

# Emotions and Political Unrest\*

## Online Appendix

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November 2015 - (\*) *Forthcoming in The Journal of Political Economy*

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## 1. Comparative Statics - Subsection 2.3

### **Riot disruptions, $\varsigma^i$**

Let the disruption parameter,  $\varsigma$ , be different across groups. Differentiating at the interior optimum the optimality condition (15),  $W_\tau(\tau^*) - \frac{1}{2} [\varsigma^p P_\tau^p(\tau^*) + \varsigma^r P_\tau^r(\tau^*)] = 0$ , yields

$$\begin{aligned}\frac{\partial \tau^*}{\partial \varsigma^p} &= \frac{1}{2} \frac{P_\tau^p}{SOC} > 0 \\ \frac{\partial \tau^*}{\partial \varsigma^r} &= \frac{1}{2} \frac{P_\tau^r}{SOC} < 0\end{aligned}$$

where  $SOC < 0$  is defined by (44) in the proof of Proposition 1. By (12),  $W_{\tau\tau}(\tau) = \frac{1}{2\alpha} < 0$  and by the proof of Proposition 1,  $P_{\tau\tau}^r = \frac{1}{2(\sigma-\mu)^2} [P^r]^3 [A_\tau^r]^2 + \frac{1}{2(\sigma-\mu)} [P^r]^2 A_{\tau\tau}^r > 0$ , and  $P_{\tau\tau}^p = \frac{1}{2(\sigma-\mu)^2} [P^p]^3 [A_\tau^p]^2 + \frac{1}{2(\sigma-\mu)} [P^p]^2 A_{\tau\tau}^p > 0$ . By (15), the last two inequalities follow from  $A_{\tau\tau}^r(\tau) = \omega > 0$  and  $A_{\tau\tau}^p(\tau) = \omega \left(\frac{\alpha-\tau}{\alpha}\right)^2 + \omega \frac{R^p-V^p}{\alpha} > 0$ . A higher ability to inflict costs results in a more favorable policy.

**Frustration,  $\omega^i$**

$$\begin{aligned}\frac{\partial \tau^*}{\partial \omega^p} &= \varsigma \frac{P_{\tau\omega}^p}{2 SOC} > 0 \\ \frac{\partial \tau^*}{\partial \omega^r} &= \varsigma \frac{P_{\tau\omega}^r}{2 SOC} < 0\end{aligned}$$

where  $P_{\tau\omega}^i = \frac{1}{2(\sigma-\mu)} (P^i)^2 A_{\tau\omega}^i + \frac{1}{\sigma-\mu} (P^i) A_\tau^i P_\omega^i$  is negative for  $i = p$  and it is positive for  $i = r$ . In more frustrated groups riots are more sensitive to tax rate. Higher frustration leads to more favorable  $\tau^*$ .

**Self-serving bias,  $\delta^i$**

$$\begin{aligned}\frac{\partial \tau^*}{\partial \delta^p} &= \varsigma \frac{P_{\tau\delta}^p}{2 SOC} > 0 \\ \frac{\partial \tau_2^*}{\partial \delta^r} &= 0\end{aligned}$$

where  $P_{\tau\delta}^p = \frac{1}{2(\sigma-\mu)} (P^p)^2 A_{\tau\hat{\tau}}^p T_\delta^p + \frac{1}{\sigma-\mu} (P^p) A_\tau^p P_{\hat{\tau}}^p T_\delta^p < 0$ , and where  $A_{\tau\hat{\tau}}^p, A_\tau^p < 0$  and  $P_{\hat{\tau}}^p, T_\delta^p > 0$ . The entitled tax rate of the poor is increasing in  $\delta^p$ . Higher  $\delta^p$  yields higher  $\hat{\tau}^p$ . Thus the threat of riots by the poor increases. This yields higher  $\tau^*$ . As for the rich, the tax rate they deem fair is zero. Thus this rate is independent of any marginal change in their self-serving bias (provided that  $\delta^r > 0$ ). This results in no marginal effect of  $\delta^r$  on  $\tau^*$ .

**Ideological heterogeneity,  $\sigma^i$**

$$\begin{aligned}\frac{\partial \tau^*}{\partial \sigma^p} &= \varsigma \frac{-\frac{2(A^p+4\sigma^p-8\mu)}{(8\sigma^p-2A^p)^3} A_\tau^p}{SOC} < 0 \\ \frac{\partial \tau^*}{\partial \sigma^r} &= \varsigma \frac{-\frac{2(A^r+4\sigma^r-8\mu)}{(4\sigma^r-A^r)^3} A_\tau^r}{SOC} > 0\end{aligned}$$

where we used  $\sigma^i > \text{Max} \left[ \mu, \frac{1}{2} A^i - \mu \right]$ , which implies  $A^i + 4\sigma^i - 8\mu > 0$ . More

heterogeneous groups are less coordinated in riots. A higher  $\sigma^p$  yields a smaller rioting by the poor. Thus  $\tau^*$  is lower. Similarly, a higher  $\sigma^r$  implies a lower  $P^r$  and a higher  $\tau^*$ .

## 2. General Convex Aggrievement Functions

### 2.1 General Convex Functions

Consider a general convex and continuously differentiable aggrievement function,

$$a^i = \omega^i \text{Max}[0, H(R^i - V^i(q))] \equiv A^i(q) \quad (6\text{-convex})$$

such that  $H(0) = 0$ ,  $H'(\cdot) > 0$ ,  $H''(\cdot) \geq 0$ . We have that  $A_q^i = -\omega^i H'(R^i - V^i(q))V_q^i$ , and  $A_{qq}^i = \omega^i H''(R^i - V^i(q))(V_q^i)^2 - \omega^i H'(R^i - V^i(q))V_{qq}^i > 0$ . It follows that all results in the general model of subsections 2.1-2.3 go through with this function.

Consider the static model of redistribution in subsection 2.4. We have:

$$A_\tau^r(\tau) = \omega H'(R^r - V^r(\tau)) > 0, \quad A_\tau^p(\tau) = -\omega H'(R^p - V^p(\tau))(\alpha - \tau)/\alpha < 0$$

This ensures that Lemma 1 and Proposition 2 hold.

Consider the dynamic model of section 3. In period 2, the following derivatives are used in the proofs of Lemma 2 and Proposition 3:

$$\begin{aligned} A_{2\tau}^r &= \omega H'(\tau_2 - T^r(b)) > 0 & A_{2b}^r &= -\omega H'(\tau_2 - T^r(b))\frac{\alpha}{\alpha - \hat{\tau}_2^r} < 0 \\ A_{2\tau b}^r &= -\omega H''(\cdot)\frac{\alpha}{\alpha - \hat{\tau}_2^r} < 0 \\ A_{2\tau\tau}^r &= \omega H''(\cdot) > 0 \end{aligned}$$

and

$$\begin{aligned} A_{2\tau}^p &= -\omega H'(2\delta\alpha/(1 + \delta)^2 - \tau_2 + F(\tau_2))(\alpha - \tau_2)/\alpha < 0 & A_{2b}^p &= 0 \\ A_{2\tau\tau}^p &= \omega H''(\cdot)(\alpha - \tau_2)^2/\alpha^2 + \omega H'(\cdot)/\alpha > 0 & A_{2\tau b}^p &= 0 \end{aligned}$$

The signs of these derivatives ensure that all results hold.

In period 1,

$$A_{1\tau}^r = \omega H'(\tau_1 + T(b)) > 0 \quad A_{1b}^r = \omega H'(\tau_1 + T(b))T_b > 0$$

and

$$A_{1\tau}^p = -\omega H'(4\delta\alpha/(1+\delta)^2 - \tau_1 - T(b) + F(\tau_1) + F(T(b)))(\alpha - \tau_1)/\alpha < 0$$

$$A_{1b}^p = -\omega H'(4\delta\alpha/(1+\delta)^2 - \tau_1 - T(b) + F(\tau_1) + F(T(b)))T_b(\alpha - \tau_2)/\alpha < 0$$

Lemmas 3 and 4 are unchanged. Given the above inequalities, Lemmas 5.1 and 6 can easily be proved by following the same steps in their proofs in the text. Additional assumptions are required to prove Lemma 5, however. Based on these lemmas, the proof of Proposition 5 is unchanged.

Thus, if aggrievements take the general form (6-convex), additional assumptions are needed to derive the main result in Proposition 5.

## 2.2. Piecewise Linear Aggrievements

Suppose that the aggrievement function is piecewise linear rather than quadratic - i.e.:

$$a^i = \omega^i \text{Max}[0, R^i - V^i(q)] \equiv A^i(q) \quad (6\text{-linear})$$

This assumption simplifies the analysis in some respects, and complicates it in others. Recall that group's  $i$  fair policy,  $\hat{q}^i$ , is such that  $R^i = V^i(\hat{q}^i)$ . Differentiating  $A^i(q)$  with respect to  $q$  we thus obtain that  $A_q^i(q) = -\omega^i V_q^i(q)$  if  $q \neq \hat{q}^i$  and  $i$  is aggrieved, and  $A_q^i(q) = 0$  if  $q \neq \hat{q}^i$  and  $i$  is not aggrieved. These are simpler expressions than with a quadratic aggrievement function. At the point  $q = \hat{q}^i$  the aggrievement function  $A^i(q)$  is non differentiable, however. Suppose that at  $q = \hat{q}^i$  group  $i$  is favoured by an increase in the policy (i.e.  $V_q^i(\hat{q}^i) > 0$ ). Then the left hand derivative of  $A^i(q)$  is  $\lim_{q \rightarrow \hat{q}^i-} A_q^i(q) = -\omega^i V_q^i(\hat{q}^i)$  and its right hand derivative is  $\lim_{q \rightarrow \hat{q}^i+} A_q^i(q) = 0$ . The opposite holds if  $V_q^i(\hat{q}^i) < 0$ .

It can be verified that all the results stated in the paper continue to hold (and in some cases are simpler to derive) if the equilibrium policy does not coincide with the fair policy of any group (i.e. if  $q^* \neq \hat{q}^i$  for all  $i$ ). If  $q^* = \hat{q}^i$  for some  $i$ , then the derivation would have to be modified to reflect the non differentiability of  $A^i(q)$  (and hence of  $P^i(q)$ ) at the point  $q^* = \hat{q}^i$ . Similarly, the statements in Lemmas 1 and 2 (and similar statements in subsections 2.4 and 3.2) would have to be modified as applying to the relevant (right hand or left hand) derivative of  $P^i$  when evaluated at the point where  $P^i$  is non-differentiable.

### 3. Sovereign Debt Crises

A sovereign debt crisis and its aftermath are typically associated with harsh fiscal austerity, prolonged recessions, and wide and sometimes arbitrary redistribution. It is thus plausible to expect a strong association between debt crisis and political unrest. Although our model has no direct implication, because debt default is ruled out by assumption, the logic of a resignation effect suggests that political unrest should precede the crisis rather than follow it. The reason is that a debt crisis makes it clear to everyone that the government has no options left. Hence, once the crisis bursts, citizens are more likely to become resigned to a lower level of welfare.

In Table A1 we regress political unrest (as defined above) on growth of GDP per capita and on five dummy variables that capture the year of a sovereign debt crisis (domestic or external) and a window of up to two years before and after the crisis. The source of the data on debt crisis is Reinhart and Rogoff (2011) - see also section 5 in this Online Appendix. Estimation is by Poisson Quasi-Maximum Likelihood, conditional on country fixed effects, with and without year fixed effects. The estimates reveal that political unrest goes up in the year of the debt crisis and two years before, while it tends to go down two years after the crisis. This timing thus provides further indirect support to the idea that resignation plays a relevant role in dampening political unrest, and that resignation is related to awareness that the government has few policy options left available.

**Table A1 here**

### 4. Robustness Checks on Table 2

Table A2 reproduces the results in Table 2 in the main text, estimating by OLS (with SE clustered by countries) rather than by Poisson Quasi-Likelihood methods.

Table A3 reproduces the main results of Table 2 for different values of the debt threshold.

**Tables A2 and A3 here**

### 5. Data Appendix

#### 5.1. Surveys' regressions - Table 1

Sources: European Social Surveys (ESS) and World Value Surveys (WVS).

• **Recent participation in lawful demonstrations**, Dummy Variable: ESS: 1 if “Taken part into lawful public demonstrations on the last 12 months”; WVS: 1 if “Political action recently done: attending peaceful/lawful demonstration”.

• **Primary education**, Dummy variable: ESS: 1 if “Highest level of education, ES-ISCED” = “less than lower secondary” or “lower secondary”; WVS: 1 if “Highest educational level attained” = “No formal education” or incomplete primary school” or “complete primary school”.

• **Tertiary education**, Dummy variable: ESS: 1 if “Highest level of education, ES-ISCED” = “lower tertiary” or “higher tertiary”; WVS: 1 if “Highest educational level attained” = “some university-without degree” or “university-with degree”.

• **Age 30 or below**, Dummy variable: ESS and WVS: 1 if “Age”  $\leq$  “30”. • **Age 50 or above**: Dummy variable: ESS and WVS: 1 if “Age”  $\geq$  “50”.

• **Male**, Dummy variable: ESS and WVS: 1 if “Male”.

• **Unemployed**, Dummy variable: ESS: 1 if “During last 7 days” = “Unemployed-actively looking for job” or “Unemployed-not actively looking for job”; WVS: 1 if “Employment status” = “unemployed”.

• **Worker**, Dummy variable: ESS: 1 if “Doing last 7 days” = “Paid work”; WVS: 1 if “Employment status” = “Full time employee” or “Part time employee” or “Self-employed”.

• **Student**, Dummy variable: ESS: 1 if “During last 7 days” = “Education”; WVS: 1 if “Employment status” = “Student”.

• **Income 30 percentile**, Dummy variable: 1 if Income belongs to the 30th percentile; WVS: “Scale of income” 1 = Lowest step, 10 = Highest step; 30th Percentile corresponds to income  $< 3$  or  $= 3$ . **Income 70 percentile**, Dummy variable: 1 if Income belongs to the 70th percentile; WVS: “Scale of income” 1 = Lowest step, 10 = Highest step; 70th percentile corresponds to income  $> 6$  or  $= 6$ .

• **Children at home**, Dummy variable: ESS: 1 if “Children living at home”; WVS: 1 if number of children living at home  $> 0$ .

• **Satisfied with life**, ESS: How satisfied with life as a whole: 0 = Extremely dissatisfied, 10 = Extremely satisfied; WVS: How satisfied are you with your life: 1 = Dissatisfied, 10 = Satisfied

• **Confidence/satisfaction with government**, ESS: How satisfied with the national government: 0 = Extremely dissatisfied – 10 = Extremely satisfied; WVS:

Confidence in government: 1 = Not at all, 4 = A great deal.

- **Satisfaction with economy**, ESS: “How satisfied with the present state of economy in the country: 0 = Extremely dissatisfied, 10 = Extremely satisfied”.

- **Satisfaction with democracy**, ESS: “How satisfied with the way democracy works in country: 0 = Extremely dissatisfied, 10 = Extremely satisfied”.

- **State of health services**, ESS: “State of health services in country nowadays: 0 = Extremely bad, 10 = Extremely good”.

- **State of education**, ESS: State of education in country nowadays: 0 = Extremely bad, 10 = Extremely good”.

- **Discriminated group**, Dummy variable: ESS: 1 if “Member of a group discriminated against in this country”

- **Autonomy index**, WVS: Variable Y003, ranging from  $-2$  (Obedience/Religious Faith) to  $2$  (Determination, Perseverance/Independence); It is defined as:  $Y003=(A029 + A039)-(A040 + A042)$ . The common question asked in “A029”, “A039”, “A040” and “A042” is: “Here is a list of qualities that children can be encouraged to learn at home. Which, if any, do you consider to be especially important?”.

The different qualities are:

- o A029 = independence
- o A039 = determination,perseverance
- o A040 = religious faith
- o A042 = obedience.

- **Income should be made more equal**, ESS: Government should reduce differences in income levels: 1 = Disagree strongly, 5 = Agree strongly; WVS: Incomes should be made more equal vs We need larger income differences as incentives: 1 = We need larger income differences as incentive, 10 = Income should be made more equal.

- **Extreme LEFT on political scale**, Dummy variable: ESS and WVS: 1 if placement on left/right scale is equal or below 3 where original question range from 0 (Left) to 10 (Right). For WVS it ranges from 1 (Left) to 10 (Right).

- **Extreme RIGHT on political scale**, Dummy variable: ESS and WVS: 1 if placement on left/right scale is equal or above 8 where original question range from 0 (Left) to 10 (Right). For WVS it ranges from 1 (Left) to 10 (Right).

- **Voted parliament/national elections**, Dummy variable: ESS: 1 if “Voted in last national election”; WVS: 1 if “Voted in recent parliament elections”.

• **Don't know for which party I will vote for**, Dummy variable: WVS: 1 if at the question "Which party would you vote for: first choice" the answer is one of the following:

-2 = No Answer, Refused

-1 = Don't Know

2 = I would not vote

3 = I would cast a blank ballot; White vote

4 = None

7 = Null vote

• **Involved in a political party**, Dummy variable: ESS: 1 if:

"Worked in political party or action group last 12 months" or

"Member of political party" or

"Political party, last 12 months: member" or

"Political party, last 12 months: participated" or

"Political party, last 12 months: donated money" or

"Political party, last 12 months: voluntary work" or

"Worn or displayed campaign badge/sticker last 12 months" or

"Donated money to political organization or group last 12 months";

WVS: 1 if:

"Member: Belong to political parties"

"Member: Belong to local political actions"

"Voluntary work: Unpaid work political parties or groups"

"Voluntary work: Unpaid work local political action groups"

"Active/Inactive membership of political party"

• **Pct of involvement in a political party**, WVS: percentage of positive answer to questions of "Involved in a political party" variable

• **Feel closer to a particular party**, Dummy variable: ESS: 1 if "Feel closer to a particular party than all other parties".



## 5.2. Other regressions - Tables 2, A1, A2 and A3

- **$\Delta$  Cyclically adj. primary deficit (\*)**, Change in the primary deficit corrected for the cycle, calculated as: percentage point change in the ratio of cyclically adjusted primary expenditures to potential GDP minus percentage point change in the ratio of cyclically adjusted government revenues to potential GDP.

- **GDP Growth – Table 1, 3-4 (\*)**, Rate of growth of real GDP, percent.

- **Growth of GDP per capita – Table 5 (\*\*\*\*)**, Rate of growth of GDP per capita.

- **Unemployment growth (\*)**, Growth of the unemployment rate, percent.

- **Inflation (\*)**, Rate of change of the GDP deflator, percent.

- **GDP growth dev. g7 (\*)**, Growth relative to the weighted average growth rate of the G7 countries.

- **Unemployment growth dev. g7 (\*)**, Unemployment rate relative to the weighted average of the G7 unemployment rate.

- **Inflation dev. g7 (\*)**, Inflation rate relative to the weighted average of the G7 inflation rate.

- **Lagged debt (\*)**, Government gross debt as a share of GDP, lagged 1 period.

- **Political unrest**, It is defined as the sum of: 1. *General Strikes* (\*\*): “Any strike of 1,000 or more industrial or service workers that involves more than one employer and that is aimed at national government policies or authority”; 2. *Riots* (\*\*): “Any violent demonstration or clash of more than 100 citizens involving the use of physical force”; 3. *Anti-government Demonstrations* (\*\*): “Any peaceful public gathering of at least 100 people for the primary purpose of displaying or voicing their opposition to government policies or authority, excluding demonstrations of a distinctly anti-foreign nature.”

- **Debt Crisis (\*\*\*)**, A dummy variable that equals one in the years of either an external or a domestic debt crisis, defined as follows: a) *External debt*: “A sovereign default is defined as the failure to meet a principal or interest payment on the due date (or within the specified grace period). The episodes also include instances where rescheduled debt is ultimately extinguished in terms less favorable than the original obligation”; b) *Domestic Debt Crisis*: “The definition for external debt applies. In addition, domestic debt crises have involved the freezing of bank deposits and or forcible conversions of such deposits from dollars to local currency.”

**Data and definitions from:**

(\*) Alesina et al. (2012); Raw Data Source: OECD Economic Outlook Database, no. 84; (\*\*) Banks and Wilson (2012); (\*\*\*) Reinhart and Rogoff (2011b).

(\*\*\*\*) Persson and Tabellini (2009); Raw Data Source: Maddison, Angus (2001), *The World Economy: Historical Statistics*, OECD.

**Table A1: Political Unrest and Sovereign Debt Crises**

Dependent variable	Political unrest			
	(1)	(2)	(3)	(4)
year of debt crisis	0.31*** (0.111)	0.38*** (0.139)	0.36*** (0.132)	0.40** (0.158)
one year before crisis	0.02 (0.114)	0.05 (0.118)	0.12 (0.127)	0.13 (0.136)
two years before crisis	0.35*** (0.086)	0.29*** (0.102)	0.39*** (0.111)	0.33*** (0.105)
one year after crisis	0.08 (0.147)	0.08 (0.159)	0.05 (0.161)	0.04 (0.170)
two years after crisis	-0.23* (0.133)	-0.18 (0.124)	-0.28* (0.148)	-0.21 (0.132)
growth of GDP per capita	-0.03*** (0.008)	-0.04*** (0.008)	-0.03** (0.012)	-0.04*** (0.011)
Year fixed effects	No	Yes	No	Yes
Observations	3,381	3,381	2,798	2,798
N. of countries	60	60	60	60
Estimation	Conditional Poisson Regression FE	Conditional Poisson Regression FE	Conditional Poisson Regression FE	Conditional Poisson Regression FE

NOTE. - The dependent variable is defined as the sum of riots, general strikes and anti-government demonstrations. Sample period: columns (1) and (2): 1919-2000; columns (3) and (4): 1946-2000. Country FE always included. Some year dummy variables are dropped due to collinearity. Robust standard errors in parentheses.

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1.

**Table A2: Political Unrest and Fiscal Retrenchment**

Dependent variable	Political unrest							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Δ cyclically adj. primary deficit	-0.1437** (0.056)	-0.1529** (0.064)	-0.1680** (0.059)	-0.1886** (0.069)	-0.0946 (0.081)	-0.1533* (0.077)	-0.0820 (0.115)	-0.1692** (0.079)
lagged debt			-0.0064 (0.005)	-0.0038 (0.005)				
GDP Growth	-0.0279 (0.079)	-0.3400 (0.222)	0.0167 (0.077)	0.0658 (0.163)	-0.2477* (0.134)	0.0522 (0.091)	-0.6948 (0.417)	0.0885 (0.172)
unemployment growth	0.0027 (0.008)	-0.0029 (0.009)	0.0083 (0.009)	0.0038 (0.008)	-0.0172 (0.012)	0.0109 (0.009)	-0.0328* (0.019)	0.0053 (0.009)
Inflation	0.0239 (0.036)	0.0040 (0.048)	0.0783* (0.040)	0.0794** (0.036)	0.0374* (0.021)	0.0660 (0.045)	0.0283 (0.053)	0.0733 (0.043)
GDP growth dev. G7	-0.0604 (0.051)	0.2856 (0.226)	-0.0707 (0.070)	-0.0794 (0.198)	0.0713 (0.086)	-0.0994 (0.080)	0.5410 (0.370)	-0.1157 (0.219)
unemployment growth dev. G7	0.0688 (0.073)	0.0726 (0.080)	0.1328 (0.085)	0.1444 (0.106)	0.0018 (0.069)	0.1478 (0.096)	-0.0383 (0.083)	0.1650 (0.126)
inflation dev. G7	0.1078 (0.075)	0.1510 (0.090)	0.0446 (0.102)	-0.0882 (0.076)	0.1111 (0.100)	0.0744 (0.099)	0.2330 (0.162)	-0.0251 (0.067)
Sample					Debt (t-1) above 90%	Debt (t-1) below 90%	Debt (t-1) above 90%	Debt (t-1) below 90%
Year Dummy variables	No	Yes	No	Yes	No	No	Yes	Yes
Observations	599	599	508	508	176	423	176	423
Number of countries	19	19	19	19	16	18	16	18
R-squared	0.058	0.121	0.064	0.136	0.129	0.062	0.303	0.133

NOTE. - The dependent variable is defined as the sum of riots, general strikes and anti-government demonstrations. The variables ending with the name dev. G7 are expressed in deviation from the average of the G7 countries. Some year dummy variables are dropped due to collinearity. Country FE always included. Robust standard errors clustered at country level in parentheses. Estimation by linear least squares.

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1.

**Table A3: Political Unrest and Fiscal Retrenchment for Different Levels of Initial Public Debt**

Threshold	dependent variable political unrest									
	80%	81%	82%	83%	84%	85%	86%	87%	88%	89%
Coefficient on $\Delta$ cyclically adj. primary deficit for the sample of countries with:										
debt (t-1) above threshold	-0.16** (0.076)	-0.16** (0.075)	-0.15** (0.073)	-0.12 (0.077)	-0.12 (0.079)	-0.12 (0.079)	-0.12 (0.079)	-0.12 (0.077)	-0.11 (0.083)	-0.09 (0.086)
debt (t-1) below threshold	-0.35*** (0.049)	-0.35*** (0.049)	-0.35*** (0.049)	-0.37*** (0.054)	-0.37*** (0.054)	-0.37*** (0.053)	-0.37*** (0.053)	-0.37*** (0.053)	-0.35*** (0.045)	-0.36*** (0.046)
Observations above threshold	181	180	178	177	176	174	174	173	170	168
Observations below threshold	393	394	398	403	405	409	411	414	418	422
Number of countries above threshold	10	10	10	10	10	10	10	10	10	10
Number of countries below threshold	18	18	18	18	18	18	18	18	18	18
	91%	92%	93%	94%	95%	96%	97%	98%	99%	100%
Coefficient on $\Delta$ cyclically adj. primary deficit for the sample of countries with:										
debt (t-1) above threshold	-0.10 (0.082)	-0.10 (0.083)	-0.11 (0.083)	-0.11 (0.085)	-0.11 (0.085)	-0.11 (0.097)	-0.11 (0.097)	-0.11 (0.097)	-0.12 (0.096)	-0.05 (0.080)
debt (t-1) below threshold	-0.36*** (0.044)	-0.36*** (0.043)	-0.34*** (0.043)	-0.34*** (0.044)	-0.34*** (0.044)	-0.33*** (0.043)	-0.33*** (0.043)	-0.33*** (0.043)	-0.33*** (0.044)	-0.33*** (0.043)
Observations above threshold	167	164	161	159	158	153	152	151	147	142
Observations below threshold	424	428	431	433	435	440	440	441	444	450
Number of countries above threshold	10	10	10	10	10	10	10	10	10	9
Number of countries below threshold	18	18	18	18	18	18	18	18	18	19

NOTE. – Coefficients on this table are obtained regressing the dependent variable on  $\Delta$  cyclically adj. primary deficit and the same set of controls used in table 2 of the article, for samples of countries with lagged debt either below or above different thresholds. The dependent variable is defined as the sum of riots, general strikes and anti-government demonstrations. The set of controls includes GDP growth, unemployment growth, inflation, GDP growth dev. G7, unemployment growth dev. G7 and inflation dev. G7. Variables ending with the name dev. G7 are expressed in deviation from the average of the G7 countries. Estimation: Conditional Poisson Regression; Country FE and year dummy variables always included. Some year dummy variables are dropped due to collinearity. Robust standard errors in parentheses.

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1.