

Discussion Paper No. 16-034

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Fiscal Outcomes:
Evidence from Historical Constitutions**

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Zentrum für Europäische
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Economic Research

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Balanced Budget Rules and Fiscal Outcomes: Evidence from Historical Constitutions

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Abstract

This paper studies the long-run fiscal consequences of balanced budget rules (*BBR*) that are enshrined in a country's constitution. Using historical data dating back to the 19th century and applying a difference-in-difference approach we find that the introduction of a constitutional-*BBR* reduces government debt-to-GDP and expenditure-to-GDP ratios, on average, by around 11 and 3 percentage points, respectively. We do not find evidence that *BBRs* affect tax revenues. Our analysis indicates that such rules reduce the probability of experiencing a debt crisis and that the effective enforcement of *BBRs* can be conditional on the quality of democratic institutions. In addition, we implement an instrumental variable approach by instrumenting the probability of having budget rules on *de jure* constraints on changing the constitution. This and other tests suggest that the relations we find are largely causal going from *BBRs* to fiscal outcomes.

JEL codes: H50, H60, K10, N40

Keywords: Economic effects of constitutions, fiscal rules, historical public finances, sovereign debt crises.

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1 Introduction

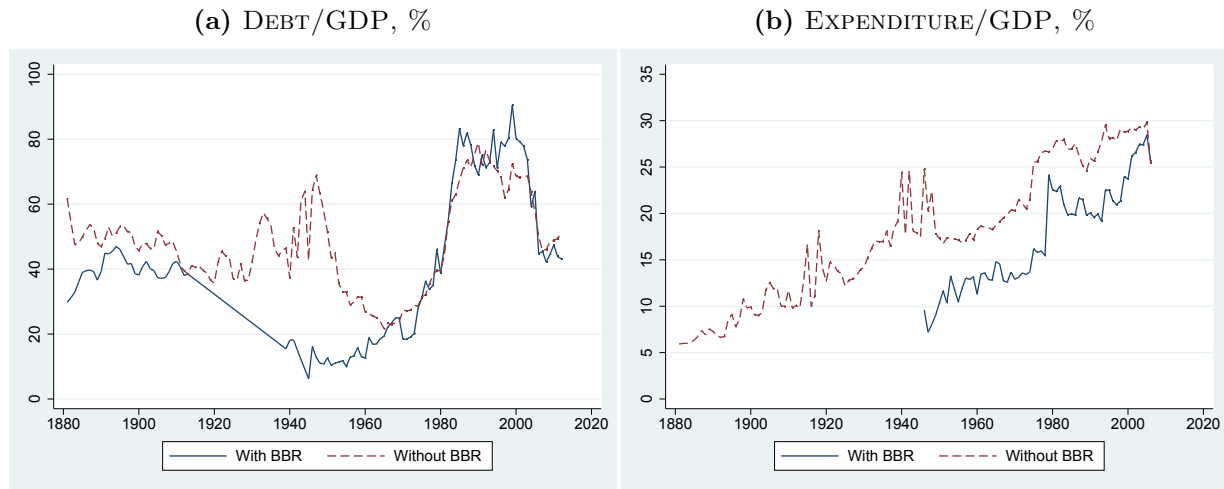
Average government debt-to-GDP and spending-to-GDP ratios around the world roughly doubled in the 50 years after WWII. Compared to the few data points that we have from the late 19th century, spending-to-GDP has roughly quadrupled by now (Figure 1). In a long and heated debate, both academics and policy-makers have questioned the reasons behind running persistent deficits and the resulting accumulation of debt, and have try to find effective solutions. The global economic crisis of 2008-09 quickly evolved into a sovereign debt crisis in many countries, bringing again the issue of sustainable public finances to the forefronts of policy-priorities and urging policy-makers to find quick, effective, and credible fixes. In particular, fiscal rules have become a popular policy-instrument to constrain fiscal policy and are being widely promoted by national governments and international organizations (such as the IMF or the EU) alike.

However, the use of fiscal rules is not a new idea (e.g., think of US states or the Maastricht-criteria in Europe) and the crisis showed that they can and do fail.¹ As a response, a recent trend – perhaps a belated one – has been to strengthen the credibility of these fiscal rules by enshrining them in the highest level of law, that is into national constitutions. Denmark, Italy and Spain are some of the cases that made such a move in the post-crisis era and, in doing so, have joined Germany and Switzerland² which are the two sole exceptions among advanced countries that already had such rules. On the other hand, there are about three dozen countries in the world – particularly in Africa and Central and South America – that historically had such provisions in their constitutions (for a map see Figure 2). Some of these provisions date back to the end of the 19th century, and most were introduced in the first and second halves of the 20th century in the Americas and Africa, respectively. Our aim in this paper is, therefore, to present the first historical evidence on the fiscal-effects of these constitutional fiscal rules.

¹For example, in the European Union, more than half of member states exceeded the 3% maximum budget deficit specified in the Stability and Growth Pact.

²Germany first introduced a fiscal rule into its constitution in 1871 (re-stating it in 1949), while Switzerland introduced it only in 1999. Portugal also had such a rule in the 1820s but it was short-lived.

Figure 1: EVOLUTION OF AVERAGE DEBT AND EXPENDITURE WITH AND WITHOUT BALANCED BUDGET RULES, 1880-2012



Own calculations based on constitutional data from the CCP project (Elkins et al. 2014), and fiscal data from Cagé and Gadenne (2014) and Abbas et al. (2010). The sample includes countries with population over 1,5 million and excludes outliers at top and bottom 1%. For a description of the sample, see Section 2.

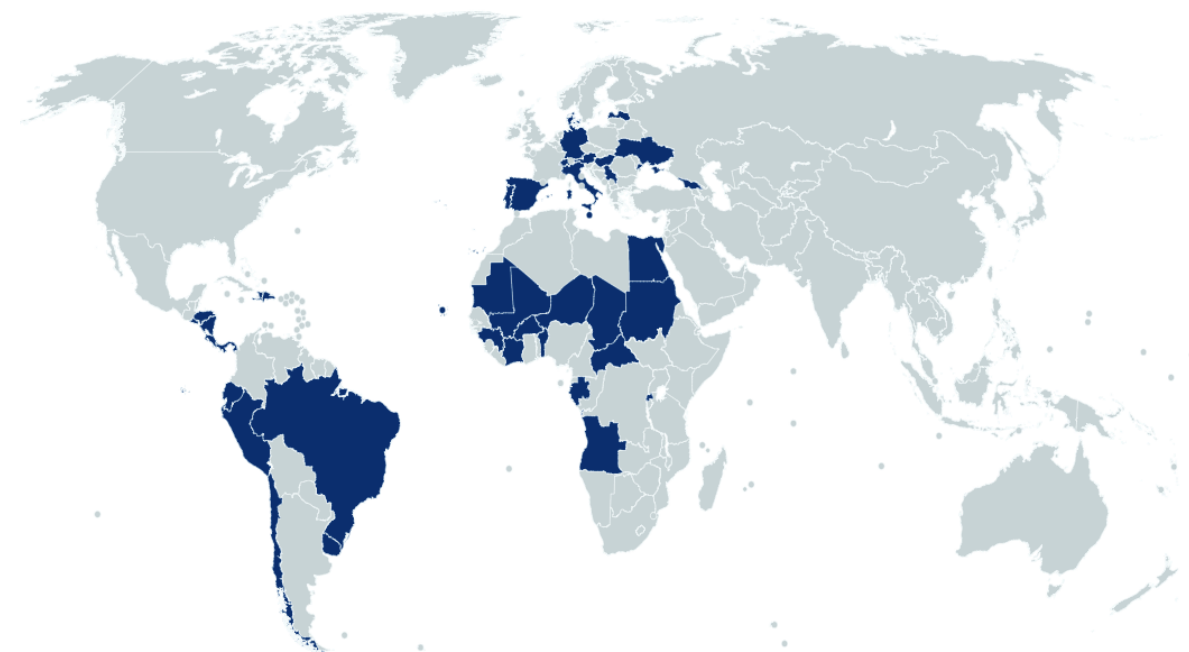
The literature on the political economy of government spending and debt is vast. It studies the question of why governments persistently spend and borrow at levels that may deviate from the prescriptions of optimal fiscal policies and focuses on the set of incentives shaping policy-makers' behavior (Persson and Tabellini 2000; Drazen 2000). For example, early work (Buchanan and Tullock 1962; Brennan and Buchanan 1980) has put forward the hypothesis of “fiscal illusion” which states that voters overvalue current spending relative to the cost of future taxation, thus violating the inter-temporal budget constraint and giving rise to a persistent deficit-bias. But even if voters put sufficient weight on the cost of future taxation, politicians may still (strategically) over-spend; for example, due to political business cycles. Systematic over-spending may also arise when agents can free-ride on the “common-pool” of tax contributions (this argument perhaps most clearly seen in federal contexts such as in Europe). In a recent paper, Alesina and Passalacqua (2015) provide a thorough review of the theoretical literature on persistent-deficits.

Regarding fiscal rules, the existing literature focuses on evaluating the performance of two types of rules. Ex-ante fiscal rules, defined as long-lasting constraints on fiscal policy through numerical limits on budgetary aggregates such as budget deficits (Schaechter et al. 2012), and procedural rules or also called fiscal institutions, like those regulating the drafting, approval, and implementation of the budget (Von Hagen 1992; Poterba and von Hagen 1999; Fabrizio and Mody 2006; Hallerberg et al. 2007). While the latter approach is unlikely to bring immediate results, the former may introduce tensions between reaching the goal of sustainable public finances and appropriate fiscal policies (for a comparative discussion of these two approaches, see Wyplosz 2005, 2013). For example, fiscal rules (even those equipped with certain escape-clauses) will very likely introduce inflexibilities in running counter-cyclical fiscal policy, may discourage public investment, and give rise to creative accounting (for a further discussion of the potential effects of fiscal rules, see Debrun et al. 2008).

However, when the (political) distortions from optimal fiscal policies are large, imperfect or second-best fiscal rules may become welfare improving. Still, it remains an empirical question whether such rules can be effective, and if so, how big is their effect on fiscal outcomes. These questions have been studied extensively on both sub-national (e.g., Poterba 1996; Feld and Kirchgässner 2008; Grembi et al. 2016, respectively from US, Switzerland and Italy) and national levels (e.g., Dahan and Strawczynski 2013; Tapsoba 2012, respectively from OECD and developing countries), and also on the supra-national level (particularly in Europe, e.g., Hallerberg et al. 2007, 2009). These are only a few examples from this abundant literature which we have no ambition to review here. We instead refer to the literature meta-analysis by Heinemann et al. (2016) who find that fiscal rules indeed constrain fiscal policies.

We contribute to the existing literature on the role of fiscal rules by, for the first time, *i)* studying the effect of balanced budget rules (*BBR*) that are enshrined in national constitutions, and *ii)* providing historical evidence dating back to the 19th century. About

Figure 2: CONSTITUTIONAL BALANCED BUDGET RULES AROUND THE WORLD



Notes: Shaded areas represent the countries (41 in total) that had a balanced budget rule between 1800 and 2015. List of these countries by region (year *BBR* first introduced in parentheses):

AFRICA: Angola (2010), Benin (1960), Burkina Faso (1960), Cape Verde (1980), Central African Republic (1959), Chad (1960), Cote d'Ivoire (1960), Republic of the Congo (1967), Egypt (2007), Gabon (1975), Guinea (1983), Mali (1960), Mauritania (1961), Niger (1964), Rwanda (1962), Sudan (1973);

CENTRAL-AMERICA: Costa Rica (1949), Dominican Republic (1955), El Salvador (1939), Haiti (1983), Honduras (1873), Nicaragua (1905), Panama (1983);

SOUTH-AMERICA: Brazil (1946), Chile (1980), Ecuador (1906), Uruguay (1942), Peru (1979);

EUROPE: Austria (2008), Denmark (2014), Germany (1871), Georgia (2013), Hungary (2011), Italy (2014), Latvia (2013), Malta (2014), Portugal (1822), Serbia (2006), Spain (2011), Switzerland (1999), Ukraine (1996).

Source: Own compilation based on data from CCP project (Elkins et al. 2014), and IMF fiscal rules database (Budina et al. 2012; Bova et al. 2015).

four dozen countries have ever introduced *BBRs* into their constitutions.³ Their study is appealing because provisions written in a country's constitution might be more binding than traditional fiscal rules.⁴ Also, unlike numerical fiscal rules that specify a numerical target, constitutional fiscal rules may be more ambiguous and general, thus allowing more flexibility for sound fiscal policy.⁵

³See Figure 2 for a map and Table A1 for a list of these countries, and Table A8 for the relevant paragraphs of the constitution describing the rule

⁴For example, in the United States, balanced budget/expenditure rules in the 80's and 90's were phased out or abandoned, as corresponding laws were rewritten. Further, supranational deficit caps – such as in the European Union – are also often exceeded.

⁵For example, Article 126 of the Swiss Constitution states: “The Confederation shall keep its expenditure and receipts in balance in the long term”. Although the term “in balance” is rather precise, this rule does not provide with further clarity, in the words of Mr. Keynes, on whether long-term is bound to one generation or not.

Figure 1 plots the evolution of average levels of government debt (panel a) and expenditure (panel b), as share of GDP, for countries with and without balance budget rules. These averages hide considerable amount of heterogeneity both across time and countries as we will see later on. However, the first evidence suggests lower levels of debt and expenditure when constitutions include explicit fiscal provisions for balanced budgets.

Our largest sample goes back to the year 1800 and covers at most 224 countries. However, since *BBRs* have little variation in the early years for countries with available data on public finances, our preferred sample focuses on the post-1945 period and includes 132 countries. By estimating a difference-in-difference regression and controlling for population composition, wealth, and quality of democracy, we find, *first*, a strong negative association between constitutional-level *BBRs* and government expenditure and debt. On average, countries with a *BBR* have debt-to-GDP and expenditure-to-GDP ratios that are 11 and 3 percentage points smaller than those without such rules. This result contributes to the literature studying the effects of fiscal rules by showing that the effect of constitutional-level rules is robust and economically relevant. This analysis also contributes to the large literature on the economic effects of constitutions (e.g., Mueller 2003) and particularly to its more recent empirical or positive side (e.g., Persson and Tabellini 2003; Voigt 2011) by presenting evidence of direct policy-effects from constitutional provisions.

Our *second* result is that countries with *BBRs* are less likely to experience debt crises (as measured by Rogoff and Reinhart 2010) even after controlling for the level of debt. This is important for policy debates since ultimately we are interested not only in the level of debt *per se* but on whether debt will reach unsustainable levels possibly leading to a sovereign debt-crisis. To our knowledge, this link between *BBRs* and debt crisis has not been previously established. *Third*, we study whether democratic institutions have a role to play in translating the effect of these rules into fiscal outcomes, and find some but partial evidence that the effective enforcement of *BBRs* is conditional on the quality of democratic institutions.

In addition to studying constitutional rules and providing historical evidence, our *third* contribution is to improve over the existing literature in terms of methodology. The effect of fiscal rules is generally not straightforward to identify because of selection-bias (e.g., fiscal preferences), the potential reverse effect of fiscal outcomes on the probability to implement rules, omitted variables, or other sources of endogeneity. We perform a number of standard tests – such as showing that the results are not driven by outliers or by short-run fluctuations, or that the assumption of parallel trends holds in our case – to rule out the alternative explanations. However, we also suggest two new approaches to isolate the causal relation between rules and fiscal policies. Both use an instrumental variable strategy. The first test exploits the fact that the introduction or suspension of a budget rule *by definition* requires to change the constitution itself. Therefore we build an index of *de jure* constraints on changing the constitution (such as whether a super-majority in the legislature or a public referendum is required) and instrument the probability of having budget rules on this index to estimate its causal effect on fiscal outcomes. However, we cannot entirely rule out the possibility that constitutional rigidity is related to fiscal outcomes in some other way. Therefore, in a second step we reverse the relation and test for reverse causality coming from exogenous variation in debt and spending (which is captured by the effect of natural disasters). These estimates suggest that the relations we find are largely causal, going from *BBR* to fiscal outcomes.

The remainder of the paper is structured as follows. Section 2 discusses the data (with greater details of the constitutional-variables since these are being used for the first time) and summarizes our empirical strategy. Section 3 presents the main results, followed by robustness tests and several extensions. Section 4 concludes.

2 Data and Empirical Design

2.1 Data

Constitutional Data: This paper exploits a novel dataset that contains information on the characteristics of national constitutions for all independent states since 1789 until the present. The dataset was collected by the Comparative Constitutions Project (CCP, Elkins et al. 2014) and has been recently used in the political science and law literature (among others, Elkins 2010; Cheibub et al. 2013; Ginsburg and Versteeg 2014; Melton and Ginsburg 2014; Blöchliger and Kantorowicz 2015; Bjornskov and Voigt 2015).

Since the definition of what makes a constitution changes over time and across countries, we first outline how the CCP defines a constitution. For every country-year observation a document is defined as a constitution if it meets at least one of the following conditions: i) the document is defined explicitly as the “Constitution”, “Fundamental Law”, or “Basic Law” of a country; ii) the document contains explicit provisions that establish its contents to be the highest level of law (either because the document is entrenched or it limits future law); or iii) the document changes the basic pattern of authority by establishing or suspending an executive or legislative branch of government.⁶

The dataset reports extensive information on general characteristics, electoral provisions, the executive, legislative and judiciary branches, regulatory and oversight institutions, among others. We focus on whether the constitution includes a provision for a balanced budget and on how easy it is to amend the constitution. We discuss the details of these variables in Section 2.2.

Historical Public Finance Data: Our objective is to identify if there is an association between a country’s fiscal performance and the use of provisions for a balanced budget in the constitution. Specifically, we focus on government’s debt, expenditure, and tax revenue (as share of GDP) as measures of a country’s fiscal performance.

⁶For further details see Elkins et al. (2014) or visit: comparativeconstitutionsproject.org.

Historical data on government expenditure and tax revenue is taken from Cagé and Gadenne (2014), and data on general government debt comes from Abbas et al. (2010).⁷ Both of these studies compile historical information from different sources and are to the best of our knowledge the most extensive records available. Cagé and Gadenne (2014) collect information on government expenditures as far back as 1830, and Abbas et al. (2010) report data on government debt as early as 1880.

In addition, we study domestic and external debt crises using the data from Rogoff and Reinhart (2010). External debt crises are defined as a failure by the government to meet an interest or principal payment on the due date. Domestic debt crises are defined similarly but include episodes involving the freezing of bank deposits and/or forcible conversions of such deposits from foreign to local currency.

Other Data: As control variables in our analysis we also include population size, per capita income and quality of democracy. We proxy for the quality of a country’s democracy using the Polity scores from the Center for Systemic Peace. The scores originally range from -10 to 10, from complete autocracy to complete democracy, but for exposition purposes we normalize the score to range between 0 and 1. The population and income data come from the Maddison Project database.⁸ Specifically, income is measured as per capita GDP in 1990 international dollars.⁹

Table 1 reports basic information on the sample (number of countries and median number of years available per country), the usual summary statistics, and the sources of our main variables.

⁷Abbas et al. (2010) define the general government sector as “all government units and all non market nonprofit institutions that are controlled and mainly financed by government units, comprising the central, state, and local governments. The general government sector does not include public corporations or quasi-corporations”. However, due to data limitations for the earlier years in their sample, they use central government debt whenever general government debt was not available.

⁸The Maddison-Project, <http://www.ggd.net/maddison/maddison-project/home.htm>, 2013 version.

⁹The unit refers to Geary-Khamis dollars which is a fictional currency set to have the same purchasing power parity as US dollars.

Table 1: SUMMARY STATISTICS, TIME AND COUNTRY COVERAGE, DATA-SOURCES

Variable	Countries	Years (median)	Obs.	Mean	St.D.	10th pct.	90th pct.	Source
Balanced Budget Rule	193	60	6,689	0.11	0.32	0.0	1.0	CCP
Population (million)	193	60	11,880	23.6	92	0.1	46	The Maddison Project
Per Capita GDP (ths. USD)	157	59	8,643	4.8	5.7	0.7	12.8	–
Polity Score	187	55	9,249	0.5	0.4	0.1	1.0	Center for Systemic Peace
Gen. Gov. Debt (% GDP)	177	41	7,011	56.3	60.3	12.6	105.5	Abbas et al. (2010)
Central Gov. Expenditure	128	29	4,068	25.5	13.1	12.0	41.8	Cagé and Gadenne (2014)
Central Gov. Tax Revenue	130	29	4,157	18.0	9.3	8.2	31.7	–
Debt Crisis	70	211	14,132	0.12	0.33	0.0	1.0	Rogoff and Reinhart (2010)

2.2 Summary of Constitutional Variables

Balanced Budget Provision: We first describe the evolution in the number of constitutions – or, in other words, the number of sovereign states that have a constitution – over time. The left panel in Figure 3 shows that the share of independent countries with constitutions increased steadily from 1816 until 1980.¹⁰ After 1980, almost all countries had some form of a constitution.

Additionally, the left panel in Figure 3 also shows the share of countries (out of those with constitutions) that have information on central government debt or spending. In particular, after 1970 the share of countries with information on outcomes increases substantially. This jump is probably driven by the fact that most government financial statistics from the IMF go as far back as 1970.

The right hand panel in Figure 3 reports the share of countries with a balanced budget provision (out of those with constitutions). The inclusion of this provision is a recent phenomenon that seems to have gained popularity starting in the 1950’s.

Substance of the Balanced Budget Provisions Our definition of a balanced budget provision in the constitution is taken from the following question in the CCP questionnaire: *Does the constitution specify that the budget must be balanced?* This provision

¹⁰The data on the number of independent states over time is taken from the 2013 updated dataset of Gleditsch and Ward (1999)

Figure 3: EVOLUTION OF CONSTITUTIONAL FISCAL PROVISIONS OVER TIME



Notes: Own calculations based on data from Comparative Constitutions Project and Gleditsch and Ward (1999).

is different from traditional budget balance rules in the sense that it is not a numerical constraint but more of an explicit commitment for a balanced budget. From here on we refer to these provisions as constitutional balanced budget rules (*BBR*).

Overall, 36 countries in our sample ever had a *BBR* in their constitution. Table A1 of the appendix lists these countries along with the periods when the *BBR* was in place (column 3), and the periods for which data on government debt is also available (column 4).¹¹

A closer look at Table A1 allows to make several observations. First, and as discussed above, there are very few developed countries that historically had a *BBR* in their constitution. The stronger presence of *BBRs* in less developed countries can perhaps be explained by the argument that the political institutions of these countries often cannot guarantee stable political commitments, thus forcing them to fill this credibility-deficit by an explicit provision in the constitution. On the other hand, the recent global crisis showed that the commitment to sustainable public finances by many developed countries can also suffer a credibility-deficit. This is one of the reasons why many countries in Europe – such as Austria, Denmark, Hungary, Italy, Spain and others – have introduced *BBRs* into their constitutions following the crisis.

¹¹Out of our outcome variables the richer dataset is on general government debt. If we look at periods with *BBRs* and data on government expenditures the sample is smaller than the one depicted in the last column of Table A1.

We also note that several countries had constitutional *BBRs* for very brief periods of time. In most instances, such cases correspond to circumstances when the constitution was short lived. Consider the cases of Ecuador (1996-1997), Niger (1989-1990), and Portugal (1822). During the period 1996-1998 Ecuador adopted a new constitution every year and two of those constitutions had explicit provisions for a balanced budget. Similarly, in 1989 Niger adopted a new constitution that included a budget balance provision; however, the 1989 constitution was replaced in 1992. Finally, Portugal's brief *BBR* of 1822 is due to the turmoil of the liberal revolution and the revolts after the ratification of the constitution in 1822.

A third observation is that most *BBRs* are incorporated into the constitution as a result of a new constitution being adopted (about 90%) rather than through constitutional amendments (about 10%). In particular, constitutions seem to be more short lived in regions like Latin America and Africa than Western Europe. Table 2 reports the average number of constitutions and amendments per country across different regions. Notice that the average Latin American country has had about eight constitutions in comparison to the average western European country that has had about three constitutions. Also, the average African country has had about three constitutions, a high number considering that most of the countries in the region obtained their independence in the 1960s.

Table 2: FREQUENCY OF CONSTITUTIONAL CHANGES ACROSS REGIONS.

Region	Mean No. New Const.	Mean No. Amendments
East Asia	3.75	19.25
Latin America	7.96	18.73
Middle East/N. Africa	2.67	17.33
Oceania	0.75	13.63
South Asia	2.50	17.75
Sub-Saharan Africa	2.63	15.00
W. Europe/U.S./Canada	2.95	32.50

Finally, we note that there are fairly large cross-country heterogeneities in how exactly a budget rule is formulated. Table A8 reports the articles, or excerpts, describing the *BBR* in each constitution (along with the approval year of the most recent constitution

or constitutional amendment in column 1). English translations of each constitution were obtained at the website of the Constitute Project.¹² Some of the countries in Table A1 are not included in Table A8 because the Constitute Project only publishes the most recent constitutions. Thus, we lack information on the text of *BBRs* incorporated in previous constitutions and no longer included in the most recent constitution (i.e., Brazil, Ecuador, Honduras, Haiti, Portugal, Rwanda, etc).

2.3 Estimation

We estimate a difference-in-difference specification of the following form:

$$y_{it} = \beta_0 + \beta_1 D_{it} + \mathbf{X}_{it}\boldsymbol{\beta} + \tau_t + \lambda_i + \varepsilon_{it} \quad (1)$$

where indexes i and t refer to countries and years, respectively. $y_{i,t}$ is our measure of fiscal performance, expressed as government's debt, expenditure or tax revenue as share of GDP in percentage points. D_{it} is an indicator variable equal to 1 when the constitution specifies a *BBR* and 0 when it includes some fiscal provision but does not require the budget to be balanced. \mathbf{X}_{it} is a $1 \times k$ vector of controls including \ln of population, \ln of per capita GDP, the polity score of democracy normalized between 0 and 1, and an indicator variable for constitutional changes or amendments. We also include year and country fixed effects, and cluster the standard errors by country.

The above specification may suffer from several sources of endogeneity. One concern that relates to all constitutional variables is the possibility of an omitted variable bias. That is, it might be the case that the factors that drive the implementation of these processes in the constitution are also correlated with the fiscal outcomes being studied (see Acemoglu 2005). With this in mind, we include several control variables to account for biases coming from observable factors. Regarding any unobservable factors – such as the often cited possibility of fiscal preferences driving both the fiscal institutions and fiscal outcomes –

¹²See <https://www.constituteproject.org/search?lang=en>

we include country fixed effects that control for any time-constant factors.¹³ Because of the likely event that some unobservable factors are not time-constant within the long period that we analyze, we repeat our analysis using shorter time periods. Moreover, we show that the common trends assumption holds in our difference-in-difference setup. Additionally, we perform a selection on unobservables test in the spirit of Altonji et al. (2005).

In the case of *BBRs* an additional concern is the possibility of reverse causality since the implementation of fiscal rules might be triggered by a country's bad fiscal performance¹⁴. To mitigate this problem, in Section 3.5 we propose a new way of testing for the possibility of reverse causality. The idea is to exploit variation in the incidence of natural disasters as a plausibly exogenous predictor of spending and debt. Thus, in the reduced form, we test for the effect of exogenous increases in spending and debt on the likelihood that a country adopts a *BBR*.

To hedge against other potential sources of endogeneity and also against potential measurement error, our final strategy is an instrumental variable design. In Section 3.5 we exploit the fact that the introduction or termination of constitutional-level rules *by definition* requires changing or amending the constitution itself. Therefore we construct an index on “*de jure* constraints on constitutional amendments” and use this as an instrument for *BBRs*.

¹³In an attempt to untangle the endogenous relation between fiscal rules and fiscal performance Heine-
mann et al. (2014); Krogstrup and Wälti (2008) develop proxies for voter preferences. After controlling
for fiscal preferences, these studies find evidence that fiscal rules have a positive effect on fiscal behavior
by serving as a signal of a commitment towards fiscal discipline.

¹⁴In such a case, fiscal rules might be implemented because politicians want to send a signal to voters
or the international community of a commitment towards fiscal discipline.

3 Results

3.1 Baseline results: Government Finances

Table 3 reports the baseline results for Equation 1. Estimates on the full sample are reported in columns 1-6, while in columns 7-12 the sample is restricted to the period from 1945 to 2015. The dependent variables are debt, expenditures and tax revenues of the central government - all in ratios to GDP and expressed in percentages. Note that the sample size varies across regressions, from 110 to 133 countries, which depends on the availability of the dependent variable. Given the historical nature of the data which may contain potential inconsistencies, we estimate the equations by trimming the outliers of the dependent variables at top and bottom 1% and 5% percentiles, respectively, at odd and even numbered columns. All regressions include country and year fixed effects and control for per capita GDP, population-size, polity index of democracy, and a dummy for constitutional changes.¹⁵

The main result of Table 3 is a statistically significant negative and economically large association between constitutional-level *BBRs* and government debt and expenditure, but no statistically significant effect on tax revenues. These results hold both for the historical sample and for the post-WWII sample. In our preferred specification on the more recent sample, the adoption of a *BBR* in a constitution is associated with an average decrease of debt-to-GDP of about 11 and expenditure-to-GDP of about 3 percentage points (columns 7-10).

¹⁵We control for constitutional changes – that is the implementation of new constitutions or amendments to existing ones – in order to isolate the effect of constitutional changes from the effect of (the introduction or termination of) *BBRs* (which, by definition, imply a constitutional change).

Table 3: BASELINE: BALANCED BUDGET RULES AND GOVERNMENT FINANCES IN 1800-2015

Sample: VARIABLES	Post-1800			Post-1945								
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	DEBT 1%	DEBT 5%	EXPENDITURE 1%	EXPENDITURE 5%	TAX REVENUE 1%	TAX REVENUE 5%	DEBT 1%	DEBT 5%	EXPENDITURE 1%	EXPENDITURE 5%	TAX REVENUE 1%	TAX REVENUE 5%
Balanced budget rule	-4.409 (4.931)	-7.487* (4.389)	-2.164** (0.971)	-2.614*** (0.923)	-0.042 (0.917)	-0.310 (0.886)	-11.106** (5.222)	-11.407** (5.355)	-3.504*** (0.856)	-2.818*** (0.615)	-0.389 (0.974)	0.061 (0.594)
Ln per capita GDP	-13.083 (10.308)	-8.553 (5.555)	-4.264* (2.173)	-2.966* (1.739)	-0.015 (1.785)	-0.035 (1.596)	-23.911** (9.673)	-11.056** (5.503)	-4.177* (2.173)	-1.770 (1.792)	1.427 (1.226)	1.732 (1.169)
Ln population	-8.097 (10.890)	-3.981 (7.018)	-15.894*** (2.800)	-10.643*** (1.853)	-12.172*** (2.087)	-7.813*** (2.454)	-9.953 (15.496)	-4.073 (10.149)	-20.261*** (3.771)	-10.995*** (2.956)	-13.516*** (2.625)	-6.198* (3.151)
Polity2 (normalized)	4.385 (7.001)	-0.205 (6.012)	-0.314 (1.343)	1.942** (0.948)	-1.545 (1.088)	-0.132 (1.024)	-5.194 (6.147)	-6.812 (5.073)	0.268 (1.204)	1.903** (0.960)	-0.874 (1.139)	0.417 (1.085)
Constitutional change	-1.040 (1.873)	-0.427 (1.190)	0.162 (0.394)	0.423 (0.288)	0.116 (0.228)	-0.136 (0.191)	-1.191 (1.095)	-0.661 (0.913)	0.202 (0.389)	0.420 (0.311)	0.212 (0.212)	0.010 (0.162)
Observations	4,560	4,121	3,207	2,954	3,237	3,036	3,797	3,486	2,816	2,656	2,850	2,679
R-squared	0.317	0.367	0.550	0.523	0.529	0.473	0.365	0.414	0.407	0.352	0.393	0.257
Countries	133	132	111	111	113	113	132	131	110	110	112	112

*** p<0.01, ** p<0.05, * p<0.1

Dependent variables are specified as a share of GDP in %. In odd and even numbered columns we drop the top/bottom 1 and 5% outliers of the dependent variable. All regressions include country and year fixed effects (not reported). Standard errors are clustered by country.

Regarding the control variables, both per capita GDP and population have negative signs indicating that richer and more populous countries have lower levels of debt and expenditure, but the coefficients are not always statistically significant. The polity index of democracy has a positive coefficient, but again not always statistically significant.

3.2 Robustness of baseline results

Before presenting our further results we perform several robustness tests on the baseline results. We replicate the analysis of Table 3 by testing: *i*) the effects on 10- or 5-year averaged data to make sure short-run fluctuation do not drive our results, *ii*) the assumption of parallel trends between treated and untreated units before and after the treatment, *iii*) the robustness of results to different estimation techniques, *iv*) the robustness of results to alternative definitions of *BBR* and a wider set of control variables, *v*) sensitivity of results to certain influential observations, and *vi*) whether selection-bias could drive our results.

Table 4: ROBUSTNESS TO SHORT-RUN FLUCTUATION

Sample: VARIABLES	Post-1800; decade-averages			Post-1945; 5-year-averages		
	(1) DEBT	(2) EXPENDITURE	(3) TAX REVENUE	(4) DEBT	(5) EXPENDITURE	(6) TAX REVENUE
Balanced budget rule	-4.909 (4.776)	-4.362** (2.017)	-1.020 (1.093)	-12.399** (5.757)	-3.222** (1.485)	-1.039 (1.234)
Ln per capita GDP	-14.825 (10.844)	-3.900* (2.207)	-0.278 (2.063)	-23.886* (12.194)	-4.745** (2.130)	0.481 (1.399)
Ln population	-6.399 (8.882)	-14.363*** (3.102)	-11.852*** (2.634)	-12.394 (15.975)	-20.499*** (3.703)	-16.724*** (2.667)
Polity2 (normalized)	4.494 (8.512)	-1.092 (2.455)	-4.066* (2.325)	-6.640 (6.564)	-0.122 (1.611)	-1.592 (1.453)
Constitutional change	-9.989 (11.364)	2.214 (2.624)	0.854 (1.950)	-7.844* (4.406)	0.739 (1.440)	0.640 (0.886)
Observations	595	458	465	902	673	687
R-squared	0.355	0.527	0.560	0.375	0.395	0.517
Number of countries	133	112	114	131	111	113

*** p<0.01, ** p<0.05, * p<0.1

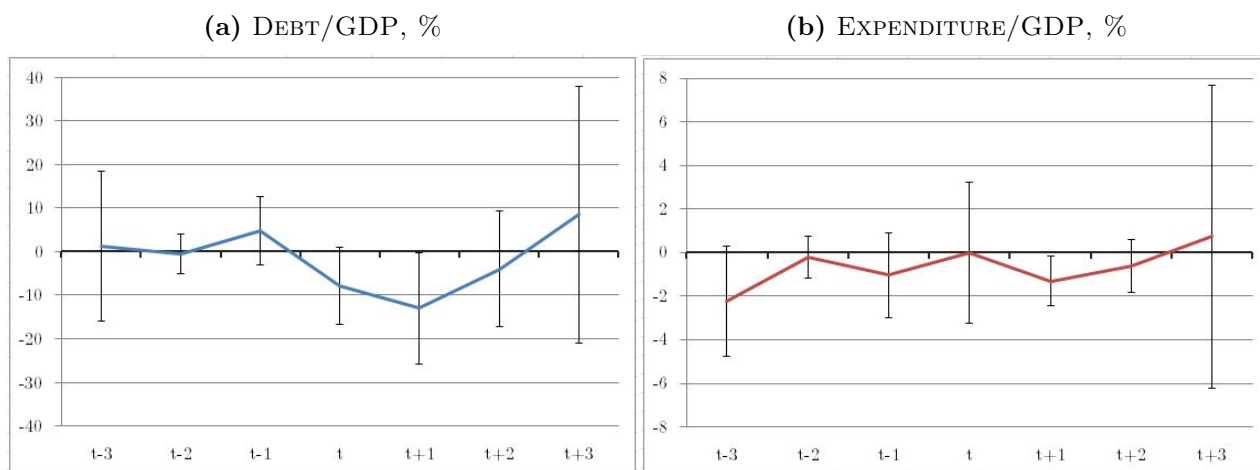
Dependent variables are specified as a share of GDP in %. All regressions include country and year fixed effects (not reported). Standard errors are clustered by country.

Robustness to short-run fluctuations: Table 4 estimates the baseline specification on 10 (5)-year-averaged data for the post-1800 (1945) sample.¹⁶ This approach helps to mitigate problems related to possible short-run fluctuations and also assures that outliers do not drive the results.

The results from this exercise – collected in Table 4 – are very similar to the baseline results of Table 3. The estimate for the effect of *BBRS* is statistically significant both for debt and expenditures, and has a similar magnitude as before.

Parallel trends: With a dummy variable on the existence of *BBRs* and country and year fixed effects, our specification is equivalent to a difference-in-difference design. Therefore the assumption is not of random treatment but that trends of treated and non-treated units are parallel. To test the validity of this assumption in Table A3 of the Appendix we estimate the baseline models from columns (7) and (9) of Table 3 by adding lags and leads of our treatment variable.

Figure 4: Debt and expenditure around the time of introducing a balanced budget rule



Notes: Figures plot the coefficient estimates of *BBRs* from columns 1 and 2 of Table A3 for debt and expenditure, respectively. Vertical lines present 95% confidence intervals.

The point estimates (along with the confidence intervals) for pre- and post- treatment periods are plotted in Figure 4. These show that the effect of *BBR* before its introduction

¹⁶Note that the definition of the dependent variable of interest is slightly different compared to the baseline model. Since we average the data over time-periods, the *BBR* variable here reflects the share of years within the period that a constitution included such a rule.

is not significantly different from 0. *BBRs* become effective in the year of the introduction or in the proceeding year, and then are again not significant.

Robustness to estimation techniques: Table A4 of the Appendix replicates the baseline results of Table 3, first, by controlling for the lagged dependent variable, and second, by estimating the latter equation with a difference-GMM. The size of the point estimates decreases, which is due to the downward-bias introduced by the lagged dependent variable (Keele and Kelly 2006). However, the sign and statistical significance of all baseline results remain robust.

Robustness to alternative definitions of BBR and a wider set of control variables: Table A5 presents further tests of the baseline results of Table 3: i) by additionally controlling for the occurrence of civil wars¹⁷ (columns: 1-2); ii) to an alternative definition of *BBR* (columns: 3-4) which includes four further countries (see Table A1 for the sample of countries having a *BBR* according to the baseline and alternative definitions); and iii) to re-defining the *BBR* dummies to be 0 also for constitutions that do not include any fiscal provisions.¹⁸ The results from these tests are broadly consistent with our baseline results.

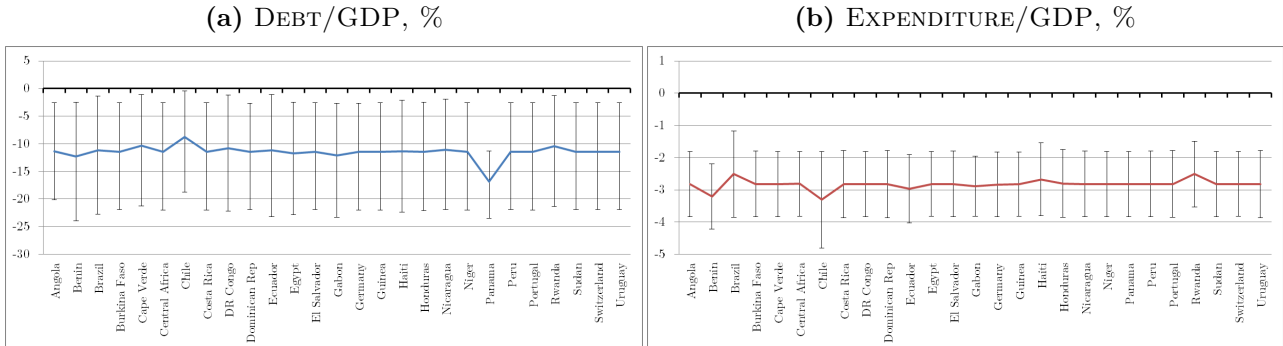
Sensitivity of results: Because the number of countries which ever had a *BBR* in their constitution is not very large – about three dozen – one question is whether there are influential countries that drive our results. To test this, in Table A6 we re-run the baseline regression dropping each of the countries in the sample one at a time. We perform this exercise both for debt and expenditure. The country-specific point estimates along with the confidence intervals are plotted in Figure 5. We do not find any single influential

¹⁷Information on civil wars was taken from the database of Intra-state wars V.4.0 of the Correlates of War Project.

¹⁸Previously we were comparing only those constitution that specify some fiscal provision in order to make sure they are comparable. In this way we also control for the selection bias coming from the fact that if a constitution specifies some fiscal provision it is more likely to also specify a *BBR*.

country without which our main results for the average effect of either debt or expenditure would not hold.

Figure 5: Sensitivity of baseline results to the exclusion of countries with *BBR*



Notes: Figures plot the country-specific coefficient estimates (and 90% confidence intervals) of *BBR* after dropping each of the countries that ever had a *BBR* one at a time. The full results are presented in Table A6.

Selection on unobservables: In the spirit of Altonji et al. (2005) the idea of this test is to construct a measure which estimates how much stronger the selection on unobservables has to be compared to the covariates in order to explain away the estimated effect (see also, e.g., Nunn and Wantchekon 2011; Oster 2015; Baskaran 2015; Hener et al. 2015). The results are collected in Table A7. The test shows that after controlling for country and year fixed effects, unobserved variables would have to explain the effect of *BBR* on debt and expenditure about 30 and 4 times more, respectively, (than the observable covariates of the full model do) for the effect to be spurious.

3.3 Sovereign Debt Crises

In this section we again estimate Equation 1, but extend the dependent variable to a dummy for (external and/or domestic) debt crises taken from Rogoff and Reinhart (2010).

Table 5 shows that *BBRs* are associated with a smaller probability of having debt crises, and that this effect holds even when controlling for the level of debt. The marginal effects of column 1 (not reported) show that the size of the effects is fairly large with

Table 5: BALANCE BUDGET RULES AND DEBT CRISES

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Sample:	Post-1945							
VARIABLES	DOMESTIC AND/OR EXTERNAL DEBT CRISES							
Method:	OLS		Poisson		Logit		Probit	
Balanced budget rule	-0.156*** (0.041)	-0.192*** (0.047)	-1.074** (0.426)	-1.276** (0.553)	-1.637*** (0.548)	-1.994** (0.862)	-0.831*** (0.292)	-1.005** (0.464)
Ln per capita GDP	-0.256*** (0.071)	-0.243*** (0.083)	-2.195*** (0.338)	-1.843*** (0.491)	-4.878*** (0.549)	-3.869*** (0.836)	-2.441*** (0.267)	-1.973*** (0.409)
Ln population	0.380*** (0.116)	0.216** (0.102)	3.978*** (0.556)	3.669*** (0.863)	7.511*** (0.795)	6.590*** (1.314)	3.809*** (0.392)	3.538*** (0.648)
Polity2 (normalized)	-0.001 (0.065)	0.086 (0.058)	-0.040 (0.289)	0.124 (0.325)	0.559 (0.431)	1.185** (0.572)	0.314 (0.237)	0.597* (0.306)
Constitutional change	0.000 (0.016)	-0.000 (0.020)	-0.058 (0.128)	-0.064 (0.143)	-0.091 (0.199)	-0.074 (0.253)	-0.008 (0.108)	-0.012 (0.137)
Debt / GDP		0.002*** (0.001)		0.007*** (0.002)		0.037*** (0.006)		0.020*** (0.003)
Observations	2,795	2,276	1,822	1,367	1,794	1,321	1,794	1,321
(Pseudo) R-squared	0.220	0.231			0.458	0.521	0.446	0.513
Wald Chi2			260.1	194.7	900.7	799.7	876.4	788.2
Number of countries	57	57	38	36				

*** p<0.01, ** p<0.05, * p<0.1

Dependent variable is a dummy for domestic and/or external debt crises taken from Reinhart and Rogoff. All regressions include country and year fixed effects (not reported). Standard errors are clustered by country.

the introduction of a *BBR* reducing the probability of observing a debt-crisis by 16,7%. Since the dependent variable is a dummy, Table 5 replicates the baseline results of a linear OLS-model (columns 1-2), with a panel-poisson model (columns 3-4), and logit and probit models with country and year dummies (columns 5-6 and 7-8).

While our result – that *BBRs* mitigate the probability of observing a debt crises – is new to the literature and is interesting in its own right, it also re-enforces our previous findings of the constraining role of constitutional *BBRs* in government’s borrowing and spending decisions more generally.

3.4 The Role of Democratic Institutions

In this sub-section we extend our baseline results of Section 3.1 by asking whether democratic institutions have a role to play. Previously we have controlled for the level of

Table 6: THE ROLE OF DEMOCRATIC INSTITUTIONS AND FEMALE VOTING SUFFRAGE

Sample: VARIABLES	(1) Post-1800		(3) Post-1945		(5) Post-1800	
	DEBT	EXPENDITURE	DEBT	EXPENDITURE	DEBT	EXPENDITURE
Balanced budget rule	-1.565 (7.874)	1.255 (2.354)	-6.875 (6.815)	0.260 (2.135)	8.911 (13.753)	-2.135** (0.972)
x Polity2 (normalized)	-4.669 (12.930)	-5.694 (3.470)	-7.813 (14.434)	-6.447* (3.338)		
x Female suffrage					-15.009 (13.863)	0.000 (0.000)
Female suffrage					18.522** (8.724)	-1.275 (2.512)
Polity2 (normalized)	5.002 (6.536)	0.310 (1.380)	-3.999 (5.969)	1.111 (1.258)	4.279 (7.348)	-0.241 (1.381)
Ln per capita GDP	-12.821 (10.306)	-4.419** (2.144)	-23.620** (9.531)	-4.357** (2.139)	-11.806 (10.915)	-3.795 (2.341)
Ln population	-7.983 (10.922)	-15.850*** (2.802)	-9.381 (15.372)	-20.314*** (3.771)	-13.777 (10.607)	-15.214*** (2.845)
Constitutional change	-1.034 (1.872)	0.171 (0.396)	-1.211 (1.084)	0.211 (0.387)	-0.947 (1.856)	0.114 (0.395)
Observations	4,557	3,207	3,794	2,816	4,505	3,167
R-squared	0.316	0.552	0.364	0.411	0.327	0.552
Countries	133	111	132	110	131	110

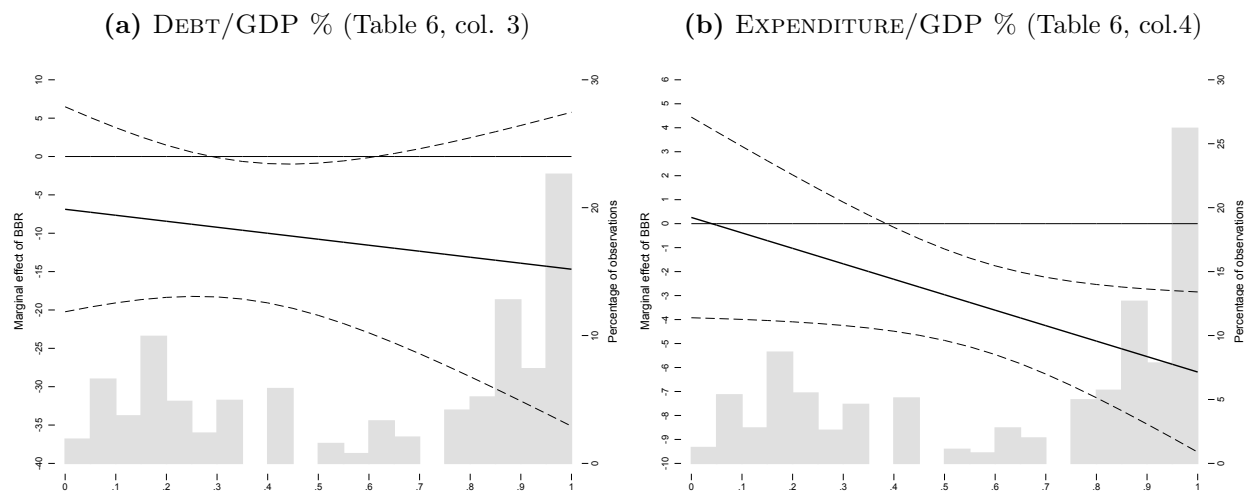
*** p<0.01, ** p<0.05, * p<0.1

Dependent variables are specified as a share of GDP in %. All regressions include country and year fixed effects (not reported). Standard errors are clustered by country.

democracy; however, it is possible that the enforcement of *BBRs* itself depends on well-functioning democratic institutions.

To test this hypothesis in Table 6 we re-estimate the baseline regressions by including an interaction term between the *BBR* dummy and the polity index of democracy. The marginal effects are plotted in Figure 6. We do not find statistically significant effect for debt, but observe clearly that the negative effects of *BBRs* on expenditure is only effective when some democratic institutions are in place. An autocracy, it seems, does not find it very costly not to comply with constitutional-level *BBRs*.

Figure 6: MARGINAL EFFECTS OF BALANCED BUDGET RULES DEPENDING ON DEMOCRATIC INSTITUTIONS



Notes: Figures plot the marginal effects of *BBRs* on debt and spending (y-axis, % of GDP) depending the polity index of democracy (x-axis, from autocracy to democracy). These relations are estimated in Table 6. The background-histograms present the distribution of the sample according to the democracy index.

As a final test, we have collected data on the dates when female universal voting-suffrage was introduced in each country.¹⁹ Generally speaking, we can think of universal suffrage as one important driver of the size of government (Aidt and Dallal 2008).

In columns 5-6 of Table 6 we test whether this proposition holds in our sample and, building on this result, aim to test whether *BBRs* constrain this large shock. The introduction of female voting suffrage is associated with an increase in debt-to-GDP; the effect on expenditure is, however, not statistically significant. Interestingly, once *BBRs* are in place, the effect of female suffrage on debt vanishes. Since suffrage rules were implemented early on we cannot identify such an effect for the later periods where *BBRs* became more common.

3.5 Causality

As discussed in Sections 2.3 and 3.2, the effect of *BBRs* on fiscal policies cannot be easily interpreted causally because of different sources of endogeneity. One issue may have to

¹⁹The data comes from the project “Women suffrage and beyond: confronting the democratic deficit”.

do with fiscal preferences of countries which could both determine the fiscal preferences and be expressed in the constitution by a *BBR*. So far we have dealt with this issue by controlling for several observable characteristics and by including fixed effects for unobservables, but some bias coming from time-variant and unobservable fiscal preferences may remain. A second issue has to do with reverse causality, i.e. a situation where a *BBR* is introduced to or terminated from the constitution motivated by the current level of debt or expenditures.

In this section we propose two new ways of isolating the causal relation between rules and fiscal policies. Both use an instrumental variable strategy. While the first test somewhat conventionally tries to find an exogenous instrument for rules, the idea of the second test is to reverse the relation and test for reverse causality coming from exogenous variation in debt and expenditure.

Instrumenting balanced budget rules: Generally it is hard to find an instrument for *BBRs*, however our setting allows us to exploit the fact that the introduction or termination of constitutional-level rules *by definition* requires changing or amending the constitution itself. Therefore from the CCP data we create an index on “de jure constraints on constitutional amendments” and use this as an instrument for *BBR*. The index takes a value of 1 (the weakest constraint) if the constitution can be amended by the executive branch, 2 by the legislature, 3 by the legislature with a super-majority, 4 by a public referendum, and 5 (the strongest constraint) both by a super-majority in the parliament and a public referendum (for a discussion of the role and measurement of amendment difficulty, see, Ginsburg and Melton 2015).

The lower panel of Table 7 collects the first stage results. It shows that following the logic above the stronger de jure constraints on amending the constitution get, the smaller is the likelihood of adopting a *BBR*. Using this variation in the second-stage (upper panel of Table 7) we show that our previous results can be replicated.

The question is, of course, whether the de jure constraints on constitutional amendments are not related to fiscal policies in some other way. In the next test we rely on data on natural disasters which may arguably contain more randomness which we could exploit.

Table 7: 2SLS: ISOLATING THE CAUSALITY BETWEEN BALANCED BUDGET RULES AND FISCAL OUTCOMES

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<i>Second-Stage</i>								
Sample:	Post-1800				Post-1945			
VARIABLES	DEBT		EXPENDITURE		DEBT		EXPENDITURE	
	1%	5%	1%	5%	1%	5%	1%	5%
Balanced budget rule	-4.083 (4.626)	-10.219*** (3.473)	-2.240* (1.257)	-1.613** (0.791)	-6.311 (7.033)	-12.599** (5.082)	-3.389*** (1.225)	-2.327*** (0.827)
Ln per capita GDP	-25.053** (10.670)	-13.109*** (4.846)	-4.883* (2.764)	-1.035 (2.351)	-32.222*** (12.430)	-12.621* (6.644)	-3.892 (3.187)	-0.421 (2.473)
Ln population	-27.681*** (8.212)	-19.209*** (4.759)	-16.846*** (4.994)	-9.807*** (3.144)	-41.931** (16.565)	-23.225** (9.465)	-19.431*** (6.903)	-10.746*** (3.938)
Polity2 (normalized)	-9.215 (6.830)	-7.474 (5.865)	-2.686 (1.904)	-0.383 (1.317)	-12.563 (8.052)	-8.256 (6.476)	-1.488 (1.703)	0.137 (1.235)
Constitutional change	-1.118 (1.465)	-0.007 (1.152)	0.197 (0.587)	0.447 (0.360)	-0.884 (1.529)	0.247 (1.202)	0.298 (0.506)	0.450 (0.365)
R-squared	0.420	0.461	0.456	0.410	0.423	0.451	0.340	0.338
F	126.4	471.3	35.44	88.37	111.4	423411	70.02	45.69
<i>First-Stage</i>								
VARIABLES	BALANCED BUDGET RULE							
Index: de jure constraints on constitutional amendments	-0.064*** (0.022)	-0.055** (0.022)	-0.028** (0.013)	-0.021 (0.014)	-0.019 (0.023)	-0.011 (0.024)	0.004 (0.019)	0.003 (0.019)
Ln per capita GDP	0.004 (0.037)	0.035 (0.046)	-0.057 (0.071)	-0.071 (0.080)	-0.036 (0.043)	-0.020 (0.046)	-0.061 (0.071)	-0.071 (0.082)
Ln population	-0.027 (0.059)	-0.034 (0.064)	0.069 (0.057)	0.039 (0.078)	-0.139 (0.113)	-0.180 (0.168)	-0.107 (0.153)	-0.133 (0.164)
Polity2 (normalized)	0.129 (0.082)	0.098 (0.075)	0.071 (0.086)	0.058 (0.088)	0.057 (0.061)	0.041 (0.062)	0.057 (0.085)	0.052 (0.087)
Constitutional change	-0.010 (0.010)	-0.009 (0.009)	0.010 (0.007)	0.009 (0.008)	-0.006 (0.011)	-0.009 (0.012)	-0.003 (0.010)	-0.003 (0.011)
Observations	2,657	2,417	1,969	1,811	2,378	2,151	1,774	1,671
R-squared	0.148	0.150	0.147	0.145	0.079	0.099	0.052	0.057
Number of countries	123	122	102	99	122	121	101	97
First-stage F	7160	402.9	28.80	35.67	191.2	11.37	6.576	13.03

*** p<0.01, ** p<0.05, * p<0.1

Dependent variables are specified as a share of GDP in %. In the first stage the endogenous regressor – *BBR* – is regressed on de jure constraints on changing the constitution. All regressions include country and year fixed effects (not reported). Standard errors are clustered by country.

Table 8: 2SLS RESULTS: DETERMINANTS OF BALANCED BUDGET RULES

	(1)	(2)	(3)	(4)	(5)	(6)
<i>Second-Stage</i>						
VARIABLES	BALANCED BUDGET RULE					
Debt / GDP	-0.001 (0.003)	-0.001 (0.003)	0.001 (0.005)			
Expenditure / GDP				0.030 (0.033)	1.083 (38.221)	0.029 (0.031)
Ln per capita GDP	-0.120 (0.092)	-0.122 (0.096)	-0.097 (0.081)	-0.065 (0.118)	3.397 (124.913)	-0.070 (0.113)
Ln population	-0.126 (0.120)	-0.129 (0.124)	-0.082 (0.190)	0.211 (0.344)	9.940 (353.668)	0.197 (0.331)
Polity2 (normalized)	0.074 (0.075)	0.074 (0.076)	0.082 (0.078)	0.107 (0.099)	1.421 (47.578)	0.105 (0.096)
F	163.9	65.79	2352	48.52	0.0763	66.40
<i>First-Stage</i>						
VARIABLES	DEBT/GDP, %			SPENDING/GDP, %		
Number of disasters per year	0.710* (0.374)	0.708* (0.373)		-0.002 (0.108)	-0.003 (0.108)	
Total deaths, thousand	0.008* (0.004)		0.008* (0.004)	0.002*** (0.001)		0.002*** (0.001)
Ln per capita GDP	-13.566 (15.160)	-13.575 (15.156)	-13.335 (15.140)	-3.288 (2.962)	-3.289 (2.962)	-3.289 (2.972)
Ln population	-25.048* (13.846)	-25.054* (13.844)	-24.801* (13.816)	-9.237*** (3.496)	-9.243*** (3.496)	-9.238*** (3.492)
Polity2 (normalized)	-4.671 (14.018)	-4.663 (14.016)	-4.631 (14.041)	-1.251 (2.457)	-1.249 (2.458)	-1.252 (2.457)
Observations	2,988	2,988	2,988	2,317	2,317	2,317
R-squared	0.142	0.142	0.142	0.271	0.271	0.271
Number of countries	54	54	54	46	46	46
Fist-stage F	13149	13319	21789	1208	1225	1255

*** p<0.01, ** p<0.05, * p<0.1

Dependent variable is a dummy for the existence of *BBRs* at the constitutional level. The endogenous regressors – debt and spending in GDP – are regressed on natural disasters in the first stage. All regressions include country and year fixed effects (not reported). Standard errors are clustered by country.

Instrumenting expenditure and debt: In the first stage of Table 8, government expenditure and debt are regressed on natural disasters with the working hypothesis that such disasters may increase borrowing to finance a recovery. In the second stage, we use the disaster-induced variation in fiscal outcomes to test whether an exogenous increase in spending and debt increases the likelihood of adopting *BBRs*.

The first stage of this specification – presented in the bottom panel of Table 8 – shows that the instruments have the predicted signs. Both the number of disasters per year and/or the total casualty rates (entering the regression jointly in columns 1 and 4, and separately in columns 2-3 and 5-6) are positively related to the levels of debt and expenditure. In the second-stage estimates – presented in the upper panel of Table 8 – we do not find evidence that higher debt or expenditure increase the probability of adopting a *BBR*. This test provides suggestive evidence that our estimated effects of *BBRs* of around 11 percentage points on debt and around 3 percentage points on expenditure are close to the unbiased parameters. This is, of course, not to say that debt and expenditure never influence the decision to adopt a fiscal rule. However, we can argue that *BBRs*, especially those at the level of the constitution, are not easily reviewed and are not influenced by relatively small or rather short-run developments in government debt and expenditure.

4 Conclusion

In this paper we study the effects of constitutional balanced budget rules (*BBRs*) on government finances. Applying a difference-in-difference approach on data from the 19th, 20th and 21st centuries for a large sample of countries we find that constitutional-level *BBRs* reduce government debt-to-GDP and expenditure-to-GDP ratios, on average, by 11 and 3 percentage points, respectively. We do not find evidence that these rules also affect tax revenues. An additional result is that the introduction of such rules also reduces a country’s likelihood of experiencing a debt crisis by around 17%.

These results have important policy-implications especially for countries that suffer chronic fiscal deficits and which frequently find themselves on the verge of sovereign debt crises. As discussed earlier, fiscal rules have been and continue to be a popular policy-instrument to solve the issue of persistent deficit-biases. However, as the global economic crisis has shown national or supra-national fiscal rules often suffer a credibility-deficit and are frequently not complied with. Perhaps not surprisingly, many countries in Europe that

already had some form of a fiscal rule – such as Austria, Denmark, Hungary, Italy, Spain and others – have decided to enshrine *BBRs* into their constitutions following the crisis. Our evidence of a robust and sizable effect of constitutional-level rules on fiscal outcomes provides strong support for this ongoing agenda of policy reform.

We conclude by offering several thoughts for future research. First, the cross-country heterogeneities in how exactly a budget rule is formulated are fairly large. Future research could study these rules in-depth and their relevant country-contexts, as well as whether their stringency matters. Such a line of research would, however, need to also take into account the sub-constitutional fiscal rules and their interactions with the constitutional rules. Second, it is of interest to study not only the constitutional fiscal rules but also the set of institutions which regulate the procedures for drafting and implementing the budget. For example, the study of the relative powers of the executive and legislative branches of the government could shed more light on the role of constitutional checks-and-balances for fiscal policies. Third, we still do not fully understand the mechanism driving to the implementation of numerical or constitutional fiscal rules. Regional studies looking at the political environment at the time of the drafting of several constitutions in Latin America, Africa, and Europe might shed some light on this matter. Finally, our focus was on the effect of *BBRs* on the level of government debt and expenditure, and on the occurrence of debt crises. It would be also important to understand the role of *BBRs* in the actual conduct of fiscal policies, such as the cyclical, structure, and redistributive nature of these policies.

References

- Abbas, S. A., N. Belhocine, A. E. Ganainy, and M. Horton (2010). A historical public debt database. *IMF Working Paper 10/245*.
- Acemoglu, D. (2005). Constitutions, politics and economics: A review essay on Persson and Tabellini's The Economic Effect of Constitutions. *Journal of Economic Literature* 43(4), 1025–1048.
- Aidt, T. S. and B. Dallal (2008). Female voting power: the contribution of women's suffrage to the growth of social spending in Western Europe (1869–1960). *Public Choice* 134(3-4), 391–417.
- Alesina, A. and A. Passalacqua (2015). The political economy of government debt. In preparation for the Handbook of Macroeconomics edited by John Taylor and Harald Uhlig. NBER working paper no. 21821.
- Altonji, J. G., T. E. Elder, and C. R. Taber (2005). Selection on observed and unobserved variables: Assessing the effectiveness of catholic schools. *Journal of Political Economy* 113(1), 151–184.
- Baskaran, T. (2015). Tax mimicking in the short- and long-run: Evidence from German reunification. Center for European Governance and Economic Development Research Discussion Paper No. 230.
- Bjornskov, C. and S. Voigt (2015). The determinants of emergency constitutions. Working paper, SSRN 2697144.
- Blöchliger, H. and J. Kantorowicz (2015). Fiscal constitutions: An empirical assessment. *OECD Economics Department Working Papers, No. 1248*.
- Bova, E., T. Kinda, P. Muthoora, and F. Toscani (2015). Fiscal rules at a glance. *Update of IMF Working paper 12/273*.

- Brennan, G. and J. M. Buchanan (1980). *The power to tax: Analytic foundations of a fiscal constitution*. Cambridge University Press.
- Buchanan, J. M. and G. Tullock (1962). *The calculus of consent*, Volume 3. University of Michigan Press Ann Arbor.
- Budina, N., T. Kinda, A. Schaechter, and A. Weber (2012). Fiscal rules at a glance: Country details from a new dataset. *IMF Working paper 12/273*.
- Cagé, J. and L. Gadenne (2014). Tax revenues, development, and the fiscal cost of trade liberalization, 1792-2006. *Working Paper*.
- Cheibub, J. A., Z. Elkins, and T. Ginsburg (2013). Beyond presidentialism and parliamentarism. *British Journal of Political Science* 44(3), 515–544.
- Dahan, M. and M. Strawczynski (2013). Fiscal rules and the composition of government expenditures in OECD countries. *Journal of Policy Analysis and Management* 32(2), 484–504.
- Debrun, X., L. Moulin, A. Turrini, J. A. i Casals, and M. S. Kumar (2008). Tied to the mast? National fiscal rules in the European Union. *Economic Policy* 23(54), 298–362.
- Drazen, A. (2000). *Political Economy in Macroeconomics*. Princeton: Princeton University Press.
- Elkins, Z. (2010). Diffusion and the constitutionalization of Europe. *Comparative Political Studies* 43(8-9), 969–999.
- Elkins, Z., T. Ginsburg, and J. Melton (2014). Characteristics of national constitutions, version 2.0. *Comparative Constitutions Project*. Last modified: April 18, 2014. Available at: <http://www.comparativeconstitutionsproject.org>.
- Fabrizio, S. and A. Mody (2006). Can budget institutions counteract political indiscipline? *Economic Policy* 21(48), 690–739.

- Feld, L. P. and G. Kirchgässner (2008). On the effectiveness of debt brakes: the Swiss experience. *Sustainability of public debt*, 223–255.
- Ginsburg, T. and J. Melton (2015). Does the constitutional amendment rule matter at all? Amendment cultures and the challenges of measuring amendment difficulty. *International Journal of Constitutional Law* 13(3), 686–713.
- Ginsburg, T. and M. Versteeg (2014). Why do countries adopt constitutional review? *Journal of Law, Economics, and Organization* 30(3), 587–622.
- Gleditsch, K. S. and M. D. Ward (1999). Interstate system membership: A revised list of the independent states since 1816. *International Interactions* 25(4), 393–413.
- Grembi, V., T. Nannicini, and U. Troiano (2016). Do fiscal rules matter? *American Economic Journal: Applied Economics*. *forthcoming*.
- Hallerberg, M., R. Strauch, and J. Von Hagen (2007). The design of fiscal rules and forms of governance in european union countries. *European Journal of Political Economy* 23(2), 338–359.
- Hallerberg, M., R. R. Strauch, and J. Von Hagen (2009). *Fiscal governance in Europe*. Cambridge University Press.
- Heinemann, F., M.-D. Moessinger, and M. Yeter (2016). Do fiscal rules constrain fiscal policy? A meta-regression-analysis. *ZEW Discussion Paper16-027*.
- Heinemann, F., S. Osterloh, and A. Kalb (2014). Sovereign risk premia: The link between fiscal rules and stability culture. *Journal of International Money and Finance* 41, 110–127.
- Hener, T., H. Rainer, and T. Siedler (2015). Political socialization in flux? Linking family non-intactness during childhood to adult civic engagement. *Journal of the Royal Statistical Society* *forthcoming*.

- Keele, L. and N. J. Kelly (2006). Dynamic models for dynamic theories: The ins and outs of lagged dependent variables. *Political analysis* 14(2), 186–205.
- Krogstrup, S. and S. Wälti (2008). Do fiscal rules cause budgetary outcomes? *Public Choice* 136(1-2), 123–138.
- Melton, J. and T. Ginsburg (2014). Does de jure judicial independence really matter? A reevaluation of explanations for judicial independence. *Journal of Law and Courts* 2(2).
- Mueller, D. C. (2003). *PublicChoice III*. New York: Cambridge University Press.
- Nunn, N. and L. Wantchekon (2011). The slave trade and the origins of mistrust in Africa. *American Economic Review* 101, 3221–3252.
- Oster, E. (2015). Unobservable selection and coefficient stability: Theory and evidence. Brown University and NBER (WP19054).
- Persson, T. and G. Tabellini (2000). *Political economics: explaining public policy*. Cambridge, MA: The MIT Press.
- Persson, T. and G. E. Tabellini (2003). *The economic effects of constitutions*. MIT press.
- Poterba, J. M. (1996). Do budget rules work? *National Bureau of Economic Research, WP 5550*.
- Poterba, J. M. and J. von Hagen (1999). *Fiscal institutions and fiscal performance*. University of Chicago Press.
- Rogoff, K. and C. Reinhart (2010). Growth in a time of debt. *American Economic Review* 100(2), 573–578.
- Schaechter, A., T. Kinda, N. T. Budina, and A. Weber (2012). Fiscal rules in response to the crisis-toward the next-generation rules: A new dataset. *IMF Working paper* 12/187.

- Tapsoba, R. (2012). Do national numerical fiscal rules really shape fiscal behaviours in developing countries? A treatment effect evaluation. *Economic Modelling* 29(4), 1356–1369.
- Voigt, S. (2011). Positive constitutional economics II A survey of recent developments. *Public Choice* 146(1-2), 205–256.
- Von Hagen, J. (1992). Budgeting procedures and fiscal performance in the european communities. *Economic papers* (96), 1–79.
- Wyplosz, C. (2005). Fiscal policy: institutions versus rules. *National Institute Economic Review* 191(1), 64–78.
- Wyplosz, C. (2013). Fiscal rules: Theoretical issues and historical experiences. In A. Alesina and F. Giavazzi (Eds.), *Fiscal Policy after the Financial Crisis*, pp. 495–525. University of Chicago Press.

Table A1: SAMPLE OF COUNTRIES WITH CONSTITUTIONAL BALANCED BUDGET RULES (*BBR*)

No	Country	Period BBR in place	Period BBR & data on debt
<i>Baseline sample (BBR):</i>			
1	Angola	2010-2015	2010-2012
2	Benin	1960-1978; 1990-2015	1990-2012
3	Brazil	1946-1964; 1967-1968	1946-1961
4	Burkina Faso	1960-1965; 1970-1973; 1991-2015	1991-2015
5	Cape Verde	1980-1998	1981-1998
6	Chad	1960-1974	1970-1974
7	Chile	1980-2015	1980-2012
8	Costa Rica	1949-2015	1950-2012
9	Cote d'Ivoire	1960-2015	1979-2012
10	Ecuador	1906-1978; 1996-1997	1945-1969; 1997
11	Egypt	2007-2015	2007-2012
12	El Salvador	1939-2015	1951-1960; 1983-2012
13	Central African Republic	1959-1963	N/A
14	Gabon	1975-2015	1975-2012
15	Germany	1871-1918; 1949-2015	1880-1913; 1950-2012
16	Guinea	2010-2015	2010-2012
17	Haiti	1983-1986	1983-1986
18	Honduras	1873-1779; 1893-1903; 1908-1935	1926-1935
19	Republic of the Congo	1967-1977	1970-1977
20	Dominican Republic	1955-1962	1954
21	Mali	1960-2015	1974-2012
22	Mauritania	1961-2015	1977-1979; 1990-2012
23	Nicaragua	1905-1973; 1987-2015	1970-1973; 1987-2012
24	Niger	1964-1973; 1989-1990; 1996-2015	1970-1973; 1989-1990; 1995-2012
25	Panama	1983-2015	1983-2012
26	Peru	1979-2015	1979-2012
27	Portugal	1822-1822	N/A
28	Rwanda	1962-1994	1970-1994
29	Sudan	1973-1984	N/A
30	Switzerland	1999-2015	1999-2012
31	Ukraine	1996-2015	1995-2012
32	Uruguay	1942-1951	N/A
<i>Additional sample (BBR2):</i>			
33	Austria	2008-2015	2008-2012
34	Spain	2011-2015	2011-2012
35	Serbia	2006-2015	2006-2012
36	Hungary	2011-2015	2011-2012
<i>Recently introduced (source: IMF):</i>			
37	Denmark	2014-2015	N/A
38	Georgia	2013-2015	N/A
39	Italy	2014-2015	N/A
40	Latvia	2013-2015	N/A
41	Malta	2014-2015	N/A

Source: CCP dataset, and IMF fiscal rules database (Budina et al. 2012; Bova et al. 2015).

Note: The CCP dataset classifies some countries as actually having a *BBR* (*balbudget*=1) and others as having some type of provision that is not as explicit (*balbudget*=96) or that coders can not properly classify (*balbudget*=97). The first thirty-two countries in the above table are classified in the CCP database as having a *BBR* over the indicated periods. Out of those coded as *96* or *97* we identify four additional countries as actually having a *BBR* (countries 33 to 36). Additionally, rows 37-41 indicate countries that have introduced constitutional *BBR* since 2013 (according to the IMF).

Table A2: SAMPLE OF COUNTRIES WITH CONSTITUTIONS

	<i>Country</i>	<i>Years</i>				<i>Country</i>	<i>Years</i>				<i>Country</i>	<i>Years</i>		
		(1)	(2)	(3)			(1)	(2)	(3)			(1)	(2)	(3)
1	Abkhazia	9			76	Guatemala	178	166		151	Parma	73		
2	Afghanistan	170	75		77	Guinea	58	50	6	152	Peru	195	141	37
3	Albania	103	84		78	Guinea-Bissau	43	32		153	Philippines	76	74	
4	Algeria	69	20		79	Guyana	50	50		154	Poland	100	78	
5	Andorra	227	23		80	Haiti	200	136	4	155	Portugal	227	97	1
6	Angola	41	41	6	81	Hanover	58			156	Qatar	46	13	
7	Antigua and Barbuda	35	35		82	Hesse Electoral	66			157	Rep. of Vietnam	22	16	
8	Argentina	202	177		83	Hesse Grand Ducal	66			158	Romania	139	117	
9	Armenia	30	21		84	Honduras	179	121	23	159	Russia	227	99	
10	Australia	115	115		85	Hungary	98	68		160	Rwanda	54	46	33
11	Austria	98	96		86	Iceland	77	72		161	Saint Kitts and Nevis	33	33	
12	Austria-Hungary	130			87	India	69	67		162	Saint Lucia	38	38	
13	Azerbaijan	27	21		88	Indonesia	71	66		163	St Vincent and Grenadines	36	30	
14	Baden	83	54		89	Iran	227	110		164	Samoa	54	54	
15	Bahamas	43	43		90	Iraq	85	54		165	Sao Tome and Principe	41	41	
16	Bahrain	45	43		91	Ireland	96	94		166	Saudi Arabia	85	24	
17	Bangladesh	45	40		92	Israel	68			167	Saxony	66		
18	Barbados	50	50		93	Italy	227	82		168	Senegal	56	56	
19	Bavaria	83	64		94	Jamaica	54	54		169	Serbia	51	15	
20	Belarus	25	22		95	Japan	227	127		170	Serbia and Montenegro	3	3	
21	Belgium	186	185		96	Jordan	70	70		171	Seychelles	43	37	
22	Belize	35	35		97	Kazakhstan	25	21		172	Sierra Leone	55	49	
23	Benin	57	43	32	98	Kenya	53	53		173	Singapore	56	53	
24	Bhutan	67	11		99	Kiribati	37	37		174	Slovak Republic	24	24	
25	Bolivia	191	144		100	Korea	122			175	Slovenia	25	25	
26	Bosnia and Herz.	25	21		101	Kosovo	8	8		176	Solomon Islands	38	38	
27	Botswana	50	50		102	Kuwait	55	42		177	Somalia	55	28	
28	Brazil	194	188	21	103	Kyrgyz Rep.	25	19		178	South Africa	107	55	
29	Brunei	23	23		104	Laos	65	38		179	South Korea	68	68	
30	Bulgaria	138	122		105	Latvia	48	44		180	South Ossetia	9		
31	Burkina Faso	56	35	10	106	Lebanon	76	76		181	South Sudan	5	5	
32	Burundi	55	28		107	Lesotho	50	30		182	Spain	227	144	
33	Cambodia	64	56		108	Liberia	170	138		183	Sri Lanka	74	45	
34	Cameroon	56	56		109	Libya	83	55		184	Sudan	61	39	12
35	Canada	151	149		110	Liechtenstein	210	103		185	Suriname	41	34	
36	Cape Verde	41	36	19	111	Lithuania	50	43		186	Swaziland	49	48	
37	Central African Rep.	57	46	5	112	Luxembourg	152	148		187	Sweden	227	207	
38	Chad	57	36	15	113	Macedonia	25	25		188	Switzerland	227	74	17
39	Chile	201	184	36	114	Madagascar	138	54		189	Syria	73	50	
40	China	227	89		115	Malawi	52	52		190	Taiwan	69	69	
41	Colombia	188	174		116	Malaysia	59	59		191	Tajikistan	25	17	
42	Comoros	41	38		117	Maldives	51	18		192	Tanzania	56	37	
43	Congo	56	48		118	Mali	56	50	50	193	Thailand	227	57	
44	Costa Rica	180	75	67	119	Malta	52	52		194	Tibet	39	1	
45	Cote d'Ivoire	57	55	55	120	Marshall Isl.	31	27		195	Timor	14	14	
46	Croatia	25			121	Mauritania	57	44	44	196	Togo	56	43	
47	Cuba	115	106		122	Mauritius	48	47		197	Tonga	48	47	
48	Cyprus	56	56		123	Meckl. Schwerin	83			198	Transvaal	59		
49	Czech Republic	23	23		124	Mexico	196	110		199	Trinidad and Tobago	54	54	
50	Czechoslovakia	75	40		125	Micronesia	31	27		200	Tunisia	154	54	
51	Dem. Rep. Congo	56	46		126	Modena	73			201	Turkey	226	92	
52	Denmark	227	167		127	Moldova	26	26		202	Turkmenistan	25	24	
53	Djibouti	39	24		128	Monaco	227	99		203	Tuscany	73		
54	Dominica	38	38		129	Mongolia	95	90		204	Tuvalu	38	38	
55	Dominican Rep.c	175	143	8	130	Montenegro	59	21		205	Two Sicilies	73		
56	Ecuador	186	155	55	131	Morocco	176	54		206	Uganda	54	29	
57	Egypt	123	69	7	132	Mozambique	41	41		207	Ukraine	28	20	20
58	El Salvador	177	121	50	133	Myanmar	139	37		208	United Arab Emirates	45	45	
59	Equatorial Guinea	48	39		134	Namibia	26	26		209	United Kingdom	237	223	
60	Eritrea	23	19		135	Nauru	48	48		210	United States	228	228	
61	Estonia	49	42		136	Nepal	227	58		211	Uruguay	186	184	10
62	Ethiopia	161	72		137	Netherlands	227	201		212	Uzbekistan	25	24	
63	Fed.Rep. Central America	17	5		138	New Zealand	119	116		213	Vanuatu	37	36	
64	Fiji	46	42		139	Nicaragua	178	158	59	214	Vatican	84	1	
65	Finland	99	97		140	Niger	56	40	32	215	Venezuela	191	131	
66	France	228	103		141	Nigeria	56	32		216	Vietnam	141	56	
67	Gabon	57	56	41	142	North Korea	68	68		217	Wuerttemberg	66		
68	Gambia	53	31		143	Norway	139			218	Yemen	25	24	
69	Georgia	26	24		144	Oman	227	5		219	Yemen Arab Rep.	73	12	
70	German Dem. Rep.c	42	19		145	Orange Free State	57			220	Yemen People's Rep.	24	21	
71	Germany	224	144	115	146	Pakistan	69	27		221	Yugoslavia	85	82	
72	Ghana	64	38		147	Palau	24	2		222	Zambia	52	52	
73	Great Colombia	10			148	Panama	113	101	33	223	Zanzibar	2		
74	Greece	190	83		149	Papua New Guinea	41			224	Zimbabwe	51	17	
75	Grenada	42	30		150	Paraguay	205	172						

Source: CCP dataset. Table presents the population of countries with coded constitutions. Columns 1-3 present the total number of years with: (1) constitution, (2) some fiscal provision enshrined in the constitution, and (3) balanced budget rule in the constitution.

Table A3: TRENDS IN DEBT AND EXPENDITURE BEFORE AND AFTER INTRODUCING A BALANCED BUDGET RULE

Sample: VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)
	Post-1945					
	DEBT	EXPENDITURE	DEBT	EXPENDITURE	DEBT	EXPENDITURE
<i>t-3</i>	1.210 (8.711)	-2.229* (1.280)	2.401 (7.911)	-2.023 (1.250)		
<i>t-2</i>	-0.586 (2.275)	-0.221 (0.491)	-0.244 (2.391)	-0.357 (0.313)		
<i>t-1</i>	4.700 (3.971)	-1.030 (0.981)	3.162 (4.210)	-0.859 (0.751)		
<i>t</i>	-7.869* (4.448)	-0.002 (1.632)	-17.516*** (5.217)	-0.970 (0.851)	-2.698 (7.808)	-2.352 (2.314)
<i>t+1</i>	-13.002** (6.426)	-1.299** (0.568)			-11.507** (5.563)	-1.292** (0.532)
<i>t+2</i>	-4.025 (6.695)	-0.630 (0.608)			0.197 (4.226)	-1.123 (0.752)
<i>t+3</i>	8.456 (14.888)	0.724 (3.504)			3.866 (14.551)	0.777 (3.391)
Ln per capita GDP	-22.429** (10.345)	-4.836** (2.387)	-22.083** (9.860)	-4.332* (2.329)	-23.559** (10.007)	-4.631** (2.237)
Ln population	-11.082 (15.188)	-20.555*** (4.014)	-10.443 (14.881)	-19.896*** (3.854)	-10.110 (15.721)	-20.931*** (3.935)
Polity2 (normalized)	-5.681 (6.878)	-0.506 (1.336)	-4.465 (6.222)	-0.330 (1.304)	-5.977 (6.772)	0.008 (1.263)
Constitutional change	-1.068 (1.254)	0.179 (0.430)	-1.116 (1.129)	0.145 (0.398)	-1.214 (1.224)	0.238 (0.425)
Observations	3,443	2,567	3,663	2,725	3,552	2,638
R-squared	0.343	0.422	0.350	0.412	0.356	0.417
Number of countries	129	108	131	109	131	110

*** p<0.01, ** p<0.05, * p<0.1

Dependent variables are specified as a share of GDP in %. *t* is the year of treatment, i.e. the year when balanced budget rule is introduced into the constitution. All regressions include country and year fixed effects (not reported). Standard errors are clustered by country. Figure 4 presents the results graphically.

Table A4: ROBUSTNESS TO METHODS

	(1)	(2)	(3)	(4)	(5)	(6)
Sample:	Post-1945					
VARIABLES	DEBT			EXPENDITURE		
Method:	Baseline OLS	Dynamic OLS	Difference GMM	Baseline OLS	Dynamic OLS	Difference GMM
Balanced budget rule	-11.105** (5.216)	-3.077*** (1.170)	-2.996*** (1.159)	-3.504*** (0.856)	-1.567*** (0.478)	-1.525*** (0.519)
Debt / GDP (t-1)		0.843*** (0.024)	0.837*** (0.026)			
Expenditure / GDP (t-1)					0.629*** (0.118)	0.620*** (0.145)
Ln per capita GDP	-23.349** (9.457)	-0.891 (1.754)	-1.224 (1.859)	-4.177* (2.173)	-1.377 (0.932)	0.887 (0.726)
Ln population	-9.519 (15.384)	-5.395** (2.498)	-5.730** (2.683)	-20.261*** (3.771)	-7.783*** (2.718)	-4.491** (1.933)
Polity2 (normalized)	-5.143 (6.170)	-4.764*** (1.399)	-4.604*** (1.473)	0.268 (1.204)	0.063 (0.554)	0.289 (0.590)
Constitutional change	-1.185 (1.094)	0.026 (0.498)	0.112 (0.496)	0.202 (0.389)	0.231 (0.211)	0.370* (0.218)
Observations	3,794	3,629	3,465	2,816	2,737	2,652
R-squared	0.364	0.857	0.855	0.407	0.716	0.712
Number of countries	132	132	131	110	110	107

*** p<0.01, ** p<0.05, * p<0.1

Table presents robustness tests of the baseline results (Columns 7 and 9 of Table 3) to estimation methods. Dependent variables are specified as a share of GDP in %. All regressions include country and year fixed effects (not reported). Standard errors are clustered by country.

Table A5: ROBUSTNESS TO CONTROLS AND ALTERNATIVE DEFINITIONS OF *BBR*

Sample:	(1)	(2)	(3)	(4)	(5)	(6)
	Post-1945					
VARIABLES	DEBT	EXPENDITURE	DEBT	EXPENDITURE	DEBT	EXPENDITURE
Balanced budget rule	-11.045** (5.261)	-3.504*** (0.856)				
Balanced budget rule 2			-10.602** (5.218)	-3.504*** (0.856)		
Balanced budget rule 3					-11.338*** (3.510)	-2.136 (1.567)
Ln per capita GDP	-23.907** (9.670)	-4.172* (2.174)	-23.916** (9.673)	-4.172* (2.174)	-22.709*** (7.916)	-2.833 (2.045)
Ln population	-10.256 (15.469)	-20.229*** (3.767)	-10.283 (15.480)	-20.229*** (3.767)	-7.638 (13.595)	-16.486*** (3.263)
Polity2 (normalized)	-4.869 (6.185)	0.241 (1.211)	-4.895 (6.187)	0.241 (1.211)	1.162 (5.358)	-0.230 (1.231)
Constitutional change	-1.186 (1.092)	0.202 (0.388)	-1.181 (1.092)	0.202 (0.388)	-1.256 (1.074)	0.094 (0.324)
Civil war	4.948 (4.105)	-0.188 (0.634)	4.956 (4.105)	-0.188 (0.634)	6.310 (4.536)	-0.532 (0.550)
Observations	3,797	2,816	3,797	2,816	5,274	3,946
R-squared	0.366	0.407	0.366	0.407	0.350	0.360
Number of ifs	132	110	132	110	147	124

*** p<0.01, ** p<0.05, * p<0.1

Table presents robustness tests of the baseline results (Columns 7 and 9 of Table 3) to the inclusion of more control variables and to alternative definition of *BBR* (see Table A1 for the sample of countries with *BBR*). Dependent variables are specified as a share of GDP in %. All regressions include country and year fixed effects (not reported). Standard errors are clustered by country.

Table A6: SENSITIVITY TO INFLUENTIAL OBSERVATIONS

No	Dropped country	DEBT			EXPENDITURE		
		β	<i>s.e.</i>	<i>N</i>	β	<i>s.e.</i>	<i>N</i>
1	Angola	-11.385**	(5.349)	3,471	-2.818***	(0.615)	2,656
2	Benin	-12.298**	(5.960)	3,453	-3.208***	(0.618)	2,629
3	Brazil	-11.126*	(5.922)	3,435	-2.511***	(0.816)	2,604
4	Burkina Faso	-11.429**	(5.369)	3,464	-2.819***	(0.619)	2,642
5	Cape Verde	-10.296*	(5.611)	3,455	-2.818***	(0.615)	2,656
6	Central African Republic	-11.438**	(5.415)	3,454	-2.815***	(0.613)	2,640
7	Chile	-8.788*	(5.061)	3,447	-3.308***	(0.913)	2,597
8	Costa Rica	-11.479**	(5.394)	3,426	-2.824***	(0.632)	2,627
9	Democratic Republic of the Congo	-10.792*	(5.827)	3,454	-2.818***	(0.615)	2,656
10	Dominican Republic	-11.461**	(5.345)	3,443	-2.826***	(0.633)	2,624
11	Ecuador	-11.181*	(6.149)	3,430	-2.966***	(0.645)	2,628
12	Egypt	-11.759**	(5.652)	3,438	-2.823***	(0.611)	2,634
13	El Salvador	-11.409**	(5.356)	3,455	-2.817***	(0.617)	2,638
14	Gabon	-12.085**	(5.744)	3,443	-2.883***	(0.567)	2,627
15	Germany	-11.468**	(5.354)	3,424	-2.834***	(0.613)	2,610
16	Guinea	-11.463**	(5.382)	3,463	-2.823***	(0.604)	2,636
17	Haiti	-11.347**	(5.611)	3,443	-2.674***	(0.687)	2,629
18	Honduras	-11.434**	(5.457)	3,436	-2.801***	(0.641)	2,626
19	Nicaragua	-11.039**	(5.549)	3,469	-2.820***	(0.618)	2,640
20	Niger	-11.420**	(5.383)	3,463	-2.819***	(0.614)	2,646
21	Panama	-16.859***	(3.372)	3,437	-2.820***	(0.616)	2,634
22	Peru	-11.429**	(5.360)	3,453	-2.817***	(0.624)	2,630
23	Portugal	-11.417**	(5.382)	3,420	-2.819***	(0.631)	2,604
24	Rwanda	-10.465*	(5.574)	3,453	-2.512***	(0.617)	2,636
25	Sudan	-11.417**	(5.359)	3,473	-2.818***	(0.615)	2,656
26	Switzerland	-11.422**	(5.363)	3,472	-2.817***	(0.614)	2,649
27	Uruguay	-11.414**	(5.365)	3,443	-2.822***	(0.635)	2,607

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Table presents sensitivity-tests of the baseline results (Columns 8 and 10 of Table 3) to one-by-one dropping each of the countries that ever had a balanced budget rule. Sample is the post-1945 period. Dependent variables are specified as a share of GDP in %. β is the coefficient of the balanced budget rule dummy, *s.e.* is the corresponding standard error clustered by country, and *N* is the number of observations after dropping the country.

Table A7: SELECTION ON UNOBSERVABLES

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	Full-model: β^f			β^r			Full-model: β^f			β^r		
	DEBT						EXPENDITURE					
Balanced budget rule, β	-11.105** (5.216)	-8.929 (13.188)	-11.473* (5.906)	-10.674** (4.966)	-11.213** (5.190)	-11.075** (5.216)	-3.504*** (0.856)	-2.163 (2.874)	-2.593 (1.846)	-2.584 (1.848)	-3.494*** (0.883)	-3.515*** (0.862)
Ln per capita GDP	-23.349** (9.457)			-20.445*** (7.732)	-22.948** (9.439)	-23.255** (9.481)	-4.177* (2.173)		0.236 (2.781)		-4.186* (2.173)	-4.194* (2.175)
Ln population	-9.519 (15.384)			-9.449 (15.429)	-9.305 (15.440)	-9.305 (15.440)	-20.261*** (3.771)				-20.250*** (3.786)	-20.284*** (3.762)
Polity2 (normalized)	-5.143 (6.170)			-5.064 (6.161)		-5.064 (6.161)	0.268 (1.204)				0.241 (1.209)	
Constitutional change	-1.185 (1.094)						0.202 (0.389)					
$\frac{\beta^f}{\beta^r - \beta^f}$		5.10	30.18	25.77	102.82	370.17		2.61	3.85	3.81	350.40	318.55
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	3,794	3,794	3,794	3,794	3,794	3,794	2,816	2,816	2,816	2,816	2,816	2,816
R-squared	0.364	0.002	0.337	0.361	0.362	0.363	0.407	0.001	0.303	0.303	0.407	0.407
Countries	132	132	132	132	132	132	110	110	110	110	110	110

*** p<0.01, ** p<0.05, * p<0.1

Table presents a selection-on-unobservables test of the baseline results (Columns 7 and 9 of Table 3) in the spirit of Altonji et al. (2005). Dependent variables are specified as a share of GDP in %. All regressions include country and year fixed effects (not reported). Standard errors are clustered by country.

Table A8: CONSTITUTIONAL BALANCED BUDGET RULES

Country	Definition
Angola; Constitution Issued:2010; Article 104 (par. 2)	The State Budget shall be a single budget, shall estimate the level of revenue to be obtained and shall set limits for authorized expenditure in each financial year for all services, public institutions, autonomous funds and social security, in addition to those of the local authorities, in order ensure that all estimated expenditure is financed .
Austria; Constitution Issued:1920 Reinstated:1945; Article 13 (par. 2)	The Federation, the Laender, and the municipalities must aim at the securement of an overall balance and sustainable balanced budgets in the conduct of their economic affairs. They have to coordinate their budgeting with regard to these goals.
Benin; Constitution Issued:1990; Article 110 (par. 1)	The National Assembly shall vote a balanced budget. If the National Assembly has not come to a decision by December 31, the provisions of the appropriations bill may be enforced by edict.
Burkina Faso; Constitution Issued:1991 Amended:2012; Article 120	The proposals and amendments concerning the law of finance deposited by the members of the Parliament are not receivable when their adoption would have as a consequence, either a diminution of public resources, or the creation or the increase of a public expense , unless they should be accompanied by a proposal for augmentation of receipts or of equivalent economies.
Chile; Constitution Issued:1980 Amended:2012; Article 67	The Bill of the Law of the Budgets must be presented by the President of the Republic to the National Congress at least three months prior to the date on which it must enter into force; and if the Congress has not acted on it within sixty days counted from its presentation, the Bill presented by the President of the Republic will be effective [regir]. The National Congress cannot augment or diminish the estimate of the revenues; [it] can only reduce the expenditures contained in the Bill of the Law of the Budgets, except for those established by permanent law. The estimation of the returns of the resources stated in the Law of the Budgets and of the new ones established by another initiative of law will correspond exclusively to the President, previously informed by the respective technical agencies. The Congress cannot approve any new expenditures with [a] charge to the funds of the Nation without indicating, at the same time, the sources of the funds necessary to meet such expenditures. If the source of funds granted by the Congress were insufficient to finance any new expenditures that it approved, the President of the Republic , upon promulgating the law, after a favorable report from the service or institution through which new income is collected, countersigned by the Office of the Comptroller General of the Republic, must proportionately reduce all expenditures , regardless of their nature.
Costa Rica; Issued:1949 Amended:2011; Article 179	The Assembly may not augment the expenditures budgeted by the Executive Power, if the new revenues that should cover them are not specified , [with] previous report of the Office of the Comptroller General of the Republic on the fiscal effectiveness of them.
Ivory Coast; Constitution Issued:2000 Amended:2004; Article 80	The National Assembly is seized with the bill of the Law of Finance from the opening of the October session. The bill of the Law of Finance must provide the receipts necessary for the integral covering of expenses. The National Assembly votes the balanced budget. If the National Assembly has not decided within a time period of seventy days, the bill of law can be put into force by ordinance. The President of the Republic seizes, for the ratification, the National Assembly convoked in extraordinary session, within a time limit of fifteen days. If the National Assembly has not voted the budget by the end of this extraordinary session, the budget is definitively established by ordinance. If the bill of the Law of Finance has not been deposited in a timely way to be promulgated before the beginning of the exercise, the President of the Republic demands of the National Assembly by urgency, the authorization to repeat the budget of the previous year by provisional twelfths.
Dominican Republic; Constitution Issue:2010; Article 233	The preparation of the Bill of the Law of the General Budget of the State corresponds to the Executive Power, which contemplates the probable incomes, the proposed expenses and the financing required, conducted within a framework of fiscal sustainability, and assuring that the public indebtedness is compatible with the capacity for payment of the State .
Egypt; Constitution Issue:2014; Article 124	The state budget includes all of its revenue and expenditure without exception. The draft budget is submitted to the House of Representatives at least 90 days before the beginning of the fiscal year. It is not considered in effect unless approved thereby, and it is put to vote on a chapter-by-chapter basis. The House may modify the expenditures in the draft budget law, except those proposed to honor a specific state liability. Should the modification result in an increase in total expenditure, the House shall reach an agreement with the government on the means to secure revenue resources to achieve a balance between them. The budget is issued in a law, which may include modification to any existing law to the extent necessary to realize such balance. In all cases, the budget law may not include any text that incurs new burdens on citizens. The specifics of the fiscal year, the method of budget preparation, the provisions of the budgets of institutions, public bodies, and their accounts are defined by law. The approval of the House of Representatives is necessary for the transfer of any funds from one chapter of the budget to another, as well as for any expenditure not included therein or in excess of its estimates. The approval is issued in a law.
El Salvador; Constitution Issued:1983 Amended:2003; Article 226	The Executive Organ, through the appropriate Branch, shall have the direction of the public finances, and shall be specially bound to maintain a balanced Budget, insofar as this is compatible with the fulfillment of the purposes of the State .
Hungary; Constitution Issued:2011; Article N	Hungary shall enforce the principle of balanced, transparent and sustainable budget management. Parliament and the Government shall have primary responsibility for the enforcement of the principle set out in Paragraph (1). In the course of performing their duties, the Constitutional Court, courts, local governments and other state organs shall be obliged to respect the principle set out in Paragraph (1).
Morocco; Constitution Issued:2011; Article 77	The Parliament and the government see to the preservation of the balance of the finances of the State. The government may oppose, in substantiated manner, the receivability [irrecevabilite] of any proposal or amendment formulated by the members of Parliament when their adoption could have as a consequence, in relation to the law of finance, either a diminishment of the public resources, or the creation or aggravation of a public expenditure [charge].

Table A8: CONSTITUTIONAL BALANCED BUDGET RULES (CONT.)

Country	Definition
Gabon, Constitution Issued:1991 Amended:1997; Article 48	All resources and obligations of the State must, for each financial exercise, be evaluated and inscribed into the annual Bill of the Law of Finance filed by the Government before the National Assembly thirty (30) days at most after the opening of the second ordinary session. If, at the end of the budgetary session, the Parliament adjourns without having passed a balanced budget, the Government shall be authorized to repromulgate by ordinance the preceding budget. This ordinance may in spite of this provide for, in case of necessity, any reduction of expenditures or increase in revenues. Upon the demand of the Prime Minister, Parliament is convoked in two weeks in extraordinary session for a new deliberation. If Parliament has not passed the balanced budget at the end of this extraordinary session, the budget shall be definitively established by ordinance taken in the Council of Ministers and signed by the President of the Republic. The new revenues which may be created, if they consist of direct taxes and contributions or similar taxes, become effective the first of January. The Court of Accounts assists the Parliament and the Government in the control of the execution of the Law of Finance. The bill of the law of regulation, established by the Government, accompanied by the general declaration of conformity and of general report of the Court of Accounts, must be filed before the Parliament at the latest at the beginning of the first ordinary session of the second year which follows the exercise of the execution of the budget concerned.
Mali; Constitution Issued:1992; Article 77	The National Assembly shall consider the appropriations bill at the opening of the ordinary session preceding the fiscal period. The appropriations bill must anticipate the income necessary for completely meeting all expenditures. If the National Assembly has not acted on this matter before the beginning of the fiscal period or if it has not passed the budget, the Government shall resubmit the proposed budget within fifteen days to the National Assembly convened in special session for this purpose. The National Assembly shall then act within eight days. If this deliberation has not resulted in a budgetary vote, it shall be automatically established by the Government on the basis of the revenues of the preceding fiscal period and after consultation with the Supreme Court.
Mauritania; Constitution Issued:1992 Amended:2012; Article 68	(Paragraph 4) If the Parliament has not voted on the budget in a time period of sixty days (60) days, or if it did not vote it in balanced form , the Government returns [renvoie] the Bill of the Law of Finance within fifteen (15) days to the National Assembly. (Paragraph 6) The Parliament controls the execution of the budget of the State and [the] annexed budgets. A statement of expenses will be provided to the Parliament at the end of each six months [semestre] for the previous six months. The definitive accounts of a fiscal year [exercice] are deposited during the course of the budgetary session of the following year and approved by a law.
Germany; Constitution Issued:1949 Amended:2012; Articles 109, 110, 115, 143d	(Article 109 - paragraph 3) The budgets of the Federation and the Länder shall in principle be balanced without revenue from credits. The Federation and Länder may introduce rules intended to take into account, symmetrically in times of upswing and downswing, the effects of market developments that deviate from normal conditions, as well as exceptions for natural disasters or unusual emergency situations beyond governmental control and substantially harmful to the state's financial capacity. For such exceptional regimes, a corresponding amortization plan must be adopted. Details for the budget of the Federation shall be governed by Article 115 with the proviso that the first sentence shall be deemed to be satisfied if revenue from credits does not exceed 0.35 percent in relation to the nominal gross domestic product. The Länder themselves shall regulate details for the budgets within the framework of their constitutional powers, the proviso being that the first sentence shall only be deemed to be satisfied if no revenue from credits is admitted. (Article 110 - paragraphs 1 & 2) All revenues and expenditures of the Federation shall be included in the budget; in the case of federal enterprises and special trusts, only payments to or remittances from them need be included. The budget shall be balanced with respect to revenues and expenditures. The budget for one or more fiscal years shall be set forth in a law enacted before the beginning of the first year and making separate provision for each year. The law may provide that various parts of the budget apply to different periods of time, divided by fiscal years. (Article 115 - paragraph 2) Revenues and expenditures shall in principle be balanced without revenue from credits. This principle shall be satisfied when revenue obtained by the borrowing of funds does not exceed 0.35 percent in relation to the nominal gross domestic product. In addition, when economic developments deviate from normal conditions, effects on the budget in periods of upswing and downswing must be taken into account symmetrically. Deviations of actual borrowing from the credit limits specified under the first to third sentences are to be recorded on a control account; debits exceeding the threshold of 1.5 percent in relation to the nominal gross domestic product are to be reduced in accordance with the economic cycle. The regulation of details, especially the adjustment of revenue and expenditures with regard to financial transactions and the procedure for the calculation of the yearly limit on net borrowing, taking into account the economic cycle on the basis of a procedure for adjusting the cycle together with the control and balancing of deviations of actual borrowing from the credit limit, requires a federal law. In cases of natural catastrophes or unusual emergency situations beyond governmental control and substantially harmful to the state's financial capacity, these credit limits may be exceeded on the basis of a decision by a majority of the Bundestag's Members. The decision has to be combined with an amortization plan. Repayment of the credits borrowed under the sixth sentence must be accomplished within an appropriate period of time. (Article 143d) Articles 109 and 115 in the version in force as from 1 August 2009 shall apply for the last time to the 2010 budget; Articles 109 and 115 in the version in force as from 1 August 2009 shall apply for the first time to the 2011 budget; debit authorizations existing on 31 December 2010 for special trusts already established shall remain untouched. In the period from 1 January 2011 to 31 December 2019, the Länder may, in accordance with their applicable legal regulations, deviate from the provisions of paragraph (3) of Article 109. The budgets of the Länder are to be planned in such a way that the 2020 budget fulfills the requirements of the fifth sentence of paragraph (3) of Article 109. In the period from 1 January 2011 to 31 December 2015, the Federation may deviate from the provisions of the second sentence of paragraph (2) of Article 115. The reduction of the existing deficits should begin with the 2011 budget. The annual budgets are to be planned in such a way that the 2016 budget satisfies the requirement of the second sentence of paragraph (2) of Article 115; details shall be regulated by federal law.
Guinea; Constitution Issued:2010; Article 75 (par. 1)	The National Assembly votes the budget in equilibrium. It is referred to [the matter] of the bill of the Law of Finance by the Government no later than 15 October.
Nicaragua; Constitution Issued:1987 Amended:2005; Article 112	The General Budget Law of the Republic has annual validity and its object is to regulate the Public Administration's ordinary and extraordinary revenues and expenditures. The law shall determine the limits of the expenditures of the State organs and shall indicate the various sources and purposes of all revenues and expenditures, which must correspond to each other. The National Assembly may modify the Bill of the Budget sent by the President of the Republic, but no extraordinary expenditures may be created except by law and through the creation and determination at the same time of the resources to finance it. The Law of the Budgetary Regime shall regulate this matter. Any modification of the General Budget of the Republic involving an increase or decrease of credits, reduction of revenues or transfers among different institutions shall require the approval of the National Assembly. The Annual Budget Law may not create taxes.

Table A8: CONSTITUTIONAL BALANCED BUDGET RULES (CONT.)

Country	Definition
Niger; Constitution Issued:2010; Article 114	<p>The National Assembly is referred to the matter of the bill of the law of finance from the opening of the budgetary session; the bill of the law of finance must specify the receipts necessary for the complete coverage of the expenses.</p> <p>The National Assembly votes the budget in equilibrium.</p> <p>If the National Assembly has not decided within sixty (60) days of the presentation of the bill, the provisions of this bill can be put into force by ordinance.</p> <p>The government refers the matter, for ratification, to the National Assembly convoked in extraordinary session, within a time period of fifteen (15) days.</p> <p>If the National Assembly has not voted the budget at the end of this extraordinary session, the budget is definitively established by ordinance.</p> <p>If the bill of the law of finance could not be presented in a timely fashion to be promulgated before the beginning of the fiscal year, the Prime Minister demands of urgency of the National Assembly the authorization to continue to receive the taxes and to continue with expenditures, the budget of the preceding year by provisional twelfths.</p>
Panama; Constitution Issued:1972 Amended:2004; Article 270	<p>In the Budget planned by the Executive Branch, expenditures shall be balanced with revenues.</p>
Peru; Constitution Issued:1993 Amended:2009; Article 78	<p>The President of the Republic sends the Budget bill to the Congress each year with a deadline expiring on August 30th. On the same date, he also sends the national debt and financial stability bills.</p> <p>The Budget bill shall be effectively balanced.</p> <p>Loans from the Central Reserve Bank of Peru or the Bank of the Nation are not considered fiscal revenue.</p> <p>Loans shall not cover current expenditures.</p> <p>The Budget shall not be passed without an appropriation for the servicing of public debt.</p>
Serbia; Constitution Issued:2006; Article 92	<p>The Republic of Serbia, autonomous provinces and local self-government units shall have budgets, which must outline all receipts and expenses with which they are funding their competences.</p> <p>The Law shall stipulate the deadlines within which the Budget must be adopted, as well as method of temporary funding.</p> <p>Realization of all budgets shall be audited by the State Audit Institution.</p> <p>The National Assembly shall discuss the financial statement proposal of the Budget upon the received evaluation of the State Audit Institution.</p>
Spain; Constitution Issued:1978 Amended:2011; Section 135	<ol style="list-style-type: none"> All public administrations will conform to the principle of budgetary stability. The State and the Self-governing Communities may not incur a structural deficit that exceeds the limits established by the European Union for their member states. An Organic Act shall determine the maximum structural deficit the state and the Self-governing Communities may have, in relation to its gross domestic product. Local authorities must submit a balanced budget. The State and the Self-governing Communities must be authorized by Act in order to issue Public Debt bonds or to contract loans. Loans to meet payment on the interest and capital of the State's Public Debt shall always be deemed to be included in budget expenditure and their payment shall have absolute priority. These appropriations may not be subject to amendment or modification as long as they conform to the terms of issue. The volume of public debt of all the public administrations in relation to the State's gross domestic product may not exceed the benchmark laid down by the Treaty on the Functioning of the European Union. The limits of the structural deficit and public debt volume may be exceeded only in case of natural disasters, economic recession or extraordinary emergency situations that are beyond the control of the State and significantly impair either the financial situation or the economic or social sustainability of the State, as appreciated by an absolute majority of the members of the Congress of Deputies. An Organic Act shall develop the principles referred to in this article, as well as participation in the respective procedures of the organs of institutional coordination between government fiscal policy and financial support. In any case, the Organic Act shall address: <ol style="list-style-type: none"> The distribution of the limits of deficit and debt among the different public administrations, the exceptional circumstances to overcome them and the manner and time in which to correct the deviations on each other. The methodology and procedure for calculating the structural deficit. The responsibility of each public administration in case of breach of budgetary stability objectives. The Self-governing Communities, in accordance with their respective laws and within the limits referred to in this article, shall take the appropriate procedures for effective implementation of the principle of stability in their rules and budgetary decisions.
Switzerland; Constitution Issued:1999 Amended:2002; Article 126	<ol style="list-style-type: none"> The Confederation shall keep its expenditure and receipts in balance in the long term. The maximum of the total expenditures which may be budgeted shall be determined by the expected receipts, taking into account the economic situation.
Ukraine; Constitution Issued:1996 Amended:2004; Article 95	<p>The budgetary system of Ukraine is built on the principles of just and impartial distribution of social wealth among citizens and territorial communities.</p> <p>Any state expenditures for the needs of the entire society, the extent and purposes of these expenditures, are determined exclusively by the law on the State Budget of Ukraine.</p> <p>The State aspires to a balanced budget of Ukraine.</p> <p>Regular reports on revenues and expenditures of the State Budget of Ukraine shall be made public.</p>