

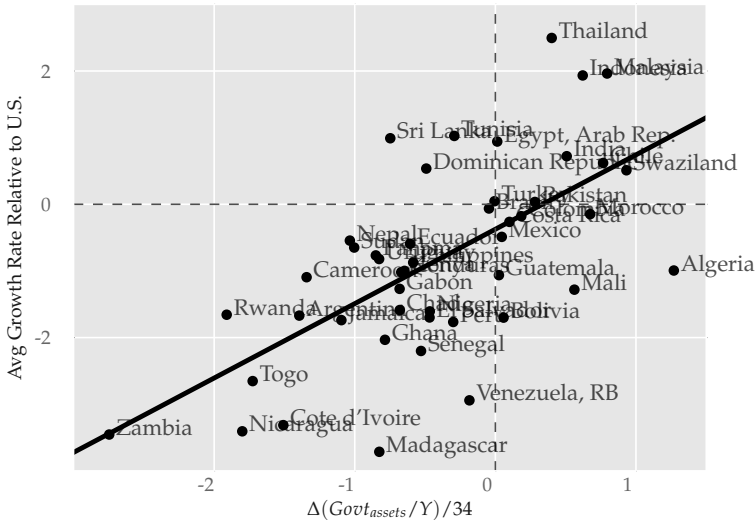
# Growth in the shadow of expropriation

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# Motivation



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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

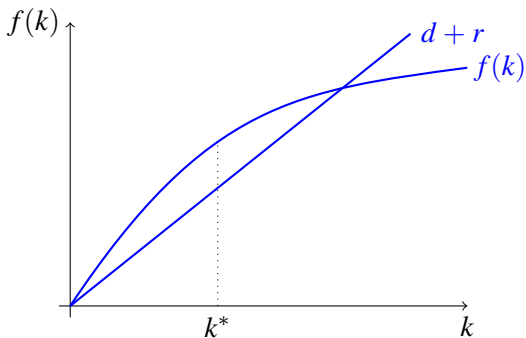
# Outline

- 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
- $u(c) = \frac{c^{1-\sigma}}{1-\sigma}, \sigma \rightarrow 0, \beta R = 1, \underline{W}(k) = -\infty$

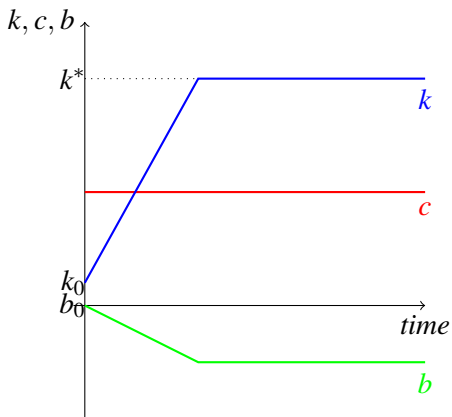
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- $k_0, b_0$  both low
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- Set taxes so that  $k_t = k^*, t \geq 1$ , and set flat consumption
- From intertemporal budget constraint

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

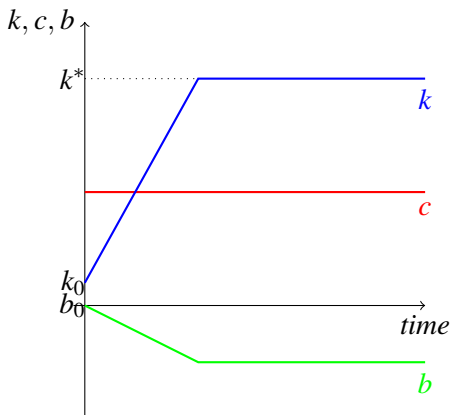


## The frictionless environment,3



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- 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  $b_1 > b^{fb}$

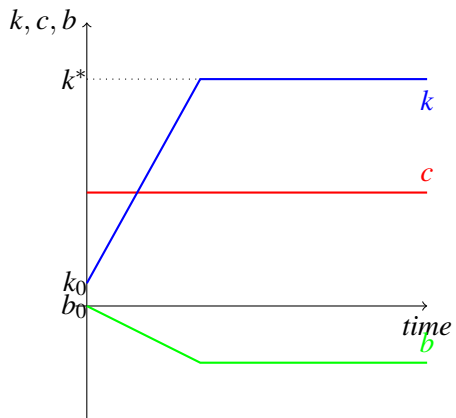
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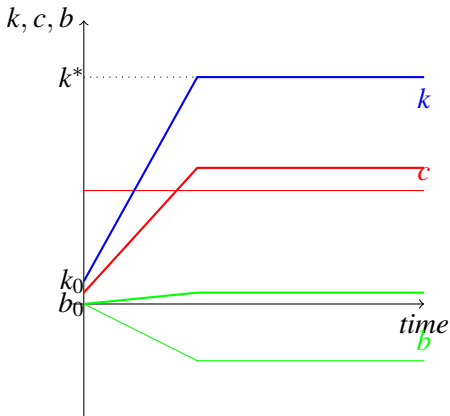
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- Is it efficient? Yes:  $\beta R = 1$ , almost linear utility

## Limited enforcement,2



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- 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



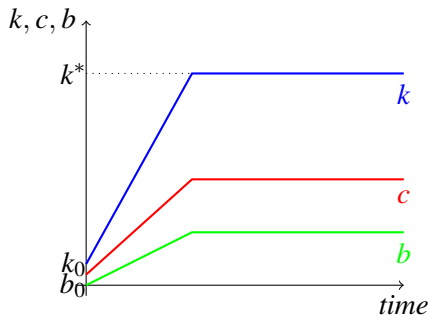
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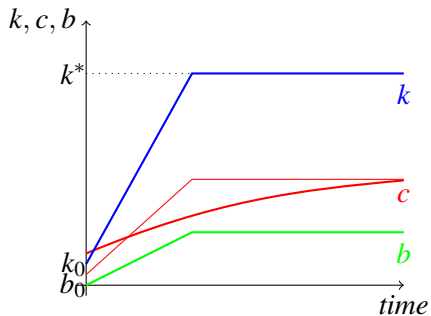
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- In general (curvature in  $U$  or political impatience), trade-off between productive efficiency and optimal allocation of consumption through time

## Limited enforcement + political friction

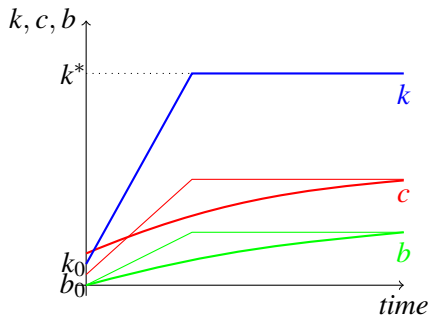


- Allocation no longer efficient: shifting consumption from 1 to 0 (reducing debt accumulation) increases govt. utility

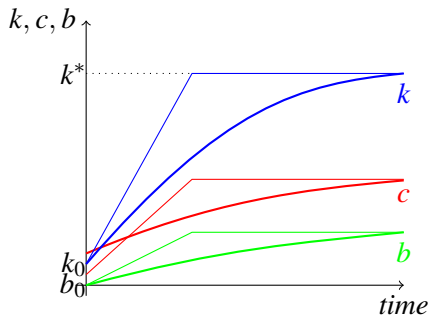
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- Consumption smoothing comes at the cost of less productive efficiency/slower growth

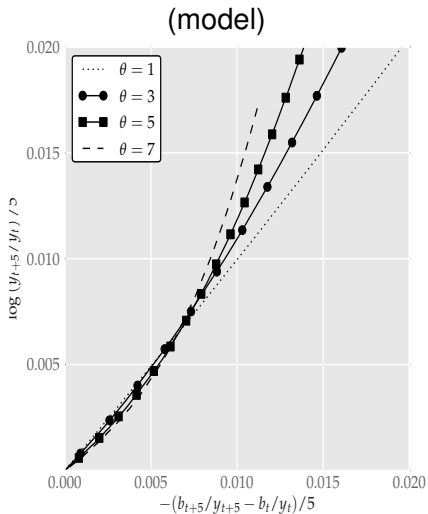
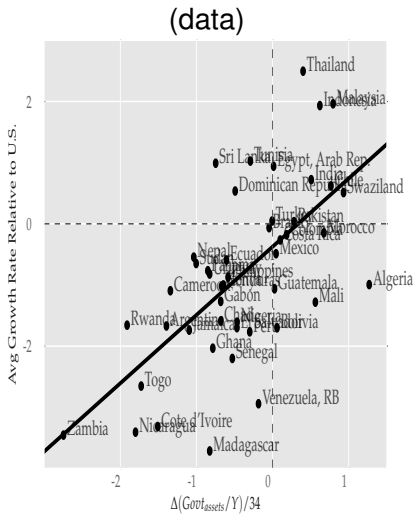
## The role of the political friction?

- 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

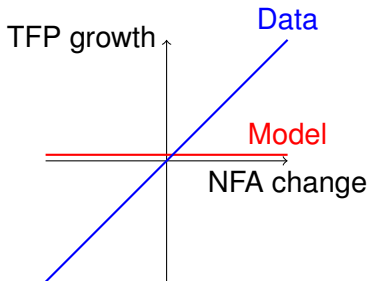
# Quantitative analysis





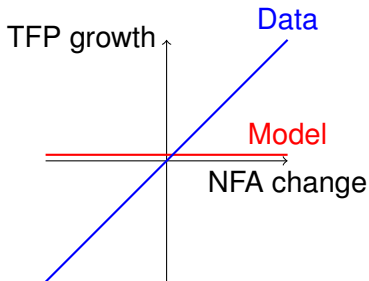
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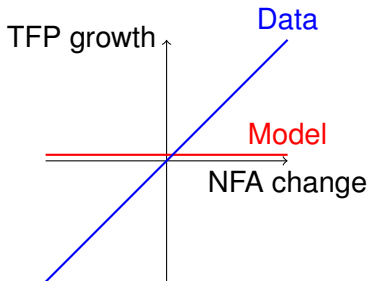
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- Problem is relation between GDP growth and NFA change comes from **TFP growth** (Gourinchas and Jeanne)



- 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  $\underline{W}(k) = V_{Aut}(k)$
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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..