

# Autocratic Succession Rules and Access to Foreign Finance: An Analysis of Sovereign Bond Markets in Sub-Saharan Africa

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## Abstract

Does regulating succession help autocracies access foreign financial markets? Sovereign debt is a critical tool for modern states, but states must convince foreign investors that the state will repay its debts. Although many autocracies have incentives to repay their debts, political instability can reduce autocratic access to financial markets. Succession rules help autocracies borrow money by reducing the probability of coups after leader vacancies and signaling, more broadly, that coups are unlikely. Using data on sub-Saharan Africa from 1990 to 2016, I show that succession rules significantly increase the probability of autocracies issuing sovereign bonds. I also find partial evidence that succession rules have a stronger effect when fiscal rules further increase the credibility of repayment. The timing of sovereign bond issuances in Cameroon further demonstrates the relationship by showing that Cameroon did not issue more bonds until its succession rule was effective. My argument and findings demonstrate that autocratic succession rules matter for outcomes beyond domestic survival and further explain the heterogeneity in the borrowing potential of autocracies.

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Sovereign debt presents a classic problem of political economy. Investors can lend money to the state and eventually be repaid with interest, but their investment comes with inherent risk. States are sovereign. If they default on their debts, either from unwillingness or inability, investors have little recourse to recoup their investments or punish bad behavior. Debt is a critical tool for modern states. Governments use debt to fund public policy and address emergencies without raising taxes to excessive levels. Alternatively, they may use debt to purchase rewards for narrow sets of supporters and increase their grasp on power. Though their motivations may vary, most states today must convince investors that they are safe partners for borrowing.

Autocracies potentially exacerbate the threat of sovereign default due to institutional differences. Institutions can create credible commitments to repay debts by placing constraints on executives (Cox 2016; Cox and Saiegh 2018; North and Weingast 1989; Saiegh 2013) and giving control over policy to actors who prefer repayment (Stasavage 2002; 2016). Democracies also hold competitive elections that investors can use to punish leaders who default (Schultz and Weingast 2003). Both mechanisms may provide democracies with advantages in sovereign borrowing. Since democracies typically place greater limitations on the executive and elections provide a mechanism for bondholders and other actors with an interest in repayment to punish the government for default, democracies potentially borrow money on better terms (Ballard-Rosa, Mosley, and Wellhausen 2021; Beaulieu, Cox, and Saiegh 2012; Schultz and Weingast 2003).

The incentives for autocracies suggest an alternative story. Many autocracies rely on debt and, therefore, consistently repay. Dictators retain power by rewarding small groups of key supporters with private goods (Bueno de Mesquita et al. 2003). Debt is a powerful tool for rewarding allies. Through debt, dictators can increase the provision of private rewards without increasing the tax burden or potentially increase rewards beyond the amount that taxes and other domestic revenue could support. The importance of debt to dictators can make autocratic repayment credible through the dictator's incentives. States that default have increased borrowing costs, such as higher interest rates and limited market access (Cruces and Trebesch 2013; Tomz 2007). These punishments are most effective against dictators. Downgrades in credit ratings have a significantly higher effect on dictators losing power than their democratic

counterparts (DiGiuseppe and Shea 2015). Autocracies can have a strong basis for credible repayment if they need debt for survival.

In this paper, I argue that succession rules can help autocracies resolve one barrier to borrowing: political instability. Political instability, such as leadership turnover and public unrest, reduces the ability of autocracies to borrow money, even when there is otherwise a credible commitment to repay. Sovereign defaults frequently emerge from political instability. Coups are one example. Coups occur when elites in the regime remove the leader through violence or the threat of violence (Powell and Thyne 2011). Coups in autocracies can double or even triple the risk of sovereign default (Balima 2020; Shea and Poast 2020). Political instability is priced into borrowing costs for developing countries. Domestic unrest, especially violent unrest, leads to downgraded bond ratings (Biglaiser, Lee, and McGauvran 2024). Analyses of bond spreads suggest that political instability costs autocracies more than democracies. When bond spreads are higher, the state pays higher interest rates to borrow, reducing the amount of available debt. Political instability increases bond spreads for autocracies more than democracies (Eichler 2014; Eichler and Plaga 2017). Autocracies seeking to borrow money must assuage investors' fears of political instability.

Succession rules—formal rules, typically in the constitution, that specify a process for replacing the leader after a vacancy—help autocracies resolve political instability and borrow more money. Succession rules influence borrowing through two mechanisms. First, succession rules directly resolve instability. By providing a publicly-known set of rules for handling vacancies, succession rules reduce the risk of coups and other forms of violence after an unexpected vacancy. Second, succession rules signal stability. Succession rules emerge when dictators are already secure. The presence of succession rules signals that the dictator believes that they can prevent coups. Together, succession rules reduce fears of political instability and increase market access for autocracies.

The argument is supported by a cross-national analysis using an original dataset of succession rules in sub-Saharan Africa. The relationship between succession rules and the monthly issuing of sovereign bonds is modeled using logit models with fixed effects. From 1990 to 2016, autocracies with succession rules were significantly more likely to issue sovereign bonds than

autocracies without succession rules. The estimated effect of succession rules is approximately half of the advantage received by democracies. I also find partial support that succession rules have the strongest effect when repayment is credible through institutional constraints, represented by the presence of fiscal rules. However, I do *not* find support that the relationship with succession rules is affected by other political incentives to default, represented by reliance on food imports. I support the regression models with the example of Cameroon. Cameroon's succession rule did not affect the issuing of sovereign bonds until an actual successor was named. Cameroon started issuing more sovereign bonds after the rule came into effect.

This paper contributes to the international political economy of sovereign debt in autocracies and the comparative politics of autocratic succession. Research on sovereign debt in autocracies primarily compares autocracies to democracies and focuses on the disadvantages that autocracies have in the sovereign debt bond market due to their lack of credible commitment (Archer, Biglaiser, and DeRouen 2007; Biglaiser and Staats 2012; Beaulieu, Cox, and Saiegh 2012; Cox 2016; Cox and Saiegh 2018; Saiegh 2005; Schultz and Weingast 2003). Recent work has shown that autocracies are heterogeneous in their borrowing prospects and incentives for default. For example, autocracies with financial rules borrow on the same or even better terms than democracies (Aaskoven 2023), and their propensity to default is moderated by reliance on food imports (Ballard-Rosa 2016; 2020). I add that autocracies must also address political instability as another threat to credible repayment. Institutions like succession rules can help autocracies borrow by both directly resolving instability and signaling stability to investors. This paper adds to the evidence that the “democratic advantage” is more limited or conditional than often appreciated (Aaskoven 2023; Ballard-Rosa 2016, 2020; Ballard-Rosa, Mosley, and Wellhausen 2021; Biglaiser, Hicks, and Huggins 2008; DiGiuseppe and Shea 2015, 2016, 2018; Hansen 2023).

The theory also expands the role of autocratic succession rules in political and economic outcomes. Existing work on autocratic succession rules focuses almost exclusively on whether having succession rules reduces the risk of coups and under what conditions succession rules emerge (Frantz and Stein 2017; Kokkonen, Møller, and Sundell 2022; Kokkonen and Sundell 2014; Konrad and Mui 2017; Meng 2021; Sharman 2025; Zhou 2023). But succession is a gen-

eral concern to anyone with an interest in the country. Succession determines pathways to political power and how the regime sustains itself. This paper shows that succession rules matter to international and private actors and influence how autocracies access foreign financial markets. More broadly, this paper shows that autocratic constitutions matter to international actors in foreign financial markets. The content of modern autocratic institutions matters to domestic actors by coordinating and structuring elite behavior (Albertus and Menaldo 2012a; Myerson 2008; Przeworski 2013). In the context of debt, autocratic constitutions are mainly analyzed for their role in creating limited government among European monarchies and city-states (North and Weingast 1989; Stasavage 2007). Almost all modern autocracies that formalize succession rules do so in the constitution. If investors care about autocratic succession rules, they care about the content of modern autocratic constitutions.

## **Sovereign Debt in Autocracies**

Repayment is the core dilemma of sovereign borrowing. Because the state is sovereign, the state cannot be forced to repay its debts. If the state refuses or is unable to repay, investors cannot punish the state and recover their investments.<sup>1</sup> Investors, consequently, carefully consider which states to lend money to, whose bonds to buy, and what terms to apply. States less likely to repay their debts must pay higher interest rates and repay debts more quickly, limiting the state's borrowing potential (Arellano and Ramanarayanan 2012). In extreme cases, states can lose access to foreign financial markets entirely (Cruces and Trebesch 2013; Tomz 2007). States need to convince investors that they are trustworthy partners to borrow money and to do it on better terms.

Research on sovereign debt in autocracies has focused on the differences in borrowing between autocracies and democracies. According to the democratic advantage literature, democracies should borrow money on better terms than their autocratic counterparts, such as by having longer maturities and lower interest rates. The democratic advantage has two sources. The first is legislative constraints. If the executive controls repayment, the executive can unilaterally

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1. Military intervention, trade sanctions, and collective retaliation by bankers have been proposed as forms of punishment. The prevalence and effectiveness of these punishments are contested (Mitchener and Weidenmier 2010; Tomz 2007, chaps. 6–8; Tomz and Wright 2013).

reschedule or stop payments altogether. Constraining the executive and placing fiscal policy in the hands of the legislature increases the number of actors with a say in repayment. The increased veto points reduce the risk of a state choosing to default (Cox 2016; Cox and Saiegh 2018; North and Weingast 1989; Saiegh 2013; Schultz and Weingast 2003). Institutions are especially effective when control of fiscal policy is given to actors with strong preferences for repayment (Stasavage 2002; 2016).

The second is a punishment mechanism. Democratic leaders must win elections to gain and retain power. Voters can punish leaders by voting against them. Naturally, foreign investors cannot directly punish defaulting governments through domestic elections, but the costs of default risk punishment from domestic voters. Sovereign default devastates the economy. Default reduces economic output, depresses the value of domestic firms, and increases the likelihood of inflationary and currency crises (Hébert and Schreger 2017; Reinhart and Rogoff 2009). According to one recent estimate, sovereign default reduces growth in GDP per capita by 8.5% over three years and 20% over 10 years (Farah-Yacoub, Graf von Luckner, and Reinhart 2024). The economic costs can lead to voter backlash, making elections a punishment mechanism even if foreign investors cannot participate directly (Schultz and Weingast 2003). Democratic leaders are more likely to repay debts to avoid voter backlash.

Constraints and elections, together, could give democracies an advantage in borrowing. Neither mechanism, however, is truly absent in autocracies. Nearly all modern autocracies have legislatures and hold elections. Autocratic legislatures can create constraints over economic decisions, preventing dictators, for example, from expropriating foreign investment (Wilson and Wright 2017; Wright 2008). Even elections are not absent in autocracies. Modern autocracies hold elections, and the majority of autocratic elections allow multiple parties to compete. Although the bulk of autocratic elections are rigged and fraudulent, autocracies frequently allow competition that could change control of the legislature and even topple the dictator (Magaloni 2010). Neither mechanism is truly unique to democracies, but they are more prevalent in democracies.

Overall, evidence on the democratic advantage is mixed, especially in the developing con-

text, and the advantage may be conditional on other factors.<sup>2</sup> Archer, Biglaiser, and DeRouen (2007) do not find an advantage in sovereign credit ratings for democracies in developing countries, but Beaulieu, Cox, and Saiegh (2012) argue that the advantage emerges when accounting for selection into capital markets and the endogeneity of economic performance to regime type. Ballard-Rosa, Mosley, and Wellhausen (2021) show that the democratic advantage is also conditional on the international context. When global liquidity is high, investors are more tolerant of the risk of lending to autocracies. Investors become more risk-averse when global financial liquidity is low and prefer democracies, driving the advantage. While the democratic advantage may exist, it has limitations.

One possibility is that autocracies are more credible partners than previously assumed. Both democrats and dictators need money to survive—by providing public goods to voters for democrats and by providing private goods to elites for dictators (Bueno de Mesquita et al. 2003). Debt helps both types of leaders increase goods provisions, and it can be especially valuable for dictators, who often have more limited tax revenues. Among developing countries, autocracies borrow more money and rely more heavily on foreign debt (Oatley 2010). Borrowing terms matter more for autocratic survival than democratic survival. When credit ratings are downgraded, both autocratic and democratic leaders are more likely to lose power, but credit downgrades have a significantly larger effect on dictators' survival (DiGiuseppe and Shea 2015). Autocracies can be credible partners given their reliance on debt to survive. Indeed, autocracies are *more* likely to repay debts than democracies among developing countries (Saiegh 2005).

Credibility is important for explaining sovereign debt, yet substantial heterogeneity in autocratic borrowing ability remains. Political instability is another threat to credibility that has received more limited attention. Violent protests reduce credit ratings in any political regime (Biglaiser, Lee, and McGauvran 2024). More general forms of instability, such as leadership turnover, only increase bond spreads in autocracies (Eichler 2014; Eichler and Plaga 2017). Leader turnover and non-violent protests are expected features of democratic systems

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2. I focus on issues with the democratic advantage from the autocratic perspective. From the democratic side, default can be a politically viable choice in democracies because the value of default varies across voters (Dixit and Londregan 2000; Frieden 1991).

but usually represent underlying problems in autocracies. Coups are especially dangerous for sovereign borrowing. Dictators who come to power through coups face heightened risks of losing power and need to consolidate support quickly and stymie the opposition. Default has multiple utilities for the new dictator. Default provides a short-term increase in funds to reward supporters, harms elites from the previous regime, and undermines the previous regime's legitimacy. As a result, default is especially attractive to dictators who claim power through coups (Shea and Poast 2020). Coups double or even triple the probability of sovereign default in autocracies (Balima 2020; Shea and Poast 2020). If an autocracy can reduce the risk of coups and signal this information to investors, investors may be less concerned about the risk of political instability for sovereign default.

## **Succession Rules, Instability, & Sovereign Debt**

By addressing political instability, succession rules can help autocracies borrow money from foreign lenders. Succession rules affect autocracies' borrowing abilities through two channels. First, succession rules have a substantive effect by directly resolving political instability. They reduce the threat that a dictator's death spurs coups, which can ultimately lead to sovereign defaults. Second, succession rules provide information to investors. Autocracies have succession rules when coups are already unlikely. The presence of succession rules signals, intentionally or otherwise, that the dictator does not fear coups.

Succession rules address a major source of political instability in autocracies: the dictator's death. Through elections, democracies have inherent systems for replacing leaders, but autocracies can lack formal rules for transferring power altogether. The situation is especially perilous when the dictator's death is the regime's first transition of power. Autocracies can sustain themselves by using informal rules to substitute for or complement formal rules. Perhaps the most famous example is Mexico's *dedazo* system, which facilitated 11 peaceful transitions of power from 1934 to 2000 (Castañeda 2000; Langston 2006). Informal rules, however, need time and practice to develop, so autocracies without experience with leader transitions are unlikely to have informal rules and face greater risks of succession crises.



Without rules, uncertainty over succession is high. Elites are less able to anticipate how the next dictator will be chosen and, therefore, who the next dictator will be. Autocratic succession has high stakes. Dictators shape the fates of elites in their regimes. The dictator's core allies receive the most private goods and influence over policy decisions. Elites who fall out of favor, especially if they were aligned with the previous dictator or rivals for power, risk punishments ranging from simply losing privileges in the regime to imprisonment, torture, and death. The stakes of succession can drive elites to drastic measures. If elites are unsure who the next dictator will be, they are more likely to be uncertain about their status in the future. Rather than wait for a new dictator to emerge, a faction of elites may stage a coup and ensure that an ally takes control. The fate of autocracies after the dictator's death illustrates the dangers that a dictator's death can create. After a dictator dies in office, 13% of autocratic regimes collapse within one year, and 24% collapse within five years (Kendall-Taylor and Frantz 2016).

Even the anticipation of death can foster coups. Politics cannot overcome the aging process. Older dictators, put simply, are closer to death. Dictators of any age, but especially elderly ones, are more likely to suffer health crises that threaten an early demise. Autocratic elites are under no obligation to wait for a dictator's natural death to transfer power. If they anticipate a dangerous and contentious succession process, elites can stage a coup and preempt a succession crisis with a candidate whom they support. Leaders become more vulnerable to removal as they age and suffer from chronic illnesses, especially in autocracies (Bueno de Mesquita and Smith 2017; 2018).<sup>3</sup>

The core purpose of succession rules is to prevent succession crises. Succession rules specify how to replace leaders if sudden vacancies occur, usually by naming the next leader, naming an interim leader and a process for choosing a permanent successor, or specifying processes for selecting both interim and long-term leaders. Succession rules are found in the constitution or other organizing documents, such as edicts or fundamental laws. Constitutions are rules that coordinate behavior (Hardin 1989). Although constitutions are usually considered in the

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3. Bueno de Mesquita and Smith (2017; 2018) argue that old age and illness lead to coups because leaders lose the ability to promise goods into the future credibly. My argument is that elites preemptively depose old and sick leaders to avoid succession crises. The two arguments can be reconciled. Succession rules help preserve the dictator's credibility by helping the regime survive. Even if the current dictator is likely to die soon, elites feel safe in their status because the regime is more likely to outlive the dictator. The dictator's promises can plausibly outlive the dictator because the regime will survive.

context of democracies, they serve important roles in autocracies. Autocratic constitutions are operating manuals that inform elites how to rule and govern (Barros 2002; Przeworski 2013). Constitutional rules exist to coordinate the behavior of elites.

By coordinating elite behavior, succession rules reduce uncertainty over the outcome of the succession process. Succession rules change the probability distribution of who will become the next dictator. If the rule names a successor, the successor starts with the strongest advantage and becomes the most likely next successor if a vacancy occurs. Most succession rules name a successor, but only on an interim basis. A new dictator is chosen for a full term while the successor rules on an interim basis.<sup>4</sup> The next dictator is not known with certainty, but elites can form expectations about whom the actors responsible for choosing the next dictator prefer. Elites are less likely to commit coups out of fear of who will emerge as the next dictator because they have informed expectations about a succession contest's results.<sup>5</sup>

Succession rules address one facet of political instability that causes sovereign default. Leader deaths lead to succession crises. Succession crises lead to coups. Coups lead to sovereign defaults (Balima 2020; Shea and Poast 2020). Succession rules reduce the threat of this pathway by facilitating leader transitions after vacancies. Succession crises, however, are only one cause of coups. Coups can emerge from other disputes among elites in the regime or stem from mass-level events such as protests and economic downturns. To access foreign financial markets, autocracies must address the broader threat of coups.

Succession rules also signal that coups are unlikely. Succession rules are systematically tied to the regime's stability. Autocracies are more likely to have succession rules when coups are already unlikely. Succession rules benefit autocracies by preventing succession crises after a leadership vacancy occurs, as described above. The cost of succession rules is that they can inspire coups during the dictator's reign even if they prevent coups after the dictator dies. Given the threats from succession rules, dictators are most likely to have succession rules when they are confident that they can prevent coups.

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4. Even if the succession rule allows the successor to take over for the full remaining term, the successor does not take over deterministically. Elites could ignore the rule and deny the successor their right to take over.

5. The idea that certainty over succession pacifies elites is one possibility. Certainty could also anger elites if they dislike the expected outcome. The argument regarding succession rules' signaling effects addresses the potential negative consequences of certainty.

If the succession rule names a successor, the most obvious threat is the successor. The successor can wait for the dictator's death to take power, but the successor maximizes their time in power by staging a coup against the dictator. A preemptive coup also reduces the risk that the successor dies or is removed before the dictator leaves power. Regardless of the successor's initial strength, being the successor increases their influence and power in the regime. Successors are inherently prominent members of the regime and often hold important positions such as vice president or prime minister. From their position, they gain resources and allies that could support a coup. Having a successor introduces what Herz (1952) dubbed the crown-prince problem. A successor has both the means and motivation to overthrow the dictator.

Succession rules can also create threats outside the successor. As discussed above, succession rules affect the probability distribution of who will take power. The increased certainty can quell elites who are satisfied with the likely outcome and want more assurance of the regime's future. Certainty is not always a positive. The likely outcomes of the succession outcome can anger elites. A subset of elites may dislike the appointed successor or believe that the process for choosing the next dictator disadvantages their favored candidate. Elites who are unhappy with the succession rule can stage a coup to avoid risking the succession rule's outcome. The enhanced certainty of succession rules comes with both benefits and costs. The succession rule can mollify elites who are happy with the outcome but motivate other elites to commit coups.

Dictators may want to have succession from their own interest in preserving the regime, bolstering a preferred successor, or satisfying elites nervous about the regime's future. But when deciding whether to have succession rules, dictators must balance the benefits of succession rules against the threats that they introduce. Dictators who fear coups, consequently, avoid succession rules because succession rules make the threat worse. Conversely, dictators who have secured their rule and minimized the risk of coups can afford to risk potential threats, feeling confident that they can stop any coup attempts. When coups have a lower probability of occurring, autocracies are more likely to have succession rules (Sharman 2025). The relationship between coup probability and succession rules provides a potential signaling effect for succession rules. The presence of succession rules signals that the dictator does not fear coups.

Investors can observe the presence of succession rules and conclude that political instability is a lower risk compared to autocracies lacking succession rules.

Succession rules, then, increase autocratic access to sovereign bonds through substantive and informational mechanisms. Instability threatens investors' prospects for repayment both during and after a dictator's lifetime. Succession rules directly address instability after a dictator's death by reducing the risk that sudden vacancies lead to coups. While succession rules do *not* directly reduce instability during a dictator's lifetime, they have an indirect effect by providing The presence of succession rules signals that the dictator is confident in their ability to prevent coups.

## Hypotheses

I test the argument with three hypotheses regarding the relationship between succession rules in autocracies and the issuance of sovereign bonds. Issuing sovereign bonds serves as a direct indicator of a state's access to foreign financial markets. A state's desire or willingness to borrow money is insufficient; the state must find buyers for its bonds. If a state issues a sovereign bond, it indicates that the state has found willing buyers and can access capital markets (Ballard-Rosa, Mosley, and Wellhausen 2021). The first hypothesis follows directly from the argument. Succession rules help autocracies borrow money by reducing political instability after succession crises and signaling to investors that coups are unlikely. As a result, autocracies with succession rules are more capable of accessing foreign financial markets. I expect that autocracies with succession rules are more likely to issue sovereign bonds than autocracies without succession rules.

The other two hypotheses propose conditional effects for succession rules based on other political factors. Succession rules make repayment more credible to the extent that political instability threatens repayment. Other threats to credibility remain that succession rules do not address, such as the government's ideology or ability to repay (Bodea and Hicks 2015; Brooks, Cunha, and Mosley 2022; Mosley 2003; Sattler 2013; Vaaler, Schrage, and Block 2006). Even an extremely stable government will struggle to borrow money if investors do not trust that the

government is willing or able to repay. Indeed, stable dictators could pose the biggest threats to repayment. Investors can punish states by restricting market access and increasing the dictator's risk of losing power (DiGiuseppe and Shea 2015; Tomz 2007). But secure dictators are secure because they can prevent coups. A secure dictator could opt to default and still can stop coups caused by the default. Investors may require other signals that default is unlikely, particularly if the punishment of limited market access has a limited effect. Succession rules are likely to matter most when other factors establish willingness and ability to repay debts.

Another institution that helps establish credible commitment to investors is fiscal rules. Fiscal rules set numerical constraints on fiscal policy aggregates, such as government spending. By signaling greater fiscal constraints, transparency, and capacity, fiscal rules reduce—or even eliminate—the democratic advantage (Aaskoven 2023). Combining succession rules and fiscal rules signals both that coups are unlikely and that the government is unlikely to choose to default. The second hypothesis states that the effect of succession rules on issuing sovereign bonds in autocracies is stronger when fiscal rules are present.

The third hypothesis addresses the political incentives for default. Governments vary in how much default can aid their survival in office. My argument, up to this point, has focused on relationships between dictators and elites in the regime. While elites are the greatest danger to autocratic survival, dictators also need to control the mass population (Svolik 2012). Large-scale political unrest, such as protests and riots, can pressure the dictator into resigning or inspire coups. Autocracies may opt to default if necessary to preserve policies that prevent domestic unrest.

Food prices are one source of domestic unrest. Higher food prices lead to protests and riots in urban areas (Hendrix and Haggard 2015). A common strategy among autocratic governments in developing countries is to use food import subsidies. The government purchases food on the international market and resells it in domestic markets at lowered prices. By keeping a sufficient amount of cheap food, food import subsidies prevent urban riots.<sup>6</sup> Food import subsidies are

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6. Autocracies have used food import subsidies to satisfy urban populations since at least the Roman Empire. Under the Roman Republic, grain imports were used to provide free grain during emergencies. Augustus, the first Roman emperor, instituted a permanent system of importing grain from the Mediterranean into Rome. Approximately 15% to two-thirds of residents in the city of Rome received subsidized grain (Kessler and Temin 2007).

costly. Amid a financial crisis, the government may be forced to choose between defaulting on debts or ending food import subsidies. The more that the government relies on food imports, the more costly ending subsidies becomes. Consequently, default is more likely among autocracies that depend more on food imports because food imports in developing autocracies rely on government subsidies (Ballard-Rosa 2016; 2020).<sup>7</sup> Lower food imports increase the credibility of repayment by lowering the political incentives for sovereign default. Succession rules should also be more effective when food imports are low due to the added credibility of repayment. The third hypothesis states that the effect of succession rules on issuing sovereign bonds in autocracies is stronger when food imports are lower.

## Data

The main variables for the analysis are the presence of succession rules in autocracies, the key independent variable; the issuance of sovereign bonds, the dependent variable; and the presence of fiscal rules and the amount of food imports, the moderating variables. I use data from sub-Saharan Africa for the analysis. Sub-Saharan Africa is a useful context for both the independent variable, autocratic succession rules, and the dependent variable, the issuance of sovereign bonds. Regarding succession rules, sub-Saharan African autocracies rely most heavily on formal rules to regulate succession. The main alternative to succession rules is strong ruling parties that manage succession through informal rules and norms (Egorov and Sonin 2024; Gill 2021). Many African autocracies have ruling parties, but the ruling party is formally incorporated into the state and often explicitly included in the succession rule. Parliamentary systems are another alternative. Instead of having a formal rule, the appointment process for the prime minister is repeated after a vacancy. Parliamentary governments are rare in modern Africa. Only Botswana, Ethiopia, Lesotho, Mauritius, Somalia, and South Africa currently have parliamentary governments.<sup>8</sup> The two main alternatives to formal rules—strong

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7. Autocratic governments, especially in Africa, have also monopolized domestic markets, forcing domestic rural producers to sell food to urban consumers at sub-market prices (Bates 1981). Monopolizing domestic markets is less expensive than subsidizing food imports and, therefore, is less likely to cause sovereign defaults.

8. Botswana and South Africa are exceptional among parliamentary systems because they do not have a prime minister appointed by the head of state. Instead, the parliament elects an executive president, and succession is provided for using a line of succession.

ruling parties outside the constitution and parliamentary systems—are mostly controlled for by using sub-Saharan Africa as the sample.

For sovereign bonds, sub-Saharan Africa has the most limited access to debt from foreign lenders compared to other regions. Sovereign debt is most inaccessible to developing countries. Investors trust developed countries to repay their debts more (Mosley 2003; Reinhart and Rogoff 2009). Sub-Saharan Africa remains a developing region, and consequently, its bond market lags behind the rest of the world. Before 2006, only South Africa regularly issued sovereign bonds. Most African states have never issued sovereign bonds (Zeitzi 2022). Given the rarity of sovereign bonds in sub-Saharan Africa, it is a challenging environment in which to find relationships with sovereign bonds.

Sub-Saharan African governments could benefit substantially from sovereign bonds. External finance is essential for sub-Saharan African states, but historically, African governments have relied on multilateral lending and increasingly on Chinese loans in recent years. African sovereign bonds are rare. Among African loans (including countries in Northern Africa) with a maturity of at least one year, only 2.1% are sovereign bonds (154 of 7,493). The remainder are loans from foreign governments and international organizations. Sovereign bonds provide significantly more money but come at the cost of higher interest rates, shorter maturities, and overall lower accessibility. The average multilateral loan provides less than \$100 million, and the average Chinese loan provides less than \$200 million. Sovereign bonds, which are purchased by private investors, average nearly \$1 billion (Mihalyi and Trebesch 2023). Sovereign bonds can provide African governments with significantly more money than other sources of financing, but they are more difficult to access and come with more challenging terms.

Data on autocratic succession rules come from Sharman (2025) adjusted for democracies based on Version 4.0 of Boix, Miller, and Rosato's (2012) data. Of the three major binary classifications of democracies and autocracies (Boix, Miller, and Rosato 2012; Cheibub, Gandhi, and Vreeland 2010; Geddes, Wright, and Frantz 2014), Boix, Miller, and Rosato (2012) provide data through 2020, whereas the two other datasets stop at 2008. Since the African bond market mostly began in 2006, the data need to include observations past 2008. Boix, Miller, and Rosato classify a country as autocratic if it does *not* meet all of the following criteria: the

executive is elected directly or indirectly through popular elections and is responsible to either voters or the legislature; the legislature or directly-elected executive is elected in free and fair elections; and a majority of adult men have the right to vote. All democracies are coded as having no succession rule even if the country was originally included in the expansive dataset of autocratic succession rules. The succession rule variable is effectively a categorical variable with three categories: autocracy without succession rule, autocracy with succession rule, and democracy. Autocracy without succession rule is treated as the reference category.

I use data from Ballard-Rosa, Mosley, and Wellhausen (2021) for the dependent variable. The dependent variable is a dummy variable indicating whether the country has issued at least one new sovereign bond with a maturity of at least six months. Ballard-Rosa, Mosley, and Wellhausen's bond data are available at the monthly level. The data are analyzed monthly because the independent and dependent variables are available on a monthly basis. The succession rule variable takes a value of 1 for any autocratic observation with an active succession rule for any part of that month. The sovereign bond data cover the period 1990 to 2016 for 24 sub-Saharan African countries: Angola, Benin, Botswana, Burkina Faso, Cabo Verde, Cameroon, Côte d'Ivoire, the Democratic Republic of the Congo (Zaire until 1997), Ethiopia, Gabon, Ghana, Kenya, Lesotho, Mauritius, Mozambique, Namibia, Nigeria, the Republic of the Congo, Rwanda, Senegal, Seychelles, South Africa, Uganda, and Zambia.

The two moderators are the presence of fiscal rules and food imports. Data on fiscal rules come from the International Monetary Fund (IMF)'s Fiscal Rules Dataset (Davoodi, Elger, Fotiou, Garcia-Macia, Lagerborg, et al. 2022). The IMF data identify four types of rules: debt rules, which set an anchor or ceiling for public debt; budget balance rules, which constrain budget aggregates such as the debt ratio; expenditure rules, which limit government expenditures; and revenue rules, which set ceilings or floors on government revenues (Davoodi, Elger, Fotiou, Garcia-Macia, Han, et al. 2022). The fiscal rules variable takes a value of 1 if a country has at least one type of fiscal rule in place. I calculate food imports as a percentage of GDP by multiplying food imports as a percentage of total imports by the total value of trade. The product is then divided by GDP. All data for the food imports variable come from the World Bank's World Development Indicators (WDI).



	N	Mean	SD	Min	Q1	Median	Q3	Max
Sovereign Bond Issued	7,477	0.25	0.43	0	0	0	1	1
Autocracy with Succession Rule	7,477	0.58	0.49	0	0	1	1	1
Democracy	7,477	0.33	0.47	0	0	0	1	1
Fiscal Rule	4,669	0.5	0.5	0	0	0	1	1
Food Imports/GDP	5,364	5.68	4.83	0.31	2.78	3.98	7.03	30.76
Log GDP per Capita	7,477	7.29	1.03	5.25	6.58	7.15	8.05	9.64
GDP Growth	7,477	1.84	5.25	-41.59	-0.2	2.03	4.17	60.09
Inflation	7,453	92.1	1,117	-29.17	2.41	6.77	14.64	26,766
Debt/GDP	6,531	71.12	69	3.9	26.93	51.28	86.47	581.1
Trade/GDP	6,457	73.82	35.87	19.68	47.78	62.82	93.86	222.2
Log Oil Rents/GDP	7,405	0.739	1.23	0	0	0	1	4.07
Active External Default	5,616	0.34	0.47	0	0	0	1	1
Left-Wing Government	7,071	0.39	0.49	0	0	0	1	1
Right-Wing Government	7,071	0.14	0.34	0	0	0	0	1
Urbanization	7,477	39.89	16.8	5.42	26.48	40.9	50.71	88.12
Log Civil Conflict Deaths	7,477	0.81	1.99	0	0	0	0	10.81

Table 1. Summary statistics

Finally, I control for a set of economic and political controls that could affect issuing sovereign bonds and that may correlate with having a succession rule. I include GDP per capita, GDP growth, public debt as a percentage of GDP, oil rents as a percentage of GDP, trade as a percentage of GDP, inflation, and urbanization from the WDI; whether the country is in external default (Reinhart and Rogoff 2009); the ideology of the government with dummies for left-wing and right-wing governments (Beck et al. 2001; Cruz, Keefer, and Scartascini 2021); and battle deaths from civil conflict (Davies, Pettersson, and Öberg 2023). Table 1 presents summary statistics for all variables.

## Cross-National Analysis

Table 2 begins the analysis by comparing how often countries issue sovereign bonds based on regime type and the presence of succession rules. Democracies issue sovereign bonds the most often. At least one sovereign bond was issued in 34.44% of months. Autocracies with succession rules issue sovereign bonds in 21.78% of months. Sovereign bond issuances drop precipitously among autocracies without succession rules. Autocracies without succession rules issued a sovereign bond in just two months, 0.3% of the total category. The percentage of months with sovereign bond issuances is over 72 times higher among autocracies with succes-

	No Bond Issued	Bond Issued	Total
Democracy	1,723 (65.56%)	905 (34.44%)	2,628 (100%)
Autocracy with Succession Rule	3,483 (78.22%)	970 (21.78%)	4,453 (100%)
Autocracy without Succession Rule	682 (99.7%)	2 (0.3%)	684 (100%)

*Notes:* Proportions of row in parentheses. The total column is the total number of country-month observations in each row. Percentages may not add up to 100% due to rounding.

Table 2. Monthly sovereign bond issuances and succession rules in sub-Saharan Africa, 1990–2016

sion rules than autocracies without them.<sup>9</sup> Both autocracies with succession rules ( $t = 12.53$ ) and democracies ( $t = 19.05$ ) are significantly more likely to issue sovereign bonds than autocracies lacking succession rules.

To test the hypotheses more fully, I use logit models with country-level fixed effects to account for unobserved heterogeneity. All the independent variables are lagged by one year to account for potential simultaneity. The model for unconditional effects in the first hypothesis takes the form

$$\Pr(\text{Issue}_{it} = 1) = \text{logit}^{-1}(\beta \text{Rule}_{it-12} + \alpha \text{Democracy}_{it-12} + \gamma' \mathbf{X}_{it-12} + \delta_i) \quad (1)$$

where  $i$  indexes countries,  $t$  indexes months, Issue is a dummy variable indicating that at least one sovereign bond was issued, Rule is a dummy variable for autocracies with succession rules, Democracy is a dummy variable for democracies,  $\mathbf{X}$  is a vector of controls, and  $\delta$  is the country-level fixed effect. The other two hypotheses expect a conditional effect for succession rules. To add the conditional effects, equation (1) is amended to

$$\begin{aligned} \Pr(\text{Issue}_{it} = 1) = & \text{logit}^{-1}(\beta_1 \text{Rule}_{it-12} + \beta_2 \text{Rule}_{it-12} \mathbf{M}_{it-12} + \alpha_1 \text{Democracy}_{it-12} \\ & + \alpha_2 \text{Democracy}_{it-12} \mathbf{M}_{it-12} + \tau \mathbf{M}_{it-12} + \gamma' \mathbf{X}_{it-12} + \delta_i) \end{aligned} \quad (2)$$

where  $\mathbf{M}$  is the relevant moderator. The moderator is fiscal rules in the second hypothesis and

9. The two autocracies without succession rules that issued sovereign bonds are Ethiopia in December 2014 and Nigeria in January 1992.

food imports in the third.

Table 3 shows the full regression results. Given that I use logit models and four models have interaction effects, the more useful quantity is the average marginal effect (AME). To test the first hypothesis, figure 1 graphs the AMEs of succession rules and democracy from models (1) and (2) where the effects are unconditional. The top panel, which corresponds to model (1) in table 3, does *not* include controls. The bottom panel, which corresponds to model (2), includes controls. Models (1) and (2) support the hypothesis that autocracies with succession rules are more likely to issue sovereign bonds than autocracies without succession rules. Succession rules have significant and positive effects regardless of whether controls are included. Without controls, autocracies with succession rules are 33.3 percentage points more likely than autocracies without succession rules to issue sovereign bonds with a 95% confidence interval of 4.6 to 61.9 percentage points. With controls, the AME is slightly smaller but more precisely estimated. The AME is 31.4 percentage points with a 95% confidence interval of 21.8 to 41.1 percentage points.

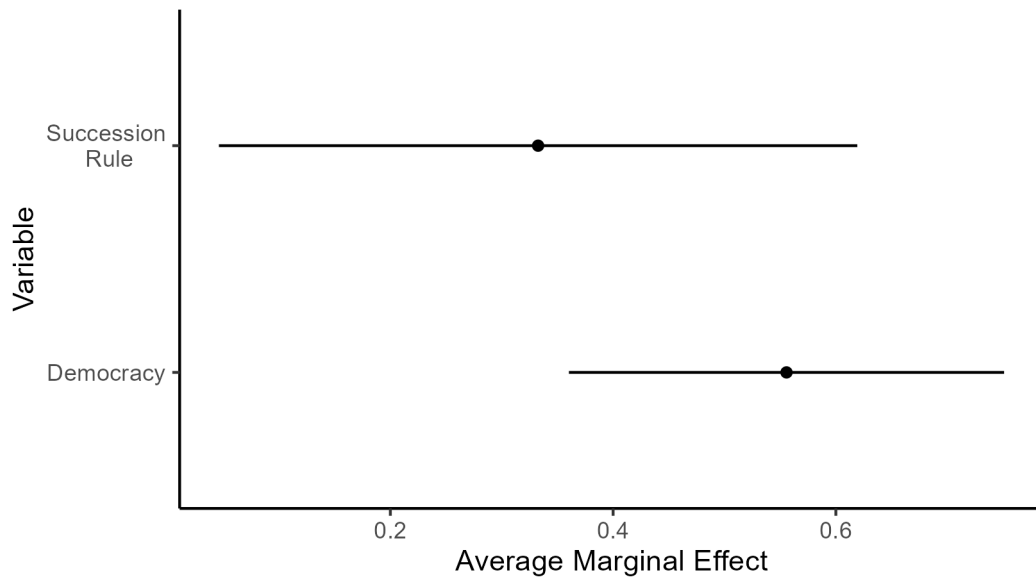
To examine the hypothesis that the effect of succession rules is conditional on the presence of fiscal rules, figure 2 graphs the effects of succession rules and democracy depending on whether succession rules are present. The top panel, which is based on model (3) on table 3, excludes controls, and the bottom panel, based on model (4), includes controls. Across both models, succession rules have a positive and statistically significant effect on issuing sovereign bonds, but the effect is stronger when fiscal rules are present. Without controls, the AME of succession rules is 48.1 percentage points with fiscal rules compared to 8.9 percentage points without fiscal rules. With controls, the AME of succession rules is 29.2 percentage points with fiscal rules compared to 13.4 percentage points without fiscal rules. The difference is statistically significant without controls but is insignificant when controls are included. Models (3) and (4) provide partial evidence for the second hypothesis. Succession rules have a higher AME when fiscal rules are present, but the difference is only significant without controls.

Democracies are generally associated with higher probabilities of issuing sovereign bonds, but the effect of democracy is insignificant without fiscal rules present. Without controls, the effect of succession rules is nearly identical to democracies, 48.1 versus 51.9 percentage points.

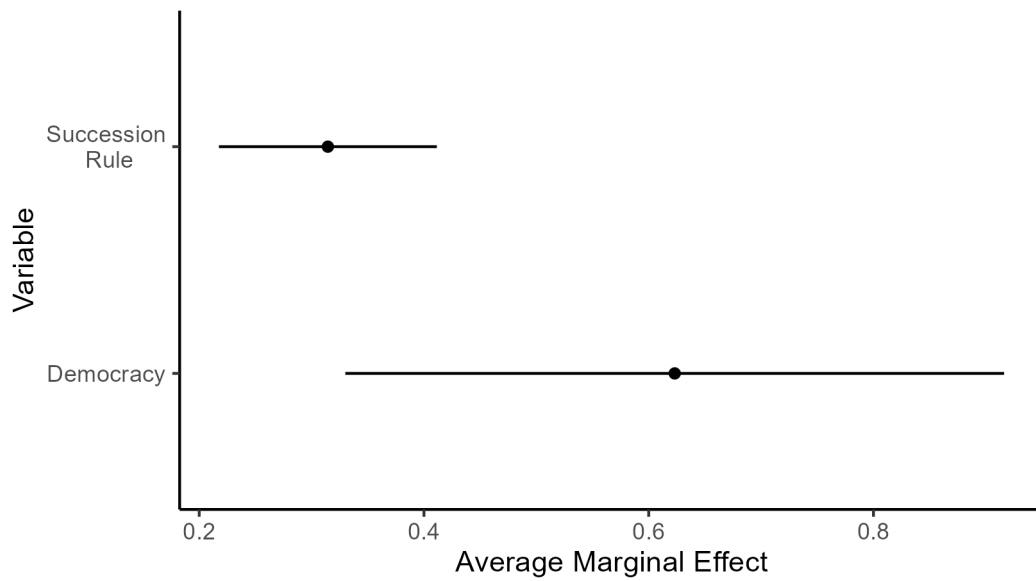
	(1)	(2)	(3)	(4)	(5)	(6)
Autocracy with Succession Rule	4.26*** (1.21)	14.6*** (2.23)	1.56*** (0.167)	10.8*** (1.37)	14.7*** (2.00)	8.59 (7.69)
Autocracy with Succession Rule × Fiscal Rule			12.0*** (0.179)	6.78*** (1.24)		
Autocracy with Succession Rule × Food Imports/GDP					0.316** (0.157)	1.51 (2.81)
Democracy	5.68*** (1.00)	15.2*** (2.38)	2.66** (1.31)	-0.202 (1.36)	17.2*** (2.14)	10.7 (7.15)
Democracy × Fiscal Rule			12.9*** (1.30)	18.2*** (1.15)		
Democracy × Food Imports/GDP					-0.088 (0.108)	1.05 (2.68)
Fiscal Rule			-8.21*** (0.288)	-3.97*** (0.870)		
Food Imports/GDP					0.151*** (0.00)	-1.31 (2.54)
Log GDP per Capita		10.5*** (1.66)		12.2*** (2.14)		11.4*** (1.89)
GDP Growth		0.008 (0.069)		0.046 (0.118)		-0.009 (0.083)
Inflation		-0.030** (0.014)		-0.034 (0.022)		-0.032* (0.017)
Debt/GDP		-0.061*** (0.015)		-0.020 (0.016)		-0.066*** (0.015)
Trade/GDP		0.003 (0.021)		0.083** (0.042)		0.014 (0.025)
Log Oil Rents/GDP		-0.280 (0.828)		0.006 (0.773)		-0.357 (0.759)
Active External Default		-0.166 (0.504)		-0.084 (0.686)		-0.188 (0.528)
Left-Wing Government		-1.63*** (0.542)		-1.33** (0.625)		-1.59*** (0.491)
Right-Wing Government		-0.338 (0.833)		1.32 (2.03)		-0.048 (0.966)
Urbanization		-0.045 (0.223)		0.240 (0.373)		-0.116 (0.263)
Log Civil Conflict Deaths		-0.048 (0.184)		-0.027 (0.200)		-0.044 (0.196)
N	7,165	4,248	4,669	3,108	5,208	3,228
Countries	23	16	15	11	22	15
Pseudo R <sup>2</sup>	0.247	0.657	0.462	0.686	0.287	0.615
Log-Likelihood	-3,103.2	-812.2	-1,407.3	-492.6	-2,382.9	-761.7
AIC	6,256.36	1,682.32	2,861.77	1,036.12	4,819.85	1,585.36
BIC	6,428.28	1,866.59	2,990.85	1,199.24	4,996.92	1,773.82

Notes: \*\*\* $p < 0.01$ ; \*\* $p < 0.05$ ; \* $p < 0.1$ . Robust standard errors clustered by country in parentheses. All models include country fixed effects.

Table 3. Fixed effect logit models of succession rules and sovereign bond issuances in sub-Saharan Africa, 1990–2016



(a) Without Controls



(b) With Controls

Figure 1. Unconditional average marginal effects of succession rules and democracy on issuing sovereign bonds. Dots are the estimated average marginal effect. Lines represent 95% confidence intervals. The top panel, corresponding to model (1) in table 3, does *not* include controls. The bottom panel, corresponding to model (2), includes controls. Across both sets of models, autocracies with succession rules and democracies are significantly more likely to issue sovereign bonds.

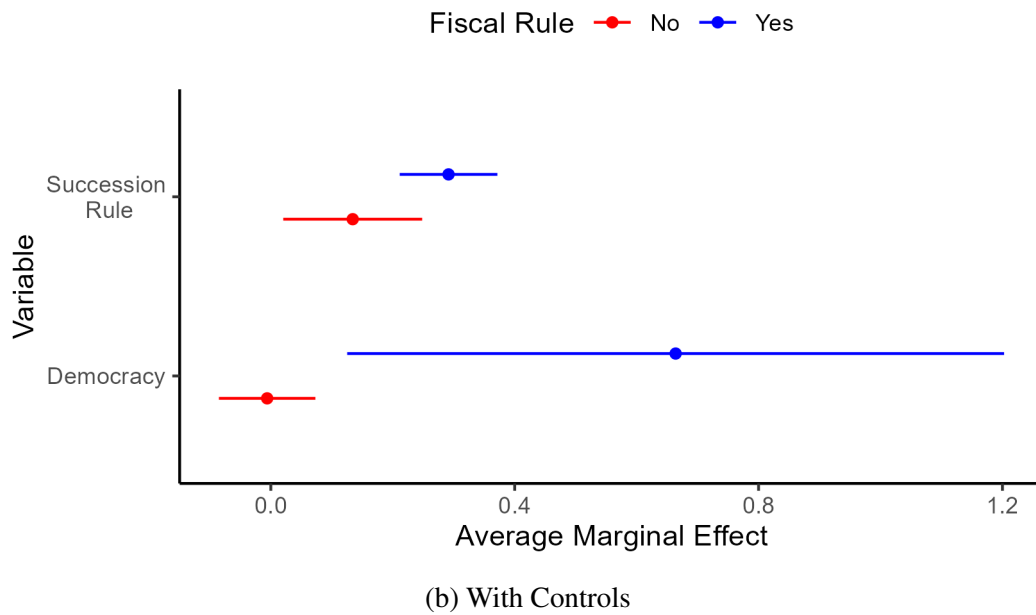
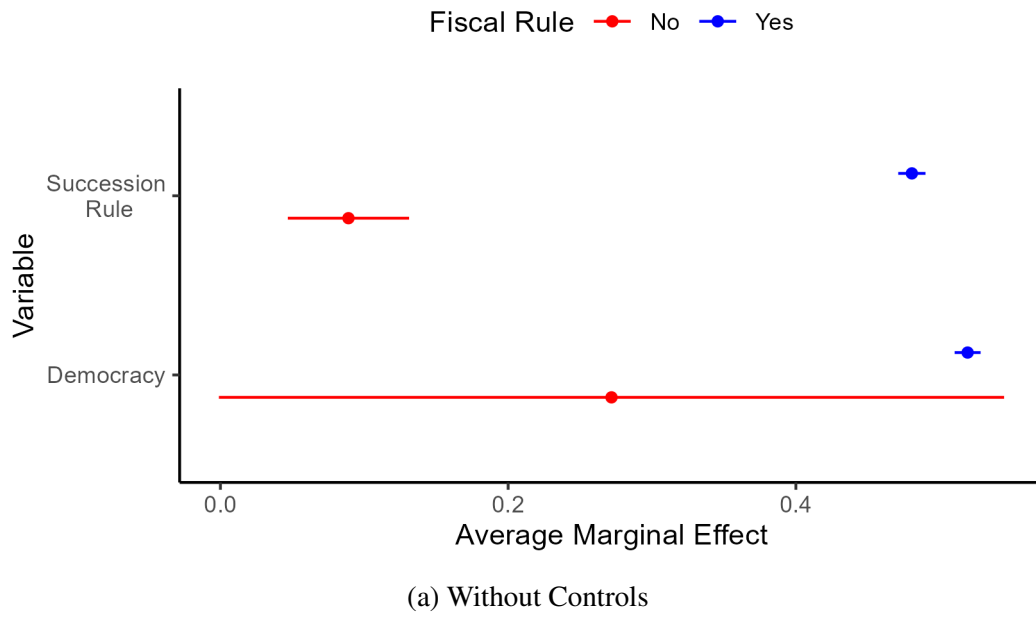


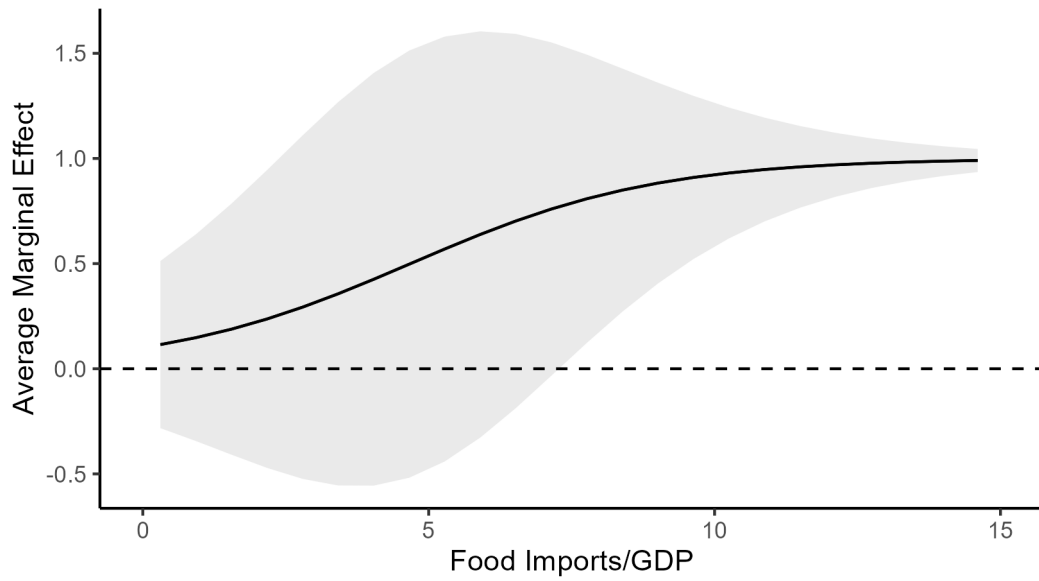
Figure 2. Average marginal effects conditional on fiscal rules of succession rules and democracy on issuing sovereign bonds. Dots are the estimated average marginal effect. Lines represent 95% confidence intervals. The top panel, corresponding to model (3) in table 3, does *not* include controls. The bottom panel, corresponding to model (4), includes controls. Across both sets of models, autocracies with succession rules and democracies are significantly more likely to issue sovereign bonds. The presence of fiscal rules increases the average marginal effect for succession rules and democracies, but the difference is not always statistically significant.

With controls, the effect of succession rules is less than half of democracies at 29.2 percentage points versus 66.4 percentage points. Making conclusions about the effect of democracies, however, is difficult due to extremely imprecise estimates. The effect of democracy is often statistically indistinguishable from the effect of succession rules due to large confidence intervals. The 95% confidence interval for democracy without fiscal rules in model (3) ranges from -0.11 to 54.5 percentage points. The 95% confidence interval with fiscal rules in model (4) ranges from 12.5 to 120.3 percentage points.

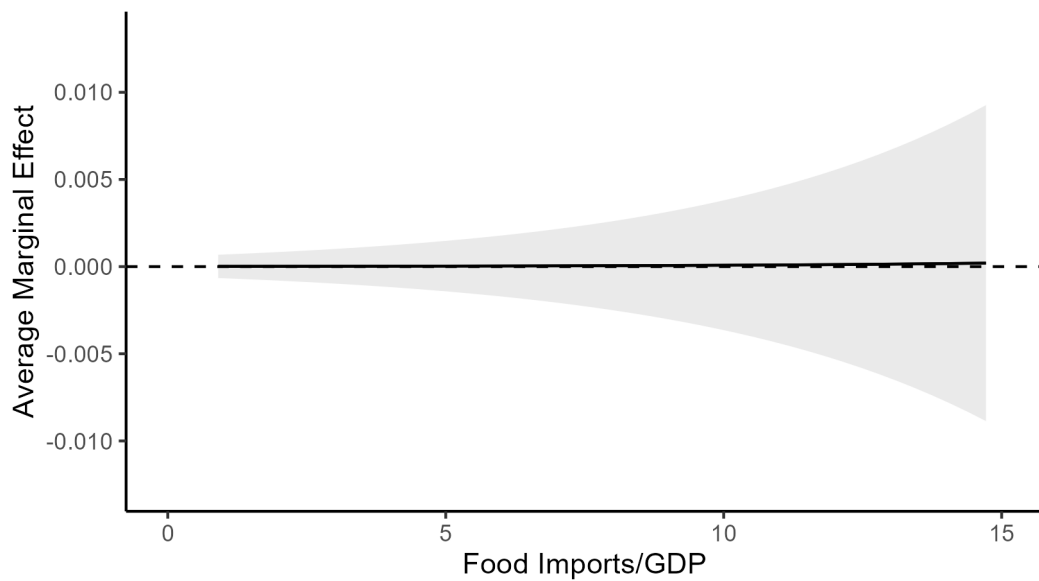
Finally, figure 3 tests the third hypothesis, predicting that the effect of succession rules decreases as the amount of food imports increases. The top panel, which is based on model (5) in table 3, excludes controls. The bottom panel, based on model (6), includes controls. The top panel fails to support the third hypothesis and actually contradicts it. Succession rules have a *stronger* effect when the ratio of food imports to GDP increases, and the effect is insignificant when the ratio is lower. With controls in the bottom panel, the effect of succession rules is insignificant and essentially flat and equal to 0. At best, the third hypothesis is simply unsupported.

Model (6) also raises the question of whether succession rules have an effect at all. If the interaction is important, succession rules are not associated with issuing sovereign bonds. A joint  $F$ -test fails to reject the null that the ratio of food imports to GDP and both interactions are insignificant ( $F = 1.43$ ) or that just the interaction terms are insignificant ( $F = 1.99$ ). Food imports and the interactions are *not* important predictors of issuing sovereign bonds, so the insignificant AME of succession rules in model (6) is less concerning. The models where food imports are excluded and succession rules have a significant effect fit the data better.

Taken together, the models support the main hypothesis. Autocracies with succession rules are associated with issuing more sovereign bonds than autocracies without succession rules. The second hypothesis receives partial support. The AME of succession rules is higher when fiscal rules are present, but the difference is not statistically significant when controls are included. The third hypothesis is *not* supported. Without controls, the hypothesis is even contradicted: succession rules have a greater effect when there are more food imports. Ultimately, the core claim that succession rules are associated with issuing more sovereign bonds in autocracies



(a) Without Controls



(b) With Controls

Figure 3. Average marginal effects conditional on food imports of succession rules on issuing sovereign bonds. Lines are the estimated average marginal effect. Shaded areas represent 95% confidence intervals. The top panel, corresponding to model (5) in table 3, does *not* include controls. The bottom panel, corresponding to model (6), includes controls. The estimates plateau after a value of 15 for Food Imports/GDP. In the top panel, the effect of succession rules becomes stronger as the importance of food imports increases, contradicting the third hypothesis. In the bottom panel, succession rules have an insignificant effect regardless of the level of food imports.



is supported.

## Testing the Informational and Substantive Mechanisms

The argument proposes two mechanisms through which succession rules increase access to foreign finance. Through the informational mechanism, the succession rule signal to investors that coups are unlikely. Through the substantive mechanism, succession rules directly address instability by making succession crises less likely. The main analysis cannot distinguish whether one or both mechanisms drive the relationship. Table 4 and figure 4 separate them. I classify whether the succession rule is new (implemented within the last two years) or sustained (in place longer than two years).<sup>10</sup> If succession rules provide new information to investors, their introduction should cause a short-term increase in bond issuances, similar to how new information drives short-term volatility in stock and currency markets (Benton and Philips 2020; Bernhard and Leblang 2006; Brogaard et al. 2022; Garfinkel, Glazer, and Lee 1999; Lausegger 2021; Vuchelen 2003). The novelty of this information diminishes over time, and therefore, the informational effect should dissipate. If succession rules continue to increase sovereign bonds even if it is no longer new, this suggests that the substantive mechanism is effective.

The results support the substantive mechanism, but not the informational one. Sustained succession rules have a positive and significant coefficient and AME regardless of whether controls are included. New succession rules have a significant coefficient only when controls are included, but the AME remains insignificant in both cases. Moreover, the significance of the coefficient with controls is fragile. Because fewer than half of countries adopt succession rules during the sample period, I estimate models in which each country is sequentially dropped to ensure that no single country is driving the results. When Mozambique is excluded, the coefficient for new rules becomes insignificant in both model specifications. In contrast, the effect of sustained rules is robust to the exclusion of any individual country. With the two mechanisms separated, there is evidence that succession rules increase sovereign bond issuances by addressing political instability directly. The evidence that succession rules affect sovereign bonds by

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10. Additionally, I lag the succession rule and democracy variables by only one month since the information mechanism should have a short-term effect. The control variables are still lagged by one year.

	(1)	(2)
New Succession Rule	0.92 (1.29)	11.96*** (1.14)
Sustained Succession Rule	3.82*** (1.26)	13.82*** (1.58)
Democracy	5.47*** (1.014)	14.89*** (1.63)
Controls Included	No	Yes
N	7,173	4,448
Countries	23	16
Pseudo R <sup>2</sup>	0.253	0.649
Log-Likelihood	-3,056.4	-801.5
AIC	6,164.83	1,662.911
BIC	6,343.7	1,853.5

*Notes:* \*\*\* $p < 0.01$ ; \*\* $p < 0.05$ ; \* $p < 0.1$ . Robust standard errors clustered by country in parentheses. Controls correspond to the specification in table 3.

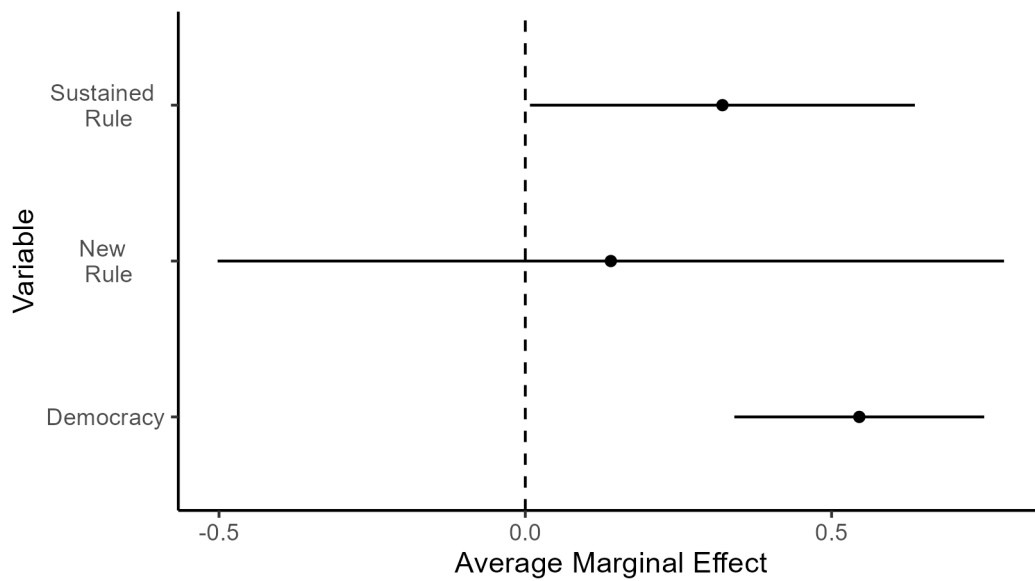
Table 4. Fixed-effect logit models of new and sustained succession rules and sovereign bond issuances in sub-Saharan Africa, 1990–2016

providing information about stability is weak and not robust.

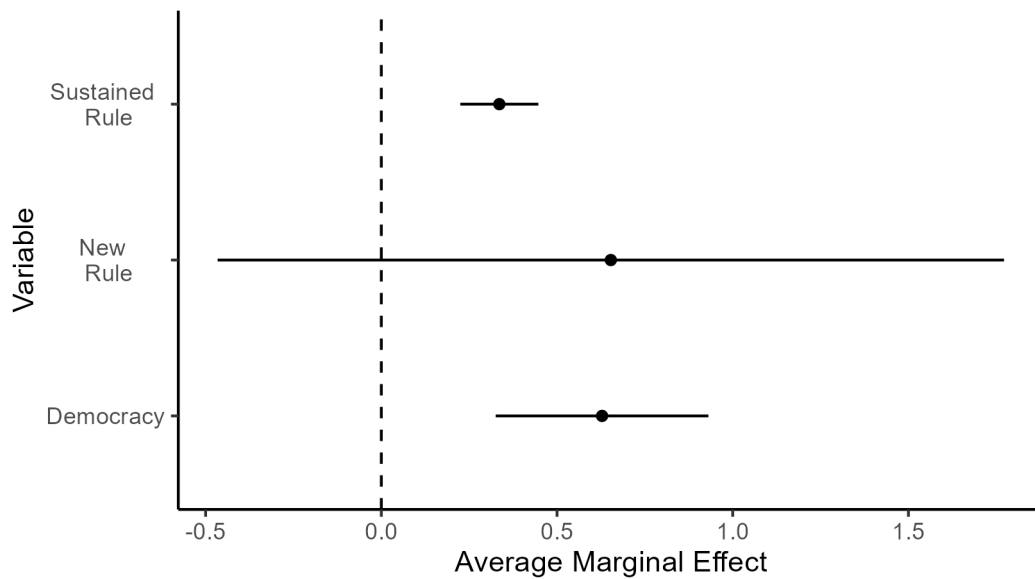
## Robustness Checks

The appendices contain a set of additional analyses. Appendix section A excludes rules that provide a process for replacing the dictator but do not identify who the successor is before a vacancy occurs. Succession rules might be more effective or only effective when a specific successor is named, providing more information and certainty to investors. Using only rules with named successors produces the same conclusions except that the unconditional effect of succession rules is insignificant without controls. The effect becomes significant when controls are included.

The other two appendices address potential concerns with combining logit models and fixed effects. The use of logit models with fixed effects may raise concerns due to potential biases from the incidental parameters problem. However, the resulting bias is negligible when  $T$  is as small as 16 or even 8 (Greene 2004; Katz 2001). Further, logit models with fixed effects are particularly effective with a large  $T$  and non-rare events (Crisman-Cox 2021). Since sovereign bond issuances and succession rules vary at the monthly level,  $T = 312$ . Sovereign bonds are



(a) Without Controls



(b) With Controls

Figure 4. Average marginal effects of new and sustained succession rules and democracy on issuing sovereign bonds. Dots are the estimated average marginal effect. Lines represent 95% confidence intervals. The top panel, corresponding to model (1) in table 4, does *not* include controls. The bottom panel, corresponding to model (2), includes controls. Democracy and sustained succession rules are associated with higher probabilities of issuing sovereign bonds. New succession rules are not.

issued in over 25% of cases, so the outcome is not rare. Given the dimensions of the data, logit models with fixed effects are appropriate.<sup>11</sup>

Still, the appendices contain an additional set of analyses to address concerns with fixed-effects logit models. Appendix section B estimates logit models without any fixed effects. The main results are the same. The one exception is that with controls included, the effect of succession rules increases as food imports increase, contradicting the third hypothesis both with and without controls.

Another possibility is to use an alternative estimator or method of accounting for unobserved heterogeneity. When dealing with binary outcomes and adjustments for unobserved heterogeneity, political scientists have recommended alternatives to standard fixed-effects logit such as penalized logit (Cook, Hays, and Franzese 2020; Zorn 2005) and correlated random effects (Crisman-Cox 2021). Both estimators fail to converge and do not produce reliable estimates.<sup>12</sup>

As an alternative, I look at a different dependent variable. If succession rules improve borrowing terms for autocracies with succession rules, their bonds should produce more money.<sup>13</sup> I expect that autocratic succession rules are associated with larger bonds compared to autocracies without succession rules. Because bond amounts have a lower bound of \$0 (when no bond is issued), I use tobit models. The amount is logged to account for a skewed distribution. The models for bond amounts provide the same conclusion as bond issuances. Autocracies with succession rules borrow significantly more money than ones without succession rules.

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11. Because sovereign bonds are frequently analyzed at the monthly level, binary outcome models like logit or probit with fixed effects are common estimators (e.g., Ballard-Rosa 2016; Ballard-Rosa, Mosley, and Wellhausen 2021).

12. The lack of convergence likely stems from separation problems. Quasi-complete separation occurs when one or a set of variables perfectly predicts one of the outcomes (Barrilleaux and Rainey 2014; Rainey 2016; Zorn 2005). As shown in table 2, the combination of autocratic succession rules and democracy almost perfectly predicts no sovereign bonds. Combining these variables with GDP per capita then perfectly predicts no bonds.

13. Another option is sovereign credit ratings, which both reflect investors' perceptions of a country's likelihood to repay and affect borrowing potential (Cantor and Packer 1996; Reinhart 2002). Sovereign credit ratings change rarely and are highly autoregressive, especially in sub-Saharan Africa where credit ratings are generally low. Focusing on changes in sovereign credit ratings leaves very little variation to explain.

## **Sovereign Bonds in Cameroon**

The timing of sovereign bond issuances in Cameroon helps demonstrate the relationship between succession rules and issuing sovereign bonds. Cameroon provides an example where a succession rule effectively did not exist for a long period before the succession rule took effect. Until 1996, Cameroon had a succession rule in its constitution since independence in 1960. Cameroon made several amendments to the constitution in January 1996. The amendments occurred at a contentious time for President Paul Biya's rule. Biya himself came to power through a succession rule. Biya was elevated to the presidency after President Ahmadou Ahidjo resigned due to a health crisis in 1982 while Biya was the prime minister, then the constitutional successor. Ahidjo's regime relied on support from the French-speaking region whereas Biya had more connections to the English-speaking regions (DeLancey 1989). Biya's initial hold on power was limited, but he consolidated his control over the regime when he suppressed a coup plotted by Ahidjo, the former president, in 1984 (Harkness 2016). By 1996, Biya had restructured the regime to weaken Ahidjo's power base, but Biya still faced intense pressure from Anglophone Cameroonians to expand their role in Cameroon's politics.

The 1996 constitutional changes were intended to strengthen the power of Anglophone Cameroonians by reintroducing a federal system. As part of the constitutional amendments, the succession rule changed. Since 1984, Cameroon had a succession rule where the President of the National Assembly became acting president until a new election was held. Under the 1996 amendments, the President of the Senate became the constitutional successor to serve as acting president while waiting for new elections. The Senate was also created by the 1996 amendments. The construction of the Senate came with a provision that effectively allowed the president to manipulate whether the succession rule was active: the Senate would only meet when the president called the Senate together. Until Biya ordered Senate elections, there would be no President of the Senate and no successor through which the succession rule would function, effectively rendering the succession rule non-existent. In February 2013, five years after Biya eliminated term limits and two years after he won his sixth term in power with little active opposition, Biya called for Senate elections. On June 12, 2013, the Cameroonian Senate finally met and elected its first president, Marcel Niat Njifenji, finally bringing the succession

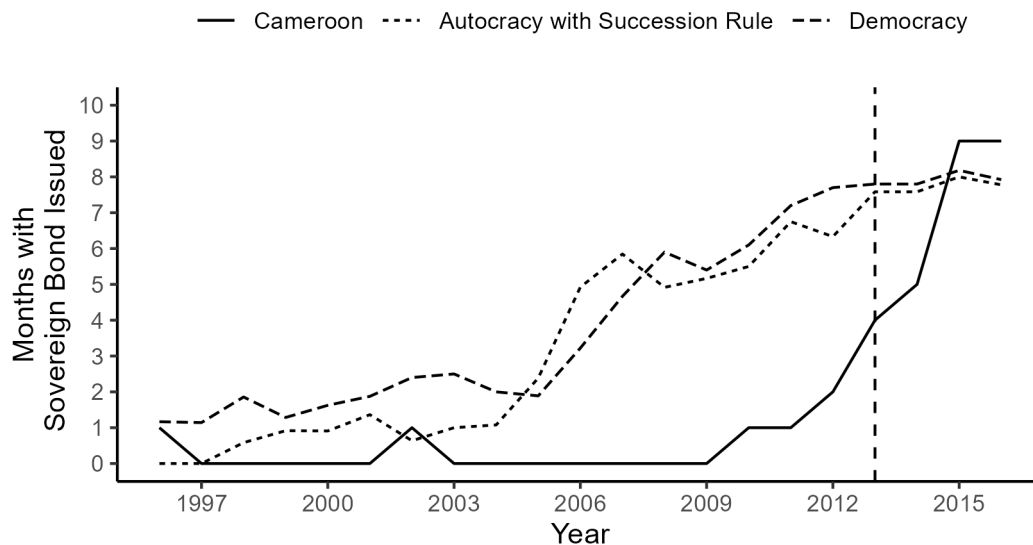


Figure 5. Number of months with sovereign bonds issued before and after Cameroon’s succession rule became effective. The vertical dashed line indicates the year 2013. Autocracies without succession rules are excluded because the average is always 0 months except for 2014 when Ethiopia had one month with a sovereign bond issued. Cameroon’s succession rule became active in June 2013, which was followed by a surge in issuing sovereign bonds.

rule into effect.

The formal existence of Cameroon’s succession rule should not have affected Cameroon’s ability to access sovereign borrowing until 2013. Before 2013, the main condition necessary for Cameroon to use its succession rule—having a President of the Senate—was not met. There would be no set process for replacing the president despite the constitution having a succession rule. Figure 5 compares the proportion of months with sovereign bonds issued in Cameroon from 1996 to 2016 to the averages for democracies and autocracies with succession rules. Autocracies without succession rules are excluded because the average is always 0% except for 2014 when Ethiopia had one month with a sovereign bond.

Before 2013, Cameroon always issues sovereign bonds more rarely than democracies and autocracies with succession rules. In other words, Cameroon appears more like an autocracy without succession rules than one with succession rules, consistent with the rule being ineffective. Cameroon never issued sovereign bonds before 2009 except for one month with a bond each in 1996 and 2002. Cameroon issued bonds in one month again in 2010 and 2011, following Biya’s eliminating term limits. In 2012, after Biya won his sixth term with little active opposition, Cameroon issued bonds in two months. Cameroon saw its greatest increase after

electing the Senate in 2013. Cameroon issued sovereign bonds in four months in 2013 and in five months in 2014. The number of months with sovereign bonds issued jumped to nine in 2015 and 2016, exceeding the average for democracies and other autocracies with succession rules.

The timing of sovereign bond issuances correlates with Cameroon's succession rule becoming meaningful. Cameroon had a succession rule, but in 1996, the succession rule was not in effect. The President of the Senate, the constitutional successor, was not filled until 2013, so the succession rule did not provide guidance on filling vacancies. Before 2010, Cameroon more closely resembled an autocracy without succession rules in issuing sovereign bonds. Bonds were rare, and Cameroon only issued bonds in one month twice. Cameroon began issuing bonds more as events like eliminating term limits and winning re-election with little active opposition signaled that Biya had consolidated power. The biggest jumps, however, happened after 2013 when a President of the Senate was elected and the succession rule became effective. By 2016, Cameroon was issuing slightly more sovereign bonds than the average autocracy with succession rules. Cameroon issued more sovereign bonds after the succession rule became effective.<sup>14</sup>

## Conclusion

Sovereign borrowing is essential to modern governance, but many states struggle to convince investors that they will repay their debts. Autocracies, particularly, face limitations in borrowing. Relative to democracies, autocracies place fewer constraints on executive power and lack an accountability mechanism like elections to punish leaders who default. Yet many autocracies do have incentives to repay their debts. If they default and, therefore, lose access to foreign financial markets, the dictator is at a greater risk of losing power. Even autocracies with political incentives to repay debts still struggle to borrow due to political instability. Po-

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14. In principle, this analysis could be formalized with synthetic controls (Abadie, Diamond, and Hainmueller 2015) or synthetic difference-in-differences (Arkhangelsky et al. 2021). Unfortunately, the data cannot support either analysis. Both estimators require sufficient control units that do not experience the treatment—here, having an effective succession rule—during the entire time period. Several countries switch between having and not having effective succession rules, but only Ethiopia is a control unit for the entire period. Cameroon does issue significantly more bonds than Ethiopia after 2013, but one control unit is not enough for a reliable analysis.

political instability increases the threat of default, especially if coups occur. Autocracies seeking to borrow money need to address political instability to make their commitments to repay more credible.

In this paper, I argue that succession rules can help autocracies issue sovereign bonds by resolving investor fears regarding political instability. Succession rules directly reduce political instability by reducing the threat that leader vacancies lead to succession crises and, subsequently, coups. Because dictators have succession rules when they believe that coups are unlikely, they also signal to investors that the dictator is confident in their ability to stop coups. Using original data on succession rules in sub-Saharan Africa, I show that autocracies with succession rules are significantly more likely to issue sovereign bonds than autocracies without succession rules. Democracies issue more sovereign bonds more often than autocracies regardless, but succession rules cut the democratic advantage in half. I also find partial evidence that succession rules have a stronger effect when fiscal rules are also present. However, I do *not* find evidence that lower political incentives to default, represented by the amount of food imports, conditions the effect of succession rules on issuing sovereign bonds.

The argument and results presented in this paper provide several avenues for future research. Future research could explore the micro-foundations of investor behavior. The argument relies on investors knowing that dictators have succession rules when coups are unlikely. This, however, remains an assumption that could be tested to evaluate the argument further. Similarly, the third hypothesis—that lower food imports strengthen the effects of succession rules on sovereign bonds—also assumes that investors know that increased reliance on food imports increases the risk of sovereign default. Testing whether investors are aware of this relationship could help clarify why the third hypothesis is unsupported and even potentially contradicted. A lack of investor knowledge could explain why the hypothesis is not supported.

Future research could also connect succession rules to foreign direct investment (FDI). Expropriation of FDI is the major form of political risk other than sovereign default that foreign investors face (Tomz and Wright 2010). Investor preferences over FDI parallel sovereign bonds. Investors typically prefer directing FDI to democracies, partially due to greater political stability (Jensen et al. 2012). Leadership turnover is a particular threat as new dictators have



the greatest incentives for expropriating FDI whereas long-serving dictators have the fewest (Albertus and Menaldo 2012b; Li 2009). Succession rules could encourage FDI similarly to sovereign bonds by reducing the actual and perceived risk of coups that would lead to expropriation.

Finally, future research could consider how demand for foreign finance leads to the development of succession rules. I focus on how succession rules increase access to foreign capital markets for autocracies and how domestic considerations motivate succession rules. This relationship also provides a strategy for dictators who want to increase their access to sovereign bonds by institutionalizing succession. Dictators seeking sovereign bonds could use succession rules to expand their market access, providing an international and economic motivation for institutionalizing succession. For example, Cameroon's activation of its succession rule also followed concerns from foreign investors that a succession crisis would destabilize the regime (*Reuters* 2013). If autocratic succession rules affect foreign financial markets, foreign financial markets should also affect autocratic succession rules.

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## Supplementary Material

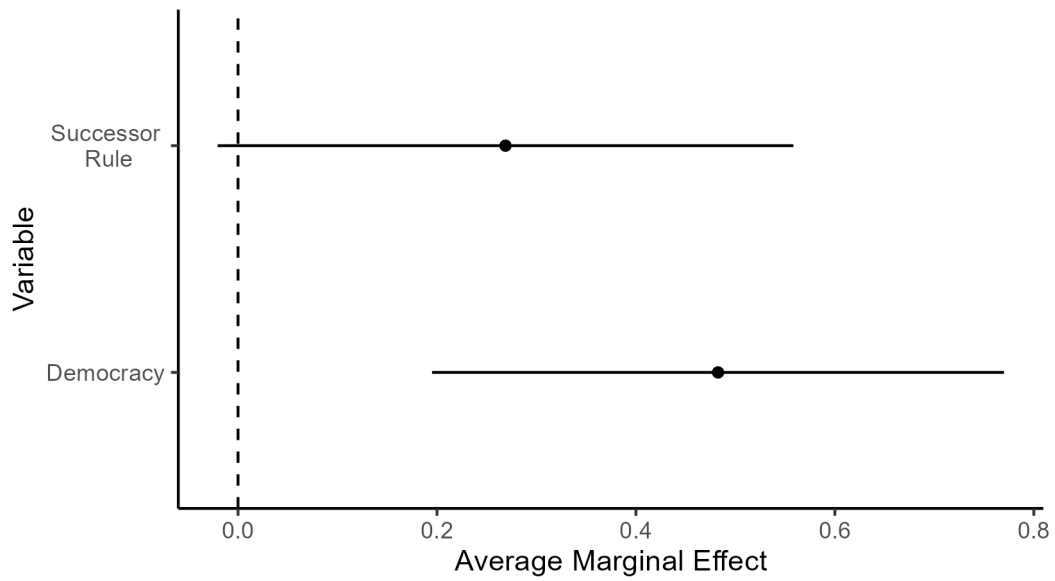
# Autocratic Succession Rules and Access to Foreign Finance: An Analysis of Sovereign Bond Markets in Sub-Saharan Africa

## A Succession Rules with Named Successors

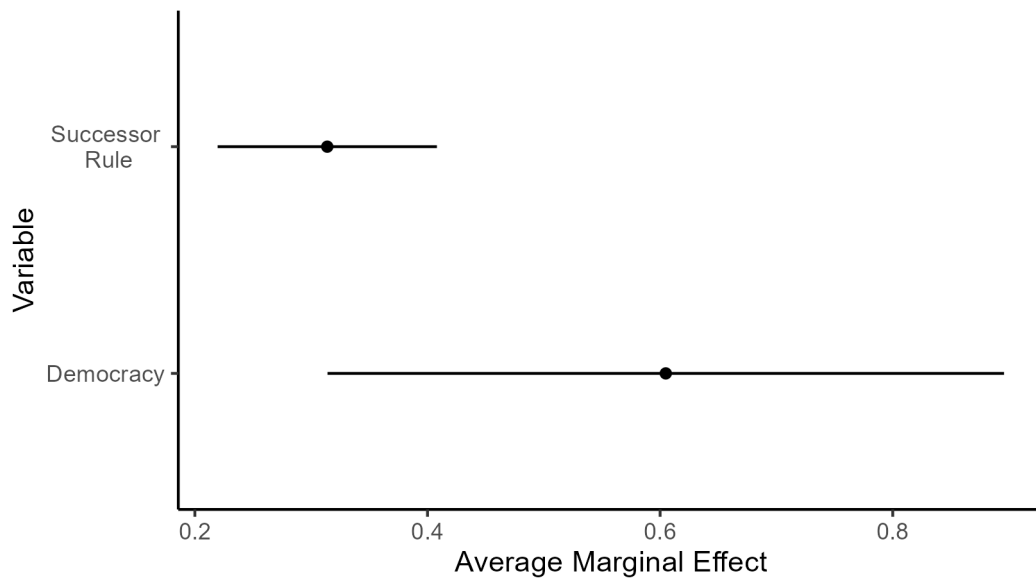
	(1)	(2)	(3)	(4)	(5)	(6)
Succession Rule with Named Successor	2.64** (1.17)	14.2*** (2.15)	4.23*** (1.38)	11.5*** (1.29)	-6.59*** (1.93)	8.88 (7.61)
Succession Rule with Named Successor × Fiscal Rule			9.34*** (1.38)	6.08*** (1.44)		
Succession Rule with Named Successor × Food Imports/GDP					3.18*** (0.955)	1.48 (2.79)
Democracy	4.06*** (1.56)	14.8*** (2.30)	5.30** (2.16)	0.505 (2.19)	-3.68*** (1.24)	11.0 (7.06)
Democracy × Fiscal Rule			10.3*** (2.13)	17.5*** (2.27)		
Democracy × Food Imports/GDP					2.73*** (0.998)	1.01 (2.67)
Fiscal Rule			-5.57*** (1.71)	-3.27 (2.38)		
Food Imports/GDP					-2.67*** (1.01)	-1.28 (2.53)
Log GDP per Capita		10.5*** (1.67)		12.2*** (2.16)		11.4*** (1.90)
GDP Growth		0.008 (0.069)		0.047 (0.118)		-0.008 (0.083)
Inflation		-0.030** (0.014)		-0.034 (0.022)		-0.032* (0.017)
Debt/GDP		-0.061*** (0.015)		-0.020 (0.016)		-0.066*** (0.015)
Trade/GDP		0.003 (0.021)		0.083** (0.042)		0.014 (0.025)
Log Oil Rents/GDP		-0.276 (0.828)		0.009 (0.773)		-0.353 (0.759)
Active External Default		-0.165 (0.504)		-0.084 (0.685)		-0.189 (0.529)
Left-Wing Government		-1.63*** (0.542)		-1.34** (0.625)		-1.59*** (0.491)
Right-Wing Government		-0.343 (0.831)		1.31 (2.03)		-0.053 (0.966)
Urbanization		-0.045 (0.223)		0.238 (0.373)		-0.116 (0.263)
Log Civil Conflict Deaths		-0.048 (0.184)		-0.027 (0.200)		-0.044 (0.196)
N	7,165	4,248	4,669	3,108	5,208	3,228
Countries	23	16	15	11	22	15
Pseudo R <sup>2</sup>	0.256	0.657	0.474	0.687	0.297	0.615
Log-Likelihood	-3,066.7	-812.0	-1,375.6	-491.0	-2,349.5	-761.5
AIC	6,183.34	1,681.902	2,791.3	1,035.99	4,753.023	1,585.067
BIC	6,355.26	1,866.17	2,920.27	1,199.12	4,930.088	1,773.54

Notes: \*\*\* $p < 0.01$ ; \*\* $p < 0.05$ ; \* $p < 0.1$ . Robust standard errors clustered by country in parentheses.

Table A1. Fixed-effect logit models of succession rules with a named successor and sovereign bond issuances in sub-Saharan Africa, 1990—2016

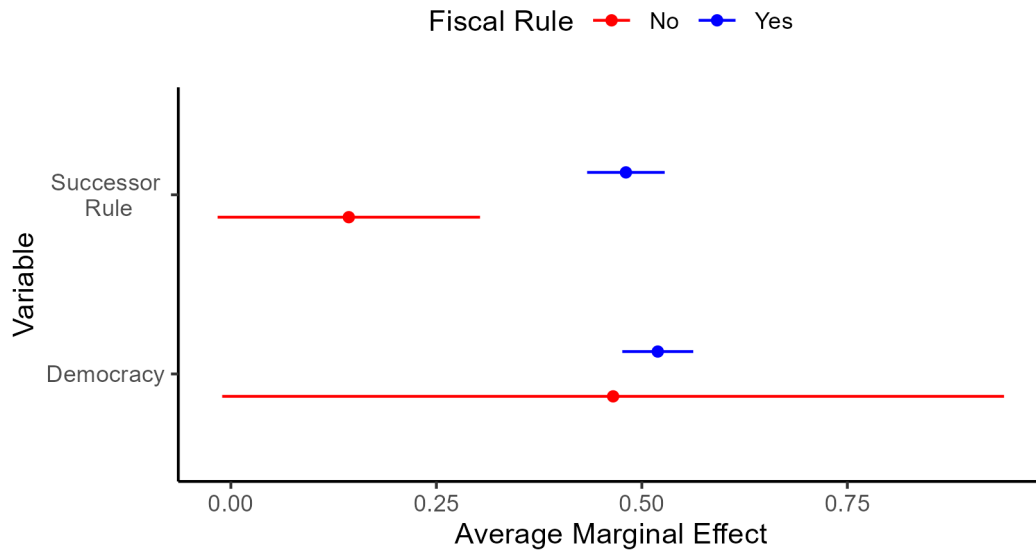


(a) Without Controls

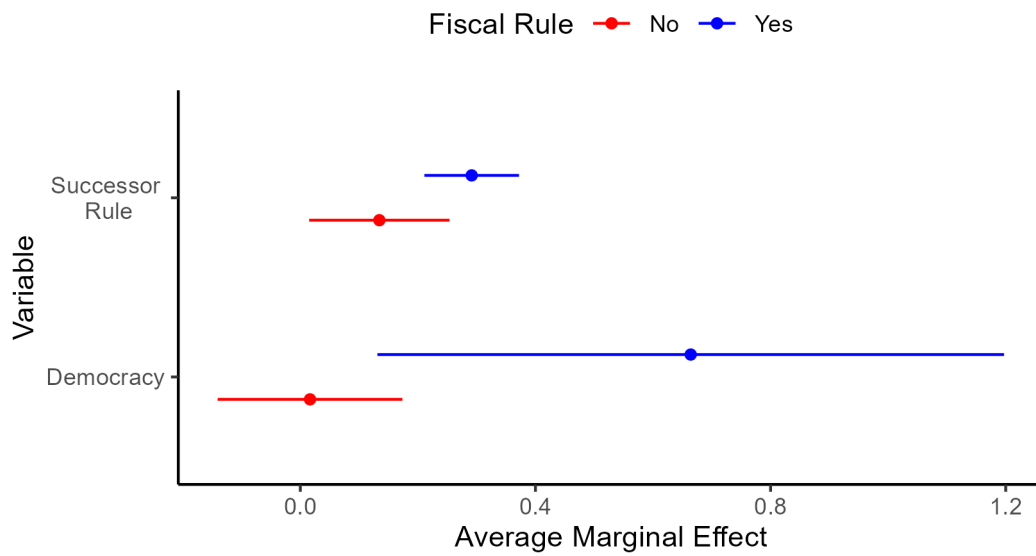


(b) With Controls

Figure A1. Unconditional average marginal effects of succession rules with named successors and democracy on issuing sovereign bonds. Dots are the estimated average marginal effect. Lines represent 95% confidence intervals. The top panel, corresponding to model (1) in table A1, does *not* include controls. The bottom panel, corresponding to model (2), includes controls. With controls, autocracies with succession rules with named successors and democracies are significantly more likely to issue sovereign bonds.

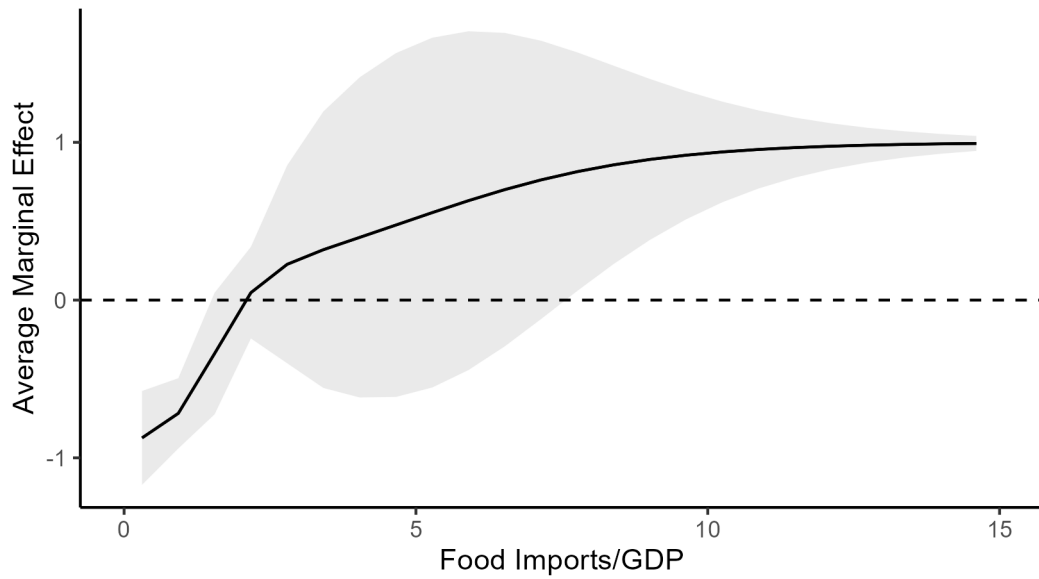


(a) Without Controls

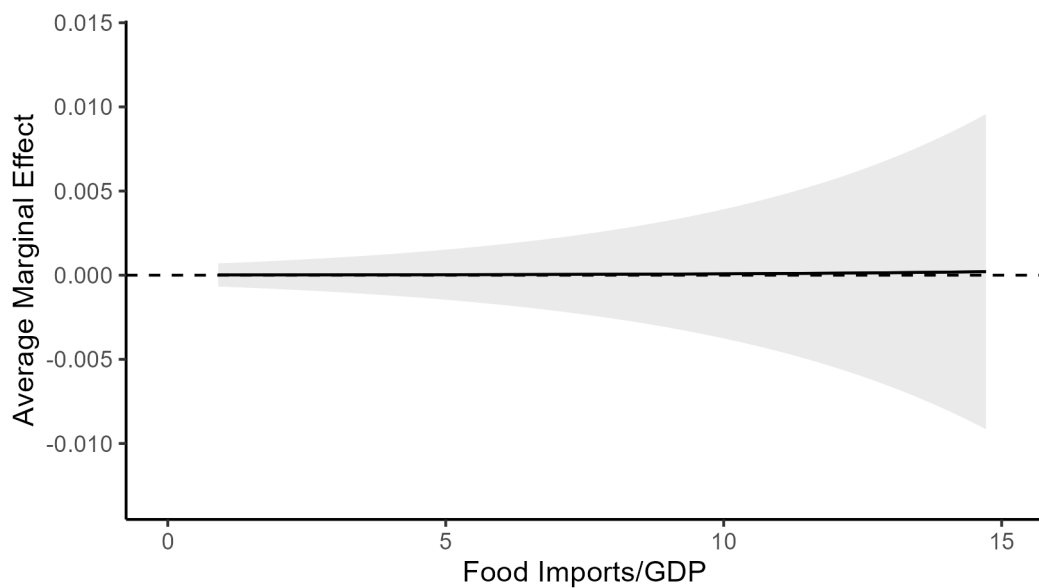


(b) With Controls

Figure A2. Average marginal effects conditional on fiscal rules of succession rules with named successors and democracy on issuing sovereign bonds. Dots are the estimated average marginal effect. Lines represent 95% confidence intervals. The top panel, corresponding to model (3) in table A1, does *not* include controls. The bottom panel, corresponding to model (4), includes controls. Across both sets of models, autocracies with succession rules with named successors and democracies are significantly more likely to issue sovereign bonds. The presence of fiscal rules increases the average marginal effect for succession rules with named successors and democracies, but the difference for succession rules is only statistically significant without controls.



(a) Without Controls



(b) With Controls

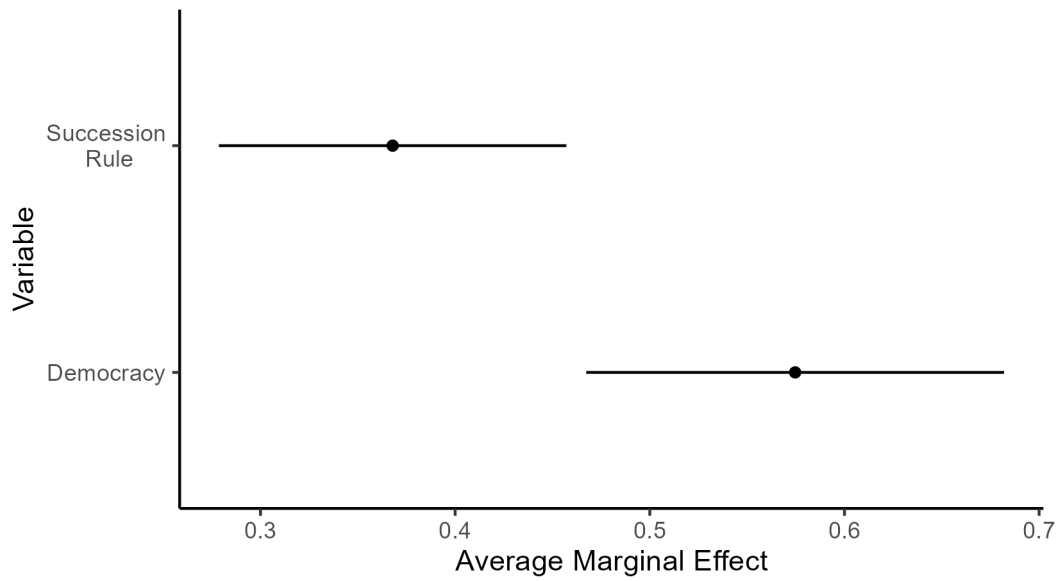
Figure A3. Average marginal effects conditional on food imports of succession rules with named successors on issuing sovereign bonds. Lines are the estimated average marginal effect. Shaded areas represent 95% confidence intervals. The top panel, corresponding to model (5) in table A1, does *not* include controls. The bottom panel, corresponding to model (6), includes controls. The estimates plateau after a value of 15 for Food Imports/GDP. Without controls, the effect of succession rules becomes stronger as the importance of food imports increases, contradicting the third hypothesis. There is no interaction effect with controls.

## B Logit Models without Fixed Effects

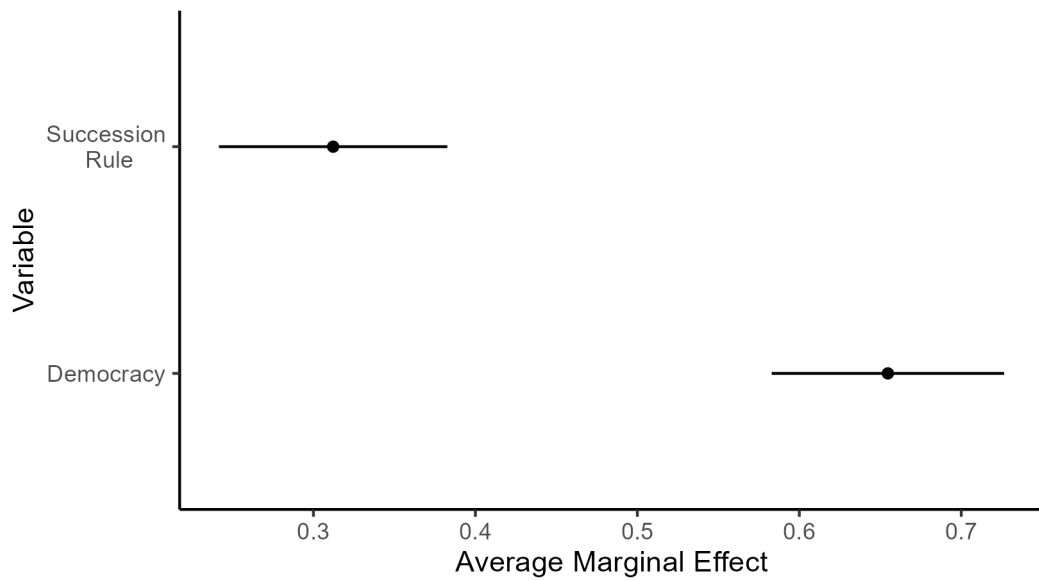
	(1)	(2)	(3)	(4)	(5)	(6)
Autocracy with Succession Rule	4.65*** (0.519)	14.8*** (0.562)	2.58*** (0.913)	9.75*** (1.35)	4.33*** (0.382)	12.1*** (1.68)
Autocracy with Succession Rule × Fiscal Rule			10.4*** (1.17)	2.01 (1.59)		
Autocracy with Succession Rule × Food Imports/GDP					0.137* (0.080)	1.15*** (0.379)
Democracy	5.16*** (0.701)	15.2*** (0.868)	3.37*** (1.30)	4.05 (2.75)	4.82*** (0.670)	14.3*** (1.20)
Democracy × Fiscal Rule			9.64*** (1.16)	6.76*** (2.04)		
Democracy × Food Imports/GDP					0.083 (0.103)	0.601** (0.238)
Fiscal Rule			-8.95*** (0.897)	-1.63 (1.62)		
Food Imports/GDP					-0.070 (0.069)	-0.763*** (0.221)
Log GDP per Capita		0.572 (0.427)		4.97*** (0.964)		0.393 (0.536)
GDP Growth		0.009 (0.018)		0.064** (0.029)		0.072 (0.053)
Inflation		$1.69 \times 10^{-5}$ (0.0003)		-0.016 (0.011)		0.016 (0.012)
Debt/GDP		-0.023* (0.012)		-0.072*** (0.013)		-0.022 (0.015)
Trade/GDP		0.025 (0.016)		0.012 (0.014)		0.035 (0.025)
Log Oil Rents/GDP		0.265 (0.507)		-1.33** (0.632)		0.010 (0.788)
Active External Default		-2.13*** (0.595)		-1.09 (0.746)		-1.61** (0.665)
Left-Wing Government		0.299 (0.886)		-2.52*** (0.948)		-0.224 (0.849)
Right-Wing Government		-0.070 (0.683)		0.381 (0.873)		-0.164 (0.753)
Urbanization		-0.087*** (0.030)		-0.140*** (0.043)		-0.067* (0.038)
Log Civil Conflict Deaths		-0.248*** (0.084)		0.174 (0.111)		-0.175 (0.108)
Constant	-5.81*** (0.533)	-17.2*** (2.21)	-4.62*** (0.897)	-38.2*** (4.92)	-5.39*** (0.144)	-15.7*** (2.65)
N	7,477	4,428	4,669	3,108	5,364	3,360
Countries	24	17	16	12	23	16
Pseudo R <sup>2</sup>	0.056	0.324	0.073	0.577	0.044	0.276
Log-Likelihood	-3,976.0	-1,633.8	-2,423.1	-662.5	-3,255.2	-1,466.7
AIC	7,958.078	3,295.55	4,858.15	1,358.96	6,522.38	2,967.33
BIC	7,978.84	3,385.088	4,896.84	1,461.67	6,561.91	3,071.37

Notes: \*\*\* $p < 0.01$ ; \*\* $p < 0.05$ ; \* $p < 0.1$ . Robust standard errors clustered by country in parentheses.

Table B1. Logit models without fixed effects of succession rules and sovereign bond issuances in sub-Saharan Africa, 1990–2016

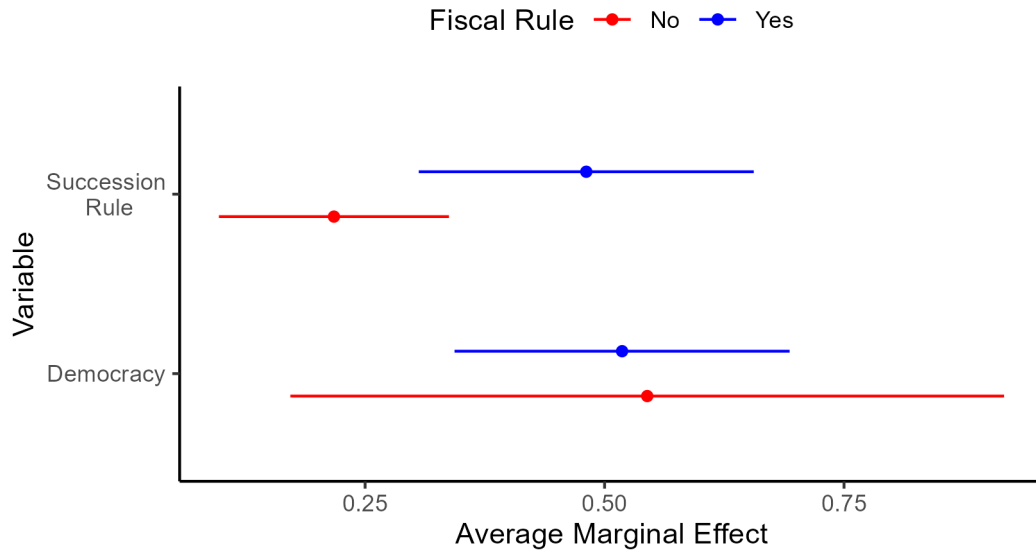


(a) Without Controls

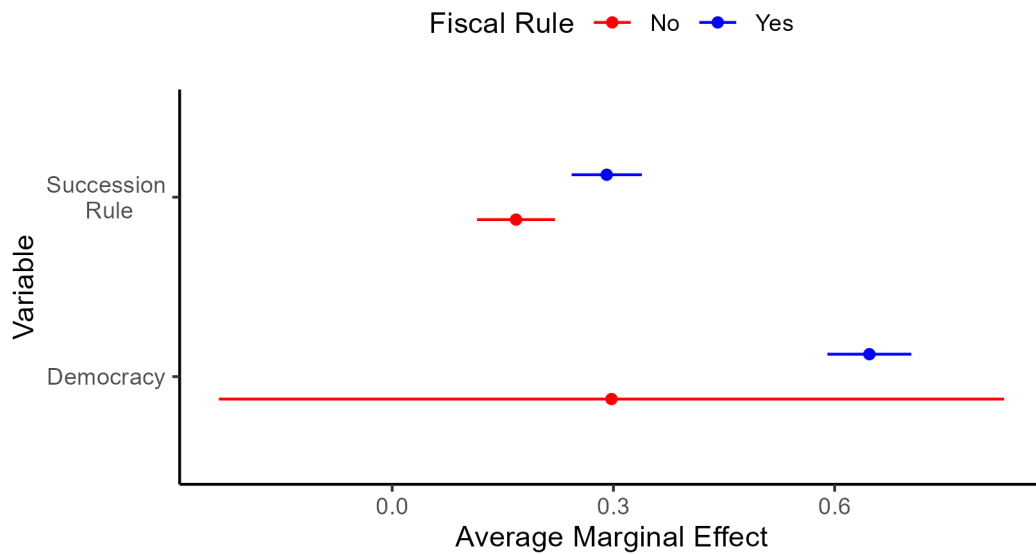


(b) With Controls

Figure B1. Unconditional average marginal effects of succession rules and democracy on issuing sovereign bonds without fixed effects. Dots are the estimated average marginal effect. Lines represent 95% confidence intervals. The top panel, corresponding to model (1) in table B1, does *not* include controls. The bottom panel, corresponding to model (2), includes controls. Across both sets of models, autocracies with succession rules and democracies are significantly more likely to issue sovereign bonds.

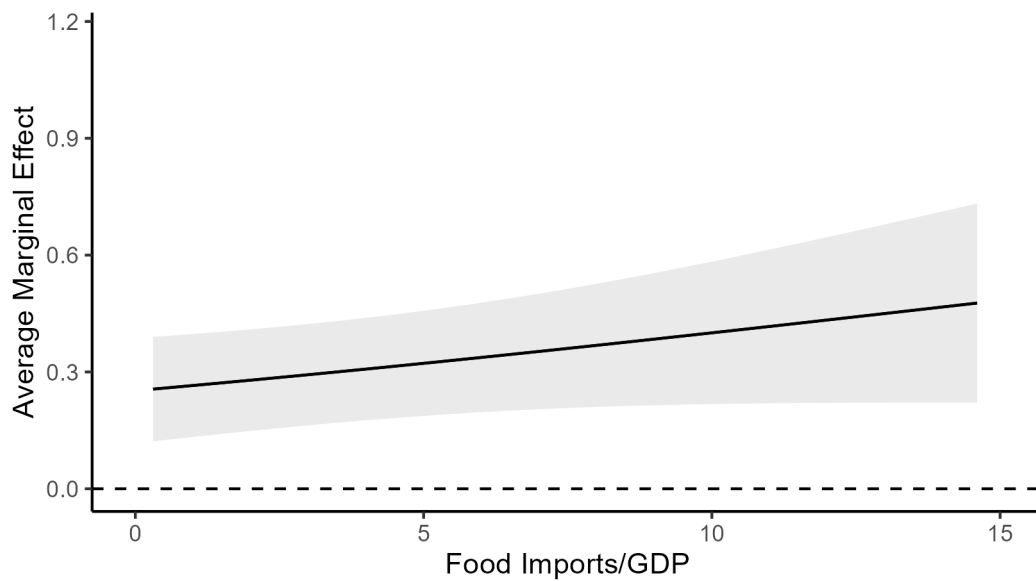


(a) Without Controls

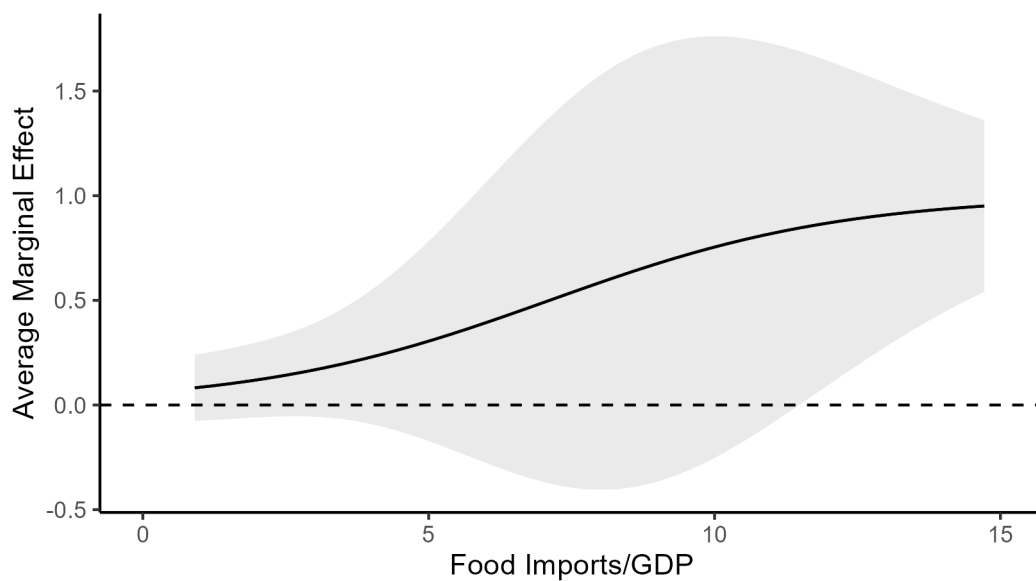


(b) With Controls

Figure B2. Average marginal effects conditional on fiscal rules of succession rules and democracy on issuing sovereign bonds without fixed effects. Dots are the estimated average marginal effect. Lines represent 95% confidence intervals. The top panel, corresponding to model (3) in table B1, does *not* include controls. The bottom panel, corresponding to model (4), includes controls. Across both sets of models, autocracies with succession rules and democracies are significantly more likely to issue sovereign bonds. The presence of fiscal rules increases the average marginal effect for succession rules and democracies, but the difference is not statistically significant.



(a) Without Controls



(b) With Controls

Figure B3. Average marginal effects conditional on food imports of succession rules on issuing sovereign bonds without fixed effect. Lines are the estimated average marginal effect. Shaded areas represent 95% confidence intervals. The top panel, corresponding to model (5) in table B1, does *not* include controls. The bottom panel, corresponding to model (6), includes controls. The estimates plateau after a value of 15 for Food Imports/GDP. In both models, the effect of succession rules becomes stronger as the importance of food imports increases, contradicting the third hypothesis.

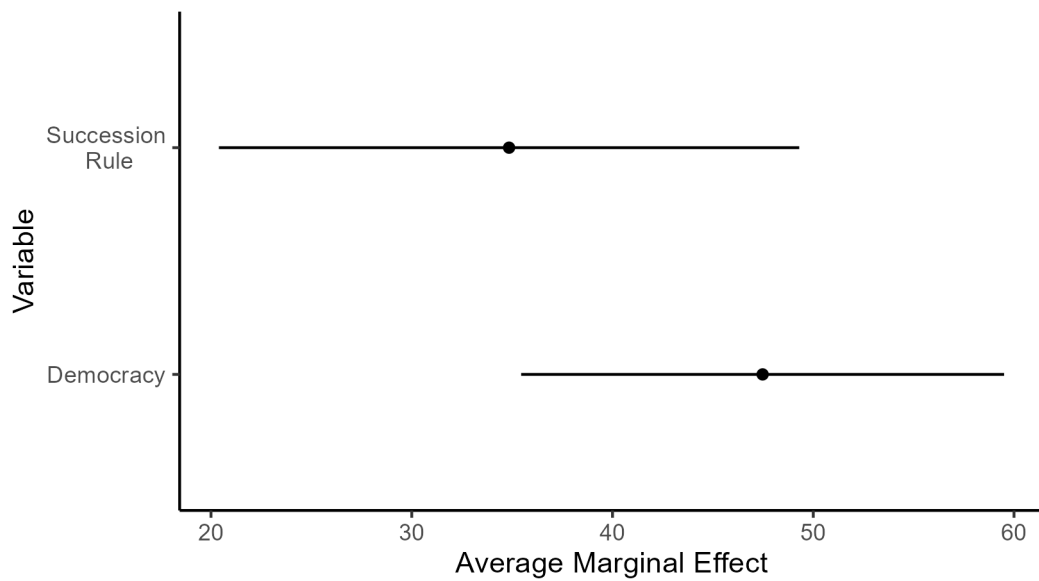


## C Tobit Models

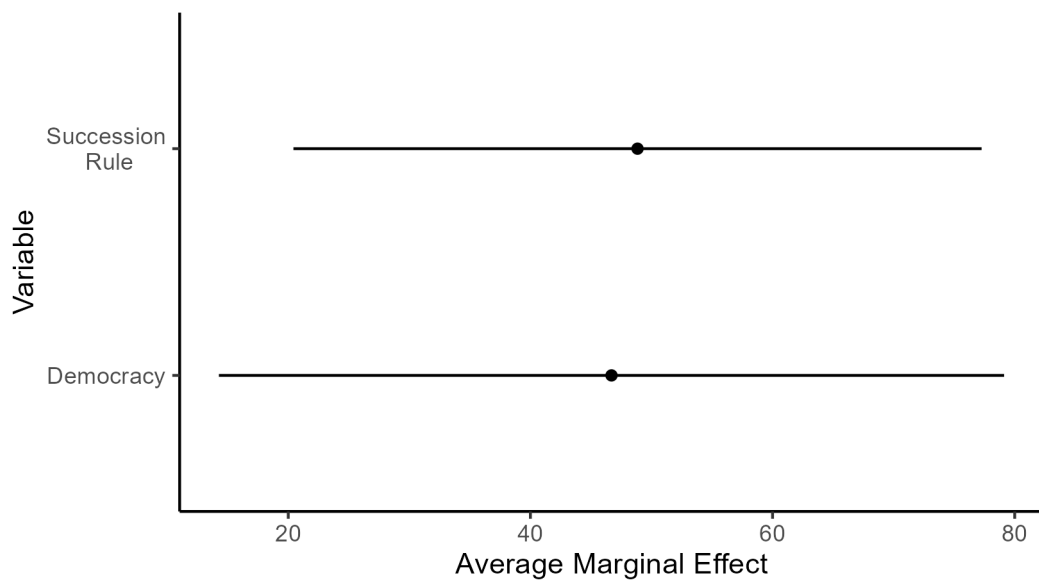
	(1)	(2)	(3)	(4)	(5)	(6)
Autocracy with Succession Rule	34.85*** (7.37)	48.85*** (14.5)	16.28*** (1.63)	20.705*** (6.48)	75.79*** (18.86)	21.91 (76.76)
Autocracy with Succession Rule $\times$ Fiscal Rule			37.087*** (7.47)	26.502*** (4.28)		
Autocracy with Succession Rule $\times$ Food/GDP					1.96** (0.901)	7.14 (17.38)
Democracy	47.48*** (6.14)	46.7*** (16.54)	31.709*** (3.57)	47.76*** (6.22)	92.051*** (18.83)	21.83 (78.044)
Democracy $\times$ Fiscal Rule			33.56*** (6.44)	-1.26 (7.22)		
Democracy $\times$ Food/GDP					-0.301 (0.77)	6.23 (17.28)
Controls Included	No	Yes	No	Yes	No	Yes
N	7,477	4,428	4,669	3,108	5,364	3,360
Countries	24	18	15	11	24	17
Pseudo R <sup>2</sup>	0.103	0.256	0.172	0.326	0.101	0.24
Log-Likelihood	-11,140.56	-5,053.89	-6,412.51	-2,773.42	-9,583.303	-4,592.097
AIC	22,287.13	10,139.78	12,841.03	5,568.84	19,182.61	9,220.19
BIC	22,307.89	10,242.11	12,892.62	5,635.3	19,235.31	9,330.35

Notes: \*\*\* $p < 0.01$ ; \*\* $p < 0.05$ ; \* $p < 0.1$ . Robust standard errors clustered by country in parentheses. All models include country fixed effects. Controls correspond to the specifications in table 3.

Table C1. Fixed effect tobit models of succession rules and sovereign bond issuances in sub-Saharan Africa, 1990–2016

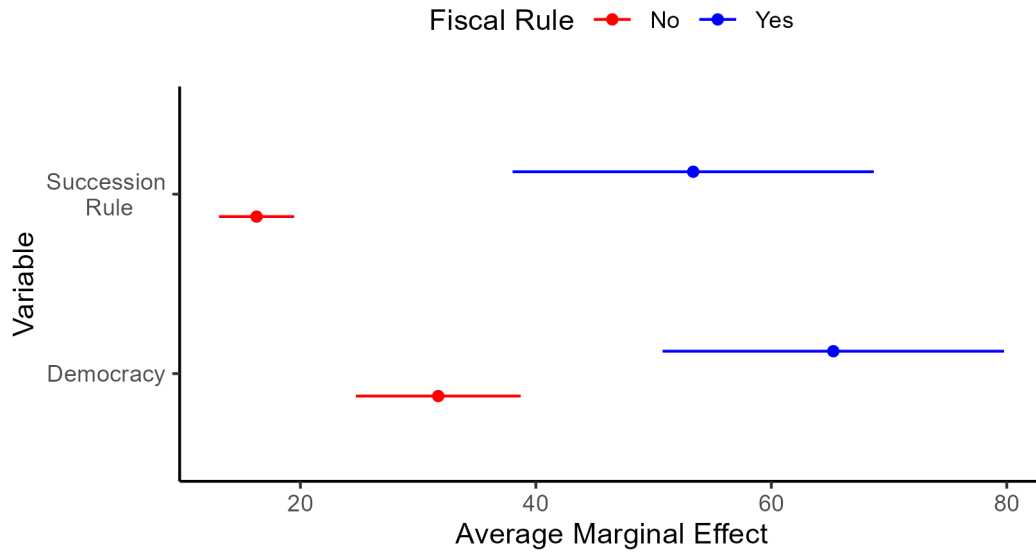


(a) Without Controls

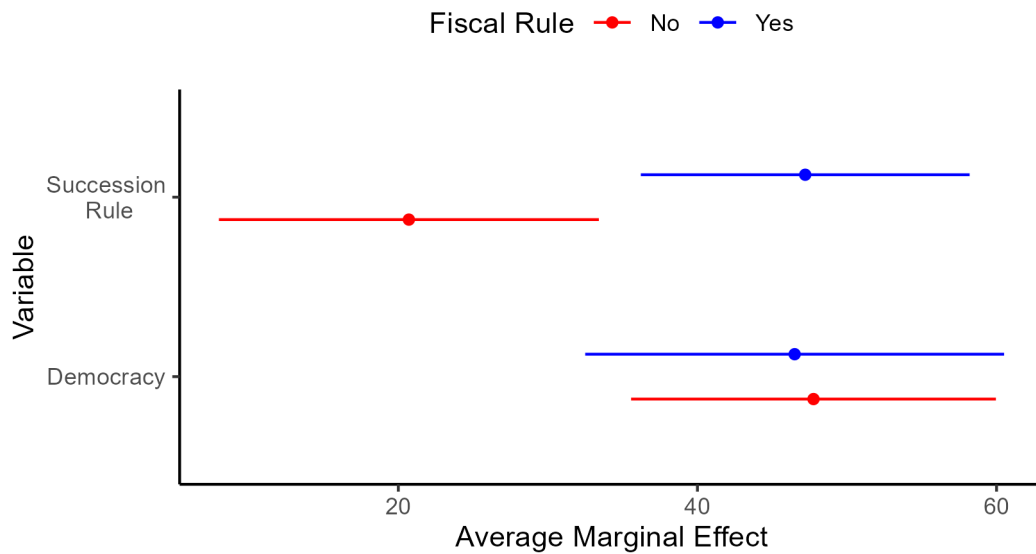


(b) With Controls

Figure C1. Unconditional average marginal effects of succession rules and democracy on issuing sovereign bonds with tobit fixed effects models. Dots are the estimated average marginal effect. Lines represent 95% confidence intervals. The top panel, corresponding to model (1) in table C1, does *not* include controls. The bottom panel, corresponding to model (2), includes controls. Across both sets of models, autocracies with succession rules and democracies receive significantly more money from sovereign bonds.

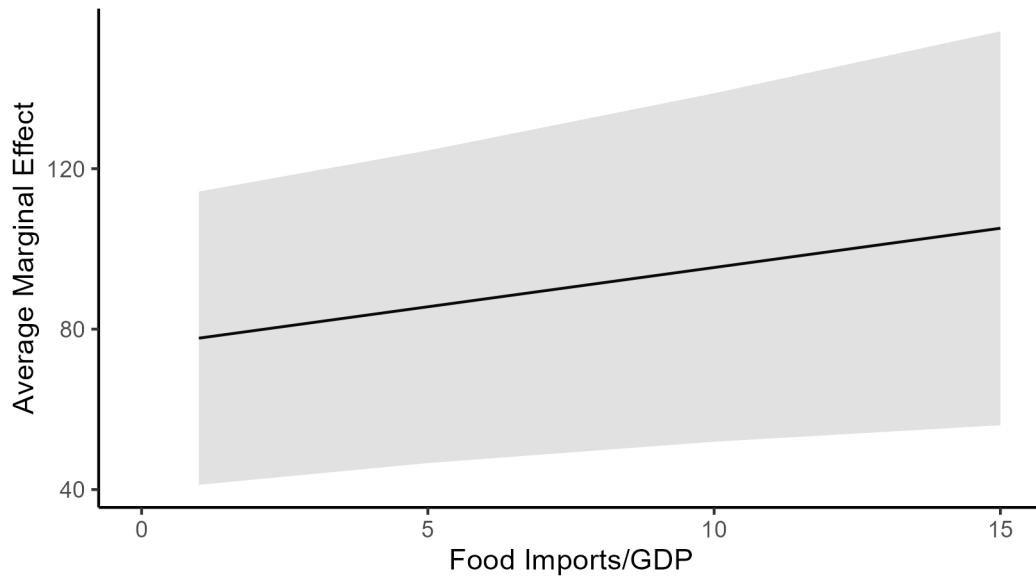


(a) Without Controls

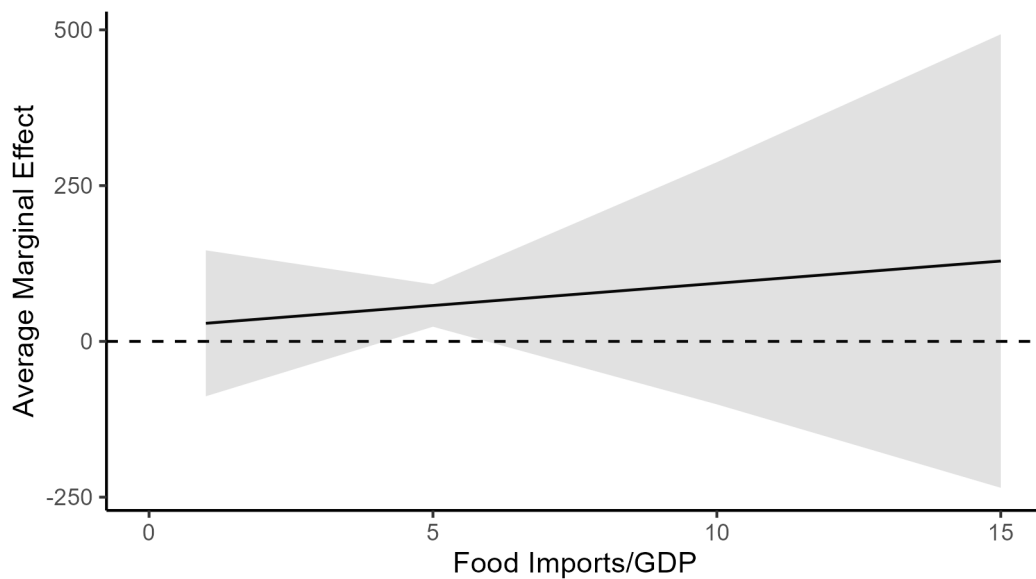


(b) With Controls

Figure C2. Average marginal effects conditional on fiscal rules of succession rules and democracy on issuing sovereign bonds with tobit fixed effects models. Dots are the estimated average marginal effect. Lines represent 95% confidence intervals. The top panel, corresponding to model (3) in table C1, does *not* include controls. The bottom panel, corresponding to model (4), includes controls. Across both sets of models, autocracies with succession rules and democracies are significantly more likely to issue sovereign bonds. The presence of fiscal rules increases the average marginal effect for succession rules and democracies, but the difference is not statistically significant for democracies when controls are included.



(a) Without Controls



(b) With Controls

Figure C3. Average marginal effects conditional on food imports of succession rules on issuing sovereign bonds tobit fixed effects models. Lines are the estimated average marginal effect. Shaded areas represent 95% confidence intervals. The top panel, corresponding to model (5) in table C1, does *not* include controls. The bottom panel, corresponding to model (6), includes controls. Without controls, the effect of succession rules becomes stronger as the importance of food imports increases, contradicting the third hypothesis. There is no interaction effect with controls.