A Schumpeterian Model of Top Income Inequality

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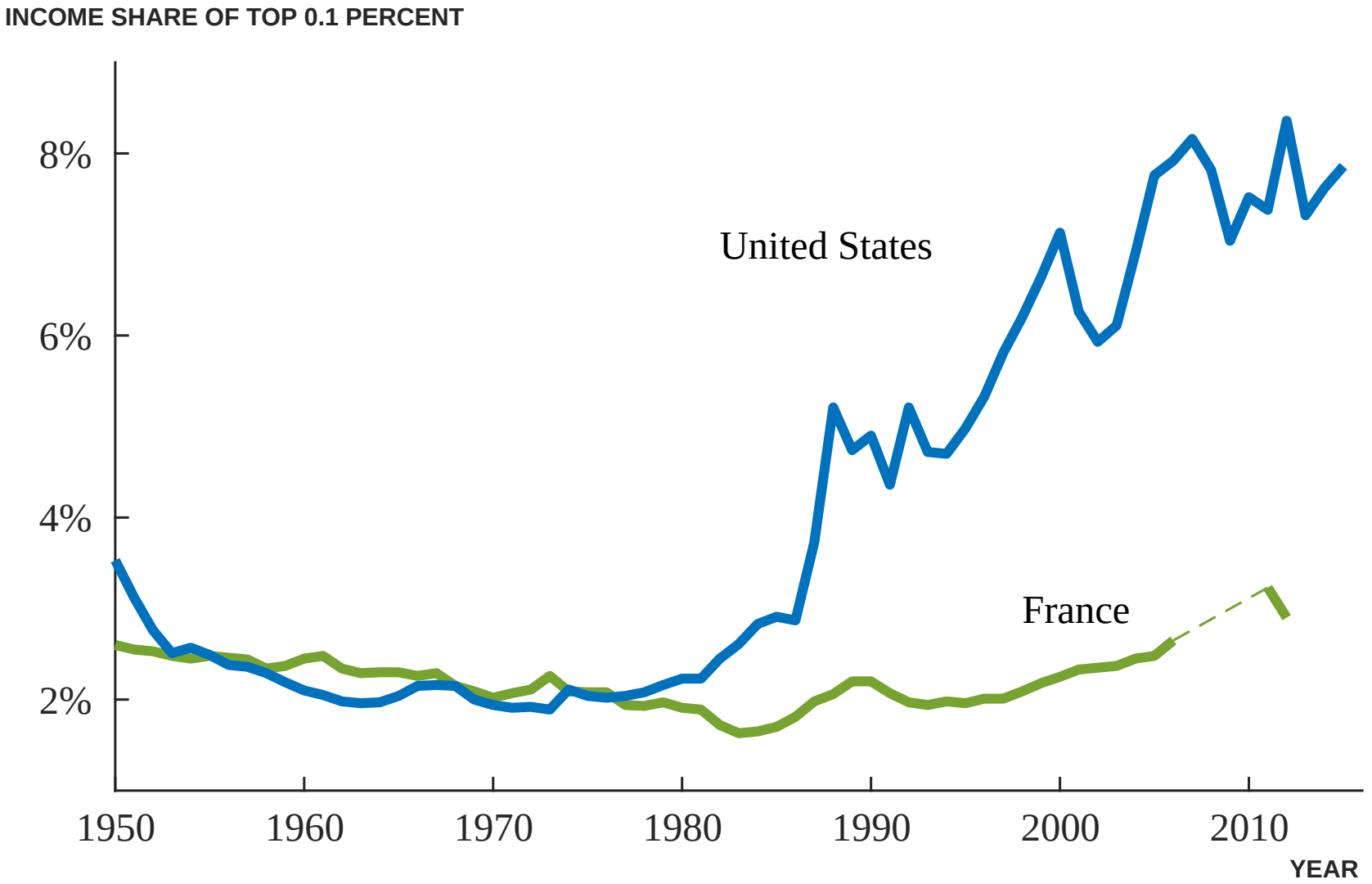
Top Income Inequality in the United States and France



Source: World Wealth and Income Database. Includes interest and dividends but not capital gains

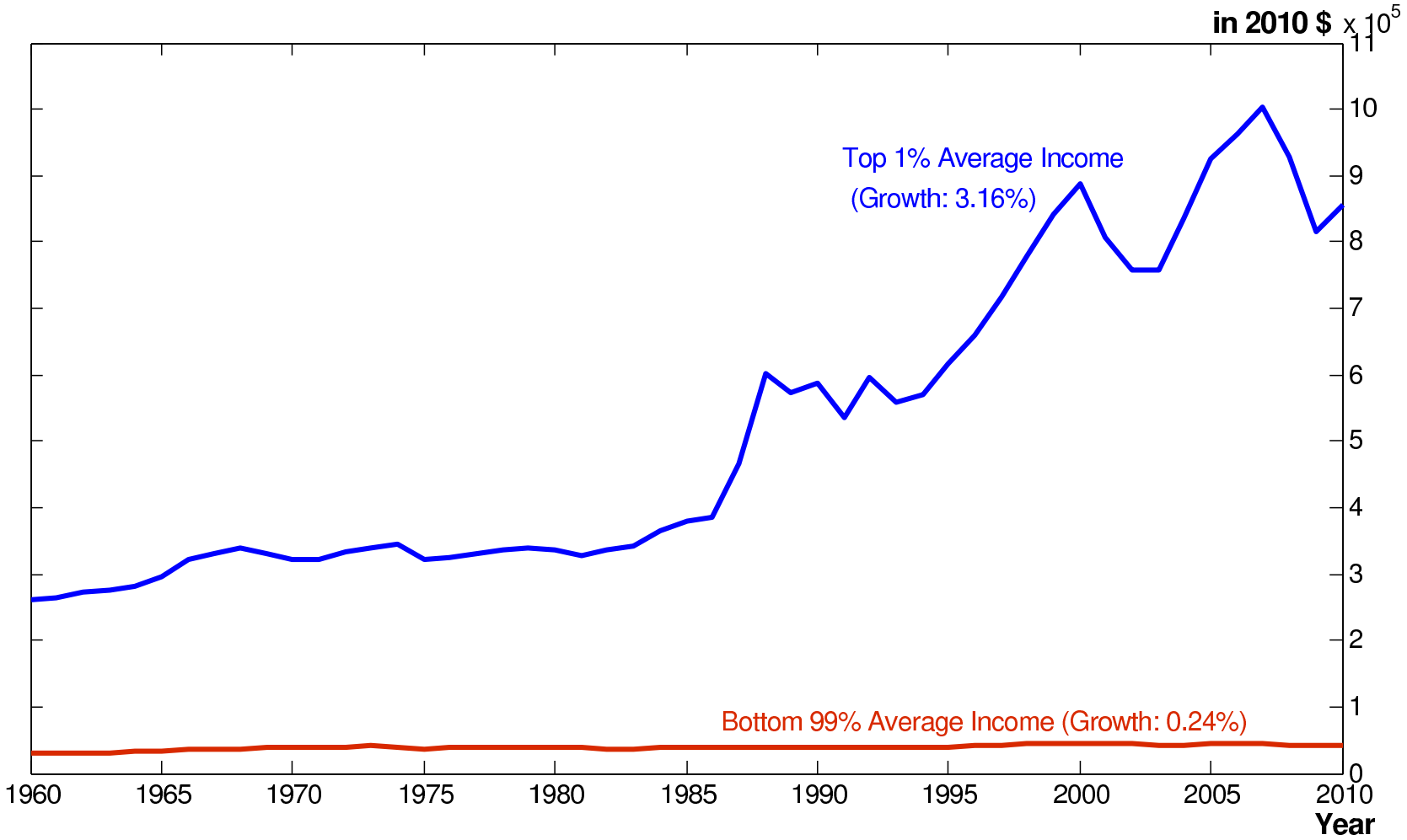
Overview

- Atkinson / Piketty / Saez stylized facts on top income inequality
  - Rising sharply in US since 1980
  - More stable in France and Japan
  - Why?

Outline

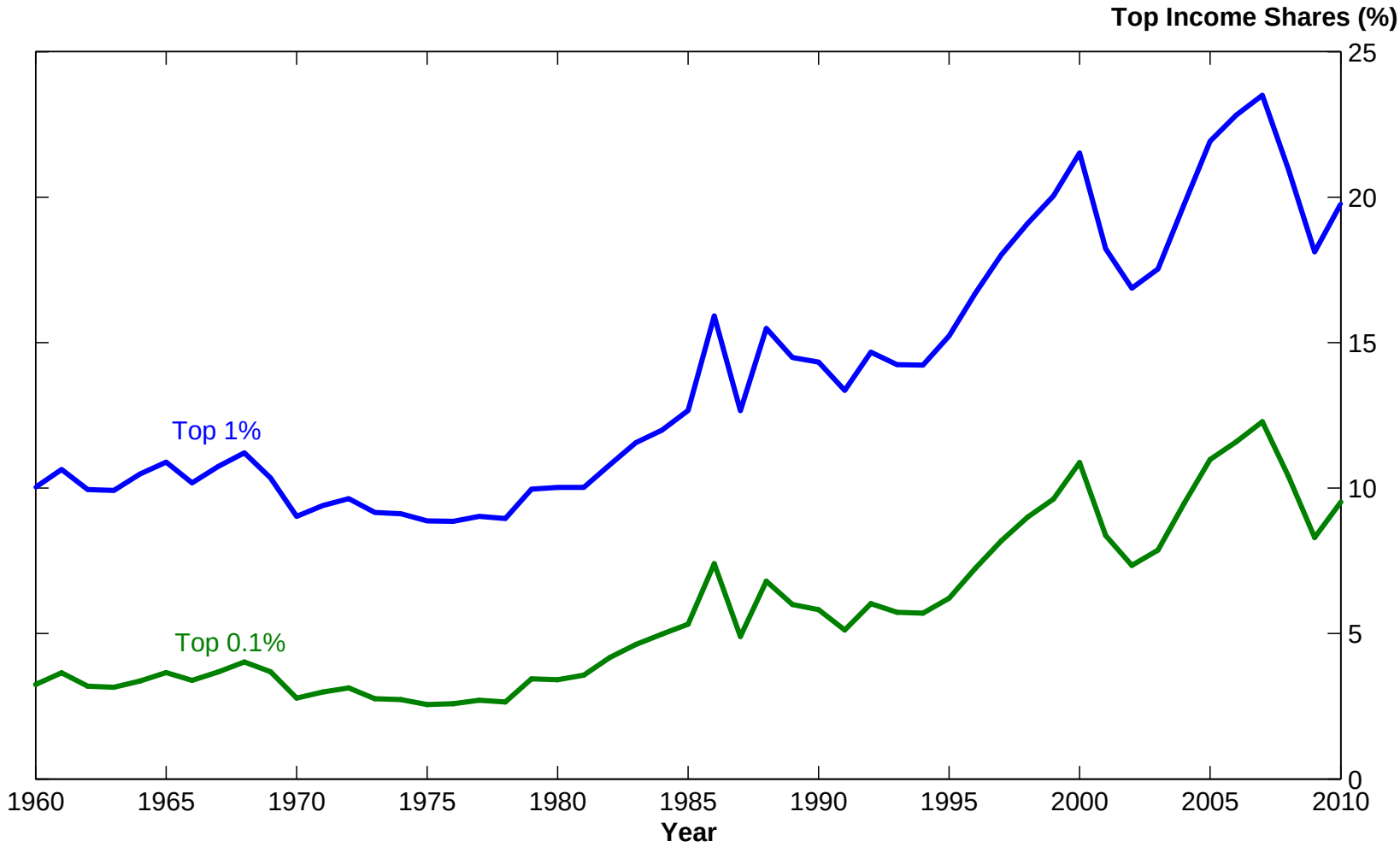
1. Facts
2. Pareto Top Income Distribution
3. Simple Model
4. Full Model
5. Micro Evidence

Top 1% vs. Bottom 99%



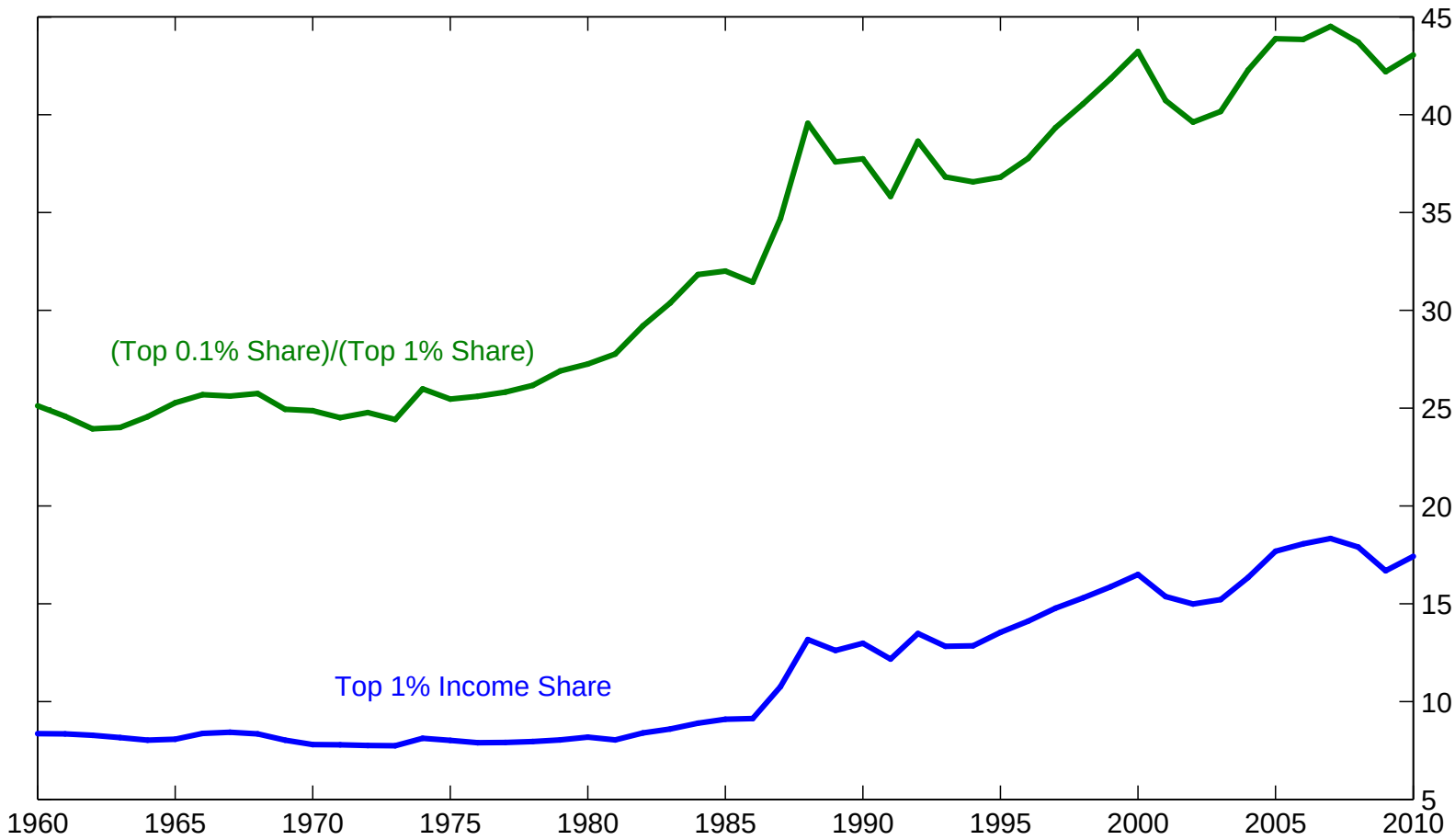
Source: Piketty and Saez (2003), 2010 data update

Top 1% vs. Bottom 99%



Source: Piketty and Saez (2003), 2010 data update

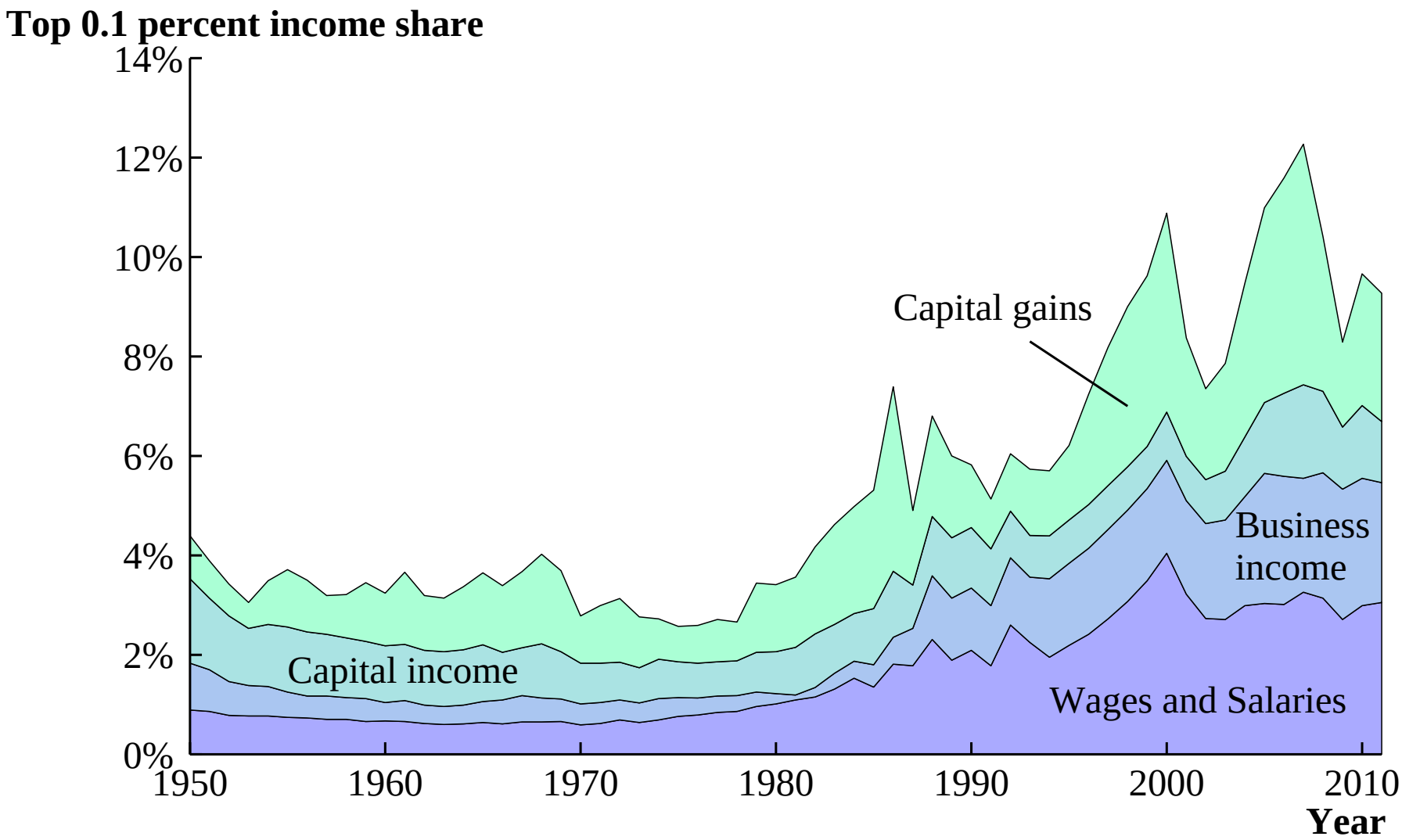
Within the Top 1%



Top Income Inequality: inequality **within** the top income group

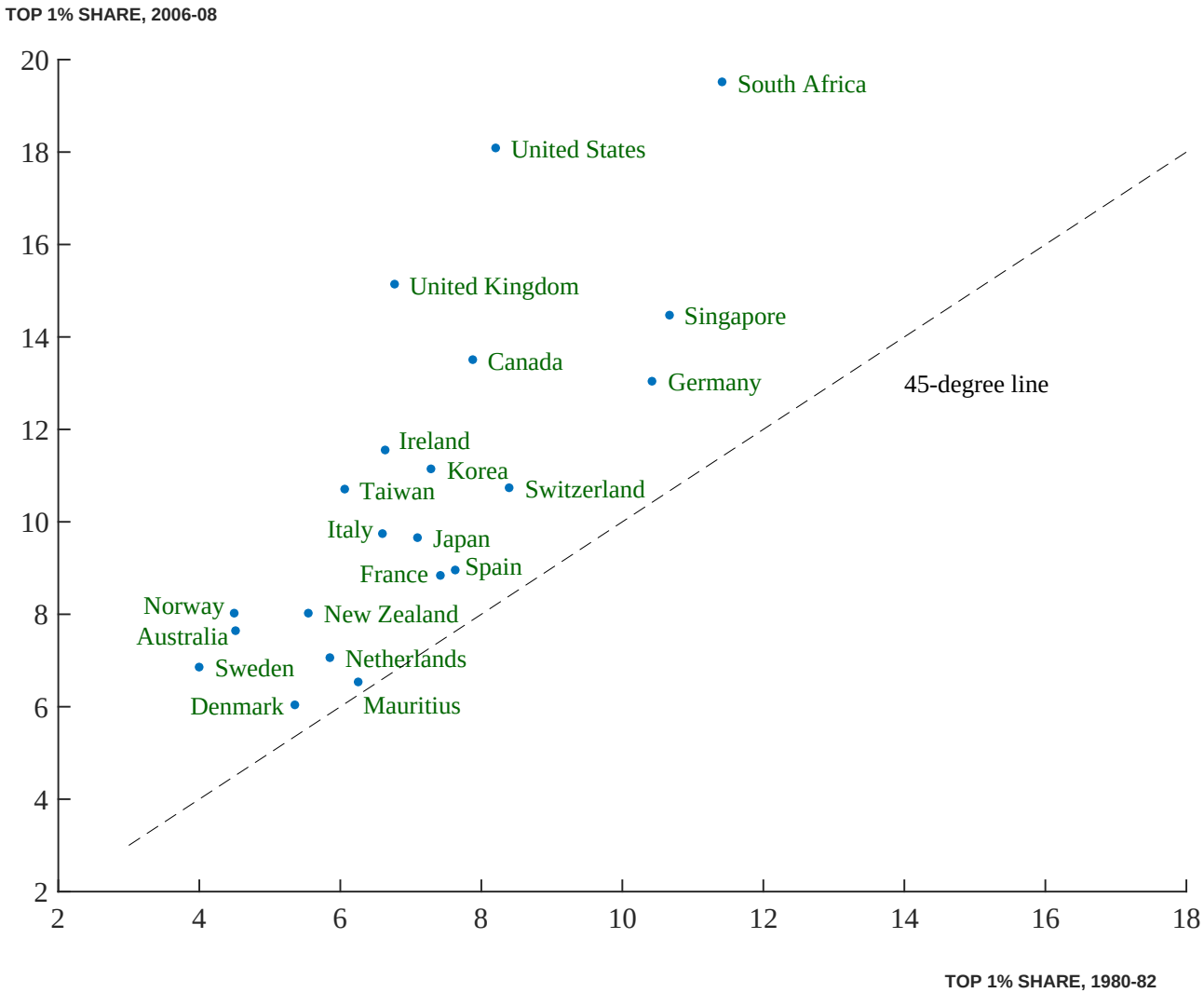
Source: Piketty and Saez (2003), 2010 data update

The Composition of the Top 0.1 Percent Income Share



Source: Piketty and Saez (2003), 2013 data update

Other Countries?



Source: World Wealth and Income Database

Who’s in the Top 1%

- 1.6 M people
- Income (excluding capital gains) threshold (2014)
  - 10%: $118,140
  - 1%: $387,810
  - 0.1%: $1,537,400
  - 0.01%: $6,649,000
- What do they do?

Who's in the Top 1%

Table 2 -- Percentage of primary taxpayers in top one percent of the distribution of income (excluding capital gains) that are in each occupation

	1979	1993	1997	1999	2001	2002	2003	2004	2005
Executives, managers, supervisors (non-finance)	36.0	33.6	34.5	34.1	31.6	31.3	30.3	30.4	31.0
Medical	16.8	20.4	17.9	15.1	16.5	17.2	17.7	16.7	15.7
Financial professions, including management	7.7	10.6	11.9	13.1	13.5	13.2	13.1	13.6	13.9
Lawyers	7.0	8.9	7.7	7.3	8.3	8.5	8.9	8.8	8.4
Computer, math, engineering, technical (nonfinance)	3.8	3.3	4.2	5.5	5.1	4.9	5.4	4.6	4.6
Not working or deceased	5.2	3.3	4.0	4.2	3.8	4.1	3.5	3.9	4.3
Skilled sales (except finance or real estate)	4.6	4.1	4.5	4.3	4.2	4.1	4.1	4.1	4.2
Blue collar or miscellaneous service	4.2	3.2	3.2	3.2	3.0	3.3	3.2	3.6	3.8
Real estate	1.9	1.4	1.8	2.6	2.6	2.9	2.6	3.1	3.2
Business operations (nonfinance)	2.4	2.2	2.6	2.8	3.3	3.0	2.8	3.3	3.0
Entrepreneur not elsewhere classified	2.7	2.1	2.1	2.1	2.1	1.7	2.1	1.9	2.3
Professors and scientists	1.3	1.8	1.6	1.4	1.8	1.8	1.9	1.8	1.8
Arts, media, sports	1.6	2.0	1.7	2.1	2.0	1.7	2.0	1.7	1.6
Unknown	1.6	1.3	1.0	0.9	0.9	1.0	1.3	1.1	0.9
Government, teachers, social services	0.8	0.9	0.5	0.8	0.5	0.8	0.7	0.8	0.8
Farmers & ranchers	1.8	0.1	0.6	0.4	0.4	0.3	0.4	0.5	0.5
Pilots	0.7	0.8	0.3	0.3	0.4	0.3	0.3	0.2	0.2

Source: Bakija, Cole, and Heim (2012)

Who's in the Top 0.1%

Table 3 -- Percentage of primary taxpayers in top 0.1 percent of the distribution of income (excluding capital gains) that are in each occupation

	1979	1993	1997	1999	2001	2002	2003	2004	2005
Executives, managers, supervisors (non-finance)	48.1	45.7	48.4	47.1	42.6	40.6	40.5	40.9	42.5
Financial professions, including management	11.0	14.1	14.7	16.4	19.1	19.0	17.8	18.7	18.0
Lawyers	7.3	6.5	6.3	5.9	7.1	8.2	8.8	8.0	7.3
Medical	7.9	13.3	6.8	4.4	5.2	6.8	7.6	6.3	5.9
Not working or deceased	5.4	2.5	3.5	3.8	4.0	3.7	3.7	3.8	3.8
Real estate	1.8	1.3	1.8	2.1	2.5	2.9	3.0	3.3	3.7
Entrepreneur not elsewhere classified	3.9	3.0	2.8	2.7	2.8	2.9	3.2	3.0	3.0
Arts, media, sports	2.2	3.3	3.5	3.5	3.3	3.6	3.4	3.3	3.0
Business operations (nonfinance)	1.5	1.7	2.3	2.2	2.7	2.7	2.2	2.7	2.9
Computer, math, engineering, technical (nonfinance)	2.3	2.3	3.1	4.7	4.0	3.0	3.1	3.0	2.9
Other known occupation	2.9	2.1	2.2	2.6	2.5	2.5	2.4	2.5	2.7
Skilled sales (except finance or real estate)	2.2	2.9	2.9	2.6	2.4	2.3	2.3	2.3	2.3
Professors and scientists	0.8	0.8	0.7	0.8	0.9	0.9	0.9	0.9	0.9
Farmers & ranchers	1.4	0.2	0.5	0.5	0.5	0.5	0.5	0.5	0.6
Unknown	1.4	0.5	0.5	0.9	0.7	0.6	0.8	0.7	0.5

Source: Bakija, Cole, and Heim (2012)

Related Literature

- Empirics: Piketty and Saez (2003), Aghion et al (2015), Guvenen-Kaplan-Song (2015) and many more
- Rent Seeking: Piketty, Saez, and Stantcheva (2011) and Rothschild and Scheuer (2011)
- Finance: Philippon and Reshef (2009) and Bell and Van Reenen (2010)
- Not just finance: Bakija, Cole, and Heim (2012) and Kaplan and Rauh (2010)

Related Literature

- Pareto-generating mechanisms: Gabaix (1999, 2009), Gabaix and Moll (2015), Luttmer (2007, 2010), Mitzenmacher (2003), Reed (2001), Gabaix, Lasry, Lions, and Moll (2015)
- Use Pareto to get growth: Kortum (1997), Lucas and Moll(2013), Perla and Tonetti (2013).
- Pareto wealth distribution: Bisin-Benhabib-Zhu (2011), Nirei(2009), Moll (2012), Piketty-Saez (2012), Piketty-Zucman (2014), Aoki and Nirei (2015)

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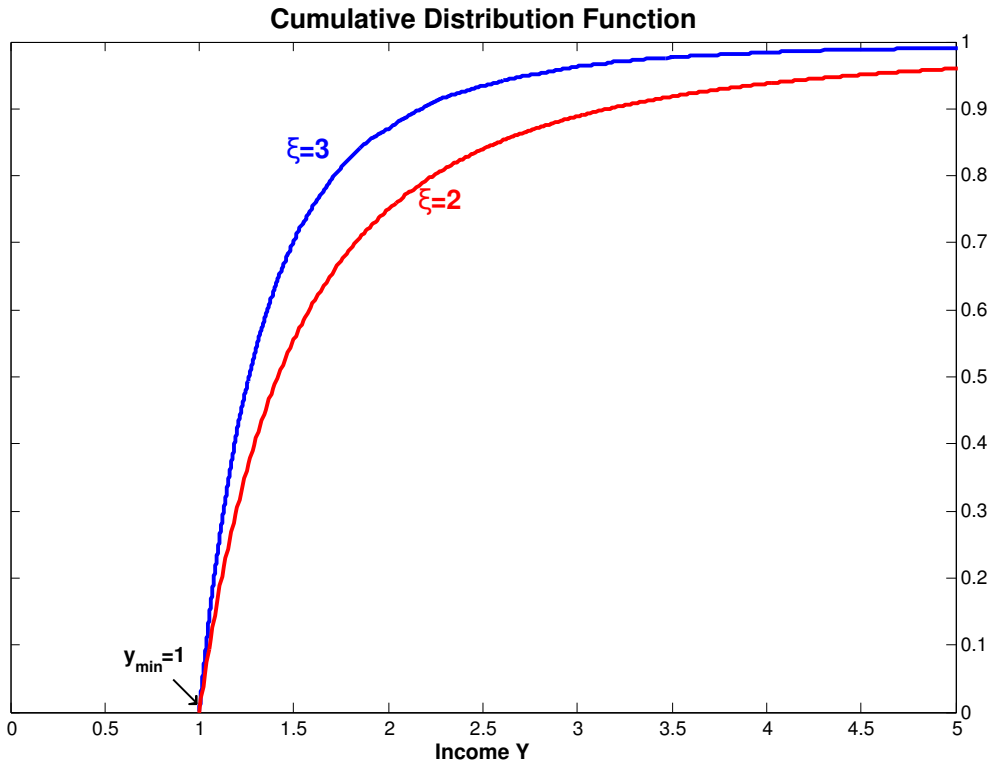
Pareto Top Income Distribution

- The Top 1% Income distribution is Pareto distributed (Saez 2001)
- If income $Y \geq y_{min} \sim Pareto(\xi)$,

  - $Pr(Y > y) = \left(\frac{y_{min}}{y}\right)^{\xi}$
  - $\mathbf{E}[Y] = \left(\frac{\xi}{\xi - 1}\right) y_{\text{min}}$ for $\xi > 1$



Pareto Top Income Distribution

Fractal Property

- $y_{x\%} \equiv$ top x % income threshold, $y_{\text{min}} \equiv y_{1\%}$
  $\Rightarrow y_{0.1\%} = 10^{\frac{1}{\xi}} y_{1\%}$ & $y_{0.01\%} = 10^{\frac{1}{\xi}} y_{0.1\%}$
- $$\frac{\text{(Top 0.1\% Income Share)}}{\text{(Top 1\% Income Share)}} = \frac{\text{(Top 0.01\% Income Share)}}{\text{(Top 0.1\% Income Share)}} = 10^{\frac{1}{\xi}-1}$$

$$\xi \uparrow \rightarrow \textbf{inequality} \downarrow$$

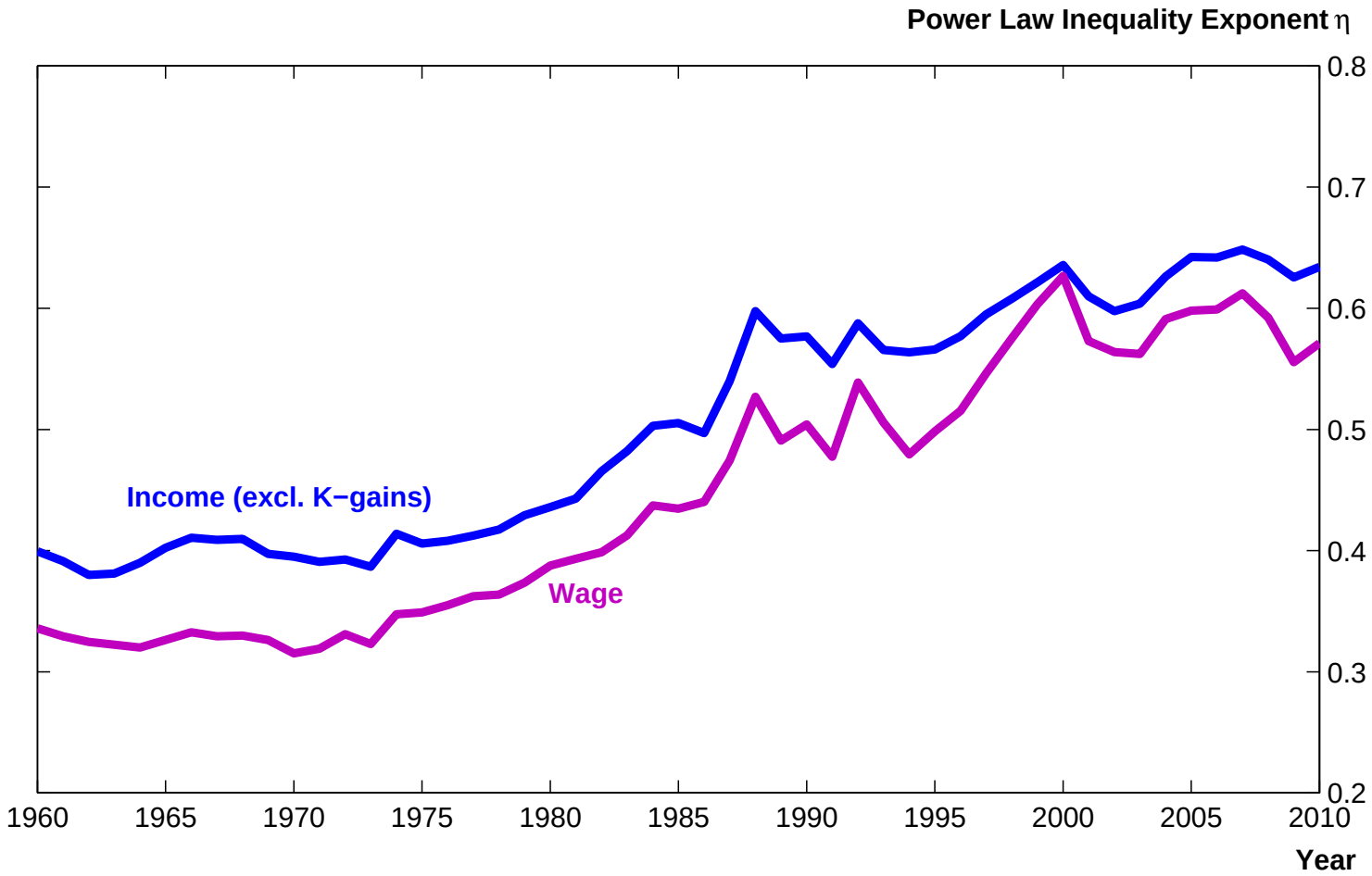
Power Law Inequality Exponent

- Define "**power law inequality exponent η**"

$$\eta \equiv \frac{1}{\xi}$$

- Useful properties
  - $\mathbf{E}[Y] = \left(\frac{1}{1-\eta}\right) y_{\text{min}}$
  - if $X = Y^{\alpha}$, $\eta_X = \alpha \eta_Y$.

Top Inequality in Power Law Inequality Exponent



Calculated from the top shares data in Piketty and Saez (2003) 2010 data update

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What We Aim to Explain

- Top income inequality has increased sharply in the U.S. since 1980
- In some other countries like France and Japan, the inequality has increased only slightly
- and all this in the context of Pareto income distribution...

Why Skill-Biased Technical Change Fails at the Top

- Let $x_i =$ skill and $\bar{w} =$ wage per unit skill

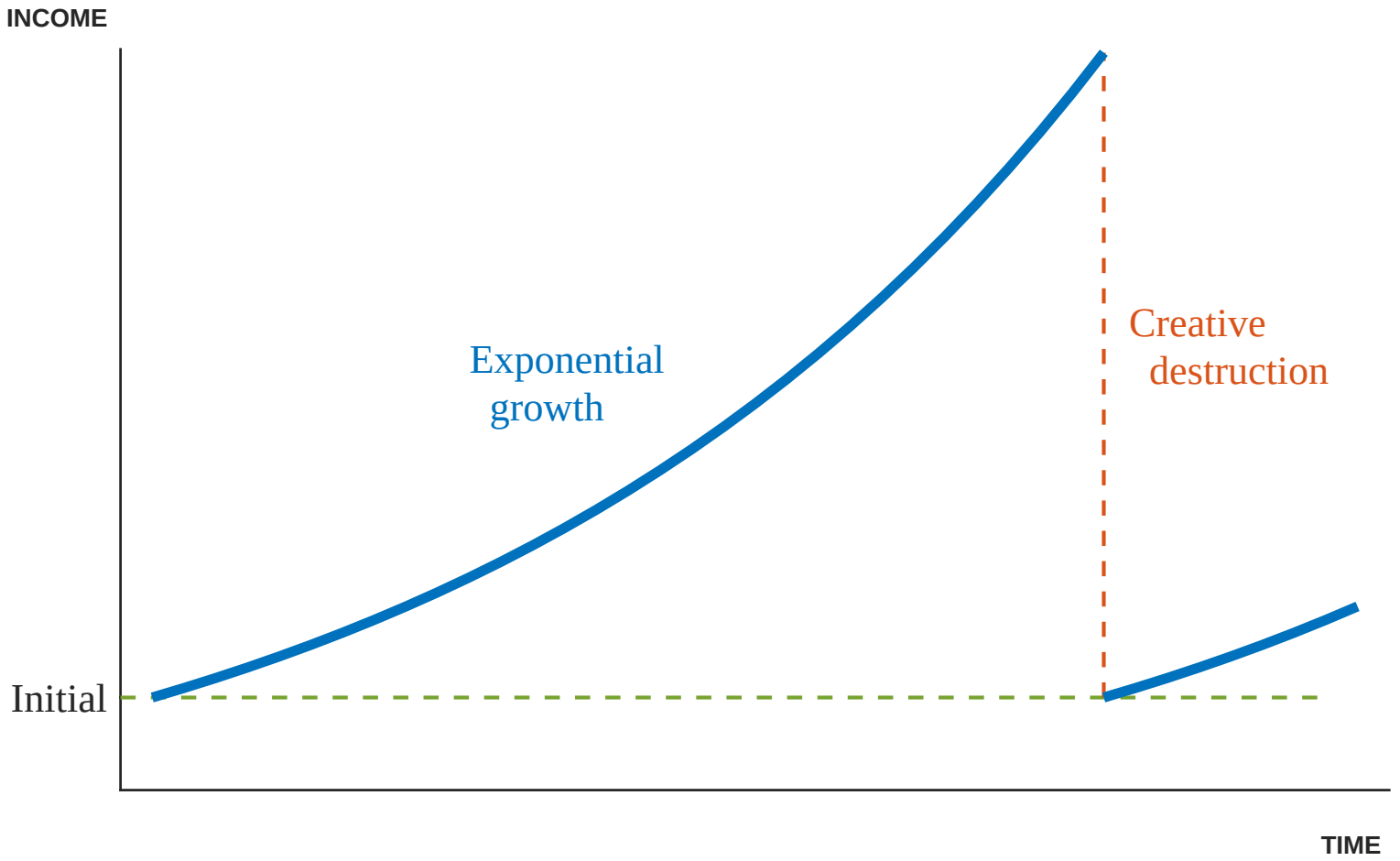
$$y_i = \bar{w} x_i^{\alpha}$$

- if Pr$[x_i > x]^{-1/\eta_x}$, then

$$Pr[y_i > y] = \frac{y}{\bar{w}}^{-1/\eta_y} \text{ where } \eta_y = \alpha \eta_x$$

- That is, y_i is Pareto with inequality parameter η_y
  - SBTC ($\uparrow \bar{w}$) shifts distribution right but η_y unchanged.
  - $\uparrow \alpha$ would raise Pareto inequality
  - This paper: why is $x \sim$ Pareto, and why $\uparrow \alpha$

Exponential growth with death $\Rightarrow$ Pareto



Simple Model for Intuition

- Exponential growth often leads to a Pareto distribution.
- Entrepreneurs
  - New entrepreneur (“top earner) earns y_0
  - Income after x years of experience:

$$y(x) = y_0 e^{\mu x}$$

- Poisson “replacement process at rate δ
  - Stationary distribution of experience is exponential

$$Pr[\text{Experience} > x] = e^{-\delta x}$$

What fraction of people have income $> y$?

- Equals fraction with at least $x(y)$ years of experience

$$x(y) = \frac{1}{\mu} \log \left(\frac{y}{y_0} \right)$$

- Therefore

$$\begin{aligned} Pr[\text{Income} > y] &= Pr[\text{Experience} > x(y)] \\ &= e^{-\delta x(y)} \\ &= \frac{y}{y_0}^{-\frac{\delta}{\mu}} \end{aligned}$$

- So power law inequality is given by

$$\eta_y = \frac{\mu}{\delta}$$

Intuition

- Why does the Pareto result emerge?
  - Log of income $\propto$ experience (Exponential growth)
  - Experience $\sim$ exponential (Poisson process)
  - Therefore log income is exponential

$$\Rightarrow \text{Income} \sim \text{Pareto!}$$

- A Pareto distribution emerges from exponential growth experienced for an exponentially distributed amount of time.

Full model: endogenize μ and δ and how they change

Why is Experience Exponentially Distributed

- Let $F(x,t)$ denote the distribution of experience at time t
- How does it evolve over discrete time interval Δt?

$$F(x,t+\Delta t) - F(x,t) = \underbrace{\delta \Delta t(1-F(x,t))}_{\text{inflow from above x}} - \underbrace{[F(x,t) - F(x-\Delta x,t)]}_{\text{outflow as top folks age}}$$

- Dividing both sides by $\Delta t = \Delta x$ and taking the limit

$$\frac{\partial F(x,t)}{\partial t} = \delta(1-F(x,t)) - \frac{\partial F(x,t)}{\partial x}$$

- Stationary: $F(x)$ such that $\frac{\partial F(x,t)}{\partial t} = 0$. Integrating gives the exponential solution.

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The Full Model

- Pareto distribution in partial equilibrium
- GE with exogenous research
- Full general equilibrium

Main Idea

- Entrepreneur
  - relative productivity/market share x (absolute: $\gamma^{n_t} x$)
  - random growth with death (creative or exogenous destruction)
  - the growth depends on the entrepreneurial effort
- Researcher
  - invent higher quality ideas.
  - (creative destruction) successful research: replacing an existing entrepreneur inheriting x
  - (exogenous destruction) or, replacing an existing entrepreneur, starting w/ x_0
- Workers
- Inequality
  - depends on the random growth process
  - effort $\uparrow \Rightarrow$ inequality $\uparrow$
  - destruction $\uparrow \Rightarrow$ inequality $\downarrow$

Setting Up: Entrepreneur's Problem

$$\max_{\{e_t\}} \mathbb{E} \int_0^\infty e^{-(\rho+\delta+\bar{\delta})t} [\log c_t + \beta \log \ell_t] dt$$

subject to

$$c_t = \psi_t x_t$$

$$e_t + \ell_t + \tau = 1$$

$$dx_t = \mu(e_t) x_t dt + \sigma x_t dB_t$$

$$\mu(e) = \phi e$$

- $x =$ idiosyncratic productivity of a variety
- $\delta =$ endogenous creative destruction
- $\bar{\delta} =$ exogenous destruction
- $\psi_t =$ determined in GE
- $\phi =$ technological parameter converting effort e into growth

Solution for Entrepreneur's Problem

- The Bellman equation for the entrepreneur:

$$\rho V(x_t,t) = \max_{e_t} \quad \log \psi_t \quad + \quad \log x_t + \beta \log(\Omega - e_t) + \frac{\mathbb{E}[dV(x_t,t)]}{dt}$$
$$+ \quad (\delta + \bar{\delta})(V^w(t) - V(x_t,t))$$

  where $\Omega \equiv 1 - \tau$

- Equilibrium effort:

$$e^* = \Omega - \frac{1}{\phi} \cdot \beta(\rho + \delta + \bar{\delta}).$$

- e^* increases if
  - $\uparrow \phi$: better technology for converting effort into x
  - $\downarrow \delta, \bar{\delta}$: less destruction
  - $\downarrow \tau$: lower "taxes"
  - $\downarrow \beta$: lower utility weight on leisure

Stationary Distribution of Entrepreneur's Income

- Unit measure of entrepreneurs / varieties
- Displaced in two ways
  - Exogenous destruction ($\bar{\delta}$): new entrepreneur $\rightarrow x_0$.
  - Endogenous creative destruction (δ): inherit existing productivity x, (new ideas arrive to researchers with λ per researcher)
- Distribution $f(x,t)$ satisfies Kolmogorov forward equation:

$$\frac{\partial f(x,t)}{\partial t} = -\bar{\delta} f(x,t) - \frac{\partial}{\partial x}\left[\mu(e^*) x f(x,t)\right] + \frac{1}{2}\cdot\frac{\partial^2}{\partial x^2}\left[\sigma^2 x^2 f(x,t)\right]$$

- Stationary distribution $\lim_{t\rightarrow\infty} f(x,t) = f(x)$ solves $\frac{\partial f(x,t)}{\partial t} = 0$.

Stationary Distribution of Entrepreneur's Income

- Guess that $f(\cdot)$ takes the Pareto form $f(x) = Cx^{-\xi-1} \Rightarrow$

$$\xi = \frac{1}{\eta^*} = -\frac{\tilde{\mu}^*}{\sigma^2} + \sqrt{\left(\frac{\tilde{\mu}^*}{\sigma^2}\right)^2 + \frac{2\,\bar{\delta}}{\sigma^2}}$$

$$\tilde{\mu}^* \equiv \mu(e^*) - \frac{1}{2}\sigma^2 = \phi\Omega - \beta(\rho + \delta^* + \bar{\delta}) - \frac{1}{2}\sigma^2$$

Comparative Statics (given δ^*)

$$\frac{1}{\eta^*} = -\frac{\tilde{\mu}^*}{\sigma^2} + \sqrt{\left(\frac{\tilde{\mu}^*}{\sigma^2}\right)^2 + \frac{2\,\bar{\delta}}{\sigma^2}}$$

$$\tilde{\mu}^* \equiv \mu(e^*) - \frac{1}{2}\sigma^2 = \phi(1-\tau) - \beta(\rho + \delta^* + \bar{\delta}) - \frac{1}{2}\sigma^2$$

- Power-law inequality η^* increases if
  - $\uparrow \phi$: better technology for converting effort into x
  - $\downarrow \delta$ or $\bar{\delta}$: less destruction
  - $\downarrow \tau$: More entrepreneurial time ($\uparrow \Omega$)
  - $\downarrow \beta$: Lower utility weight on leisure

Luttmer and GLLM

- Problems with basic random growth model:
  - Luttmer (2011): cannot produce “rockets” like Google or Uber
  - Gabaix, Lasry, Lions, and Moll (2015): Slow transition dynamics
- Solution from Luttmer/GLLM:
  - introduce heterogeneous mean growth rates: e.g. “high” versus “low”
  - Here: $\phi_H > \phi_L$ with Poisson rate $\bar{p}$ of transition ($H \to L$)

Pareto Inequality with Heterogeneous Mean Growth

$$\eta_H^* = \frac{1}{\xi_H}, \xi_H = -\frac{\tilde{\mu}_H^*}{\sigma_H^2} + \sqrt{\left(\frac{\tilde{\mu}_H^*}{\sigma_H^2}\right)^2 + \frac{2\left(\bar{\delta} + \bar{p}\right)}{\sigma_H^2}}$$

$$\tilde{\mu}_H^* \equiv \mu_H(e^*) - \frac{1}{2}\sigma_H^2 = \phi_H(1-\tau) - \beta(\rho + \delta^* + \bar{\delta}) - \frac{1}{2}\sigma_H^2$$

- This adopts Gabaix, Lasry, Lions, and Moll (2015)
- Why it helps quantitatively:
  - ϕ_H : Fast growth allows for Google / Uber
  - $\bar{p}$: Rate at which high growth types transit to low growth types raises the speed of convergence $= \bar{\delta} + \bar{p}$.

Growth and Creative Destruction

Final output	$Y = \left(\int_0^1 Y_i^\theta di \right)^{1/\theta}$
Production of variety i	$Y_i = \gamma^{n_t} x_i^\alpha L_i$
Resource constraint	$L_t + R_t + 1 = \bar{N}, \;\; L_t \equiv \int_0^1 L_{it} di$
Flow rate of innovation	$\dot{n}_t = \lambda(1 - \bar{z}) R_t$
Creative destruction	$\delta_t = \dot{n}_t$

Equilibrium with Monopolistic Competition

- Suppose $R/\bar{L} = \bar{s}$ where $\bar{L} \equiv \bar{N} - 1$
- Define $X \equiv \int_0^1 x_i di = \frac{x_0}{1-\eta}$

Aggregate output	$Y_t = \gamma^{n_t} X^\alpha L$
Wage for L	$w_t = \theta \gamma^{n_t} X^\alpha$
Profits for variety i	$\pi_{it} = (1-\theta)\gamma^{n_t} X^\alpha L \left(\frac{x_i}{X}\right) \propto w_t \left(\frac{x_i}{X}\right)$
Definition for ψ_t	$\psi_t = (1-\theta)\gamma^{n_t} X^{\alpha-1} L$

- Note that $\uparrow \eta$ has a level effect on output and wages

Growth and Inequality in the $\bar{s}$ case

- Creative destruction and growth

$$\delta^* = \dot{n} = \lambda R = \lambda(1-\bar{z})\bar{s}\bar{L}$$

$$g_y^* = \dot{n}\log\gamma = \lambda(1-\bar{z})\bar{s}\bar{L}\log\gamma$$

- Does rising top inequality always reflect positive changes?
  - No! $\uparrow \bar{s}$ (more research) or $\downarrow \bar{z}$ (less innovation blocking)
  - Raise growth but reduce inequality (more creative destruction)

Endogenizing $s = R/\bar{L}$

- indifferent *ex ante* to being a worker or researcher $V^w = V^R$
- Value function for worker (no leisure)

$$\rho V_t^w = \frac{1}{\rho}\left(\log w_t + \frac{g}{\rho}\right)$$

- Value function for researcher ($\bar{\delta}_R = \bar{\delta}/R$)

$$\begin{aligned}\rho V_t^R = \ \log(\bar{m} w_t) + \frac{dV_t^R}{dt} \quad &+ \quad \lambda\left(\mathbb{E}[V(x,t)] - V_t^R\right) \\ &+ \quad \bar{\delta}_R\left(\mathbb{E}[V(x_0,t)] - V_t^R\right),\end{aligned}$$

Stationary Equilibrium Solution

Drift of log x

$$\tilde{\mu}_H^* \equiv \mu(e_H^*) - \tfrac{1}{2}\sigma_H^2 = \phi_H(1-\tau) - \beta(\rho + \delta^* + \bar{\delta}) - \tfrac{1}{2}\sigma_H^2$$

Pareto inequality

$$1/\eta^* = -\frac{\tilde{\mu}_H^*}{\sigma_H^2} + \sqrt{\left(\frac{\tilde{\mu_H}^*}{\sigma_H^2}\right)^2 + \frac{2\,\bar{\delta}+\bar{p}}{\sigma_H^2}}$$

Creative destruction

$$\delta^* = \lambda(1-\bar{z})R = \lambda(1-\bar{z})s^*\bar{L}$$

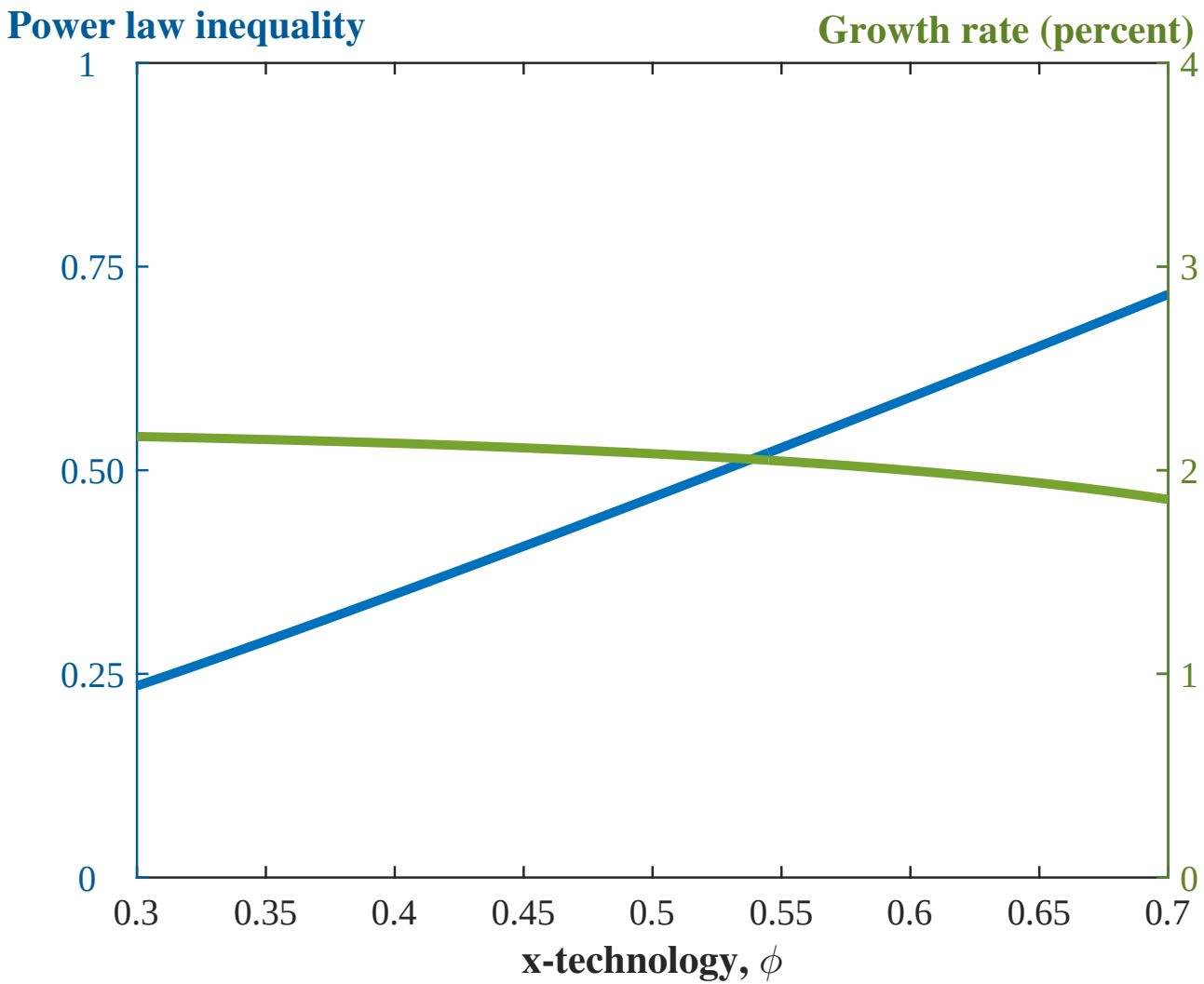
Growth

$$g^* = \delta^* \log \gamma$$

Research allocation

$$s^* = 1 - \frac{L^*}{\bar{L}}, V^w(s^*) = V^R(s^*)$$

Varying the x-technology parameter ϕ



Why does $\uparrow \phi$ reduce growth?

- $\uparrow \phi \Rightarrow \uparrow e^* \Rightarrow \mu^*$
- Two effects
  - GE effect: technological improvement $\Rightarrow$ economy more productive so higher profits, but also higher wages
  - Allocative effect: raises Pareto inequality (η), so $\frac{x_i}{X}$ is more dispersed $\Rightarrow \mathbb{E} \log \pi/w$ is lower. Risk averse agents undertake less research.
- Positive level effect raises both profits and wages.
- Riskier research $\Rightarrow$ lower research and lower long-run growth

How the model works

- $\uparrow \phi$ raises top inequality, but leaves the growth rate of the economy unchanged.
- Key: the distribution of x is stationary!
- Higher ϕ has a positive level effect through higher inequality, raising everyones wage.
- But growth comes via research, not through x...

Growth and Inequality

- Growth and inequality tend to move in opposite directions!
- Two reasons

  Faster growth $\Rightarrow$ more creative destruction
  - Less time for inequality to grow
  - Entrepreneurs may work less hard to grow market

  With greater inequality, research is riskier!
  - Riskier research $\Rightarrow$ less research $\Rightarrow$ lower growth
- Transition dynamics $\Rightarrow$ ambiguous effects on growth in medium run

Possible explanations: Rising U.S. Inequality

- Technology (e.g. WWW)
  - Entrepreneur's effort is more productive $\Rightarrow \uparrow \eta$
  - Worldwide phenomenon, not just U.S.
  - Ambiguous effects on U.S. growth (research is riskier!)
- Lower taxes on top incomes
  - Increase effort by entrepreneurs $\Rightarrow \uparrow \eta$

Possible explanations: Inequality in France

- Efficiency-reducing explanations
  - Delayed adoption of good technologies (WWW)
  - Increased misallocation (killing off entrepreneurs more quickly)
- Efficiency-enhancing explanations
  - Increased subsidies to research (more creative destruction)
  - Reduction in blocking of innovations (more creative destruction)
- Rise in utility weight on leisure in France?

Summary of the Schumpeterian Model

- Dynamics of top incomes depend on
  - entrepreneurial effort
  - creative destruction
- Inequality
  - $\propto$ entrepreneurial effort
  - $\propto 1/$(creative destruction)
- Globalization?
  - $\uparrow \phi \Rightarrow$ More inequality
  - $\uparrow \delta \Rightarrow$ Less inequality

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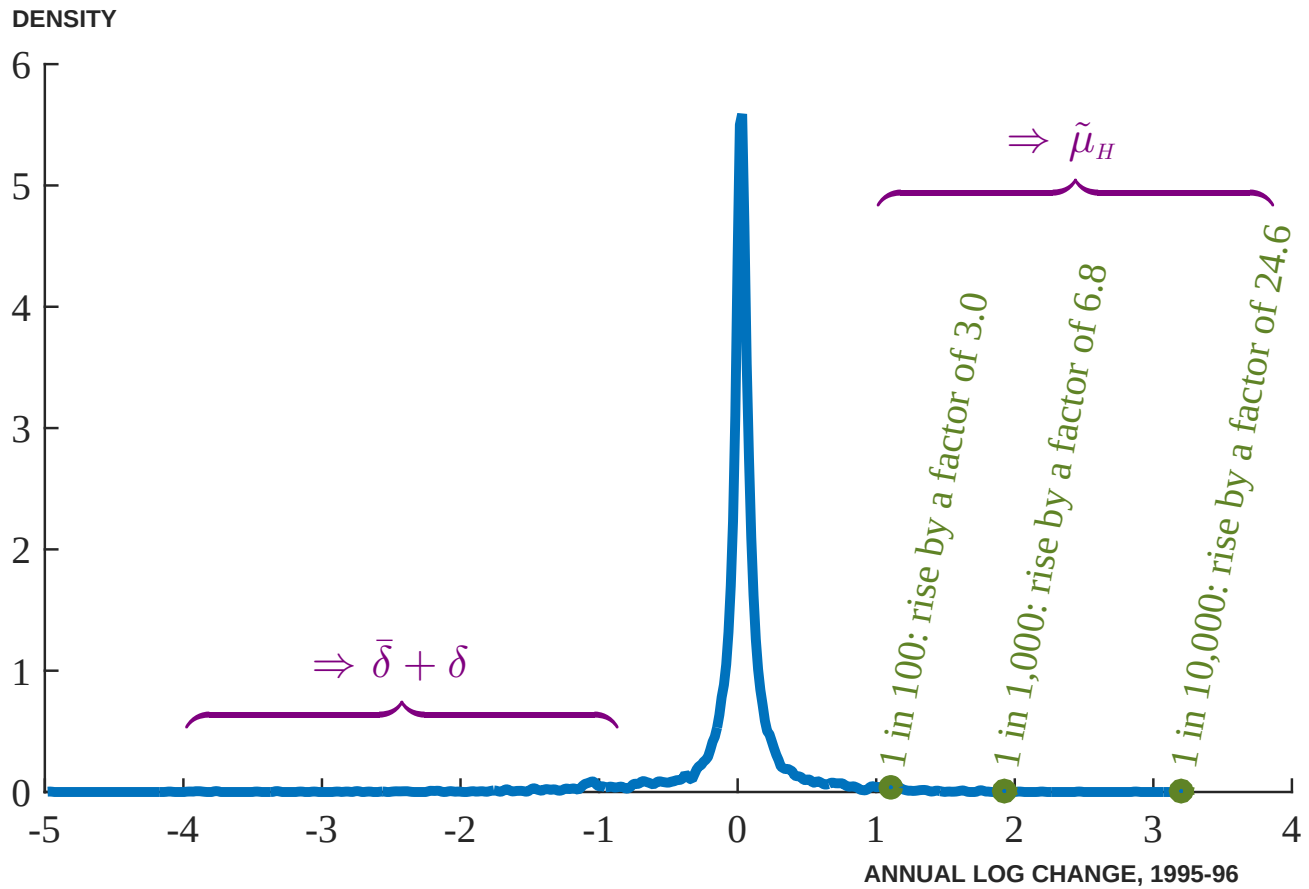
3. Simple Model
4. Full Model
5. **Micro Evidence**

Overview

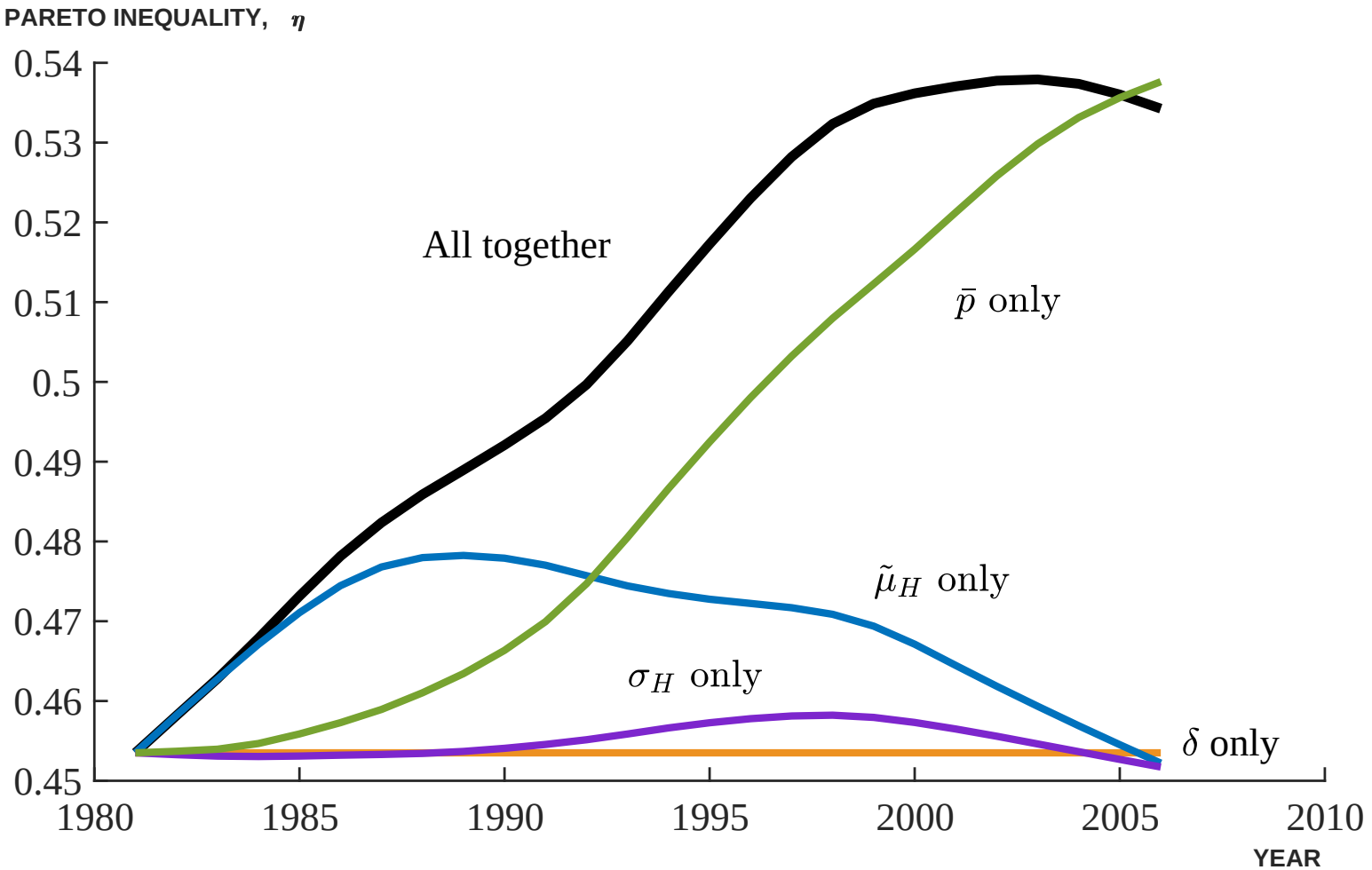
- Geometric random walk with drift = canonical DGP in the empirical literature on income dynamics.
  Survey by Meghir and Pistaferri (2011)
- Using administrative tax records
  - Estimate $\mu_{H,t}$, $\sigma_{H,t}$, $\delta_{H,t}$, $\bar{p}_t$
  - Changes over time and differences across countries
  - Problem: Data access is sharply restricted
- The distribution of growth rates for the top earners
  - SSA data: moments data of wage growth distributions from Guvenen, Karahan, Ozkan, Song (2016)
  - IRS public use panel for 1979–1990: small sample but includes entrepreneurial income

Growth Rates of Top 10% Incomes, 1995–1996



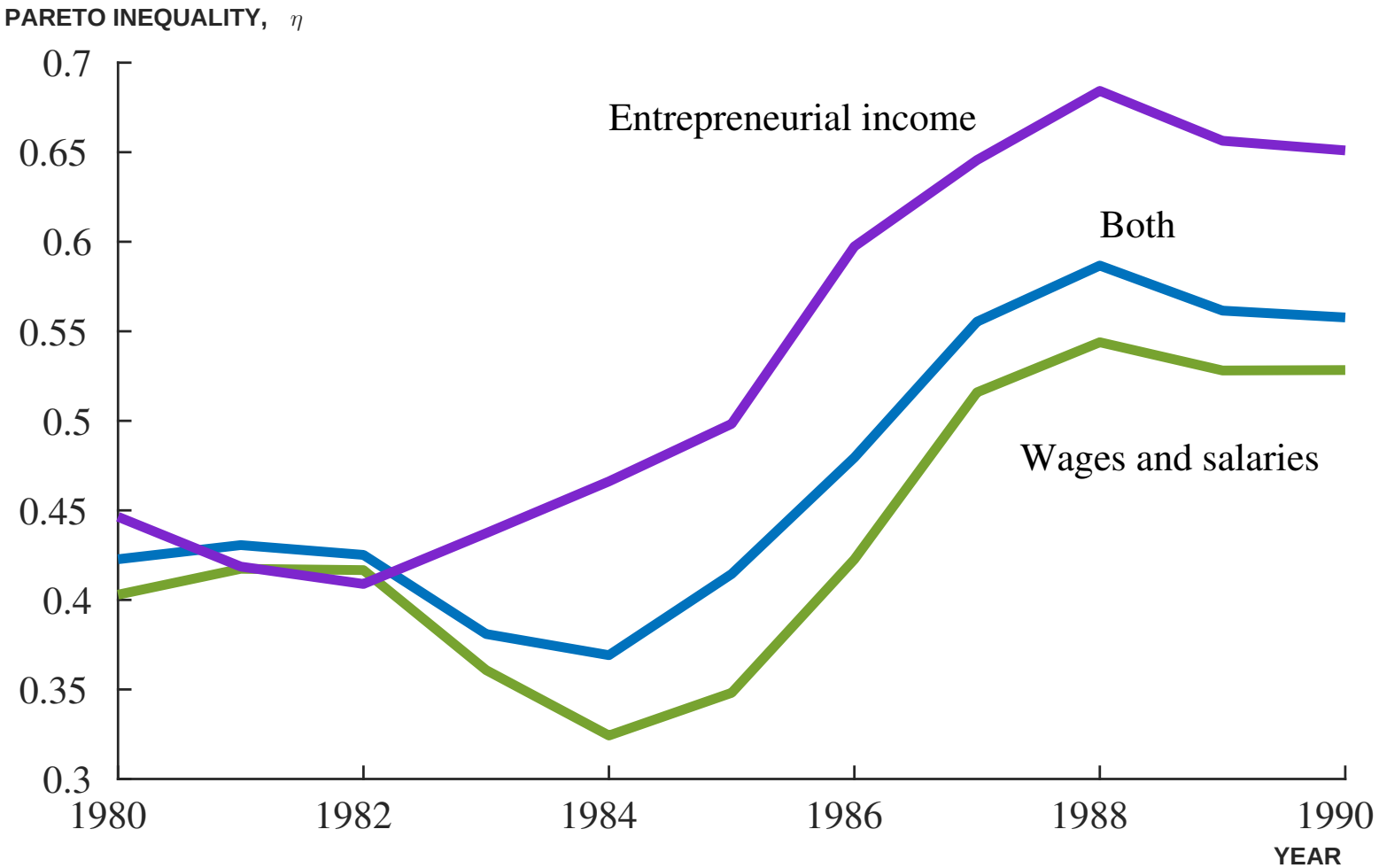
Source: Guvenen, Karahan, Ozkan, Song (2016)

Decomposing Pareto Inequality: SSA Data



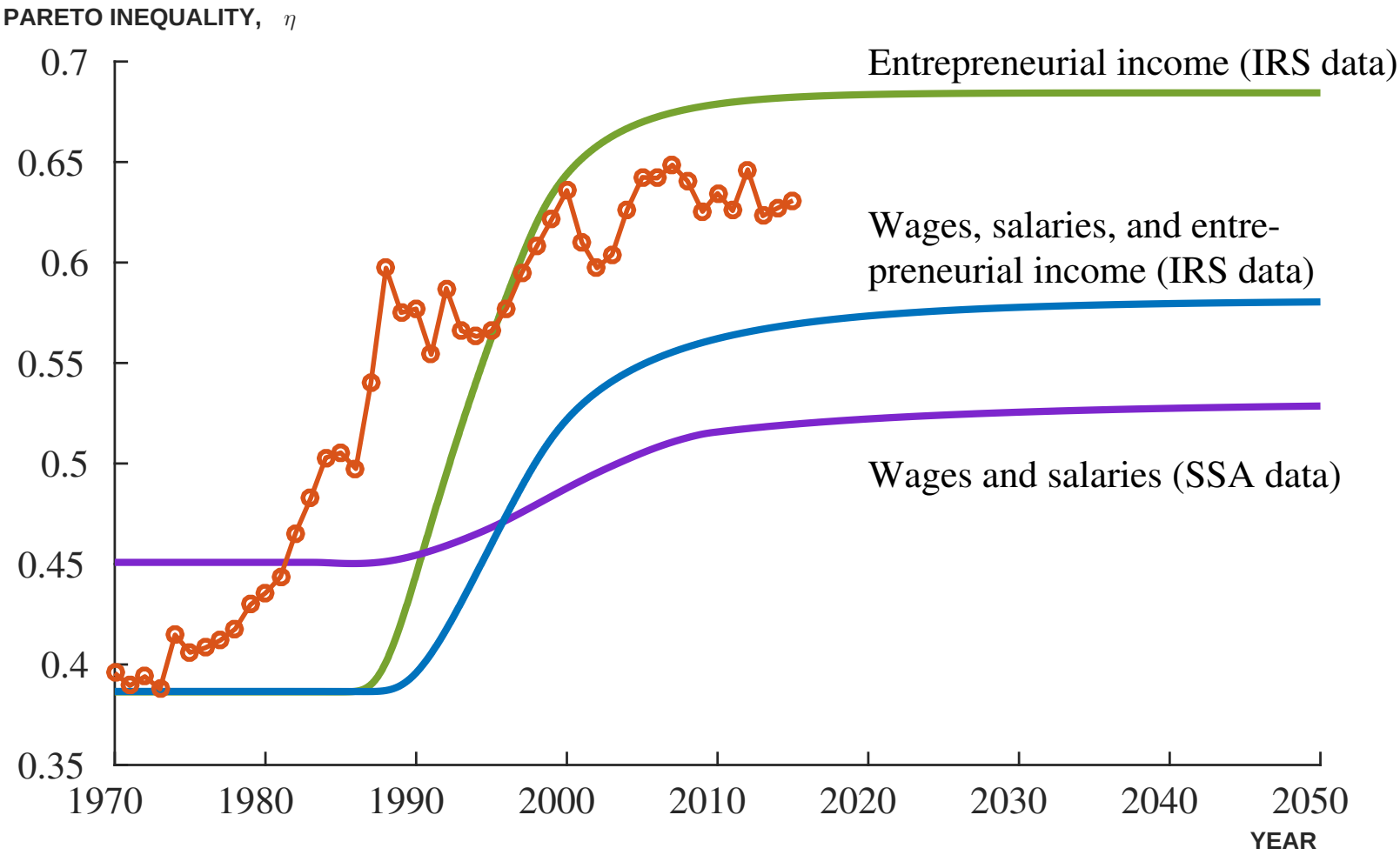
Estimates based on the wage and salary data obtained from Guvenen, Karahan, Ozkan, Song (2016)

Pareto Inequality: IRS Data

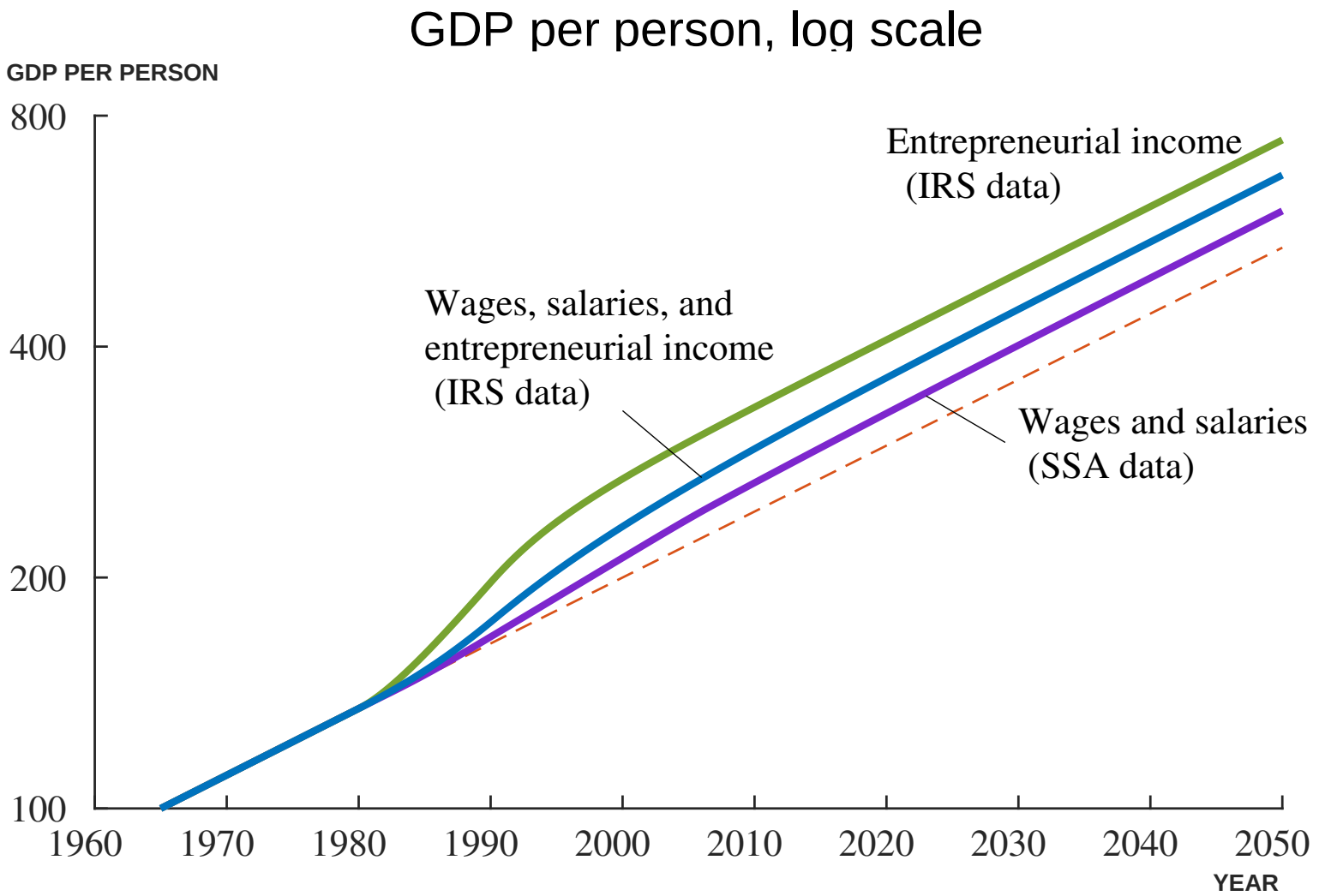


Estimates based on the IRS public use micro data

Transition Dynamics with IRS/SSA-inspired Shocks



Transition Dynamics with IRS/SSA-inspired Shocks



Conclusions

- entrepreneurs' effort $+$ creative destruction
  $\Rightarrow$ a Pareto distribution for top incomes
- Globalization:
  - Entrepreneurs effort is more productive: $\phi_H \uparrow \Rightarrow \eta \uparrow$
  - more competition $\rightarrow$ more creative destruction: $\delta, \bar{p} \uparrow \Rightarrow \eta \downarrow$
  - Worldwide phenomenon (?)
- What else might rise inequality be less in France?
  - Less innovation blocking / more research: raises creative destruction
  - Regulations limit rapid growth: $\bar{p} \uparrow$ and $\phi \downarrow$

Theory suggests rich connections between:
models of top inequality $\leftrightarrow$ micro data on income dynamics