

# **Monetary Constraints, Spending, and Autocratic Survival in Party-Based Regimes**

Cristina Bodea

Michigan State University

Ana Carolina Garriga

Essex University

Masaaki Higashijima

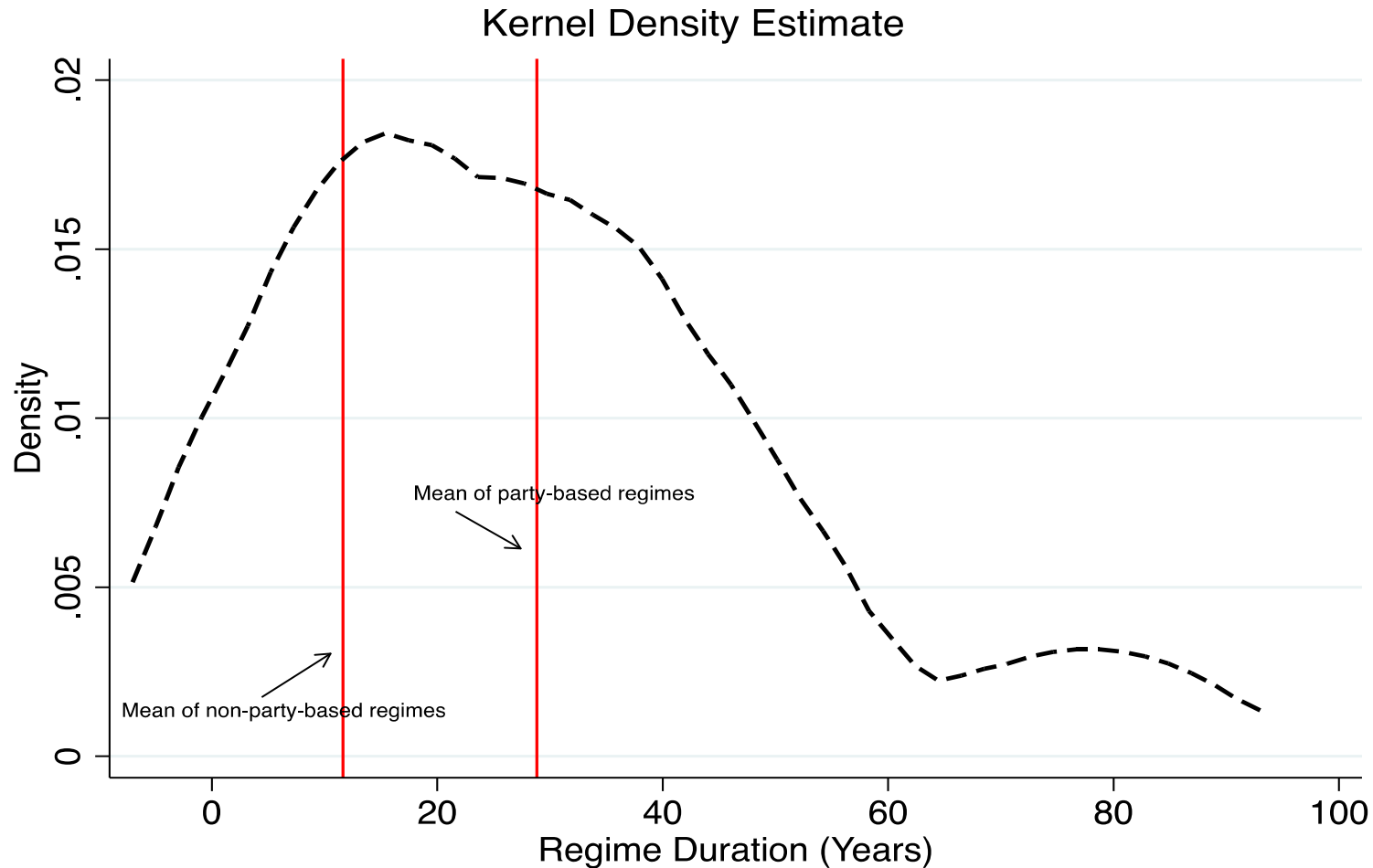
Tohoku University and University of Michigan

# Research question

Under what conditions do dominant party dictatorships collapse?

# Puzzle

- Dominant party regimes last longer
- BUT Variation in duration of dominant-party dictatorships



kernel = epanechnikov, bandwidth = 9.0315

# Upshots

## Argument:

Dominant party autocracies are more likely to collapse when autocrats face strong monetary constraints making it harder to spend

## Methods:

Cross-national analysis of 94 autocracies (1970-2012)

## Findings:

1. Autocracies tend to breakdown when the level of legal CBI is high but only under party-based regimes (robust to IV estimations)
2. High legal CBI is negatively correlated with fiscal expenditures only under party-based dictatorships

# Dominant party autocracies

“Control over policy, leadership selection, and the security apparatus is in the hands of a ruling party” (Geddes et al. 2014: 318)

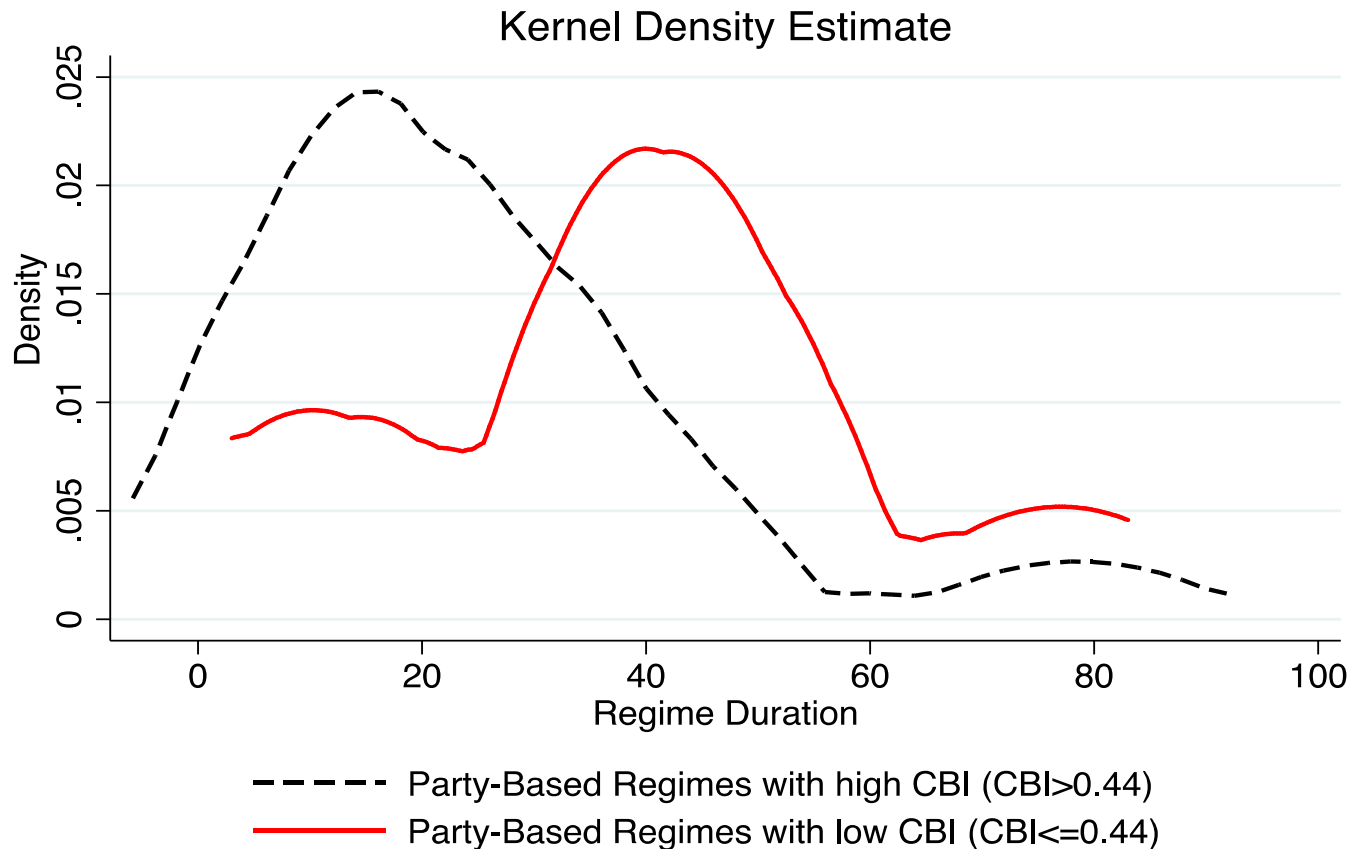
Two main functions:

1. Collective decision making within the party to solve commitment problems between the dictator and elites (Magaloni 2008; Svobik 2012)
1. Extensive, efficient patronage distribution to party members via party networks (Magaloni and Kricheli 2010; Greene 2010) = heavy reliance on party supporters to maintain rule )

⇒ Literature **assumes** the two functions work together to prolong the regimes

# Our point

In some cases **elite-level power-sharing constraint** makes it harder for dictators to **spend and buy-off supporters** via party networks



kernel = epanechnikov, bandwidth = 7.8249

# When CBI meets with dominant party...

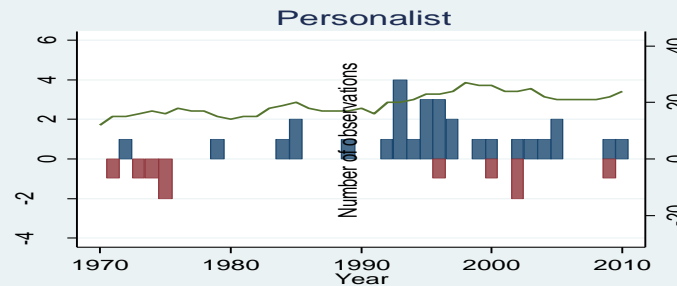
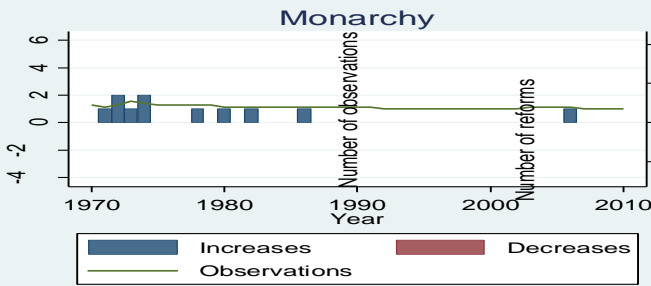
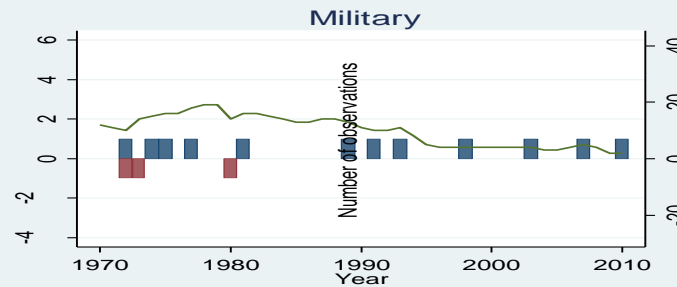
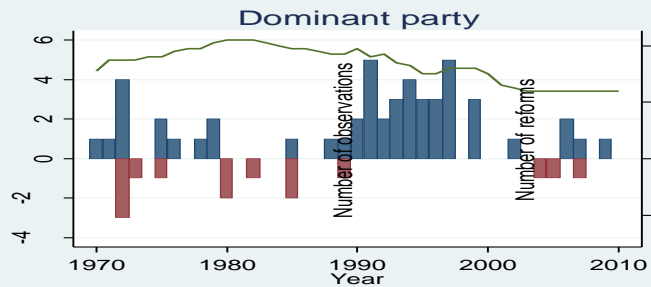
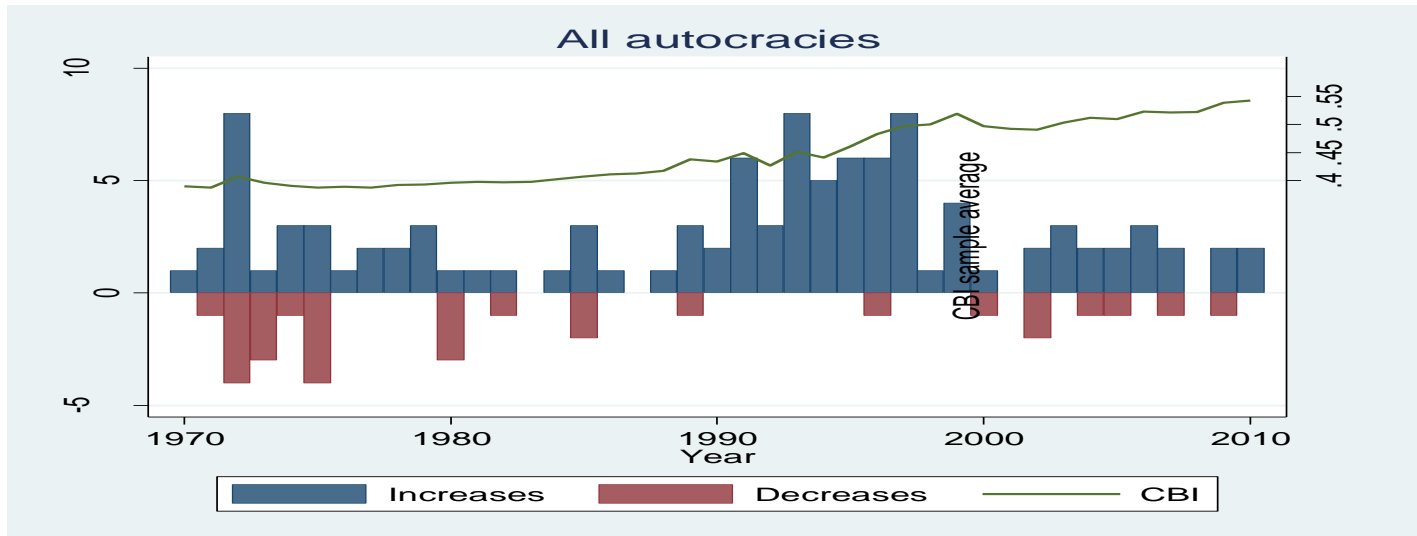
*De jure* CBI can be effective to prevent dictators' fiscal spending in dominant-party regimes. This makes regime breakdown more likely

## Mechanisms:

- Collective decision-making within the party imposes a variety of checks on the dictator, which work as **veto points** (Frantz and Ezrow 2011; Gehlbach and Keefer 2012)
- Constraints make it difficult for dictator to bypass central bankers, **limiting dictator's relentless spending to buy-off political support**
- The decreased volume of patronage distribution **increases potential for autocratic breakdown**

# CBI in autocracies

Central bank reforms not rare:





# Why do autocrats reform the central bank?

1. Try to signal the country's competence on economic issues to attract foreign investors

\*creditworthiness (Maxfield 1997); follow the global norm favoring CBI (McNamara 2003, Johnson 2016)

2. Deflect the blame for economic hardships

\* “scapegoat” central bankers for their policy failures; Georgia (2015), Liberia (2017) and Venezuela (2017)

## Reforms

- More reforms in the earlier years of authoritarian regimes than later in their tenure, the distribution of reforms throughout the autocratic rule is relatively uniform
- Percentage of observations experiencing central bank reforms is not especially high in the years before regime breakdown

# Mubarak's Egypt:

## Extensive patronage and dependent central bank

- A party-based regime (Brownlee 2007; Blaydes 2010; Geddes et al. 2014)
- Two central bank reforms: 1975 and 2003 => weakened the autonomy of the central bank



\* The bank's governor could hold other public offices; subordinate price stability to the government's fiscal policy; shorten the term of the governor's tenure; weak limits to the government's ability to use the bank's credit etc

“Fiscal and monetary policy authority, therefore, is highly centralized in the executive branch with the president and his cabal of experts essentially free to act without restriction” (Blaydes 2011: 79)

- A variety of methods to distribute patronage to party supporters under the regime: vote-buying, pension raises, bonuses payment for government employees etc

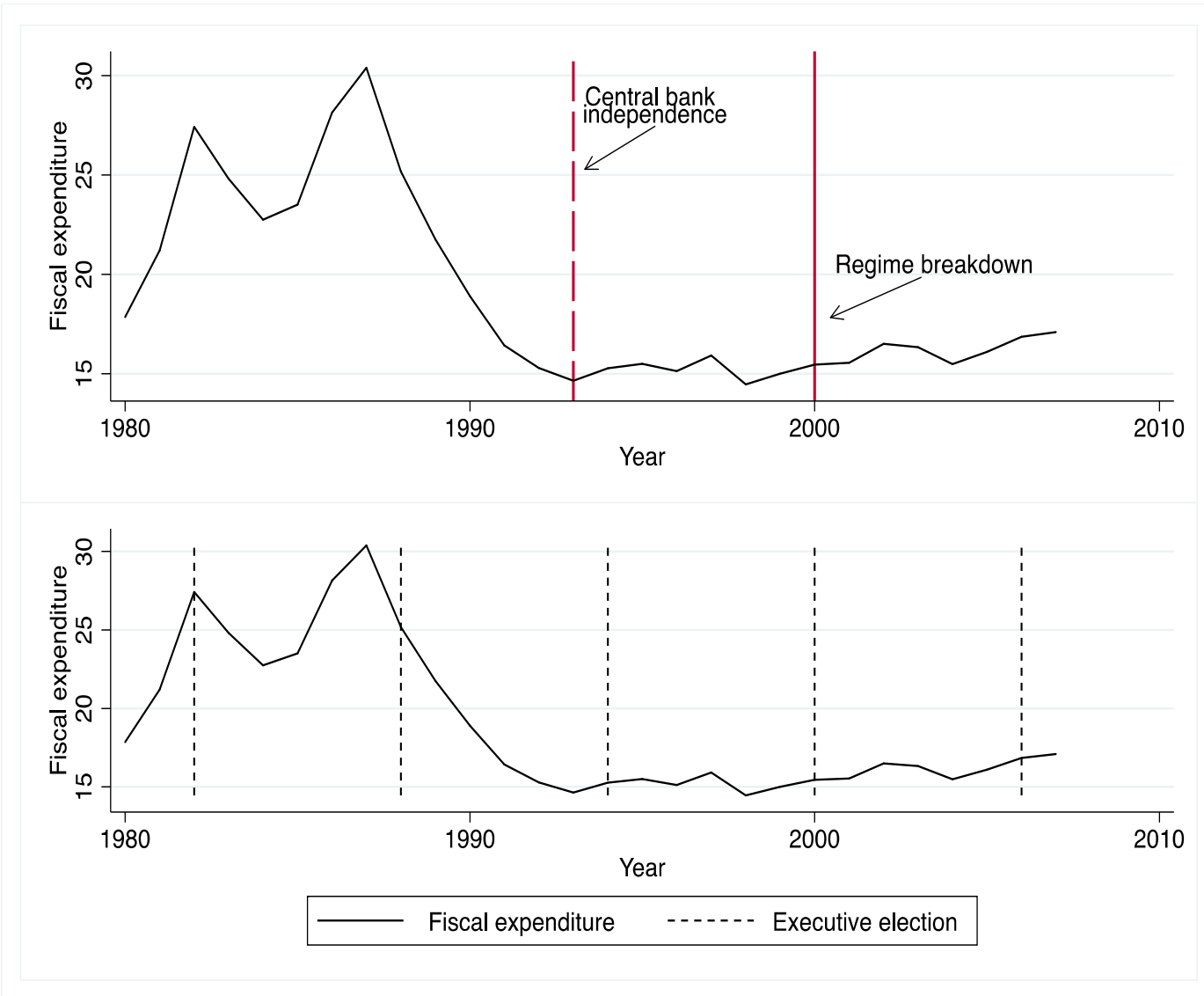
## PRI's Mexico:

### Reduced spending and independent central bank

- Another typical party-based regime (Magaloni 2006; Geddes et al. 2014), which collapsed in 2000
- Central bank reform in 1993
- The purpose was to signal the country's competence on economic policy (to attract foreign capital after the failure of the NAFTA negotiation)
- After the reform, fiscal expenditures were constrained with little fluctuation and became insensitive to election cycles
- The reduced volume of fiscal expenditures likely contributed to the historical victory by the opposition in 2000



# Fiscal expenditures in Mexico



# Hypothesis

## Hypothesis:

Dominant party autocracies are more likely to experience regime breakdown as legal CBI becomes higher

Additional observable implication: CBI is negatively associated with fiscal spending only under dominant party autocracies

# Data and dependent variables

Sample: 94 autocratic countries (1970-2012)

Dependent variable: Autocratic regime breakdown  
(Geddes et al. 2014)

\*1 if an autocratic country experiences regime breakdown

Regime breakdown == “fundamental changes in the formal and informal rules that identify the group from which leaders can be chosen and determine who can influence policy (the leadership group)”

# Core independent variables

- Dominant party autocracies (Geddes et al. 2014; binary)
  - Vs. military, personalist, and monarchic regimes
- CBI (Garriga 2016, continuous 0.0-1.0): larger values indicate higher legal central bank independence
  - \*The coding scheme is based on Cukierman et al. 1992
- Interaction term between the two variables

# Estimation methods

1. **Ordinary probit** with regional-/year- fixed effects and time splines
2. **Ordinary probit with unit means** ( $\hat{=}$  country FE) + regional-/ year-fixed effects and time splines
3. **IV probit and IV regression models** with regional-/year- fixed effects and time splines

\*Setting neighbors' mean of CBI and its interaction with party-based regimes (one-year lagged and 5 year lagged) as instruments for CBI and the interaction term

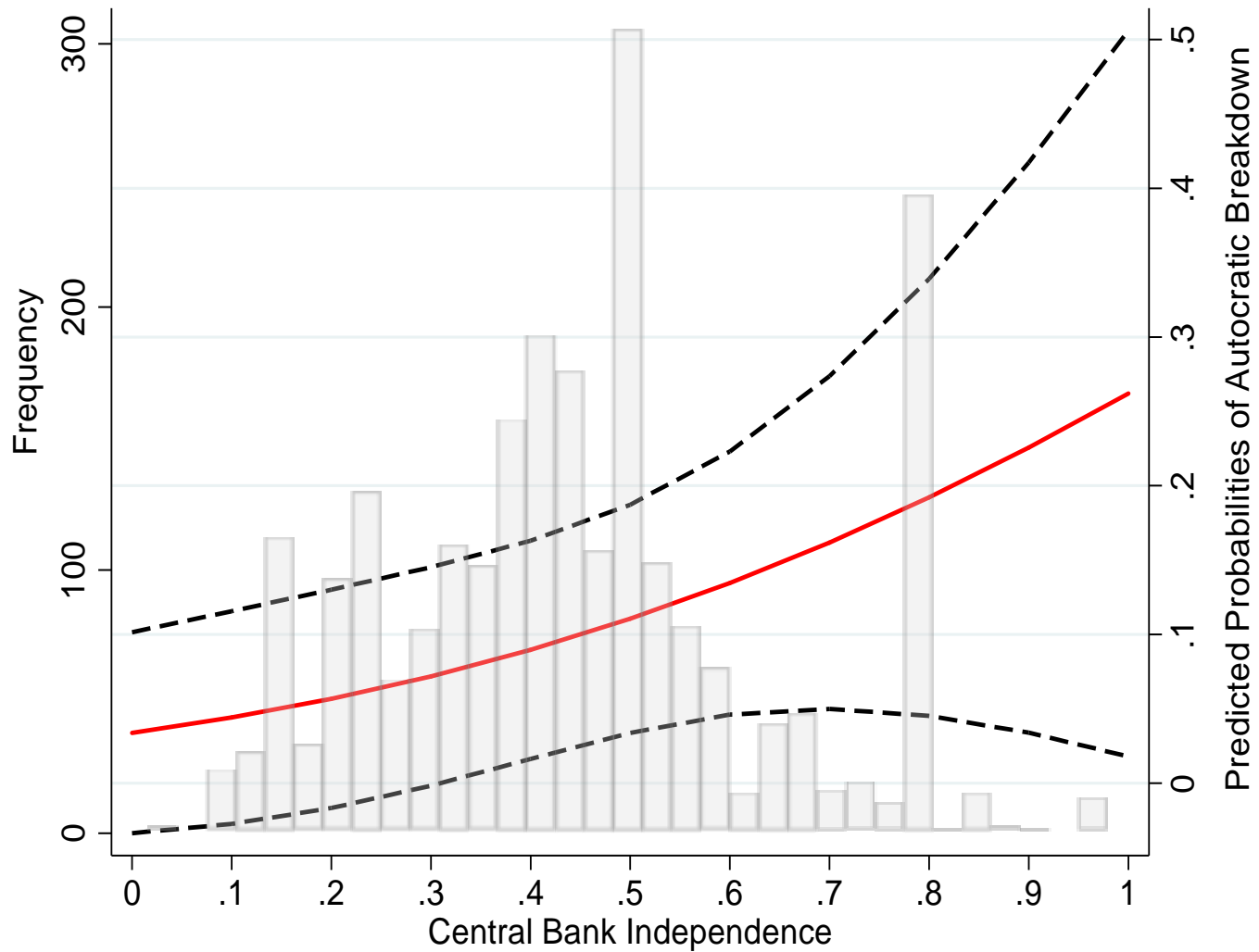
Controls: GDP per capita, logged population, oil-gas value per capita, trade openness, neighbors' mean of democracy (based on Geddes et al. 2015 and Escriba-Folch and Wright 2014), and **neighbors' proportion of autocratic breakdown**



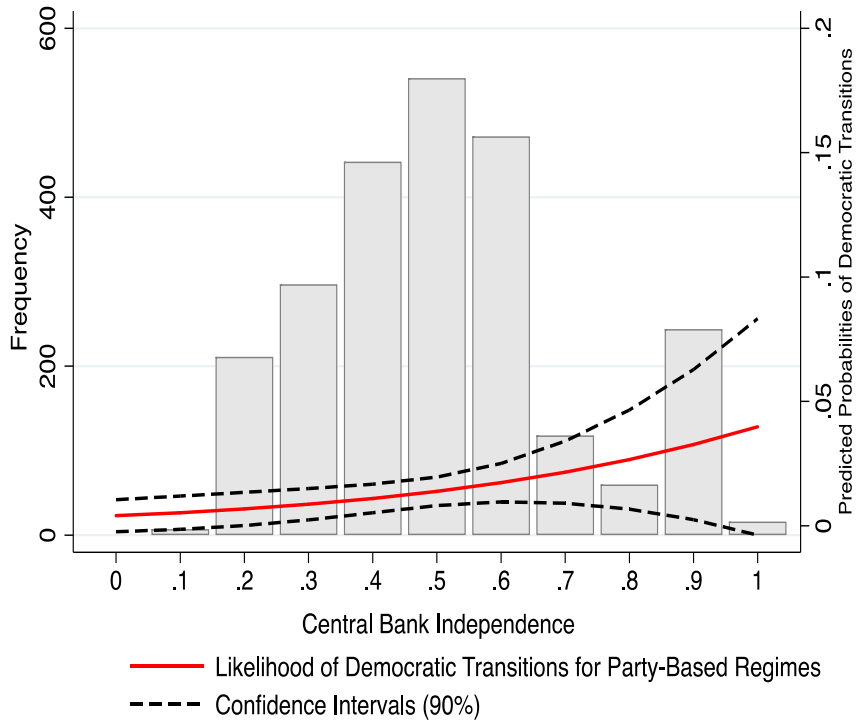
# Regime change, CBI and dominant party regimes

DV: Regime Breakdown	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Estimation method	Probit	Probit	Probit & Unit Means	Probit & CBI - 5 YR lagged	IV Probit	IV Reg
Central Bank Independence (CBI)	0.206 (0.238)	0.000693 (0.274)	-0.903 (0.611)	0.116 (0.312)	-0.945 (1.044)	-0.108 (0.113)
Party-Based Autocracies	-0.429*** (0.133)	-0.932*** (0.285)	-0.697 (0.446)	-1.071*** (0.287)	-1.547** (0.609)	-0.122** (0.057)
CBI*Party-Based		1.036** (0.517)	2.357*** (0.697)	1.156** (0.545)	2.086* (1.231)	0.166 (0.113)
Logged GDP per capita	-0.0342 (0.062)	-0.036 (0.065)	-0.185 (0.239)	-0.0193 (0.083)	-0.029 (0.079)	-0.010 (0.008)
Logged Population	-0.0552 (0.058)	-0.0563 (0.059)	-0.028 (0.372)	-0.0157 (0.062)	-0.053 (0.066)	-0.008 (0.005)
Oil-Gas Value per capita	(0.031)	-0.031 (0.025)	0.04660 (0.077)	-0.032 (0.029)	-0.030 (0.031)	-0.001 (0.003)
Trade Openness	-0.003 (0.002)	-0.003 (0.002)	(0.001) (0.004)	-0.002 (0.002)	-0.002 (0.002)	-0.0001 (0.000)
Neighbor Democracy	0.020 (0.018)	0.0194 (0.018)	0.0123 (0.025)	0.013 (0.023)	0.015 (0.022)	0.00029 (0.0021)
Neighbors' Autocratic Breakdown					0.489 (0.644)	0.0641 (0.0881)
Constant	-0.138 (1.136)	-0.023 (1.193)	-1.273 (1.202)	-0.138 (1.136)	0.358 (1.485)	0.374*** (0.142)
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Region Dummies	Yes	Yes	Yes	Yes	Yes	Yes
Time Dependence and Cubic Splines	Yes	Yes	Yes	Yes	Yes	Yes
Wald Test of Exogeneity (p value)					0.629	N/A
Kleibergen-Paap Wald F Statistic						42.452
Stock-Yogo weak ID test 5% critical values						11.04
Hansen J Statistic (p value)						0.395
Observations	1,918	1,918	1,918	1,560	1,647	1,647
Number of Countries	94	94	94	89	91	91
Log Pseudolikelihood	-373.76	-372.35	-360.14	-297.29	2569.61	

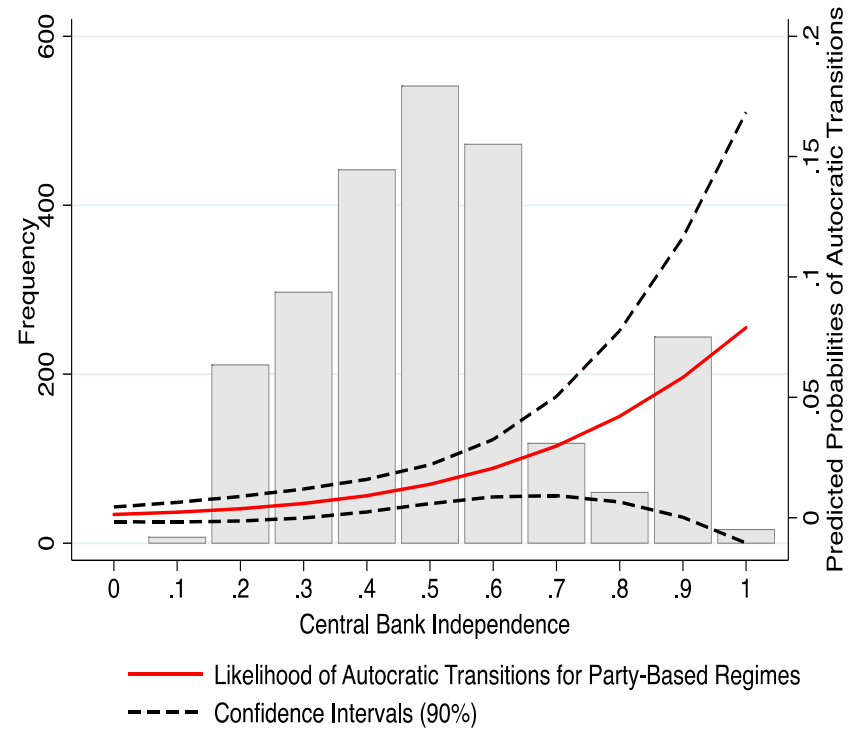
# Results: Autocratic breakdown



# Results: Regime transitions



Democratic Transitions



Autocratic Transitions

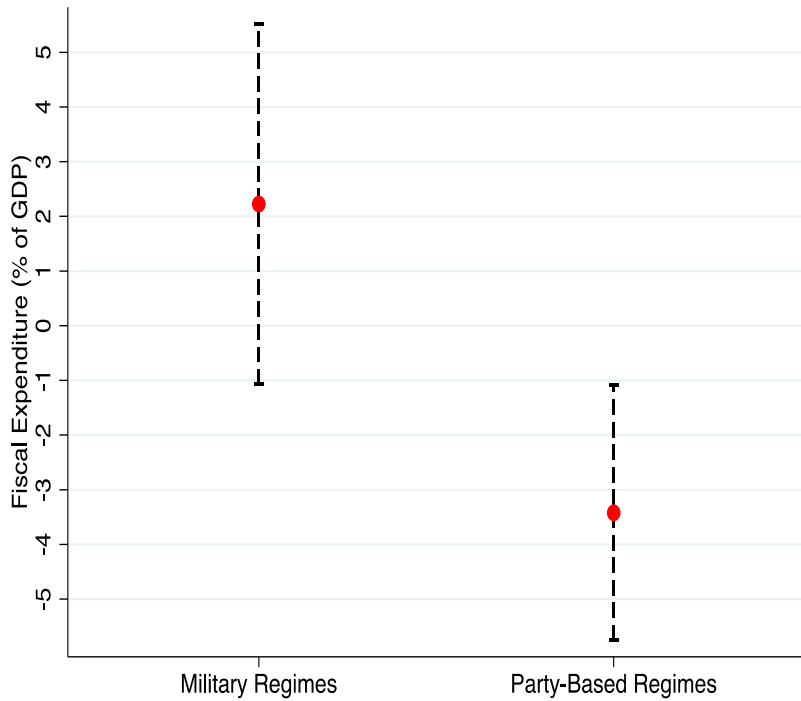
# Exploring causal mechanism: spending

- Dependent variable -- **fiscal expenditure** (% of GDP): Global data (1948-2015)
- Key Independent variables – CBI, party-based regime, and their interactions
- Controls – election year, autocratic regime types, democracy, GDP per capita, growth, oil, capital openness, trade openness, population over 65, exchange rate regimes, (based on Bodea and Higashijima [2015])
- Country Fixed Effects with year dummies and clustered robust standard errors

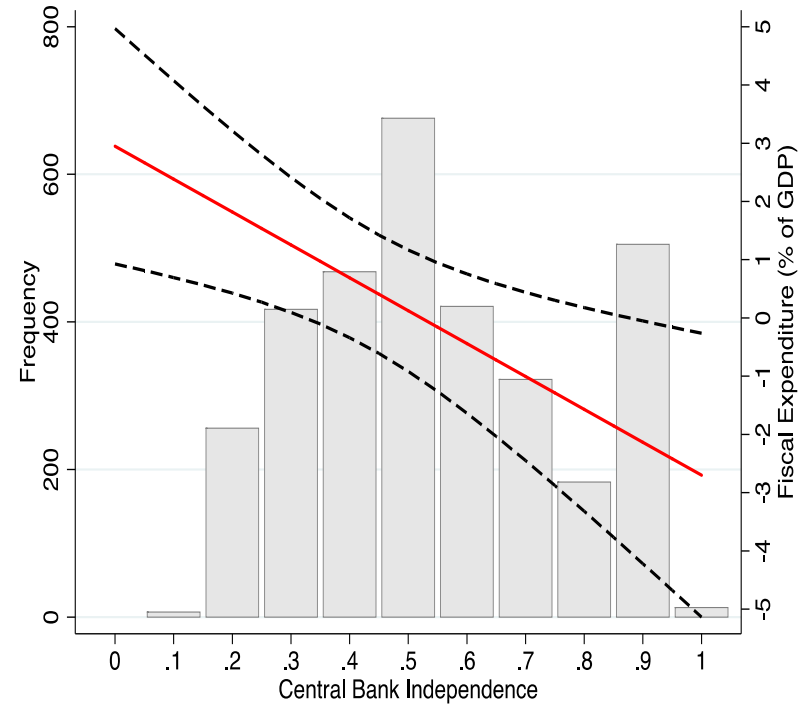
# Fiscal outcomes, CBI and dominant party regimes

	Model 7	Model 8
DV	Expenditure	Expenditure
Sample	All Countries	All Countries
Method	Country FE	Country FE
Lagged Dependent Variable	0.748***	0.745***
	(0.028)	(0.029)
Central Bank Independence (CBI)	0.439	2.225
	(0.825)	(2.004)
Party-Based Autocracies	0.462	2.948**
	(0.563)	(1.228)
CBI*Party-Based		-5.648**
		(2.409)
Election Years	0.228*	0.219
	(0.135)	(0.135)
Democracies	0.821***	1.406**
	(0.305)	(0.693)
CBI*Democracies		-1.716
		(1.824)
Personalist	-0.0397	(0.319)
	(0.513)	(1.061)
CBI*Personalist		0.012
		(1.999)
Monarchy	2.804	3.310*
	(1.704)	(1.982)
CBI*Monarchy		-0.906
		(3.031)
Logged GDP per capita	-0.139	-0.121
	(0.419)	(0.429)
GDP Growth	-0.00113	-0.00427
	(0.020)	(0.020)
Oil-Gas Value per capita	0.000127*	0.000121*
	(0.000)	(0.000)
Capital Openness	-0.094	-0.103
	(0.101)	(0.100)
Trade Openness	0.00734	0.00816
	(0.007)	(0.007)
Population over 65	0.113	0.104
	(0.106)	(0.106)
Fixed Exchange Rate Regimes	0.116	0.0845
	(0.218)	(0.221)
Constant	5.198	4.455
	(3.142)	(3.150)
Year Fixed Effects	Yes	Yes
Country Fixed Effects	Yes	Yes
Observations	3,258	3,258
Number of Countries	126	126

# Additional tests: spending



Marginal of CBI



Marginal of dominant party autocracies

# Robustness Checks

1. Different measures of democracy: Boix et al. (2011), CGV (2009), and Polity IV
2. Possible error correlation within regions: Region-clustered standard errors
3. Time dependence: Cubic time polynomials (Carter and Signorino 2010) instead of cubic splines
4. Additional controls: economic growth, coup risk, anti-government collective action, multiple opposition parties, and colonial origins
5. Jackknife analysis by excluding a country and region one by one to consider possible outliers

# Conclusions

- Dictatorships become vulnerable to regime change when autocrats are constrained from manipulating fiscal policy
- CBI may work as a spending constraint via monetary policy
- This happens only in dominant party autocracies where the autocrats need to integrate diverse policy preferences

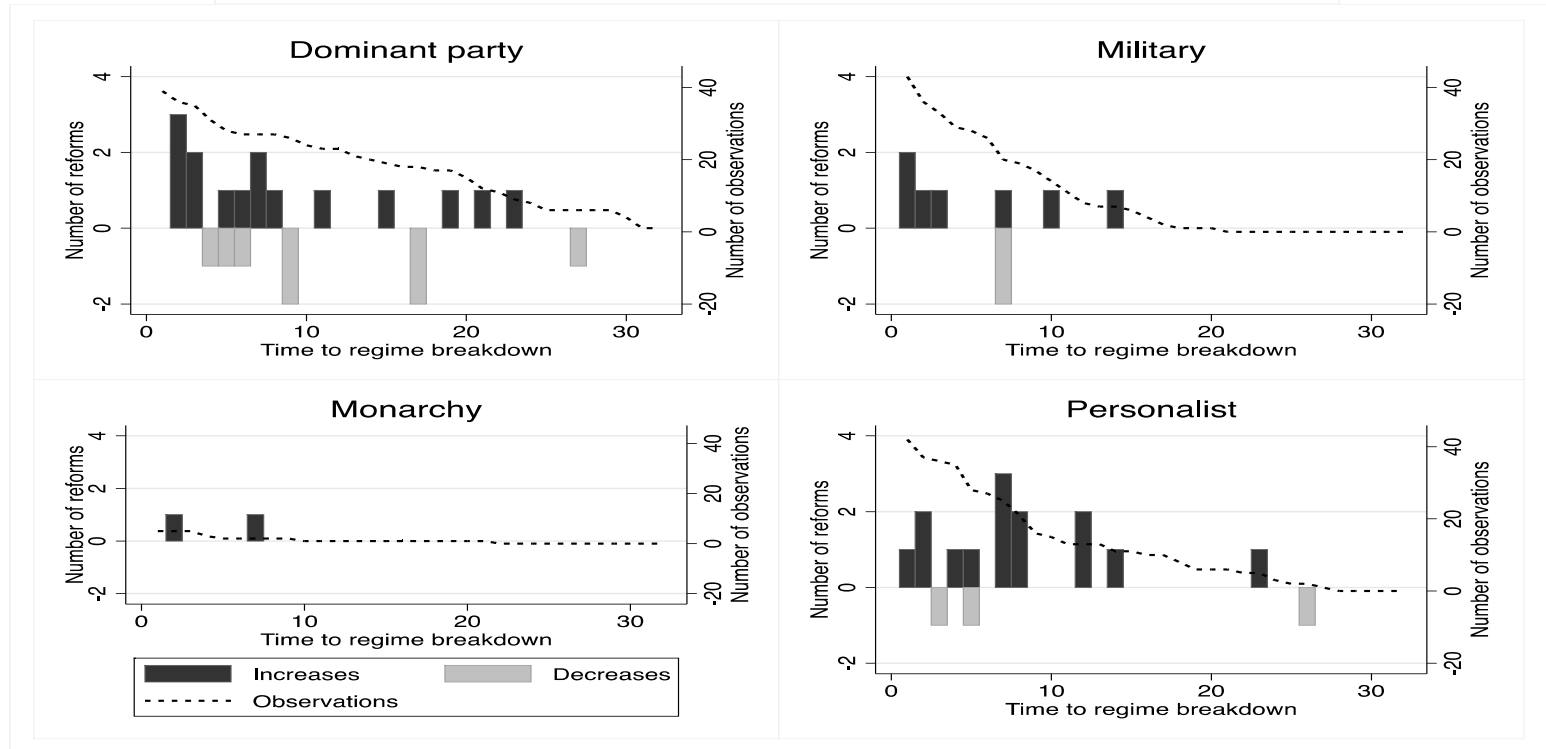
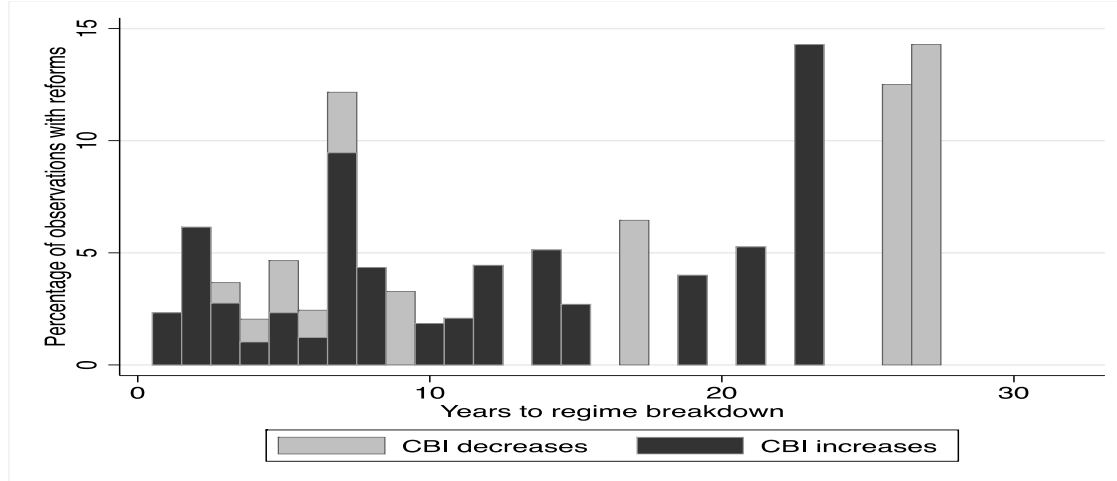


**Thanks for your attention!**

# CBI reforms in autocracies

Regime	N	CBI reforms		CBI level	
		Decreases	Increases	Average	Median
Dominant party	1,356	14 (1%)	50 (3.7%)	.412	.436
Military regime	399	4 (1%)	12 (3%)	.401	.368
Monarchy	322	0	11 (3.4%)	.416	.483
Personalist dictator	789	10 (1.3%)	29 (3.7%)	.521	.501
Democracy	2,183	28 (1.2%)	174 (8%)	.521	.480
Full sample	6,753	56 (.8%)	276 (4.1%)	.476	.490

# Central Bank Reforms and Years to Regime Breakdowns



# Regime Transitions

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
DV	Democratic Transitions	Democratic Transitions	Democratic Transitions	Autocratic Transitions	Autocratic Transitions	Autocratic Transitions
Estimation Methods	Probit	Probit	Probit & Unit Means	Probit	Probit	Probit & Unit Means
Central Bank Independence (CBI)	-0.135 (0.350)	-0.424 (0.384)	-1.029 (0.771)	0.239 (0.297)	-0.0699 (0.331)	-0.191 (0.853)
Party-Based Autocracies	-0.685*** (0.156)	-1.362*** (0.429)	-0.915 (0.650)	-0.365** (0.170)	-1.306*** (0.495)	-1.544** (0.671)
<b>CBI*Party-Based</b>		<b>1.471*</b> <b>(0.788)</b>	<b>2.612**</b> <b>(1.279)</b>		<b>1.801**</b> <b>(0.900)</b>	<b>3.463***</b> <b>(0.910)</b>
Logged GDP per capita	0.081 (0.073)	0.083 (0.077)	0.3480 (0.340)	-0.233** (0.100)	-0.253** (0.101)	-0.510* (0.265)
Logged Population	-0.0185 (0.065)	-0.018 (0.066)	1.421** (0.617)	-0.122* (0.066)	-0.134** (0.067)	-0.252 (0.608)
Oil-Gas Value per capita	-0.00514 (0.029)	-0.006 (0.029)	0.150 (0.094)	0.0137 (0.031)	0.018 (0.031)	0.017 (0.078)
Trade Openness	-0.00297 (0.002)	-0.003 (0.002)	0.0031 (0.004)	-0.001 (0.002)	-1.30E-03 (0.003)	0.001 (0.004)
Neighbor Democracy	0.0736*** (0.021)	0.0716*** (0.022)	0.0612** (0.0310)	0.0048 (0.024)	0.00533 (0.024)	0.002 (0.037)
Constant	-2.240* (1.191)	-2.176* (1.235)	-3.181** (1.425)	1.25 (1.522)	1.727 (1.527)	1.519 (1.908)
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Region Dummies	Yes	Yes	Yes	Yes	Yes	Yes
Time Dependence and Cubic Splines	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1,918	1,918	1,918	1,918	1,918	1,918
Number of Countries	94	94	94	94	94	94
Log Pseudolikelihood	-229.94	-288.28	-211.89	-211.47	-209.19	-203.98

# Alternative Measures of Democracy and Dictatorship

	Model 1-1	Model 1-2	Model 1-3	Model 1-4	Model 1-5	Model 1-6
DV	Autocratic	Autocratic	Autocratic	Autocratic	Autocratic	Autocratic
Estimation Methods	Probit	Probit Unit Means	Probit	Probit Unit Means	Probit	Probit Unit Means
Political Regime Variable	Boix et al.	Boix et al.	Cheibub et al.	Cheibub et al.	Polity IV < 6	Polity IV < 6
Central Bank Independence (CBI)	-0.0993 (0.295)	-1.441*** (0.494)	0.0788 (0.299)	-1.251** (0.544)	-0.1 (0.298)	-0.946 (0.595)
Party-Based Autocracies	-1.040*** (0.290)	-0.959** (0.448)	-1.205*** (0.326)	-1.005** (0.484)	-1.092*** (0.323)	-0.958** (0.478)
<b>CBI*Party-Based</b>	<b>1.043*</b> <b>(0.534)</b>	<b>2.091***</b> <b>(0.763)</b>	<b>1.318**</b> <b>(0.564)</b>	<b>2.342***</b> <b>(0.780)</b>	<b>1.251**</b> <b>(0.557)</b>	<b>2.669***</b> <b>(0.733)</b>
Logged GDP per capita	0.023 (0.068)	-0.1100 (0.248)	0.0275 (0.059)	0.001 (0.242)	-0.0161 (0.066)	-0.064 (0.218)
Logged Population	-0.074 (0.060)	-0.4010 (0.368)	-0.033 (0.062)	-0.241 (0.380)	-0.0412 (0.060)	-0.012 (0.329)
Oil-Gas Value per capita	-0.024 (0.026)	0.104 (0.074)	-0.0238 (0.025)	0.033 (0.070)	-0.0215 (0.024)	0.064 (0.068)
Trade Openness	-0.00383** (0.002)	0.0024 (0.003)	-3.13E-03 (0.002)	0.002 (0.004)	-1.21E-03 (0.002)	0.002 (0.003)
Neighbor Democracy	0.026 (0.017)	0.0439* (0.0249)	0.0312* (0.017)	0.032 (0.026)	0.00857 (0.017)	0.005 (0.023)
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Region Dummies	Yes	Yes	Yes	Yes	Yes	Yes
Time Dependence and Cubic Splines	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1,672	1,672	1,666	1,666	1,940	1,940
Number of Countries	95	95	89	89	100	100
Log Pseudolikelihood	-343.88	-332.88	-326.92	-317.12	-388.22	-376.71

# Different estimators

	Model 2-1	Model 2-2	Model 2-3	Model 2-4	Model 2-5	Model 2-6
DV	Autocratic Breakdown	Autocratic Breakdown	Autocratic Breakdown	Autocratic Breakdown	Autocratic Breakdown	Autocratic Breakdown
Estimation Methods	Probit	Probit & Unit Means	Probit	Probit & Unit Means	Probit	Probit & Unit Means
	Region Clustered SE	Region Clustered SE	RE Probit	RE Probit	Time Polynomials	Time Polynomials
Central Bank Independence (CBI)	0.000693 (0.230)	-0.903* (0.505)	0.000694 (0.301)	-0.904 (0.638)	0.0104 (0.276)	-0.883 (0.614)
Party-Based Autocracies	-0.932*** (0.091)	-0.697* (0.358)	-0.932*** (0.334)	-0.697 (0.465)	-0.937*** (0.286)	-0.703 (0.449)
CBI*Party-Based	1.036*** (0.263)	2.357*** (0.585)	1.036* (0.617)	2.357*** (0.867)	1.024** (0.514)	2.352*** (0.695)
Logged GDP per capita	-0.036 (0.105)	-0.1850 (0.354)	-0.0364 (0.074)	-0.185 (0.244)	-0.0356 (0.064)	-0.181 (0.236)
Logged Population	-0.056 (0.048)	-0.0280 (0.421)	-0.0563 (0.060)	-0.028 (0.351)	-0.0571 (0.060)	-0.033 (0.379)
Oil-Gas Value per capita	-0.031 (0.034)	0.047 (0.098)	-0.0312 (0.026)	0.047 (0.062)	-0.0299 (0.025)	0.048 (0.076)
Trade Openness	-0.003 (0.002)	-0.0009 (0.003)	-2.53E-03 (0.002)	-0.001 (0.003)	-2.53E-03 (0.002)	-0.001 (0.004)
Neighborhood Democracy	0.0194 (0.012)	0.0123 (0.0106)	0.0194 (0.018)	0.012 (0.029)	0.0204 (0.018)	0.012 (0.025)
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Region Dummies	Yes	Yes	Yes	Yes	Yes	Yes
Time Dependence and Cubic Splines	Yes	Yes	Yes	Yes	Time Polynomials	Time Polynomials
Observations	1,918	1,918	1,918	1,918	1,918	1,918
Number of Countries	94	94	94	94	94	94
Log Likelihood			-372.35	-360.14		
Log Pseudolikelihood	-372.35	-360.14			-371.76	-359.49

# Additional controls

	Model 3-1	Model 3-2	Model 3-3	Model 3-4	Model 3-5	Model 3-6	Model 3-7	Model 3-8	Model 3-9	Model 3-10
DV	Autocratic Breakdown	Autocratic Breakdown	Autocratic Breakdown	Autocratic Breakdown	Autocratic Breakdown	Autocratic Breakdown	Autocratic Breakdown	Autocratic Breakdown	Autocratic Breakdown	Autocratic Breakdown
Estimation Methods	Probit	Probit & Unit Means	Probit	Probit & Unit Means	Probit	Probit & Unit Means	Probit	Probit & Unit Means	Probit	Probit & Unit Means
Central Bank Independence (CBI)	0.00197 (0.295)	-0.92 (0.591)	0.033 (0.323)	-0.637 (0.550)	0.039 (0.296)	-0.984 (0.659)	-0.0124 (0.304)	-1.029 (0.676)	0.0461 (0.302)	-0.659 (0.557)
Party-Based Autocracies	-0.906*** (0.293)	-0.561 (0.467)	-0.849*** (0.294)	-0.425 (0.456)	-0.900*** (0.295)	-0.697 (0.464)	-0.889*** (0.302)	-0.702 (0.461)	-0.862*** (0.297)	-0.575 (0.449)
<b>CBI*Party-Based</b>	<b>0.974*</b> <b>(0.509)</b>	<b>1.905**</b> <b>(0.742)</b>	<b>0.980*</b> <b>(0.533)</b>	<b>2.120***</b> <b>(0.806)</b>	<b>0.928*</b> <b>(0.518)</b>	<b>2.175***</b> <b>(0.751)</b>	<b>0.901*</b> <b>(0.524)</b>	<b>2.118***</b> <b>(0.735)</b>	<b>0.902*</b> <b>(0.530)</b>	<b>2.096***</b> <b>(0.716)</b>
Logged GDP per capita	0.027 (0.067)	-0.2070 (0.256)	-0.0775 (0.056)	-0.182 (0.251)	-0.00422 (0.067)	-0.0896 (0.253)	-0.0174 (0.069)	-0.149 (0.253)	-0.0173 (0.062)	-0.0957 (0.242)
Logged Population	-0.060 (0.061)	-0.1490 (0.398)	-0.121** (0.058)	-0.0728 (0.379)	-0.0552 (0.061)	0.0182 (0.382)	-0.0575 (0.062)	-0.0171 (0.389)	-0.0432 (0.062)	0.0637 (0.386)
Oil-Gas Value per capita	-0.040 (0.028)	0.068 (0.086)	-0.0225 (0.026)	0.0762 (0.084)	-0.0365 (0.027)	0.0639 (0.080)	-0.033 (0.028)	0.0647 (0.081)	-0.0461 (0.029)	0.0485 (0.082)
Trade Openness	-0.00334* (0.002)	-0.0013 (0.004)	-0.0024 (0.002)	-0.00196 (0.004)	-0.00305* (0.002)	-0.00343 (0.004)	-0.00288 (0.002)	-0.00323 (0.004)	-0.00192 (0.002)	-0.000885 (0.004)
Neighbor Democracy	0.0313 (0.020)	0.0229 (0.029)	0.0156 (0.018)	0.0134 (0.025)	0.0181 (0.019)	0.0155 (0.027)	0.018 (0.020)	0.014 (0.028)	0.0192 (0.018)	0.0108 (0.026)
GDP Growth	-0.0300*** (0.008)	-0.0288*** (0.008)	-0.0212*** (0.007)	-0.0196*** (0.007)	-0.0313*** (0.008)	-0.0315*** (0.008)	-0.0310*** (0.008)	-0.0307*** (0.008)	-0.0288*** (0.008)	-0.0276*** (0.008)
Electoral Authoritarianism	-0.245** (0.103)	-0.168 (0.106)								
Logged Protests			0.310*** (0.066)	0.321*** (0.067)						
History of Coup Attempt (5 Years)					0.0267 (0.143)	0.0449 (0.135)				
History of Coup Attempt (10 Years)							-0.0307 (0.134)	-0.0166 (0.136)		
British Colony									-0.165 (0.148)	-0.193 (0.172)
French Colony									-0.136 (0.140)	-0.168 (0.167)
Spanish Colony									0.322 (0.222)	0.275 (0.217)
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Region Dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Time Dependence and Cubic Splines	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1,867	1,867	1,890	1,890	1,884	1,884	1,808	1,808	1,916	1,916
Number of Countries	94	94	94	94	94	94	94	94	94	94
Log Pseudolikelihood	-352.38	-341.51	-345.3	-332.28	-355.08	-344.43	-349.14	-338.92	-364.15	-352.84

# Additional analysis for the spending mechanism

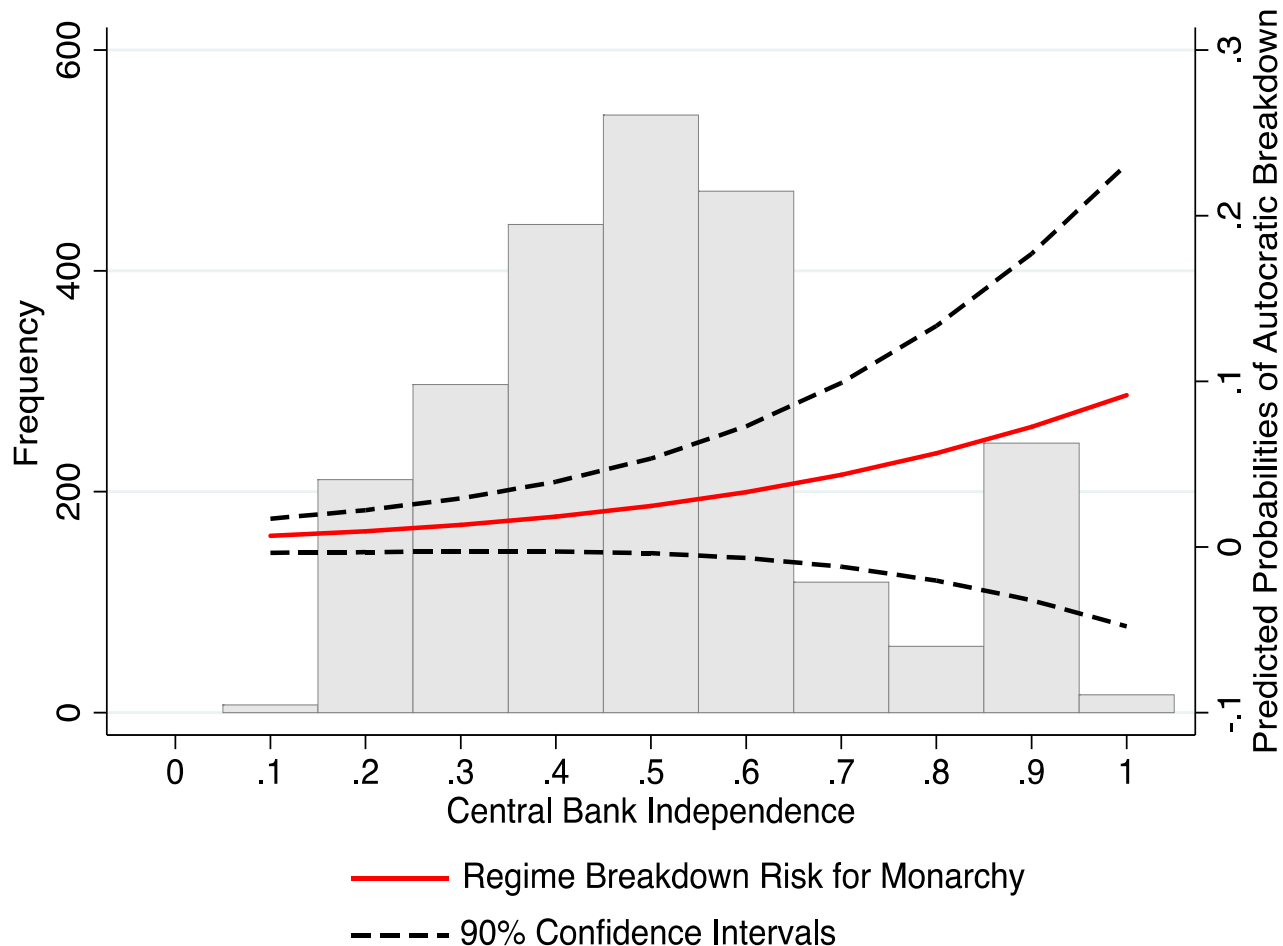
	Model F-1	Model F-2	Model F-3
DV	Expenditure	Expenditure	Expenditure
Sample	Autocracy	All Countries	All Countries
Reference Category	Military	Personalist	Monarchy
Lagged Dependent Variable	0.705*** (0.028)	0.746*** (0.028)	0.747*** (0.029)
Central Bank Independence (CBI)	2.749 (2.071)	2.609 (1.856)	2.109 (1.992)
Party-Based Autocracies	4.975*** (1.820)	3.146** (1.325)	0.765 (1.422)
<b>CBI*Party-Based</b>	<b>-9.455*** (2.854)</b>	<b>-5.925*** (2.263)</b>	<b>-5.425** (2.426)</b>
Election Years	0.397 (0.240)	0.214 (0.134)	0.209 (0.134)
Democracies		1.628* (0.965)	-0.594 (1.074)
CBI*Democracies		-2.119 (1.925)	-1.642 (2.152)
Military Regime		0.581 (1.014)	-1.561 (1.186)
CBI*Military		-1.985 (2.023)	-1.743 (2.432)
Personalist Regime	0.0419 (1.722)		-2.260* (1.258)
CBI*Personalist	-0.546 (2.507)		0.138 (2.137)
Monarchy	6.730*** (2.220)	3.512* (2.064)	
CBI*Monarchy	-2.359 (2.939)	-1.293 (2.888)	
Logged GDP per capita	-0.251 (0.555)	-0.0996 (0.419)	-0.0768 (0.431)
GDP Growth	0.032 (0.027)	-0.00356 (0.020)	-0.00262 (0.020)
Oil-Gas Value per capita	0.000258*** (0.000)	0.000120* (0.000)	0.000127* (0.000)
Capital Openness	-0.275* (0.148)	-0.112 (0.100)	-0.104 (0.100)
Trade Openness	0.00797 (0.009)	0.00828 (0.007)	0.00925 (0.007)
Population over 65	0.137 (0.233)	0.108 (0.106)	0.121 (0.106)
Fixed Exchange Rate Regimes	-0.522 (0.355)	0.0951 (0.218)	0.0897 (0.219)
Year Fixed Effects	Yes	Yes	Yes
Country Fixed Effects	Yes	Yes	Yes
Observations	1,458	3,258	3,258
Number of Countries	115	126	126



# Different reference categories

	Model G-1	Model G-2	Model G-3
DV	Regime Breakdown	Regime Breakdown	Regime Breakdown
Method	Probit	Probit	Probit
Central Bank Independence (CBI)	0.121 (0.239)	0.421 (0.293)	0.353 (0.296)
Monarchic Autocracies	-0.956*** (0.332)		
CBI*Monarchy	1.273* (0.652)		
Military		0.736** (0.295)	
CBI*Military		-0.819 (0.640)	
Personalist			0.229 (0.286)
CBI*Personalist			-0.396 (0.515)
Logged GDP per capita	-0.078 (0.063)	-0.0868 (0.068)	-0.0556 (0.065)
Logged Population	-0.0861 (0.063)	-0.081 (0.055)	-0.0671 (0.060)
Oil-Gas Value per capita	-0.038 (0.025)	-0.0348 (0.025)	-0.0384 (0.026)
Trade Openness	-0.00371** (0.002)	-0.00345* (0.002)	-0.00328* (0.002)
Neighbor Democracy	0.013 -0.0191	0.0212 (0.019)	0.0126 (0.019)
Year Fixed Effects	Yes	Yes	Yes
Region Dummies	Yes	Yes	Yes
Time Dependence and Cubic Spline	Yes	Yes	Yes
Observations	1,918	1,918	1,918
Number of Countries	94	94	94
Log Pseudolikelihood	-377.61	-375.38	-379.23

# Marginal Effect of Monarchy on Autocratic Breakdown Conditional on CBI



# First model in IV probit

Method Dependent Variable	IV Probit	
	CBI	CBI*Party
Neighbors' CBI (t-1)	0.752*** (0.262)	-0.147 (0.124)
Neighbors' CBI*Party (t-1)	0.377 (0.275)	1.275*** (0.254)
Neighbors' CBI (t-6)	0.0813 (0.216)	0.294** (0.126)
Neighbors' CBI*Party (t-6)	0.141 (0.097)	-0.041 (0.050)
Party	-0.206* (0.124)	-0.0925 (0.108)
Logged GDP per capita	-0.016 (0.016)	0.001 (0.011)
Logged Population	-0.0293** (0.013)	-0.0104 (0.008)
Oil-Gas Value per capita	0.00696 (0.005)	0.00359 (0.003)
Trade Openness	-0.000269 (0.000)	-0.000272 (0.000)
Neighbor Democracy	-0.00654 (0.006)	-0.000549 (0.004)
Neighbors' Autocratic Breakdown (mean)	0.0237 (0.058)	0.0195 (0.028)
Constant	0.615** (0.299)	0.0892 (0.190)
Year Fixed Effects	Yes	Yes
Region Dummies	Yes	Yes
Time Dependence and Cubic Splines	Yes	Yes
Observations	1647	1647
Number of Countries	91	91

# The exclusionary restriction condition of the instruments

Method	Probit
CBI	-1.14 (0.877)
CBI*Party	2.376** (1.030)
Party	-1.732*** (0.640)
Neighbors'CBI(t-1)	-2.522 (1.576)
Neighbors'CBI*Party(t-1)	1.624 (1.809)
Neighbors'CBI(t-6)	2.077 (1.390)
Neighbors'CBI*Party(t-6)	-0.134 (0.537)
LoggedGDPpercapita	-0.18 (0.288)
LoggedPopulation	-0.772 (0.521)
Oil-GasValuepercapita	0.0902 (0.079)
TradeOpenness	-0.00103 (0.004)
NeighborDemocracy	0.0213 (0.028)
Constant	-1.585 (1.273)
YearFixedEffects	Yes
RegionDummies	Yes
TimeDependenceandCubicSplines	Yes
LogPseudolikelihood	-302.31
Observations	1,647
NumberofCountries	91

# Measure of central bank independence

## Components of the Cukierman, Webb, and Neyapti index

### Chief Executive Officer (weight = .20)

- (a) Term of office (6 categories)
- (b) Who appoints CEO? (6 categories)
- (c) Dismissal (7 categories)
- (d) May CEO hold other offices in government (3 categories)

### Policy Formation (weight = .15)

- (a) Who formulates monetary policy? (4 categories)
- (b) Resolution of conflict (6 categories)
- (c) Role in government's budgetary process (2 categories)

### Objectives (weight = .15; 6 categories)

## Limitations on lending to the government

### Part 1 (weight = .40)

- (a) Advances (weight = .15; 4 categories)
- (b) Securitized lending (weight = .10; 4 categories)
- (c) Terms of lending (weight = .10; 4 categories)
- (d) Potential borrowers from bank (weight = .05; 4 categories)

### Part 2 (weight = .10)

- (e) Limits on central bank lending determined by? (weight = .025; 4 categories)
- (f) Maturity of loans (weight = .025; 4 categories)
- (g) Interest rates on loans must be? (weight = .025; 5 categories)
- (h) Is central bank prohibited from buying or selling government securities in primary market? (weight = .025; 2 categories)