On Fiscal Policy and Unions

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Introduction

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  - For some: yes (e.g., bailouts, inflationary pressures).
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- Main insights:
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    - ★ Crowding-out effect of public spending exported to the union.
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  - Extension 1: externality depends on whether debt markets are global.
    - ★ Role for within-union intermediation.
  - Extension 2: at ZLB, externality switches sign.
    - ★ Overspending or underspending depending on severity of financial frictions.
    - ★ Importance of flexible spending limits.

Related literature

- Financial frictions, interest rates, and capital flows:
  - Gertler, Rogoff (1990), Matsuyama (2004), Caballero, Farhi, Gourinchas (2008), Broner, Ventura (2016).
- Fiscal policy and interest rates:
  - Mundell-Fleming, Farhi, Werning (2017), Fornaro, Romei (2019), Blanchard (2019).
- Foreign holdings of public debt, fiscal policy, and economic activity:
  - Bolton, Jeanne (2011), Broner, Erce, Martin, Ventura (2014), Brutti, Sauré (2014), Priftis, Zimic (2018), Broner, Clancy, Erce, Martin (2018), Gourinchas, Martin, Messer (2018).
- Interest rates and return to capital:
  - Gomme, Ravikumar, Rupert (2011, 2015), Faltermeier (2019).

The model

- I ($\# = \infty$), two periods ($t = 0, 1$).

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- *Preferences*: in each country $i \in I$, continuum of agents that maximize

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- Country $i \in I$ populated by government, entrepreneurs and savers.
  - At $t = 0$, savers with endowment ω_i:
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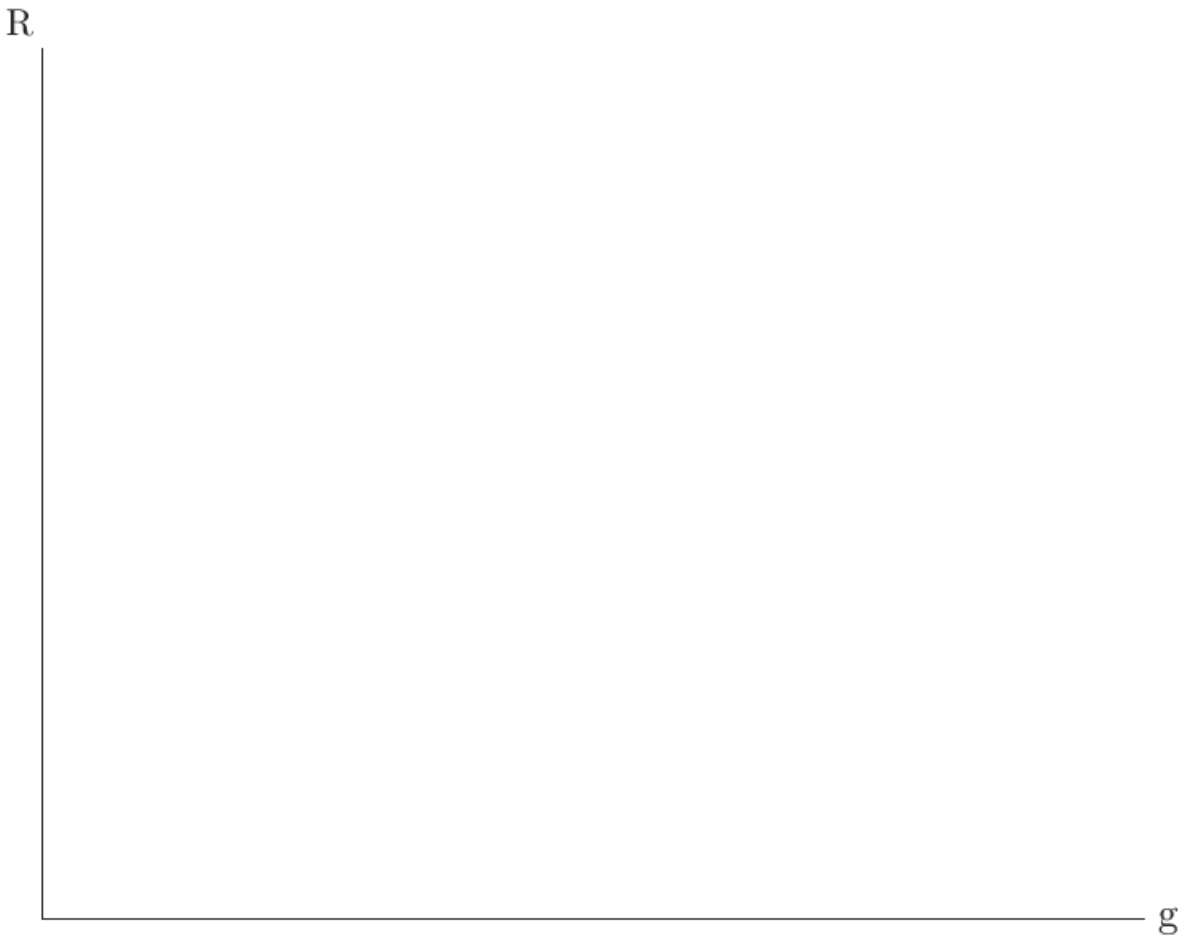
- In a "union", given $\{g_i\}_{i \in I}$, equilibrium satisfies:

$$R = \lambda \cdot f'(k_i) \text{ for all } i \in I,$$

$$\sum_{i \in I} (k_i + g_i) = \sum_{i \in I} \omega_i,$$

$$W_i = f(k_i) + \gamma_i \cdot v(g_i) + R \cdot (\omega_i - k_i - g_i) \text{ for all } i \in I.$$

Constrained optimal allocation



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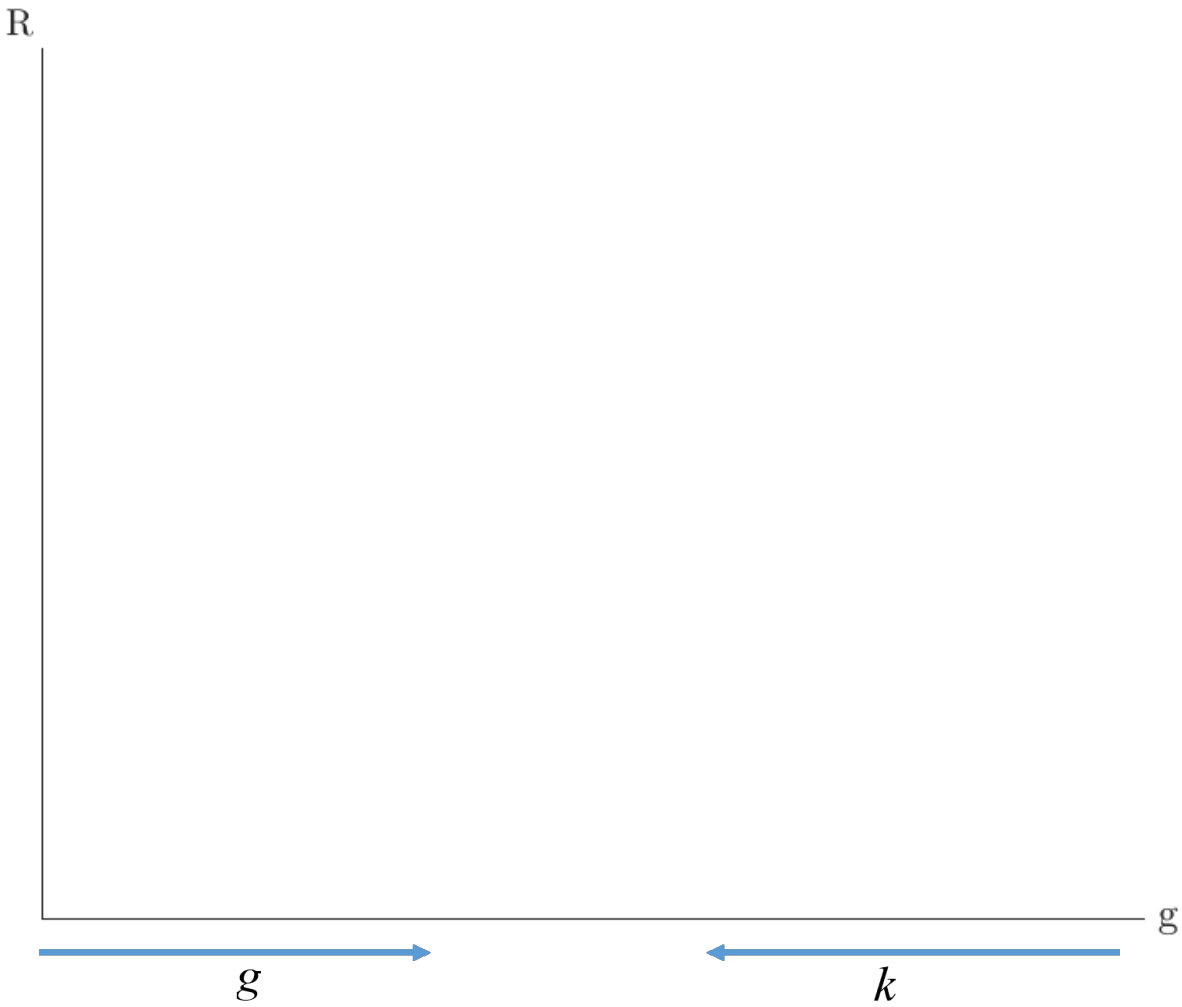

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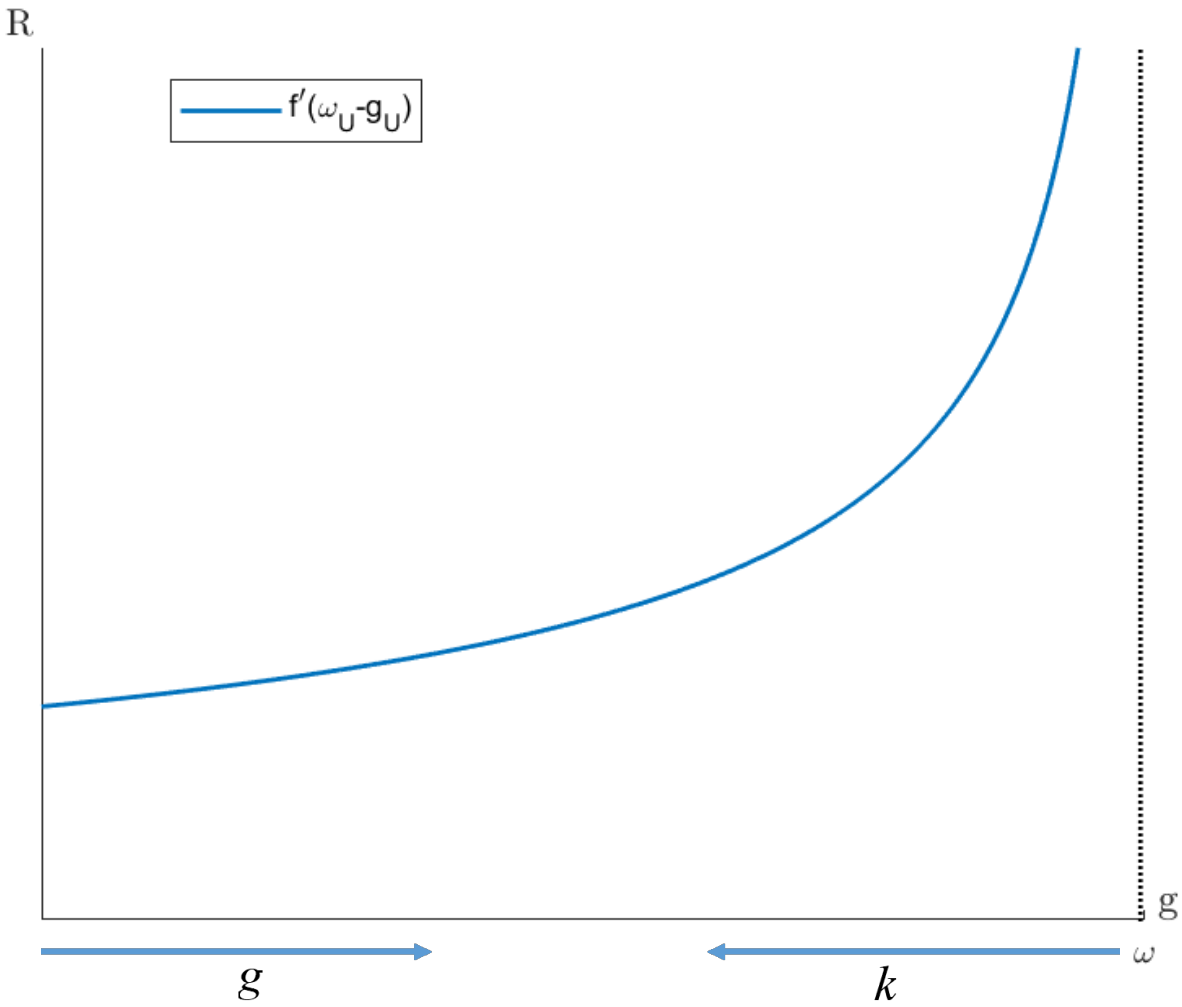

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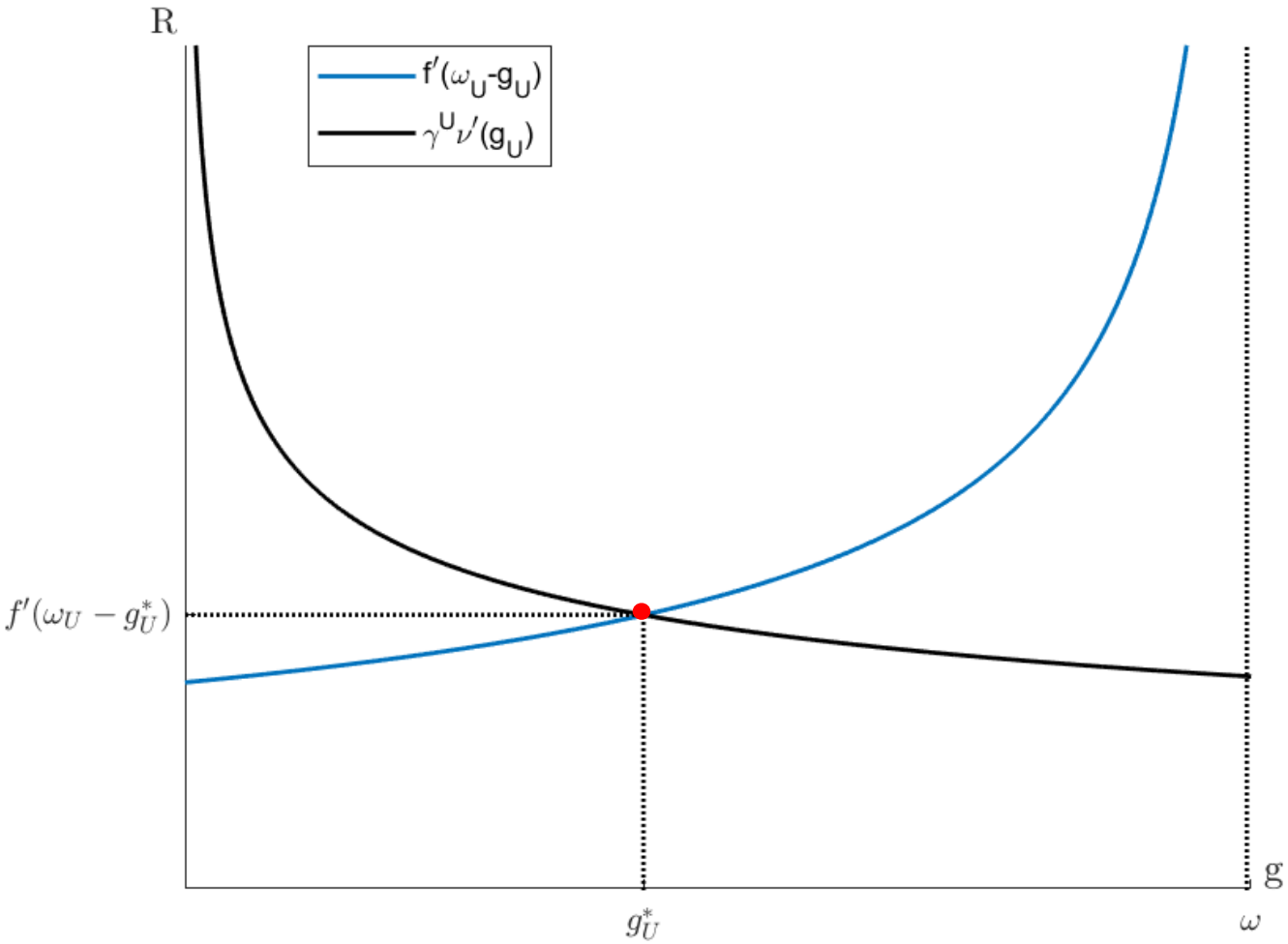
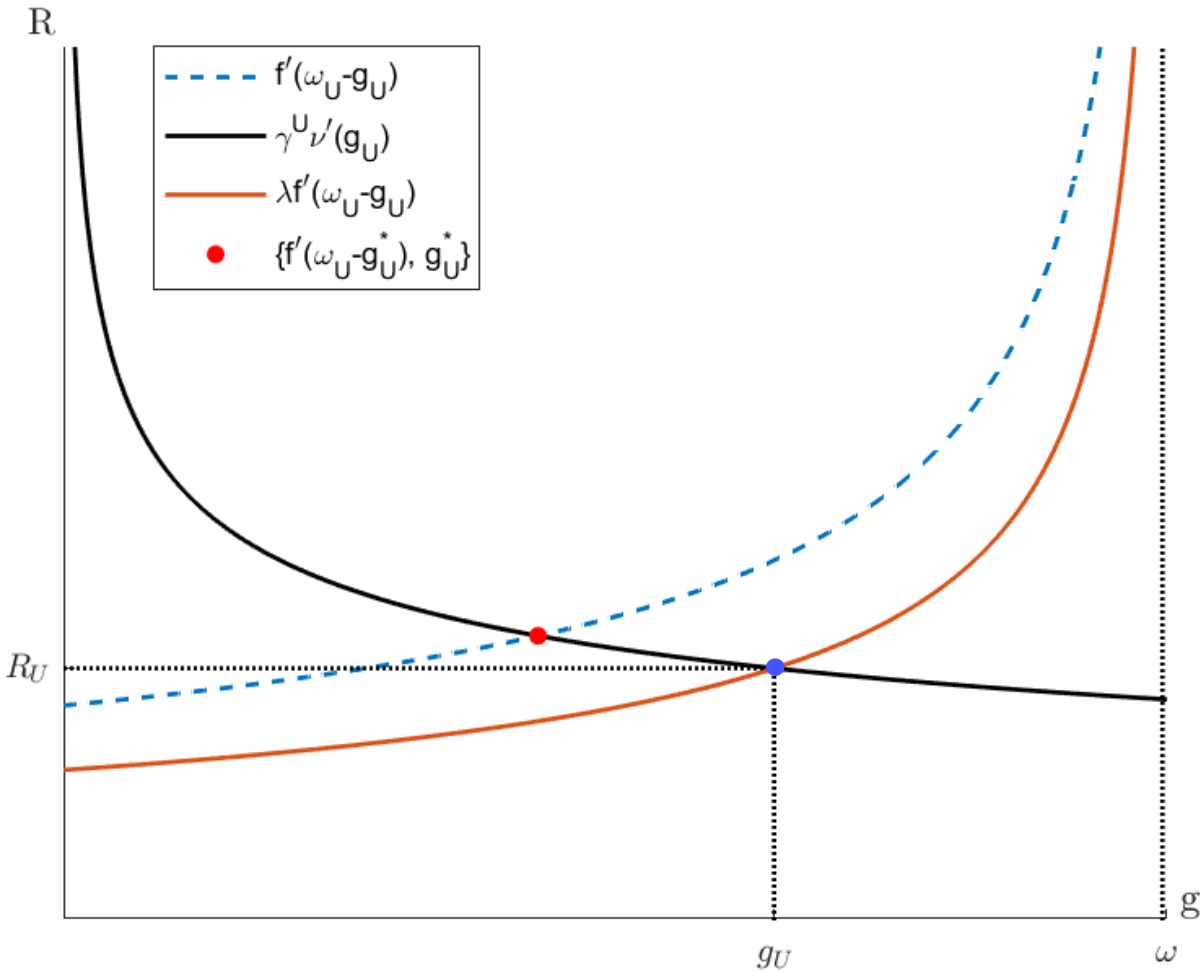


Decentralized equilibrium



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- Consider (non-discriminatory) spending limit.
  - Set by median country:
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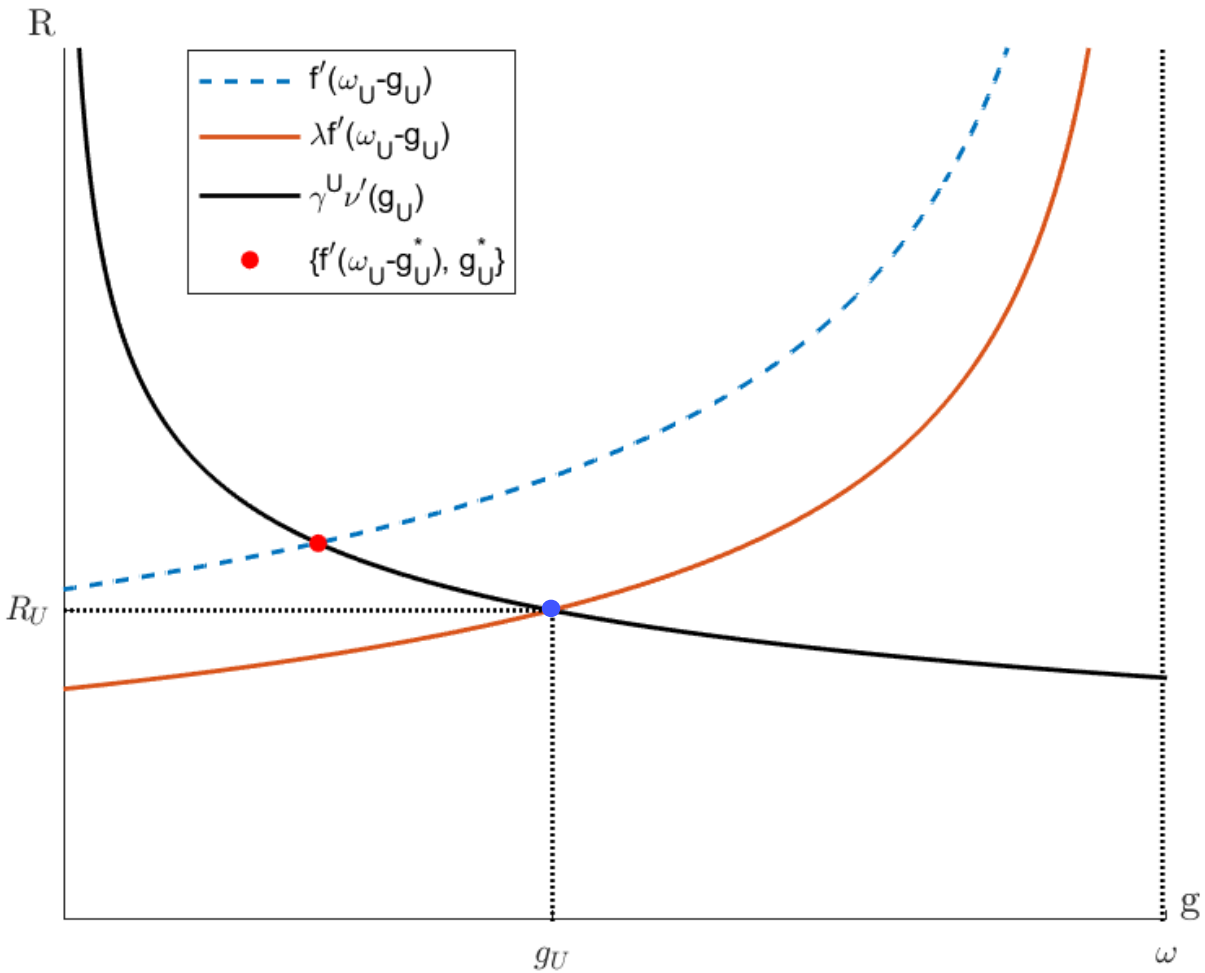
  - Median country does not internalize effects on other countries.
- **Main insight:**
  - If median country is high spender: limit will tend to be too loose.
  - If median country is low spender: limit will tent to be too tight.

Union with heterogeneous countries



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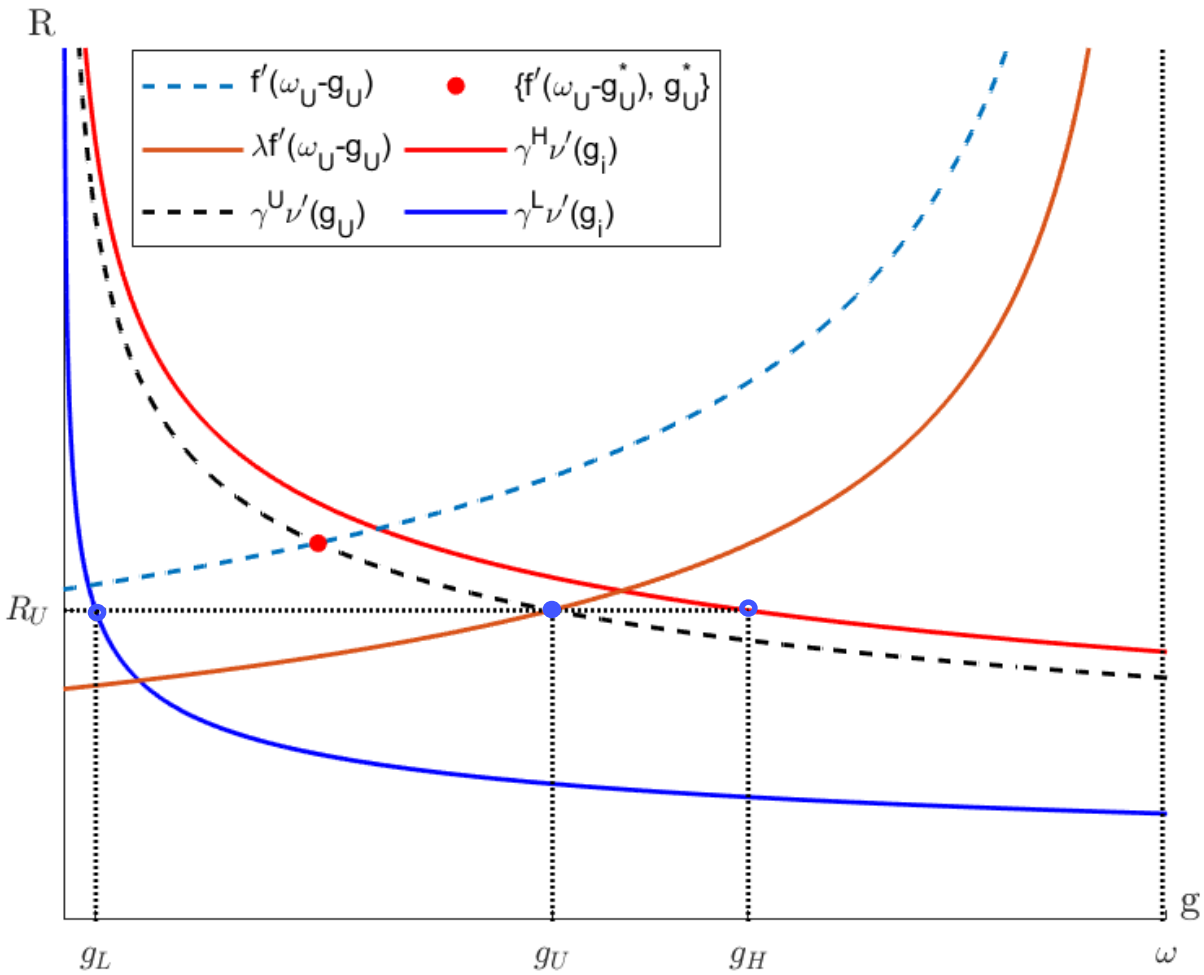
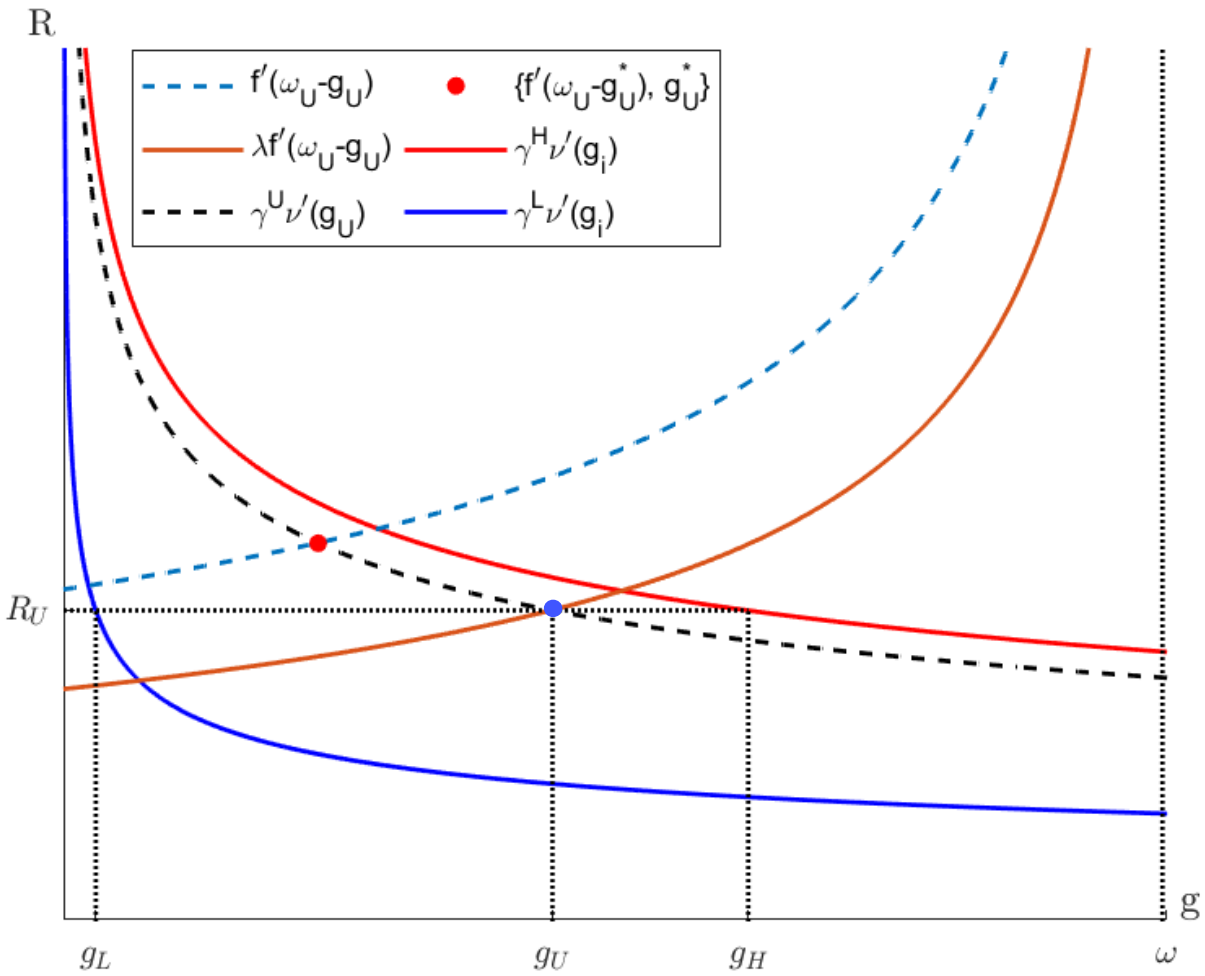


Spending limit too loose



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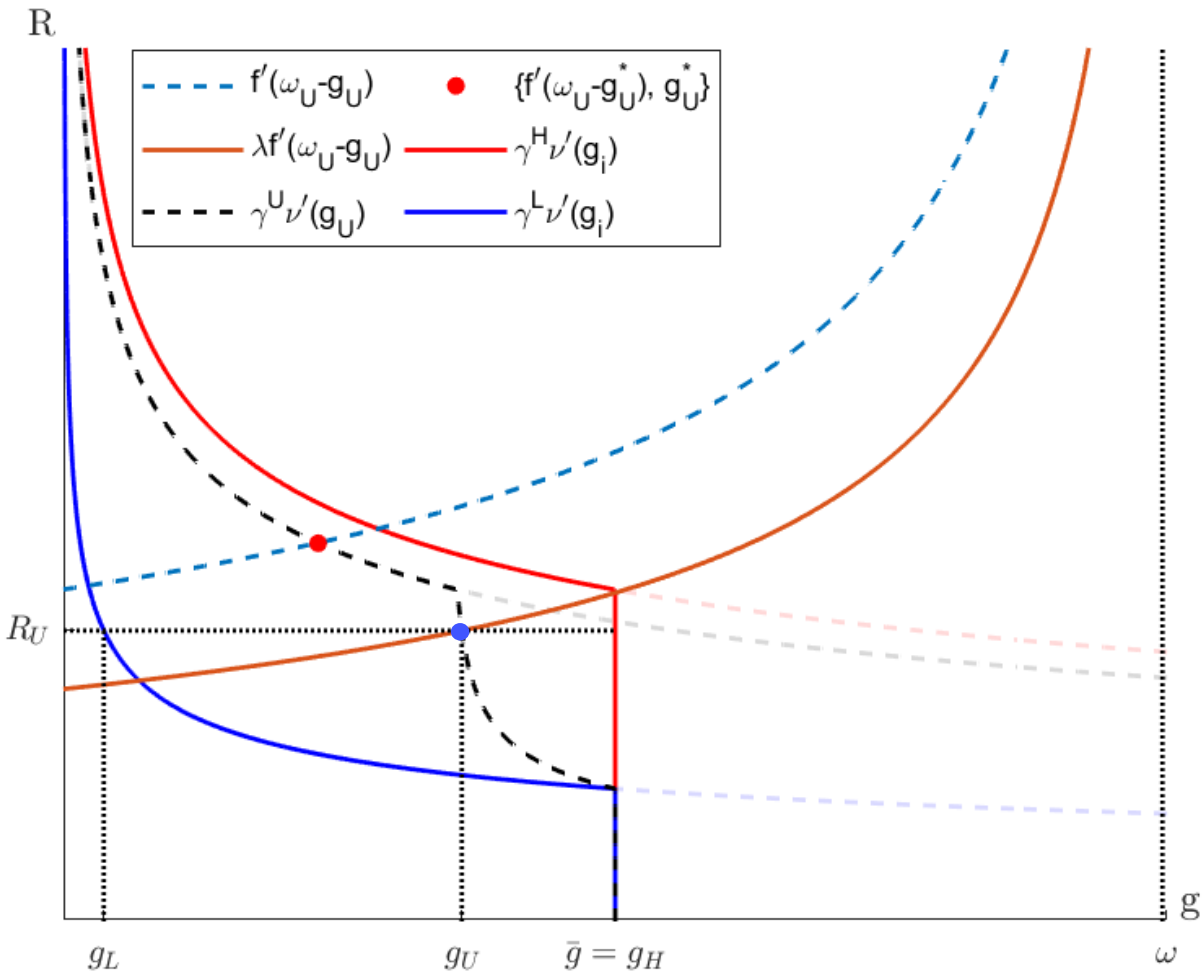
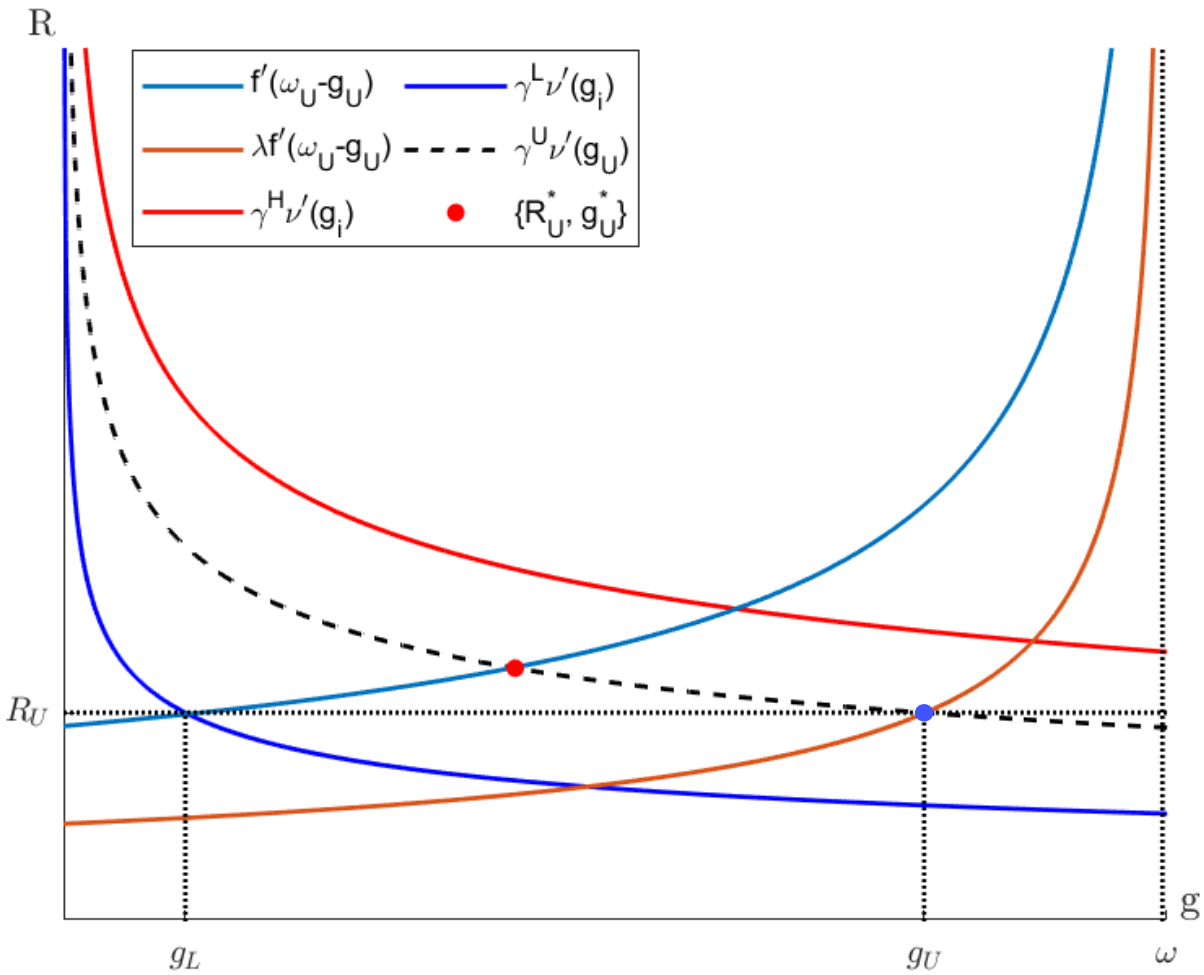


Spending limit too tight



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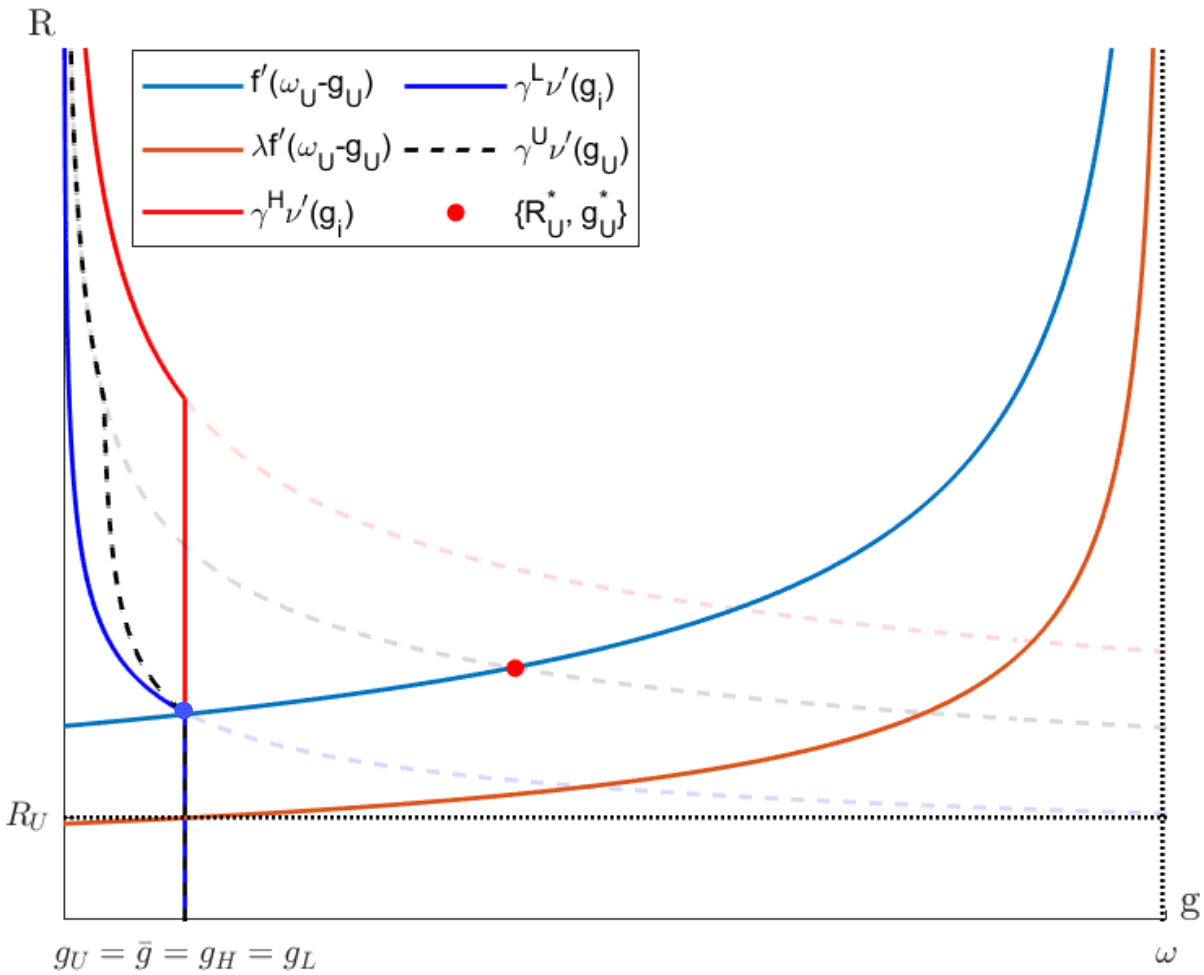

Correcting the externality: taxes

- In principle, tax on spending could correct externality.
- But similar arguments apply...
  - Median country would not necessarily choose optimal tax.
  - In fact, median country may prefer spending limit over taxes.

Extension 1: global debt

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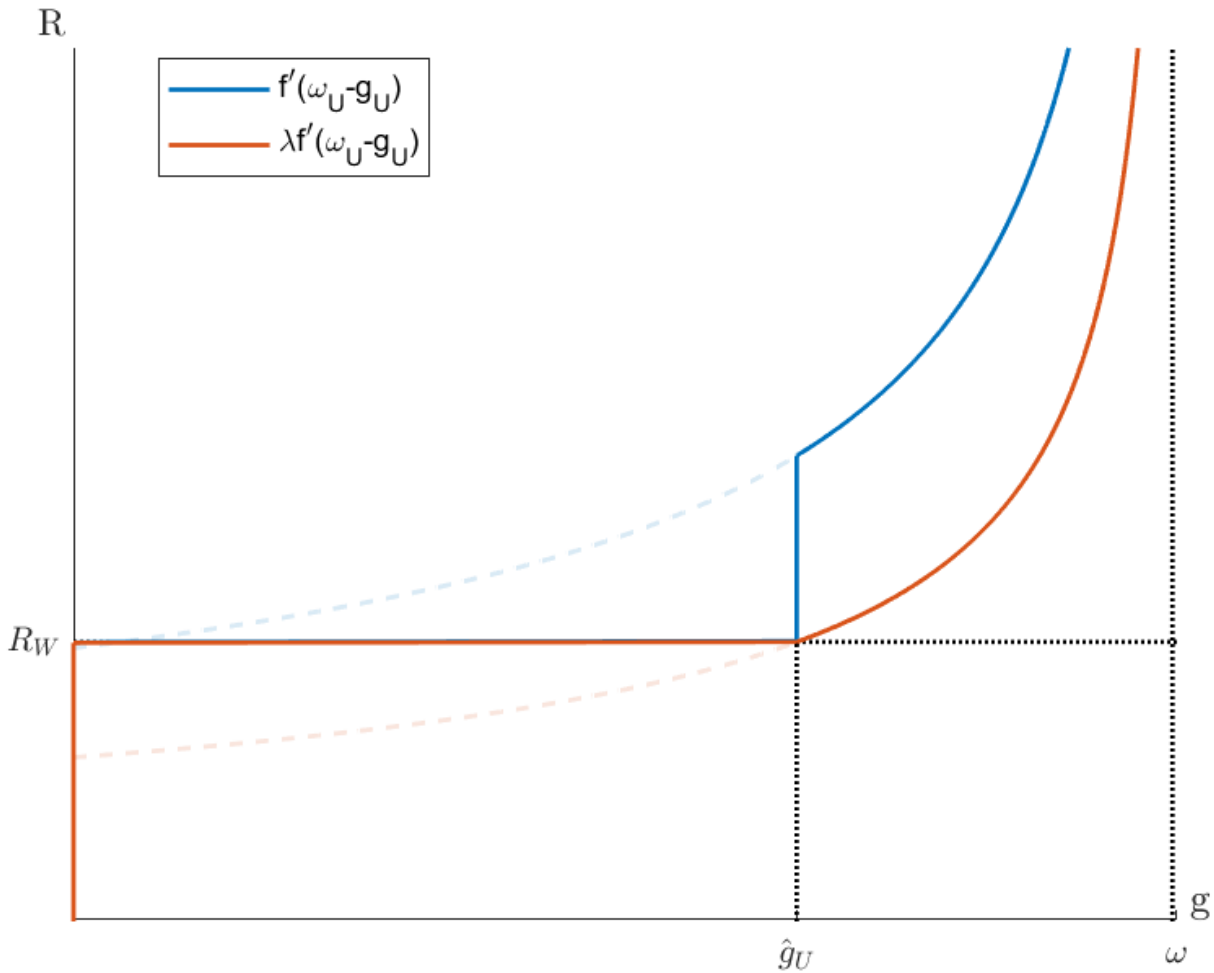
- Now assume fraction δ of debt can be placed outside of the union.
  - Purchased by international financial market (IFM): interest rate R_W.
  - Can think of δ as reflecting credibility.
- Crowding-out effect of g decreasing in share of debt held by IFM.
  - Consistent with evidence on multiplier and debt holdings (Broner et al. 2019).

Global debt: externality may disappear



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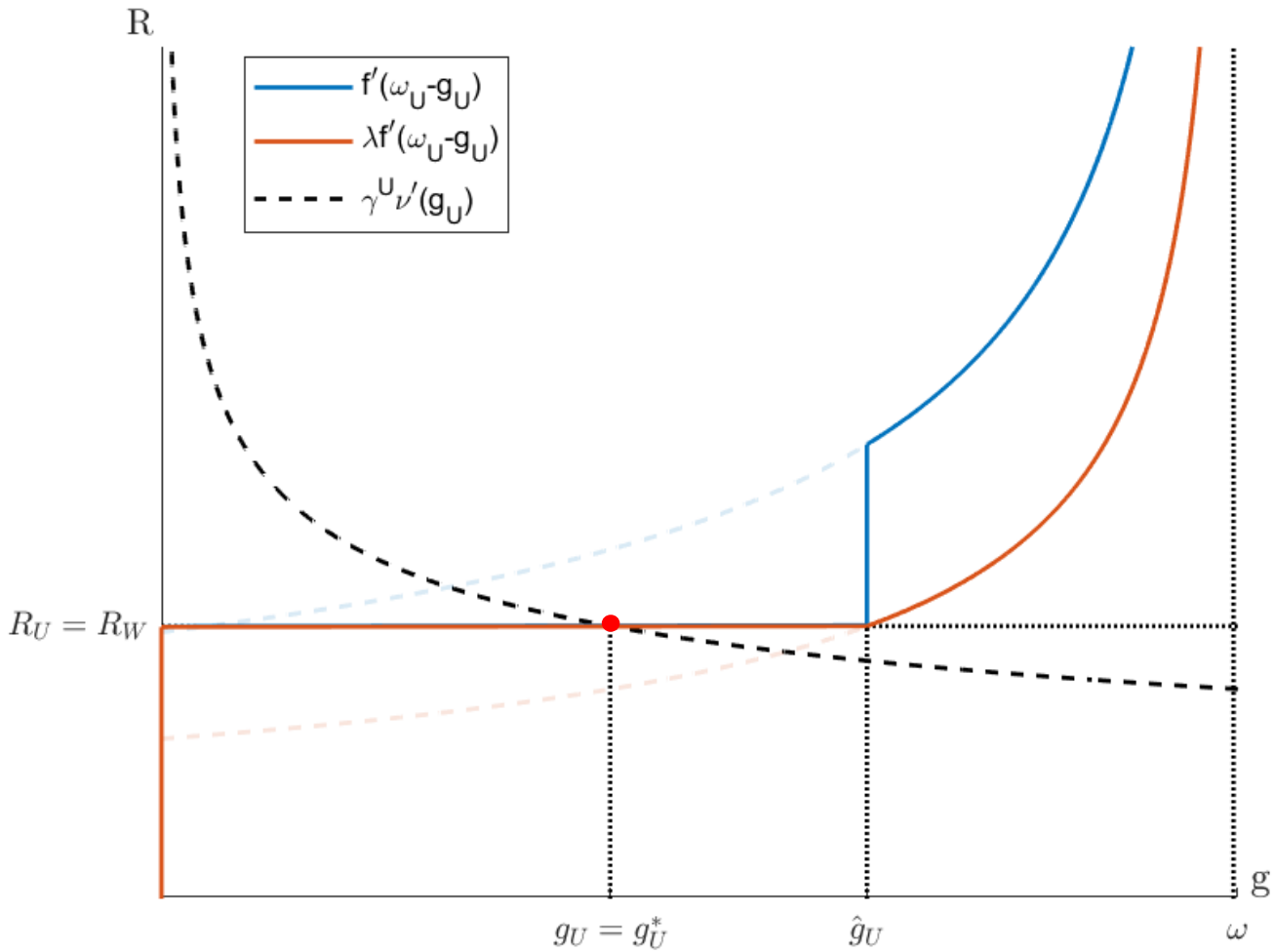

Extension 1: global debt

- If δ is high enough, $R_U = R_W$ and externality disappears altogether!
- If δ is heterogeneous within the union, role for intra-union intermediation.
  - Think of crisis as fall in δ of periphery (or fall in λ throughout union).
  - Role for high-δ countries to intermediate between IFM and low-δ countries.
  - Interpretation of eurozone policy responses:
    - ★ European Financial Stability Facility (EFSF), European Stability Mechanism (ESM), ECB's programs (SMP, LTRO, OMT).

Extension 2: ZLB

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    - ★ e.g., savers in country $i \in I$ can produce up to $\bar{\omega}_i$ with negligible effort.
  - Lower bound r on union interest rate, i.e., $R_U \geq r$.
    - ★ e.g., ZLB on nominal interest rate plus nominal rigidities.

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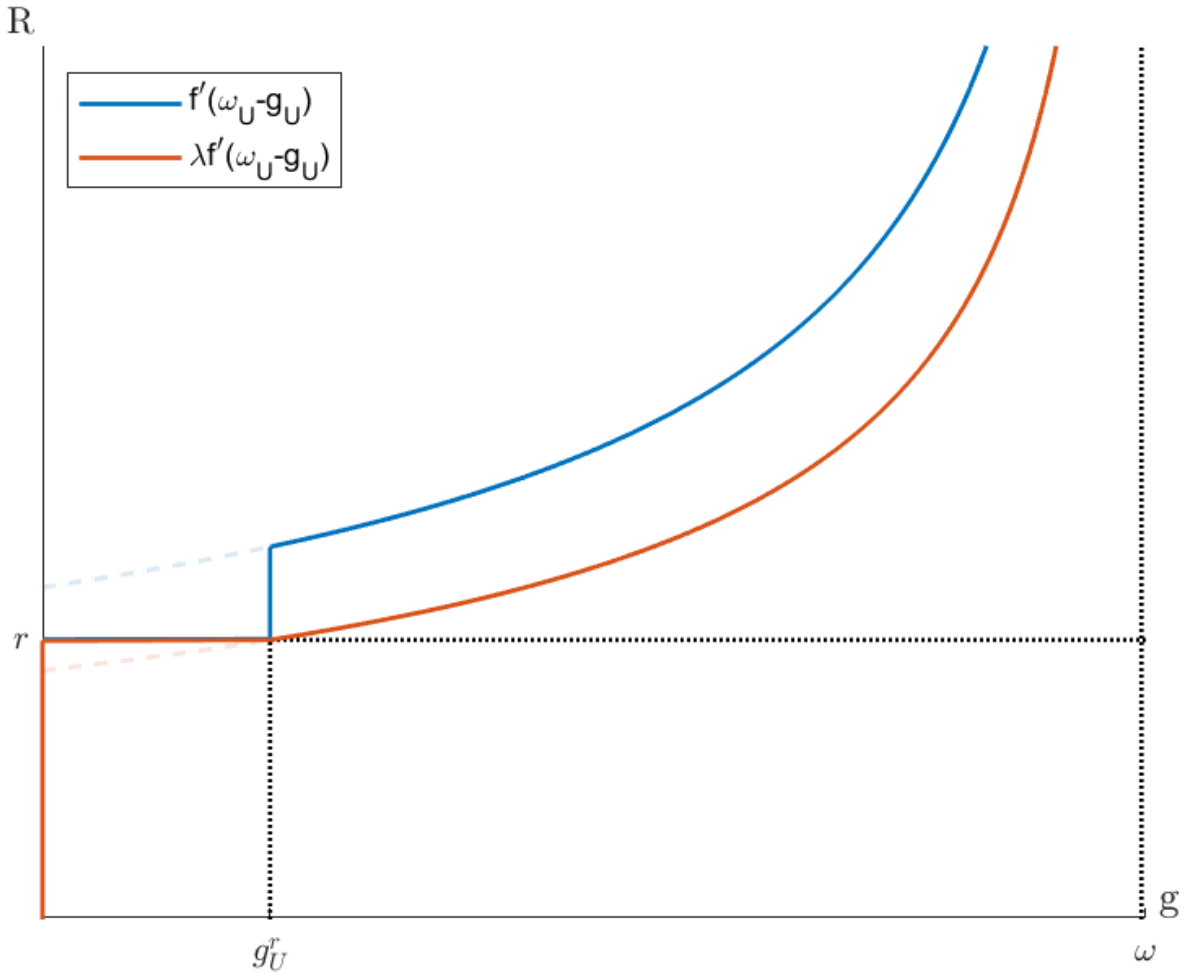
- What changes? Critical level of spending $\hat{g}_U$ such that:
  - If $g_U \geq \hat{g}_U$: $\omega_U = \bar{\omega}_U$ (output supply determined): *overspending*.
  - If $g_U < \hat{g}_U$: $\omega_U < \bar{\omega}_U$ (output demand determined): *underspending*.

Extension 2: before crisis (ZLB slack)

- λ high and overspending: role for spending limit.



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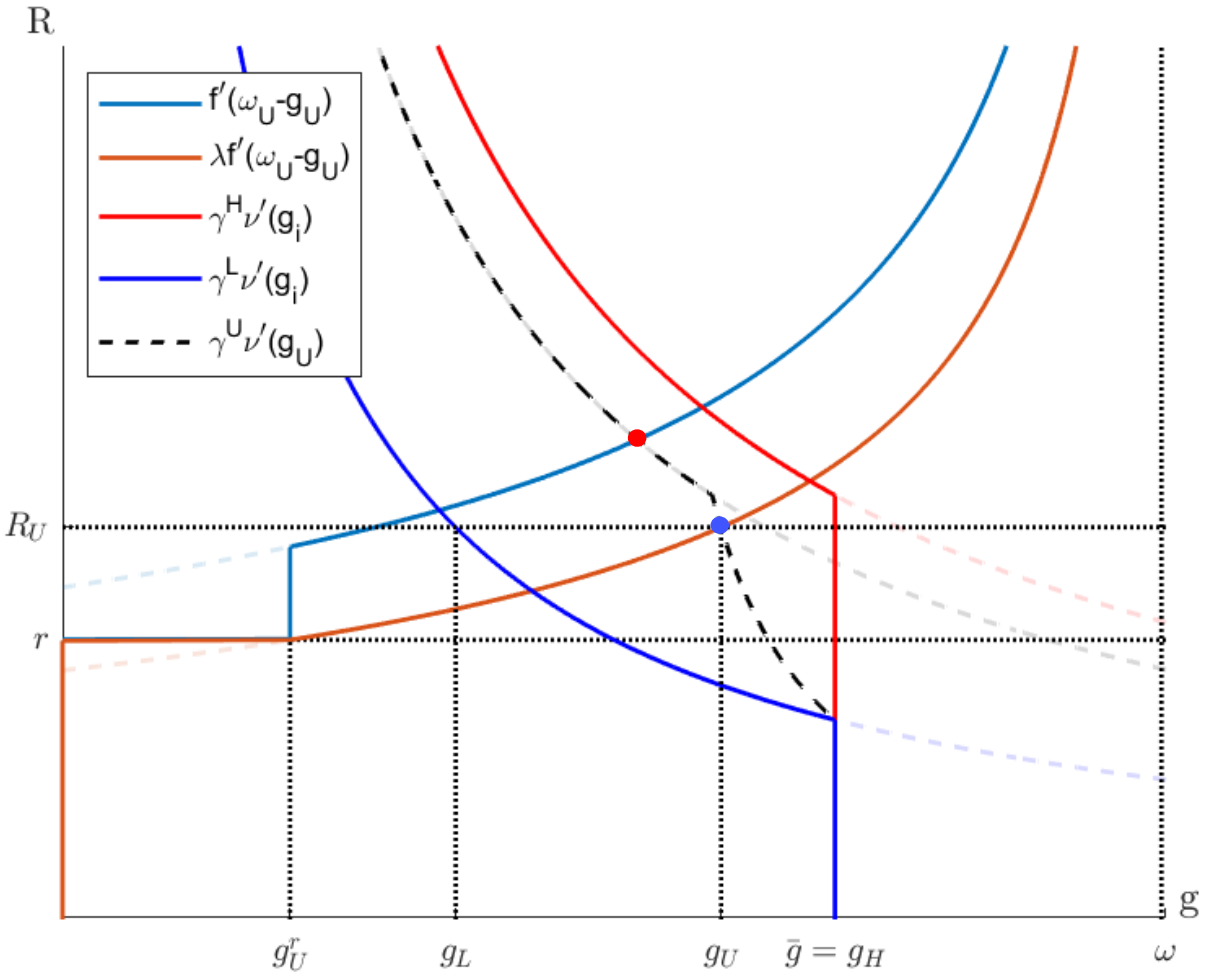
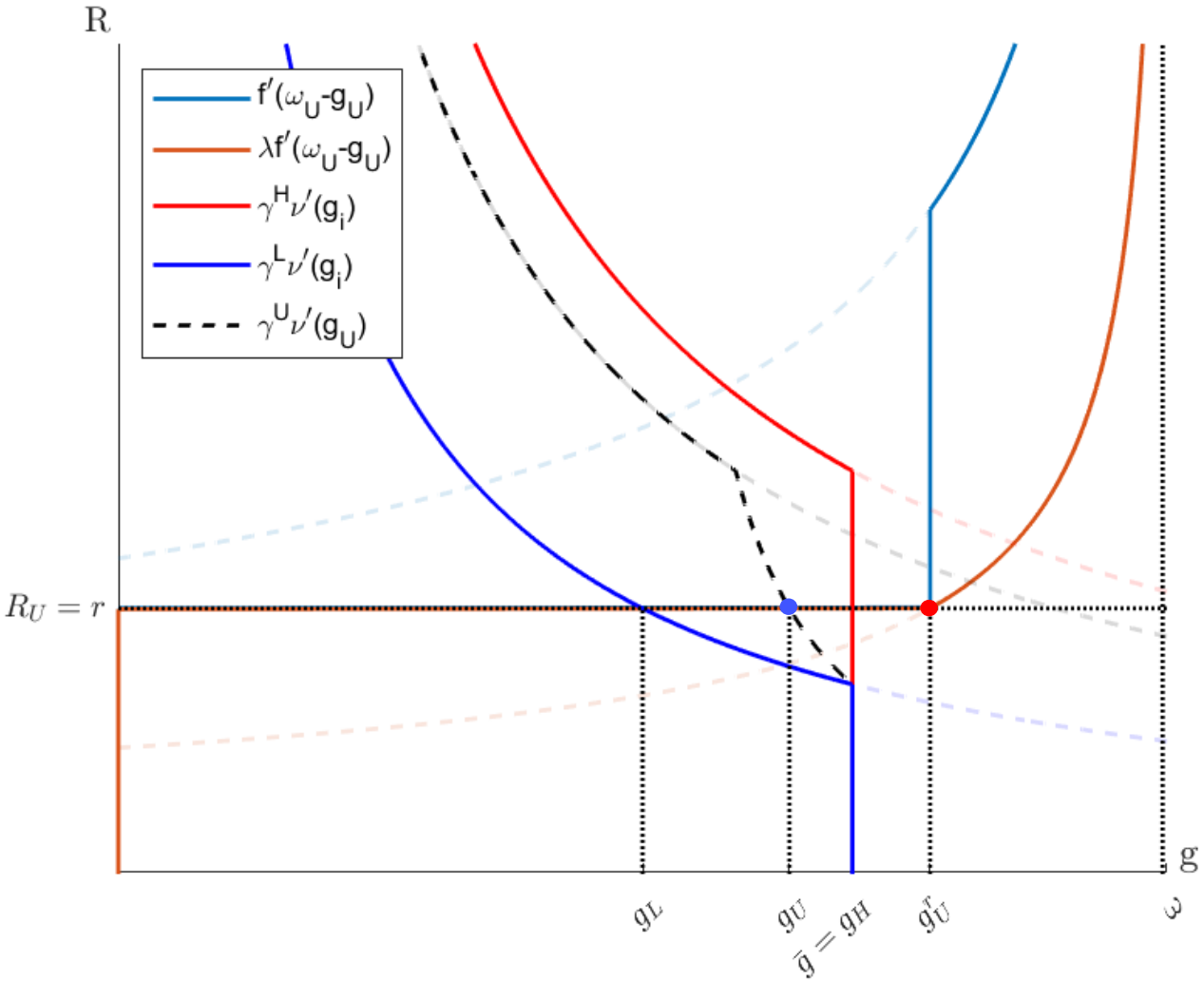


Extension 2: effect of crisis (ZLB binds)

- λ falls, underspending: some countries cannot spend, others don't want to!



Conclusions

- We live in a world of low interest rates.
  - Opportunity to increase public spending at low cost?
- This paper emphasizes role of financial frictions.
  - Frictions: wedge between interest rate and marginal product of capital.
  - Interest rates may not properly reflect cost of public spending.
  - In fact, some evidence that return to capital has not fallen alongside interest rate.
- Main insights:
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  - Extension 1: externality depends on whether debt markets are global.
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