Income inequality in Spain: A Very Long Run View

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Inequality in a Recessionary World: From Global to Local
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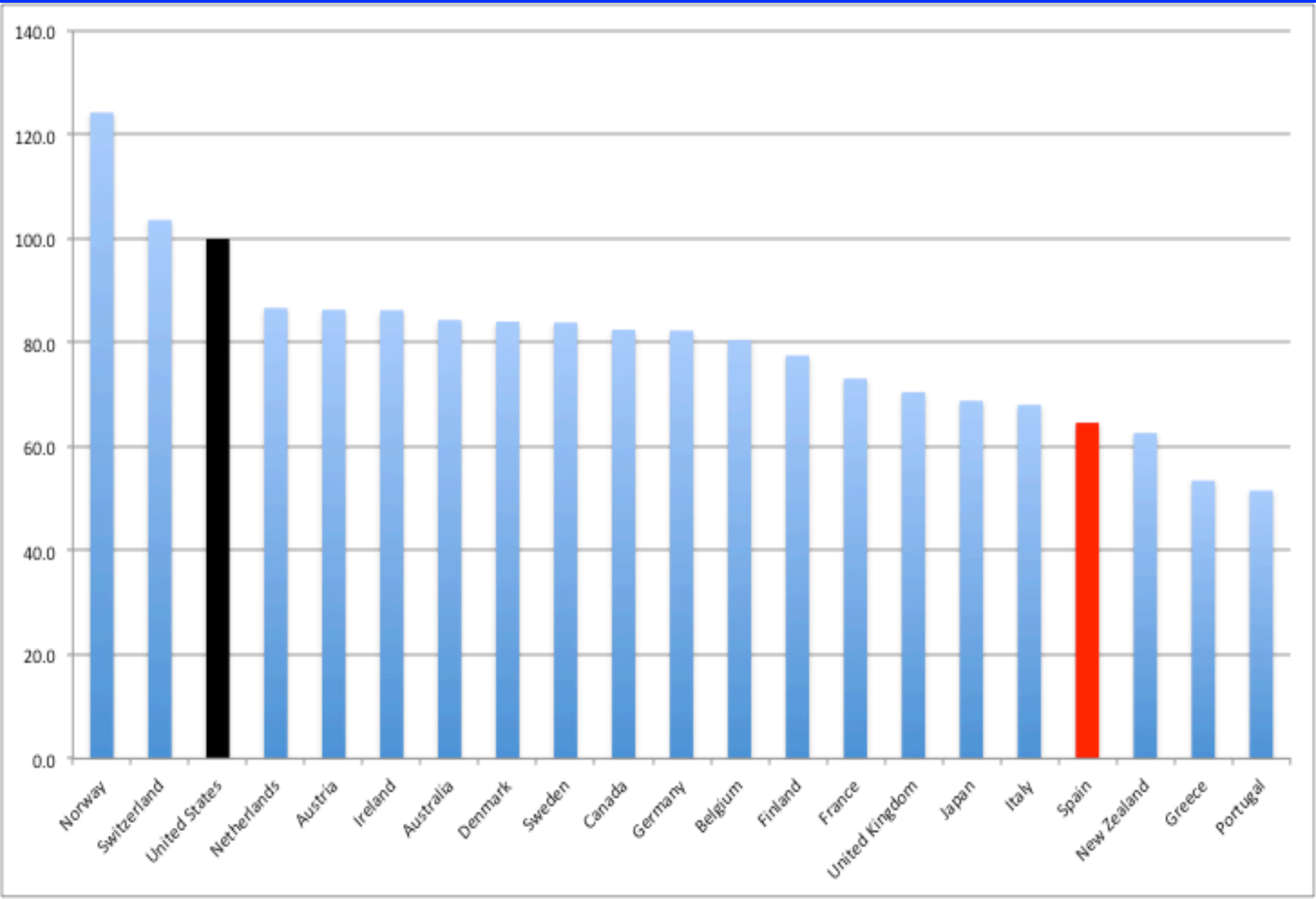
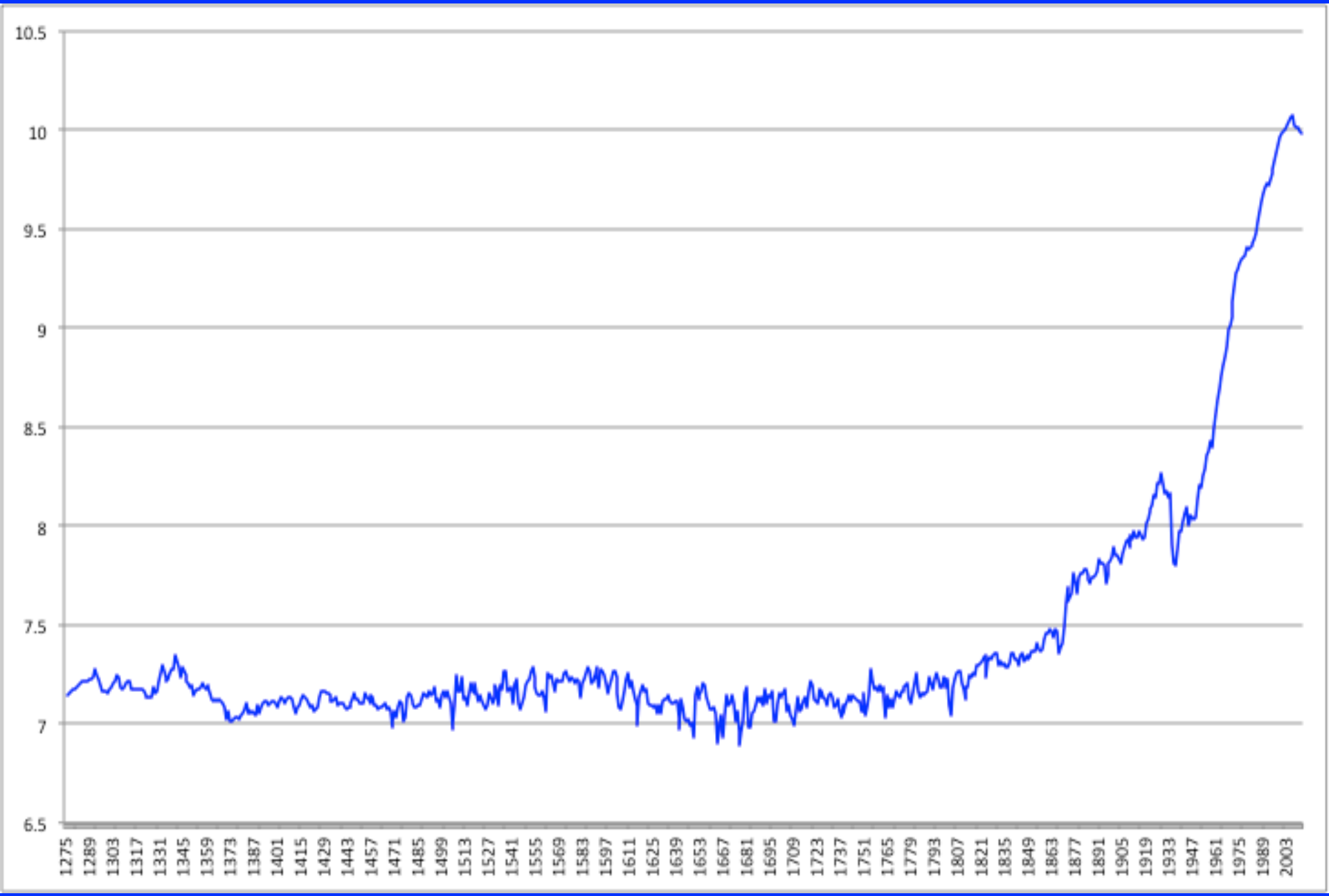
Spain in the West, 2011 [USA =100] (EKS $ 2011)



Per capita GDP since the end of the Reconquista (logs)



How Has a Growing Per Capita GDP Been Distributed over Time?

- Did **growth** reach the **bottom** of the ***income distribution***?
- Was there a **growth-inequality** ***trade-off***?
- **But lack** ***of pre-1970s micro evidence (HHS)***

The Simplest *Case of Income Distribution: Property Owners and Workers Only*

The evolution of income **inequality** ***depends on***

- the **gap** ***between*** the groups' **average incomes**
- the **dispersion** of incomes ***within*** each group

Stylized facts

- in **early** stages of development,
  inequality is **driven** by the **gap** ***between***
  average returns of **proprietors** and **workers**
- as progress takes place,
  the ***dispersion*** of factor **returns** (**labour**, in particular)
  leads ***personal*** income distribution

How to infer long-run trends in inequality? (1)

A) *land rent / unskilled wage ratio*

Caveat

- Only ***representative*** in **pre-industrial** societies in which ***land*** and ***unskilled labour*** are the **main** production **factors**

How to infer long-run trends in inequality? (2)

B) Williamson *inequality index*

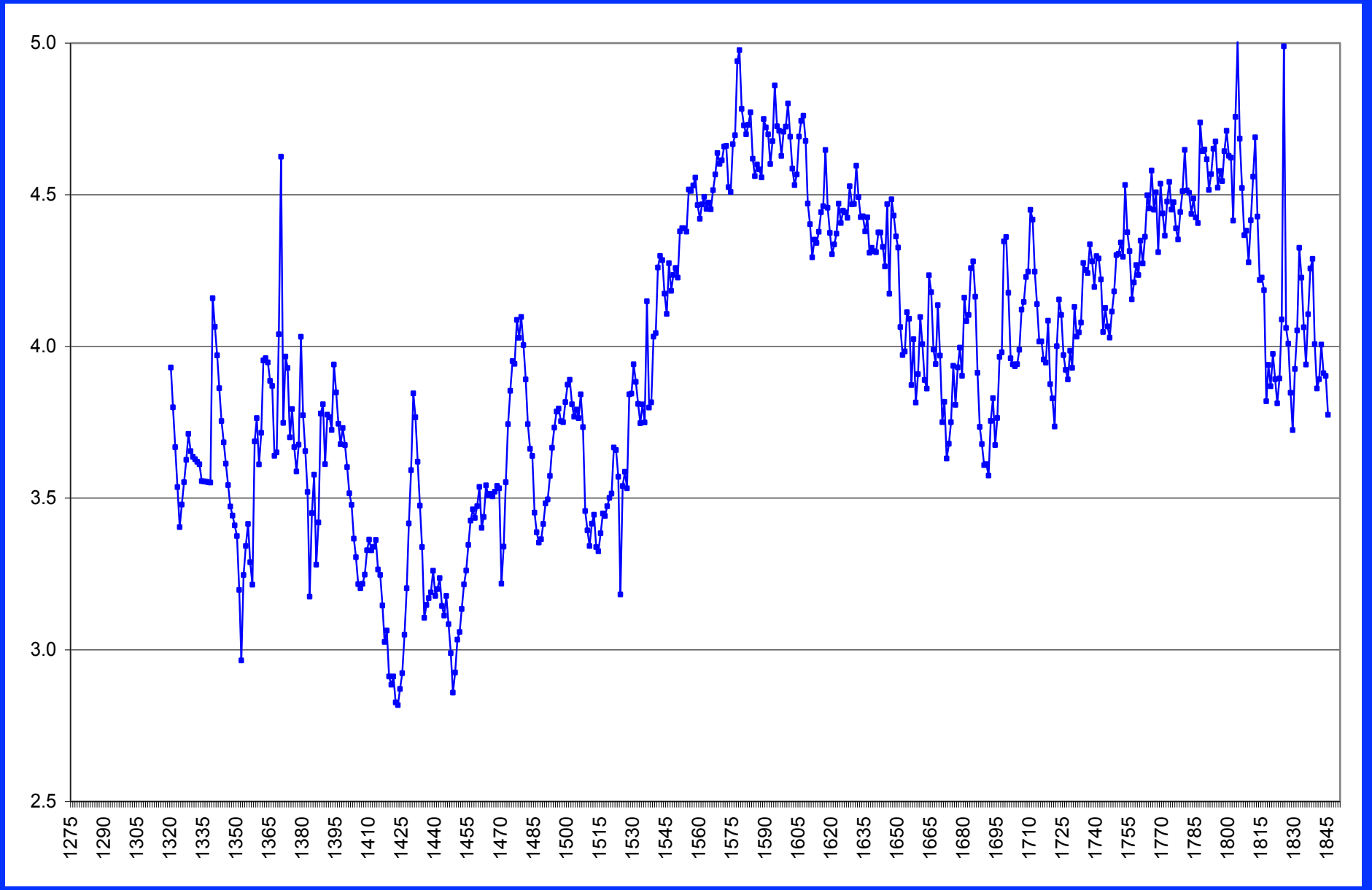
***- GDP per worked hour / Unskilled wage* (*y/wus*)**

- ***rationale:***
  numerator captures ***returns*** to **all** factors of production;
  denominator, only ***returns*** to **raw labour**

Caveat

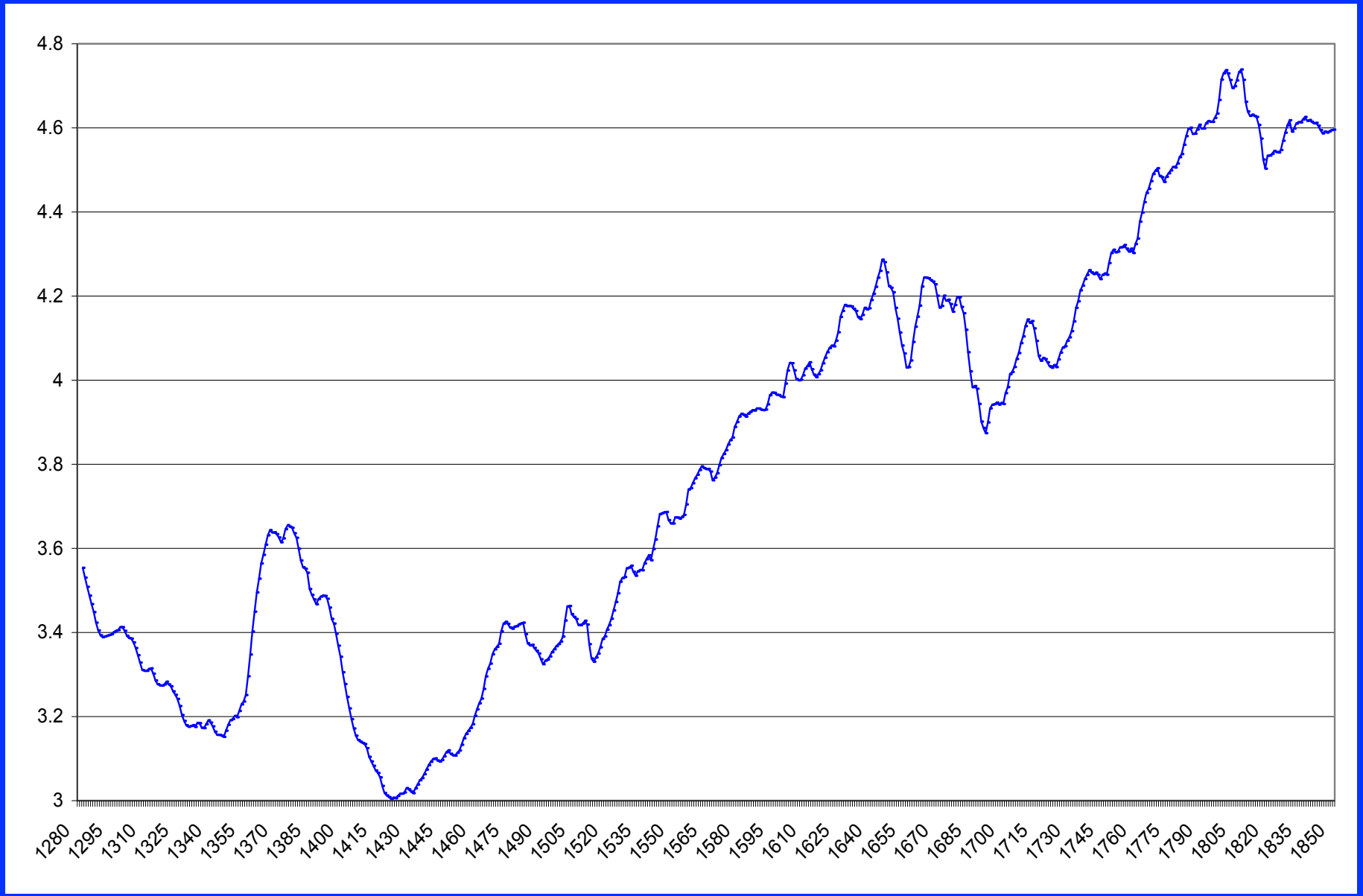
- As societies progress, ***y/wus*** **exaggerates inequality**
  => the ***share*** of ***unskilled workers*** in labour **dwindles**
- ***Time comparisons*** become **inconsistent**:
  the ***quantile*** of income of ***unskilled workers*** **today,**
  a **fraction** of the **same** ***quantile*** in the **past**

Land Rent/Wage Ratio, 1320-1845 (1790/99=100) (logs)



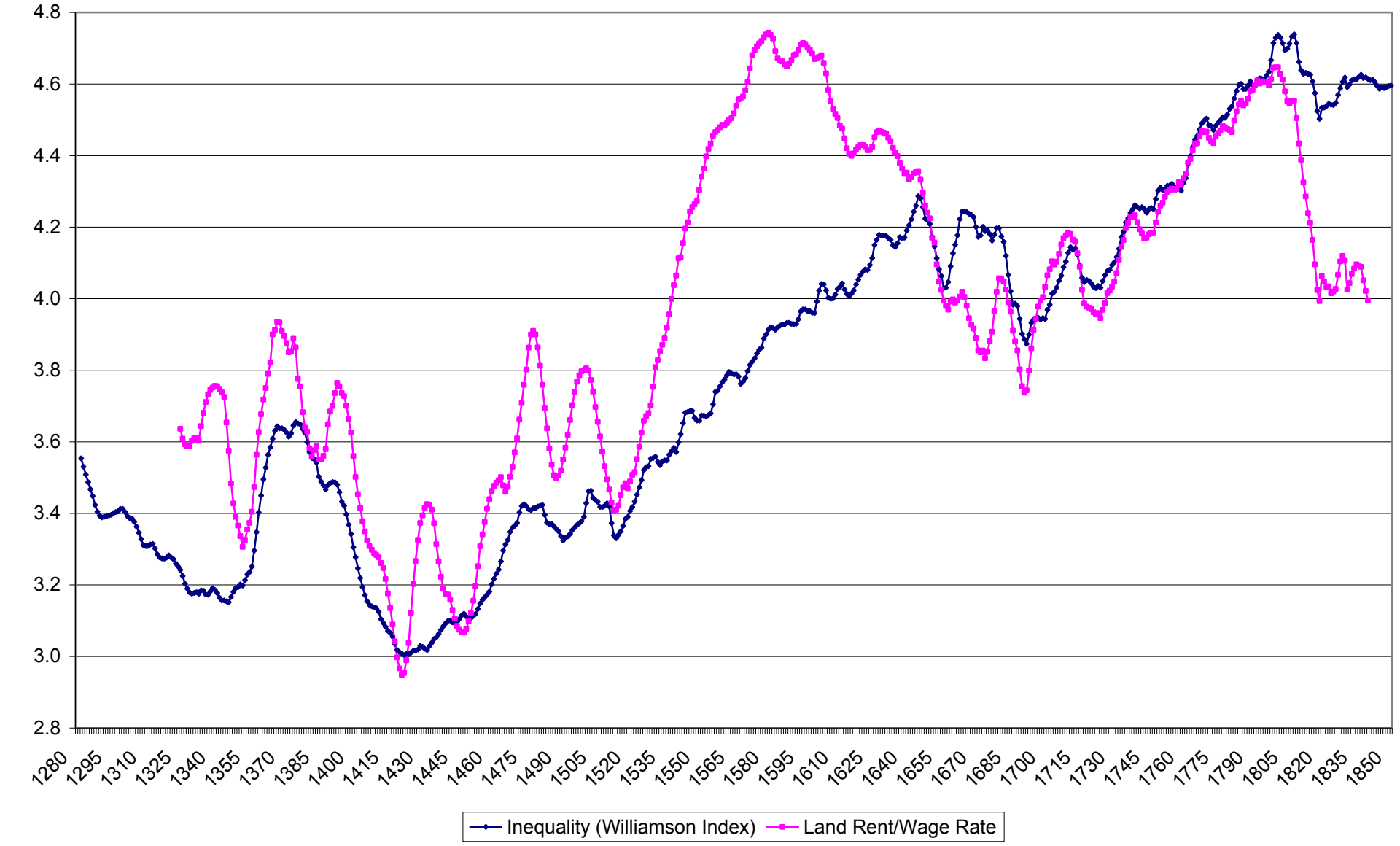
Inequality [Williamson Index], 1277-1850

(11-year moving averages) (1850/59=100) (logs)



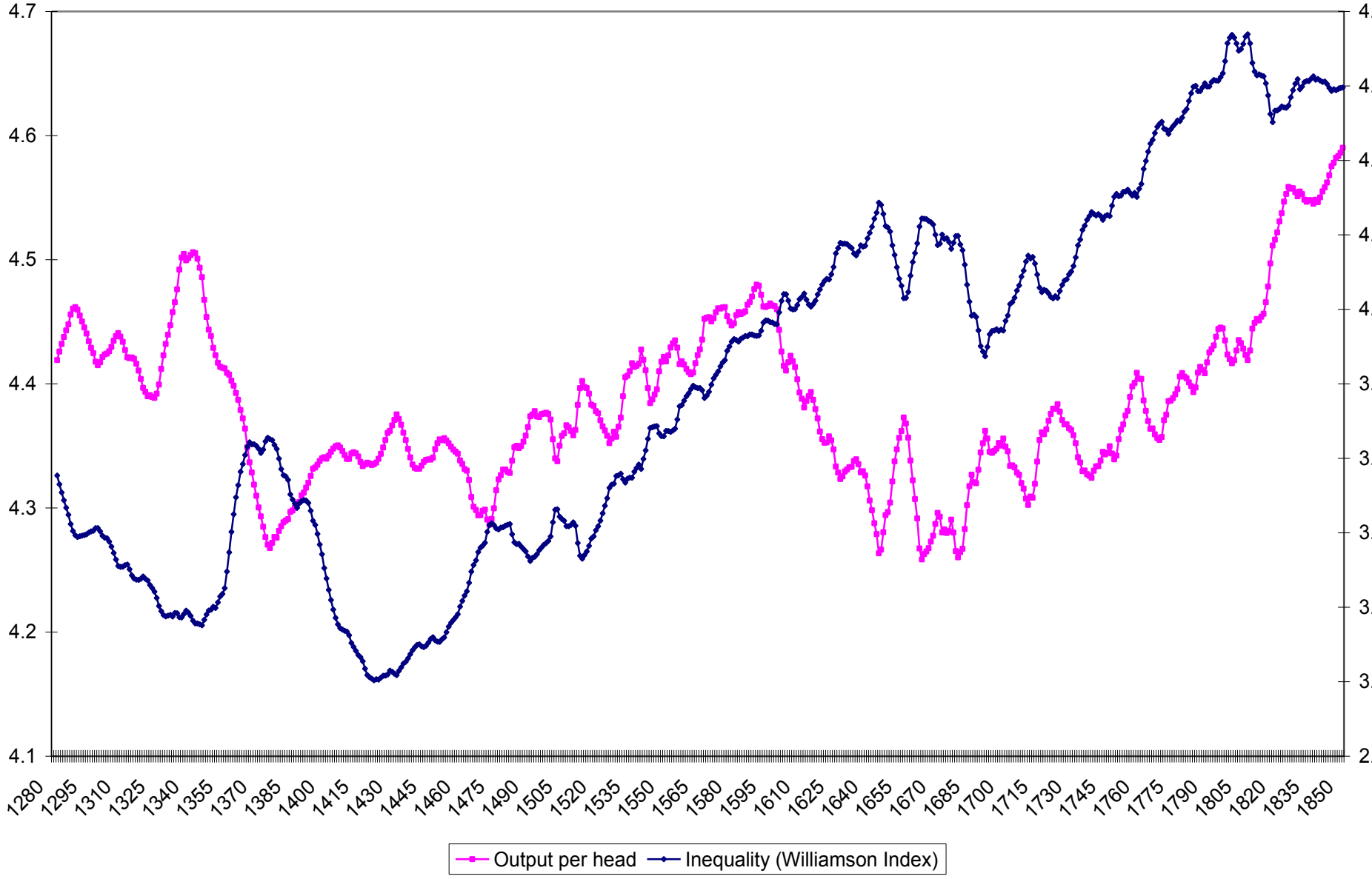
Inequality, 1277-1850: Alternative Measures

(11-year moving averages) (1850/59=100) (logs)



Output per Head and Inequality, 1277-1850

(11-year moving averages) (1850/59=100) (logs)



Two Regimes in Pre-industrial Spain

- **1270-1570**

  - a **high** land-labour ratio **frontier** economy,
  largely **pastoral**, **trade**-oriented, led by **towns**
  => **high wages** & food **consumption, low inequality**

- **1600-1820**

  - a more **agricultural** and **densely** populated,
  low wage, **unequal** economy
  => ***growth*** along a **lower path**

Reconciling Partial *Measures of Inequality*

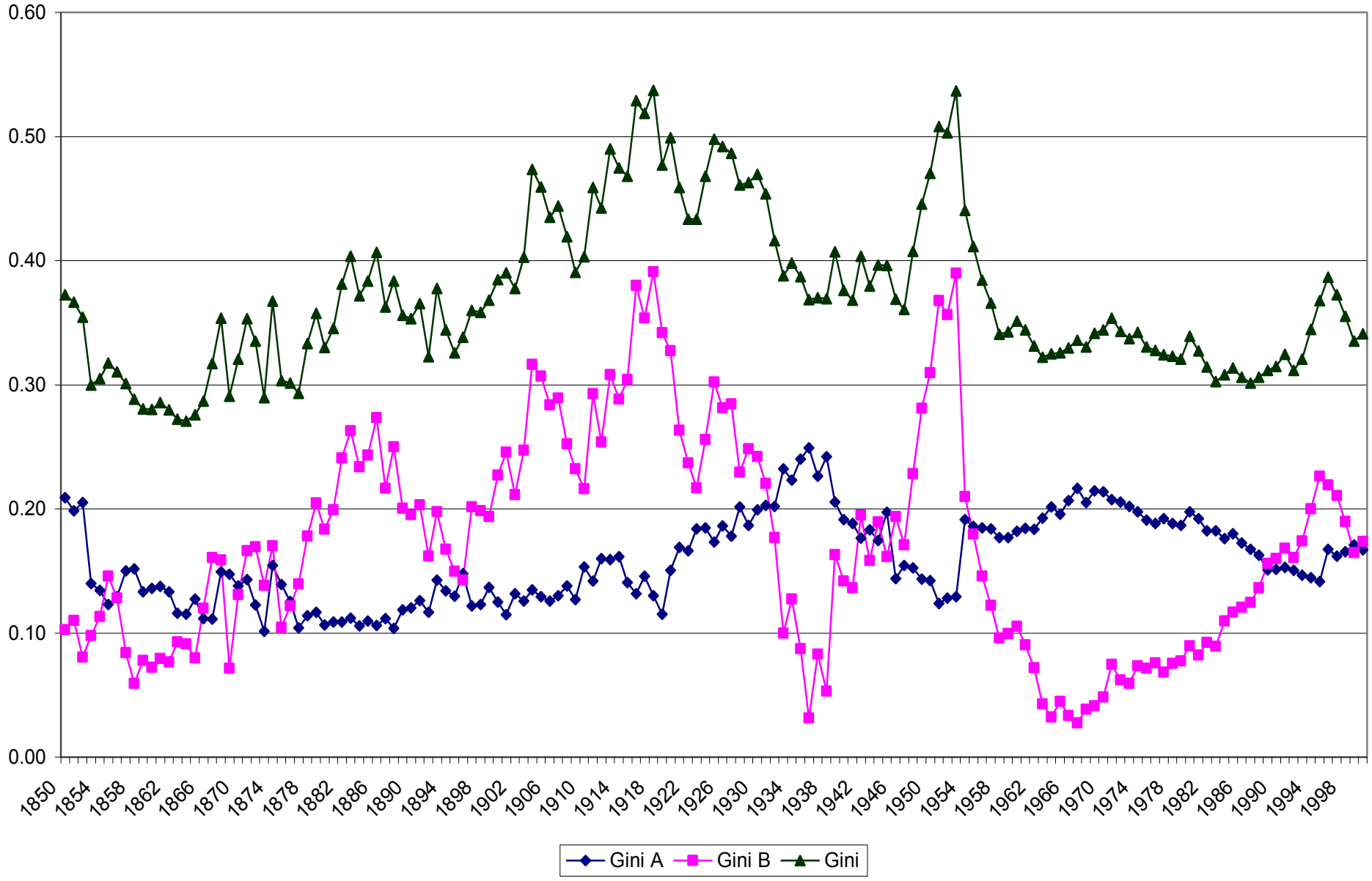
The ***Gini*** can be expressed as,

$$Gini = \sum G_i p_i \pi_i + \sum ((y_p - y_l)/ y_l) \pi_l p_p + L$$

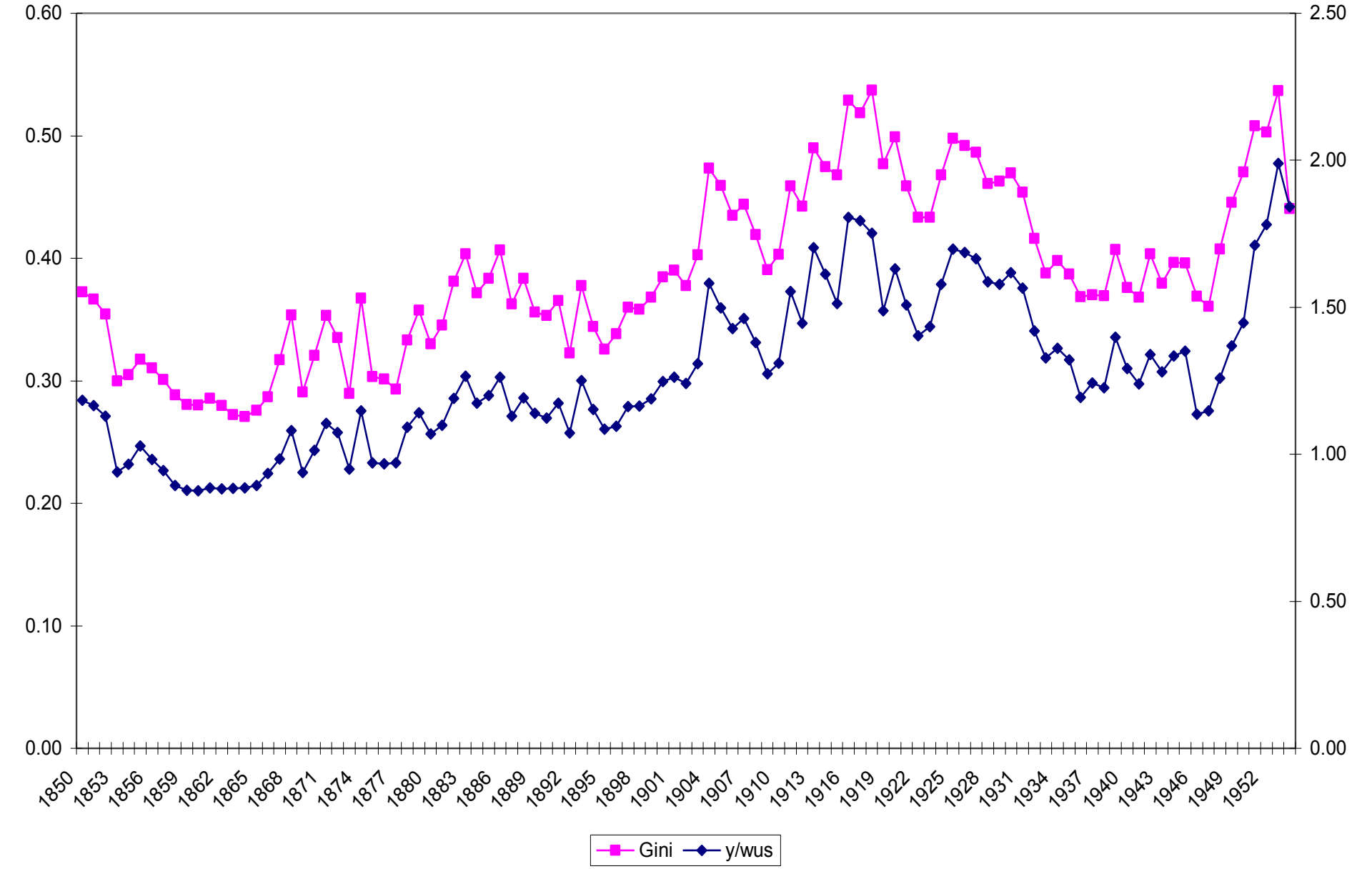
[A] **[B]** **[L]**

- $\sum Gi\ pi\ \pi\ i$ (**Gini A**), weighted sum of **within-group** ***inequality***
- $\sum ((y_p - y_l)/ yl) \pi_l p_p$ (**Gini B**), **between-group** ***inequality***
- (***L***) is the ***overlapping component***, or residual

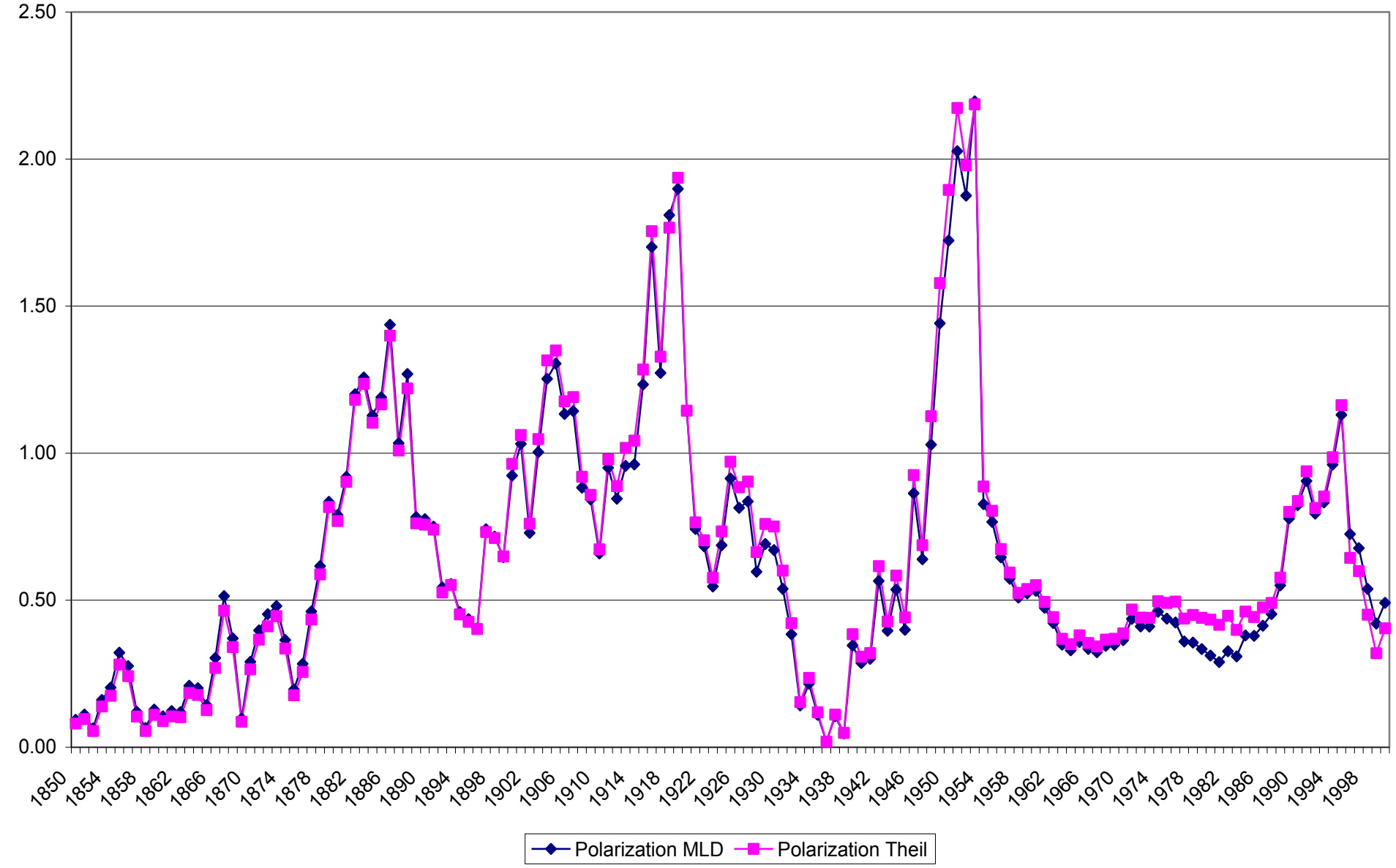
Gini and its Components, 1850-2000



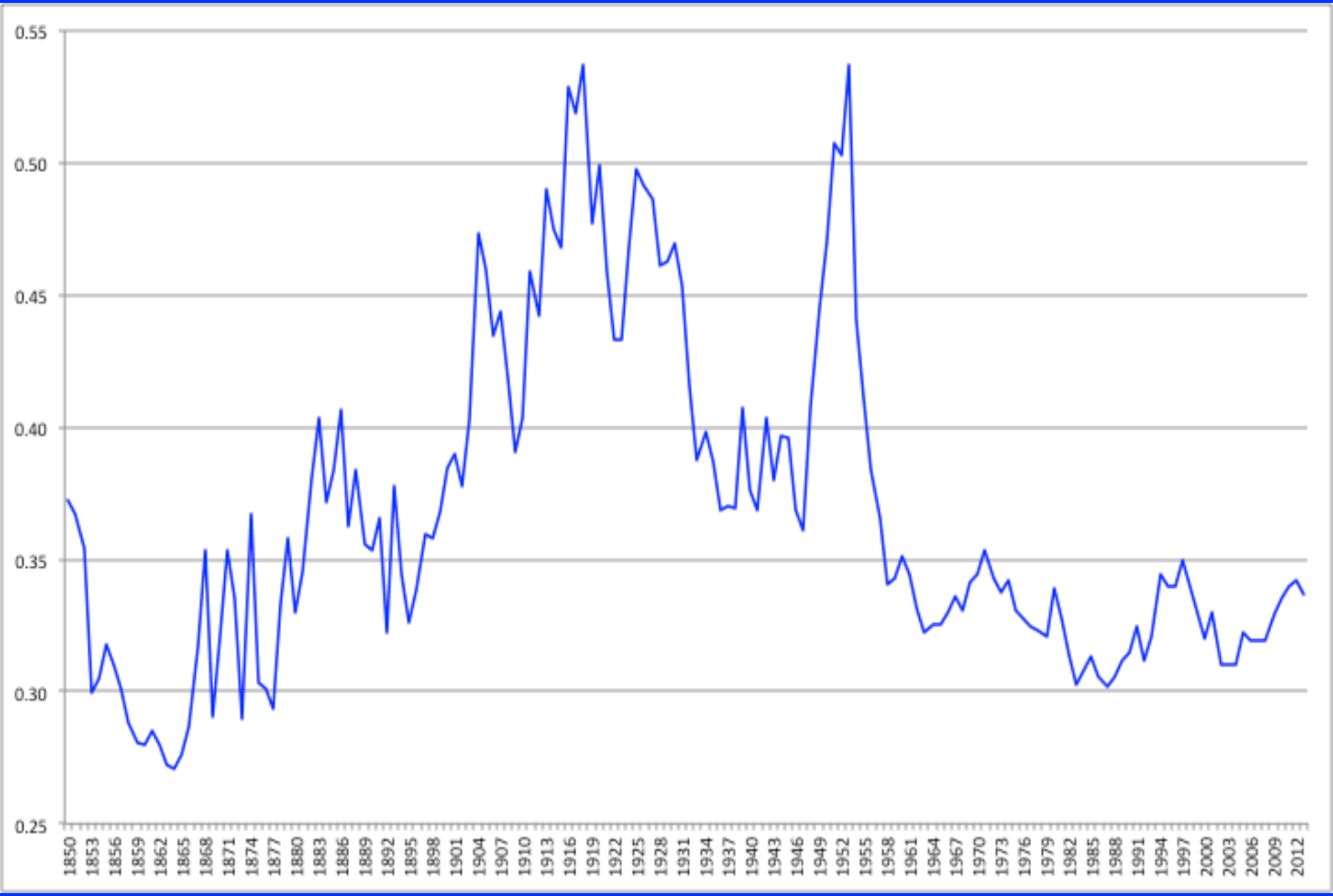
Gini and the Williamson Index, 1850-1954



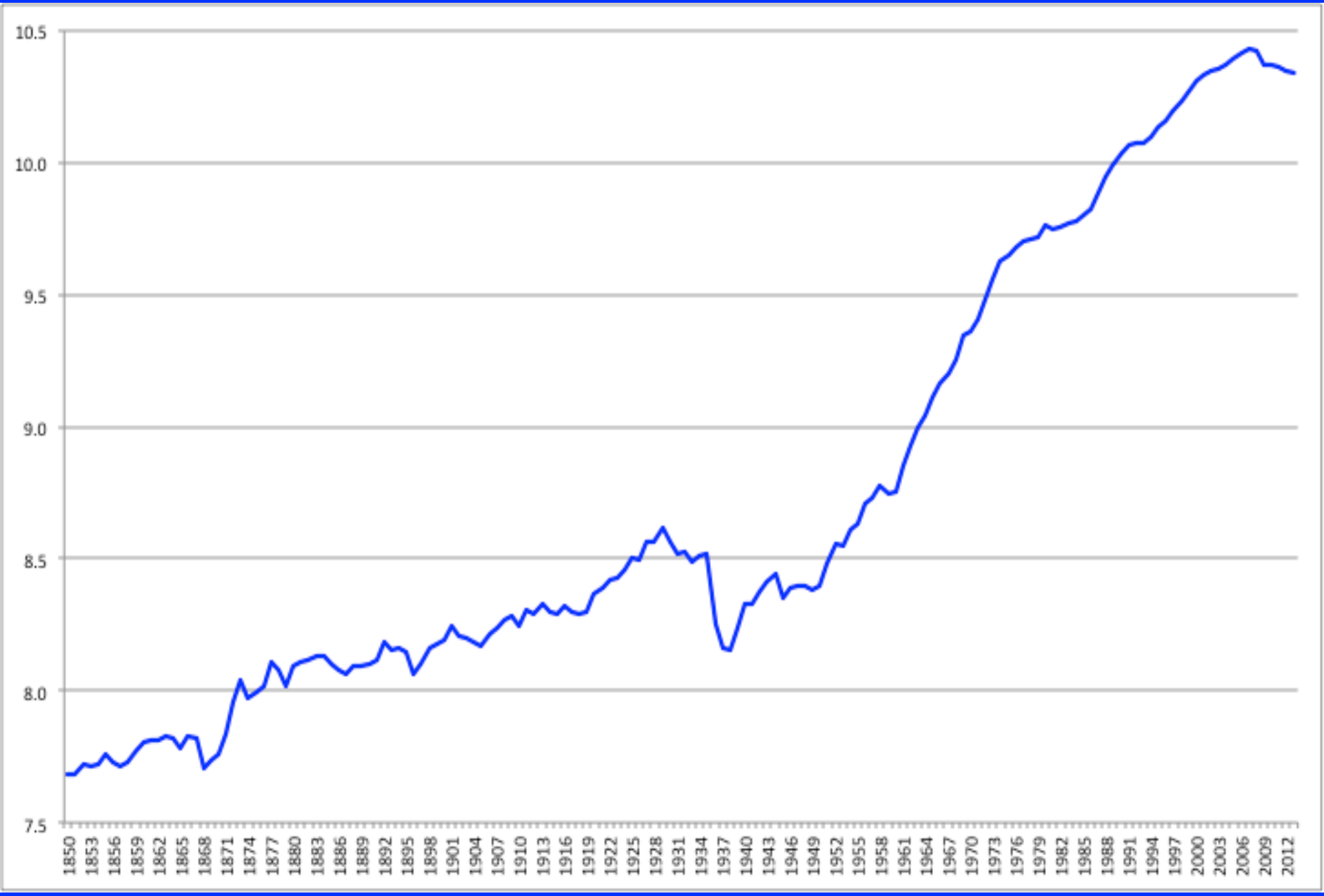
Economic Polarization (GE)



Income Inequality in Spain, 1850-2013 (Gini)

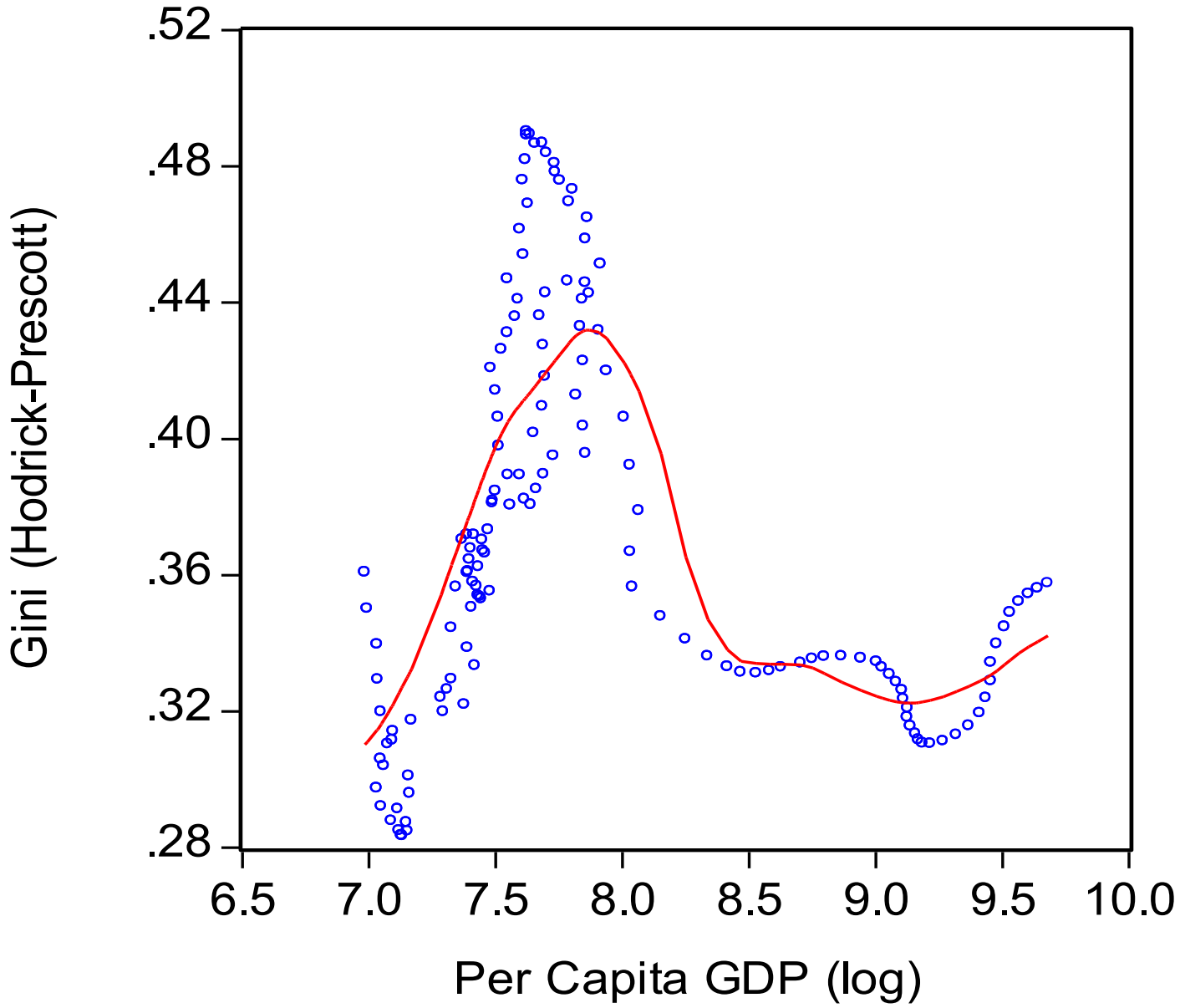


Real Per Capita GDP, 1850-2013

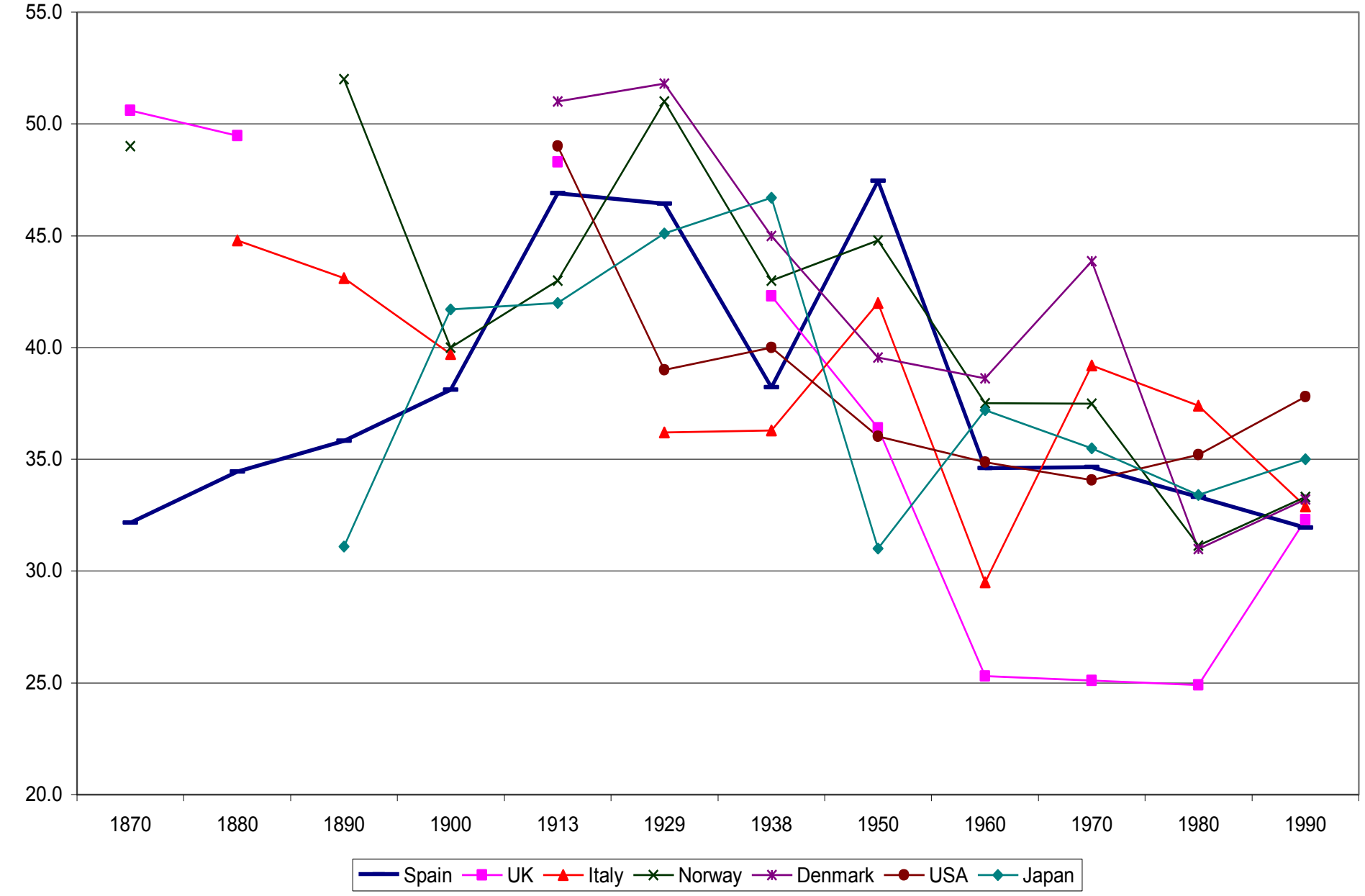


The Kuznets Curve in Spain, 1850-2000

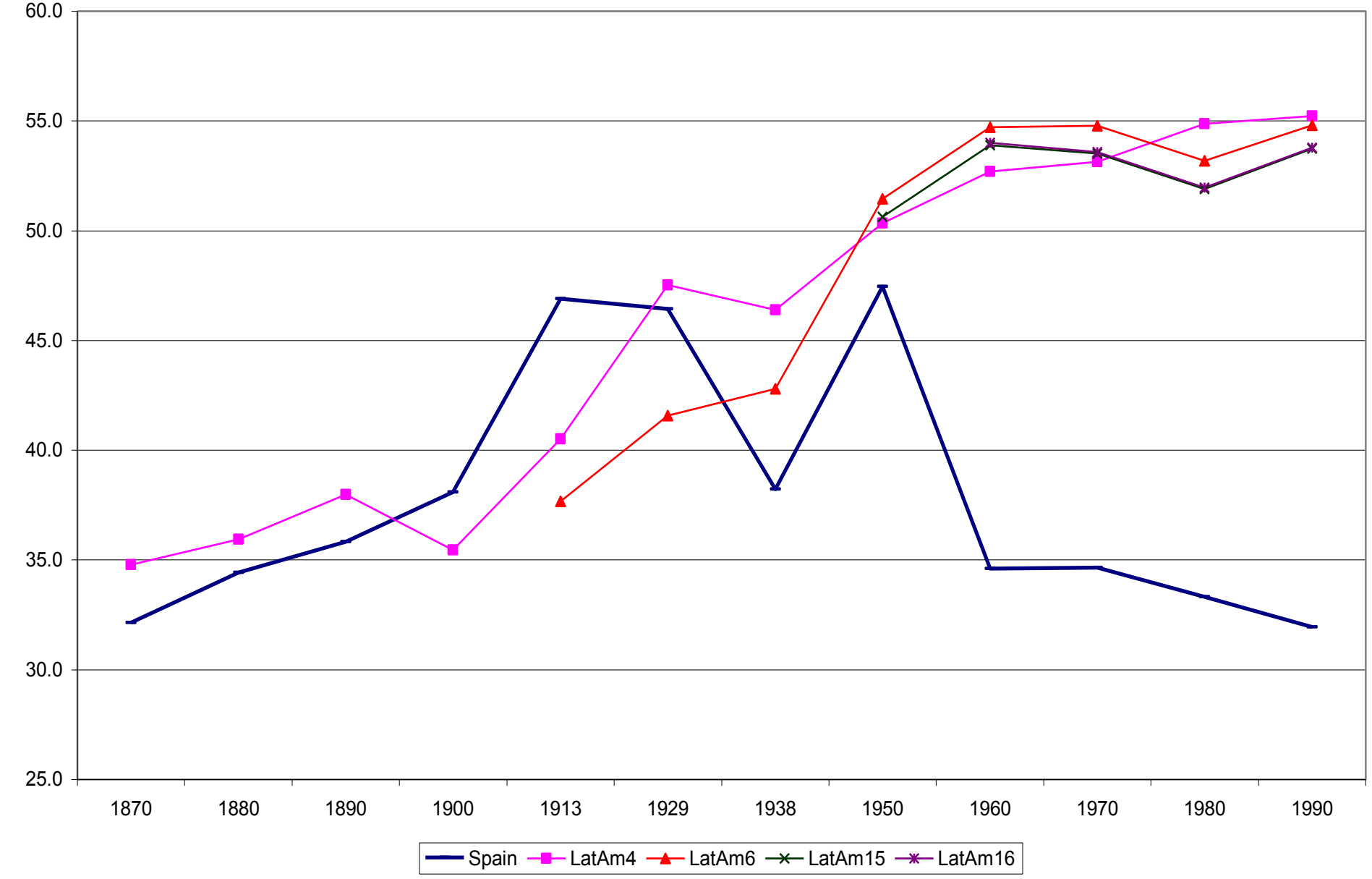
(Kernel Fit Epanechnikov, h=0.4042)



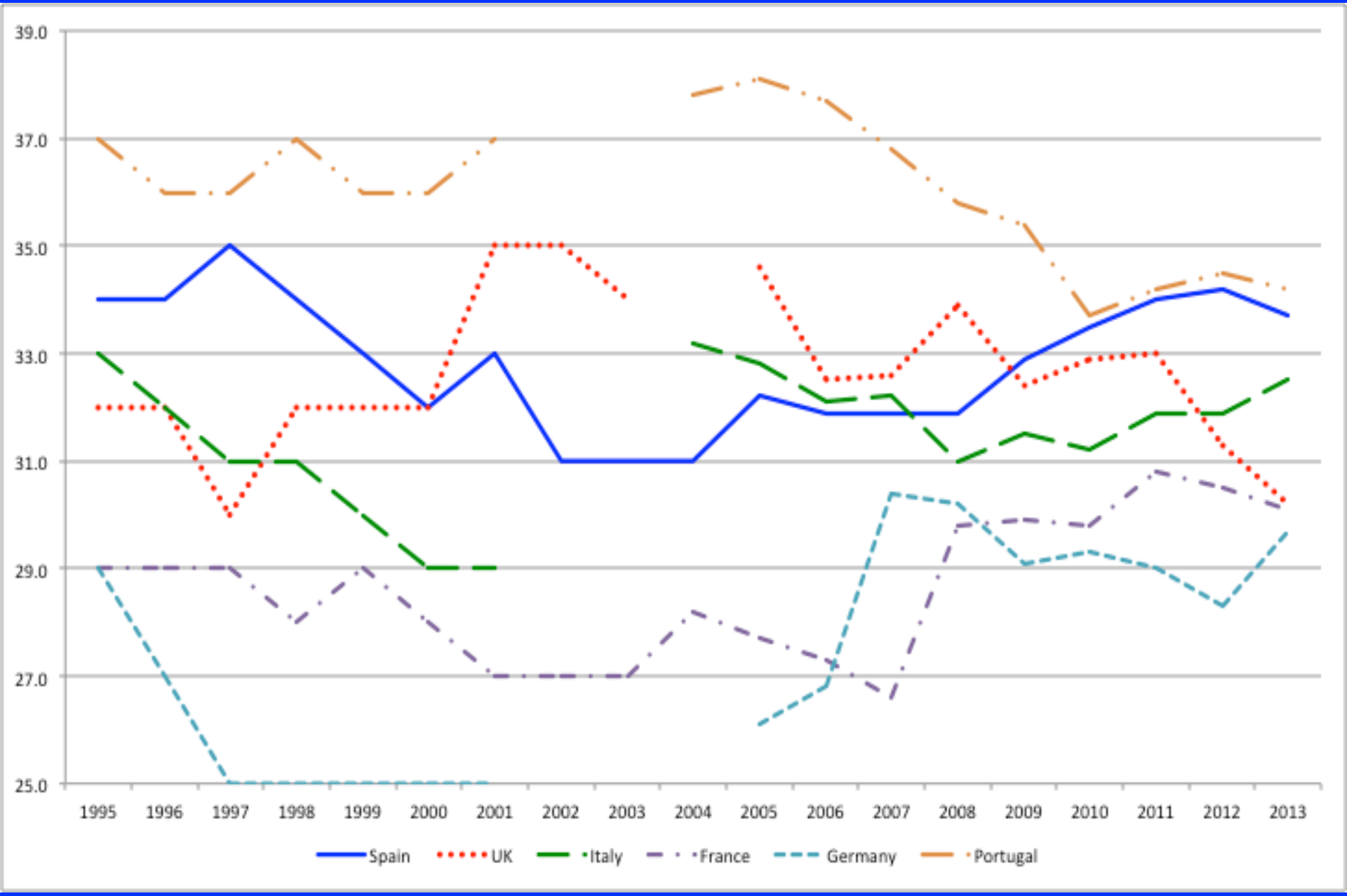
Inequality in Spain: OECD Perspective 1870-2000 (Gini)

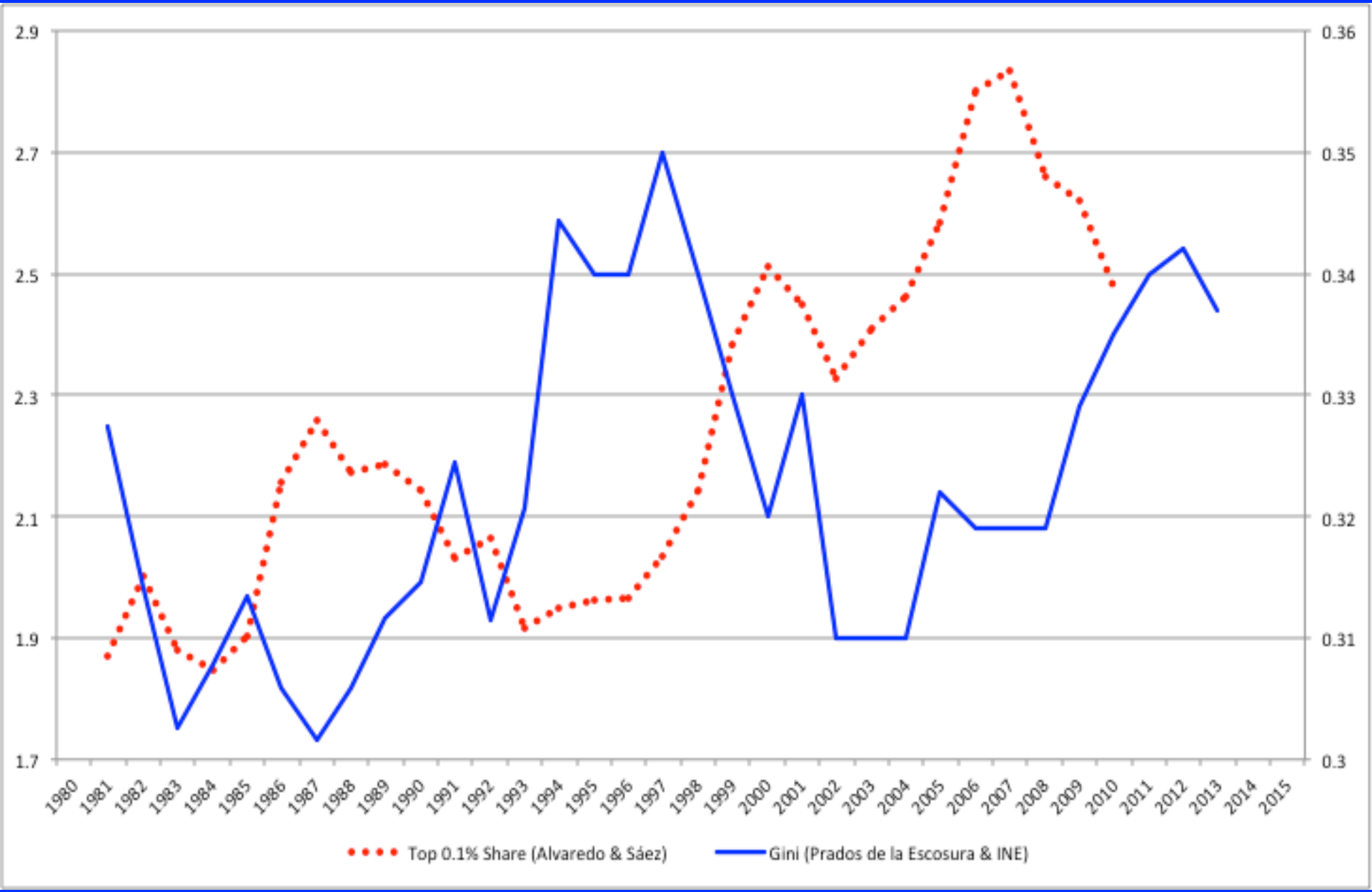


Gini in Spain and Latin America, 1870-2000



Spain in European Perspective, 1995-2013 (Gini)



Income Inequality and Concentration since 1980

Gini versus Top Income Share (0.1%)