

Supplementary Appendix

IMF Programs, Chinese Lending, and the Political Economy of Leader Survival

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A1 Descriptive Statistics

Table A1: Summary statistics

Variable	Mean	Std. Dev.	Min.	Max.	N
Leader Duration (days)	2631.63	2925.644	1	16597	2085
Ongoing IMF Prog.	0.414	0.493	0	1	2085
log China Debt/GDP	0.506	0.817	0	4.164	2085
Growth	0.059	0.092	-0.348	0.818	2085
Polyarchy	0.482	0.229	0.017	0.913	2085
Log GDP per cap	8.679	1.15	6.219	11.958	2085
Resource Rents	10.421	13.248	0	82.53	2085
Civil Conflict	0.177	0.382	0	1	2085
log Debt/GDP	3.74	0.772	0.385	6.262	2085
IMF Prog. duration	2.089	1.515	1	6	2085
Executive Corruption	0.605	0.258	0.014	0.967	2085
Tax Haven deposits	0.417	0.224	0	0.968	2067
Tax Haven deposits (Andersen et al)	0.247	0.169	0	0.92	2067

A2 Financial Schemes

As many projects are concentrated in the construction sector and related services, the exact verification of used materials, worked hours, and overall costs is an almost impossible task. Furthermore, Dreher et al. (2021) find that Chinese contractors inflate the actual loan volume to attain overseas investment permissions. However, given the opaque nature of these loans, it might be even the case that a loan just existed on paper but money was never transferred. A recent corruption scandal in Moldova illustrates how such a scheme can operate (for a survey, see Pilkington (2015)). According to this scheme, an SPV issues a loan to a Moldovan firm but never transfers any money. An independent Russian firm guarantees the viability of this loan. In the event that the Moldavian business defaults on its loan obligations towards the SPV, the Russian firm pays out the SPV and transfers the remaining balance into the SPV's bank account in an offshore financial sink. Whereas in the Moldovan case, it was an independent judge that needed to certify the viability of a debt obligation to unlock a financial guarantee and make way for money to be siphoned into an offshore financial sink, in our scenario, it is the IMF and its audit that are needed to unlock the government guarantees backing a country's debt obligations towards the SPV. Such a scheme has been reported for the case of Tajikistan where the IMF audit overlooked a government guarantee—placed on the central bank's foreign currency reserves—that was backing up a fraudulent loan scheme. Bailing out the country, the IMF accidentally unlocked this government guarantee so that participants in this fraudulent scheme could be paid out. Although the IMF *ex-post* detected these irregularities and sanctioned Tajik authorities for misleading auditors, it could not recoup the money that was lost due to this financial scam. Also, government officials involved in operating this scam were never brought to justice (ICG, 2009; Reinsberg et al., 2020). Taken together, we believe that these types of lending arrangements represent an optimal vehicle to design and implement this type of fraudulent financial scheme. We leave an in-depth investigation to future research but believe that similar schemes have been operating in Chinese lending arrangements (Gelpern et al., 2021).

A3 IMF Involvement

Knowing about these perverse incentives, the question arises as to why the IMF provides bailout funding? There are several reasons to believe as to why the Fund is playing along. First, IMF programs are not supply-side but demand-side driven. It is not the IMF that initiates the negotiations with a country in financial difficulties but a country has to approach the Fund if it seeks financial or technical assistance (McDowell, 2016). Given the outlined mechanisms above, we believe that Chinese borrowers have a natural incentive to turn to the IMF and initiate the negotiations for bailout funding. Second, given the consequences of full-fledged sovereign default,¹ the IMF is rarely declining bailout requests. In particular, when governments agree to a ‘what-ever-it-takes’ number of loan conditions, the Fund is not inclined to turn away authorities seeking financial relief (Bird, 2007; McDowell, 2016).² Given that governments need the IMF—amongst providing fresh capital—to clear their name, we expect them to agree to a substantially larger number of loan conditions. To illustrate this point, take for instance the case of Tajikistan. Seeking a financial bailout in 2007, a representative of the Tajik authorities “*repeated several times that Tajikistan would be ready to accept any conditions the Fund demanded.*”³ Finally, knowing about their likely departure, governments will engage in reckless fiscal spending while negotiating for a financial bailout with the IMF. To illustrate this point, consider the recent case of Zambia. Defaulting on its Eurobond obligations, the government was quick in reaching out for talks with the IMF for a financial bailout. The authorities nationalized one of the country’s largest copper mines owned by an SVP-type joint-venture registered in an offshore financial sink while not being able to serve its Eurobond debt. This behavior of the administration in Lusaka even left the most skeptical international observers

¹According to the IMF Articles of Agreement, members are allowed to purchase currency to address balance-of-payments needs, in accordance with the provisions of [the] agreement and adequate safeguards such as conditionality (Article V). With the exception of a few cases—such as the expulsion of Taiwan—countries have not been denied access to IMF credit (Lipsy and Lee, 2019). In the latter case, membership even had to be revoked to deny such access. In contrast, scholars have long been concerned about ‘moral hazard’ whereby countries anticipate that getting IMF bailouts is all too easy if they are aligned with major shareholders or are deemed systematically important by the IMF bureaucracy (Dreher and Jensen, 2007; McDowell, 2016).

²We have conducted numerous interviews with IMF staff related to this matter. They all confirmed the notion that the Chinese administration did not make any attempts to push for bailouts for borrowing countries relying on Chinese loans. Also, recent statements of the administration in Beijing confirm that China is attempting to resolve its foreign lending vows internally rather than relying on the IMF.

³“Tajikistan Pleads for Help to Resolve Self-Inflicted Cotton Finance Crisis.” Wikileaks. Cable ID 08DUSHANBE86_a.

puzzled about the motives for this maneuver.⁴ We believe that these fiscal maneuvers around IMF program negotiations serve several purposes. Besides exerting additional pressure on the Fund to deliver financial relief, nationalizations allow governments and their cronies to siphon cash into their retirement accounts (Kern et al., 2021). At the same time, this behavior narrows any successor's fiscal breathing space and chances of succeeding in office (Alesina and Tabellini, 1990).

⁴"Zambia mortgages the future by taking over Glencore copper debt." The Africa Reporter, January 21, 2021.

A3.1 IMF and Leader Survival

Table A2 revisits the question of whether IMF programs affect leader survival without consideration for China loans. In model 1, we find that having a program in a given leader-year decreases the likelihood of leader exit. The coefficients of control variables are in line with expectations. Subsequent models unpack various forms of leader engagement with IMF programs. In model 2, we find that leaders' political benefit from IMF programs comes from starting a new program, not necessarily having an ongoing program shortens their time in office. Similarly, we find in model 3 that a leader starting a program for the first time decreases her hazard rate of failure.

In model 4, we establish that a leader benefits from starting a program of her own, but is not helped by inheriting programs. In the final two models, we allow for the effect of IMF programs to vary by regime type. In model 5, we find that "owning" an IMF program is significantly worse for democratic leaders. In model 6, inheriting an IMF is better for democratic leaders. Overall, these findings are consistent with existing work on the relationship between IMF programs and leader survival (Williams, 2012).⁵

A4 Instrumental Variable Analysis

A4.1 Instrumental Variable Analysis: First Stage

Table A3 shows the first stage estimation for the instrumental variable model, which was not shown in the manuscript. Model 1 shows the model instrumenting China loans. Model 2 shows the model instrumenting for the interaction between China loans and corruption.

⁵We also estimated these models on the 2000-2015 period to facilitate comparisons with our subsequent analysis with Chinese loan data that are available only for this shorter period. The results are substantively consistent.

Table A2: Cox models: IMF programs and leader survival

	(1)	(2)	(3)	(4)	(5)	(6)
Ongoing IMF Prog.	-0.274*	0.176				
	(0.097)	(0.097)				
Started New IMF Prog.		-34.491*				
		(0.147)				
Leader's 1st IMF Prog.			-0.461*			
			(0.161)			
Leader's IMF Prog.				-0.625*	-1.279*	-0.616*
				(0.107)	(0.227)	(0.111)
Inherited IMF Prog.				0.622*	0.637*	1.650*
				(0.167)	(0.165)	(0.374)
Polyarchy	1.203*	1.022*	1.161*	1.195*	0.910*	1.435*
	(0.293)	(0.293)	(0.294)	(0.302)	(0.318)	(0.333)
Leader's IMF × Polyarchy					1.285*	
					(0.392)	
Inherited IMF × Polyarchy						-1.930*
						(0.695)
Growth	-2.443*	-2.599*	-2.457*	-2.410*	-2.414*	-2.363*
	(0.489)	(0.481)	(0.490)	(0.466)	(0.464)	(0.456)
Log GDP per cap	-0.130*	-0.096	-0.096	-0.136*	-0.142*	-0.127*
	(0.057)	(0.055)	(0.055)	(0.058)	(0.057)	(0.058)
Resource Rents	-0.013	-0.014	-0.012	-0.013	-0.015	-0.013
	(0.008)	(0.008)	(0.008)	(0.008)	(0.008)	(0.008)
Civil Conflict	0.284*	0.300*	0.309*	0.296*	0.301*	0.277*
	(0.106)	(0.108)	(0.107)	(0.107)	(0.108)	(0.105)
log Debt/GDP	0.058	0.065	0.045	0.067	0.067	0.075
	(0.072)	(0.074)	(0.071)	(0.076)	(0.076)	(0.080)
LL	-3056.81	-2950.31	-3057.30	-3023.55	-3019.17	-3017.78
N	4035	4035	4035	4035	4035	4035

* $p < 0.05$; Standard errors clustered on countries reported in parentheses.

Table A3: First stages of Instrumental Variable Model

	China Loans (1)	China Loans × Corruption (2)
Reserves × Pr(Loan)	-0.136*	-0.130*
	(0.030)	(0.023)
Pr(China Loan)	5.943*	4.028*
	(0.871)	(0.671)
Logged Chinese USD reserves	-0.100	0.254
	(0.476)	(0.362)
IV × Corruption		0.056*
		(0.004)
Polyarchy	-0.396*	-0.198
	(0.142)	(0.108)
Growth	0.067	0.058
	(0.087)	(0.066)
Log GDP per cap	0.008	0.023
	(0.076)	(0.058)
Resource Rents	-0.003*	-0.005*
	(0.002)	(0.001)
Civil Conflict	-0.016	0.002
	(0.034)	(0.026)
log Debt/GDP	0.025	-0.001
	(0.021)	(0.016)
Constant	3.013	-7.388
	(13.827)	(10.516)
R2	0.93	0.93
N	1221	1221

* $p < 0.05$; Models include year and country fixed effects.

A4.2 Instrumental Variable Diagnosis: Falsification tests

The manuscript uses an instrumental variable model to address potential confounders. Instruments have two requirements. First, instruments must be correlated with the endogenous regressor, which is demonstrated in Table A3. In addition, standard weak instrument tests demonstrate that the interaction between China's reserves and a leader's likelihood of receiving a loan has a high correlation with China loan amounts. These are summarized in Table A4.

Table A4: Instrumental variable tests

Anderson LM statistic	790.455
Cragg-Donald Wald F statistic	995.999
Stock-Yogo weak ID test (10% maximal IV size)	19.93
Sargan statistic (overidentification)	1.140

The second requirement of a valid instrument is that the instrument is not correlated with the error term of the outcome equation of the estimation. This means that the instrument cannot be associated with an observable or unobservable confounder of leader survival and China lending. Ideally, the IV would behave as it was “as-if” randomly assigned across observations, which would ensure that the IV is unrelated to the outcome and any potential confounder. While the interaction of China's reserves and a leader's likelihood of receiving a loan are not randomly assigned, we argue that it is plausibly “as-if” random to the states potentially receiving China loans.

This second requirement of a valid IV cannot be tested. Theoretically, we cannot identify a plausible connection between the interaction instrument and the error term of the outcome equation. We can imagine that some global economic conditions associated with China's reserves levels may be associated with leadership survival. For example, global economic shocks such as the Great Recession may affect both reserves and political stability. Controlling for both unit and year fixed effects, along with our chosen covariates should block these confounding pathways.

While we cannot show this empirically, we can use falsification tests to rule out some potential confounders. Falsifications tests cannot prove the validity assumptions hold but can test conditions under which we expect them not to hold. The first falsification test examines whether the control variables in our main models are associated with the interaction instrument. A lack of empirical association does not prove our assumptions. However, any empirical association would call those

assumptions into doubt.

To test whether the controls are empirically associated with the instrument, we regress each of the covariates on the instrument interaction, the additive components of the interaction (not shown), while controlling for country and year fixed effects (not shown). To show the IV interaction has no linear and non-linear relationship with these covariates, we split the IV into quantiles. We then compare the 3rd, 4th, and 5th quantities to the baseline category of quantiles 1 and 2.⁶ Table A5 shows that these quantiles are not statistically different from the baseline. In addition, joint significance tests demonstrate that these coefficients are not statistically different from each other.

Table A5: Regression Balance Tests

	(1)	(2)	(3)	(4)	(5)	(6)
	Growth	Polyarchy	GDP per cap	Natural Resources	Civil War	Debt burden
3rd Quantile	0.019 (0.011)	0.007 (0.018)	0.004 (0.025)	0.207 (0.831)	-0.087 (0.058)	3.779 (5.403)
4th Quantiles	0.009 (0.010)	-0.007 (0.018)	-0.024 (0.028)	-0.112 (0.813)	-0.047 (0.050)	-4.457 (10.179)
5th Quantiles	0.023 (0.016)	-0.016 (0.022)	-0.067 (0.050)	0.445 (1.255)	-0.003 (0.058)	8.113 (10.967)

* $p < 0.05$; Standard errors clustered on countries reported in parentheses.

While we cannot definitively rule out that the IV interaction is not associated with some unobservable confounder, the balance tests in Table A12 lend support to our expectation that the IV meets the exclusion restrictions. A valid instrument acts as if the treatment has been randomly assigned across observations. If true, we should accept no empirical differences across values of the IV. The control variables in our main models represent the most obvious confounders between China lending and leadership survival. If the IV is not associated with these variables, it is less likely that the IV has a strong enough association with another variable to undermine our main inferences. If we observed differences in the control variable means across the different quantiles of the IV interaction, our assumptions would be implausible.

Another way to diagnose the validity of the exclusion restriction is to identify conditions under

⁶Many leaders have a zero likelihood of receiving a loan (based on past China lending), thus the IV interaction has many zeros that make up the first 2 quantiles.

which the association between the instrument and endogenous regressor should not exist. For example, we expect that China will withhold loans from countries that formally recognize Taiwan. As a result, (1) China's reserves should have no relationship with China lending in these countries, and (2) China's reserves should have no effect on leadership survival in these countries if the exclusion restriction holds. The first part of this expectation holds as no country that recognizes Taiwan receives any China loans in our data. To test the second expectation, we replicate model 1 from Table 1 in the manuscript with two key changes. First, we restrict the sample to only those states that recognize Taiwan. Second, we substitute China's reserves for lending. We expect no relationship. Table A6 supports our expectation, showing a coefficient that is statistically insignificant, positive and is small in substantive value (one logged unit change in reserves increases a leader's hazard by 3 percent). Again, this does not prove anything about our assumptions about the exclusion restriction, but if we did observe a relationship between China's reserves and leadership survival in this restricted sample of countries, it would have cast serious doubt on our assumptions.

Table A6: Cox Model: Falsification Test

	(1)
Logged Chinese USD reserves	0.032 (0.221)
LL	-67.40
N	155
Note: Controls not shown	* $p < 0.05$

A5 Cox model diagnostics

The Cox survival model assumes that covariates have a proportional effect across the duration of the sample, often called the proportional hazard assumption. To diagnose this assumption, we analyze the Schoenfeld residuals over time of leaders' duration. We can use a chi-squared (χ^2) test to examine whether the residuals are different than a set of residuals that does not violate proportional hazards. Alternatively, we can plot the residuals and fit the best line to the residuals using loess. We illustrate both approaches. Table A7 reports the chi-squared test statistic for each variable. We conclude that Polyarchy violates the assumption.⁷ To further illustrate this, we plot the Schoenfeld residuals for Polyarchy and compare them to residuals for China Debt in Figure A1.

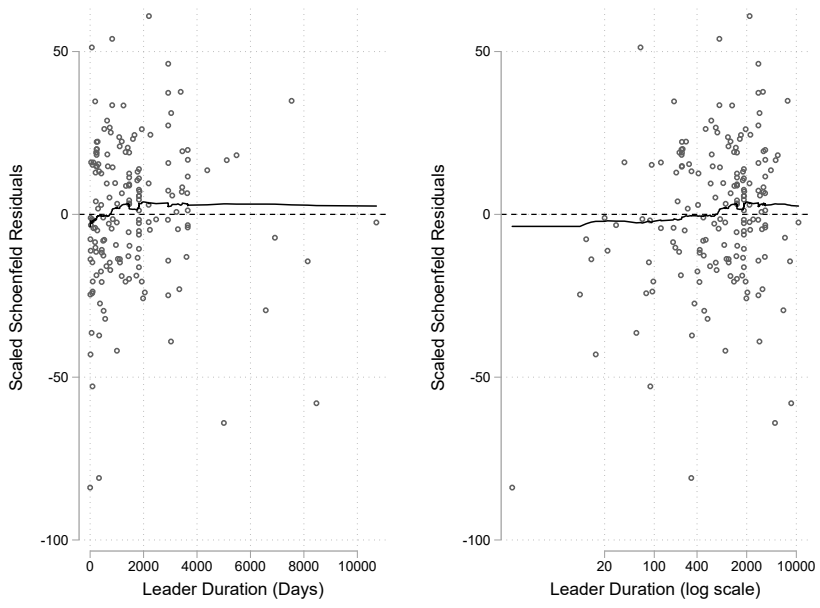
Table A7: Schoenfeld Residual Test of Proportional Hazards

Variable	χ^2 Statistic	p-value
log China Debt/GDP	2.46	0.1168
Corruption	1.34	0.2472
Growth	0.25	0.6196
Polyarchy	29.78	0
Log GDP per cap	6.21	0.0127
Resource Rents	1.94	0.1634
Civil Conflict	7.03	0.008
log Debt/GDP	1.26	0.2613

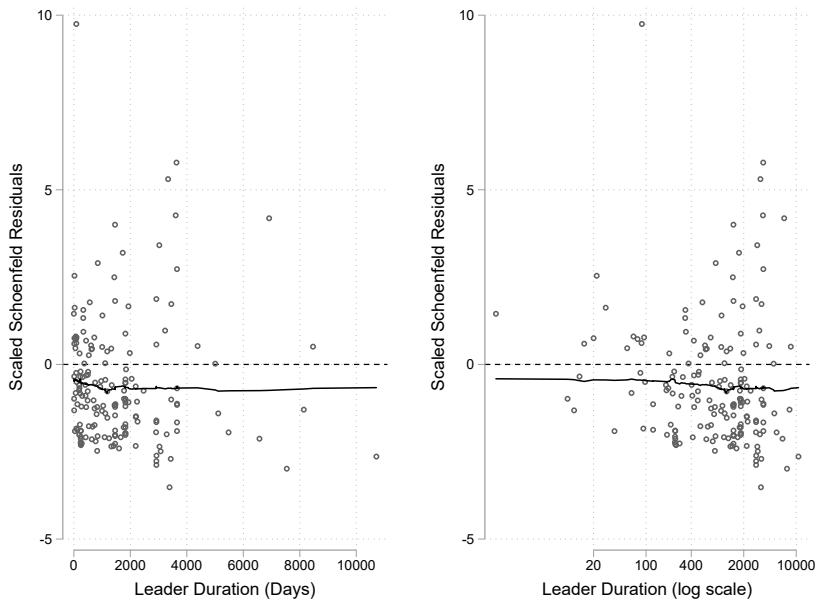
There are several ways to address non-proportional hazards. We implement these fixes in Table A8 and find that they do not affect our main inferences. To begin we run the main results from Table 1 in the manuscript in model 1 as a point of comparison. Next, we run a time-varying model in model 2, where Polyarchy is interacted with the log of leader duration. This models Polyarchy's effect as dependent on time. Next, we run a shared frailty model, which is akin to a random-effects model in model 3. Model 4 includes dummy variables for each country in the sample, thus providing fixed effect estimators. Model 5 runs a stratified model, which allows democracies and non-democracies to have different baseline hazards. Finally, models 6 and 7 run the Cox models separately for democracies and non-democracies. Focusing on the China loans

⁷ There is evidence that civil conflict may also violate the PH assumption, but this seems connected to polyarchy. When we address time-varying conditions in polyarchy, civil conflict no longer violates the assumption.

Figure A1: Schoenfeld residuals



(a) Polyarchy



(b) China Loans

coefficients, we observe that the estimates from the diagnostic models produce similar estimates across the various models. While Polyarchy does violate the proportional hazard assumption, that does not affect our main inferences. In each model, the estimates for China loans term are at least as large, if not larger, than the original model. That suggests that any bias from violating the proportional hazard assumption is biasing the estimates downward.

Table A8: Cox models Diagnostics

	Original (1)	Time Varying Model (2)	Shared Frailty (3)	Fixed Effects (4)	Strata (5)	Democracy (6)	Non-Democracy (7)
log China Debt	-0.570* (0.139)	-0.571* (0.147)	-0.591* (0.165)	-0.701* (0.358)	-0.569* (0.157)	-0.552* (0.201)	-0.536* (0.237)
Executive Corruption	0.487 (0.491)	0.509 (0.505)	0.250 (0.492)	-6.588* (2.171)	0.367 (0.424)	-0.918 (0.723)	0.592 (0.436)
Polyarchy	1.481* (0.636)	-6.478* (1.502)	1.891* (0.614)	1.264 (1.658)	0.434 (0.693)		
Growth	-2.785* (1.018)	-2.354* (1.012)	-2.688* (1.069)	-3.232* (1.109)	-2.420* (1.043)	-1.365 (1.005)	-3.961* (1.456)
Log GDP per cap	-0.306* (0.110)	-0.280* (0.099)	-0.340* (0.115)	-0.074 (1.044)	-0.284* (0.098)	-0.165 (0.128)	-0.369* (0.150)
Resource Rents	-0.014 (0.012)	-0.012 (0.011)	-0.010 (0.010)	0.061* (0.027)	-0.010 (0.008)	-0.005 (0.013)	-0.037 (0.026)
Civil Conflict	0.064 (0.266)	0.044 (0.247)	0.184 (0.238)	0.586 (0.373)	0.038 (0.198)	0.642 (0.349)	-0.246 (0.339)
log Debt/GDP	0.049 (0.103)	0.001 (0.105)	0.111 (0.136)	0.551 (0.436)	0.034 (0.117)	0.430* (0.141)	-0.308* (0.155)
LL	-720.32	-708.93	-717.14	-620.03	-618.61	-177.58	-430.66
N	1221	1221	1221	1221	1220	672	548

* $p < 0.05$; Standard errors clustered on countries reported in parentheses.

A5.0.1 Cox model comparison to discrete duration model

Table A9 compares the original results from the Cox survival model to alternative models specifications. Specifically, we treat the data as discrete duration data, which examines the likelihood of leader failure and includes time splines to account for temporal heterogeneity. Model 1 presents the original Cox model results for convenience. Model 2 uses a probit model to analyze the discrete duration data. Model 3 uses a logit model. As expected the results in all three models are consistent with each other. Deviations in coefficient sizes are attributed to different link functions and assumptions of hazard rates.

Table A9: Cox models comparison to discrete duration model

	Cox model (1)	Probit (2)	Logit (3)
log China Debt	-0.596* (0.155)	-0.301* (0.064)	-0.582* (0.131)
Executive Corruption	0.433 (0.698)	0.037 (0.265)	0.152 (0.489)
Polyarchy	0.906 (0.874)	0.560 (0.341)	1.006 (0.646)
Growth	-3.594* (1.046)	-1.271* (0.560)	-2.792* (1.163)
Log GDP per cap	-0.262* (0.130)	-0.126* (0.057)	-0.253* (0.109)
Resource Rents	-0.030* (0.015)	-0.005 (0.006)	-0.013 (0.012)
Civil Conflict	-0.056 (0.294)	0.041 (0.144)	0.061 (0.259)
log Debt/GDP	0.026 (0.125)	0.087 (0.060)	0.117 (0.109)

* $p < 0.05$; Standard errors clustered on countries reported in parentheses. Time splines not shown

A6 Robustness Checks: Alternative Explanations

In the manuscript, we argue that corrupt governments funnel China loan resources to their cronies and to offshore bank deposits. This allows leaders to solidify their control over power and allow provides an insurance mechanism if leaders are ousted from power. To rule out alternative interpretations of our main findings, we consider different outcome variables in this section to determine if leaders could be using China debt for other purposes. To begin, we consider a more benign explanation: leaders use China loans for the stated purpose of building infrastructure. To examine this possibility, we use V-Dem's measure of public goods allotment in model 1 in Table A10. We find no additive or conditional effect of China debt. As expected, corruption has a negative effect on public good allocation but is not conditioned by China debt.

Table A10: Alternative explanation: Government Services or Repression

	Public Goods (1)	State Killings (2)	Political Terror Model (3)	Military Spending (4)
log China Debt	0.027 (0.127)	-0.067 (0.089)	-0.069 (0.097)	-0.026 (0.090)
Executive Corruption	-1.880* (0.302)	0.034 (0.274)	0.091 (0.311)	-0.951* (0.275)
China Debt × Corruption	-0.016 (0.165)	0.061 (0.116)	0.059 (0.124)	0.005 (0.130)
Ongoing IMF Prog.	0.006 (0.034)	0.010 (0.047)	0.003 (0.049)	0.051 (0.028)
Polyarchy	0.200 (0.235)	-1.157* (0.322)	-1.004* (0.333)	-0.524* (0.174)
Growth	0.292 (0.151)	-0.056 (0.164)	-0.194 (0.191)	-0.208 (0.137)
Log GDP per cap	0.167 (0.118)	-0.378* (0.120)	0.006 (0.126)	0.009 (0.120)
Resource Rents	-0.003 (0.003)	0.000 (0.005)	-0.000 (0.004)	-0.001 (0.004)
Civil Conflict	-0.027 (0.040)	0.446* (0.081)	0.451* (0.068)	0.068 (0.036)
log Debt/GDP	-0.047 (0.048)	0.064 (0.049)	0.039 (0.049)	-0.056 (0.037)
Constant	0.047 (1.045)	3.223* (1.050)	3.213* (1.089)	-6.355* (0.916)
R2	0.91	0.89	0.77	0.91
N	1664	1664	1664	1490

* $p < 0.05$; OLS models. Standard errors clustered on countries reported in parentheses. Country fixed effect estimates.

Next, we consider the possibility that leaders use China debt as repressive means to remain in power. To examine this possibility, we use Fariss et al.'s (2020) latent measure of state killing in model 2 in Table A10. Again we observe no effects. As an alternative measure of repression, we

use the Political Terror Scale, which uses U.S. State Department reports to measure governments' repressive activities. Model 3 shows null results. It is possible that leaders do not need to use repressive strategies because investments in the state's repressive apparatuses deter people from dissent. If this is the case, we would observe more investment into these repressive mechanisms. Model 4 uses military spending as a percentage of GDP as a proxy for such investment (data from World Bank). Again, we find no relationship.

The political benefits from China debt may not come in the form of satisfied elites or offshore accounts but rather a more placated society. This placation may come from more effective government policies or credible threats not captured in the measures from Table A10. To examine this possibility examine dependent variables that measure societal's reactions to governments in Table A11. First, we consider the possibility that China debt is used to placate the military in model 1, but we find no relationship between China debt and coup attempts. Next, we examine the relationship with the general workforce in model 2, but we find no relationship between China debt and strikes. Finally, we consider society's general behavior towards the government using data on anti-government demonstrations in model3. Again, we observe no relationship between China debt and society's behavior towards the government, ruling out these alternative explanations.

Table A11: Alternative explanation: Societal reactions

	Coup Attempts (1)	Strikes (2)	Anti-Gov't Protests (3)
log China Debt	0.000 (0.013)	-0.087 (0.103)	-0.270 (0.232)
Executive Corruption	-0.056 (0.056)	-0.159 (0.326)	-0.543 (0.532)
China Debt × Corruption	-0.024 (0.020)	0.035 (0.145)	0.370 (0.269)
Ongoing IMF Prog.	0.008 (0.010)	-0.062 (0.045)	-0.118 (0.139)
Polyarchy	-0.065 (0.092)	0.335 (0.201)	-0.666 (1.454)
Growth	-0.003 (0.032)	-0.163 (0.162)	-0.393 (0.427)
Log GDP per cap	0.070* (0.030)	0.016 (0.080)	0.258 (0.369)
Resource Rents	-0.000 (0.001)	-0.004 (0.003)	-0.005 (0.009)
Civil Conflict	-0.018 (0.016)	0.007 (0.049)	0.268 (0.213)
log Debt/GDP	0.004 (0.009)	-0.044 (0.059)	0.191 (0.111)
Constant	-0.469 (0.247)	0.771 (0.870)	1.392 (2.775)
R2	0.13	0.32	0.39
N	1559	778	778

* $p < 0.05$; OLS models. Standard errors clustered on countries reported in parentheses. Country fixed effect estimates.

A7 Robustness Test: Balanced Covariates

In this section, we examine the observable characteristics of states by whether they receive China loans (treatment) or not (control). Table A12 reports the means, variance, and skewness of the control variables used in the main analysis, along with additional institutional variables that may explain varying leader tenures. While some treatment and control means are not statistically different from each other, others are. This indicates some covariate imbalance indicative that the treatment is not randomly assigned.

We address the problem of non-random treatments by using an instrumental variable model in the manuscript. Here, we use an alternative empirical strategy: pre-processing. While pre-processing covariates by treatment only addresses observable confounders it can lead to more consistent estimates. We use entropy balancing to not only match means but other moments of the covariates' distribution (Hainmueller, 2012). The processing procedure provides weights to each observation, which is then used to set the survival data. To demonstrate this, we replicate Table 1 from the manuscript with the re-weighted data in Table A13. The results are similar to the original analysis, suggesting that the imbalance in the observable covariates is not producing misleading inferences. The other results from the manuscript are also consistent and can be reproduced from the replication materials.

Table A12: Balance statistics by China debt

	Pre-Balanced Treatment Mean	Pre-Balanced Control Mean	Post-Balanced Mean	Pre-Balanced Treatment Variance	Pre-Balanced Control Variance	Post-Balanced Variance	Pre-Balanced Treatment Skewness	Pre-Balanced Control Skewness	Post-Balanced Skewness
Growth	0.061	0.067*	0.061	0.0080224	0.00883567	0.00802241	1.2563576	1.3517432	1.256356
Polarchy	0.460	0.504*	0.460	0.04256067	0.06086032	0.0425607	0.19390499	-0.1087441	0.19390468
Executive Corruption	0.648	0.562*	0.648	0.0530383	0.07653587	0.05303833	-0.76368608	-0.54554063	-0.76368529
Ongoing IMF Program	0.399	0.431	0.399	0.24007626	0.24542155	0.24007555	0.4115148	0.28022267	0.41151569
Parliament	0.189	0.187	0.189	0.15346328	0.15192762	0.15346286	1.5882305	1.6088462	1.5882306
Electoral Autocracy	0.505	0.332*	0.505	0.25021711	0.22200774	0.25021642	-0.01919474	0.71320547	-0.01919372
Presidential	0.808	0.801	0.808	0.15524715	0.15957763	0.15524672	-1.5644583	-1.5074963	-1.5644583
Log GDP per cap	8.402	8.955*	8.402	1.0348236	1.457775	1.034826	-0.08573077	0.04722686	-0.08572745
Resource Rents	11.383	9.449*	11.383	160.28745	188.72841	160.28767	1.7827325	2.0736891	1.7827304
Civil Conflict	0.202	0.152*	0.202	0.16164603	0.12912611	0.16164552	1.4806416	1.9369526	1.4806423
log Debt/GDP	3.746	3.735	3.746	0.5082101	0.68309811	0.50821081	-0.59663088	-0.12762656	-0.59663165

* $p < 0.05$ statistical difference between pre-balanced means of treatment and control groups

Table A13: Balanced survival models: IMF programs, China debt, and leader survival

	(1)	(2)	(3)	(4)
log China Debt	-0.596*	0.089	-0.304*	0.092
	(0.155)	(0.333)	(0.089)	(0.197)
Executive Corruption	0.433	0.775	0.037	0.279
	(0.698)	(0.817)	(0.245)	(0.277)
China Debt × Corruption		-1.133*		-0.691*
		(0.522)		(0.297)
Polyarchy	0.906	0.956	0.559	0.613
	(0.874)	(0.899)	(0.319)	(0.328)
Growth	-3.594*	-3.494*	-1.269*	-1.207
	(1.046)	(1.068)	(0.636)	(0.625)
Log GDP per cap	-0.262*	-0.253*	-0.127*	-0.114*
	(0.130)	(0.129)	(0.055)	(0.056)
Resource Rents	-0.030*	-0.031*	-0.005	-0.006
	(0.015)	(0.015)	(0.005)	(0.005)
Civil Conflict	-0.056	-0.031	0.041	0.053
	(0.294)	(0.288)	(0.121)	(0.122)
log Debt/GDP	0.026	0.044	0.087	0.087
	(0.125)	(0.130)	(0.066)	(0.067)
LL	-1414.96	-1390.30	-1384.82	-4425.36
N	1221	1221	1221	1221

* $p < 0.05$; Standard errors clustered on countries reported in parentheses. Models 1 - 2 are Cox survival models; coefficients reported. Models 3 and 4 are a discrete duration IV probit model. First stages not shown.

A8 Exile rates

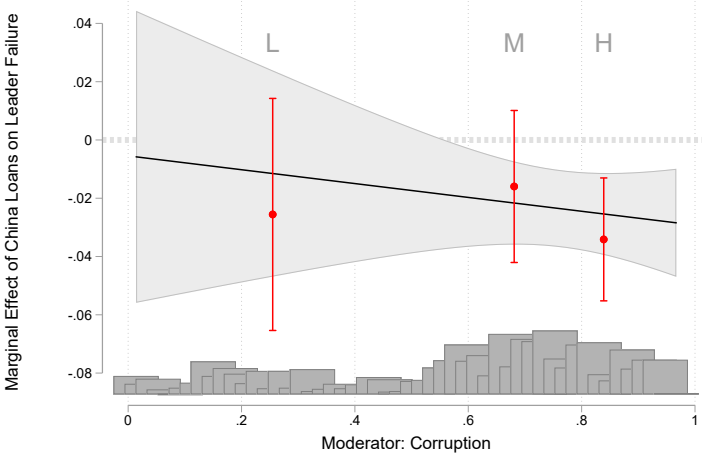
Table A14: Leaders' Post-Tenure Exile Rates

Exile Rates	17.1 %	0.0 %	5.6 %	0.0 %	14.3 %	7.5 %	7.3 %	4.9 %
IMF Program	Yes	Yes	No	No	Yes	Yes	No	No
China Loans	Yes	Yes	Yes	Yes	No	No	No	No
Corrupt	Yes	No	Yes	No	Yes	No	Yes	No

A9 Interaction Diagnostics

The results in the manuscript show that China loan’s effect on leader survival is conditioned by a leader’s corruption: more corrupt leaders benefit from China loans than non-corrupt leaders. To model this conditional effect, we use an interaction term in our survival model. Hainmueller et al. (2019) note two problems with interactions: lack of data support and linearity assumptions. Using the authors’ Interflex package in Stata, we find no evidence of either problem for our inferences. Figure A2 plots the interaction. The histogram of corruption data shows sufficient data coverage. In addition, binning the data shows that the low, medium and high effects follow the linear marginal effects (a Wald test shows that these binned effects are not statistically different than the marginal effect line).

Figure A2: Interaction Diagnostics with Interflex



Supplementary Online Appendix: References

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