Dictators Under The Weather

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Introduction

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- Bruckner and Ciccone (2011) show, for Sub-Saharan African countries, that a negative shock to GDP caused by a drought gives rise to increased probability of democratic reform/transition.
- This paper explores the mechanism by which the ruling elite will have to democratize, and when they can instead use tariffs to maintain the status quo.

Two Contributions

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- Second contribution is empirical: we show empirically that when this mechanism is taken into account, the tendency of the elite to democratize in response to a weather shock is significantly reduced.

Literature Review

Theoretical foundations: Acemoglu and Robinson (2000 QJE, 2001 AER, 2005 Book, Zissimos 2015, 2017). Motivate democratization as solution to commitment problem.

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Other papers showing that democratic reform is triggered by adverse income shocks: Burke and Leigh (2010), Chaney (2013), Aidt and Franck (2015), Dasgupta and Ziblatt (2015), Aidt and Leon (2016).

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- Conflict of interest over trade policy: elite want protection while poor want free trade.

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- Weather is assumed to be 'normal' next period. Focus on current period.
- Elite can offset the effect of an adverse weather shock by lowering the tariff.
- But, depending on severity of the shock, this may or may not be enough to defuse the threat of revolution.

Franchise Extension, Revolution, and Elite Rule

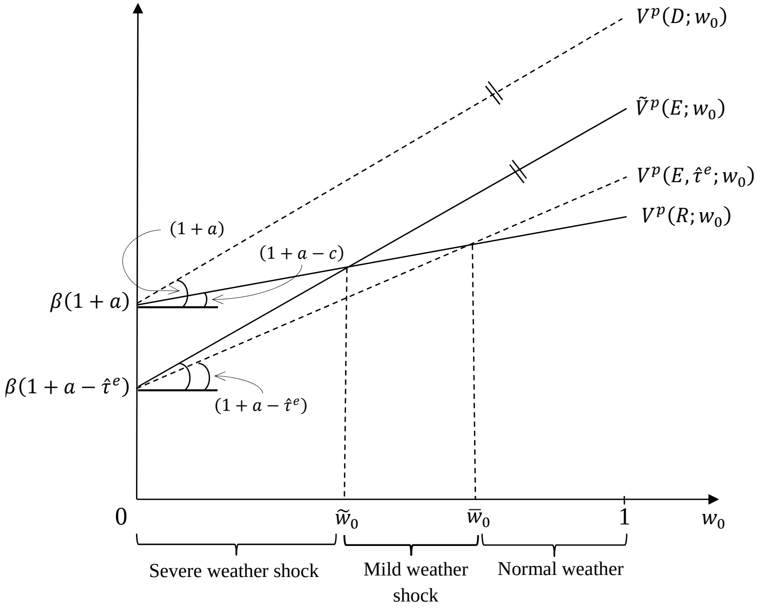
Value functions for the poor under franchise extension, revolution, and elite rule respectively.

$$V^p\left(D; w_0\right) \equiv w_0\left(1+a\right) + \beta\left(1+a\right).$$

$$V^p\left(R; w_0\right) \equiv w_0\left(1+a-c\right) + \beta\left(1+a\right).$$

$$V^p\left(E, \tau_0^e; w_0\right) = w_0\left(1+a-\tau_0^e\right) + \beta\left(1+a-\hat{\tau}^e\right).$$

Characterization of Equilibrium



Empirical Design and Data

We follow the empirical design of Bruckner and Ciccone (2011, henceforth BC), who study the effect of rainfall shocks in a sample of 40 sub-Saharan African countries over 1981-2003.

BC employ the econometric specification

$$\Delta \text{Polity}_{i,t} = \gamma_i + \lambda_t + \eta_i t + \phi \log(\text{Income})_{i,t-2} + u_{it}. \tag{1}$$

However we make a fundamental break from BC in our instrumental variables strategy, motivated by our theory. The import tariff that the dictator uses to mitigate the effect of a weather shock serves as an additional instrument.

Table 3. Dependent Variable: $\Delta \text{Polity2}_{i,t}$.

	OLS ΔPolity2$_t$	2SLS ΔPolity2$_t$	2SLS ΔPolity2$_t$	2SLS ΔPolity2$_t$
Log GDP per capita, $t-2$	−0.410	−20.37**	−4.192***	−2.314
	(0.565)	[0.019]	[0.010]	[0.015]
	(robust se)	[A-R p-value]	[A-R p-value]	[A-R p-value]
Country fixed effect	Yes	Yes	Yes	Yes
Year fixed effect	Yes	Yes	Yes	Yes
Country-trend	Yes	Yes	Yes	Yes
		First Stage		
Log Rainfall, $t-2$		0.082**	0.078**	0.083***
		(0.032)	(0.032)	(0.031)
NRA$^{\text{M}}$, $t-2$			−0.043**	−0.066***
			(0.018)	(0.018)
NRA$^{\text{X}}$, $t-2$				0.139***
				(0.026)
Country fixed effect	Yes	Yes	Yes	Yes
Year fixed effect	Yes	Yes	Yes	Yes
Country-trend	Yes	Yes	Yes	Yes
N	815	815	815	815
Anderson−Rubin p value		0.019	0.010	0.015
Weak Instrument F stat		6.621	6.785	13.824
Overidentification: J stat		exact	7.948	8.304
Overidentification: p value			0.005	0.016

Conclusions

This paper explores the mechanism by which dictators are able to forestall democratization, focusing on import tariffs.

The theoretical model shows when the elite will be able to use tariffs to defuse the threat of revolution, and when they will face a commitment problem and hence have to democratize.

Using Bruckner and Ciccone (2011) as a baseline, our econometric results show that when import tariffs are introduced as an instrument along with rainfall, the tendency for a rainfall shock to lead to democratization is significantly reduced.

Thank you