number of sovereign debt crises, 1980-2010



Note: “Crisis” is counted as a year in which sovereign debt crisis is observed. See <http://www.reinhartandrogoff.com/data/browse-by-topic/topics/7/> (accessed on March 5, 2015).

e) Degree of incoherence and GDP growth, 1980-2010



5.7. Closing remarks for chapter 5

This chapter contributes to our understanding of federal fiscal constitutions and the interaction between constitutional arrangements. It shows convincingly that federal fiscal constitutions vary in the degree of constitutionally guaranteed decentralization, with two prevailing types of fiscal constitutions being the most common: decentralized and integrated fiscal constitutions. A crucial contribution of this chapter is to demonstrate that fiscal constitutions vary in terms of coherence (or alignment) of institutional arrangements, where coherent (aligned) fiscal constitutions suggest that institutional arrangements “fits well” together. Preliminary evidence shows that alignment (or coherence) of fiscal constitutions is associated with selected economic and fiscal outcomes. 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. This chapter also derived some very tentative policy implications in the context of the European fiscal union.

Appendix 5.1. List of the main laws used for coding

Argentina:

- Argentina's Constitution of 1853, Reinstated in 1983
- Law 12.139
- Law 12.143
- Law 12.147
- Law 12.956
- Law 14.060
- Law 14.788
- Law 14.788
- Law 25.570
- Law N 20.221
- Law N 23.548
- The 1992 Fiscal Pact
- The 1993 Fiscal Pact

Austria:

- Austria's Constitution of 1920, Reinstated in 1945
- Financial Constitutional Law of 1922, Reinstated in 1948
- Federal Financial Settlement Law of 1959 and subsequent
- The Stability Pact of 1999 and subsequent

Australia:

- Australia's Constitution of 1901
- Commonwealth Grants Commission Act of 1976

Belgium:

- Belgium's Constitution of 1831
- The Special Law for the Reform of the Institutions of 1980
- The Special Financing Law of 1988

Brazil:

- Brazil's Constitution of 1988
- Camata Law of 1995
- Kandir Law of 1996

The Fiscal Responsibility Law of 2000

Canada:

Canada's Constitution of 1867

The Federal-Provincial Fiscal Arrangements Act (multiple years)

Germany:

German Federal Republic's Constitution of 1949

Haushaltsgrundsätzegesetz of 1969

India:

India's Constitution of 1949

Fiscal Responsibility and Budget Management Law of 2003

Italy:

Italy's Constitution of 1947

The Internal Stability Pact of 1999

Mexico:

Mexico's Constitution of 1917

Ley de Coordinacion Fiscal of 1967, Convenios de Adhesion

South Africa:

South Africa's Constitution of 1996

Borrowing Powers of Provincial Government Act of 1996

Financial and Fiscal Commission Act of 1997

Public Finance Management Act of 1999

Provincial Tax Regulation and Processes Act of 2001

Municipal System Act of 2003

Russia:

Russia's Constitution of 1993

The Tax Code of 1998

The Budget Code of 1998

The Federal Law N184 on General Principles of the Organization of Government in

Subjects of the Federation

Presidential Decree N848

Presidential Decree N1602

The Federal Law N122 on Amendments to Several Laws

Spain:

Spain's Constitution of 1978

Ley Organica de las Comunidades Autonomas 8/1980

Ley Organica 1/1989

Ley Organica 3/1996

Ley Organica 10/1998

Ley Organica 5/2001

Ley Organica 7/2001

Ley Organica 3/2009

Ley Organica 2/2012

Ley Organica 4/2012

Switzerland:

Switzerland's Constitution of 1848

Switzerland's Constitution of 1874

Switzerland's Constitution of 1999

The Federal Tax Harmonization Act of 1990

United States of America:

United States of America's Constitution of 1789

Appendix 5.2. List of experts

ARG: **Sebastian Saiegh**, University of California
AUS: **Jeff Petchey**, Curtin University
AUT: **Erich Thöni**, University of Innsbruck
BEL: **Geert Jennes and Damiaan Persyn**, Leuven University
BRA: **Carlos Pereira**, School of Public and Business Administration
CAN: **Richard Bird**, University of Toronto
GER: **Stefan Voigt**, University of Hamburg
SPA: **Alberto Solé-Ollé**, University of Barcelona
ITA: **Simona Scabrosetti**, University of Pavia
IND: **Govinda Rao**, Centre for Policy Research
MEX: **Alberto Diaz-Cayeros**, Stanford University
RSA: **Bongani Khumalo**, Financial and Fiscal Commission
RUS: **Elena Jarocińska**, Pompeu Fabra
SWI: **Christoph Schaltegger**, University of Lucerne
USA: **Jonathan Rodden**, Stanford University

Appendix 5.3. Questionnaire

Questionnaire on federal fiscal constitutions

This questionnaire is part of on-going work of the OECD Network on Fiscal Relations across Government Levels

Expert information

NAME:

COUNTRY:

TELEPHONE NUMBER:

EMAIL ADDRESS:

For additional questions and to return the questionnaire and any accompanying documents, please contact Hansjörg Blöchliger (Hansjoerg.Bloechliger@oecd.org) and Jarosław Kantorowicz (jaroslaw.kantorowicz@edle-phd.eu).

OVERVIEW AND INSTRUCTIONS

1. This questionnaire asks for information about the current state of the federal fiscal constitution and its historical evolution. Fiscal constitution refers to a country-specific set of rules and regulations, which guide decision making in the area of fiscal policy and particularly in fiscal relations between the federal and state levels of government. This questionnaire is divided into three parts:

- Part 1 asks about the current state of the federal fiscal constitution;
- Part 2 asks about the historical evolution of and amendments to the federal fiscal constitution;
- Part 3 asks about a qualitative assessment of the state and evolution of the federal fiscal constitution.

2. Part 1 comprises 18 questions. Each question is devoted to one building block of the federal fiscal constitution. In this section most of the questions can be answered by ticking a box. However, below each question space is left, so that you can provide additional information. Part 2 asks you to provide information on reforms (amendments) of the federal fiscal constitution in chronological order together with a short description of the reform. Finally, Part 3 is complementary to the previous sections, inviting you to present a qualitative assessment of the current thrust of the federal fiscal constitution, in particular the main features and long-term trends.

3. The focus of this questionnaire is on the *constitutional* framework and constitutional change/reform/amendment. Many fundamental reforms of the federal fiscal constitution occurred at the post-constitutional level (e.g. through judicial decisions and special fiscal legislation), however. Therefore, key post-constitutional reforms should also be explicitly mentioned in your responses.

4. The questionnaire usually asks about the relationship between the *federal* and the *state* level (i.e. the level immediately below the federal level, also called the regional level, provincial level etc.). If the federal constitution also says something about the *local* level (municipalities etc.), please provide this information in the comments section of each question. This is important when the federal rules for states and for local governments differ widely.

5. Please return the questionnaire by **March 31, 2014**.

Part 1: Current fiscal constitution

1. Tax assignment

The constitutional division of taxing powers between the federal and state levels is at the core of the federal setting and fiscal sovereignty of jurisdictions. Please fill the following table on the constitutional rulings about tax powers. Several answers can be ticked.

	Please tick if appropriate
The federal constitution allows the federal level to legislate on any tax:	<input type="checkbox"/>
The federal constitution allows the federal level to legislate <u>only</u> on taxes listed in the constitution:	<input type="checkbox"/>
The federal constitution sets minimum and/or maximum tax rates for federal taxes:	<input type="checkbox"/>
<ul style="list-style-type: none"> If so, please specify: 	

Please fill the following table depending on what the federal constitution says about specific taxes. For each tax category only one answer can be ticked.

	The federal constitution says that only the <i>federal</i> level can levy this tax	The federal constitution says that the <i>federal</i> level is allowed to levy this tax	The federal constitution says that the <i>federal</i> level <i>cannot</i> levy this tax
Personal income tax	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Corporate income tax	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Value added tax/retail sales tax	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Property tax	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Natural resource tax	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Social security contribution	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Please fill the following table on the constitutional rulings about state tax autonomy. Several answers can be ticked.

	Please tick if appropriate
The federal constitution allows the state level to legislate on any tax, if not explicitly prohibited by the federal constitution:	<input type="checkbox"/>
The federal constitution allows the state level to legislate <u>only</u> on taxes listed in the federal constitution:	<input type="checkbox"/>
The federal constitution sets minimum and/or maximum tax rates for state taxes:	<input type="checkbox"/>
<ul style="list-style-type: none"> If so, please specify: 	

Please fill the following table depending on what the federal constitution says about specific taxes. For each tax category only one answer can be ticked.

	The federal constitution says that only the <i>state</i> level can levy this tax	The federal constitution says that the <i>state</i> level is allowed to levy this tax	The federal constitution says that the <i>state</i> level cannot levy this tax
Personal income tax	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Corporate income tax	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Value added tax/retail sales tax	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Property tax	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Natural resource tax	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Social security contribution	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

In the following box please give any additional comments regarding the division of taxing power between the federal and state levels (e.g. describe some country-specific nuances or mention other important taxes). Also, please refer to any post-constitutional legislation which determines the division of taxing powers.

Comments (if any):

2. Tax sharing

Some taxes are not assigned exclusively to one level of government but shared among them. Please fill the following table on tax sharing mechanisms depending on which answer is appropriate. Several answers can be ticked.

	Please tick if appropriate
The federal constitution says nothing about tax sharing between the federal and the state level:	<input type="checkbox"/>
The federal constitution says that the federal level shares taxes with the state level:	<input type="checkbox"/>
<ul style="list-style-type: none">If so, please specify which taxes are allowed to be shared:	
The federal constitution provides some guidelines for tax sharing formula:	<input type="checkbox"/>
The federal constitution specifies the body responsible for setting and adjusting tax sharing formula:	<input type="checkbox"/>
<ul style="list-style-type: none">If so, please specify (e.g. whether the body is independent, intergovernmental, etc.):	
The body responsible for setting and adjusting tax sharing formula is established by post-constitutional legislation:	<input type="checkbox"/>
<ul style="list-style-type: none">If so, please specify (e.g. whether the body is independent, intergovernmental, etc.):	

In the following box please give any additional comments on tax sharing mechanism. Particularly, please refer to any post-constitutional legislation which regulates the tax sharing between federal and state levels.

Comments (if any):

3. Spending assignment

Spending powers concerns the division of power in various policy/spending areas. Please fill the following table depending on which constitutional power is given to the federal level. Only one answer can be ticked.

	Please tick if appropriate
The federal constitution allows the federal level to legislate/spend on any policy area:	<input type="checkbox"/>
The federal constitution allows the federal level to legislate/spend only on policy areas listed in the constitution:	<input type="checkbox"/>

Please fill the following table depending on which statements the federal constitution makes about a specific policy area. The policy areas correspond to the Classification of Functions of Government (COFOG) of the OECD National Accounts. For each policy area only one answer can be ticked. If the federal constitution says nothing about a policy area, then no box should be ticked

		The federal constitution says that <i>only</i> the federal level can legislate/spend on a given policy area:	The federal constitution says that the <i>federal</i> level should or must legislate/spend on a given policy area:	The federal Constitution says that the <i>federal</i> level <i>cannot</i> legislate/spend on a given policy area:
National defense		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Public order and safety	Police services	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Law courts	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Prisons	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Economic affairs: transport		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Environmental protection		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Housing development		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Health	Outpatient services	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Hospital services	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Education	Primary education	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Secondary education	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Tertiary education	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Protection	Sickness and disability	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	Old age	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Family and children	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Unemployment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Please fill the following table depending on which constitutional power is given to the state level. Only one answer can be ticked.

	Please tick if appropriate
The federal constitution allows the state level to legislate/spend on any policy area:	<input type="checkbox"/>
The federal constitution allows the state level to legislate/spend only on policy areas listed in the constitution:	<input type="checkbox"/>

Please fill the following table depending on what the federal constitution says about a specific policy area. For each policy area only one answer can be ticked. If the federal constitution says nothing about a policy area, then no box should be ticked.

		The federal constitution says that <i>only states</i> can legislate/spend on a given policy area:	The federal constitution says that <i>states should or must</i> legislate/spend on a given policy area:	The federal constitution says that <i>states cannot</i> legislate/spend on a given policy area:
National defense		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Public order and safety	Police services	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Law courts	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Prisons	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Economic affairs: transport		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Environmental protection		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Housing development		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Health	Outpatient services	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Hospital services	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Education	Primary education	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Secondary education	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	Tertiary education	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Social protection	Sickness and disability	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Old age	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Family and children	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Unemployment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

In the following box please give any additional comments regarding the division of spending powers between the federal and state levels (e.g. describe some country specific nuances or mention other important categories of spending). Also, please refer to any post-constitutional legislation which determines the division of spending powers.

Comments (if any):

4. Fiscal equalization

Fiscal equalization deals with regional fiscal equity concerns and its main goal is to achieve redistributive goals. Please fill the following table on fiscal equalization mechanisms depending on which answer is appropriate. Several answers can be ticked.

	Please tick if appropriate
The federal constitution says nothing about regional redistribution or fiscal equalisation:	<input type="checkbox"/>
<i>Weak equalization:</i> The federal constitution says that there is a regional equity objective and that fiscal equalization should reduce regional inequalities:	<input type="checkbox"/>
<i>Moderate equalization:</i> The federal constitution says that there is a regional equity objective and that fiscal equalization should reduce regional inequity considerably or contribute to “similar” regional conditions:	<input type="checkbox"/>
<i>Strong equalization:</i> The federal constitution says that there is a regional equity objective and that fiscal equalization should reduce regional inequity fully or contribute to “equal” regional conditions.	<input type="checkbox"/>
The federal constitution provides some guidelines regarding the way fiscal equalization should be pursued:	<input type="checkbox"/>
<ul style="list-style-type: none"> If so, please specify (e.g. expenditure need, cost criterion, tax capacity): 	
The federal constitution specifies the body responsible for setting and adjusting fiscal	<input type="checkbox"/>

equalization formula:	
<ul style="list-style-type: none"> If so, please specify (e.g. whether the body is independent, intergovernmental, etc.): 	
The body responsible for setting and adjusting fiscal equalization formula is established by post-constitutional legislation:	<input type="checkbox"/>
<ul style="list-style-type: none"> If so, please specify (e.g. whether the body is independent, intergovernmental, etc.): 	

In the following box please give any additional comments on fiscal equalization mechanisms. Particularly, please refer to any post-constitutional legislation which determines the fiscal equalization system.

Comments (if any):

5. Stabilization policies

Most federal constitutions contain an article on stabilization, either for the country or parts of it (risk sharing across states). Please fill the following table on stabilization and risk sharing depending on which answer is appropriate. Several answers can be ticked.

	Please tick if appropriate
The federal constitution says nothing about stabilization policies, either in general or for parts of the country:	<input type="checkbox"/>
The federal constitution says that the federal level <i>should</i> provide for stabilization, either in general or for parts of the country:	<input type="checkbox"/>
The federal constitution says that the federal level <i>must</i> provide for stabilization, either general or for parts of the country:	<input type="checkbox"/>
The federal constitution specifies the way federal stabilization policy should be pursued:	<input type="checkbox"/>
<ul style="list-style-type: none"> If so, please specify (e.g. rainy day funds, revenues from higher levels of government that protect states from cyclical fluctuations of revenue sources or of expenditure, special financial support, etc.): 	
Stabilization policy is specified at the post-constitutional level:	<input type="checkbox"/>
<ul style="list-style-type: none"> If so, please specify (e.g. rainy day funds, revenues from higher levels of government that protect states from cyclical fluctuations of revenue sources or of expenditure, special financial support, etc.): 	

In the following box please describe any ad hoc mechanisms used by the federal level in the past to deal with general and idiosyncratic shocks at the state level.

Please insert text:

In the following box please give any additional comments on stabilization policy and intergovernmental risk sharing. Particularly, please refer to any post-constitutional legislation which determines the intergovernmental risk sharing mechanism.

Comments (if any):

6. Intergovernmental grants

The federal constitution may provide for the financial support of state activities/policies (other than for stabilization purposes). We ask this question in order to gauge the constitutional background of intergovernmental transfers. In the following table, only one answer can be ticked.

	Please tick if appropriate
The federal constitution says nothing about federal level support (assistance, granting, etc.) of state level activities/policies:	<input type="checkbox"/>
The federal constitution contains separate articles saying that the federal level “supports” (assists, grants, etc.) or “may support” (may assist, may grant, etc.) states’ activities:	<input type="checkbox"/>
<ul style="list-style-type: none"> If so, please specify how often the constitution mentions that the federal level “supports” (assists, grants, etc.) or “may support” (may assist, may grant, etc.) states’ activities, and – if possible – which activities/policies are supported: 	

In the following box please give any additional comments on intergovernmental grants. Particularly, please refer to any post-constitutional legislation which determines the intergovernmental grants.

Comments (if any):

7. Numerical fiscal rules

Numerical fiscal rules limit fiscal discretion at all government levels. Fiscal rules can be grouped into four types: a) Deficit/budget balance rules, b) Revenue rules (e.g. a rule limiting tax rates), c) Spending rules (e.g. a rule limiting spending or spending growth), d) Debt/borrowing rules. The below table asks how each of the four types of fiscal rules is constitutionally anchored..

	Please tick if appropriate			
	<i>Deficit/ budget balance rules</i>	<i>Revenue rules</i>	<i>Expenditure rules</i>	<i>Debt/ borrowing rules</i>
<i>Constitutional background of the rules</i>				
The federal constitution does not specify any numerical rules:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The federal constitution specifies numerical rules only for the federal level:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The federal constitution specifies numerical rules for the federal and the state level:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The federal constitution specifies numerical rules for the federal, state and local level (i.e. rules covering the whole general government):	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The federal constitution specifies numerical rules only for the state level:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The federal constitution specifies rules only for the local level:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Post-constitutional background of the rules</i>				
Post-constitutional legislation specifies numerical rules only for the federal level:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Post-constitutional legislation specifies numerical rules for the federal and the state level:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Post-constitutional legislation specifies numerical rules for the federal, the state and the local level (i.e. rules covering the whole general government):	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Post-constitutional legislation specifies numerical rules only for the state level:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Post-constitutional legislation specifies rules only for the local level:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Status of the rules for the state level:</i>				
Rules for the state level are imposed by the federal level:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Rules for the state level are negotiated between levels of government:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Rules for the state level are self-imposed:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Status of the local rules:</i>				

Rules for the local level are imposed by the federal level:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Rules for the local level are imposed by the state level:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Rules for the local level are negotiated between levels of government:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Rules for the local level are self-imposed:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Corrective and sanctioning actions (state rules):</i>				
In the case of failure to meet state rules, states take corrective/sanctioning actions:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In the case of failure to meet state rules, the federal level takes corrective/sanctioning actions:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In the case of failure to meet state rules, an independent body takes corrective/sanctioning actions:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Corrective and sanctioning actions (local rules):</i>				
In the case of failure to meet local rules, the local level takes corrective/sanctioning actions:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In the case of failure to meet local rules, the state level takes corrective/sanctioning actions:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In the case of failure to meet local rules, the federal level takes corrective/sanctioning actions:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In the case of failure to meet local rules, an independent body takes corrective/sanctioning actions:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

In the following box please assess in a few sentences the credibility of the numerical fiscal rules operating at the federal, state and local levels. Please refer to any episodes when the numerical fiscal rules were explicitly or tacitly violated.

<i>Please insert text:</i>

In the following box please give in a few sentences any additional comments on numerical fiscal rules. Please make a distinction between the rules enshrined in the constitution or post-constitutional legislation.

<i>Comments (if any):</i>

8. No-bailout rules

To curb moral hazard at the state level, federal fiscal constitutions may include clauses which preclude a federal bailout of states. Please fill the following table on no-bailout rules depending on which answer is appropriate. Several answers can be ticked.

	Please tick if appropriate
The federal constitution says nothing about federal level helping out states in distress:	<input type="checkbox"/>
The federal constitution says that the federal level is allowed to bailout states in distress:	<input type="checkbox"/>
The federal constitution says the federal level must bailout states in distress:	<input type="checkbox"/>
<ul style="list-style-type: none"> If so, please specify the procedure and consequence of federal bailout (e.g. temporary constraint of fiscal sovereignty of the states): 	
The federal constitution forbids a federal bailout (i.e. it provides for an explicit no-bailout rule):	<input type="checkbox"/>
There have been bailouts of states by the federal level:	<input type="checkbox"/>
There were cases of state level defaults (i.e. cases of state bankruptcy):	<input type="checkbox"/>

In the following box please assess the credibility of a no-bailout rule. Please refer to any events which explicitly or tacitly led to the violation of a no-bailout rule. Also please give any additional comments on no-bailout rules.

<i>Please insert text:</i>

9. Procedural fiscal rules and budget frameworks

Procedural fiscal rules guide the preparation, implementation and assessment of the federal and state budgets. Please fill the following table on the procedural fiscal rules governing the federal budget depending on which answer is appropriate. Several answers can be ticked.

	Please tick if appropriate
The federal constitution says that the first chamber of parliament can initiate amendments in the approval stage of the federal budget:	<input type="checkbox"/>
The federal constitution says that the second chamber of parliament can initiate amendments in the approval stage of the federal budget:	<input type="checkbox"/>
The federal constitution imposes restraints (amendment rules) on the first and/or	<input type="checkbox"/>

second chamber of parliament in the approval stage of the federal budget:	
<ul style="list-style-type: none"> If so, please specify those restraints: 	
The federal constitution gives to one minister (Head of Government or Treasury Minister) strong agenda setting powers, or veto power over the spending ministers in the budget preparation:	<input type="checkbox"/>
The federal constitution requires that the federal level establishes and complies with a medium-term budgetary framework:	<input type="checkbox"/>
The federal constitution requires that the execution of the federal budget is assessed by an independent supreme audit institution:	<input type="checkbox"/>

Please fill the following table on the procedural fiscal rules governing the state budget depending on which answer is appropriate. Several answers can be ticked.

	Please tick if appropriate
The federal constitution says nothing about federal involvement in the budget process at the state level:	<input type="checkbox"/>
The federal constitution allows federal involvement in the budget process at the state level:	<input type="checkbox"/>
The federal constitution forbids federal involvement in the budget process at the state level (i.e. federal and state levels are autonomous in the management of their respective budgets):	<input type="checkbox"/>
The federal constitution requires that states establish and comply with a medium-term budgetary framework:	<input type="checkbox"/>
The federal constitution requires that states coordinate their medium-term objectives:	<input type="checkbox"/>
<ul style="list-style-type: none"> If so, how is coordination achieved (e.g. in a consultative manner, through an independent body, etc.): 	
The federal constitution requires that states use the same financial reporting standards as federal level:	<input type="checkbox"/>
The federal constitution stipulates that the federal supreme audit institution has a mandate to audit state budgets:	<input type="checkbox"/>

In the following box please give any additional comments on procedural fiscal rules operating at the federal and state levels. Please make a distinction between the rules enshrined in the constitution and post-constitutional legislation.

Comments (if any):

10. State borrowing and debt

Federal constitutions may include instruments restraining or prohibiting state borrowing and debt issuance. Please fill the following table on borrowing and debt restraints depending on which answer is appropriate. Several answers can be ticked. Please make sure that your answers are coherent with your answers to question 7(d) on debt/borrowing rules.

	Please tick if appropriate
The federal constitution places no restrictions on state level borrowing:	<input type="checkbox"/>
The federal constitution prohibits borrowing by states:	<input type="checkbox"/>
The federal constitution prohibits borrowing abroad by states:	<input type="checkbox"/>
The federal constitution requires authorizing state level borrowing by the federal level:	<input type="checkbox"/>
The federal constitution allows state level borrowing but imposes a golden rule:	<input type="checkbox"/>
The federal constitution allows state level borrowing only from limited (specific) lender institutions:	<input type="checkbox"/>
The federal constitution allows state level borrowing from the federal level:	<input type="checkbox"/>
The federal constitution says that the federal level guarantees states' debt:	<input type="checkbox"/>
The federal constitution allows mutualization of states' debt:	<input type="checkbox"/>
<ul style="list-style-type: none"> • If so, please specify how mutualization is achieved (e.g. through the issuance of joint debt, responsibility funds, etc.): 	
The federal constitution assumes that states can declare bankruptcy:	<input type="checkbox"/>
The federal constitution forbids that states can go bankrupt:	<input type="checkbox"/>
The federal constitution requires the establishment of insolvency frameworks or other forms of orderly defaults for states:	<input type="checkbox"/>

In the following box please give any additional comments on state borrowing and debt restraints. Particularly, please refer to any post-constitutional legislation which influences borrowing and debt strategies at the state level.

Comments (if any):

11. Independent fiscal and arms-length agencies

Independent fiscal agencies (e.g. fiscal councils) provide independent analysis of fiscal policy developments and issue normative statements and recommendations on public finance stance. Please fill the following table on independent fiscal agencies depending on which answer is appropriate. Several answers can be ticked.

	Please tick if appropriate
The federal constitution says nothing about an independent fiscal agency (Fiscal council or similar entity):	<input type="checkbox"/>
The federal constitution allows to establish an independent fiscal agency (fiscal council or similar entity):	<input type="checkbox"/>
The federal constitution requires the establishment and functioning of an independent fiscal agency (fiscal council or similar entity):	<input type="checkbox"/>
<ul style="list-style-type: none"> • If so, please specify (e.g. composition, role of the agency, etc.): 	
A federal "fiscal council" has power to assess states' fiscal policy:	<input type="checkbox"/>
A federal "fiscal council" is not allowed to assess states' fiscal stance:	<input type="checkbox"/>
State constitutions require the establishment of independent fiscal agencies (fiscal council or similar entity):	<input type="checkbox"/>
<ul style="list-style-type: none"> • If so, please specify (e.g. composition, role of the agency, etc.): 	

In the following box please give any additional comments on independent fiscal institutions. Particularly, please refer to any post-constitutional legislation which set up independent fiscal agencies. Please specify whether they have any mandate over the state level.

<i>Comments (if any):</i>

12. Central bank

Although not directly part of the fiscal constitution, monetary policy may affect fiscal policy. Here we would like to assess the role of the central bank in areas that may have consequences for fiscal policy. Please fill the following table on central banks. Several answers can be ticked. For federal countries in the Euro area, please refer to the power of the national Central Bank.

	Please tick if appropriate
The federal constitution establishes an independent central bank:	<input type="checkbox"/>

The federal constitution stipulates that the focus of the central bank is price stability:	<input type="checkbox"/>
The federal constitution forbids to monetize public debt:	<input type="checkbox"/>
The federal constitution precludes the central bank from purchasing federal and states bonds/securities in the primary market:	<input type="checkbox"/>
The federal constitution precludes central bank from purchasing federal and states bonds/securities in the secondary market:	<input type="checkbox"/>

In the following box please give any additional comments regarding the central bank and its possible influence on the fiscal policy dynamics at the federal and state levels.

<i>Comments (if any):</i>

13. Banking system and financial regulation

Banking regulations might shape fiscal policy outcomes in a federal setting. Please fill the following table on banking system regulations depending on which answer is appropriate. Several answers can be ticked.

	Please tick if appropriate
The federal constitution says that the banking system is primarily the responsibility of the federal level (in other words the federation is a banking union):	<input type="checkbox"/>
The federal constitution precludes states from owning banks and other financial institutions:	<input type="checkbox"/>
States can own banks and other financial institutions but there are special federal constraints on state level borrowing from these institutions:	<input type="checkbox"/>

Please describe mechanisms used by the federal level in the past to deal with the banking and financial crises at the state level.

<i>Please insert text:</i>

In the following box please give any additional comments on the banking and financial regulation, which might be relevant for fiscal policy dynamics across government levels.

<i>Comments (if any):</i>

14. Supreme/constitutional court

Supreme/constitutional courts can be an important player in interpreting or amending the federal constitution. Please fill the below table on the supreme/constitutional court. Several answers can be ticked.

	Please tick if appropriate
<i>Court's prerogatives:</i>	
The federal constitution says that an independent supreme/constitutional court is responsible for constitutional adjudication:	<input type="checkbox"/>
The federal constitution precludes the supreme/constitutional court from adjudicating on the validity of federal laws:	<input type="checkbox"/>
The federal constitution precludes the supreme/constitutional court from adjudicating on the validity of state laws:	<input type="checkbox"/>
<i>Right to initiative:</i>	
The federal constitution says that states can initiate a petition to the supreme/constitutional court:	<input type="checkbox"/>
The federal constitution says that the first chamber of parliament can initiate a petition to the supreme/constitutional court:	<input type="checkbox"/>
The federal constitution says that the second chamber of parliament can initiate a petition to the supreme/constitutional court:	<input type="checkbox"/>
<ul style="list-style-type: none"> • Please specify all other bodies who can initiate a petition to the supreme/constitutional court: 	
<i>Timing of the constitutional review:</i>	
The federal constitution says that constitutional review can occur only before the law is promulgated (<i>ex-ante</i> constitutional review):	<input type="checkbox"/>
The federal constitution says that constitutional review can occur only after the law is promulgated (<i>ex-post</i> constitutional review):	<input type="checkbox"/>
The federal constitution says that constitutional review can occur before and after the law is promulgated:	<input type="checkbox"/>
<i>Conclusiveness of the judicial decisions:</i>	
The federal constitution stipulates that an unconstitutional legislation is automatically void:	<input type="checkbox"/>
The federal constitution stipulates that an unconstitutional legislation needs to be revised and amended by the parliament:	<input type="checkbox"/>

The federal constitution stipulates that the first chamber of parliament can invalidate the decision of the supreme/constitutional court:	<input type="checkbox"/>
The federal constitution stipulates that the second chamber of parliament can invalidate the decision of the supreme/constitutional court:	<input type="checkbox"/>
<i>Judicial appointments:</i>	
The federal constitution says that states participate in appointing judges to the supreme/constitutional court:	<input type="checkbox"/>
The federal constitution says that the first chamber of parliament participates in appointing judges to the supreme/constitutional court:	<input type="checkbox"/>
The federal constitution says that the second chamber of parliament participates in appointing judges to the supreme/constitutional court:	<input type="checkbox"/>
<ul style="list-style-type: none"> Please specify all other bodies involved in appointing judges to the supreme/constitutional court: 	

In the following box please give any additional comments on the supreme/constitutional court setting, which might be relevant in shaping intergovernmental relations.

<i>Comments (if any):</i>

15. Political institutions: bicameralism

Legislative bicameralism is considered integral to federalism and part of intergovernmental power arrangements. Please fill the following table on bicameralism. Several answers can be ticked.

	Please tick if appropriate
<i>Regional representation in the second chamber of parliament:</i>	
The federal constitution stipulates that the second chamber of parliament is the representation of the states:	<input type="checkbox"/>
The federal constitution stipulates that each state has the same number of seats in the second chamber:	<input type="checkbox"/>
The federal constitution assumes that the regional representation in the second chamber of parliament is partially proportional to the population in each state:	<input type="checkbox"/>
The federal constitution determines that members to the second chamber of parliament are chosen in direct elections:	<input type="checkbox"/>
The federal constitution determines that members to the second chamber of	<input type="checkbox"/>

parliament are chosen by state legislatures/executives:	
<i>Regional interests in the second chamber of parliament:</i>	
Members of the second chamber of parliament follow and comply with the instructions of state legislatures/executives:	<input type="checkbox"/>
Party discipline in the second chamber of parliament overrides state representation:	<input type="checkbox"/>
<i>Institutional strength of the second chamber vis-à-vis the first chamber:</i>	
The federal constitution says that the second chamber of parliament has full legislative power (equivalent to the first chamber of parliament), and hence has a veto power over all legislation:	<input type="checkbox"/>
The federal constitution says that the second chamber of parliament has a veto power only over federal legislation that impacts state level:	<input type="checkbox"/>
<i>Coordination mechanisms between the chambers:</i>	
There are some coordination mechanisms (e.g. a <i>navette</i> system) that resolve intercameral differences:	<input type="checkbox"/>
<ul style="list-style-type: none"> If so, please specify: 	

In the following box please give any additional comments on bicameral legislature.

<i>Comments (if any):</i>

16. Political institutions: direct democracy

Some federal constitutions provide rules for direct participation of citizens in the legislative process. Please fill the following table on direct democracy depending on which answer is appropriate. Both answers can be ticked.

	Please tick if appropriate
The federal constitution allows to launch a national referendum on any law voted by the parliament:	<input type="checkbox"/>
The <i>federal</i> constitution allows to launch referenda on the national budget (federal fiscal referendum):	<input type="checkbox"/>
<i>State</i> constitutions allow to launch referenda on the state budget (state fiscal referendum):	<input type="checkbox"/>

• If yes, please specify:	
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In the following box please give any additional comments on direct democracy mechanisms, which might be relevant in shaping intergovernmental relations and/or fiscal policy at the federal and state level.

Comments (if any):

17. Political institutions: qualified majorities in fiscal decisions

This section asks about any qualified majorities for fiscal decisions at the federal level. Please fill the following table on qualified majority voting depending on which answer is appropriate.

	Please tick if appropriate
The federal constitution requires a qualified majority voting in case of federal fiscal/financial/budgetary laws:	<input type="checkbox"/>
• If so, please specify:	

In the following box please give any additional comments on qualified majority voting in case of some fiscal/financial/budgetary laws. Particularly, please refer to any post-constitutional legislation which obliged qualified majorities for fiscal decisions.

Comments (if any):

18. Political institutions: constitutional amendments

Each constitution contains rules on how to amend itself. Please fill the following table on constitutional amendment depending on which answer is appropriate. Several answers can be ticked.

	Please tick if appropriate
<i>Rights to propose a constitutional amendment:</i>	
The federal constitution stipulates that both chambers (first and second) have equal rights in proposing a constitutional amendment:	<input type="checkbox"/>
The federal constitution says that the first chamber of parliament has more rights in proposing a constitutional amendment than the second chamber:	<input type="checkbox"/>
The federal constitution says that the second chamber of parliament has more rights in proposing a constitutional amendment than the first chamber:	<input type="checkbox"/>

The federal constitution says that the citizens can ask for constitutional amendment (popular initiative):	<input type="checkbox"/>
<i>Qualified majorities and referenda to approve constitutional amendments:</i>	
The federal constitution requires a qualified majority in the first chamber of parliament to approve constitutional amendment:	<input type="checkbox"/>
• If so, please specify required qualified majority:	
The federal constitution requires a qualified majority in the second chamber of parliament to approve constitutional amendment:	<input type="checkbox"/>
• If so, please specify required qualified majority:	
The federal constitution requires popular referendum to approve constitutional amendment:	<input type="checkbox"/>
The federal constitution requires <i>double majority</i> (of people <i>and</i> states) in a popular referendum to approve constitutional amendment:	<input type="checkbox"/>
<i>Unamendable sections of the federal constitution:</i>	
Certain parts of the federal constitution are excluded from amendment:	<input type="checkbox"/>
• If so, please specify which parts:	

In the following box please give any additional comments on the constitutional amendment process.

<i>Comments (if any):</i>

Part 2: Historical evolution of and amendments of the fiscal constitution

This part of the questionnaire aims at tracking the history of the federal fiscal constitutions. To this end, we ask you to list and very briefly describe all changes/reforms/amendments of the fiscal constitution that occurred since the establishment of the federation or federal constitution.

In tracking the evolution of the fiscal constitution please refer to all changes/reforms/amendments in the building blocks (18 elements), which are enumerated in Part 1 of this questionnaire. Please be aware that some changes/reforms/amendments could also occur at the post-constitutional level (as opposed to pure constitutional change), for instance through the decision of the constitutional court or the enactment of special fiscal legislation. Please use as many rows in the table as needed and please do not feel restrained by the current number of rows. Each row should correspond to a single constitutional change/reform/amendment. Please start listing the reforms in a chronological order (from the newest to the oldest; the latter should be the founding date of the constitution).

Year of constitutional/ post-constitutional change	Type of change (building block)	Please describe in a few words the change and, if possible, explain why it occurred

Part 3: Qualitative assessment of the fiscal constitution

This third part of the questionnaire asks you to deliver a qualitative assessment of the state and evolution of the federal fiscal constitution. The purpose of this assessment is twofold. *First*, to get an impression of the main thrust of the fiscal constitution and the way the different building blocks work together. *Second*, to get an impression of the long-term and main trends of the fiscal constitution, by illustrating, e.g., a secular trend towards fiscal centralization or decentralization; stricter fiscal rules; stronger interference of federal level in state budget processes; stronger constitutional anchoring of interregional redistribution; less power of the second chamber; a “centralist” drift of the constitutional court, etc.

The report should be succinct and if possible count between 2000 and 4000 words, but may be longer if you wish to provide more information. Your report should be in a separate document.

Optional question: In light of the evolution of the fiscal constitution in your country, you may describe what potential lessons the European Union should take into account when developing its own fiscal constitution.

END OF THE QUESTIONNAIRE

Appendix 5.4. Coding for institutional indicators

	Weight	Coding
1. Autonomy		
<i>A higher value of the indicator represents larger state fiscal autonomy</i>		
1.1. Tax autonomy		
For each tax category:		
The federal constitution says that only the state level can levy a tax	½	1
The federal constitution says that the state level is allowed to levy a tax		0.66
The federal constitution says nothing about the state level levying a tax		0.33
The federal constitution says that the state level cannot levy a tax		0
The federal constitution says that only the federal level can levy a tax	½	0
The federal constitution says that the federal level is allowed to levy a tax		0.33
The federal constitution says nothing about the federal level levying a tax		0.66
The federal constitution says that the federal level cannot levy a tax		1
Tax categories are weighted by the averages of tax revenue shares across OECD countries to reflect the importance of certain taxes.		
Tax autonomy indicator is further increased by 0.05 if the constitution provides for the principle of subsidiarity and by another 0.05 if the states are residual lawmakers.		+0.05
1.2. Spending autonomy		
For each policy area:		
The federal constitution says that only the state level can legislate/spend in a given policy area	½	1
The federal constitution says that the state level is allowed to legislate/spend in a given policy area		0.66
The federal constitution says nothing about the state level to legislate/spend in a given policy area		0.33
The federal constitution says that the state level cannot legislate/spend in a given policy area		0
The federal constitution says that only the federal level can legislate/spend in a given policy area	½	0
The federal constitution says that the federal level is allowed to legislate/spend in a given policy area		0.33
The federal constitution says nothing about the federal level to legislate/spend in a given policy area		0.66
The federal constitution says that the federal level cannot legislate/spend in a given policy area		1
Policy areas are weighted by the averages of expenditure shares in given policy areas across OECD countries to reflect the importance of certain policy areas.		
Spending autonomy indicator is increased by 0.05 if the constitution provides for the principle of subsidiarity and by another 0.05 if the states are residual lawmakers.		+0.05
1.3. Borrowing autonomy		
The federal constitution places no restrictions on state level borrowing		1

The federal constitution prohibits borrowing by states		0
For each positive answer subtract 0.2 from 1:		
The federal constitution prohibits borrowing abroad		-0.2
The federal constitution requires authorizing states' borrowing by federal level		-0.2
The federal constitution allows state level borrowing but imposes a golden rule		-0.2
The federal constitution imposes numerical constraints on states' debt and/or borrowing		-0.2
The federal constitution imposes constraints on borrowing from state-owned banks		-0.2
1.4. Budgeting autonomy		
The federal constitution forbids federal involvement in the budget process at the state level	½	1
The federal constitution allows federal involvement in the budget process at the state level		0
For each positive answer subtract 0.16 from 1:		
The federal constitution requires that states establish and comply with mid-term budgetary framework	½	-0.16
The federal constitution requires that states coordinate their mid-term budgetary objectives		-0.16
The federal constitution requires that states use the same financial reporting standards as federal level		-0.16
The federal constitution stipulates that the federal audit institution has a mandate to audit state budgets		-0.16
The federal level imposes numerical fiscal rules on state level		-0.16
In the case of failure to meet state/local rules, federal level takes corrective/sanctioning actions		-0.16
2. Responsibility		
<i>A higher value of the indicator represents larger state responsibility for their fiscal actions</i>		
2.1. Institutional anchoring and extent of fiscal equalization		
<i>Institutional anchoring of fiscal equalization</i>		
For each positive answer subtract 0.5 from 1:		
The constitution provides guidelines regarding the way fiscal equalization should be pursued	1/3	-0.5
The constitution specifies the body responsible for setting and adjusting fiscal equalization formulae		-0.5
No fiscal equalization	1/3	1
Fiscal equalization embedded in the secondary legislation		0.5
Fiscal equalization embedded in the federal constitution/organic law		0
<i>Extent of fiscal equalization</i>		
No fiscal equalization/weak equalization: fiscal equalization should reduce regional inequality	1/3	1
Moderate equalization: fiscal equalization should reduce regional inequity considerably		0.5
Strong equalization: fiscal equalization should reduce regional inequity fully		0
2.2. Institutional anchoring and extent of tax sharing		
<i>Institutional anchoring of tax sharing</i>		
For each positive answer subtract 0.5 from 1:		
	1/3	-0.5

<p>The federal constitution provides some guidelines for tax sharing formulae</p> <p>The federal constitution specifies the body responsible for setting and adjusting tax sharing formulae</p> <p>No tax sharing</p> <p>Tax sharing embedded in the secondary legislation</p> <p>Tax sharing embedded in the federal constitution/organic law</p> <p><i>Extent of tax sharing</i></p> <p>No tax is shared/weak tax sharing: Up to 5% of general government revenue</p> <p>Moderate tax sharing: up to 10% of general government revenue</p> <p>Strong tax sharing: more than 10% of general government revenue</p>	<p>1/3</p> <p>1/3</p>	<p>-0.5</p> <p>1</p> <p>0.5</p> <p>0</p> <p>1</p> <p>0.5</p> <p>0</p>
<p>2.3. Institutional anchoring of stabilization policy</p>		
<p>No stabilization</p> <p>Stabilization embedded in secondary legislation</p> <p>Stabilization embedded in the federal constitution/organic law</p> <p>The federal constitution says that the federal level must provide for stabilization</p> <p>The federal constitution says that the federal level should provide for stabilization</p> <p>The federal constitution does not require, neither allow stabilization</p>	<p>1/2</p> <p>1/2</p>	<p>1</p> <p>0.5</p> <p>0</p> <p>0</p> <p>0.5</p> <p>1</p>
<p>2.4. Intensity of intergovernmental grants</p>		
<p>No grants system</p> <p>Grants system embedded in the secondary legislation</p> <p>Grants system embedded in the federal constitution/organic law</p> <p><i>Intensity of grants</i></p> <p>No grants/weak grants system: Up to 5% of general government revenue</p> <p>Moderate grants system: up to 10% of general government revenue</p> <p>Strong grants system: more than 10% of general government revenue</p>	<p>1/2</p> <p>1/2</p>	<p>1</p> <p>0.5</p> <p>0</p> <p>1</p> <p>0.5</p> <p>0</p>
<p>2.5. Bailout exposure</p>		
<p>The federal constitution forbids a federal bailout</p> <p>The federal constitution says nothing about federal level helping out states in distress</p> <p>The federal constitution says that the federal level is allowed to bailout or must bailout states in distress</p> <p>There were no cases of bailout by the federal level</p> <p>There were cases where states or local governments were bailed-out by the federal level</p> <p>The federal constitution does not require that the federal level guarantees debt of the state level</p> <p>The federal constitution requires that the federal level guarantees debt of the state level</p>	<p>1/3</p> <p>1/3</p> <p>1/3</p>	<p>1</p> <p>0.5</p> <p>0</p> <p>1</p> <p>0</p> <p>1</p> <p>0</p>

2.6. Bankruptcy exposure		
The federal constitution assumes that states can declare bankruptcy	1/3	1
The federal constitution forbids that states can go bankrupt		0
There are insolvency frameworks or other forms of orderly defaults for the states	1/3	1
There are no insolvency frameworks and other forms of orderly defaults for the states		0
There were cases of state level bankruptcy	1/3	1
There were no cases of state bankruptcy		0
2.7. Numerical fiscal rules responsibility		
For each numerical fiscal rule:		
Rules for the state/local level are self-imposed or in case of local rules imposed by state level		1
Rules for the state/local level are negotiated between levels of government		0.5
Rules for the state/local level are imposed by the federal level		0
3. Co-determination		
<i>Higher value of indicator represents larger states' participation in federal decision-making</i>		
3.1. Co-determination through the second chamber		
The constitution says that the second chamber has full legislative power and full veto power	1/5	1
The constitution says that the second chamber has a veto power over federal laws that impact states		0.5
The constitution does not mention any veto power of the second chamber		0
The constitution says that members to the second chamber are chosen by state legislature/executive	1/5	1
The constitution says that member to the second chamber are chosen in universal elections		0.66
The constitution says that the members of the second chamber are appointed by non-regional bodies		0.33
The constitution does not assume state representation in the second chamber		0
Members of the second chamber of parliament follow the instructions of the state legislature/executive		
Members of the second chamber might follow the states interests/instructions	1/5	1
Member of the second chamber do not follow the instructions of state legislature/executive		0.5
		0
The constitution stipulates that each state has the same number of seats in the second chamber		
The constitution stipulates that the regional representation is partially proportional	1/5	1
The constitution stipulates no regional representation/party representation		0.5
		0
There are some coordination mechanisms for resolving intercameral differences and disputes		
There are no coordination mechanisms	1/5	1
		0
3.2. Co-determination through the constitutional court		

For each positive answer add 0.33: The constitution says that the second chamber or states appoint the judges to the constitutional court The constitution says that the states can initiate the petition to the court against the federal law The constitution says that the second chamber can initiate the petition to the court against the federal law		+0.33 +0.33 +0.33
3.3. Co-determination through the constitutional amendment For each positive answer add 0.25: The constitution says that the second chamber alone can propose constitutional amendment The constitution says that the states can propose constitutional amendment The constitution says that the second chamber needs to approve constitutional amendment The constitution says that the states need to approve constitutional amendment		+0.25 +0.25 +0.25 +0.25
3.4. Co-determination through the executive meetings Routine meetings between federal level and state level with authority to reach legally binding decisions Routine meetings between federal level and state level without legally binding authority No routine meetings between federal level and state level to negotiate policy		1 0.5 0
3.5. Co-determination through the intergovernmental transfers No fiscal equalization Fiscal equalization embedded in the secondary legislation Fiscal equalization embedded in the federal constitution/organic law No tax sharing Tax sharing embedded in the secondary legislation Tax sharing embedded in the federal constitution/organic law No stabilization Stabilization embedded in the secondary legislation Stabilization embedded in the federal constitution/organic law No grants system Grants system embedded in secondary legislation Grants system embedded in federal constitution/organic law	1/4 1/4 1/4 1/4	0 0.5 1 0 0.5 1 0 0.5 1 0 0.5 1
4. Strength of fiscal institutions <i>A higher value of the indicator represents stronger fiscal institutions</i>		
4.1. Strength of numerical fiscal rules For each numerical fiscal rule: Rules are enshrined in the federal constitution or organic law Rules are enshrined in the statutory laws No rules or they function as political agreements	1/4	1 0.5 0

Rules cover the general government (e.g. central and state level)	¼	1
Rules cover only the central, state or local government		0.5
No rules or they are not applied to general, central or sub-central governments		0
Rules are imposed by the federal level	¼	1
Rules are negotiated among levels of government		0.5
Rules are self-imposed by the state level		0
In the case of violation, the higher level government takes corrective actions	¼	1
In the case of violation, an independent body takes corrective actions		0.5
Rules are self-enforced		0
4.2. Strength of procedural fiscal rules		
The federal constitution gives to one minister strong agenda setting power or veto power over ministers	1/7	1
The federal constitution does not prescribe any special budgeting powers to one minister		0
The constitution imposes restraints on the first or second chamber in the approval stage of the budget	1/7	1
The federal constitution imposes no restraints on first and/or second chamber		0
The federal constitution requires that the federal level establishes and complies with MTBF	1/7	1
The federal constitution does not require to establish MTBF		0
The federal constitution requires that the execution of the federal budget is assessed by audit institution	1/7	1
The federal constitution does not mention any budget assessment by supreme audit institution		0
The federal constitution requires that states coordinate their mid-term budgetary objectives	1/7	1
The federal constitution does not require that states coordinate their mid-term budgetary objectives		0
The federal constitution requires that states use the same financial reporting standards as federal level	1/7	1
The federal constitution does not require states to use same financial reporting standards as federal level		0
The federal constitution stipulates that the federal audit institution has a mandate to audit state budgets	1/7	1
Federal constitution does not stipulate federal audit institution to have mandate to audit state budgets		0
4.3. Strength of the fiscal council		
The federal constitution requires the establishment and functioning of an independent fiscal council	1/3	1
The secondary law requires the establishment and functioning of an independent fiscal council		0.5
No fiscal council		0
Fiscal council assesses federal and state finance		

Fiscal council assesses only federal or state finance	1/3	1
No council/or it is not responsible for assessing stance of public finance		0.5
		0
Fiscal council is fully independent		
Fiscal council is partially independent	1/3	1
Fiscal council is not independent		0.5
		0
5. Stability of the fiscal constitution		
<i>Higher value of the indicator represents a more stable fiscal constitution</i>		
5.1. Degree of constitutional review		
The federal constitution does not preclude any laws from adjudicating on their validity	1/4	1
The federal constitution precludes adjudicating on the validity of some federal or state laws		0
The federal constitution defines a broad right to initiate petition (4 or more bodies can initiate petition)	1/4	1
The federal constitution defines a moderate right to initiate petition (2-3 bodies can initiate petition)		0.5
The federal constitution defines a single body to initiate a petition (only one body can initiate petition)		0
The federal constitution says that constitutional review can be performed ax ante and ex post	1/4	1
The federal constitution says that constitutional review can be performed only ex post/ or not specified		0
The constitution stipulates that unconstitutional legislation is automatically void	1/4	1
The constitution stipulates that unconstitutional legislation need to be revised and amended		0.5
The constitution does not specify what happens with unconstitutional legislation		0
5.2. Bicameral veto		
The constitution says that the second chamber has full legislative power (full veto power)	1/2	1
The constitution says that the second chamber has a veto power over federal laws that impact states		0.5
The constitution does not mention any veto power of the second chamber		0
The constitution stipulates that each state has the same number of seats in the second chamber	1/2	1
The constitution stipulates that the regional representation is partially proportional		0.5
The constitution stipulates no regional representation/party representation		0
5.3. Scope of direct democracy		
The constitution allows to launch a national referendum on laws voted by the parliament	1/2	1
The constitution does not allow to launch referenda on national laws		0
The constitution does not provide for a right to popular initiative	1/2	1
The constitution provides for the ability of citizens to propose legislative initiatives		0
5.4. Rigidity of constitutional amendment		

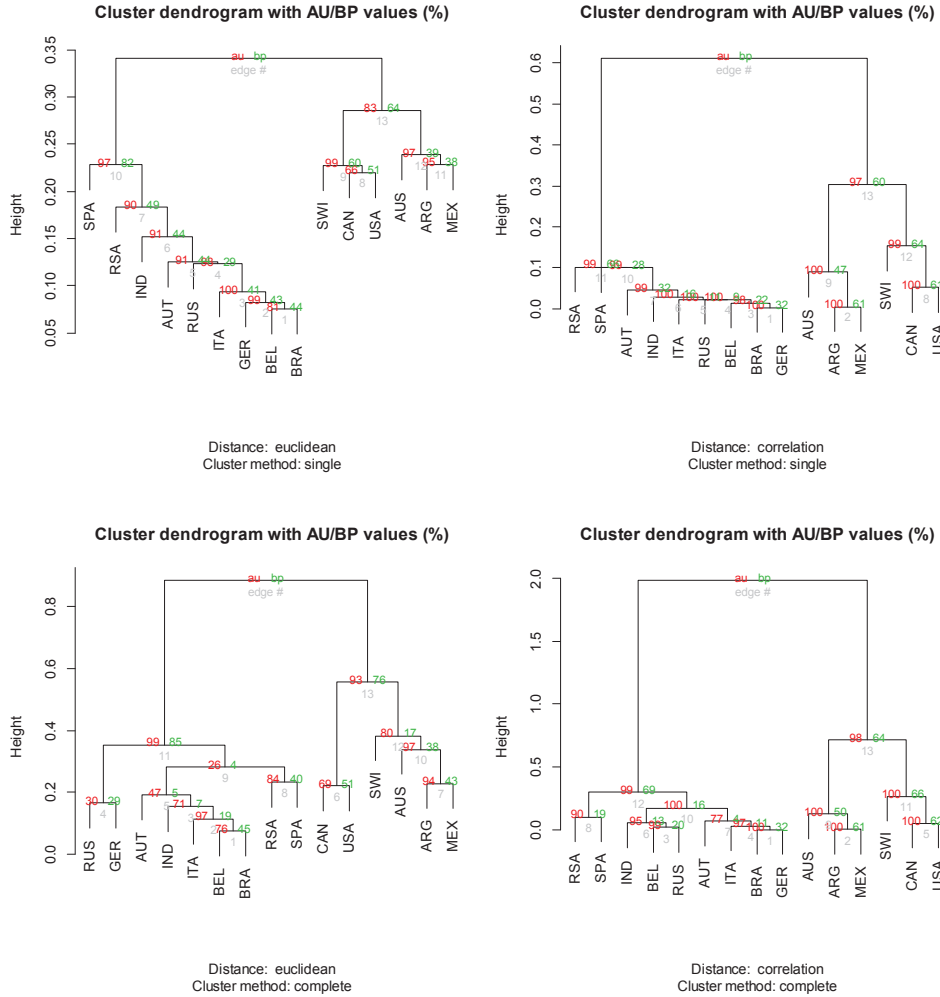
The constitution defines weak right to propose amendment (only one body can initiate amendment)	1/5	1
The constitution defines moderate right to propose amendment (2-3 bodies can initiate amendment)		0.5
The constitution defines broad right to propose amendment (4 or more bodies can initiate amendment)		0
The constitution requires a qualified majority in the first and second chamber to approve amendment	1/5	1*p
The constitution requires a qualified majority in the first or second chamber to approve amendment		0.5*p
No qualified majority		0
<i>p</i> stands for the required majority		
The constitution requires double majority (of people and states) to approve amendment	1/5	1
The constitution requires that a popular referendum approves the amendment		0.5
No national referendum or states approval requested		0
The constitution requires that states approve the amendment	1/5	1
		0
There are parts in the constitution which are unamendable	1/5	1
No inalienable provisions in the federal constitution		0

Appendix 5.5. Cluster analysis: description and further results

Cluster analysis provides a hierarchical and agglomerative (bottom-up) classification of individual elements (Hair et al., 2010). A clustering algorithm begins with each country as a separate cluster and successively groups countries into larger clusters. Varied agglomerative methods can be used to create clusters, of which four were used in this study: 1) Ward's method which aims at minimizing the within-cluster variance; 2) average-linkage clustering, which determines the closest two groups by the average (dis)similarity between the observations of the two groups; 3) single-linkage (nearest-neighbor) clustering defines the similarity between clusters as the shortest distance from any object in one cluster to any object in the other; 4) complete-linkage (farthest-neighbor) clustering is comparable to the single-linkage algorithm, except that cluster similarity is based on maximum distance between observations in each cluster (Moutinho and Hutcheson, 2011, pp. 43-44). Also different similarity measures can be applied. In this chapter two similarity measures are used, i.e. the Euclidean distances and correlation measures. Distance measures focus on the magnitude of the values and portray as similar the objects that are close together, even if they have different patterns across the variables. Instead, correlation measures focus on the patterns across the variables and do not consider the magnitude of the differences between objects (Hair et al., 2010). In general, the various methods applied deliver similar results (see figure 5.20).

Dendrograms – a tree diagram – are the graphical representation of clustering (Hair et al., 2010). Dendograms show successive clusters and provide the loss of information resulting from each aggregation. The robustness of the clusters can be further assessed with the approximately unbiased (AU) p-values calculated using *pvclust* package in R software (Suzuki and Shimodaira, 2004).

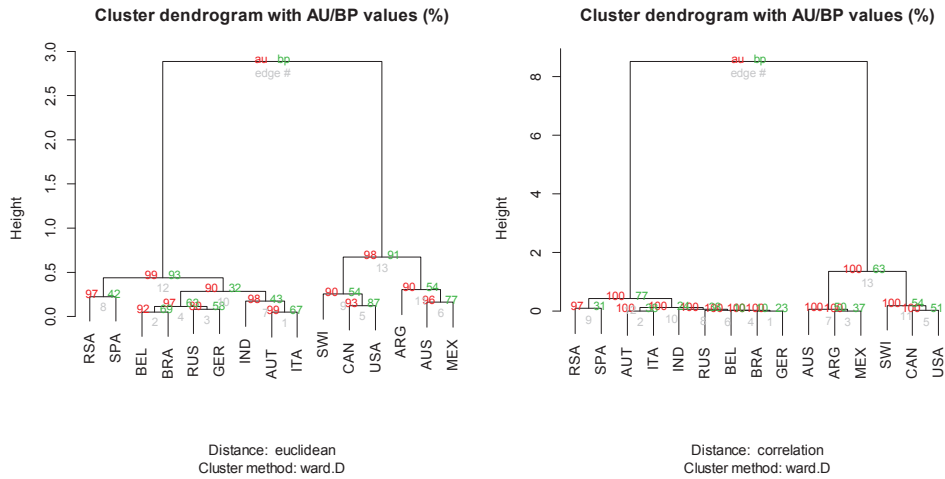
Figure 5.20. Similarities and differences across fiscal constitutions: dendrograms based on various cluster analysis methods (single and complete-linkages), all five building blocks

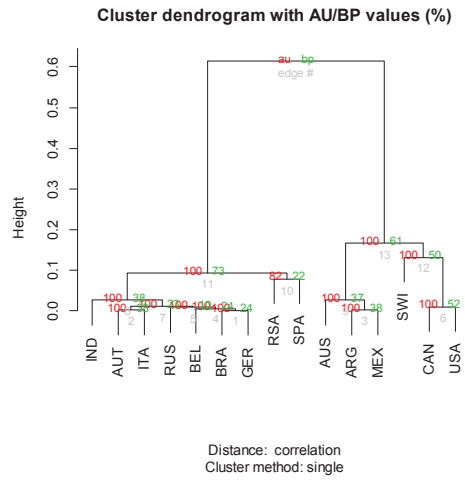
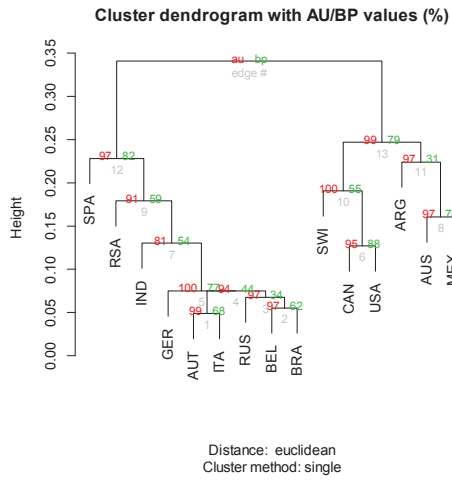
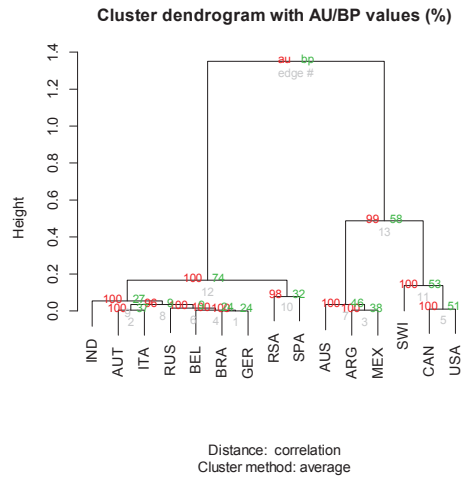
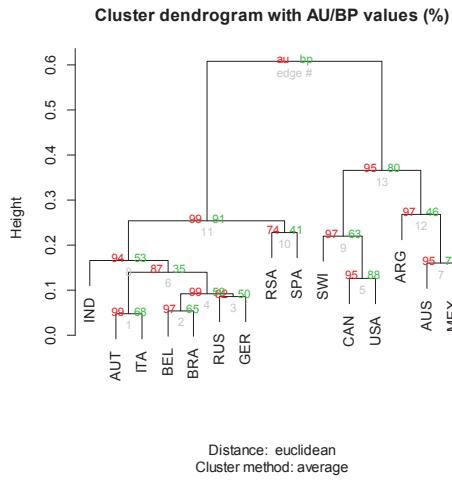


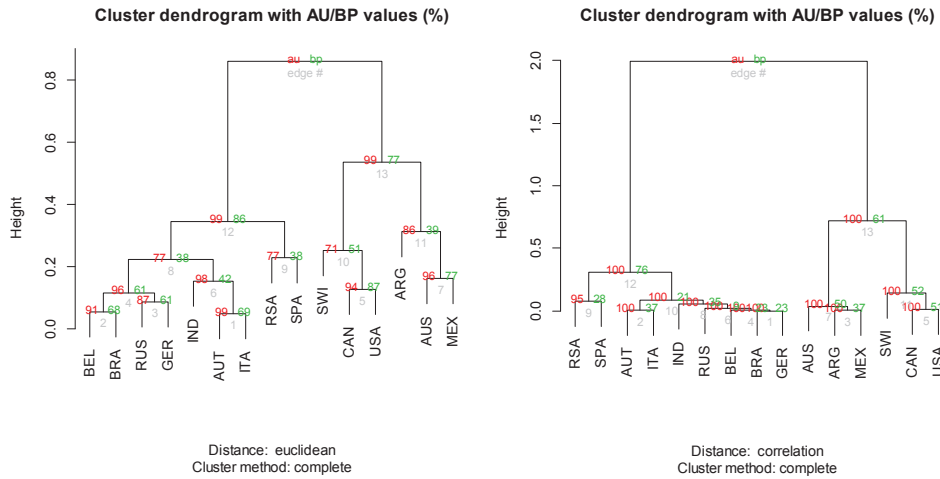
Note: The clustering height is a measure of dissimilarity. The higher is the value the more heterogeneous are units grouped in a given cluster. The approximately unbiased (AU) p-values computed by multiscale bootstrap resampling are printed in red and bootstrap probabilities (BP) are printed in green. AU p-values are more accurate than BP value as unbiased p-values (Suzuki and Shimodaira, 2006). Clusters for which AU values exceed 90 are strongly supported by data indicating stable clusters. A default number of replication applied in the cluster analysis is 1000.

As an additional robustness check the cluster analysis in figure 5.13 is replicated by using only four building blocks, i.e. dropping the stability building block. The analysis delivers largely similar results (figure 5.21). In addition, results confirm that Argentina, Australia and Mexico indeed form a separate cluster or group of “quasi-decentralized” federations which tend to combine institutional arrangements from decentralized and co-operative federalism.

Figure 5.21. Similarities and differences across fiscal constitutions: dendrograms based on various cluster analysis methods (Ward’s, average-, single- and complete-linkage methods), four building blocks (without stability)







Note: The clustering height is a measure of dissimilarity. The higher is the value the more heterogeneous are units grouped in a given cluster. The approximately unbiased (AU) p-values computed by multiscale bootstrap resampling are printed in red and bootstrap probabilities (BP) are printed in green. AU p-values are more accurate than BP value as unbiased p-values (Suzuki and Shimodaira, 2006). Clusters for which AU values exceed 90 are strongly supported by data indicating stable clusters. A default number of replication applied in the cluster analysis is 1000.

Appendix 5.6. Factor analysis: description and further results

Factor analysis and principle component analysis (PCA) can be used to identify which building blocks of the fiscal constitutions differentiate most the federations and to assess empirically how various building blocks are combined across countries. Factor analysis has some advantage over PCA since it gives clear interpretation of factors/components (OECD, 2008). In order to interpret the factors, the first selection procedure is followed by a rotation procedure of the factors that are considered relevant (Abdi, 2004). A clear interpretation of factors is possible since the rotation of axes simplifies the factor structure. Varimax rotation is the most commonly used rotation method (Abdi, 2004). A simple solution that Varimax offers is that each factor consists of a small number of large loadings and a large number of small loadings (Abdi, 2004). This facilitates the interpretation because each original variable tends to be correlated with only one (or a small number) of factors, thereby each factor stands for only a small number of variables (Abdi, 2004).

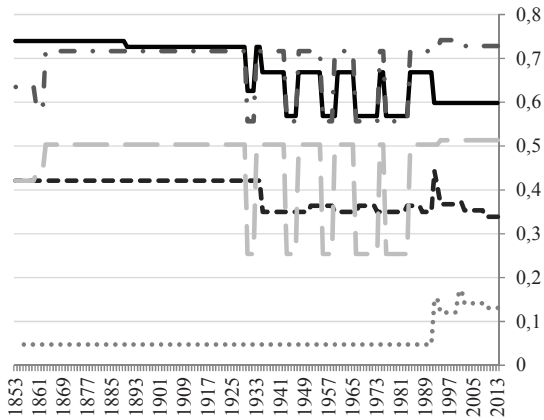
Table 5.3 shows the details of the factor analysis carried out for the five building blocks, showing that results are largely driven by two factors, namely the first factor covering autonomy, responsibility, co-determination and budget frameworks; and the second factor covering stability.

Table 5.3. Communalities between the building blocks of fiscal constitution: results of factor analysis

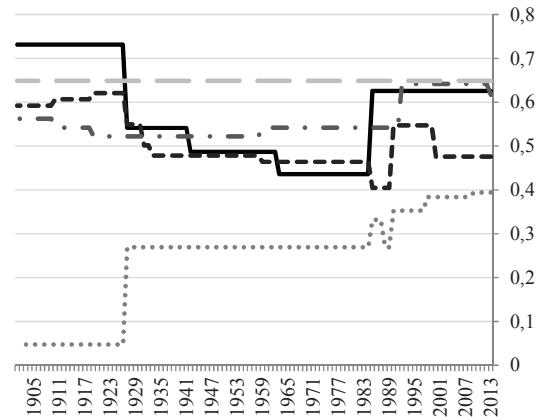
	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
Eigenvalue	3.27	0.97	0.60	0.12	0.05
Share of the variance explained (%)	65.5	19.4	11.9	2.3	0.9
Cumulative share of the variance explained (%)	65.5	84.9	96.8	99.1	100
Correlation with building blocks					
Autonomy	0.97	-0.02	0.18	-0.03	0.17
Responsibility	0.95	0.02	-0.13	0.28	-0.04
Co-determination	-0.79	0.21	0.56	0.16	0.03
Budget frameworks	-0.85	0.14	-0.48	0.10	0.11
Stability	0.30	0.95	-0.05	-0.06	-0.02

Appendix 5.7. Evolution of fiscal constitutions in individual countries

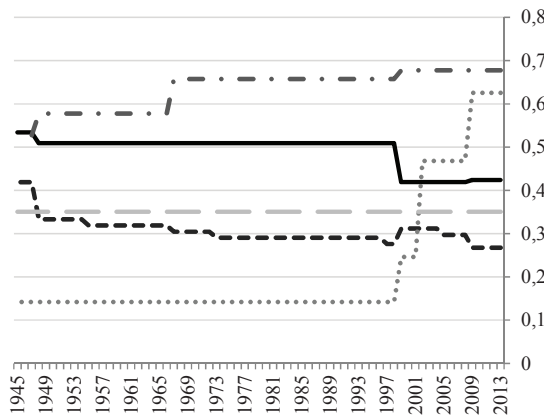
Argentina 1853-2013



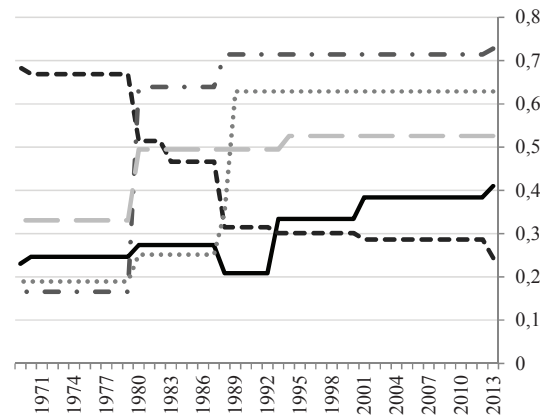
Australia 1901-2013



Austria 1945-2013

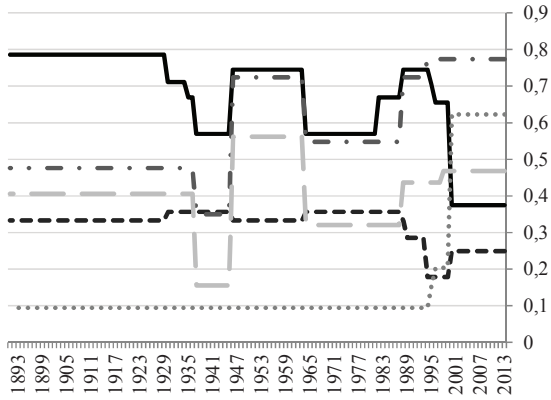


Belgium 1969-2013

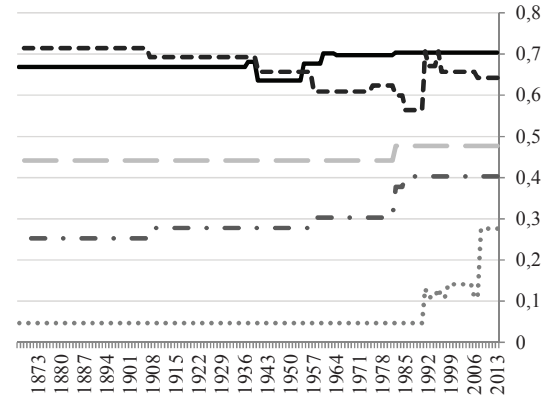


— AUTONOMY - - - RESPONSIBILITY
 - · - CO-DETERMINATION ····· BUDGET FRAMEWORKS
 — STABILITY

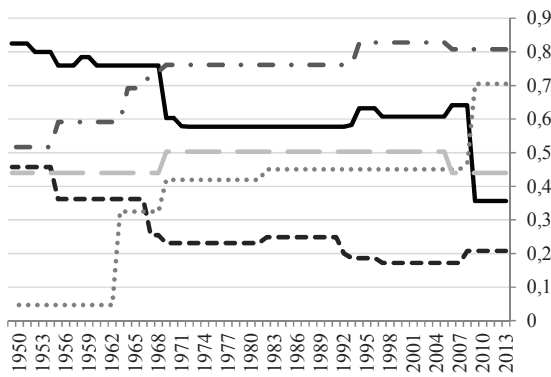
Brazil 1988-2013



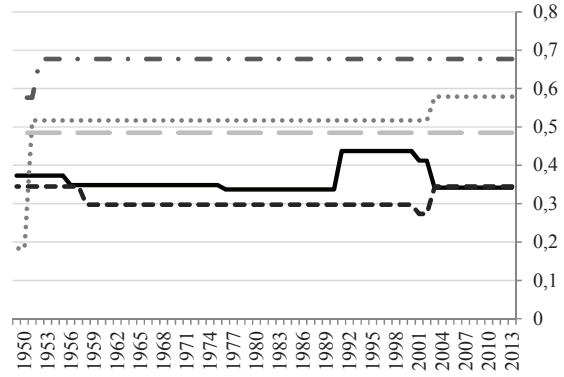
Canada 1867-2013



Germany 1949-2013

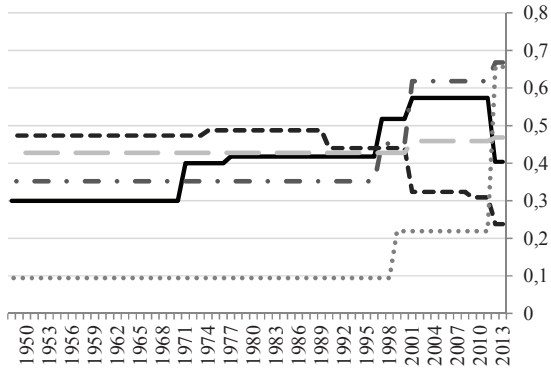


India 1949-2013

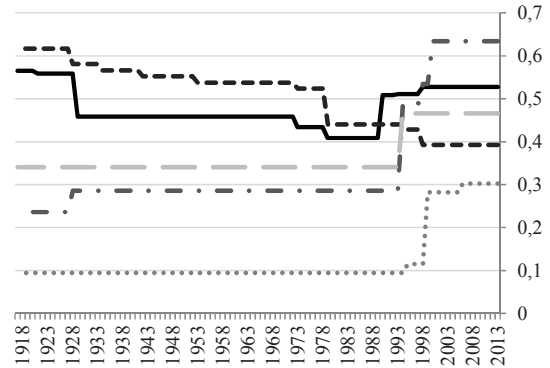


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 — STABILITY

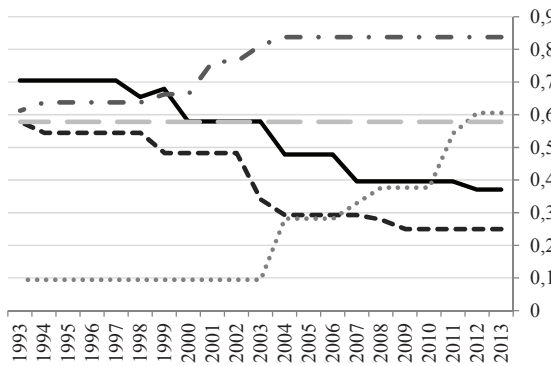
Italy 1948-2013



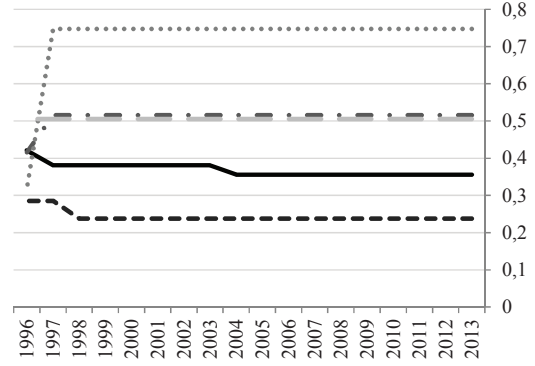
Mexico 1917-2013



Russia 1993-2013

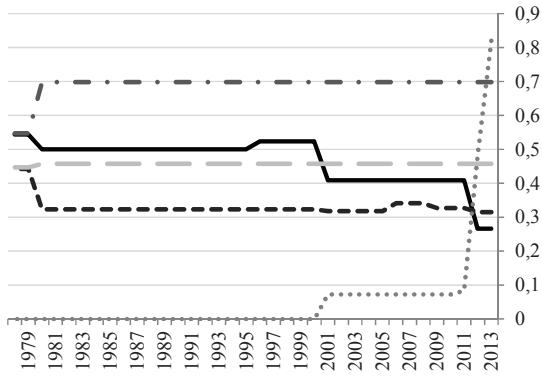


South Africa 1996-2013

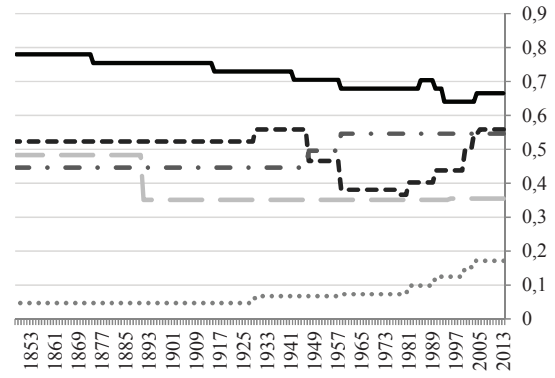


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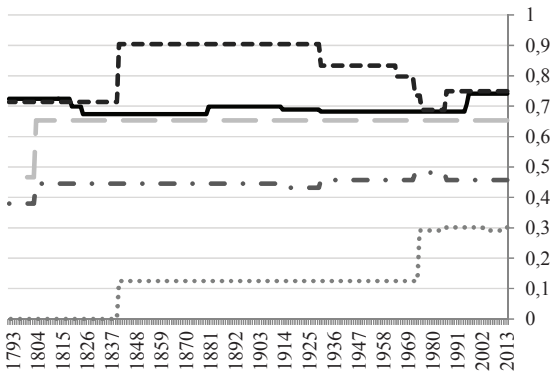
Spain 1978-2013



Switzerland 1848-2013



United States 1791-2013



Appendix 5.8. Evolution of fiscal constitution’s coherence in individual countries

Coherence measures how well the building blocks of fiscal constitutions “fit together”. Coherence can evolve over time, *i.e.* the building blocks of a fiscal constitution can become better or less-well aligned within any type of federation. Given that the most salient reforms to fiscal constitutions took place in the last 30 years, the focus is on the trends during that period. The two following graphs show the evolution of fiscal constitutions’ coherence by country.

In most federations, coherence or alignment has increased (figures 5.22 for decentralized and figure 5.23 for integrated federal systems). Only the incoherence of the US fiscal constitution has remained persistently low for 30 years, while the Argentinian constitution remained highly incoherent over the same period. Some 30 years ago some collaborative federations were not only more decentralized but also more incoherent. Better coherence in countries such as Spain, Germany, Brazil, Italy and Austria followed tighter budget rules and frameworks, often in reaction to low responsibility at the state level. Federations whose fiscal constitutions were decentralized from the outset appear more stable as they maintain similar coherence levels over time.

Figure 5.22. The evolution of coherence in decentralized federal systems

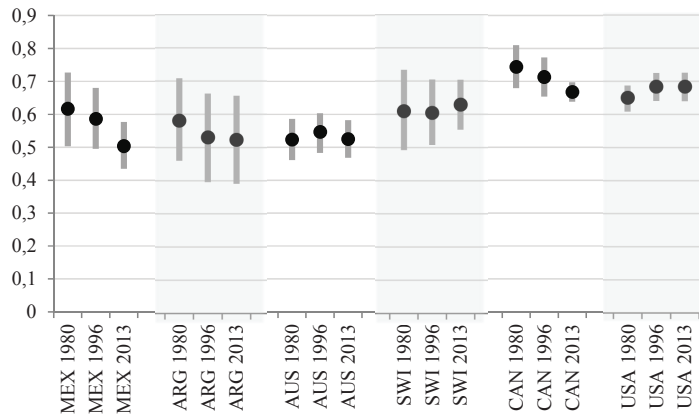
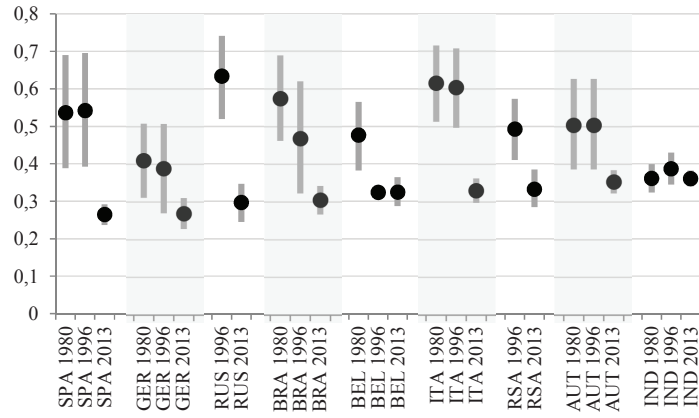


Figure 5.23. The evolution of coherence in integrated federal systems



CHAPTER 6

CONCLUSIONS AND OUTLOOK

The overarching question posed by this dissertation was: “*why is the public debt growing, and why are the fiscal crises repetitive and so widespread?*” Four narrow questions contribute to the answer and shed some light on the overarching question. They were selected after identifying the gaps and loopholes in the modern literature on fiscal constitutions. Those questions were as follows:

- Question 1: What is a genuine causal relationship between the electoral systems and fiscal outcomes? How do electoral systems influence vertical fiscal imbalance, i.e. mismatch between local spending and revenue? Additionally, is there any relation between the electoral regimes and the composition of public spending?
- Question 2: Does history matter for fiscal outcomes? More precisely, can distant historical events influence vertical fiscal imbalance in a causal way?
- Question 3: How do judges adjudicate in fiscal cases (cases which have budgetary implications) as opposed to other cases? Is the judiciary able to shape fiscal outcomes, such as for instance fiscal deficit, in any systematic way?
- Question 4: How do the building blocks of fiscal constitutions interact? Does the manner in which the building blocks are combined influence the growth of public expenditure and public debt as well as the likelihood of fiscal crises? Also, what are the driving forces behind the reforms of fiscal constitutions?

The concluding chapter comprises two parts. First, it summarizes particular results of the content chapters 2-5, which tackle the abovementioned narrow questions. The second part provides an outlook and depicts potential avenues for future research on fiscal constitutions.

Summary of the results

Besides the introductory chapter (chapter 1), this dissertation consists of four stand-alone content chapters and original contributions, which are all concerned with fiscal constitutions. The introductory chapter was instrumental in setting the stage for the discussion on fiscal constitutions. It clarified the meaning of the term “fiscal constitution” and identified gaps in the research covering fiscal constitutions. The original contributions are organized within four content chapters, which are as follows.

Chapter 2 examined electoral systems and their impact on selected fiscal variables, such as vertical fiscal imbalance (mismatch between local spending and revenue) and the allocation of public spending. The political economy literature theorizes various channels through which electoral systems might determine fiscal outcomes. Empirical evidence supporting or rejecting theoretical arguments is not abundant and not sufficiently robust, however. It is widely recognized that the existing empirical literature linking electoral systems and fiscal outcomes does not identify the causal relationship. Reasons for this are omitted variable bias, infrequent institutional changes and small samples. Chapter 2 attempted to overcome these problems. A quasi-experimental empirical setting was employed and provided evidence that electoral systems influence selected fiscal outcomes. The empirical design employed in chapter 2 rested on a discontinuity in the application of electoral rules in Polish municipalities in the period 2002-2012. The results presented confirmed existing theoretical arguments only to some extent. As compared to the majoritarian regimes, proportional electoral systems tend to promote broad public expenditure and undermine narrow public spending. However, these effects seem to be much weaker as compared to previous findings in the cross-country studies. Additionally, proportional systems lead to a larger vertical fiscal imbalance, which is measured as a share of local expenditure covered through intergovernmental transfers and borrowings. The average treatment effects of electoral rules on fiscal imbalance are not only statistically significant but also non-negligible from the economic point of view and robust to numerous alternative specifications and falsification tests. This result is important because greater VFI leads to greater general government deficits and, consequently, to greater public debt.

Chapter 3 subscribed to the literature stream that has attempted to answer the question regarding whether history matters. However, in chapter 3 a more specific question was posed concerning whether history matters for fiscal outcomes. In the context of the Polish municipalities the answer was positive. To confirm it, this chapter exploited a natural experiment, which was provided by Poland's partition. After Poland lost its independence in 1795, its territory was divided between three empires (Prussia, Russia, and Austria-Hungary), was governed by foreign institutions, and was influenced by the culture and norms of these countries for more than 120 years. By means of spatial regression discontinuity, chapter 3 showed that municipalities from the former Prussian empire have imposed contemporarily higher property tax rates as compared to municipalities that were exposed to the Russian ruling. Higher property tax rates lead to greater own revenue and higher fiscal autonomy in the Prussian part of Poland. Consequently, the municipalities belonging to the former Prussian partition cast smaller vertical fiscal imbalance than the municipalities from the former Russian part. Given the link between VFI and general government deficits and debt, these results can shed some light on the overarching question: "*why is the public debt growing?*"

Chapter 4 analyzed overall judicial behavior and contrasted it with the judicial behavior in adjudicating fiscal cases. Different theories have been developed, mainly in the context of the United States, to explain judicial decision-making. In this respect, there is an important ongoing debate over whether judges are guided by the law or by personal ideology. The analysis of the decision-making in the Polish Constitutional Tribunal seems to support the existence of some party alignment. That is to say that judicial behavior is influenced by the ideology, either because judges' preferences coincide with the interests of a specific party or because the judges are incentivized to show their loyalty to the nominating party. Party alignment exists but subject to institutional constraints. The results from chapter 4 are in line with previous findings for other Kelsenian constitutional courts in Europe. Interestingly, although to lesser extent, the ideological vote is also cast in fiscal cases. The identified institutional constraints limit the ideological vote in fiscal cases but are not able to entirely eliminate it. The fact that ideological bias is also present in fiscal cases – despite considerable institutional restraints – might have important implications for public finance. Given that the majority of judges in the adjudicating benches are occasionally politically aligned with the petitioners (opposition parties), it might be more difficult for the governing party to pursue major reforms of public finance, such as fiscal consolidation and public debt reduction. For instance, in times of economic distress the necessary fiscal adjustments might

be severely delayed or entirely damped by the Tribunal. Under these circumstances, the Tribunal can be perceived as a veto player biasing policy towards a status quo and hampering fiscal adjustments.

Chapter 5 provided an empirical assessment of federal fiscal constitutions and the interaction between constitutional arrangements. It demonstrated that federal fiscal constitutions around the world have differed in the degree of constitutionally guaranteed decentralization. More specifically, two types of fiscal constitutions could be distinguished: decentralized and integrated. Decentralized federations are those federations where states (sub-central units) enjoy high tax and spending autonomy; face high responsibility for their own fiscal policy, have little co-determination power at federal level; and have intergovernmental budget rules and frameworks that are relatively weak. The opposite is the case in integrated federations. A cluster analysis suggested that the United States, Canada, Switzerland, Australia, Argentina and Mexico feature decentralized fiscal constitutions, while Austria, Belgium, Brazil, Germany, India, Italy, Russia, South Africa and Spain feature integrated fiscal constitutions. An important contribution of this chapter was to show that fiscal constitutions have varied in terms of coherence (or alignment) of institutional arrangements. Coherent (aligned) fiscal constitutions combine arrangements in a balanced manner or in a way that arrangements “fit well” together. For instance, an aligned fiscal constitution provides similar degrees of autonomy for various budget items (taxation and spending); or the fiscal constitution aligns a certain level of autonomy with a similar level of responsibility. Incoherent fiscal constitutions combine arrangements in an unbalanced manner, for instance by combining low tax autonomy with high spending autonomy or low responsibility for fiscal policy with high autonomy. Some preliminary evidence was also shown to demonstrate that the degree of decentralization of fiscal constitutions has been marginally associated with economic and fiscal outcomes. On the contrary, it was shown that alignment (or coherence) of fiscal constitutions has been associated with outcomes. Over the period 1980-2010, less coherent fiscal constitutions were correlated with higher debt and spending growth, and more economic and sovereign debt crises. These results add new insights to the debate on “*why is the debt growing and why are fiscal crises repetitive?*” Moreover, it was tentatively demonstrated that federations with less coherent fiscal constitutions had somewhat lower GDP growth between 1980 and 2010. In addition, chapter 5 has examined the causes and the driving-forces of reforms and amendments of fiscal constitutions since their inception. It was found that reforms of fiscal

constitutions usually follow events like economic and fiscal crises, the establishment or fall of authoritarian regimes or separatist threats. Furthermore, it was shown that while budget frameworks were strengthened over the last 100 years, the autonomy and responsibility of states declined. Furthermore, the coherence of fiscal constitutions increased over the last three decades.

It should be noted that all chapters included some preliminary policy implications. They were derived in the EU context or in the context of Poland.

Avenues for future research

The avenues for future research on fiscal constitutions are organized within two blocks. The first block relates to the issues and topics that were touched upon in this dissertation. The second block poses new research questions, which are however related to the overarching question of this dissertation, i.e. “*why is public debt growing, and why are fiscal crises repetitive and so widespread?*”

Contrary to other subfields of law and economics, such as for instance behavioral and labor law and economics, the empirical investigation on fiscal constitutions rarely relies on the design-based research, which allow the inferring of a genuine causality between institutions and fiscal outcomes (see section 1.4). A search for credible natural or quasi-experimental settings should therefore be a fruitful way forward. The likelihood of finding natural or quasi-experimental settings increases if one studies lower tiers of governments, such as for instance municipalities and districts. This, however, should not be considered a drawback, but on the contrary an advantage as it explicitly requires the delving into the intergovernmental structure and the interactions between the tiers of government. The research on the intergovernmental settings might fuel and inform institutional discussions in emerging “federations”, either individual countries that are on a secular path towards decentralisation, or supranational entities such as the EU that are about to build their fiscal intergovernmental framework.

This section also calls for more encompassing analysis of institutions which, at first glance, do not seem to influence public finance, such as the judiciary. Yet even more importantly, it calls for

more systematic analysis of interactions between the building blocks of fiscal constitutions. As chapter 5 showed, there might be some key complementarities and synergies between the building blocks that influence fiscal outcomes both negatively and positively. An important contribution in this respect is the paper by Ardanaz and Scartascini (2014). The authors show that the effect of the form of government (presidential or parliamentary) on public expenditure is conditional to the specific procedural fiscal rules. More specifically, they demonstrate that the negative effect of presidentialism on the size of the government (spending-to-GDP) disappears when the executive's discretion over the budget process is high.

Likewise, more research is needed on the dynamic or historical context of fiscal constitutions. First of all, it is vital to investigate more systematically how distant historical events set fiscal constitutions on different trajectories, which now materialize in varied fiscal outcomes even within the same country. A related issue entails examining the origins of fiscal constitutions and the driving forces of change and reform. In the Polish context, for example, an interesting question concerns why the post-socialist Constitution of 1997 included a very restrictive numerical fiscal rule limiting the growth of public debt to 60% of GDP³¹⁴. Some preliminary research conducted by the author of this dissertation suggests that the following factors might have played an important role in constitutionalizing the debt rule (based mostly on the transcripts from the constitution-making assembly's deliberations).

- The negative past events, namely the debt trap originating from excessive borrowing in the 1970s, set the credible argumentation in favor of the debt rule. Institutional reforms in the EU and particularly the Maastricht Treaty (formally the Treaty on the European Union) of 1992, comprising the convergence criteria³¹⁵ and excessive deficit procedure³¹⁶, also influenced the constitution-drafters in Poland. Poland signed the Accession Treaty with the EU in 1993 and wished to show its eagerness in adopting the EU rules.

³¹⁴ See Article 216(5) of the *Polish Constitution 1997*.

³¹⁵ As of today, the convergence criteria are accommodated in Article 140 of the *Treaty on the Functioning of the European Union*.

³¹⁶ As of today, the excessive deficit procedure is enshrined in Article 126 and Protocol 12 of the *Treaty on the Functioning of the European Union*.

- The constitution-making procedural rules, especially the super-majority rule of 2/3 at the General Assembly, led to a more consensual outcome over the final draft of the constitution. Owing to the super-majority rule, bargaining and veto power of smaller, fiscally conservative parties was increased.
- The constitution making process in Poland lasted around five years (effectively around 3 years).³¹⁷ It is much more than the average of 16 months calculated by Ginsburg et al. (2009, p. 209). This relatively long period of time spent in constitutional deliberation opened the avenues for discussions over more detailed provisions, such as the debt rule. The ample time allowed for mobilization and bargaining, which would be less likely if the constitution-making process was short.
- Determined and charismatic political leaders, such as for instance Leszek Balcerowicz, strongly backed up the debt rule. They were promoting the rule through formal and informal channels and sensitizing political groups and public opinion to the problem of excessive public debt.

The knowledge regarding the driving factors behind introduction and reforms of the fiscal rules is informative not only from a policy-making point of view but also crucially contributes to the empirical investigation (recall discussion on the confounding factors in section 1.4).

Going beyond issues touched upon in this dissertation, another fruitful avenue for future research concerns the determinants of “hidden” public debt. It is the debt that stems from implicit liabilities of the public finance sector, such as future retirement benefits. In 2013, the European Parliament and the Council adopted a new methodology for national account, so-called ESA 2010³¹⁸. According to it, the EU member states are obliged, as of 2017, to measure the extent of implicit liabilities from future retirement benefits. Therefore, at least for the EU member states data will be readily available, which would enable the pursuit of some preliminary empirical investigation in this respect.

³¹⁷ It needs to be stressed that the long amount of time spent on drafting was due to the prior promulgation of the *Little Constitution 1992*, which set the basic organizational features of the state.

³¹⁸ Regulation (EU) No 549/2013 of the European Parliament and of the Council of 21 May 2013 on the European system of national and regional accounts in the European Union Text with EEA relevance, OJ 2013 L 174.

It is well recognized that the deficit bias is caused by the fact that fiscal policy constitutes a political process. The public choice literature emphasizes that politicians – similarly to other individuals – are interested in pursuing their own objectives, which are mainly re-election prospects. Politicians often use the deficits instrumentally in order to increase the chance of being re-elected. A thought-provoking question in that respect is, therefore, whether the enactment one-term limitation (i.e. the re-election is not permitted) would be able to break the link between the political process and deficit.

Given how burgeoning the field of behavioral economics is, it would be remarkable to verify whether behavioral concepts could inform the debate on the persistence of deficit and determinants of public debt. More precisely, one could verify whether certain well-established behavioral biases on the part of policy-makers and/or voters have some power in explaining the occurrence of excessive public deficits and ensuing public debt. An interesting overview of the behavioral concepts applied in the public choice research is given by Schnellenbach and Schubert (2014).

A further question worth investigating is the interaction between monetary and fiscal policy, notably in the context of the recently triggered quantitative easing in the Eurozone (Pacces and Repasi, 2015). Simplifying it, the quantitative easing is a program of government bond purchase by a central bank. The risk in applying the quantitative easing is that it might generate the moral hazard because, as a result of it, governments might postpone necessary economic and fiscal reforms (Roubini, 2013). Regarding the analogies between the fiscal and the monetary policy, one could also contemplate an idea of delegating the fiscal policy to an independent fiscal council (Leeper, 2009). A delegation of competences to an independent council in the monetary policy was judged as a successful policy shift (Wren-Lewis, 2011). Could the delegation of power to an independent fiscal council be equally successful in the area of public finance? This and other questions put forth in this dissertation remain to be comprehensively answered. The author of this dissertation hopes that this dissertation at least to some extent will stimulate the pursuit of these answers and of research on fiscal constitutions more generally.

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EXECUTIVE SUMMARY

Fiscal Constitutions: An Empirical Approach

The overarching question posed by this dissertation is: “*why does the public debt grow, and why are fiscal (debt) crises repetitive and so widespread?*” A special focus in answering this question is given to a fiscal constitution, which contains a country-specific set of laws, rules and regulations, and guides decision making in the area of fiscal policy. By shaping incentives and limiting arbitrariness, the fiscal constitution determines the course of fiscal policy and fiscal outcomes in the long term. This dissertation does not give, however, an exhaustive response to the overarching question. Instead it asks much narrower questions, which are selected after reviewing and identifying the main weaknesses and gaps in the modern literature on fiscal constitutions.

Besides an introductory chapter that is instrumental in setting the stage for the discussion on fiscal constitution, this dissertation consists of four chapters including original contributions to the literature based on targeting self-contained questions.

Chapter 2 examines electoral systems and their impact on selected fiscal variables, such as vertical fiscal imbalance measured as a share of local expenditure covered through intergovernmental transfers and borrowings. It uses a quasi-experimental empirical setting and provides evidence that electoral systems influence fiscal imbalance. The empirical design employed in chapter 2 rests on a discontinuity in the application of electoral rules in Polish municipalities in the period 2002-2012. The results presented show that proportional systems lead to a larger vertical fiscal imbalance as compared to the majoritarian regimes. This result is important forasmuch as larger vertical fiscal imbalance leads to greater general government deficits and, consequently, to larger public debt.

Chapter 3 subscribes to the literature stream that attempts to answer the question regarding whether history matters. This chapter exploits a natural experiment, which was provided by Poland’s partition in the 19th century. By means of spatial regression discontinuity, it is shown that municipalities from the former Prussian empire impose contemporarily higher property tax rates as compared to municipalities that were exposed to the Russian ruling. Higher property tax rates lead to larger own revenue and higher fiscal autonomy. As a consequence of it, there is a smaller vertical fiscal imbalance in the municipalities belonging to the former Prussian partition. Given the positive link between vertical fiscal imbalance and

general government deficits and debt, these results can shed some light on the overarching question: “*why does the public debt grow?*”

Chapter 4 analyzes judicial behavior overall and contrasts it with the judicial behavior in adjudicating fiscal cases. The analysis of the decision-making in the Polish Constitutional Tribunal seems to support the existence of some party alignment. It is to say that judicial behavior is influenced by the ideology, either because judges’ preferences coincide with the interests of a specific party or because the judges are incentivized to show their loyalty to the nominating party. The fact that ideological bias is present also in fiscal cases might have important implications for public finance. Occasionally the majority of judges in the adjudicating benches are politically aligned with the petitioners, which in the Polish context are typically opposition parties. For that reason it might be harder for the governing party to pursue major reforms of public finance, such as fiscal consolidation and public debt reduction.

Chapter 5 provides an empirical assessment of federal fiscal constitutions and the interaction between constitutional arrangements. It demonstrates that federal fiscal constitutions differ in the degree of constitutionally guaranteed decentralization. More specifically, two types of fiscal constitutions can be distinguished: decentralized and integrated. An important contribution of this chapter is to show that fiscal constitutions vary in terms of coherence (or alignment) of institutional arrangements. Coherent (aligned) fiscal constitutions combine arrangements in a balanced manner or in a way that they “fit well” together. The thesis provides some preliminary evidence that the degree of decentralization of fiscal constitutions is hardly associated with economic and fiscal outcomes, but alignment (or coherence) of fiscal constitutions is correlated with selected outcomes. For instance, over the period 1980-2010, less coherent fiscal constitutions were correlated with higher debt and spending growth, and more economic and sovereign debt crises. Again, this finding contributes to answering the overarching question “*why does the public debt grow, and why are fiscal (debt) crises repetitive and so widespread?*”

Chapter 6 includes conclusions. However, it does not only summarize the main findings of the dissertation, but also sets a general agenda for future research on fiscal constitutions.

Samenvatting

De overkoepelende vraag van dit proefschrift is: "waarom groeit de staatsschuld, en waarom zijn fiscale (schuld)crises zo wijdverbreid?" Om deze vraag te beantwoorden focust dit proefschrift op de inhoud van wat ook wel de "fiscale constitutie" wordt genoemd. De fiscale constitutie van een land bestaat uit de wetten, regels en voorschriften die de kaders vormen van de fiscale besluitvorming. Door middel van prikkels en door het stellen van randvoorwaarden aan beslissingen, bepaalt de fiscale constitutie het begrotingsbeleid en dus zo tevens de fiscale uitkomsten op de lange termijn. Dit proefschrift geeft echter geen uitputtend antwoord op de gestelde vraag. Als de omvang van de literatuur enige indicatie is, dan zou het geven van een dergelijk antwoord enkele decennia kunnen duren en een aantal boeken kunnen vullen. In plaats daarvan draagt dit proefschrift bij aan de literatuur door een aantal kleinere vragen te stellen en te beantwoorden naar aanleiding van lacunes en zwaktes in de bestaande literatuur betreffende fiscale constituties.

De inhoud van dit proefschrift is als volgt. Het eerste hoofdstuk is een inleidend hoofdstuk dat de lezer een korte introductie geeft tot de literatuur over fiscale constituties. De vier hoofdstukken die volgen beantwoorden vervolgens de vragen die gemotiveerd zijn door de lacunes in de bestaande literatuur. Het zesde en laatste hoofdstuk concludeert het proefschrift.

Hoofdstuk 2 bestudeert wat de invloed van het kiesstelsel is op een aantal fiscale uitkomsten, zoals de verticale fiscale kloof. De verticale fiscale kloof wordt hier gemeten als het aandeel van de lokale uitgaven die worden gedekt door middel van intergouvernementele overdrachten en door leningen. Om aan te tonen dat het kiesstelsel een causaal effect heeft op de verticale fiscale kloof wordt hier gebruik gemaakt van een quasi-experimentele onderzoeksopzet. Deze opzet bestaat uit een discontinuïteit in de kiesstelsels die van toepassing waren voor de Poolse gemeenteraadsverkiezingen in de periode 2002-2012. Uit de resultaten blijkt dat een stelsel van evenredige vertegenwoordiging leidt tot een grotere verticale fiscale kloof ten opzichte van een

meerderheidsstelsel. Dit resultaat is belangrijk omdat een grotere verticale fiscale kloof tot een groter overheidstekort en uiteindelijk tot een hogere staatsschuld kan leiden.

Hoofdstuk 3 stelt de vraag in hoeverre historische gebeurtenissen bepalend kunnen zijn voor fiscale uitkomsten. Dit hoofdstuk maakt gebruik van de partitie van Polen in de 19^{de} eeuw als ware het een natuurlijk experiment. Door gebruik te maken van de regressie discontinuïteitmethode, wordt aangetoond dat de gemeenten die vroeger deel uitmaakten van Pruisen, vandaag hogere onroerende-zaakbelastingtarieven hanteren in vergelijking met de gemeenten die vroeger deel uitmaakten van Rusland. Het belang van dit resultaat is dat hogere onroerende-zaakbelastingtarieven tot hogere eigen inkomsten kunnen leiden en dus tot grotere fiscale autonomie. Het gevolg hiervan is dat er een kleinere verticale fiscale kloof bestaat in die gemeenten die deel uitmaken van wat vroeger Pruisisch grondgebied was. Gezien het verband tussen de verticale fiscale kloof, en tekorten en het aangaan van leningen, werpen deze resultaten enig licht op de vraag waarom de staatsschuld groeit.

Hoofdstuk 4 vergelijkt de rechterlijke beslissingen in niet-fiscale zaken met de rechterlijke beslissingen in de fiscale zaken die het Pools Constitutioneel Hof behandeld heeft. Het gedrag van de rechters hier is consistent met dat rechters worden beïnvloed door de ideologie van de politieke partij die hen heeft benoemd. De verklaringen die hiervoor gegeven kunnen worden zijn de volgende. Ten eerste kan het zo zijn dat de politieke voorkeuren van de rechters samenvallen met die van de partij die ze benoemd heeft. Ten tweede kan het zo zijn dat rechters redenen hebben om loyaal te zijn aan de partij die ze genomineerd heeft. Het feit dat ideologie niet slechts een rol speelt in niet-fiscale zaken kan belangrijke gevolgen hebben voor de overheidsfinanciën. Het is namelijk niet ongewoon dat de meerderheid van de rechters van dezelfde politieke kleur is als de klagende partij. In het geval van Polen zijn dit meestal de oppositiepartijen. Dit betekent dat het moeilijker zou kunnen zijn voor de regering om ingrijpende hervormingen van de overheidsfinanciën, zoals fiscale consolidatie en het versneld terugbetalen van de staatsschuld, door te voeren.

Hoofdstuk 5 kijkt naar federale fiscale constituties in een meer internationale context door middel

van een empirisch onderzoek naar de interactie tussen de federale fiscale grondwetten en andere grondwettelijke bepalingen in de OESO-landen voor de periode 1980-2010. De conclusies die uit dit hoofdstuk getrokken kunnen worden zijn de volgende. Ten eerste bestaan er verschillen in de mate waarin de federale fiscale constituties fiscale decentralisatie garanderen. Fiscale constituties kunnen worden geclassificeerd als gedecentraliseerd of geïntegreerd op basis van de fiscale autonomie (belastingheffing en uitgaven) die de federatieleden genieten. Ten tweede bestaan er verschillen in de coherentie van de fiscale constituties. Niet alle fiscale constituties verlenen dezelfde hoeveelheid autonomie aan de federatieleden op zowel belasting als op uitgavengebied. Ten derde is de data niet consistent met dat de hoeveelheid fiscale autonomie bepalend is voor de fiscale uitkomsten, maar is de data wel consistent met dat de coherentie bepalend is voor de fiscale uitkomsten. Zo is bijvoorbeeld de coherentie van de fiscale constitutie, behalve (negatief) gecorreleerd met een hogere schuldenlast en een hogere groei in uitgaven, ook (negatief) geassocieerd met economische crises en schulden crises.

Hoofdstuk 6 concludeert het proefschrift. De belangrijkste bevindingen van dit proefschrift worden hier samengevat en een agenda voor verder onderzoek naar fiscale constituties wordt hier voorgesteld.

