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RESEARCH NOTE

Institutionalizing the autocratic penalty away: fiscal rules, autocracy, and sovereign financial market access

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Abstract
The "democratic advantage" in access to credit markets has been vigorously researched. Recent research has found that this "autocratic disadvantage" can be partly countered by other factors. However, this research agenda has largely ignored an increasingly important type of institution of direct importance for national fiscal policy, fiscal rules. This article argues that fiscal rules alleviate the "autocratic disadvantage" in sovereign bond market access. This argument is tested on a dataset on fiscal rules and sovereign bond issuing data covering 121 countries from 1990 to 2015. The results provide substantial evidence in favor of the argument, autocracies with fiscal rules face no disadvantage in bond market access and might even be more likely to issue new government bonds than democracies.

Keywords: Democracy; democratic advantage; financial markets; fiscal rules; sovereign borrowing

1. Introduction

A much-discussed "law" in the political economy of sovereign debt is that of the "democratic advantage."[1] Presumably, financial market actors, both domestic and international, should be more willing to lend to governments which are constrained by legislatures and regular elections.[2] Recent scholarship has argued and shown that this democratic advantage and thus autocratic disadvantage in sovereign credit market access is contingent on a number of other factors. Sovereign bond investors and credit rating agencies should be more willing to "forgive" autocratic countries their regime type if these regimes sign bilateral investment treaties (Arias et al., 2018) and/or otherwise seem to protect private property (Biglaiser and Staats, 2012), if these regimes have longer time horizons (Dhillon et al., 2019)[3] and institutionalized ruling parties (Gehlbach and Keefer, 2012) or if global interest rates are low (Ballard-Rosa et al., 2019).

Institutional structures thus matter a great deal not only for average sovereign credit market access (Bodea and Hicks, 2018), but also for the apparent difference between autocracies and democracies. Consequently, autocratic leaders which are constrained by international and domestic institutions might end up with the same access to financial markets as their democratic counterparts. However, this literature has mostly ignored a very important type of constraining domestic institutions which is directly linked to fiscal governance and which has grown in importance both among democracies and autocracies in recent decades, national fiscal rules.

[1]This idea can be traced at least back to North and Weingast (1989) discussion of England after the Glorious Revolution (Stasavage, 2002, 155).

[2]However, see Stasavage (2016).

[3]See also Shea and Solis (2018).

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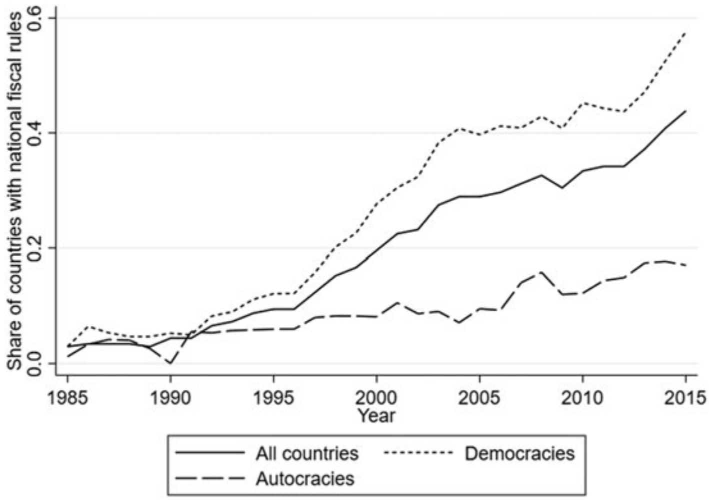

Fig. 1. National fiscal rules in democracies and autocracies, 1985–2015.
Note: Source is IMF's Fiscal Rules Database. Democracy and autocracy classifications are based on the updated Boix et al. (2013) dataset.

Fiscal rules can be defined as rules and regulations which set some sort of numerical constraint on fiscal policy aggregates (Schaechter, 2012). These include both balanced-budget rules, expenditure ceilings, and debt limits. Both among democracies and autocracies, these fiscal rules, even not counting supranational fiscal rules such as the European Union's Stability and Growth Pact, have increased in number over the past few decades and now about a third of the World's countries have one or more fiscal rules in place, see Figure 1. A list of autocracies with fiscal rules in place can be found in Appendix A.

While fiscal rules are more prevalent in democracies than autocracies, a non-trivial number of non-democratic countries now rely on one or more fiscal rules as a governance tool. Fiscal rules have now been adopted in a wide variety of autocracies for very different reasons (Aaskoven and Grundholm, 2021, 1566–1567).

However, there is limited research on the political implications of the rise of these rules, including their potential link to the "democratic advantage"/"autocratic disadvantage." This article argues that fiscal rules constrain fiscal policy and improve fiscal sustainability. Consequently, they are a signal to potential government bond buyers and analysts about government repayment willingness and repayment ability, and they signal fiscal policy capacity and transparency. Thus, in non-democratic regimes, these rules should substitute for the executive constraints and transparency of democratic political institutions (Ballard-Rosa et al., 2019, 1) and lessen the difference between autocratic and democratic in sovereign market access. This argument is tested using data on sovereign primary bond issuing in 121 countries from 1990 to 2015. The results show strong evidence in favor of the argument. There is no autocratic penalty in sovereign bond market access for autocracies with national fiscal rules in place, and autocracies with fiscal rules might even be more likely to issue new government bonds than other types of regimes.

2. Theory: fiscal rules, autocracy, and bond market access

This section provides the theoretical arguments for why fiscal rules limit the autocratic disadvantage in access to credit markets. It builds on the widely held assumptions that the "democratic advantage" is rooted in the greater levels of political certainty and executive constraints as well as policy transparency (which affect the risk of default) in democracies compared to autocracies (Ballard-Rosa et al., 2019, 3), which limit the supply of international credit to autocratic governments.[4]

[4]Autocratic governments might even have a higher demand for international credit than democratic governments since they seem to benefit more from credit market access (DiGuiseppe and Shea, 2015) but autocratic countries' supply constraint causes them to be less successful in issuing and finding buyers for their sovereign bonds.

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However, in autocracies, fiscal rules can act as a substitute for democratic political institutions and thus help autocratic countries "close the gap" with regard to sovereign bond market access. This is due to several characteristics of fiscal rules.

First, fiscal rules should act as a constraint on government fiscal policy and improve fiscal performance (Asatryan et al., 2018). Consequently, fiscal rules are signals of fiscal prudence and constraint and positively affect market actors' evaluation of sovereign states' credit worthiness, evidenced by the lower sovereign borrowing costs in countries with fiscal rules (Thornton and Vasilakis, 2018). Indeed, credit rating agencies mention fiscal rules (positively) in their sovereign credit rating assessments (Standard and Poor, 2016a, 2016b).[5] This signaling effect of fiscal rules could be considered more powerful in autocracies, where incumbents should face less formal pressure from legislative actors such as the opposition and support parties to limit executive fiscal discretion through fiscal rules and should have less of an incentive to "tie the hands" of their successors fiscally. In this way, fiscal rules act as a substitute for political certainty and legislative constraints on the executive which is part of the basis of the "democratic advantage" (Ballard-Rosa et al., 2019, 3).

One could argue that there might no formal sanction mechanisms for non-compliance with fiscal rules in autocracies. However, as argued by Kelemen and Teo (2014), since fiscal rules serve as focal points for bond market actor coordination, the threat of bond market sanctions, when fiscal rules are broken, can be enough to sustain government compliance and bond market actors' trust even in the absence of formal sanctions.

Additionally, fiscal rules show that the government has a finance ministry and/or other government institutions capable of drafting and implementing these fiscal rules and that the government favors rule-based policy-making. Furthermore, fiscal rules could draw attention to the government's fiscal policy stance, including whether they break the rules or not (Kelemen and Teo, 2014, 360). Consequently, fiscal rules in autocracies can serve to increase fiscal and financial transparency, an important correlate of sovereign credit worthiness (Copelovitch et al., 2018) and a key mechanism for the democratic advantage (Ballard-Rosa et al., 2019, 3).

To sum up, fiscal rules in autocracies serve as signals of government constraints with regard to fiscal policy and as signals of fiscal capacity and transparency as well as a dedication to rule-based policy-making, which are some of the central mechanisms behind the democratic advantage in sovereign credit access. Thus, autocratic governments with fiscal rules should not suffer from a disadvantage in access to sovereign bond markets compared to democracies, since an autocratic state with fiscal rules in place possesses many of the same institutional underpinnings of the democratic advantage as democracies.[6] This leads to the central theoretical argument of this article:

> Having national fiscal rules in place eliminates the autocratic disadvantage in sovereign bond market access.

3. Data and estimation

The dataset used to test the argument consists of a panel of 121 countries from 1990 to 2015, where there is available data for both sovereign bond issuance and fiscal rules. The dependent variable, which measures financial bond market access, is the share of months in a given year in which the government issues new bonds. This variable fairly reasonably measures whether

[5]Fiscal rules are also promoted and their adoption praised by the IMF (Baunsgaard, 2003; Curristine et al., 2017) whose opinion and analyses financial market actors might pay attention to.

[6]As mentioned, given that autocratic countries might have greater demand for international credit, autocracies with fiscal rules might even be more likely to access bond markets than democracies.

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there is a demand for government bonds in primary markets.[7] The data are taken from the new dataset collected by Ballard-Rosa et al. (2019).[8]

The independent variables are fiscal rules and the autocratic/democratic status of the country. Fiscal rules are measured by a dummy which takes the value 1 if the country has one or more national fiscal rules, such as balanced budget rules, debt rules, and expenditure rules, in place, and 0 otherwise. The data only concern national fiscal rules and thus not supranational fiscal rules and regulations such as those of the European Union's Stability and Growth Pact. The data are from the IMF's Fiscal Rules Database, see Lledó et al. (2017).

In Appendix D, the main analysis is redone using various versions of a continuous fiscal rules strength index, which also takes into account the nature of the national fiscal rule(s), including their numbers, their coverage, their legal basis (from coalition agreement to enshrined in the constitution), and the role various auxiliary rules and institutions, including independent institutions (e.g., fiscal councils) play for the implementation of national budgets. However, the results using these alternative measures of fiscal rules are similar to those of the main analysis.

I use two different measures of autocracy/democracy. One is a dummy for whether the country is an autocracy (1 if autocratic 0 if democratic) based on the democracy dummy from the Boix et al. (2013) dataset, which relies on a fairly minimalistic definition of democracy.[9] The other is a continuous index from the Varieties of Democracy Project, the polyarchy index, which is a less minimalistic and more fine-grained measure of democracy. A higher value means a higher level of democracy and thus lower levels of autocracy. In the analyses, the fiscal rule dummy is interacted with the two measures of autocracy/democracy to compare countries' bond issuance based on their autocratic/democratic and fiscal rule status.

I also include a number of control variables, including government gross debt in percentage of GDP (from the IMF's World Economic Outlook Database), log of GDP per capita, GDP growth, and oil rents as a percentage of GDP (from World Development Indicators) and whether the country is undergoing an IMF program. Additionally, I include current account balance as a percent of GDP, the proportion of bond issuance in the country's region, the country's export to the USA,[10] whether the country is undergoing a default crisis as well as whether there is an election for the national leadership in the current year.[11] The last five control variables are taken from the replication dataset of Ballard-Rosa et al. (2019). Descriptive statistics for the variables can be seen in Appendix B.

The effects of autocracy/democracy contingent on fiscal rules are estimated using ordinary least squares (OLS) with both country- and year-fixed effects. Appendix E contains the results done with fixed-effects probit estimation instead. However, these results are similar to those of the OLS. Standard errors are clustered at the country level.

The regression equation is provided below. *Issuance* is the share of months in which a government i issues new bonds in year t. *Autocracy* is the measure of autocracy (the dummy or the polyarchy index), while *Rule* is the dummy for whether the country has one or more national fiscal rules in place. Z is the vector of control variables. δ_i and γ_t are the county- and year-fixed effects and ϵ_{it} the error term:

$$Issuance_{it} = \beta Autocracy_{it} + \beta Rule_{it} + \beta Autocracy_{it} Rule_{it} + \beta Z_{it} + \delta_i + \gamma_t + \epsilon_{it} \tag{1}$$

[7]Results are fairly similar if the dependent variable is the log of amount of debt issued in constant US dollars, see Appendix C. In Appendix G, I also carry out an auxiliary analysis looking at how fiscal rules and regime status affect the likelihood of receiving a credit rating by credit rating agencies as well as the on specific credit ratings.

[8]This dataset has a country-year-month structure but since the independent variables of interest only vary at the yearly level, the data are collapsed to the yearly (mean) level.

[9]Since this variable measures autocracy/democracy status at the calendar year's end, it is lagged one year.

[10]A proxy for the country's relationship to the USA which might affect access to international financial markets (Beaulieu et al., 2012, 721).

[11]Which might affect a country's relationship with financial markets (Block and Vaaler, 2004).

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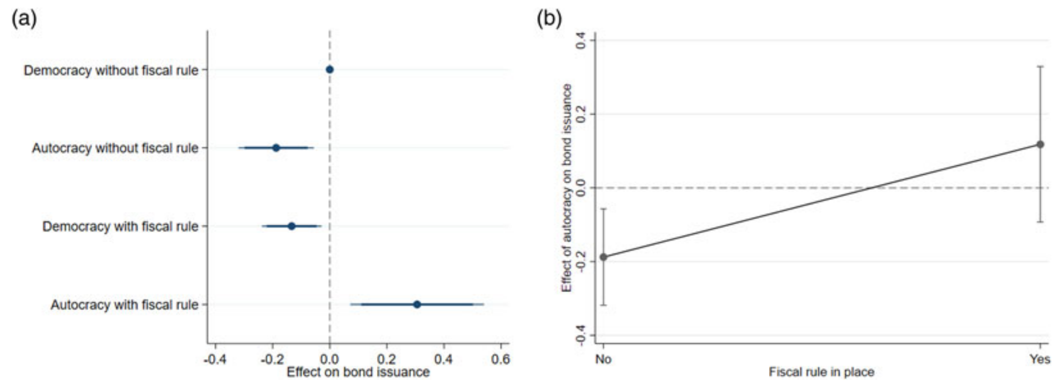

Fig. 2. Democracies, autocracies, and fiscal rules' effect on bond issuance: (a) coefficients and (b) marginal effects.
Note: Thin lines represent 95 percent confidence intervals. Thick lines represent 90 percent confidence intervals. Outer lines represent 95 percent confidence intervals.

4. Results

The main results can be seen in Figure 2 which plots the main coefficients from the interaction between the autocracy dummy and the fiscal rule dummy as well as the marginal effects from this interaction.[12] The results provide evidence in favor of the argument. Looking at autocracies without fiscal rules, these regimes are much less likely to issue new bonds compared to democracies without fiscal rules, an effect which amounts to an about 19 percentage point decrease in the share of months with bond issuing. This suggests the well-known democratic advantage/autocratic disadvantage in financial market access. However, this autocratic penalty is contingent on whether the autocracy has one or more fiscal rules in place, as the coefficient of the interaction between the autocracy dummy and the fiscal rules dummy is statistically significant with a much bigger positive coefficient than the negative coefficient of the autocracy dummy. Compared to non-fiscal rules democracies, an autocracy with one or more fiscal rules in place might actually be more likely to issue new government bonds.[13] In accordance with the theoretical argument, having fiscal rules in place alleviates the autocratic penalty in sovereign bond market access, suggesting that fiscal rules might substitute for democratic political institutions with regard to gaining the trust of bond market actors.

Interestingly, democracies with fiscal rules in place are actually much less likely to issue new government bonds in a given month than non-fiscal rule democracies. Maybe because democracies with fiscal rules in place both have more accountable governments, and thus less government rent-seeking, as well as better fiscal governance and planning (Badinger and Reuter, 2017; Asatryan et al., 2018)[14] and would be more likely to meet spending needs with increased taxes, which jointly decrease the need to access (international) financial markets often, even though they have access. This is also in line with the findings of DiGuiseppe and Shea (2015) who find that autocratic leaders benefit more from better financial market access and thus should have a higher demand for government bond issuing than democratic leaders. Having one or more fiscal rules in place apparently solves autocratic regimes' supply constraint with regard to bond issuing and lead to, on average, higher likelihood of bond issuing compared to democracies.

In Figure 3, the marginal effects for the interaction between the fiscal rule dummy and the polyarchy index can be seen. Again, there is evidence in favor of the argument that fiscal rules in autocracies can alleviate the autocratic disadvantage with regard to bond market access. The

[12]Control variables and country- and year-fixed effects are suppressed. See Appendix B for regression tables.
[13]Although, as shown in the marginsplot, this positive effect is not statistically significant.
[14]See Hansen (2020) for fiscal institutions' effect contingent on political competition.

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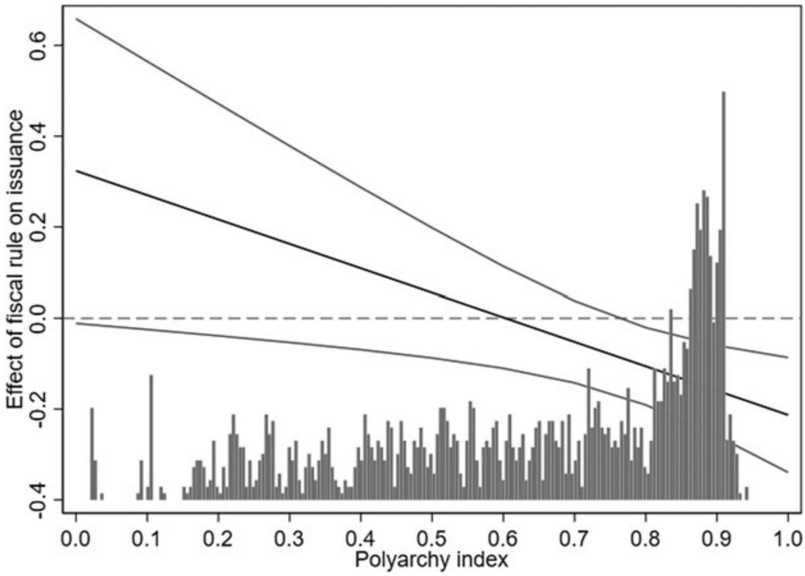

Fig. 3. Effect of fiscal rule on bond issuance contingent on level of democracy.
Note: Outer lines represent 90 percent confidence intervals.

effect of fiscal rules on bond issuance declines as countries become more democratic, in accordance with the argument that autocracies improve their sovereign bond market access by introducing fiscal rules.[15] Apparently, fiscal rules can substitute for democratic institutions with regard to attracting sovereign bond market investors.

The effects above remain largely intact when controlling for average the ten-year US Treasury bond interest rate, annual inflation rate (data are from Ballard-Rosa et al., 2019), and the Garriga (2016) measure of central bank independence. The direction of the results also holds when controlling for the measure of general government transparency, which should independently affect financial market access (Biglaiser and Staats, 2012), using the measure created by Hollyer et al. (2011) (data are also from Ballard-Rosa et al., 2019), although the effects become marginally statistically insignificant when using the dummy measure of autocracy/democracy. However, it should be noted that due to data coverage for this government transparency variable, the number of observations drop by over 40 percent. Additionally, the results also generally hold when removing the countries of the OECD from the analysis.[16] These results are found in Appendix F.

5. Discussion

Recent research suggests that the democratic advantage/autocratic disadvantage in sovereign financial market access is contingent on institutional and economic factors. This article has explored the effects of a type of institution which has been on the rise globally in both democracies and autocracies in recent decades, fiscal rules. An analysis of sovereign bond issuances in 121 countries from 1990 to 2015 shows that autocracies can substitute numerical fiscal rules for democratic institutions in order to get better access to sovereign bond markets. An autocracy with

[15]It should be noted that the confidence intervals overlap 0 at the lower end of the polyarchy index which is also due to the lower level of observations compared to the higher end of the polyarchy index. However, see the more flexible probit estimation in Appendix E.

[16]The confidence intervals increase slightly for the polyarchy index analysis which is hardly surprising given that OECD countries have very high values on this index.

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one or more fiscal rules faces not disadvantage with regard to government bond issuing and might actually be more likely to issue new government bonds than non-fiscal rules democracies. Fiscal rules thus seem to alleviate the autocratic penalty in sovereign financial market access. Future research could delve deeper into these findings, including whether different spending demands between autocracies and democracies drive these tendencies, and the role that fiscal rules might play for alleviating credit supply constraints. Future research on the "democratic advantage" could also investigate whether fiscal rules strengthen the effects of other economic governance institutions, such as independent central banks (Bodea and Hicks, 2018), or whether these institutions instead serve as substitutes for each other.

The results also speak to the wider trends in autocracy which the world has witnessed over the past few decades. As evident from Figure 1, fiscal rules have been on the rise both in democracies and autocracies over the past few decades, which might have improved autocratic governments' relative access to bond financing and might thus have made autocracies with fiscal rules more resilient (DiGuiseppe and Shea, 2015; Arias et al., 2018). Thus, the increased use of fiscal rules in autocracies might have aided in the recent trends in autocratic resilience and even the increased autocratization in many countries (Lúhrmann and Lindberg, 2019). Taking this perspective, when assessing the relative virtues of implementing fiscal rules, which are being promoted by organizations such as the IMF, these institutions' effects on autocratic financing opportunities should perhaps be kept in mind. As with international capital flows (Ahmed, 2019), the economic benefits of fiscal rules should perhaps be weighed against their potential negative effect on political rights in autocratic countries[17] and perhaps even the relative power of autocracies in the international system (Schultz and Weingast, 2003). Future research could explore these issues further.

Supplementary material. The supplementary material for this article can be found at https://doi.org/10.1017/psrm.2022.22. To obtain replication material for this article, please visit https://doi.org/10.7910/DVN/O7ICGD.

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[17]However, as suggested by Clay and Matthew (2017), autocracies with better credit market access might also rely less on physical repression.

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