Hegemonic Globalization

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Introduction

- Recent decades: trade and financial globalization
- Not unprecedented: end of 19th century, integration as high as today
- Common feature to both episodes: single hegemonic power
  - Britain in 19th century, US today

Questions

- What is the relationship between hegemonic power and globalization?
- Is globalization more or less likely in a multipolar world?

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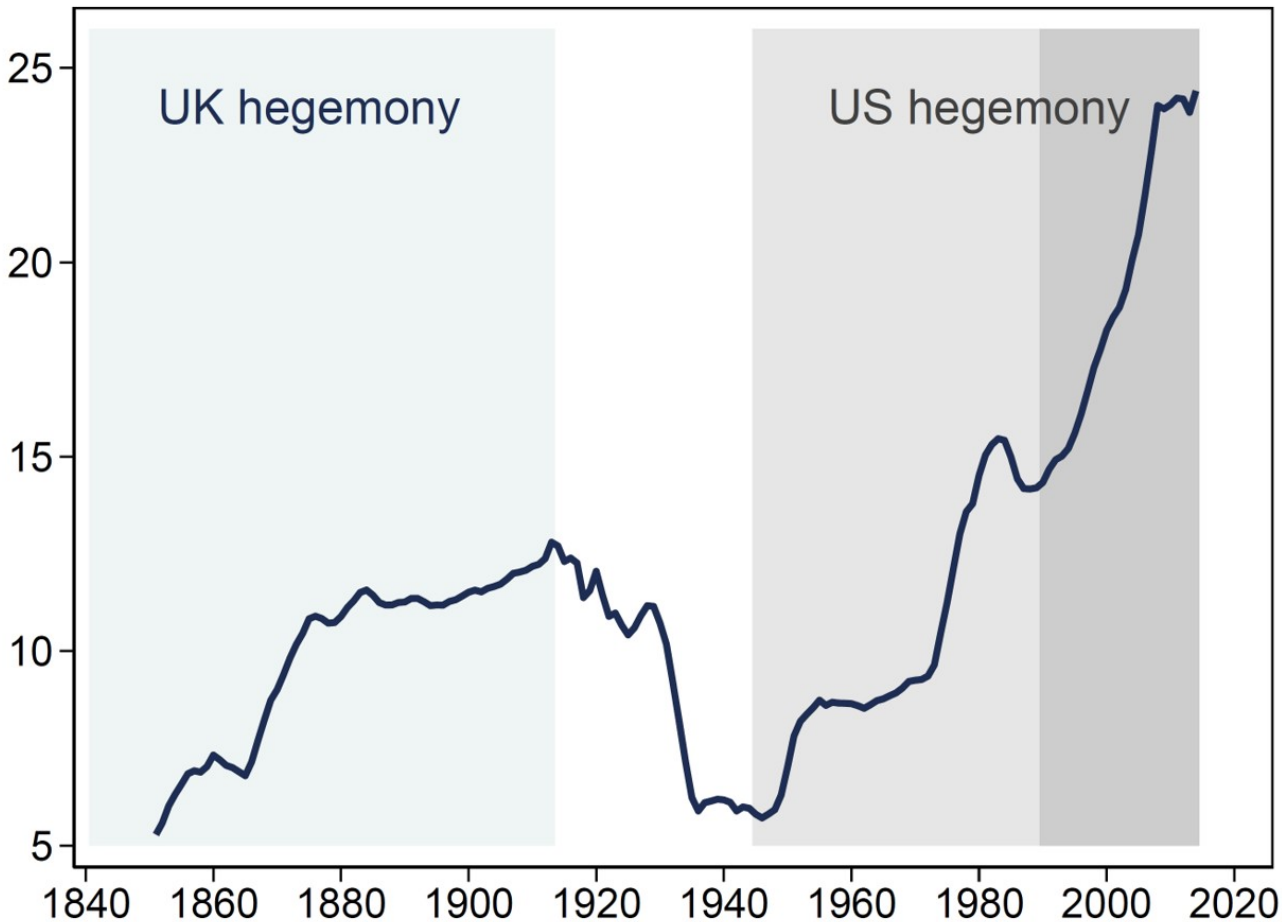
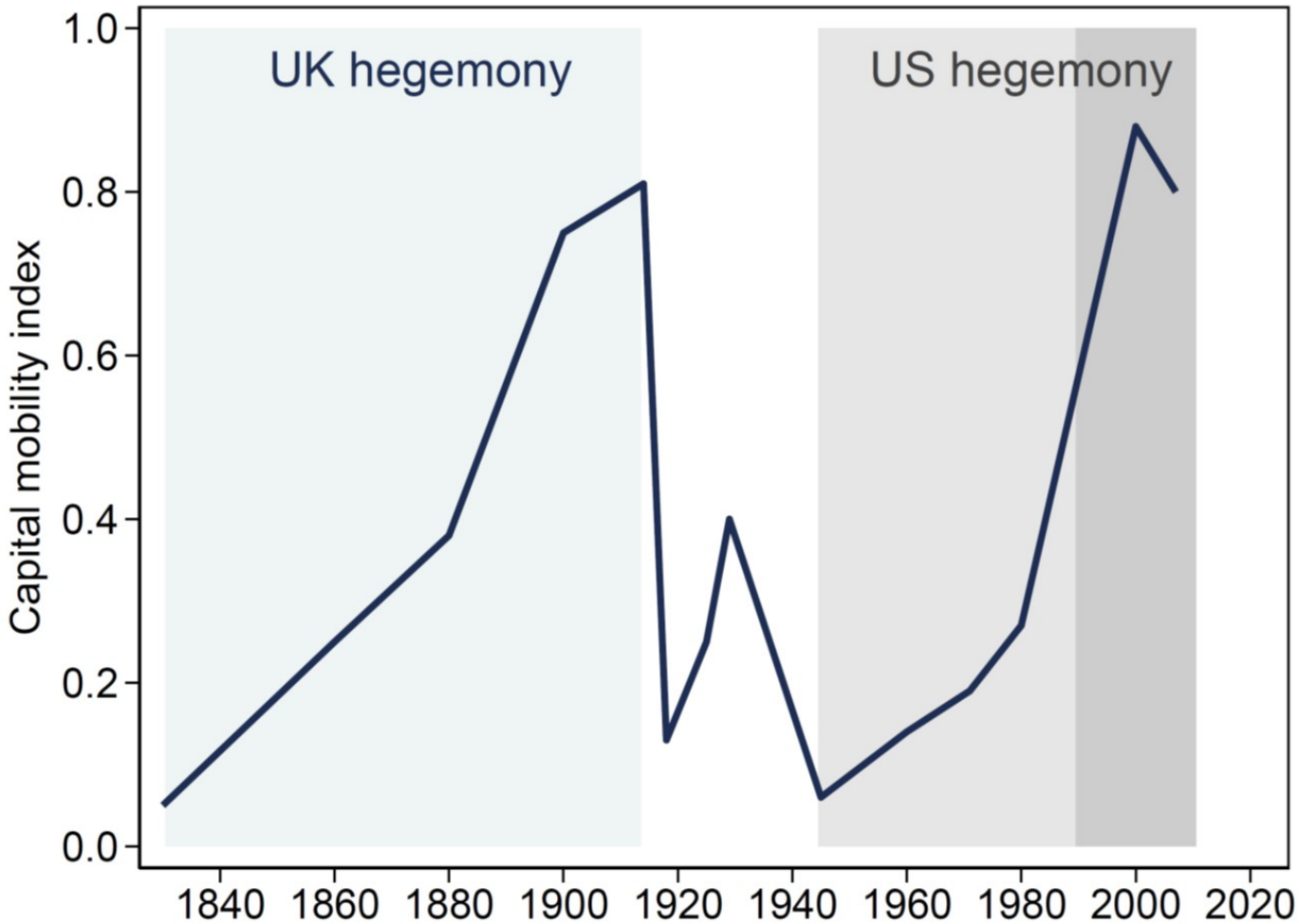
Trade openness and hegemony

Global exports to global GDP (in %)



Notes: Data from CEPII/TradeHist.

Financial openness and hegemony



Notes: Index of capital mobility by Obstfeld/Taylor (2005), Reinhart/Rogoff (2009)

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This paper

- Stylized model of hegemonic power and globalization, four key features
  - countries trade in goods and assets
  - countries have heterogeneous preferences over political "actions" or alignment
    - political system (democracy/autocracy), industrial standards, language, currency
  - trade between any two countries increases in similarity of their actions
  - hegemonic power derives from country size
- Main insights
  - Complementarity in actions
    - hysteresis, multiple equilibria, tipping points
  - Emergence of an hegemon
    - prompts alignment of actions
    - transition from fragmented to integrated world
    - more trade in goods and assets, and higher world welfare
    - but not everyone wins
  - Transition to multipolar world may cause sudden unravelling of globalization
- Theoretical framework and preliminary supporting evidence

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On Hegemony

- Definition: *the ability of an actor with overwhelming capabilities to shape the international system through both coercive and non-coercive means. Usually this actor is understood to be a single state, such as Great Britain in the 19th century or the United States in the 20th and 21st century* (Oxford Dictionary 2023)
  - Consistent with Gilpin (1981), Keohane (1984), and Nye (2011)
- Distinct from Empire: hegemonic power rules by influence not by direct control
- Two hegemonic periods since 1800
  - UK: 1820s to 1913 (O'Rourke and Wiliamson 2002)
  - US: 1945-, in particular 1992-2008 (Waltz 1979, Doyle 1986, Fukuyama 1992, 2021)

Related literature

- Hegemony and globalization
  - Kindleberger (1973, 1986), Gilpin (1975, 1981), Krasner (1976), Braudel (1984), Stein (1984), Wallerstein (1989), Bordo and James (2015), Farhi and Maggiori (2018), Gourinchas et al. (2019), Ilzetzki et al. (2019), Gopinath et al. (2020), Camboni and Procellaria (2023), Clayton et al. (2023)
- Trade and geopolitics
  - Rogowski (1989), Mansfield and Bronson (1997), Bliss and Russett (1998), Morrow et al. (1998), Mansfield et al. (2002), Estevadeordal et al. (2003), Milner and Kubota (2005), Martin et al. (2008), Mitchener and Weidenmier (2008), Head et al. (2010), Maurer (2013), Jackson and Nei (2015), Gokmen et al. (2020), Jacks et al. (2020), Kleinman et al. (2023), Neri (2023), Thoening (2023)
- Overcoming distance (gravity)
  - O'Rourke and Williamson (1999), Rauch and Trindade (2002), Anderson and Van Wincoop (2004), Combes et al. (2005), Portes and Rey (2005), Findlay and O'Rourke (2007), Disdier and Head (2008), Jacks et al. (2008, 2011), Antras and Caballero (2009), Manova (2013), Head and Mayer (2014), Redding and Turner (2015), Donaldson and Hornbeck (2016), Donaldson (2018), De Bromhead et al. (2019), Kisling et al. (2021), Xu (2023)

Environment

- Two periods: $t = 0, 1$
- World composed of
  - Mass one of countries in a circle, indexed by $l \in (-0.5, 0) \cup (0, 0.5]$
  - Hegemon of mass η indexed by 0
- At $t = 0$
  - each country i adopts action $a_i \in (-0.5, 0.5]$
  - trade in financial assets (not today)
- At $t = 1$
  - each country receives endowment ω
  - state of nature determines marginal utility of consumption (not today)
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Actions and trade

- Gains from trade in goods arise from love of variety
- For country $i \neq 0$

$$c_i = c_{ii} + \int_{j \in I} (1+T) \cdot c_{ij} \cdot dj + \eta \cdot (1+T) \cdot c_{i0}$$

- The more similar actions are, the more countries can trade

$$c_{ij} \leq 1 - \beta \cdot d(a_i, a_j)$$

where $d(\cdot, \cdot) \in [0, 0.5]$ denotes distance between actions

- Given symmetry and linearity of preferences, all goods have the same price

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- Given symmetry and linearity of preferences, all goods have the same price

Actions and trade

- Value of consumption for country $i \neq 0$ is given by

$$c_i = \omega + \int_{j \in I} T \cdot (1 - \beta \cdot d(a_i, a_j)) \cdot dj + \eta \cdot T \cdot (1 - \beta \cdot d(a_i, a_0))$$

  where $T \cdot (1 - \beta \cdot d(a_i, a_j))$ are gains from trading with j

- Value of consumption for hegemon

$$c_0 = \eta \cdot \omega + \eta^2 \cdot T + \eta \cdot \int_{j \in I} T \cdot (1 - \beta \cdot d(a_0, a_j)) \cdot dj$$

  where $\eta^2 \cdot T$ reflects gains from trade within hegemon

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Preferences over consumption and actions

- Utility of country $i \neq 0$

$$U_i = c_i - \alpha \cdot d\left(a_i, i\right)$$

where $\alpha \cdot d\left(a_i, i\right)$ denotes disutility of choosing $a_i \neq i$

- Utility of hegemon $i = 0$

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Equilibria

- Fragmentation equilibrium
  - Each country sets $a_i = i$
  - Exists if
$$\frac{\alpha}{T} \geq \beta \cdot \eta$$
  - Intuition: heterogeneity in preferences strong relative to "pull" by hegemon
- Globalization equilibrium
  - All countries set $a_i = 0$
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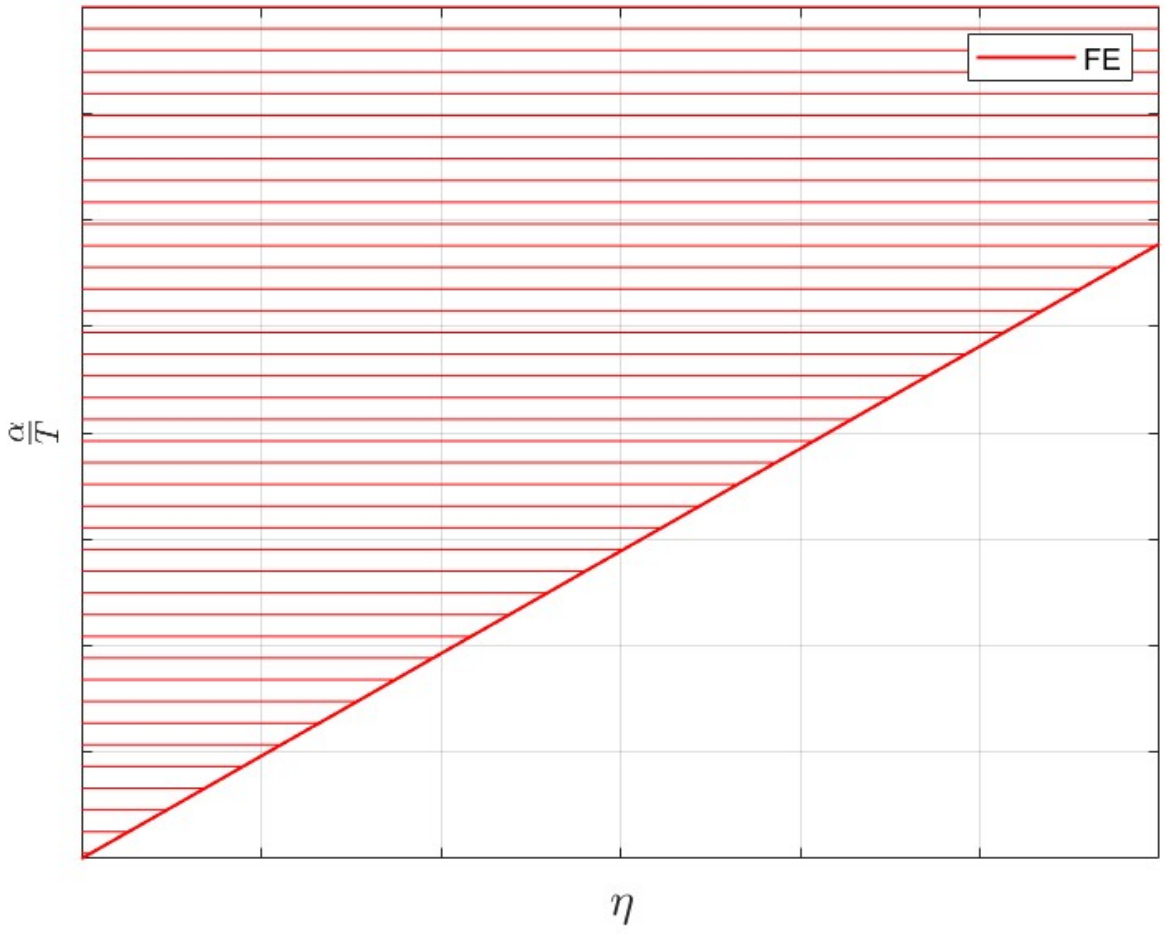
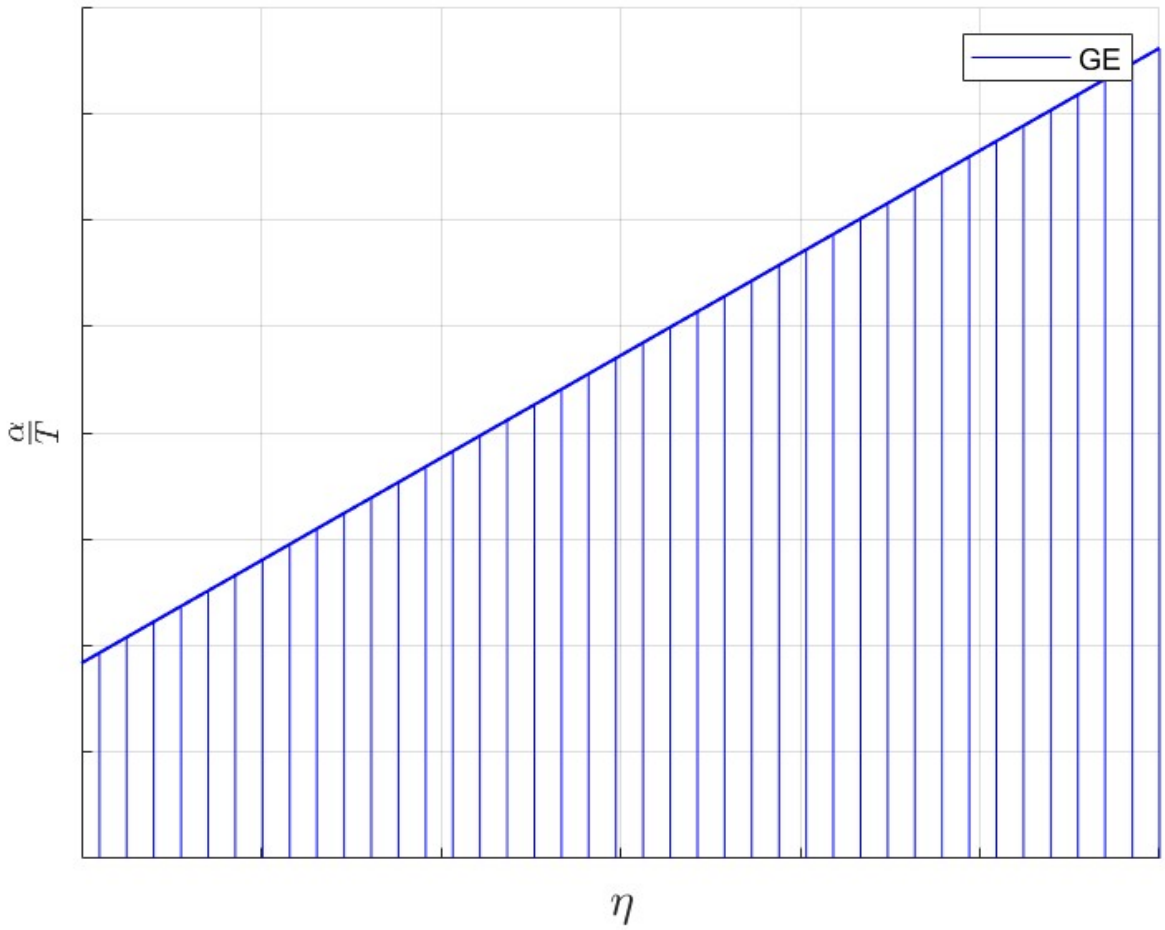
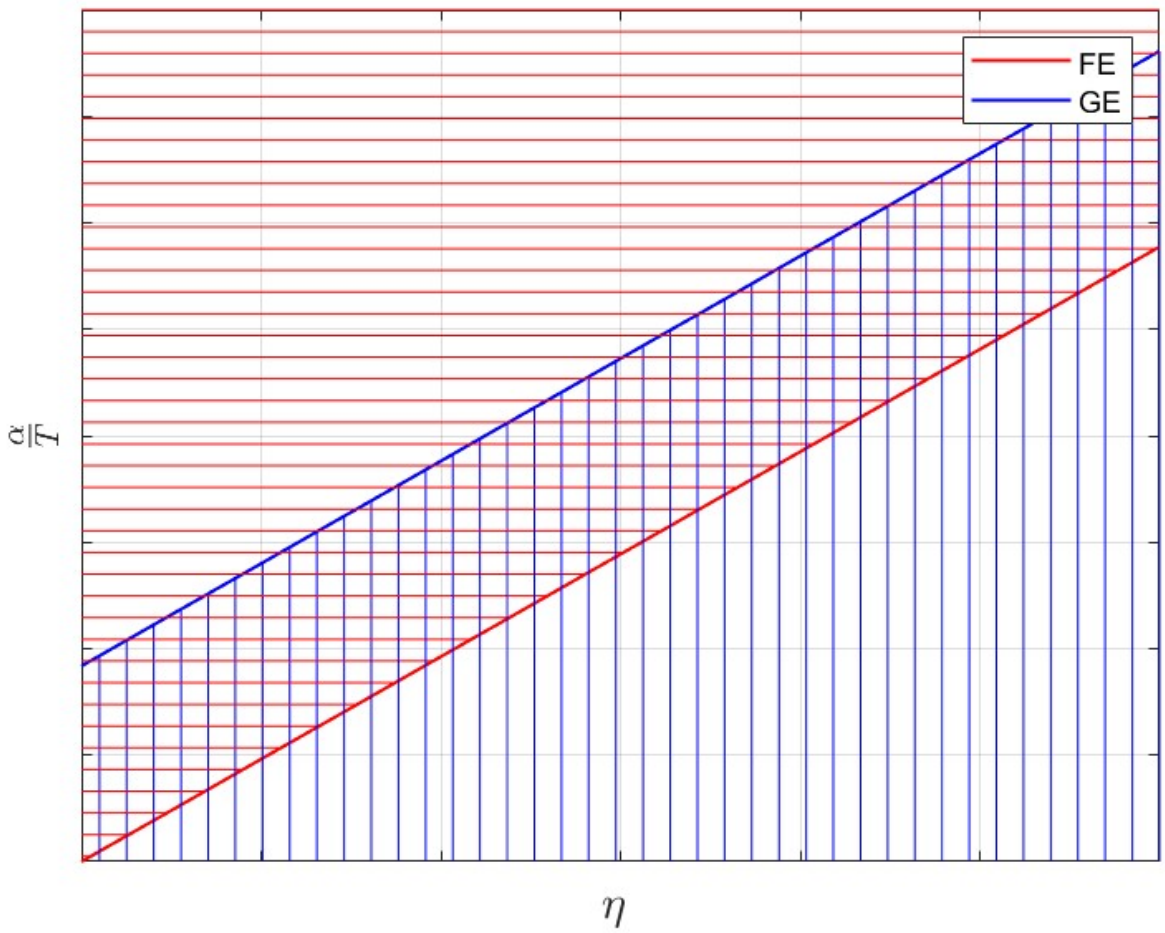
Fragmentation equilibria



Globalization equilibria

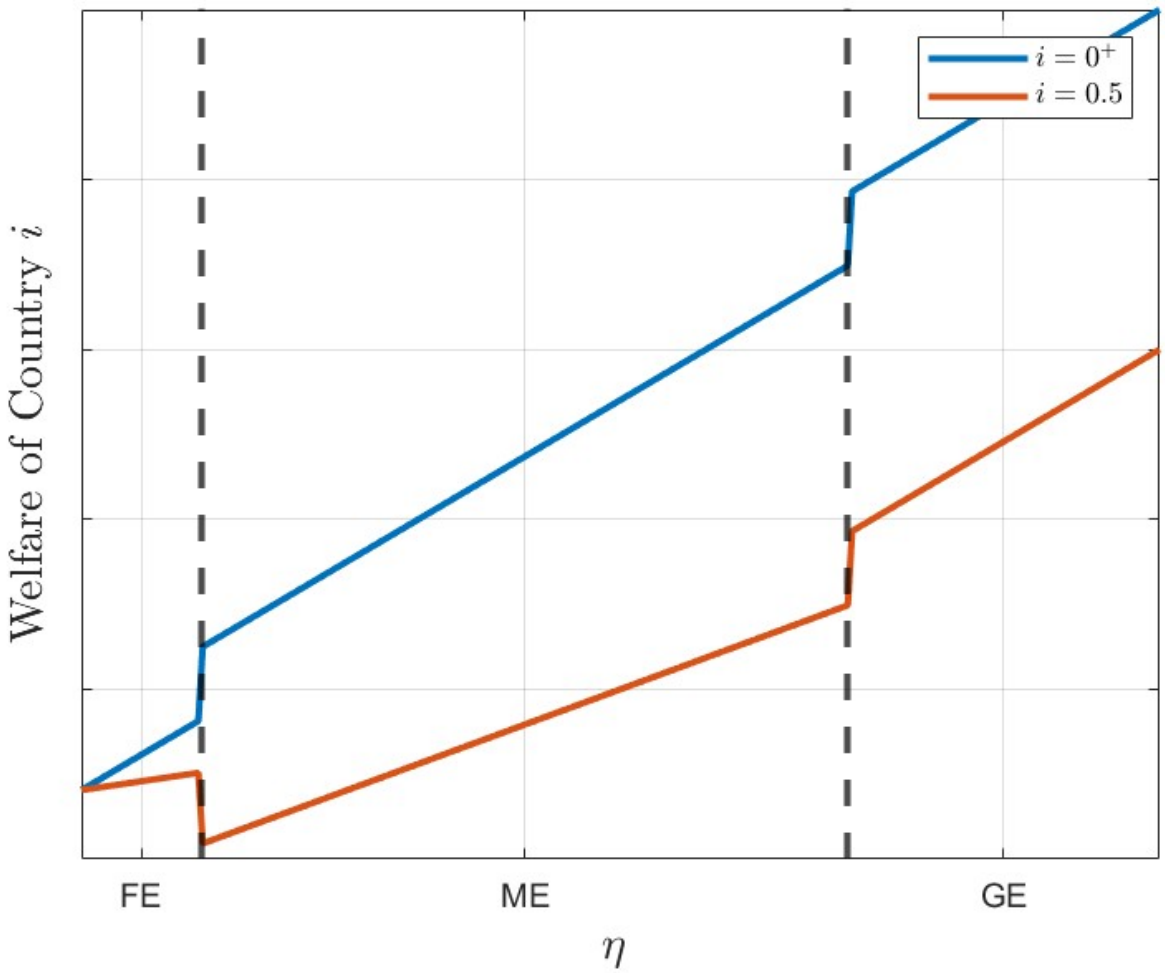


Fragmentation and globalization equilibria



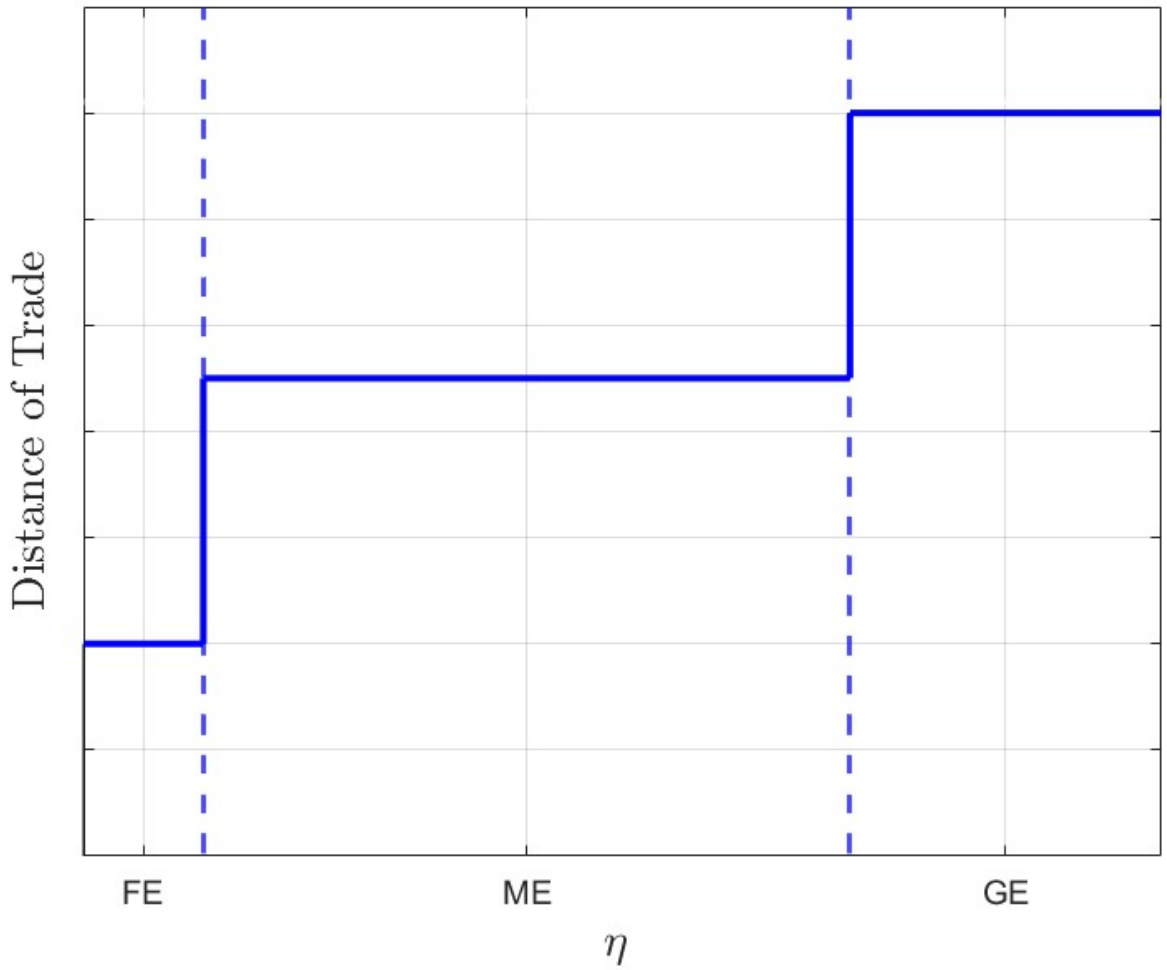
Welfare

Country welfare as a function of hegemon size



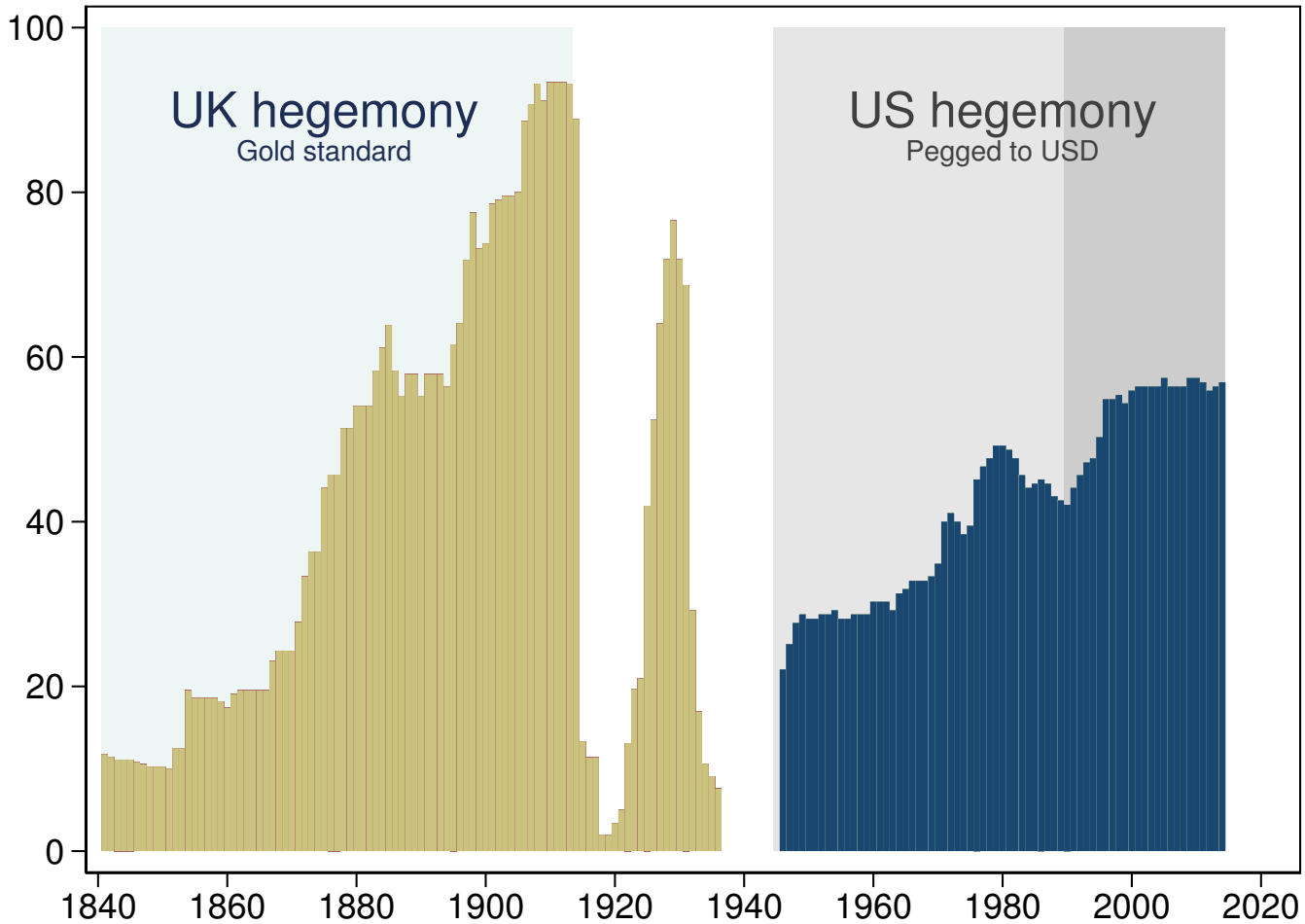
Distance of trade

Weighted trade distance as a function of hegemon size



Historical data on currency choice

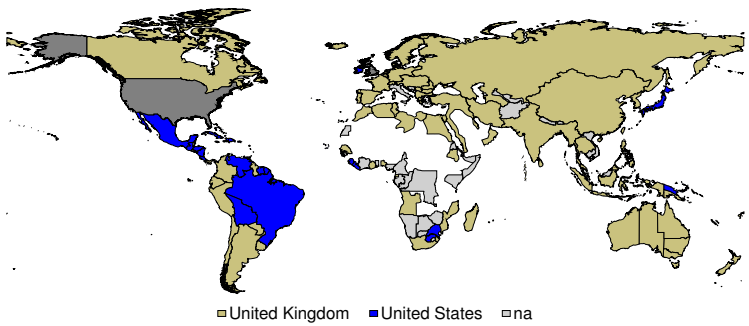
Share of countries in UK gold standard or with USD anchor, (in %)



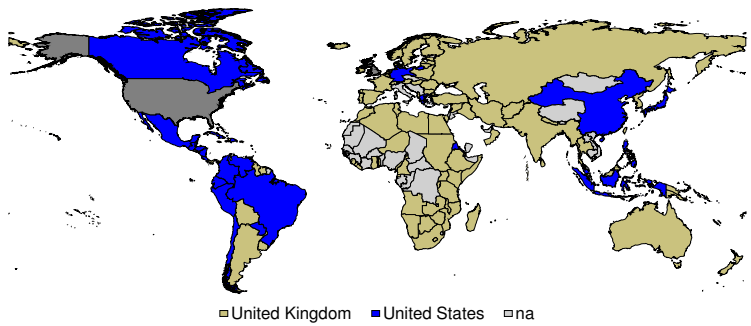
Notes: Gold standard dates from Mitchener and Weidenmier (2008), USD anchor data from Ilzetzki, Reinhart and Rogoff (2019)

Dominant trading partners - UK vs. US

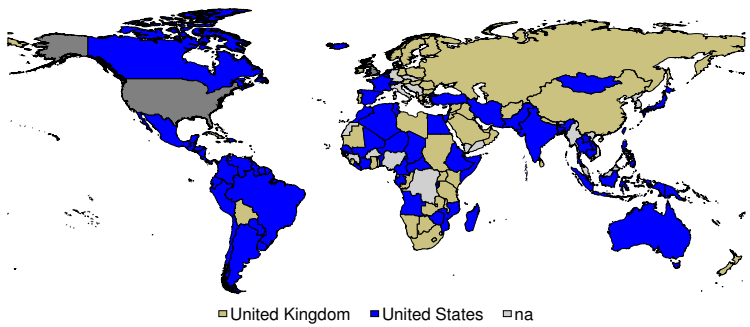
(a) 1890



(b) 1930



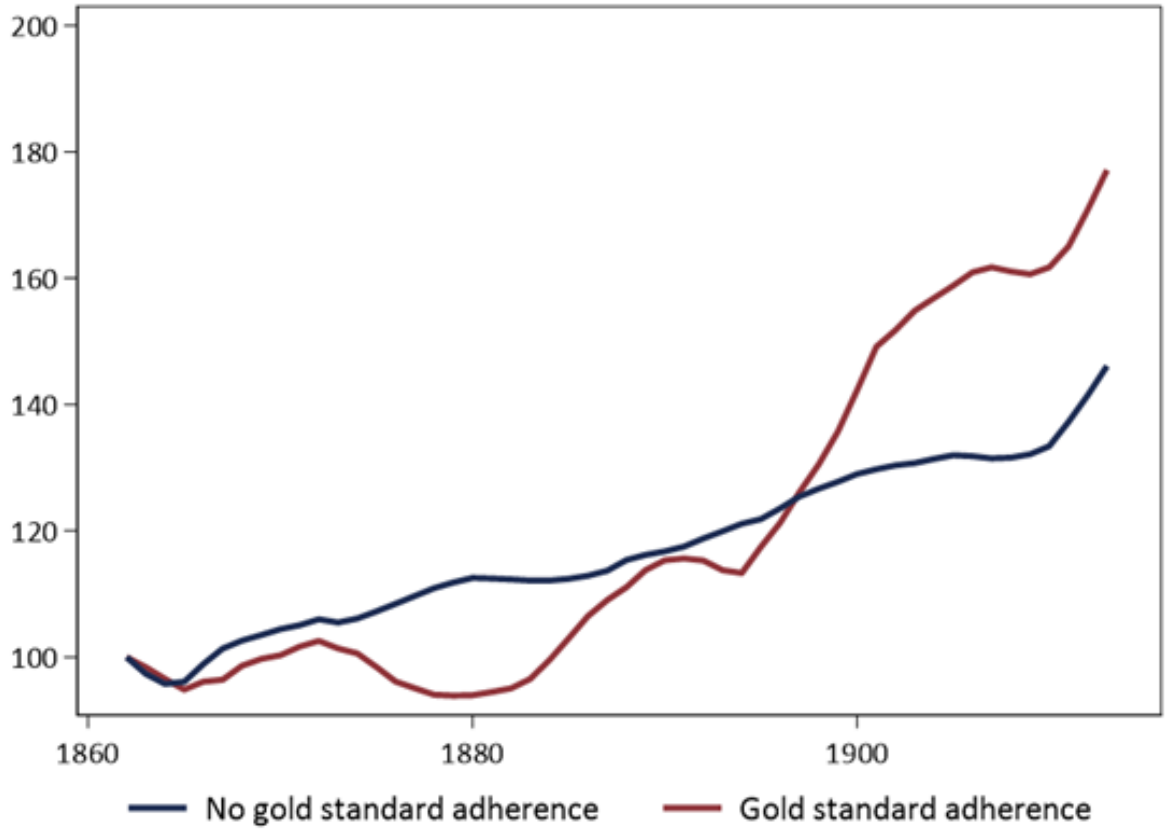
(c) 1970



Notes: Country is coded in gold if the UK is a larger trading partner than the US, and blue otherwise (source: CEPII).

Adherence to the gold standard and distance of trade

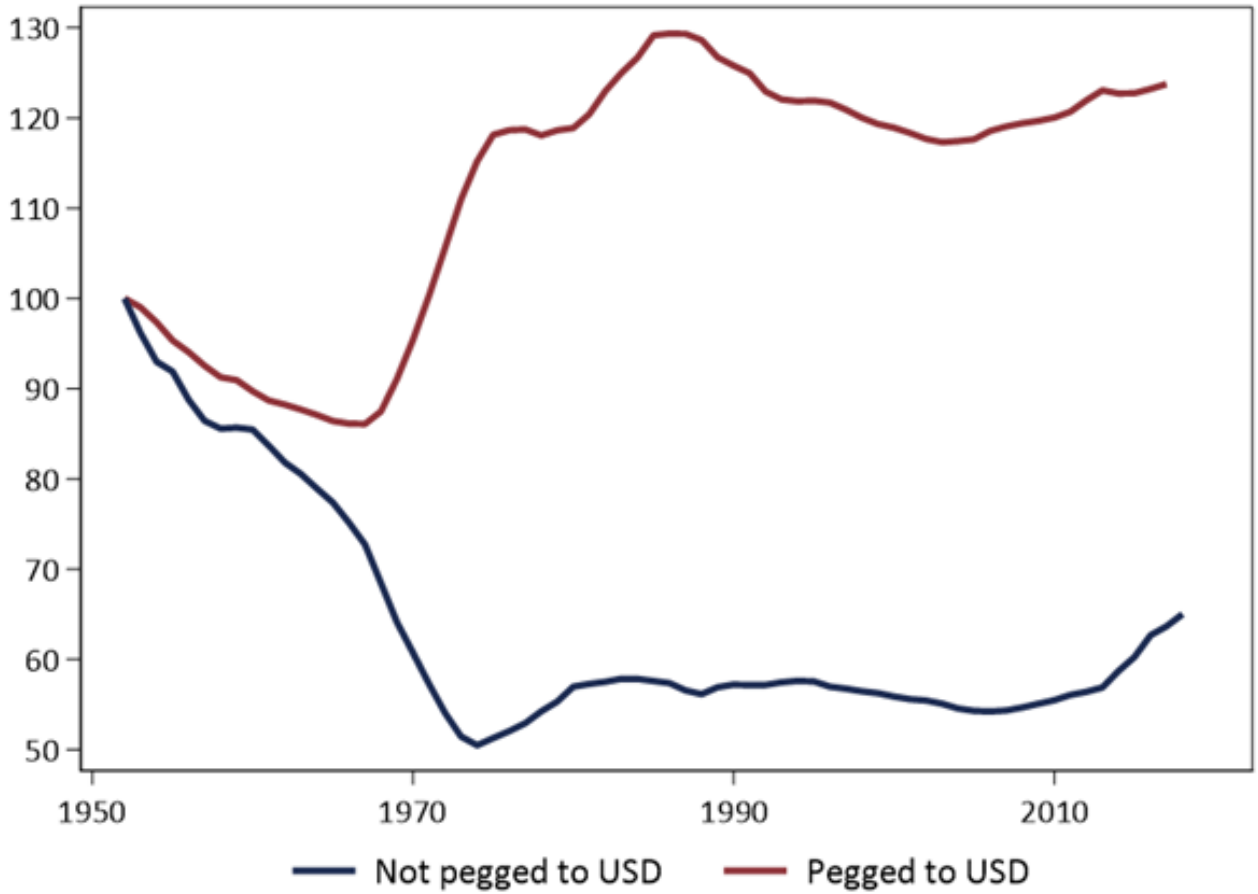
Weighted average distance of exports for countries within and outside gold standard (1860=100)



Notes: Constant samples of 13 countries that adhered to gold standard for more than 20 years and 17 countries that did not.

Anchoring to US dollar and distance of trade

Weighted average distance of exports for countries anchored and unanchored to the USD (1950=100)



Notes: Constant samples of 98 countries that were pegged to the USD for more than 20 years and 97 countries that were not.

Coercive globalization

- Allow for use of trade as a threat
- At $t = 0$, before countries choose actions, each country i
  - can threaten all countries $j \in (-0.5, 0.5]$ with no trade unless $a_j = i$
    - threat is non-discriminatory
    - when there is trade in assets, threat can also apply to repayment
- Trade-off: closer integration with some, at expense of no integration with others
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Coercive globalization

- Conjecture hegemon threatens
- Partial globalization
  - fraction $\mu \in (0,1)$ countries closest to hegemon set $a_i = 0$, others set $a_i = i$
  - equilibrium if

$$\frac{\alpha}{T} = \begin{cases} \frac{2 \cdot \eta}{\mu} + \beta \cdot \frac{\mu}{2} & \text{if } \mu \leq \frac{1}{2} \\ \frac{2 \cdot \eta}{\mu} + \beta \cdot \left(\frac{5 \cdot \mu^2 - 4 \cdot \mu + 1}{2 \cdot \mu} \right) & \text{if } \mu > \frac{1}{2} \end{cases}$$

- Full globalization
  - all countries set $a_i = 0$
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- Note: multiple equilibria possible under coercion

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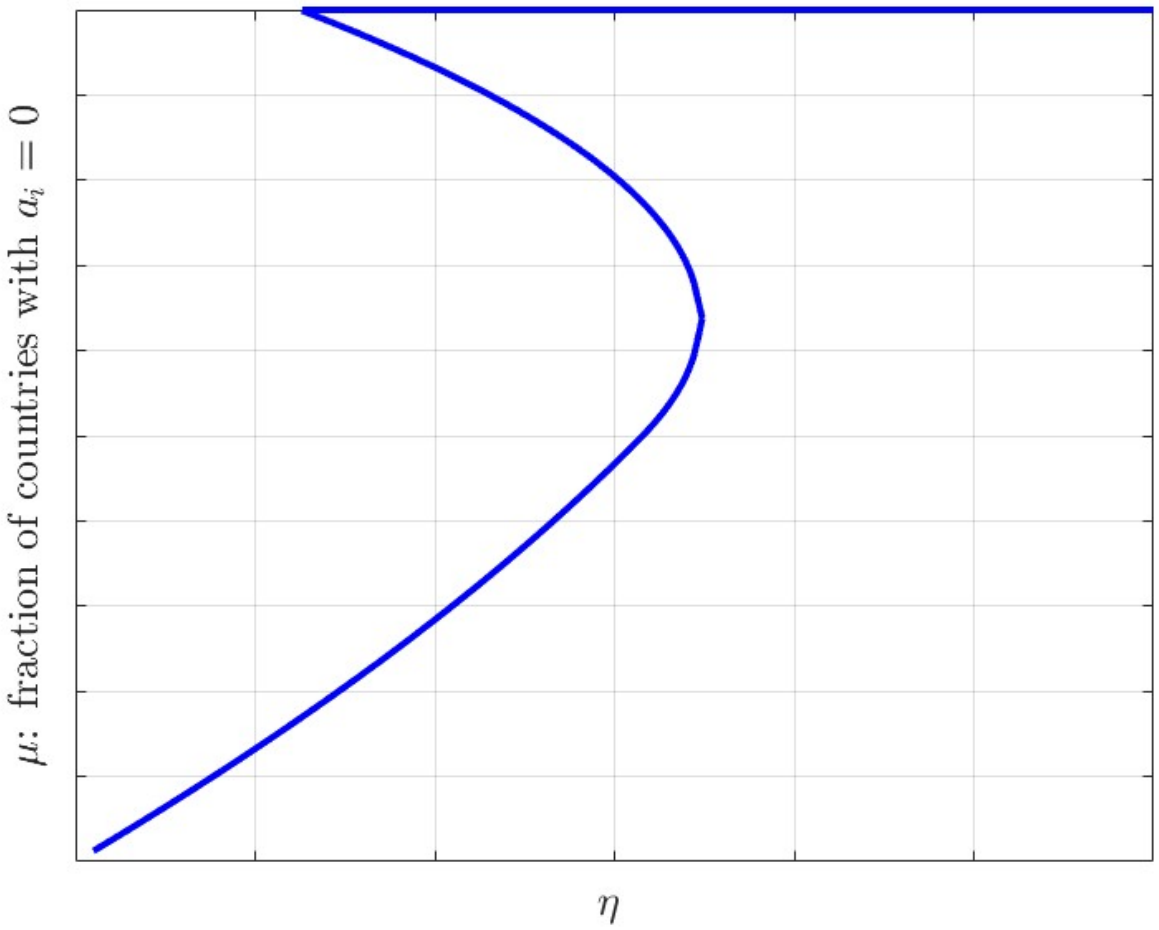
Coercive globalization



Coercive globalization

- Conjecture hegemon threatens
- Partial globalization
  - fraction $\mu \in (0,1)$ countries closest to hegemon set $a_i = 0$, others set $a_i = i$
  - equilibrium if

$$\frac{\alpha}{T} = \begin{cases} \frac{2\cdot\eta}{\mu} + \beta \cdot \frac{\mu}{2} & \text{if } \mu \leq \frac{1}{2} \\ \frac{2\cdot\eta}{\mu} + \beta \cdot \left(\frac{5\cdot\mu^2 - 4\cdot\mu + 1}{2\cdot\mu}\right) & \text{if } \mu > \frac{1}{2} \end{cases}$$

- Full globalization
  - all countries set $a_i = 0$
  - equilibrium if

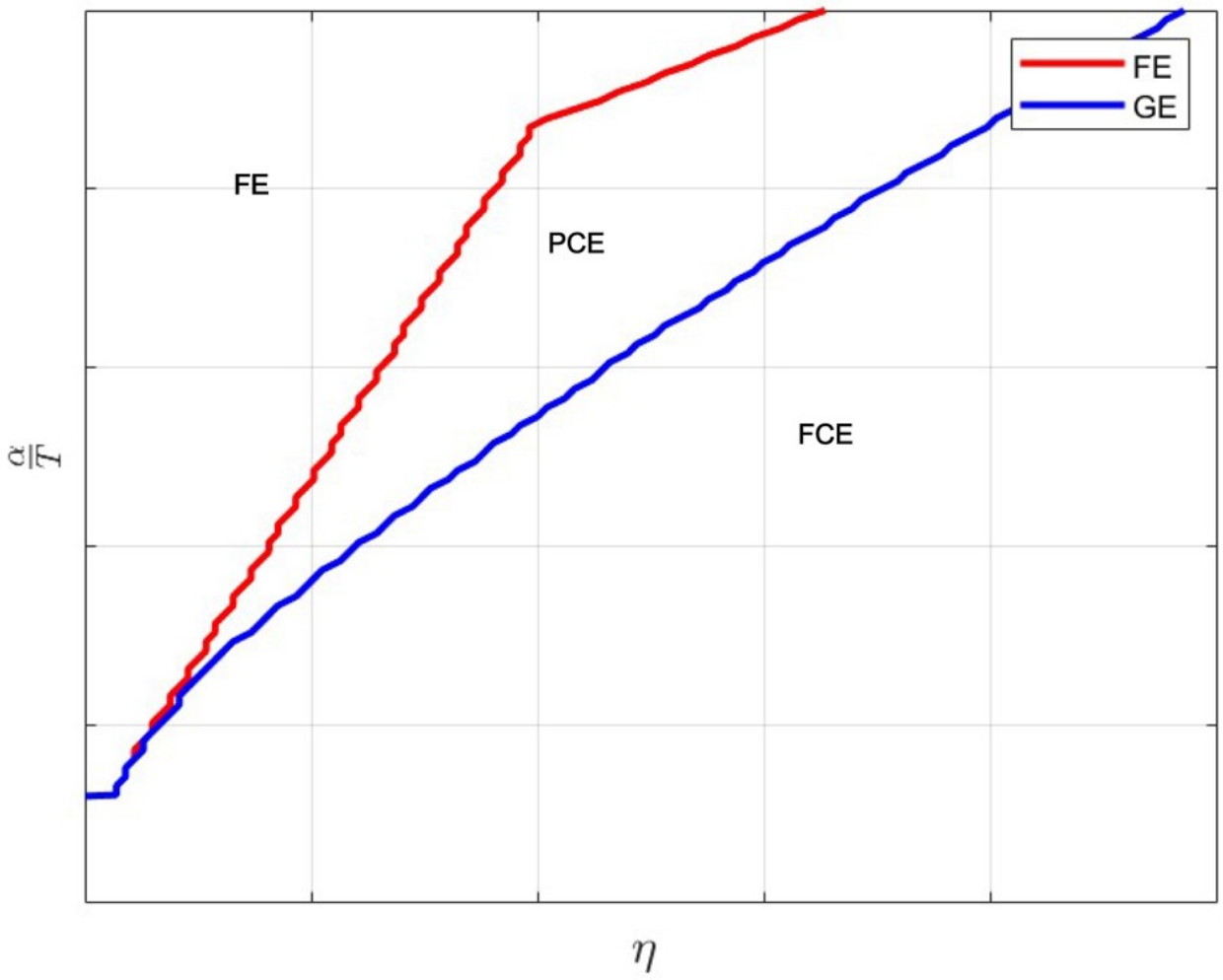
$$\frac{\alpha}{T} \leq \beta + 2 \cdot \eta$$

- Note: multiple equilibria possible under coercion
- Does hegemon want to threaten? Only if

$$E[\mu] \geq 1 - \frac{\beta}{4}$$

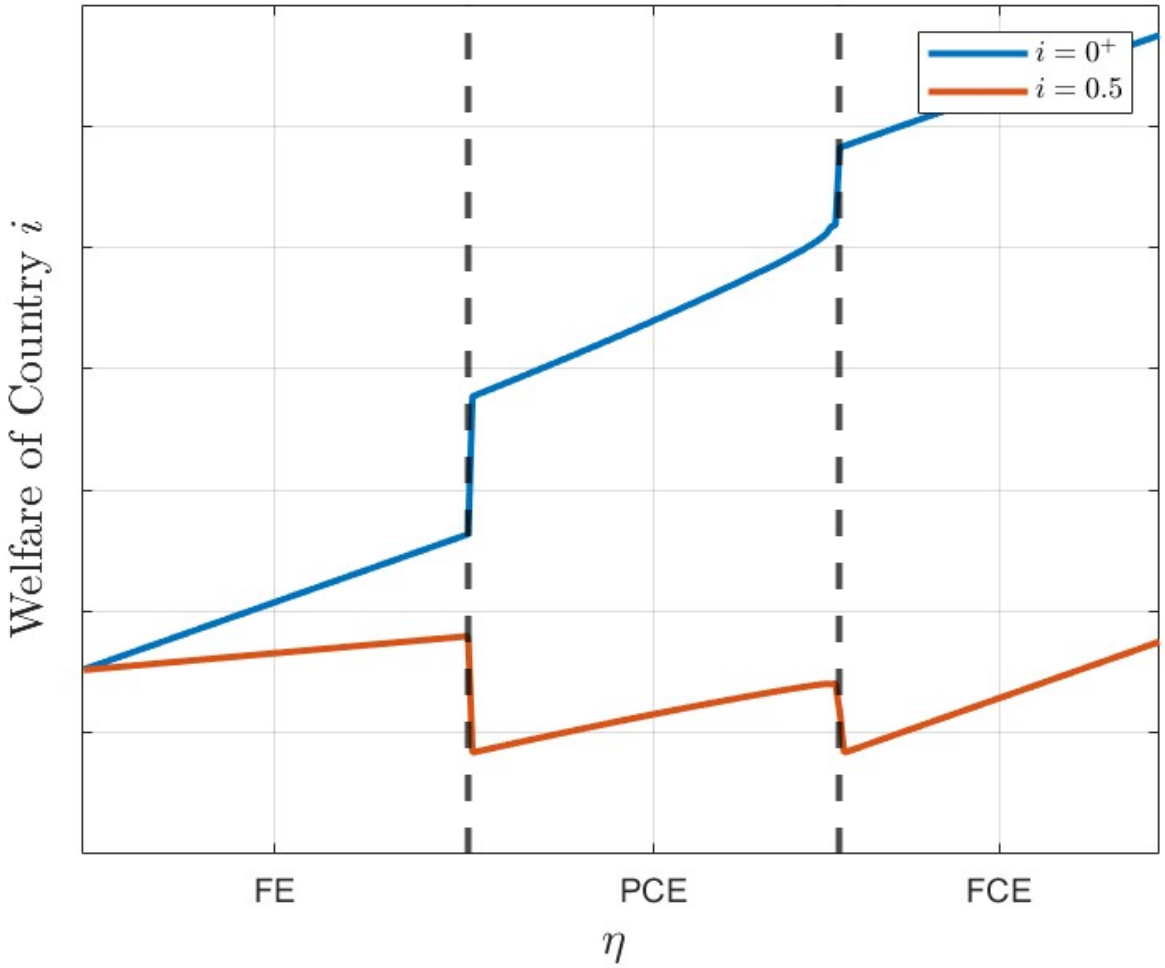
Coercive globalization

Equilibrium regions



Coercive globalization

Welfare



From a unipolar to a multipolar world

- Suppose $i = 0.5$ is rising hegemon, with size η_C
- Timing
  - incumbent and rising hegemons choose actions
  - incumbent hegemon chooses whether to coerce or not
  - all other countries choose actions
- How does equilibrium change with η_C?
  - η_C small: rising hegemon aligns with incumbent
    - sets $a_{0.5} = 0$ and incumbent coerces
  - η_C large enough: rising hegemon dealigns from incumbent
    - sets $a_{0.5} = 0.5$ and coercion gives way to fragmentation
- Trade falls, but some countries win!

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From a unipolar to a multipolar world

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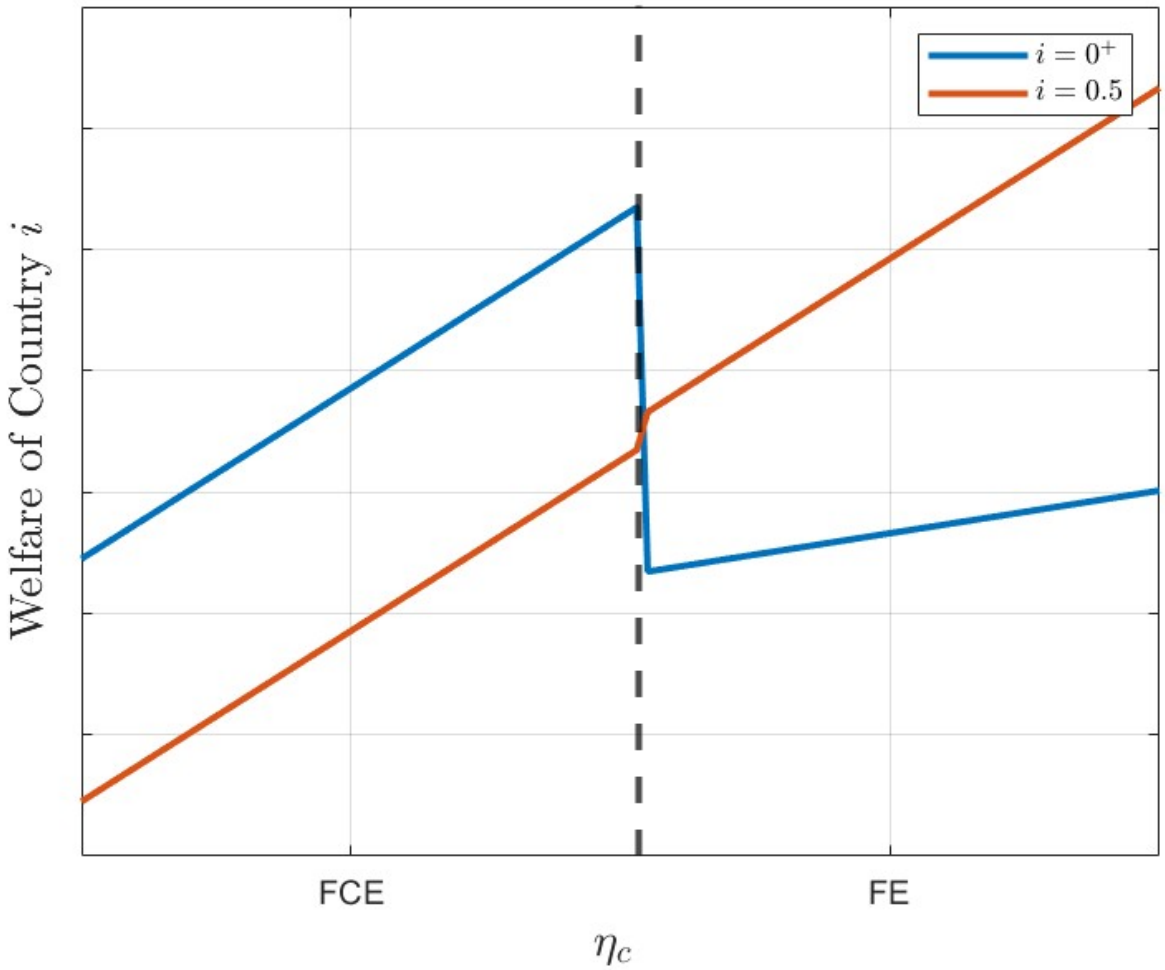
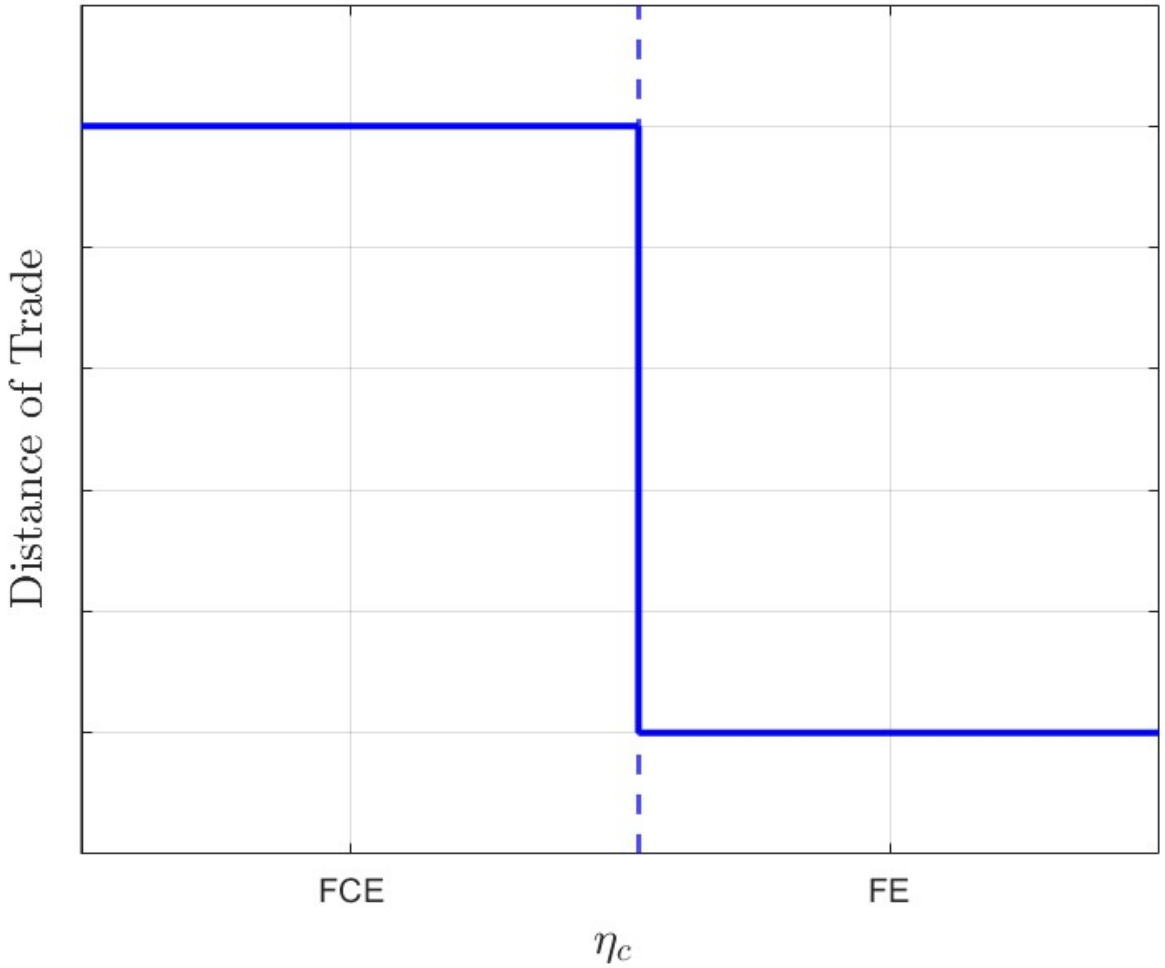


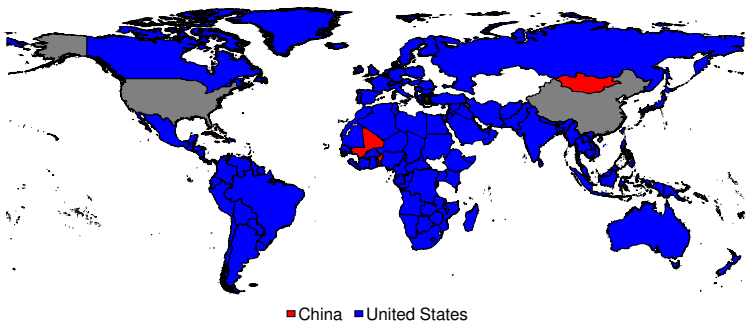
From a unipolar to a multipolar world

Weighted trade distance

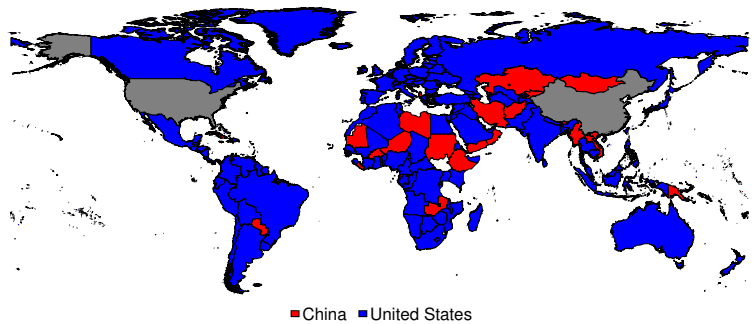


Dominant trading partners - US vs. China

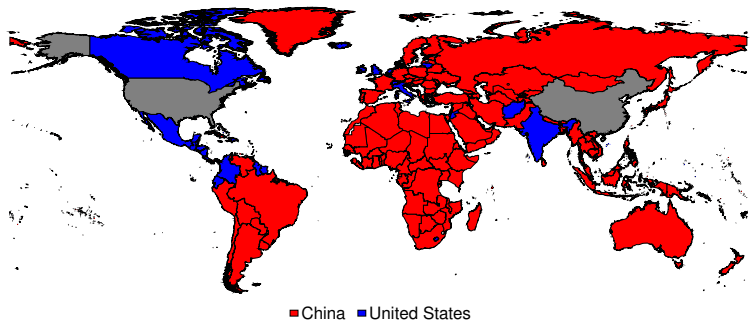
(a) 1980



(b) 2000



(c) 2020



Notes: Country is coded in blue if the US is a larger trading partner than China, and red otherwise (source: CEPII).

What have we learned?

- What is the relationship between hegemonic power and globalization?
- Complementarity in actions
  - hysteresis, multiple equilibria, tipping points
- Emergence of an hegemon
  - prompts alignment of actions
  - transition from fragmented to integrated world
  - more trade in goods and assets, and higher world welfare
  - but not everyone wins
- Presence of hegemon associated with smaller impact of distance on trade
- Transition to multipolar world may cause sudden unravelling of globalization