Autocratic Succession and Access to Foreign Finance

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Abstract

Succession is a core function of any political regime but is particularly a dilemma for autocracies Recent work has examined the role of designated successors–an individual or office specified in the constitution to take power if a vacancy occurs—in autocracies with a focus on the relationship between successors and autocratic survival. Instead, I connect designated successors to political economy through sovereign debt. I argue that designated successors can increase an autocracy's access to sovereign debt by providing information about an autocrat's stability. Designated successors reduce the probability of coups if a vacancy occurs and can signal that the autocrat is secure in power. Using data on 39 autocracies from 1990 to 2008, I find that having a vice president is associated with higher sovereign credit ratings, consistent with my argument. I also find that the effect is conditional on financial openness and that the effect weakens over time. My argument and findings demonstrate how autocratic succession matters for outcomes beyond survival and that autocratic institutions can increase access to foreign finance without creating credible commitment.

Introduction

All political regimes must eventually deal with succession. Rules for succession determine how and when political power is transferred between individuals. Succession presents a greater challenge for autocracies, regimes where political power is not determined by competitive elections. Elections provide democracies with built-in mechanisms for succession. Opportunities for transferring power occur at regular intervals. Autocracies show greater variation in handling succession whether in formal rules like constitutional provisions or informal rules like a ruling party's traditions. Some autocracies simply neglect to prepare for succession altogether.

Succession can occur at two times. Regular successions occur at times defined by formal rules. In most modern polities, elections demarcate regular transfers of power. Irregular successions occur after emergencies like a leader's death, resignation, or incapacitation. Emergency, irregular successions are particularly dangerous in autocracies. Without succession rules, the autocrat's death can create a power vacuum. The resulting power vacuum can lead to violence that destabilizes the regime and causes the regime's demise. By one estimate, there is a 25% chance that an autocracy collapses, either into a democracy or a new autocratic regime, after the autocrat dies (Kendall-Taylor and Frantz 2016).

Designated successors are one solution for emergency successions. A designated successor is an individual or office specified in the constitution to take power, at least temporarily, if a vacancy occurs. Recent work finds that having a designated successor in an autocracy can reduce the probability of coups (Frantz and Stein 2017; Kokkonen, Møller, and Sundell 2022; Kokkonen and Sundell 2014; Konrad and Mui 2017; Meng 2020, 2021; Zhou 2023) and the probability of violence after a vacancy (Iqbal and Zorn 2008; Kokkonen and Sundell 2020; Meng 2021).

In this paper, I connect designated successors to an outcome in political economy: sovereign debt. Debt allows states to spend more than what the state can extract from domestic resources or substitute for higher taxation. Modern states, whether autocratic or democratic, need to borrow money, often from foreign investors. But buying sovereign bonds and lending states money come with risk. Investors cannot force states to repay their debts. States can opt to default, refusing to repay their debts and leaving bondholders at a loss. When sovereign default

occurs, bondholders cannot directly punish the state.

Autocracies potentially exacerbate the threat of sovereign default. Institutions can help lower the risk of default. Institutions can create a credible commitment 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). Both functions of institutions may provide democracies with advantages in borrowing money. Democracies typically place greater limitations on executives, and elections provide a mechanism for bondholders and other actors with an interest in repayment to punish the government for default (Ballard-Rosa, Mosley, and Wellhausen 2021; Beaulieu, Cox, and Saiegh 2012; Schultz and Weingast 2003).[1]

Still, many autocracies rely on debt and consistently repay their debts. Autocrats retain power by rewarding a small group of key supporters (Bueno de Mesquita et al. 2003), and debt is a powerful tool for rewarding allies. Autocracies borrow money at higher levels than democracies (Oatley 2010), and the costs of borrowing affect the survival of leaders in autocracies more than the survival of democratic leaders (DiGiuseppe and Shea 2015). For autocrats who rely on debt to retain power, repayment is credible because default threatens the leader's survival.

Even among autocracies that will credibly repay debts, political instability remains a threat. Political instability can precede sovereign defaults, particularly in the case of coups (Balima 2020; Shea and Poast 2020). Political instability generally reduces a country's access to sovereign debt (Biglaiser, Lee, and McGauvran, forthcoming), but the problem is most severe in autocracies. Political instability increases the costs of sovereign borrowing for autocracies more than democracies (Eichler 2014; Eichler and Plaga 2017). Any autocracy that wants better access to foreign borrowing needs to assuage lenders' fears of potential instability.

I argue that designated successors can provide information about an autocrat's stability. Designated successors can reduce fears of political instability through two channels. First, designated successors reduce the probability of coups if a vacancy occurs. Without succession rules, violence is likely to resolve the succession crisis. If elites expect a tumultuous succession,

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1. Default, however, can be a politically viable choice in democracies because the value of default varies across voters (Dixit and Londregan 2000; Frieden 1991).

they may stage coups preemptively (Bueno de Mesquita and Smith 2017; 2018). A designated successor provides a focal point solution for elites to organize around temporarily. The designated successor can hold power while elites choose the new leader, reducing the threat of instability after a vacancy.

Second, designated successors can signal that the autocrat is secure in power. In a separate working paper, I argue and find that autocrats have vice presidents when the probability of a coup is low. Designated successors can threaten autocrats because they have the motivation and resources to stage a coup. While autocrats can use designated successors to secure their position in power, the autocrat needs security first to ward off coups from the designated successor (Sharman 2023). The presence of a designated successor, then, signals that the autocrat can prevent coups.

I test my argument using data on vice presidents and monthly sovereign credit ratings across 39 autocracies from 1990 to 2008. With fixed-effects regression models, I find that autocracies have higher sovereign credit ratings when they have vice presidents. I also find partial support for two secondary hypotheses. Vice presidents only have a significant effect when the credibility to repay is higher, measured through the level of capital account openness. Additionally, vice presidents have the strongest effect when they are first introduced.

My argument provides a new role for designated successors in autocracies. I also contribute to understanding the politics of sovereign debt in autocracies. As discussed above, economists and political scientists have long compared the ability of autocracies and democracies to access debt. There is an increasing focus on sovereign debt in autocracies on their own, without democracies. For instance, Ballard-Rosa (2016) proposes the first theory of sovereign debt focused solely on autocracies, arguing that incentives for autocracies to default depend on urbanization and food imports. I add an additional explanation for how autocracies can increase access to foreign debt. I take credibility as built-in through the autocrat's incentives, but a designated successor can resolve lingering fears of political instability.

Third and finally, work in other areas of political economy, like foreign direct investment (FDI), has studied autocracies in the absence of constraining institutions. Autocratic institutions like legislatures (Wilson and Wright 2017) and ruling parties (Gehlbach and Keefer

2011; 2012) can create constraints and commitment. But unconstrained autocracies also receive significant investment. Autocrats can use financial liberalization to secure their rule without constraining institutions, including unconstrained autocrats like Chile's Pinochet and Indonesia's Suharto (Pond 2018). Personal characteristics of autocrats, such as an autocrat's education, can inform investors of which investors are safe partners (François, Panel, and Weill 2020).

Albertus and Gay (2019) use uncertainty to explain investment in unconstrained autocracies. Succession can threaten investment by empowering a new autocrat with policy preferences that threaten investment. With uncertainty over the future, investors increase investment today to exploit a more favorable investment environment. In the next section, I argue that succession-related uncertainty creates costs for foreign lenders by increasing the probability of default. Designated successors, even without constraining institutions, transmit information to investors regarding what autocracies are stable and unlikely to face coups.

Autocracy, Successors, & Sovereign Debt

Lending money to states and buying sovereign bonds come with substantial risk. Investors cannot force states to repay their debts. If the state refuses to repay its debt and defaults, lenders, particularly foreign lenders, lack the recourse to directly punish the state and recoup their losses.[2] The risk of sovereign default exists under any political threat, but autocracies may pose greater risks. Voters can punish democratic leaders for default. Autocracies lack a similar accountability mechanism.

Autocracies, however, vary in their incentives to default. Default provides short-term gains because the state avoids costs from repayment. The cost of default is long term. States that default gain reputations among lenders and investors for being riskier partners. With a reputation for default, states must pay higher interest rates to overcome the risk associated with them and potentially lose access to foreign credit (Cruces and Trebesch 2013; Tomz 2007). Defaulting saves money in the short term but reduces the benefit of sovereign borrowing in the long term.

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2. The exception is gunboat diplomacy where a state uses the military to force repayment. It remains debated whether gunboat diplomacy is relevant after the 1910s or whether gunboat diplomacy was ever widely used (Mitchener and Weidenmier 2010; Tomz 2007, chap. 6).

Autocrats vary in their sensitivity to borrowing costs. Autocrats retain power by distributing resources and choosing policies acceptable to a small group of elites, the winning coalition (Bueno de Mesquita et al. 2003). Sovereign debt allows autocrats to increase the resources that they can give to the winning coalition beyond what they can extract from the population. Sovereign default reduces the resources available to autocrats by increasing the costs of borrowing. Decreases in sovereign credit ratings significantly increase the risk that an autocrat loses power (DiGiuseppe and Shea 2015). Autocrats who rely on sovereign borrowing to reward their winning coalitions must either repay their debts or risk losing power.

Of course, not all autocrats rely on debt. Debt is irrelevant to leaders of autarkic economies like North Korea. In other cases, autocrats can replace sovereign debt with other sources of "easy money" like foreign aid and resource wealth that do not require mass cooperation (Bueno de Mesquita and Smith 2013). The subset of autocrats who depend on sovereign debt have compatible incentives with bondholders. If autocrats depend on sovereign borrowing, they do not need constraining institutions for credibility. The threat of losing power makes repayment credible.

Incentive compatibility is likely insufficient for creditors and investors to have confidence in autocrats. There remains uncertainty over what happens if the autocrat suddenly loses office, usually through the autocrat's death. The autocrat's death creates a potential power vacuum. In the absence of rules or agreements, elites may resolve the power struggle through violence (Svolik 2012). Even the expectation of a power vacuum could spur coups. Elites may preemptively stage a coup to avoid the autocrat's death and bypass a power vacuum (Bueno de Mesquita and Smith 2017; 2018).

Autocrats who come to power through violence, such as coups and rebellions, are more prone to default and expropriation. Such autocrats serve shorter tenures (Goemans, Gleditsch, and Chiozza 2009). Default provides short-term gains with long-term costs from more expensive borrowing. Autocrats with shorter tenures, therefore, are less likely to experience default's costs, making sovereign default more likely (Shea and Poast 2020). Coups, generally, nearly double the probability of sovereign defaults in autocracies (Balima 2020). Autocrats who rise to power through irregular means like coups are more likely to default. Even with compatible

incentives, the risk of coups and political instability could repel investors.

Designated successors can reduce uncertainty if the autocrat dies. Rules written in the constitution are publicly known and observed both by those inside and outside the regime (Albertus and Menaldo 2012). If the autocrat dies, the designated successor is a focal point—or obvious solution (Schelling 1960)—around which elites can organize. They provide a means for interim leadership and processes for organizing a transfer of power. Existing evidence is consistent with the idea that designated successors reduce instability after an autocrat dies. Primogeniture, for instance, decreased succession wars in medieval and early modern Europe (Kokkonen and Sundell 2020), and succession rules reduce political instability after assassinations (Iqbal and Zorn 2008). Designated successors should increase confidence that the next autocrat will not emerge from a coup or other violent means.

Additionally, designated successors can signal that the autocrat is stable and able to prevent coups. Designated successors pose threats to autocrats. The designated successor maximizes their time in power the sooner that the autocrat loses power. From their position, the designated successor gains access to resources and allies that could facilitate a coup. The designated successor, consequently, has the means and motive to overthrow the autocrat.[3]

Designated successors provide benefits to autocrats. As discussed, they can resolve uncertainty over succession crises. They can also help autocrats secure key allies and distribute patronage. But the autocrat needs enough existing security to have a designated successor. The autocrat, otherwise, risks a coup from the successor. As a result, autocrats have designated successors when the probability of a coup is low (Sharman 2023). By having a designated successor, the autocrat signals that they are strong enough to prevent a coup.

Having a designated successor could be cheap talk. An autocrat could appoint a weak designated successor who does not pose an actual threat. Even an initially weak successor will grow more powerful over time. The designated successor has a prominent place in the regime. As the focal point solution if the autocrat dies, the designated successor is the potential next autocrat. Ambitious elites can ally themselves with the designated successor and increase the chance of taking a prominent position under the next autocrat. While weak at first, the

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3. Herz (1952) labeled the danger posed by the designated successor the "crown-prince problem."

designated successor gains allies who could help stage a preemptive coup.[4]

Taken together, designated successors can help autocrats receive favorable access to foreign finance when the autocrat has incentives compatible with foreign investors. Designated successors create a focal point for the regime to organize temporary governance and a transfer of power if the autocrat dies. Having a designated successor, further, signals the autocrat's stability and security in power. Autocrats are more likely to appoint successors if they believe that they can prevent coups.

Data & Methods

To test the argument, I examine the relationship between vice presidents and sovereign credit ratings. I use vice presidents to represent designated successors. A vice president is a specific form of a designated successor. Vice presidents are specified in the constitution to serve as successors if a sudden vacancy occurs and are among the highest-ranking members of the executive branch. Due to their prominence, vice presidents are among the most effective designated successors. Autocracies with vice presidents are significantly more likely to have peaceful transitions of powers than autocracies with other designated successors or without designated successors (Meng 2021).

I code the presence of a vice president based on the WhoGov dataset (Nryup and Bramwell 2020). I code a country as having a vice president if at least one vice president exists, the chief executive is not a chief of state or prime minister, and the vice president is a different person than the president. A chief of state derives power from a non-constitutional office such as the secretary-general of the ruling party. Because their power comes from outside the constitution, the constitution does not define, even formally, how power is transferred. Prime ministers, on the other hand, do not have formal successors. If a vacancy occurs, parliament chooses a new prime minister. Prime ministers can have deputies, but the deputy is not constitutionally entitled to take power upon a vacancy. Finally, the vice presidency does not fulfill the role of designated successor if the president holds it. In any case where a presidential vacancy would

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4. A simpler, though perhaps less satisfying, solution is that cheap talk matters, especially if the actors have aligned interests (Morrow 1994; Tingley and Walter 2011).

occur, the vice presidency would also be vacant. Verifying that the president and vice president are different people helps ensure that the formal rule is supported by actual behavior.

The dependent variable, representing access to foreign finance, is sovereign credit ratings. Sovereign credit ratings are assigned by credit rating agencies to assess the likelihood that a country will repay its debts. Higher credit ratings indicate a lower risk of sovereign default and a greater likelihood of repaying debts. Countries with lower credit ratings have less access to foreign financial markets and receive less money from sovereign bonds (Cantor and Packer 1996; Reinhart 2002). Sovereign credit ratings, as a result, capture both perceptions of risk and determinants of access to foreign finance.

I average the sovereign credit ratings from the three major credit rating agencies, Standard & Poor's, Fitch, and Moody's. I include a country if it has a rating for at least one credit rating agency to maximize data availability. Each agency's sovereign credit ratings are standardized on a 1-to-23-point scale. I treat the ratings as an interval variable and take a simple average of available sovereign credit ratings. I collect sovereign credit ratings starting in 1990 when the number of countries with credit ratings expanded substantially. Before 1990, sovereign credit ratings were limited to developed democracies. I take the average of sovereign credit ratings each month. Sovereign credit ratings can move rapidly. Averaging over a year can mask this variation.

The basic relationship that I expect to see between vice presidents and sovereign credits is that vice presidents should correlate with higher sovereign credit ratings. Based on my argument, vice presidents, as a strong form of a designated successor, should increase sovereign credit ratings and, as a result, access to sovereign borrowing. Vice presidents are an effective means of avoiding succession crises and sending a strong signal that coups are unlikely. By signaling to potential lenders and investors that political instability is unlikely, having a vice president improves sovereign borrowing terms.

Because my argument focuses on autocratic countries, I restrict the sample to autocracies only. I identify autocracies using Cheibub, Gandhi, and Vreeland's (2010) data. A country-year observation is coded as autocratic if it violates at least one of the following criteria: One, the chief executive is chosen by direct election or a directly-elected body; two, the legislature is

directly elected; three, multiple parties compete in elections; and four, an alternation in power has occurred under the same electoral rules that brought the incumbent party into power. With the data on credit ratings and autocracies, the data span 4,132 country-month observations from 1990 to 2008 across 39 countries.[5]

I estimate the relationship between vice presidents and sovereign credit ratings using ordinary least squares (OLS) regression with country fixed effects. The model takes the form

$$R_{it} = \beta_1 V_{it} + \boldsymbol{\tau}' \mathbf{C}_{it} + \alpha_i + \varepsilon_{it}, \tag{1}$$

where i indexes countries and t months; R is the sovereign credit rating; V is a dummy for vice presidents; $\mathbf{C}$ is a matrix of controls; α_i is the fixed effect for country i; and ε is the error term. In all models, I use robust standard errors clustered by country.[6] β_1 is the effect of vice presidents. I expect that $\beta_1 > 0$.

I estimate a baseline model that includes no additional controls beyond the fixed effects and a model with all the controls included. I control for variables that could affect sovereign credit ratings and might correlate with having a vice president. I focus on economic conditions and political and financial institutions that could affect the ability and willingness to repay debts. I include GDP per capita, GDP growth, oil wealth as a percentage of GDP, trade as a percentage of GDP, and debt as a percentage of GDP from the World Bank's World Development Indicators; executive constraints from Polity IV (Marshall, Gurr, and Jaggers 2014); central bank independence (Garriga 2016); V-Dem's judicial independence index; the presence of a legislature (Cheibub, Gandhi, and Vreeland 2010); and party-based regimes (Geddes, Wright, and Frantz 2014). Section A provides summary statistics.

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5. The 39 autocracies are Azerbaijan, Bahrain, Belarus, Bosnia and Herzegovina, Botswana, Burkina Faso, Cameroon, China, Ecuador, Egypt, Fiji, Gabon, Indonesia, Jordan, Kazakhstan, Kuwait, Lebanon, Lesotho, Malaysia, Mexico, Montenegro, Morocco, Mozambique, Namibia, Oman, Pakistan, Peru, Qatar, Russia, Rwanda, Saudi Arabia, Singapore, South Africa, Taiwan, Thailand, Tunisia, Uganda, the United Arab Emirates, and Vietnam.

6. Throughout the results, the clustered standard errors are more conservative than other common standard-error estimators like panel-corrected standard errors.

Figure 1. Autocracies with Vice Presidents Have Higher Credit Ratings
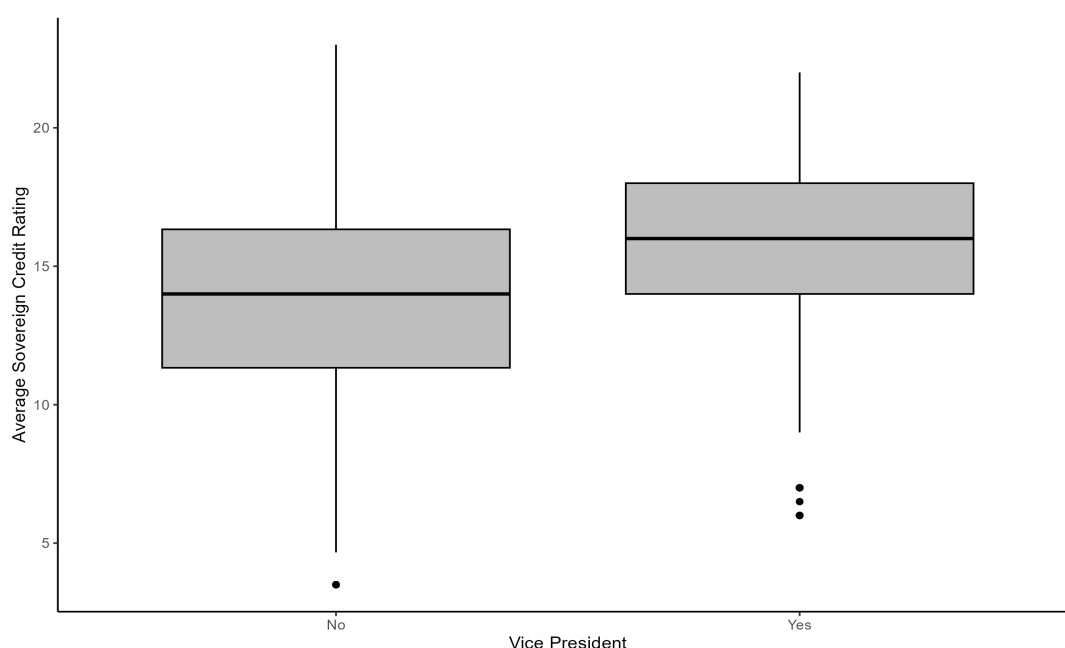
Results

Before moving to the regression analyses, figure 1 displays a simple box-plot comparison of sovereign credit ratings based on whether the autocracy has a vice president. As expected, autocracies with vice presidents have higher sovereign credit ratings. Autocracies that have vice presidents, on average, have sovereign credit ratings two points higher than autocracies without vice presidents. The median with vice presidents is almost as high as the third quartile without vice presidents. The median without vice presidents is lower than the first quartile with vice presidents. In the extremes, countries without vice presidents have a lower flower. Only three observations with vice presidents have an average credit rating below eight. The pattern holds even though the autocratic country with the highest credit ratings, Singapore, lacks a vice president.

Table 1 shows the results from the main analyses. Model (1) shows the unconditional estimates without controls beyond the country fixed effects. Having a vice president is associated with a 4.65-point increase in sovereign credit ratings. The effect is statistically significant at a 99% confidence level. Model (2) adds additional control variables. The point estimate decreases while the standard error increases, but the effect remains statistically significant at a 95% confidence level. Now, having a vice president is associated with increasing the sovereign

credit rating by 2.57 points.

The standard deviation of sovereign credit ratings in the sample is 3.87 points. The estimated baseline effects, then, are also substantively meaningful. The coefficient estimate without controls is larger than a standard deviation, and with controls, the coefficient estimate is about two-thirds of a standard deviation. The estimates suggest that if Fiji or Kazakhstan adopted a vice president, they would borrow on terms similar to Botswana.

Additional Analyses

The appendices include additional specifications and estimators for the baseline result that vice presidents are associated with higher sovereign credit ratings. I start by analyzing each credit rating agency's ratings separately. Table B1 shows the no-controls and controls models for the Standard & Poor's, Moody's, and Fitch ratings. In all six models, the coefficient for vice presidents is significant and positive although the results are strongest for Moody's and weakest for Fitch. Neither the aggregation process nor a specific agency's ratings drive the results.

Table C1 presents results with additional time-series-cross-section (TSCS) considerations. I start with two-way fixed effects models that include fixed effects for both countries and years. The year fixed effects can account for common shocks that also affect sovereign credit ratings (Brooks, Cunha, and Mosley 2015). Then, I estimate models with linear and quadratic time trends. The six coefficients for vice presidents are all significant and positive, and the point estimates are similar to the main results.

I replace the country fixed effects with country random effects in table D1. The fixed effects account for significant unmodeled heterogeneity and improve model fit. But the fixed effects remove all variation between countries. Because institutions change rarely within countries, there may be concerns that the fixed effects remove too much variation. Random effects also account for unobserved heterogeneity but only remove part of the between-country variation, not all of it. The conclusions remain the same with the random effects in table D1. Vice presidents have a significant and positive effect on sovereign credit ratings.

For the final additional analysis, I change the regime variable. I interact the vice president dummy with Polity score rather than subset the sample, substantially increasing the number

Table 1. Vice Presidents and Sovereign Credit Ratings

	(1)	(2)	(3)	(4)	(5)
Vice President	4.65***	2.57**	11.0***	-1.08	0.068
	(1.02)	(1.15)	(2.81)	(2.75)	(3.05)
Vice President × Capital Account Openness			-9.78*	6.17	6.30
			(5.10)	(4.74)	(5.54)
Log. GDP per Capita		1.76***		1.88***	2.79***
		(0.334)		(0.294)	(0.436)
GDP Growth		0.007		-0.008	
		(0.030)		(0.022)	
Oil/GDP		-0.011		-0.025	
		(0.032)		(0.029)	
Trade/GDP		-0.007		-0.003	
		(0.012)		(0.008)	
Debt/GDP		-0.034**		-0.041***	
		(0.014)		(0.013)	
Executive Constraints		0.249		-0.079	
		(0.218)		(0.191)	
Central Bank Independence		0.675		0.314	
		(1.08)		(1.11)	
Judicial Independence		-1.01		-2.48	
		(1.36)		(1.75)	
Legislature		0.746		1.13	
		(0.716)		(0.730)	
Party-Based Regime		1.00			
		(1.19)			
Capital Account Openness			5.79	2.31	3.97**
			(3.97)	(2.08)	(1.93)
Observations	4,132	2,959	3,434	2,536	3,434
Within R^2	0.04	0.60	0.11	0.70	0.58
Country fixed effects	Yes	Yes	Yes	Yes	Yes

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

of countries in the sample to 116. Lower Polity scores indicate more autocratic countries. I expect that vice presidents have a positive effect when Polity score is low. Table E2 shows the model estimates using the interaction with Polity score.[7] Figures E1 and E2 graph the marginal effects without controls and with controls. Both models are consistent with my expectations. Vice presidents are associated with higher sovereign credit ratings in the autocratic range of values. The effect is insignificant over a Polity score of three.

Conditioning on Capital Account Openness

Next, I test whether the relationship between vice presidents and sovereign credit ratings is conditional on capital account openness. I argue that designated successors can increase confidence in autocracies when the autocrat has a survival-based incentive to repay. Designated successors resolve succession problems and signal stability. They do not create commitment. The information provided by designated successors should not affect investors' expectations if they already do not expect repayment. The relationship should exist primarily when commitment already exists.

I use capital account openness as a proxy for an autocrat's commitment to repay. The capital account is the difference between the change of foreign ownership of domestic assets and the change in domestic ownership of domestic assets. Countries with more open capital accounts allow for more foreign finance and capital to enter the economy. Having an open capital account is a revealed policy preference for foreign finance, and capital account openness can signal commitment to market-friendly policies (Bartolini and Drazen 1997). Vice presidents should only matter when repayment is credible, represented through capital account openness.

I model the conditional expectation using an interaction term. With the interaction term, the model takes the form

$$R_{it} = \beta_1 V_{it} + \beta_2 M_{it} + \beta_3 V_{it} M_{it} + \boldsymbol{\tau}' \mathbf{C}_{it} + \alpha_i + \varepsilon_{it}, \tag{2}$$

where M is the moderator, capital account openness. Now, the marginal effect of vice presidents

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7. The executive constraints variable that I use as a control in other analyses is used to construct the Polity score. For the Polity score regression models, I do not include executive constraints as a covariate.

Figure 2. Conditional Effect of Vice Presidents without Controls
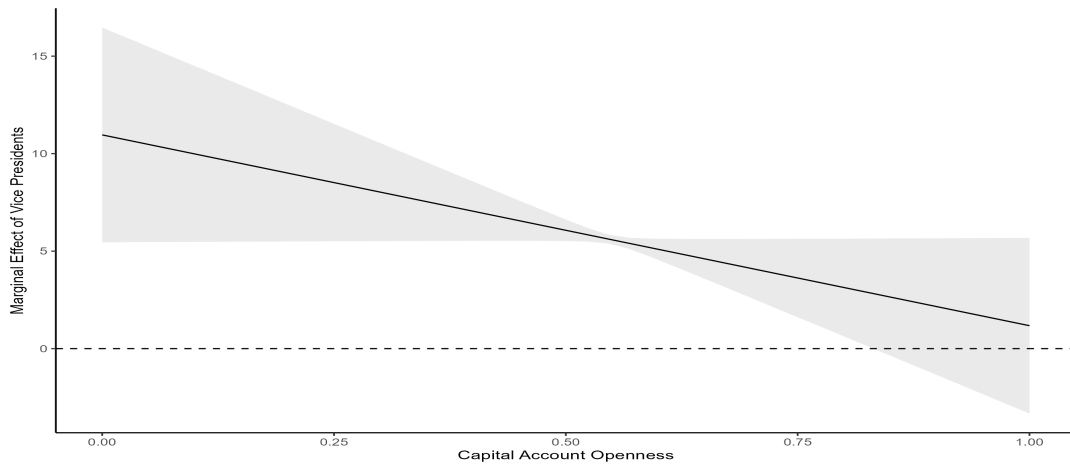
Notes: The shaded areas represent 95% confidence intervals. Estimates are based on model (3) in table 1.

Figure 3. Conditional Effect of Vice Presidents with Controls
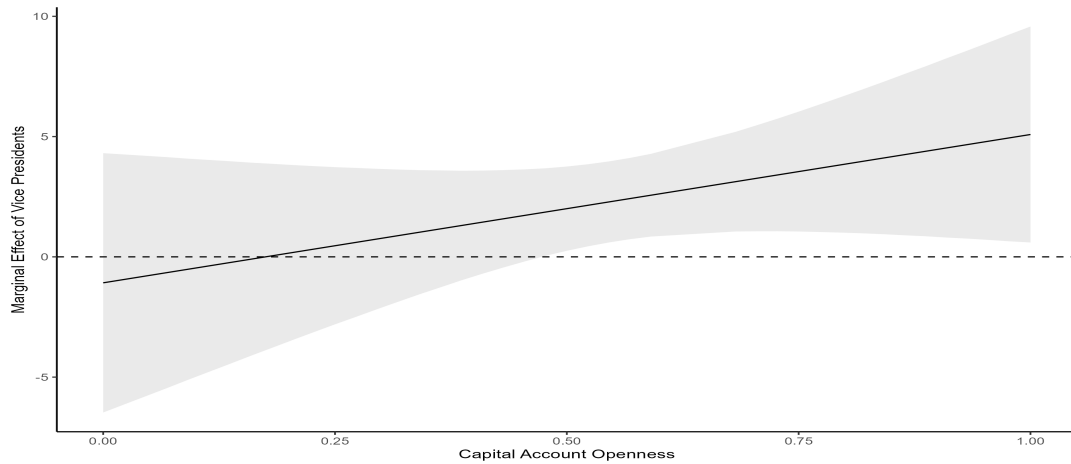
Notes: The shaded areas represent 95% confidence intervals. Estimates are based on model (4) in table 1.

Figure 4. Conditional Effect of Vice Presidents Controlling for GDP per Capita
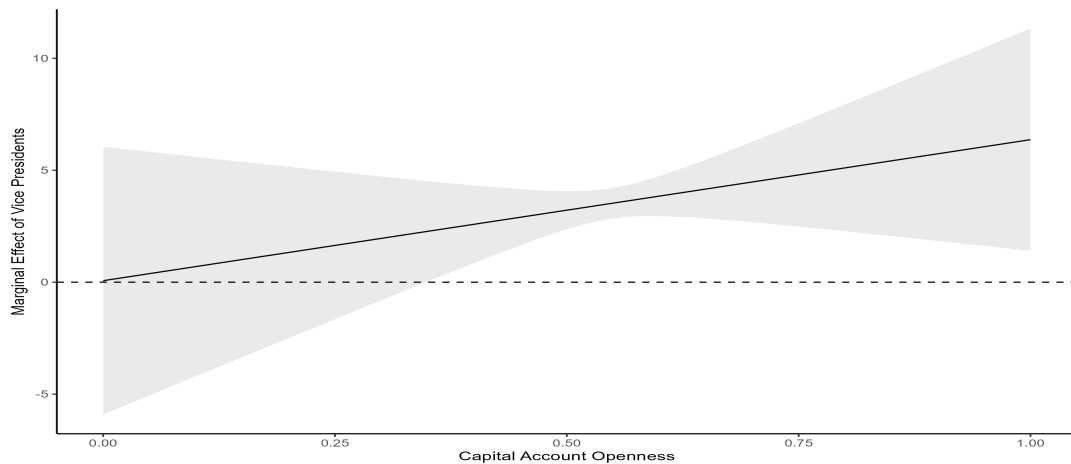
Notes: The shaded areas represent 95% confidence intervals. Estimates are based on model (5) in table 1.

is $\beta_1 + \beta_3 M_{it}$. I expect that the marginal effect starts insignificant and increases over time, so $\beta_3 > 0$. I use plots of the marginal effects to assess whether the expected effect occurs.

Model (3) of table 1 adds the interaction without controls, and figure 2 shows how the marginal effect of vice presidents changes across the level of capital account openness. The coefficients suggest the opposite relationship than the one that I expect. The coefficient for vice presidents is positive, and the interaction coefficient is negative. The marginal effect starts positive and declines as capital account openness increases. Figure 2 shows that the effect starts out significant. While the marginal effect is always positive, it becomes insignificant at around 0.8 on the index.

Model (4), however, provides evidence in favor of my expectation. Model (4) adds all the controls. The coefficient on vice presidents is negative but insignificant, and the interaction coefficient is negative. Figure 3 shows the expected relationship. Just below 0.5, the marginal effect is indistinguishable from 0. Just above 0.5, the marginal effect is positive and statistically at a 95% confidence level. The results in figure 3 match my expectations regarding the conditional relationship.

Whether my prediction is supported or contradicted depends on the inclusion of one covariate: GDP per capita. When GDP per capita is included, the marginal effect of vice presidents is significant only when capital account openness is high. Model (5) includes logged GDP per capita as the only additional covariate. The vice-president coefficient is close to 0 with a positive coefficient for the interaction. The marginal effect in figure 4 is almost the same as figure 3 except that the average marginal effect (AME) becomes significant at a lower value of the capital account openness index. Despite the contradictory result without controls, the evidence mostly supports my expectation. GDP per capita has some of the highest explanatory power among the covariates and produces a more accurate model.[8]

Designated Successors & Information

I argue that information is one mechanism for designated successors to affect sovereign credit ratings. To test this mechanism, I examine whether the effects of vice presidents change

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8. Models (3) and (5) have the same sample, so including GDP per capita does not change the result by changing the sample.

over time. The most information is provided when the autocrat first introduces a vice president. As the vice president remains in place, the presence of the vice president is less newsworthy and provides less information. The autocracy's stability should be increasingly incorporated into investor perceptions while relying less on institutional features. I expect that the effect of the vice president decreases the longer that a vice president is in place.

I use WhoGov to measure the consecutive number of years that an autocrat has a vice president since 1966. If the vice presidency becomes vacant, the counter resets to 0. To allow for a changing effect over time, I amend the specification in equation (1) to have a quadratic term:

$$R_{it} = \beta_1 V_{it} + \beta_2 V_{it}^2 + \boldsymbol{\tau}' \mathbf{C}_{it} + \alpha_i + \varepsilon_{it}. \tag{3}$$

I expect that having a vice president has a positive effect but that the magnitude of the effect decreases over time. The expected pattern in the coefficients is that $\beta_1 > 0$ and $\beta_2 < 0$.

Models (1) and (2) of table 2 replicate the initial results replacing the vice-president dummy with the number of consecutive years that the country has a vice president. The results remain consistent with the baseline expectation. Having a vice president is associated with better credit ratings. Without controls, each year is associated with increasing the credit rating by 0.25 points; with controls, the association is 0.12 points per year. Models (3) and (4) allow for the effect to vary over time by adding the quadratic term. At first glance, the models are consistent with expectations. The non-quadratic term has a positive coefficient while the quadratic term is negative. Both models show a potential relationship where vice presidents are associated with increasing sovereign credit ratings where the effect decreases over time.

Plotting the marginal effects is necessary to fully evaluate the relationship. Figure 2 shows the marginal effects without controls. The effect does decrease over time but at a small rate. Across the support for years with a vice president, the confidence intervals contain the other point estimates. While the shape is in line with what I expect, the decrease in the marginal effect is not statistically significant.

Figure 6 displays the marginal effects for vice presidents over time using the model with controls included. With controls, the shape is closer to the expected pattern. The effect is highest when a vice president is first introduced, and the magnitude decreases over time. Un-

Table 2. Years with Vice President and Sovereign Credit Ratings

	(1)	(2)	(3)	(4)
Years with Vice President	0.252***	0.116**	0.265***	0.351***
	(0.023)	(0.045)	(0.054)	(0.029)
Years with Vice President^2			-0.0005	-0.011***
			(0.002)	(0.001)
Log. GDP per Capita		1.69***		1.75***
		(0.353)		(0.351)
GDP Growth		0.004		0.007
		(0.028)		(0.028)
Oil/GDP		-0.006		-0.008
		(0.032)		(0.032)
Trade/GDP		-0.007		-0.008
		(0.012)		(0.012)
Debt/GDP		-0.033**		-0.032**
		(0.014)		(0.014)
Executive Constraints		0.250		0.234
		(0.218)		(0.212)
Central Bank Independence		0.866		0.769
		(1.10)		(1.07)
Judicial Independence		-1.44		-1.90
		(1.16)		(1.15)
Legislature		0.839		0.926
		(0.708)		(0.689)
Party-Based Regime		-0.866*		-0.048
		(0.502)		(0.347)
Observations	4,132	2,959	4,132	2,959
Within R^2	0.09	0.61	0.10	0.62
Country fixed effects	Yes	Yes	Yes	Yes

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

Figure 5. Effect of Vice Presidents on Sovereign Credit Ratings over Time without Controls
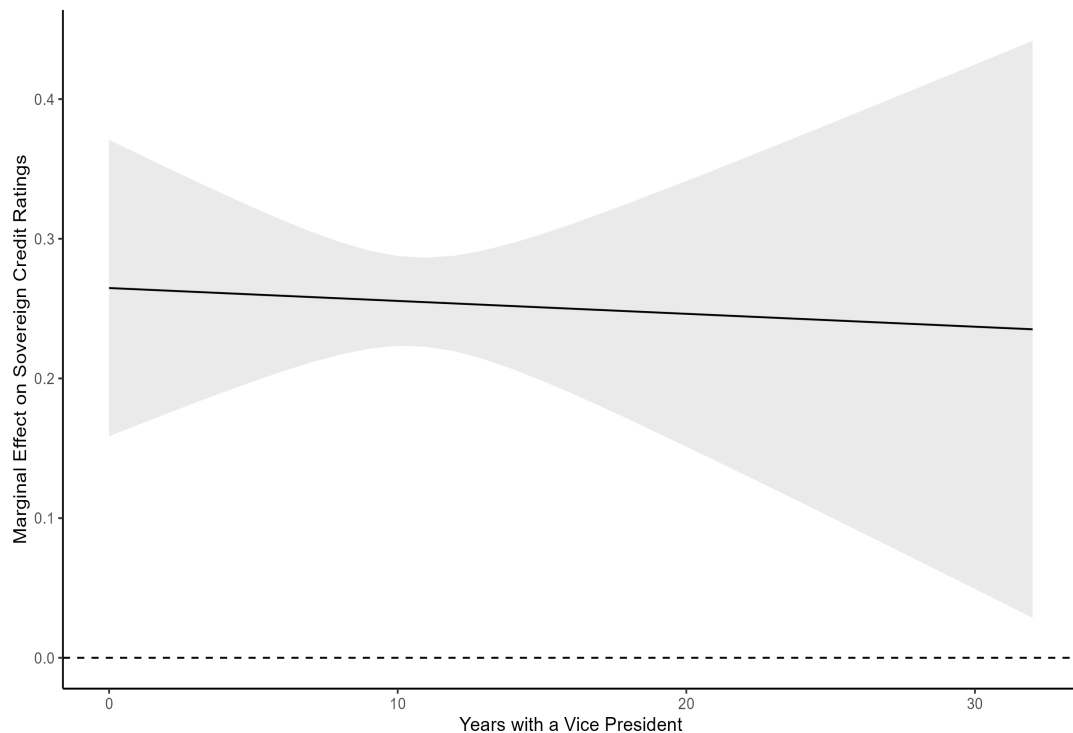
Notes: The shaded areas represent 95% confidence intervals. Estimates are based on model (3) in table 2

expectedly, the effect becomes significant and negative after around 23 years. Only Botswana, Indonesia, Taiwan, and the United Arab Emirates exceed 23 consecutive years with a vice president during the sample period. The small number of outliers potentially leads to the negative results at the extreme end. With controls, there is partial support that the effect declines the longer that an autocracy has a vice president.

Conclusion

Organizing succession is an essential function of any political regime. Most states define regular intervals where transfers of power can occur. All states must prepare for situations when the leader suddenly leaves power and needs replaced. Recent work has explored how autocracies organize succession, particularly in irregular circumstances. Political scientists have focused on how having a designated successor relates to survival: Whether autocrats are more likely to have designated successors when they are endangered or secure and whether designated successors reduce the risk of coups.

Figure 6. Effect of Vice Presidents on Sovereign Credit Ratings over Time with Controls
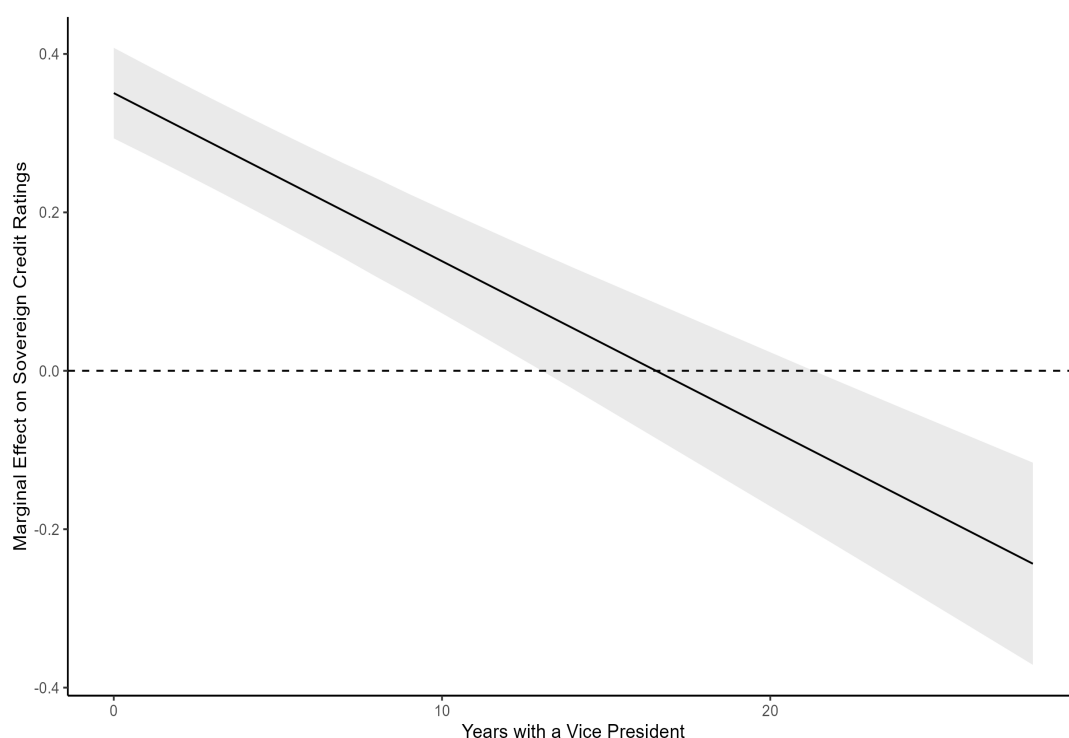
Notes: The shaded areas represent 95% confidence intervals. Estimates are based on model (4) in table 2

In this paper, I connect designated successors in autocracies to political economy through sovereign debt. I argue that designated successors can reduce investor fears over uncertainty. Designated successors provide a solution to succession crises by providing rules and a temporary leader if a sudden vacancy occurs. Providing a formal process and temporary leadership reduces the risk of violence during succession crises. Designated successors also signal that autocrats can prevent coups. Because designated successors have incentives to stage coups, autocrats appoint them when they are confident that they can stop a coup attempt.

I find support for the argument by analyzing the relationship between vice presidents and sovereign credit ratings from 1990 to 2008. As expected, autocracies have higher sovereign credit ratings when they have vice presidents. I also find partial support for two additional implications. One, vice presidents are associated with higher sovereign credit ratings only when capital account openness is high. Two, vice presidents have the strongest effect when they are first introduced, and the effect declines over time.

Beyond identifying a new role for designated successors in autocracies, I contribute to understanding the politics of sovereign debt in autocracies. Research on autocratic sovereign

default has emphasized the role of institutions in constraining autocrats. Institutions can constrain autocrats by limiting executive discretion over the choice to default and empowering actors with strong preferences for repayment. But increasingly, there is recognition that many autocrats have behavioral incentives to repay debt. Autocrats rely on debt to reward key actors. The costs of default can threaten an autocrat's survival, making repayment credible.

I agree with previous work that institutions matter for autocracies and sovereign debt; however, I propose a role beyond creating constraints. Regardless of credible commitment to repay, autocracies face additional questions of stability. A coup greatly increases the threat of sovereign default, and succession crises are common causes of coups in autocracies. Designated successors can address the problem of uncertainty by resolving succession crises and signaling autocratic stability. Autocratic institutions matter for providing information and addressing basic problems of governance.

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A   Summary Statistics

	N	Mean	SD	Min	Q1	Median	Q3	Max
Sovereign Credit Rating	4132	14.25	3.87	3.50	12.00	14.00	17.00	23.00
Vice President	4132	0.15	0.36	0.00	0.00	0.00	0.00	1.00
Years with Vice President	4132	2.92	7.73	0.00	0.00	0.00	0.00	32.00
Log. GDP per Capita	4060	8.25	1.30	5.64	7.28	8.20	9.12	11.33
GDP Growth	4001	5.85	4.54	-13.13	3.22	5.58	8.22	34.50
Oil/Trade	3713	9.75	13.50	0.00	0.03	3.10	14.38	54.94
Trade/GDP	3925	102.45	75.94	24.68	54.80	86.84	118.25	439.66
Debt/GDP	4036	46.68	34.16	2.70	19.20	41.30	64.40	181.90
Executive Constraints	3853	3.30	1.63	1.00	2.00	3.00	4.00	7.00
Central Bank Independence	4013	0.46	0.17	0.12	0.35	0.47	0.55	0.98
Judicial Independence	3778	0.45	0.23	0.03	0.20	0.49	0.62	0.91
Legislature	4132	0.84	0.37	0.00	1.00	1.00	1.00	1.00
Party-Based Regimes	3702	0.42	0.49	0.00	0.00	0.00	1.00	1.00

B Disaggregating Credit Rating Agencies

Table B1. Regression Results Disaggregated by Credit Rating Agency

	Standard & Poor's		Moody		Fitch	
	(1)	(2)	(3)	(4)	(5)	(6)
Vice President	2.21***	2.52***	4.58***	3.46***	4.00***	1.71***
	(0.82)	(0.720)	(0.371)	(0.305)	(0.477)	(0.427)
Log. GDP per Capita		2.45***		1.72***		2.13***
		(0.090)		(0.061)		(0.076)
GDP Growth		0.016*		0.004		0.016**
		(0.008)		(0.006)		(0.006)
Oil/GDP		-0.083***		0.013***		-0.077***
		(0.008)		(0.005)		(0.007)
Trade/GDP		-0.020***		-0.002*		-0.007***
		(0.002)		(0.001)		(0.002)
Debt/GDP		-0.031***		-0.022***		-0.029***
		(0.002)		(0.002)		(0.002)
Executive Constraints		0.368***		0.217***		-0.032
		(0.068)		(0.049)		(0.063)
Central Bank Independence		1.73***		0.783***		1.65***
		(0.328)		(0.224)		(0.431)
Judicial Independence		-1.93***		-1.54***		6.51***
		(0.696)		(0.475)		(1.00)
Legislature		1.73***		0.208		
		(0.210)		(0.145)		
Party-Based Regime				2.50***		2.69***
				(0.588)		(0.744)
Observations	3,237	2,571	3,405	2,554	2,166	1,700
Within R^2	0.002	0.51	0.04	0.60	0.03	0.65
Country fixed effects	Yes	Yes	Yes	Yes	Yes	Yes

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

The loss of observations causes perfect multicollinearity between the fixed effects and party-based regimes for Standard & Poor's and legislatures for Fitch. Because those variables are time-invariant within countries, the country fixed effects still control for them. The small standard errors and large number of significant variables do create concerns that the disaggregated credit ratings are highly autoregressive.

C   Additional TSCS Considerations

Table C1. Two-Way Fixed Effects and Trend Models

	(1)	(2)	(3)	(4)	(5)	(6)
Vice President	4.45***	2.85**	4.66***	2.54**	4.51***	2.66**
	(1.02)	(1.07)	(1.47)	(1.18)	(1.25)	(1.09)
Log. GDP per Capita		2.26***		1.93***		1.80***
		(0.645)		(0.649)		(0.614)
GDP Growth		-0.018		0.004		0.002
		(0.027)		(0.029)		(0.027)
Oil/GDP		-0.010		-0.010		-0.010
		(0.032)		(0.032)		(0.032)
Trade/GDP		0.0008		-0.004		-0.004
		(0.007)		(0.008)		(0.009)
Debt/GDP		-0.035***		-0.034**		-0.033**
		(0.012)		(0.014)		(0.014)
Executive Constraints		0.324		0.256		0.259
		(0.216)		(0.216)		(0.192)
Central Bank Independence		0.987		0.687		0.918
		(1.02)		(1.10)		(1.20)
Judicial Independence		0.998		-0.742		-0.679
		(2.14)		(1.45)		(1.52)
Legislature		0.017		0.772		0.745
		(0.652)		(0.730)		(0.724)
Party-Based Regime		1.51		0.913		1.00
		(1.31)		(1.33)		(1.29)
Observations	4,132	2,959	4,132	2,959	4,132	2,959
Within R^2	0.05	0.45	0.27	0.61	0.34	0.61
Country fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	No	No	No	No
Trend	No	No	Linear	Linear	Quadratic	Quadratic

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

D Random Effects

Table D1. Random Effects Models

	(1)	(2)
Vice President	4.45***	2.37**
	(1.05)	(1.03)
Log. GDP per Capita		1.77***
		(0.33)
GDP Growth		0.009
		(0.03)
Oil/GDP		-0.013
		(0.031)
Trade/GDP		-0.006
		(0.012)
Debt/GDP		-0.034**
		(0.014)
Executive Constraints		0.23
		(0.21)
Central Bank Independence		0.56
		(1.02)
Judicial Independence		-0.65
		(1.26)
Legislature		0.67
		(0.71)
Party-Based Regime		1.15
		(0.87)
Constant	12.18***	-1.063
	(0.66)	(2.36)
Observations	4,132	2,959
Within R^2	0.04	0.604
Country random effects	Yes	Yes

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

E Polity Score as the Regime Variable

Table E2. Polity Score as the Regime Variable

	(1)	(2)
Vice President	2.71**	1.98***
	(1.12)	(0.676)
Polity Score	0.088*	0.027
	(0.050)	(0.048)
Vice President × Polity Score	-0.307***	-0.281***
	(0.085)	(0.077)
Log. GDP per Capita		1.87***
		(0.257)
GDP Growth		0.008
		(0.017)
Oil/GDP		-0.024
		(0.036)
Trade/GDP		-0.006
		(0.008)
Debt/GDP		-0.019**
		(0.009)
Central Bank Independence		-0.076
		(0.538)
Judicial Independence		0.608
		(1.19)
Observations	16,621	14,308
Within R^2	0.03	0.40
Country fixed effects	Yes	Yes

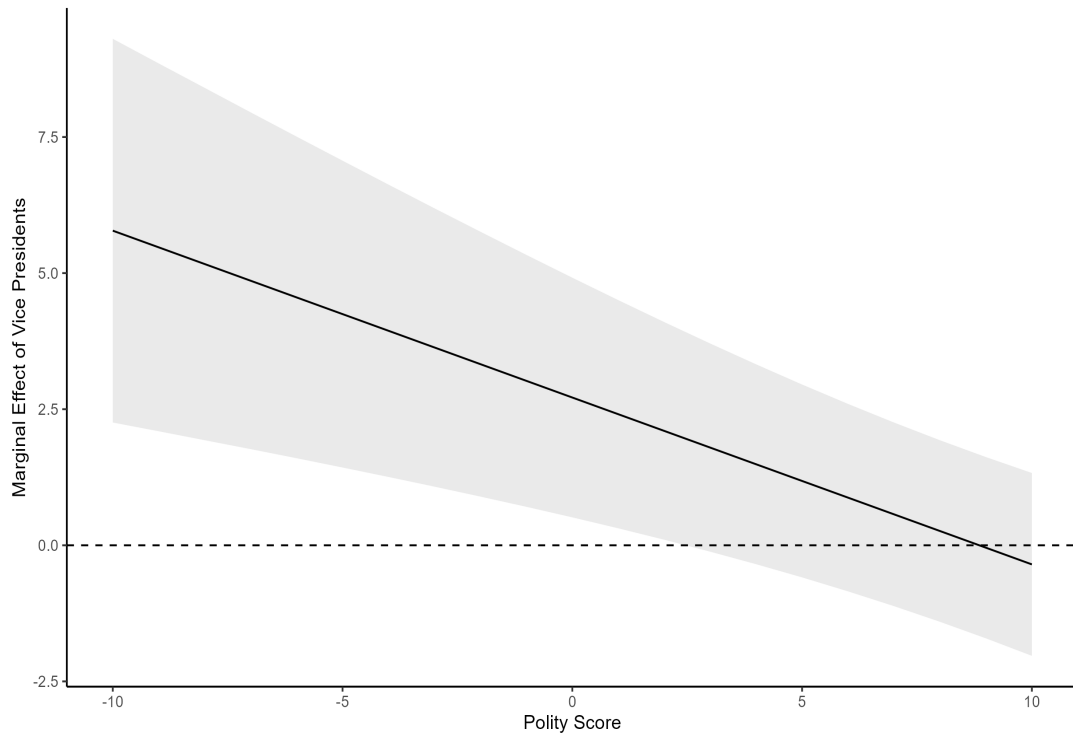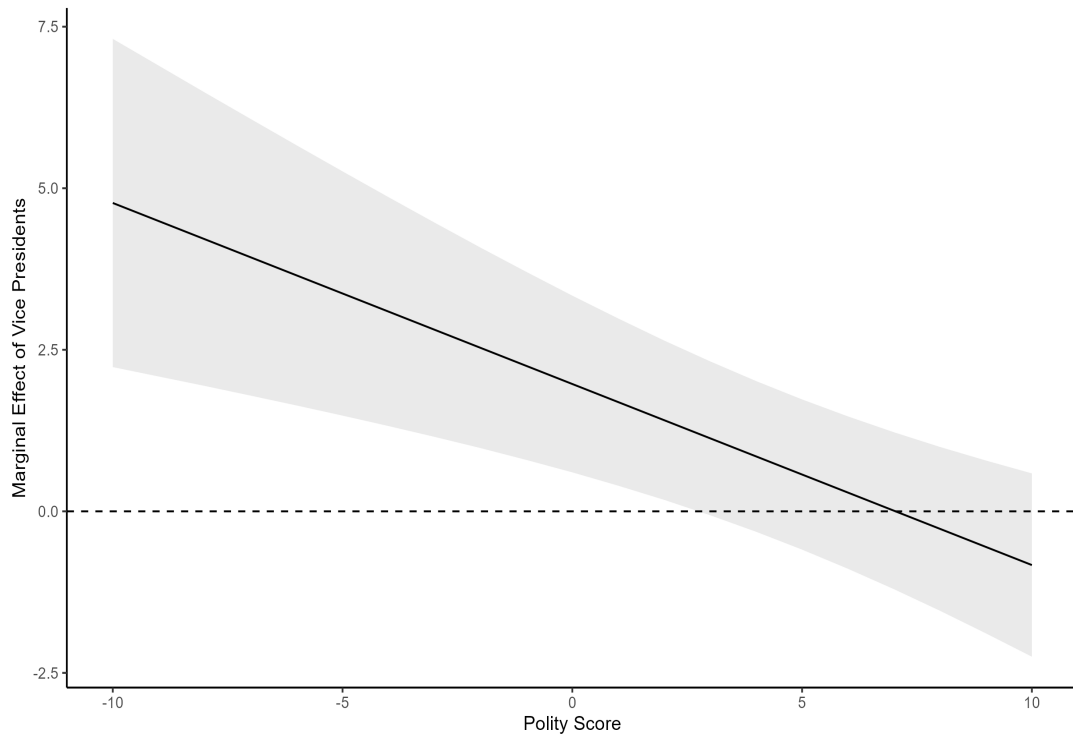*** $p < 0.01$; ** $p < 0.05$; * $p < 0.1$. Robust standard errors clustered by country in parentheses.

Figure E1. Conditional Effect of Vice Presidents Using Polity Score

Notes: The shaded areas represent 95% confidence intervals. Estimates are based on model (1) in table E2.

Figure E2. Conditional Effect of Vice Presidents Using Polity Score with Controls

Notes: The shaded areas represent 95% confidence intervals. Estimates are based on model (2) in table E2.