Appendix to “Partisan External Borrowing in Middle Income Countries”

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Appendix 1: Countries in Main Models

Table 1 Model 2 Countries (45 countries, N = 595)	
Angola	Kazakhstan
Albania	Kyrgyz Republic
Armenia	Lebanon
Azerbaijan	Sri Lanka
Bulgaria	Lesotho
Bosnia and Herzegovina	Morocco
Bolivia	Moldova
Brazil	Mexico
Botswana	North Macedonia
Cameroon	Mongolia
Congo, Rep.	Mauritius
Colombia	Nicaragua
Costa Rica	Peru
Dominican Republic	Philippines
Egypt, Arab Rep.	Paraguay
Gabon	Russian Federation
Georgia	El Salvador
Ghana	Thailand
Guatemala	Tunisia
Honduras	Turkey
Indonesia	Ukraine
India	South Africa
Jamaica	
Only countries with over 1 million in population are included See sample for specific years	

Appendix 2: Descriptive Statistics

Full cases using V-Party

	N	mean	min	max	sd
DV	601	0.37	0.00	1.00	0.35
WorkingPoorPrty	601	0.26	0.00	0.75	0.17
CreditRating	601	12.65	6.00	19.00	3.60
USIrates	601	4.13	1.80	8.55	1.71
Growth	601	4.35	-15.91	31.67	4.37
Inflation	601	23.08	-3.75	7481.66	306.17
Deficit	601	-6.79	-28.47	5.75	5.57
Crisis	601	0.08	0.00	1.00	0.27
DebtService	601	2.80	0.12	16.54	2.11
Reserves	601	60.25	1.53	2191.31	147.12
Democracy	601	1.70	0.00	3.00	0.74
RuleOfLaw	601	0.49	0.04	0.96	0.24
PropRights	601	0.79	0.24	0.96	0.12
PolCycle	601	-28.00	-999.00	6.00	170.77
UN_USalign	601	0.35	0.12	0.72	0.11
UN_CHNalign	601	0.86	0.63	0.98	0.08

Full cases using DPI

	N	mean	min	max	sd
DV	686	0.35	0.00	1.00	0.34
Left	686	0.28	0.00	1.00	0.45
CreditRating	686	13.08	6.00	19.00	3.70
USIrates	686	4.28	1.80	8.55	1.78
Growth	686	4.21	-19.73	31.67	4.68
Inflation	686	38.05	-3.75	7481.66	336.17
Deficit	686	-7.06	-28.47	5.75	5.56
Crisis	686	0.08	0.00	1.00	0.27
DebtService	686	3.02	0.00	16.54	2.43
Reserves	686	56.46	0.15	2191.31	138.46
Democracy	686	1.59	0.00	3.00	0.80
RuleOfLaw	686	0.48	0.04	0.96	0.23
PropRights	686	0.78	0.24	0.96	0.12
PolCycle	686	-75.34	-999.00	6.00	267.47
UN_USalign	686	0.35	0.12	0.72	0.11
UN_CHNalign	686	0.86	0.63	0.98	0.08

Appendix 3a: Variable Details, Discussion, and MIC country-level coding info/sources

Variable Name	Source	Coding Notes
DV	WDI	DT.COM.PRVT.CD/DT.COM.DPPG.CD; private public and publicly guaranteed over total external public and publicly guaranteed new debt agreed to each year
WorkingPoorPrty	V-Party (Lührmann et al. 2020)	v2pagroup variable; To make WorkingPoorPrty, added scores of 8 (urban working classes, including unions); 9 (urban middle); 10 (rural working including peasants); and 11 (rural middle including family farmers) and divided by four to get, on a scale of 0-1, the importance of poor, working, and middle classes to a governing party.[1]
Left	DPI (Beck et al. 2001)	GOV1RLC
Credit Rating	Bloomberg	Best of S&P, Moody's & Fitch ratings. Manually coded using country's year-end long-term credit rating in calendar year. Data coded using Bloomberg in Nov 2016. AAA = 1, so lower values are better ratings.[2]
USIrates	Contingent Adv. (Ballard-Rosa, Mosley, and Wellhausen 2021b)	Use replication data to average annual US Interest rates, which shape liquidity available to developing countries.
Growth	WDI	NY.GNP.MKTP.KD.ZG; GNI growth, annual %
Inflation	WDI	FP.CPI.TOTL.ZG
Deficit	WDI	GC.TAX.TOTL.GD.ZS minus GC.XPN.TOTL.GD.ZS; both as % of GDP.
Crisis	Syst Bank Crisis Dataset (Laeven and Valencia 2012)	Crisis = 1 if country in crisis at one point of the calendar year.
Debt Service	WDI	DT.TDS.DPPG.GN.ZS, percent GNI
Reserves	WDI	FI.RES.TOTL.DT.ZS; % of Total External Debt
Democracy	V-Dem (Coppedge et al. 2021)	v2x_regime ordinal variable
Rule of Law	V-Dem	v2x_rule
Property Rights	V-Dem	v2xcl_prpty
Debt Service	WDI	DT.TDS.DPPG.GN.ZS
PolCycle	DPI	yrcurnt; 0= election year, otherwise years until planed election

[1] The V-Party dataset codes all political parties in a country since 1900. To get governing parties, I select only parties coded as heads of government, so governing parties or leaders of coalitions (v2pagovsup = 0). These parties' variables are then brought forward until there is a change in governing party or a change in the party's coding. If two parties are coded as v2pagovsup = 0, I average their scores to score the degree to which these groups are central to both parties leading the government (only 7 MIC cases of this over timeframe of the sample).

[2] If unrated by all three agencies, to avoid losing observations these are coded as Caa3 for Moody's and CCC- in S&P and Fitch. This follows research estimating most unrated countries would fall between Moody's Ca and Caa2, or CCC and CC- for S&P and Fitch (Ratha, De, and Mohapatra 2011, 304), which makes intuitive sense. It reflects the likelihood that an unrated country is more creditworthy than one in default, but still relatively risky and low-speculative grade.

UN_USalign	UN voting database (Bailey, Strezhnev, and Voeten 2017)	Annual UNGA voting alignment between borrower and US
UN_CHNalign	UN voting database	Annual UNGA voting alignment between borrower and China
MIC status[3]	World Bank	History of income group for each country-year coded manually using World Bank file OGHIST.xsl, found here: https://datahelpdesk.worldbank.org/knowledgebase/articles/378834-how-does-the-world-bank-classify-countries[4]

[3] Countries are manually coded according to the income group they were *that* year.

[4] **Selection concerns:** MIC categorization is an exogenous threshold determined by national income/GDP level. In the vast majority of cases, then, countries cannot select into being a MIC. They are in the MIC income/GDP group range or they are not. At times, there are exceptions at the low and high end of this income range. In some instances, the World Bank will allow countries "graduating" to a new income level a few years of access on the lower-level terms before having to borrow in the manner expected of the higher income category. For example, if moving from MIC to HIC, the Bank may allow a country a few years of extra IBRD access before completely becoming reliant on markets. Similarly, for countries graduating from LIC to MIC, the country may maintain access to grants and not face the same borrowing options theorized about in this study. In robustness checks below, we drop (1) IDA recipients, to account for countries maintaining access to the grant window on the low end of the MIC income range and (b) drop countries that do indeed graduate in the next two years to HIC status, to ensure countries that may be negotiating selection into MIC status before graduating are not driving findings.

Appendix 3b: Covariate correlations

- **V-party class-constituency variable and DPI partisan variable correlation**

Confirmation of significant covariance between class variable (WorkingPoorPrty) and DPI variable (Left, as well as Center-Left). Ensures capturing similar party identities (constituencies and ideologies) when using both variables. Of 1,521 observations with both coded, simple regression of one on the other:

```
                Left |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-----------------------------+------------------------------------------------------------------
WorkingPoorPrty|   .5217646   .0657202     7.94   0.000     .3928526    .6506766

             CenterOrLeft |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-----------------------------+------------------------------------------------------------------
WorkingPoorPrty |   .6046958   .0684646     8.83   0.000     .4704006     .738991


WorkingPoorPrty |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
Left |   .0763593    .009618     7.94   0.000     .0574932    .0952253

WorkingPoorPrty |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
CenterOrLeft |   .0807788   .0091459     8.83   0.000     .0628388    .0987187
```

- **Correlation matrix of possible post-treatment-bias inducing covariates**

	WorkingPoorPrty	Left	CreditRating	Inflation	Deficit
WorkingPoorPrty	1				
Left	0.2754	1			
CreditRating	**0.0096**	**0.004**	1		
Inflation	**-0.0012**	**0.0453**	0.0835	1	
Deficit	**-0.0934**	**-0.0649**	0.1332	0.018	1

It is possible that, given standard expectations about policy preferences of left-leaning parties with working class constituencies including labor and the poor, controlling for deficit and inflation may induce post-treatment bias. It is also possible that these countries get worse credit ratings as has been shown in the rich world.

In a theoretical sense (at least in the context of this paper about borrowing preferences and outcomes), assuming post-treatment bias with these variables in this study's models is problematic. Deficits are shaped not only by partisan preferences but tax and revenue generation capacity, tax policy itself, budget rules, and other factors. Inflation is shaped by capital flows and

exchange rate policy as much as partisan economic policy, and it is not a safe assumption that left-leaning governments promote inflation (and may focus on it to prevent being vulnerable to that stigma) or have less-independent central banks. Credit ratings may be lower for left-leaning governments, but to the extent that this is the case, the argument of the paper is that despite and controlling for this, they still use proportionally more market finance.

In a statistical sense, the correlation matrix of these variables above shows small coefficients, indicating minimal statistical relationships, between the explanatory variables of interest and the potential post-treatment bias-inducing covariates (see bolded relationships). In fact, the directions of these relationships are not even consistent across the DPI categorical variable and the V-Party constituency variable (compare inflation). This eases concern that these variables should not be controlled for in the models.

Appendix 4a: Robustness Checks

Alternative explanatory variables

- Drop middle class from the party constituency. Only use urban and rural working classes, to ensure nothing about nature of coding small family "middle" class farmers or urban middle class is driving the estimations.
- Construct an "elite constituency variable." The theoretical inverse of the working class and poor variable used in the analysis. Variable adds v2pagroup parts 1 (aristocracy/high status elites) and 3 (business elites) and divides by two to average the influence of these groups on the governing party. This should lead to more official credit, by the theory in the study (i.e. the inverse of H1).
- Add centrists then pool with left, add unclear and pool with non-left, ensuring dropping them and lower N is not driving the main text's Table 2 relationships.

Modeling the Effect of Labor & Poor on MIC External Borrowing

	Working Class only in Party Constituency (no family farming or middle class)		Aristocracy and business elites as constituents (should have opposite effect on borrowing; more official)		Add center and unclear from DPI (ensure dropping centrists and lower N doesn't drive findings)	
	Probit	Logit	Probit	Logit	Probit	Logit
Model	(1)	(2)	(3)	(4)	(5)	(6)
UrbRuralWorkingOnly	0.369*	0.631*				
	(0.206)	(0.336)				
Party_EliteConstituents			-0.326*	-0.544*		
			(0.167)	(0.280)		
Center-Left					0.211**	0.343**
					(0.092)	(0.157)
DVlag	1.527***	2.523***	1.528***	2.522***	1.534***	2.534***
	(0.188)	(0.315)	(0.182)	(0.305)	(0.172)	(0.289)
CreditRating	-0.058***	-0.098***	-0.059***	-0.100***	-0.049***	-0.083***
	(0.018)	(0.030)	(0.017)	(0.028)	(0.017)	(0.028)
USIrates	0.029	0.051	0.028	0.051	0.022	0.038
	(0.033)	(0.055)	(0.034)	(0.058)	(0.034)	(0.058)
Growth	-0.003	-0.007	-0.001	-0.003	0.004	0.007
	(0.010)	(0.019)	(0.010)	(0.019)	(0.009)	(0.017)
Inflation	-0.000*	-0.000	-0.000*	-0.000	-0.000	-0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Deficit	-0.000	-0.001	-0.005	-0.009	-0.004	-0.008
	(0.009)	(0.015)	(0.009)	(0.015)	(0.007)	(0.013)
Crisis	0.063	0.099	0.073	0.111	0.160	0.256
	(0.128)	(0.217)	(0.127)	(0.214)	(0.109)	(0.185)
DebtService	0.017	0.028	0.023	0.040	-0.001	0.001
	(0.026)	(0.043)	(0.026)	(0.044)	(0.026)	(0.044)
Reserves	-0.001	-0.002	-0.001	-0.002	-0.001	-0.002
	(0.001)	(0.002)	(0.001)	(0.002)	(0.001)	(0.002)
Democracy	-0.140	-0.250	-0.096	-0.174	-0.134	-0.231
	(0.099)	(0.169)	(0.103)	(0.176)	(0.099)	(0.169)
v2x_rule	0.495*	0.852*	0.352	0.615	0.489*	0.823*
	(0.290)	(0.491)	(0.294)	(0.498)	(0.288)	(0.486)
PropRights	-0.023	-0.039	0.154	0.276	0.115	0.217

	(0.444)	(0.762)	(0.435)	(0.747)	(0.393)	(0.686)
PolCycle	0.001**	0.001***	0.001***	0.001***	0.001***	0.001***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
UN_USalign	-0.041	-0.047	-0.353	-0.617	-0.255	-0.451
	(1.190)	(1.954)	(1.170)	(1.914)	(1.229)	(2.030)
UN_CHNalign	0.002	-0.006	0.174	0.221	-0.313	-0.574
	(1.436)	(2.374)	(1.377)	(2.266)	(1.335)	(2.202)
N	595	595	595	595	680	680

Notes:
* p<0.1, ** p<0.05, *** p<0.01
Cluster-Robust Standard Errors in all models
Dependent Variable, Deficit, and PolCycle led one year (see DGP discussion)

Appendix 4b: Robustness Checks

Alternative sample subsets

- Drop IDA recipients (so access to grant World Bank window that year)
- Drop countries about to graduate in next two years (so may be selecting final years into being MIC)
- Drop crisis countries (IMF program and/or no market access/in default)
- Drop non-democracies (check assuming logic of political survival isn't driving findings/nothing special about democracies in context of annual borrowing decisions)

Probit models of alternative sample subsets

	Drop IDA recipients	Drop countries about to graduate (i.e. do graduate to HIC in next two years)	Drop countries in crisis	Drop non-democracies
WorkingPoorPrty	0.793**	0.557**	0.564**	0.598*
	(0.324)	(0.263)	(0.274)	(0.331)
DVlag	1.446***	1.512***	1.575***	1.382***
	(0.210)	(0.190)	(0.194)	(0.287)
CreditRating	-0.043*	-0.060***	-0.052***	-0.091***
	(0.023)	(0.018)	(0.017)	(0.031)
USIrates	0.017	0.033	0.038	0.102**
	(0.044)	(0.032)	(0.032)	(0.048)
Growth	-0.016	-0.005	-0.004	-0.023
	(0.018)	(0.011)	(0.011)	(0.020)
Inflation	-0.000	-0.000*	-0.000*	-0.000*
	(0.001)	(0.000)	(0.000)	(0.000)
Deficit	-0.002	0.001	0.004	-0.008
	(0.009)	(0.009)	(0.009)	(0.014)
Crisis	-0.072	0.063	0.000	-0.428**
	(0.137)	(0.125)	(.)	(0.170)
DebtService	-0.025	0.012	0.010	-0.010
	(0.026)	(0.027)	(0.028)	(0.038)
Reserves	-0.001	-0.001	-0.001	-0.003
	(0.001)	(0.001)	(0.001)	(0.002)
Democracy	-0.180	-0.150	-0.143	-0.208
	(0.112)	(0.099)	(0.103)	(0.215)
v2x_rule	0.359	0.482*	0.551*	-0.216
	(0.323)	(0.277)	(0.286)	(0.340)
PropRights	0.151	0.001	-0.013	1.415
	(0.479)	(0.433)	(0.445)	(0.878)
PolCycle	0.001***	0.001***	0.001**	0.001**
	(0.000)	(0.000)	(0.000)	(0.000)
UN_USalign	-0.557	-0.123	-0.407	-1.584
	(1.554)	(1.168)	(1.210)	(1.601)
UN_CHNalign	-0.718	-0.136	-0.512	-0.030
	(1.944)	(1.390)	(1.402)	(1.989)
N	425	593	548	368

Notes:

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

Same as Probit Models in Main Tables; Cluster-Robust Standard Errors in all models

Dependent Variable, Deficit, and PolCycle led one year (see DGP discussion)