Growth in the shadow of expropriation

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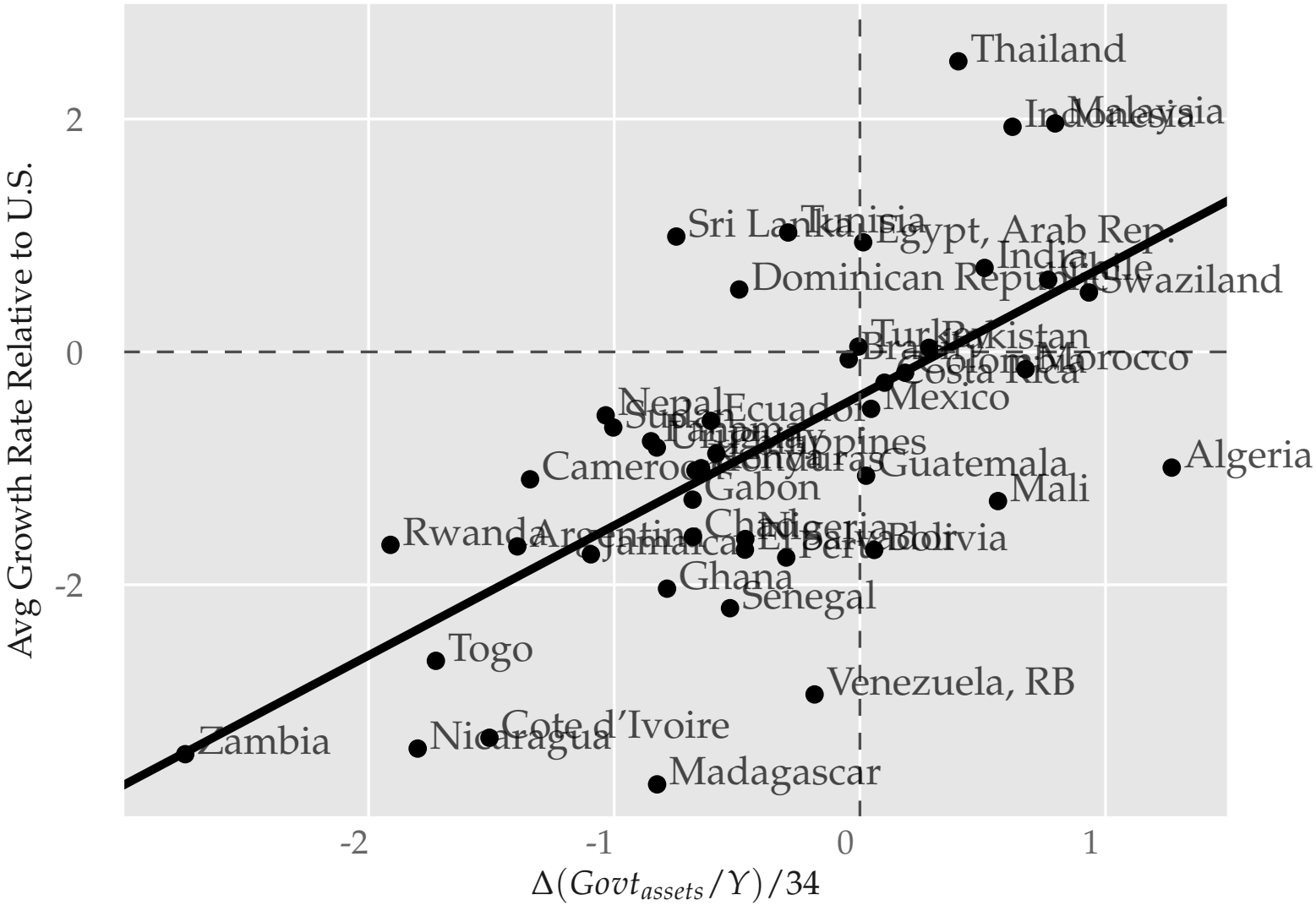
Motivation


Thailand
Malaysia
Sri Lanka
Tunisia
Egypt, Arab Rep.
India
Dominican Republic
Swaziland
Pakistan
Morocco
Costa Rica
Mexico
Nepal
Ecuador
Guatemala
Algeria
Cameroon
Gabon
Mali
Rwanda
Nigeria
Bolivia
Ghana
Senegal
Togo
Venezuela, RB
Zambia
Nicaragua
Cote d'Ivoire
Madagascar
Avg Growth Rate Relative to U.S.
2
0
-2
-2
-1
0
1
$\Delta(Govt_{assets}/Y)/34$

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- Growth is associated with NFA accumulation (Gourinchas and Jeanne), in particular Govt NFA accumulations (AA)
- Puzzling for the standard neoclassical growth model
- Add limited commitment + impatient politicians to explain this pattern

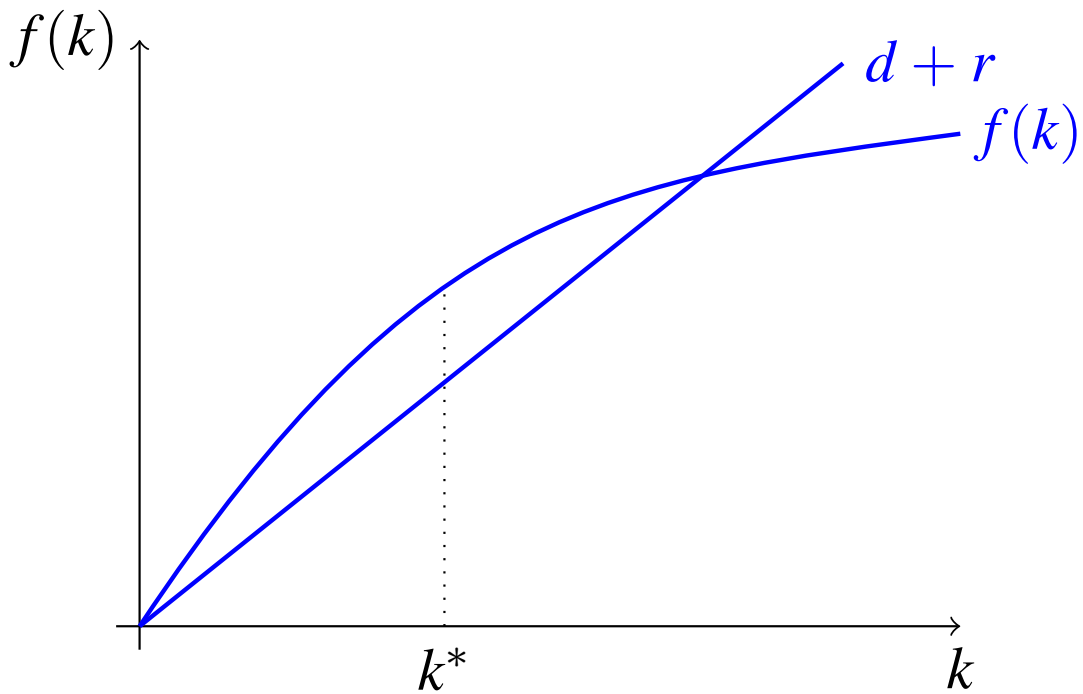
Outline

- Deconstructing the model (the role of different assumptions)
- The quantitative analysis
- What does the model teach us about Greece (and Argentina)?

The frictionless environment,1

Small open economy, no uncertainty

$$(1-\tau)f'(k) + (1-d) = 1 + r$$



The frictionless environment,2

- k_0, b_0 both low
- $u(c) = \frac{c^{1-\sigma}}{1-\sigma}, \sigma \to 0, \beta R = 1, \underline{W}(k) = -\infty$

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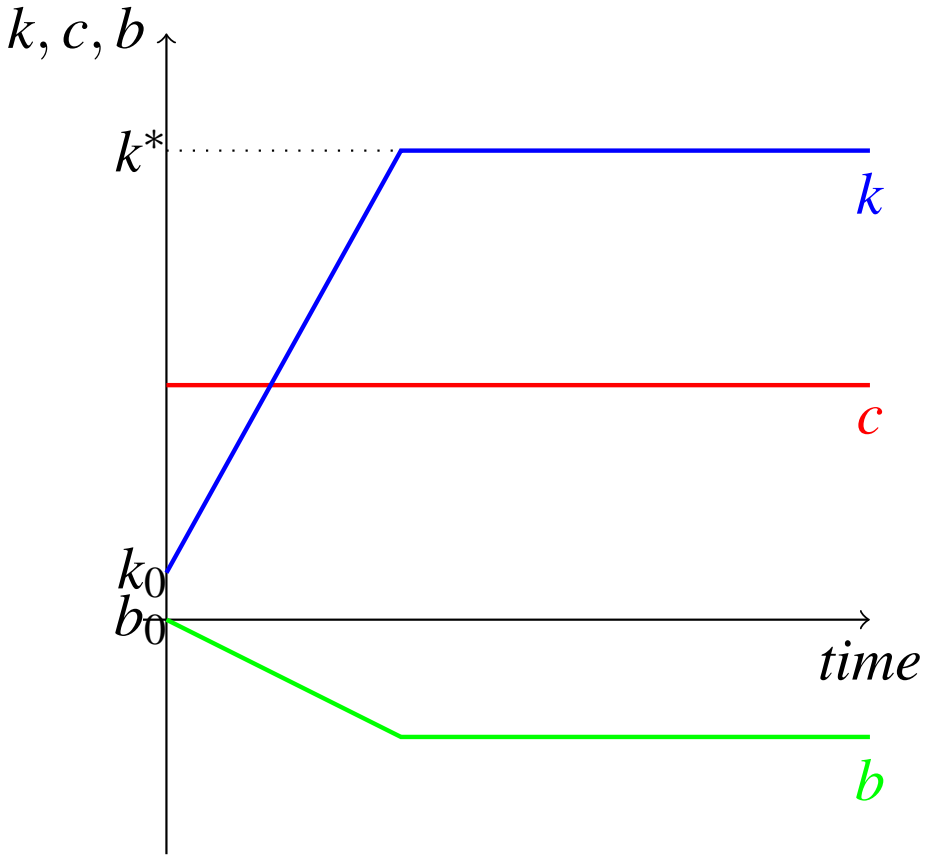
- $u(c) = \frac{c^{1-\sigma}}{1-\sigma}, \sigma \to 0, \beta R = 1, \underline{W}(k) = -\infty$
- Set taxes so that $k_t = k^*, t \geq 1$, and set flat consumption
- From intertemporal budget constraint

$$c = b_0 \frac{r}{1+r} + \frac{r}{(1+r)} \underbrace{(f(k_0) - (r+d)k_0)}_{\text{Disposable income, } t_0} + \frac{1}{1+r} \underbrace{(f(k^*) - (r+d)k^*)}_{\text{Disposable income, } t > t_0}$$

The frictionless environment,3



- Implications: Flat consumption, fast income growth and intl borrowing

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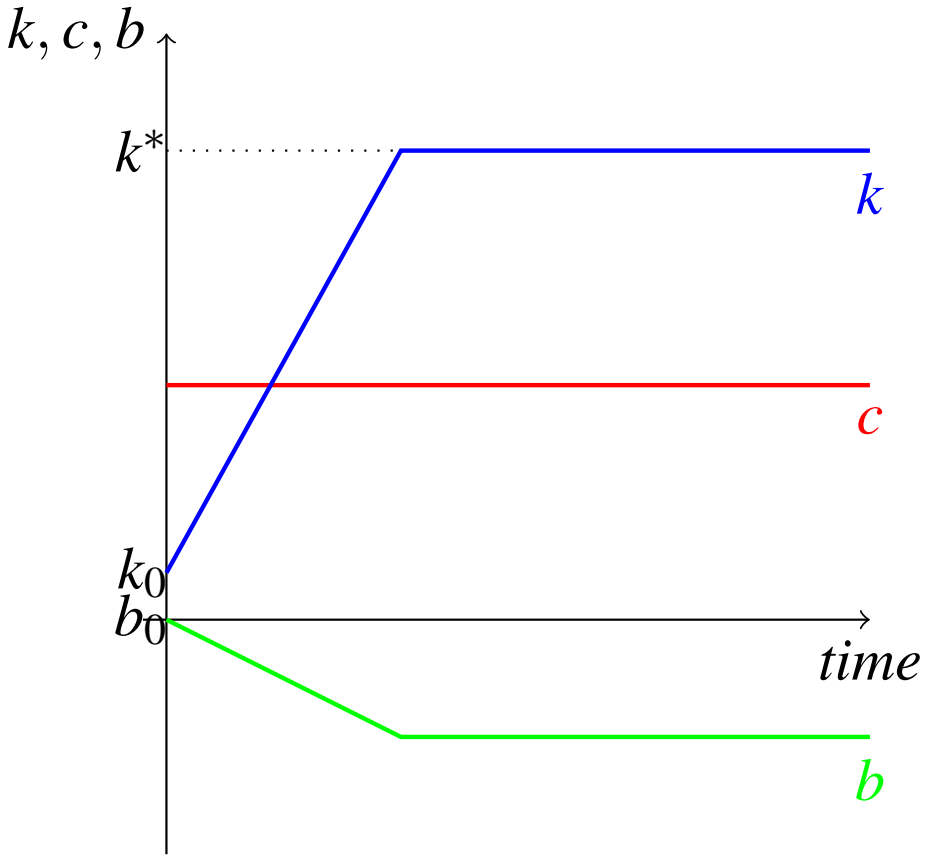

- Implications: Flat consumption, fast income growth and intl borrowing
- High growth and asset decumulation: counterfactual

Limited enforcement,1

- Suppose $\underline{W}(k) > \infty$ in particular $V_1(k^*, b^{fb}) < \underline{W}(k^*)$
- Is first best k sustainable in long run? Yes, if $b_1 > b^{fb}$

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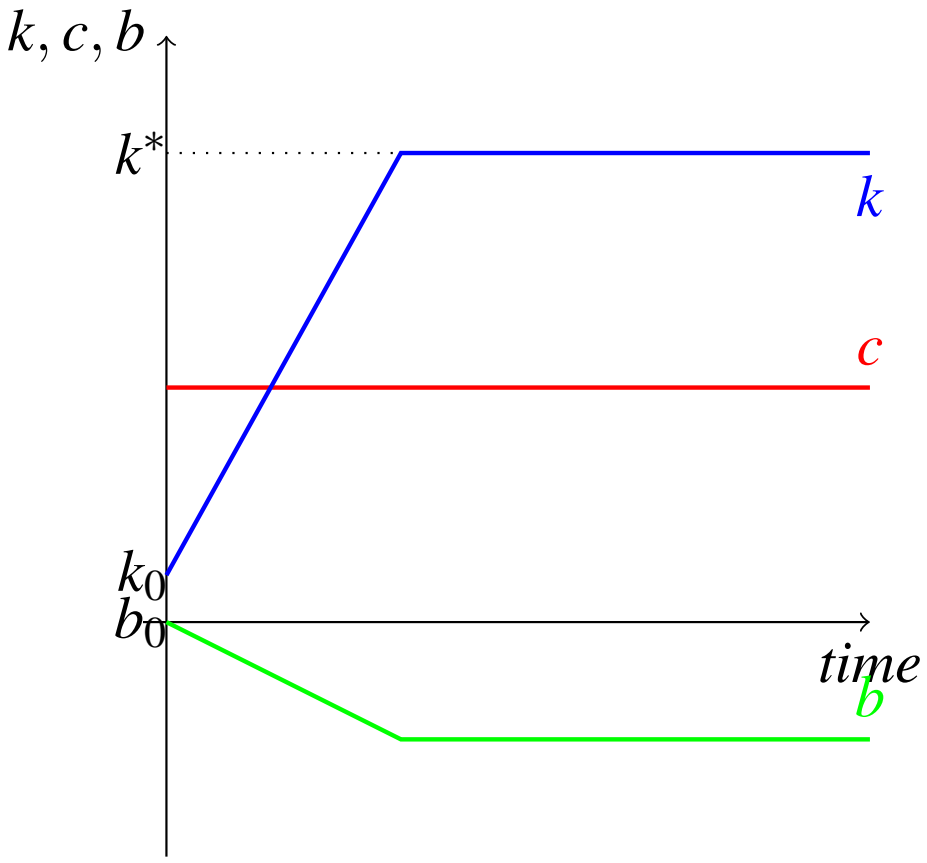
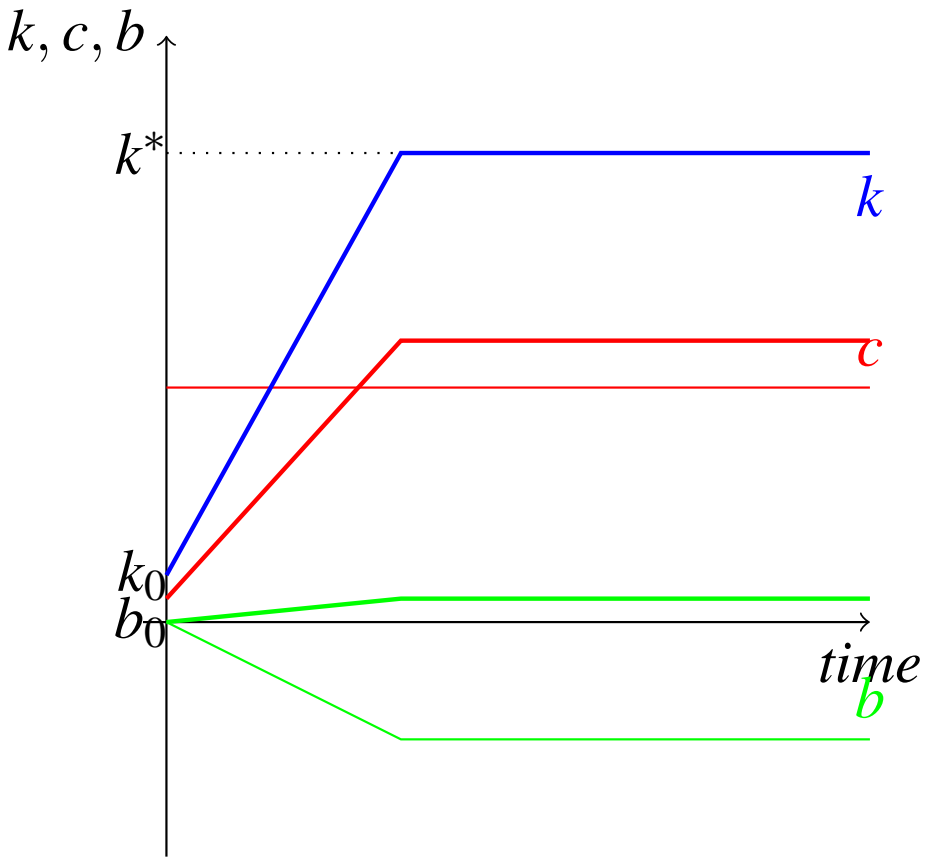
- Is it efficient? Yes: $\beta R = 1$, almost linear utility

Limited enforcement,2



Limited enforcement,2



- Implications: High growth and asset accumulation: qualitative success!

The key ingredient and tradeoff

- Complementarity between b and k

$$V(k,b) \geq \underline{W}(k)$$

- Increasing k (growth) raises $\underline{W}(k)$ more than $V(k,b)$, hence to satisfy enforcement constraint b has to increase as well
- Increasing b hinders consumption smoothing
- With linear utility consumption smoothing not important, so productive efficiency/growth happen fast

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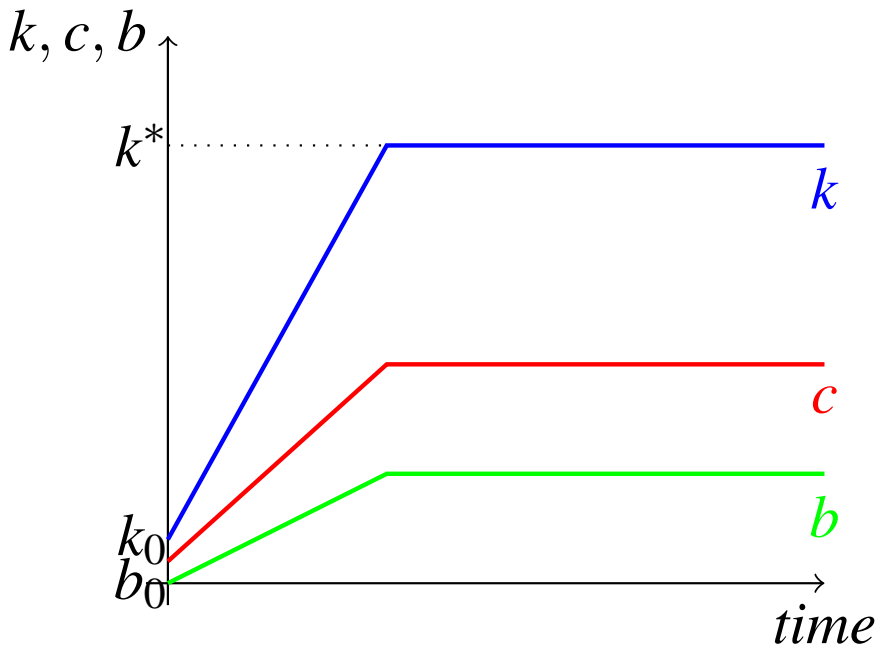
- With linear utility consumption smoothing not important, so productive efficiency/growth happen fast
- In general (curvature in U or political impatience), trade-off between productive efficiency and optimal allocation of consumption through time

Limited enforcement + political friction



- Allocation no longer efficient: shifting consumption from 1 to 0 (reducing debt accumulation) increases govt. utility

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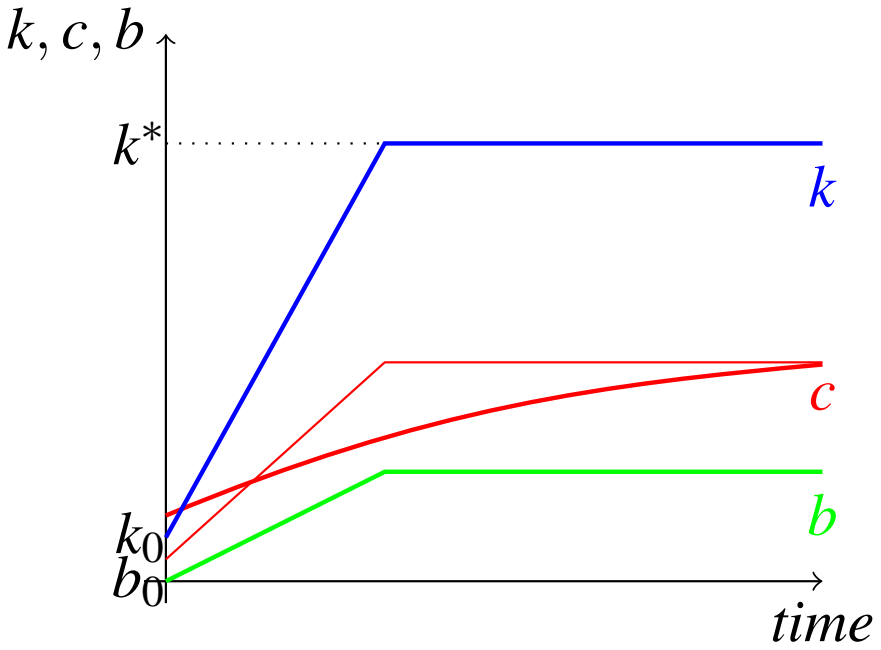

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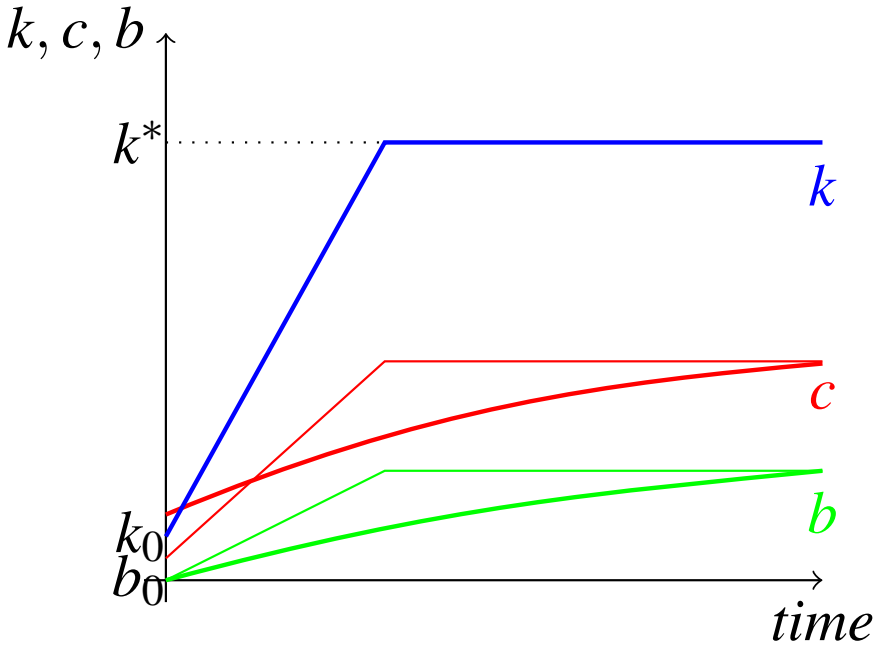

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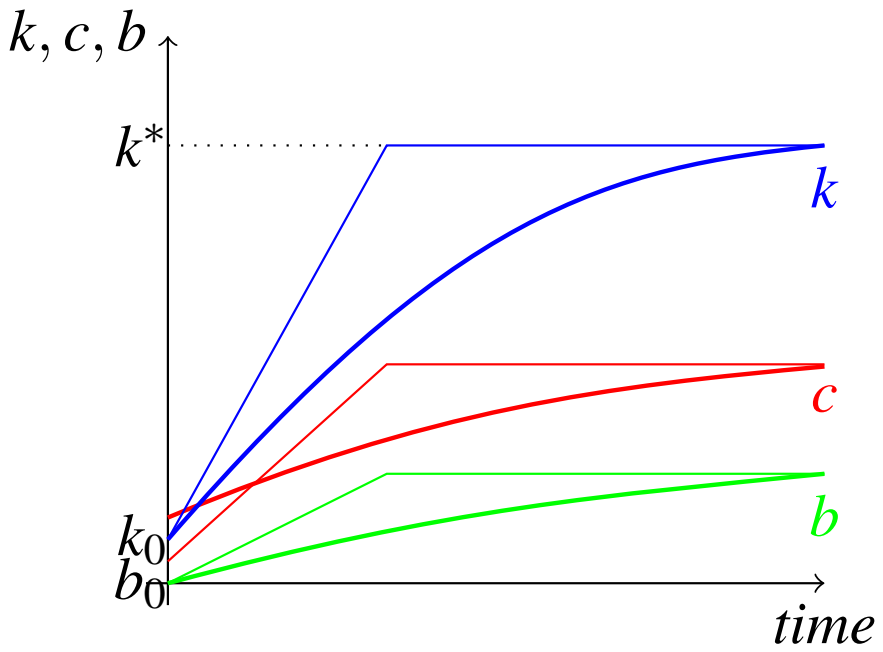

- Consumption smoothing comes at the cost of less productive efficiency/slower growth

The role of the political friction?

- Political friction provides a desire for consumption smoothing -> slow foreign asset accumulation -> slow convergence to steady state
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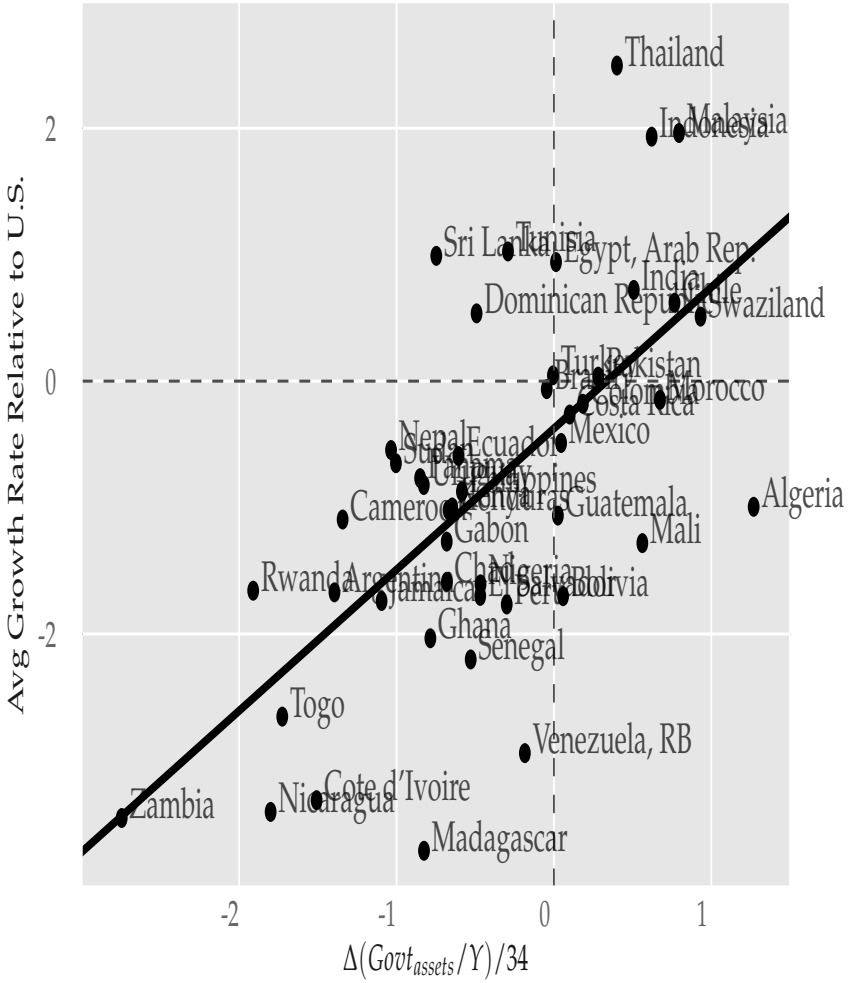
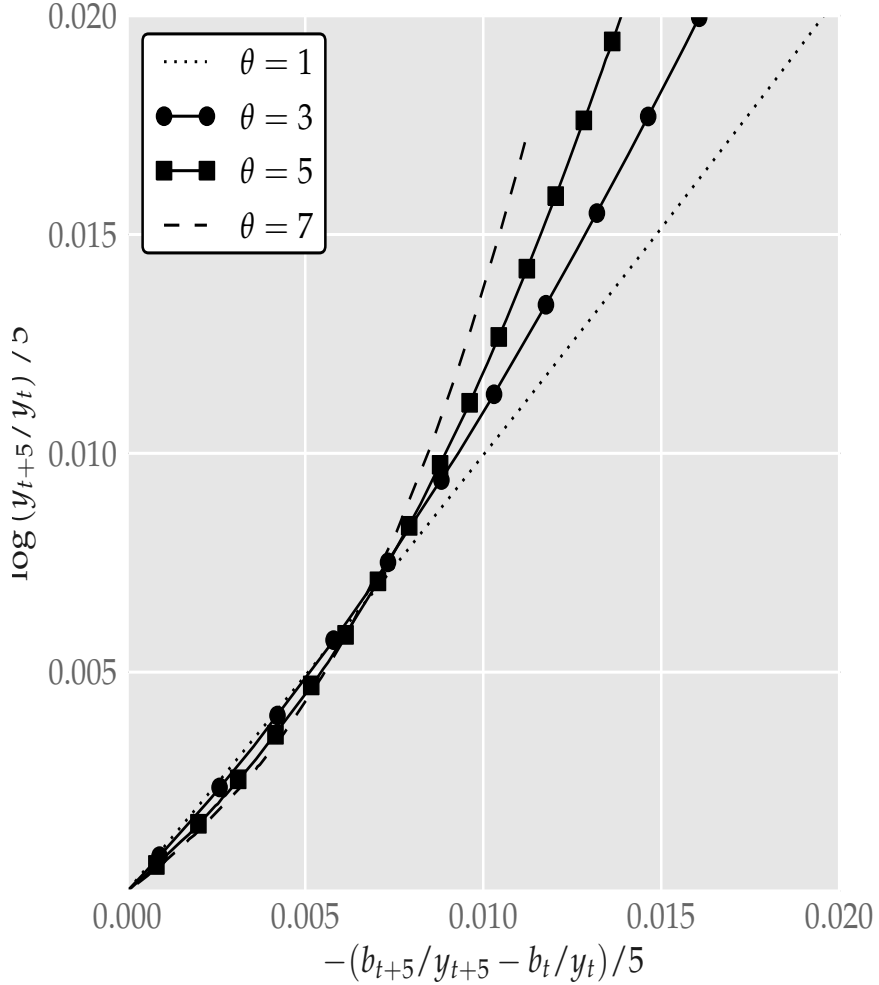
- Political friction provides a desire for consumption smoothing -> slow foreign asset accumulation -> slow convergence to steady state
- Curvature in utility would also work
- Not crucial for qualitative results, probably not for main quantitative result
- Model is consistent with evidence of impact of institutional quality on growth but certainly not the first one

Quantitative analysis

(data)

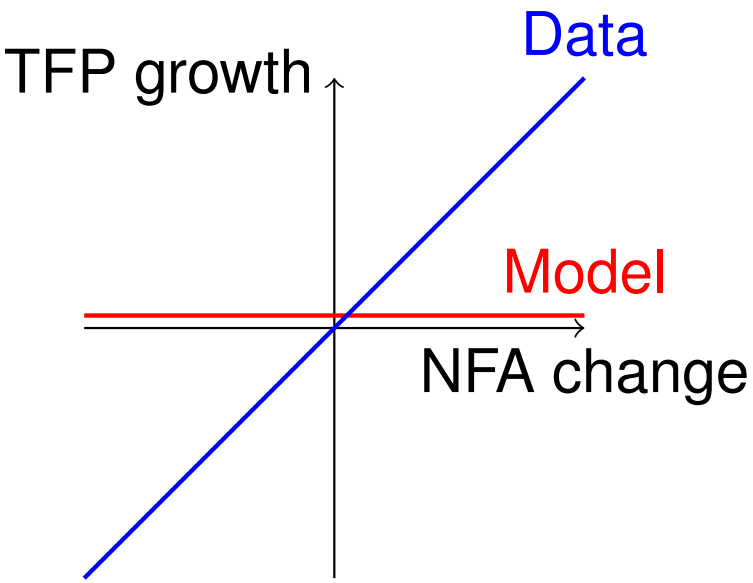


(model)



Success?

- Problem is relation between GDP growth and NFA change comes from TFP growth (Gourinchas and Jeanne)



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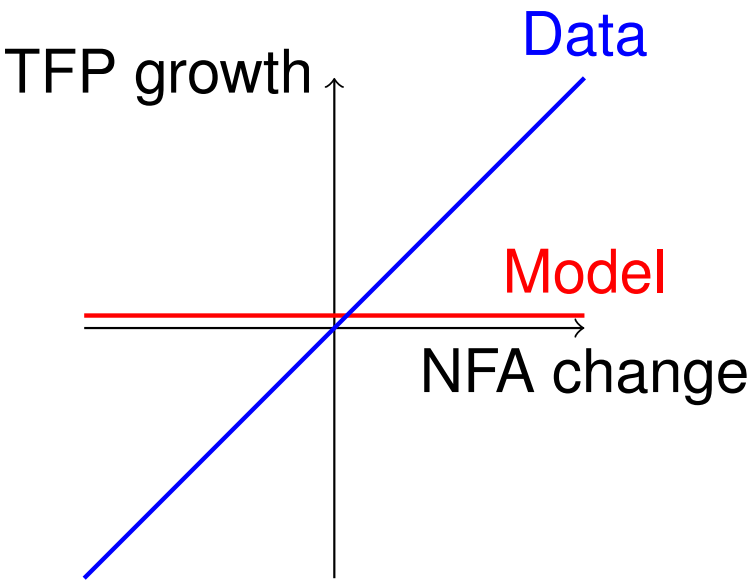

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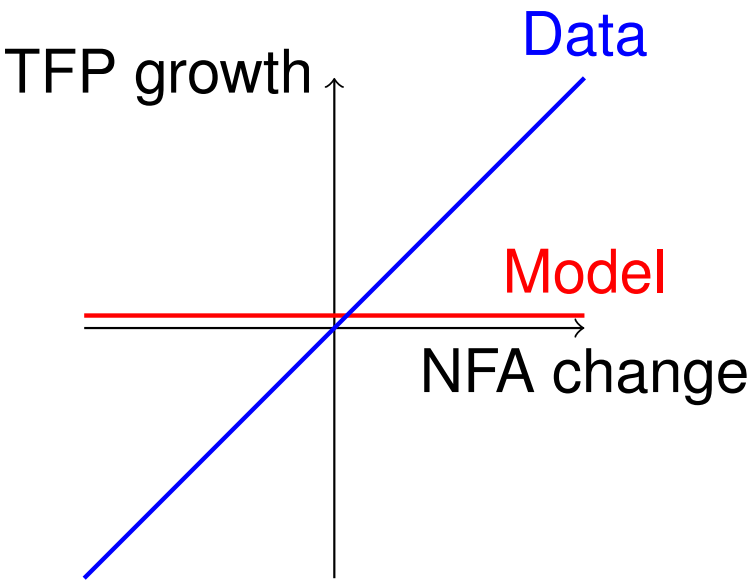

- Could reinterpret k as TFP but..
- Existing papers (Buera and Shin 2009, Sandri 2009) obtain relation between TFP and NFA using different mechanism (domestic financial frictions)
- More work needed to establish the mechanism here is quantitatively relevant

What are the costs of international default $(\underline{W}(k))$?

- In traditional sovereign debt models $\underline{W}(k) = V_{Aut}(k)$
- Here $W(k) = V_{Aut}(k)$+High capital tax i.e. international default triggers domestic punishment (switch to high tax/low investment equilibrium) hence higher default costs
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  - Why Greece that has a foreign debt to GDP ratio exceeding 50% not defaulting?
  - Why after default Kirchner has been elected in Argentina?
  - Why Chari claims that different fates of Mexico and US are due to the fact Mexico defaulted on its international debt in late 1800s while US did not?

Conclusions

- Very good paper, very useful analytical characterization of growth dynamics under limited enforcement..I teach it in my intl macro class!
- Model highlights connections between growth, foreign capital accumulation and preferences over timing of consumption
- More work needed to establish its quantitative relevance..