The Allocation of Talent and U.S. Economic Growth

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Big changes in the occupational distribution

**White Men in 1960:**

94% of Doctors, 96% of Lawyers, and 86% of Managers

**White Men in 2008:**

63% of doctors, 61% of lawyers, and 57% of managers

Sandra Day O’Connor...
High-skill occupations are lawyers, doctors, engineers, scientists, architects, mathematicians and executives/managers.
Our question

Suppose distribution of talent for each occupation is *identical* for whites, blacks, men and women.

Then:


**How much of productivity growth between 1960 and 2008 was due to the better allocation of talent?**
Outline

1. Model

2. Evidence

3. Counterfactuals
Model

- $N$ occupations
- Live for three periods ("young", "middle age", "old")
- Draw talent in each occupation $\{\epsilon_i\}$ and at home
- Young: Choose lifetime occupation $(i)$ and human capital $(s, e)$
- All ages: Decide to work or stay at home

Preferences \[ U = c_y^\beta c_m^\beta c_o^\beta (1 - s)z. \]

Human capital \[ h = s^{\phi_i} e^\eta \epsilon \]

Consumption \[ c = (1 - \tau_w)wh - (1 + \tau_h)e \]
What varies across occupations/groups/cohorts

\[ w_{it} = \text{the wage per unit of human capital in occupation } i \text{ (endogenous)} \]

\[ \phi_{it} = \text{the elasticity of human capital wrt time invested for occupation } i \]

\[ \tau_{igt}^w = \text{labor market barrier facing group } g \text{ in occupation } i \text{ (time effect)} \]

\[ \tau_{igc}^h = \text{human capital barrier facing group } g \text{ for } i \text{ (cohort effect)} \]

\[ z_{igc} = \text{preference for occupation } i \text{ by group } g \text{ (cohort effect)} \]
Timing

- Individuals draw and observe an $\epsilon_i$ for each occupation.
  - See current $\phi_i$, $\tau_i^w$, $\tau_i^h$, and $z_{ig}$.
  - Anticipate $w_i$

  $\Rightarrow$ choose occupation, $s$, and $e$.

- Then observe $\epsilon^{home}$
  - Decide to work or stay home when young.

- Age to next stage of life
  - See new $\tau_i^w$ and $w_i$
  - Decide to work or stay home.
Some Possible Barriers

**Acting like** $\tau^w$

- Discrimination in the labor market.

**Acting like** $\tau^h$

- Family background.
- Quality of public schools.
- Discrimination in school admissions.
The solution to an individual’s utility maximization problem, given an occupational choice:

\[ S_i^* = \frac{1}{1 + \frac{1 - \eta}{\epsilon_{\beta \phi_i}} e^{\beta \phi_i}} \]

\[ e_{ig}^* (\epsilon) = \left( \frac{\eta (1 - \tau_i^w w_i s_i^{\phi_i} \epsilon)}{1 + \tau_i^h} \right)^{\frac{1}{1 - \eta}} \]

\[ U(\tau_{ig}, w_i, \epsilon_i) = \bar{\eta} \beta \left( \frac{w_i s_i^{\phi_i} [z_i (1 - s_i)]^{\frac{1 - \eta}{3 \beta}} \epsilon_i}{\tau_{ig}} \right)^{\frac{3 \beta}{1 - \eta}} \]

where \[ \tau_{ig} \equiv \frac{(1 + \tau_{ig}^h) \eta}{1 - \tau_{ig}^w} \]
We assume independent Fréchet for each occupation:

\[ F_i(\epsilon) = \exp(-\epsilon^{-\theta}) \]

- \( \theta \) governs the dispersion of skills

Home sector talent drawn from this same distribution.
Result 1: Occupational Choice

\[ U_{ig} = \left( \tilde{w}_{ig} \epsilon_i \right)^{\frac{3\beta}{1-\eta}} \]

**Extreme value theory:** \( U(\cdot) \) is Fréchet \( \Rightarrow \) so is \( \max_i U(\cdot) \)

Let \( p_{ig} \) denote the fraction of people in group \( g \) that work in occupation \( i \):

\[ p_{ig} = \frac{\tilde{w}_{ig}^\theta}{\sum_{s=1}^N \tilde{w}_{sg}^\theta} \quad \text{where} \quad \tilde{w}_{ig} = \frac{w_i s_i^{\phi_i} z_{ig} \left( 1 - s_i \right)}{\tau_{ig}} \]

Note: \( \tilde{w}_{ig} \) is the reward to working in an occupation for a person with average talent
\( \text{LFP}_{ig}(c, t) \equiv \text{fraction of people in } i,c,g \text{ at time } t \text{ who decide to work.} \)

\[
\text{LFP}_{ig}(c, t) = \frac{1}{1 + \tilde{p}_{ig}(c) \cdot \left[ \frac{\Omega^{\text{home}}_g(c)}{(1 - \tau^w_{ig}(t)) \cdot w_i(t)} \right]^{\theta}}.
\]

We do not observe \( \tilde{p} \) or \( \text{LFP} \). But their product is the observed fraction of people of a cohort-group actually working in an occupation, \( p_{ig} \):

\[
p_{ig}(c, t) = \tilde{p}_{ig}(c) \cdot \text{LFP}_{ig}(c, t).
\]

\( \text{observed} \quad \text{occ choice} \quad \text{lfp} \)
The average quality of workers in each occupation is

\[
\mathbb{E} [h_{ig}(c, t) \cdot \epsilon_{ig}(c, t)] = \gamma s_i(c)^{\phi_i(t)}. 
\]

\[
\left( \frac{\eta \cdot s_i(c)^{\phi_i(c)} \cdot w_i(c) \cdot (1 - \tau_{ig}^w(c))}{1 + \tau_{ig}^h(c)} \right)^{\eta} \left( \frac{1}{p_{ig}(c, t)} \right)^{\frac{1}{\theta}} \right]^{\frac{1}{1-\eta}}
\]

\[
\uparrow p_{ig} \Rightarrow \text{lower average quality (other things equal)}...
\]
Let $\overline{\text{wage}}_{ig}(c, t)$ denote average earnings in occupation $i$ by group $g$.

Then wage of young cohort is

$$\overline{\text{wage}}_{ig}(t, t) \equiv (1 - \tau_{ig}(t)) \cdot w_{i}(t) \cdot \mathbb{E} [h_{ig}(c, t) \cdot \epsilon_{ig}(c, t)]$$

$$= \gamma \eta \left( \frac{m_{g}(t, t)}{LFP_{ig}(t, t)} \right)^{\frac{1}{\theta}} \cdot \frac{1}{1-\eta} \cdot [(1 - s_{i}(c))z_{ig}(c)]^{\frac{1}{3\beta}}$$

where $m_{g}(c, t) = \sum_{i=1}^{M} \tilde{w}_{ig}(c, t)^{\theta}$.

So occupational wage gaps depend only on LFP and $z_{ig}$. 
Focusing only on the young (who make occupational decisions):

\[
\frac{p_{ig}}{p_{i,wm}} = \left( \frac{\tau_{ig}}{\tau_{i,wm}} \right)^{-\theta} \left( \frac{\text{wage}_{ig}}{\text{wage}_{i,wm}} \right)^{-\theta(1-\eta)}
\]

Misallocation of talent comes from dispersion of \( \tau \)'s across occupation-groups.

This equation allows us to recover \( \tau_{ig} \)...
We infer high $\tau$ barriers for a group with low average wages.

We infer particularly high barriers when a group is underrepresented in an occupation.

We pin down the *levels* by assuming $\tau_{i,wm} = 1$. 

\[
\frac{\tau_{ig}}{\tau_{i,wm}} = \left( \frac{p_{ig}}{p_{i,wm}} \right)^{-\frac{1}{\theta}} \left( \frac{\text{wage}_{ig}}{\text{wage}_{i,wm}} \right)^{-(1-\eta)}
\]
Aggregates

Human Capital

\[ H_i = \sum_{g=1}^{G} \int h_{jgi} \, dj \]

Production

\[ Y = \left( \sum_{i=1}^{I} (A_i H_i)^\rho \right)^{1/\rho} \]

Expenditure

\[ Y = \sum_{i=1}^{I} \sum_{g=1}^{G} \int (c_{jgi} + e_{jgi}) \, dj \]
1. Given occupations, individuals choose $c, e, s$ to maximize utility.
2. Each individual chooses the utility-maximizing occupation.
3. A representative firm chooses $H_i$ to maximize profits:

$$\max_{\{H_i\}} \left( \sum_{i=1}^{I} (A_i H_i)^\rho \right)^{1/\rho} - \sum_{i=1}^{I} w_i H_i$$

4. The occupational wage $w_i$ clears each labor market:

$$H_i = \sum_{g=1}^{G} \int h_{jgi} \, dj$$

5. Aggregate output is given by the production function.
A Special Case

- Live for one period only
- \( \sigma = 1 \) so that \( w_i = A_i \).
- 2 groups, men and women.
- \( \phi_i = 0 \) (no schooling time).

\[
\overline{wage}_m = \left( \sum_{i=1}^{N} A_i^\theta \right)^{\frac{1}{\theta}} \cdot \frac{1}{1-\eta}
\]

\[
\overline{wage}_f = \left( \sum_{i=1}^{N} \left( \frac{A_i \left( 1 - \tau_i^w \right)}{(1 + \tau_i^h \eta)} \right)^\theta \right)^{\frac{1}{\theta}} \cdot \frac{1}{1-\eta}
\]
Further Intuition

Adding the assumption that $A_i$ and $1 - \tau_i^w$ are jointly log-normal:

\[
\ln \text{wage}_f = \ln \left( \sum_{i=1}^{N} A_i^\theta \right)^{\frac{1}{\theta}} \cdot \frac{1}{1-\eta} \\
+ \frac{1}{1-\eta} \cdot \ln (1 - \bar{\tau}^w) - \frac{1}{2} \cdot \frac{\theta-1}{1-\eta} \cdot \text{Var} (\ln(1 - \tau_i^w)).
\]

Also helpful for understanding comparative statics:

\[
\text{Var} \ln(1 - \tau^w) = \frac{1}{\theta^2} \cdot \text{Var} \ln \frac{p_{ig}}{p_{i,wm}}
\]
1. Model

2. Evidence

3. Counterfactuals
Data

- American Community Survey for 2010–2012
- 67 consistent occupations, one of which is the “home” sector.
- Look at full-time and part-time workers, hourly wages.
- Prime-age workers (age 25-55).
Examples of Baseline Occupations

Health Diagnosing Occupations

- Physicians
- Dentists
- Veterinarians
- Optometrists
- Podiatrists
- Health diagnosing practitioners, n.e.c.

Health Assessment and Treating Occupations

- Registered nurses
- Pharmacists
- Dietitians
Standard Deviation of Relative Occupational Shares

- Black women
- White women
- Black men
Standard Deviation of Wage Gaps by Decade

- Black women
- Black men
- White women
Mean of $\tau_{ig}$

**MEAN (WEIGHTED) ACROSS OCCUPATIONS**

- **White women**
- **Black women**
- **Black men**

Variance of $\tau_{ig}$
Mean of $z_{ig}$
Variance of $z_{ig}$

VARIANCE (WEIGHTED) OF LOG

Black women

White women

Black men
### Baseline Parameter Values and Variable Normalizations

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Definition</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>$\theta$</td>
<td>Fréchet shape</td>
<td>2.12</td>
</tr>
<tr>
<td>$\eta$</td>
<td>Goods elasticity of human capital</td>
<td>0.103</td>
</tr>
<tr>
<td>$\sigma$</td>
<td>EoS across occupations</td>
<td>3</td>
</tr>
<tr>
<td>$\beta$</td>
<td>Consumption weight in utility</td>
<td>$\frac{1}{3} \cdot 0.693$</td>
</tr>
<tr>
<td>$z_{i,wm}$</td>
<td>Occupational preferences (white men)</td>
<td>1</td>
</tr>
<tr>
<td>$\tau_{i,h}$</td>
<td>Human capital barriers (white men)</td>
<td>0</td>
</tr>
<tr>
<td>$\tau_{i,w}$</td>
<td>Labor market barriers (white men)</td>
<td>0</td>
</tr>
</tbody>
</table>
## Endogenous Variables and Empirical Targets

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Definition</th>
<th>Empirical Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>$A_i(t)$</td>
<td>Technology by occupation</td>
<td>Occupations of young white men</td>
</tr>
<tr>
<td>$\phi_i(c)$</td>
<td>Time elasticity of human capital</td>
<td>Average wages by occ, white men</td>
</tr>
<tr>
<td>$\tau_{i,g}^h(c)$</td>
<td>Human capital barriers</td>
<td>Occupations of young by group</td>
</tr>
<tr>
<td>$\tau_{i,g}^w(t)$</td>
<td>Labor market barriers</td>
<td>Life-cycle wage changes by group</td>
</tr>
<tr>
<td>$z_{ig}(c)$</td>
<td>Occupational preferences</td>
<td>Occ wage gaps of young by group</td>
</tr>
<tr>
<td>$\Omega_{g}^{home}(c)$</td>
<td>Home sector talent/taste</td>
<td>Labor force participation</td>
</tr>
</tbody>
</table>
Mean of $\tau^h$ and $\tau^w$: White Women

$$(1 + \tau_h)^{\eta}$$

$$1/(1 - \tau_w)$$
Variance of $\tau^h$ and $\tau^w$: White Women
<table>
<thead>
<tr>
<th>Year</th>
<th>Earnings Data</th>
<th>Earnings Model</th>
<th>LFP Data</th>
<th>LFP Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>1960</td>
<td>26,191</td>
<td>26,199</td>
<td>0.599</td>
<td>0.599</td>
</tr>
<tr>
<td>1970</td>
<td>35,593</td>
<td>36,142</td>
<td>0.636</td>
<td>0.597</td>
</tr>
<tr>
<td>1980</td>
<td>32,925</td>
<td>33,703</td>
<td>0.702</td>
<td>0.643</td>
</tr>
<tr>
<td>1990</td>
<td>38,026</td>
<td>39,357</td>
<td>0.764</td>
<td>0.708</td>
</tr>
<tr>
<td>2000</td>
<td>47,772</td>
<td>50,195</td>
<td>0.747</td>
<td>0.689</td>
</tr>
<tr>
<td>2010</td>
<td>50,981</td>
<td>53,898</td>
<td>0.759</td>
<td>0.723</td>
</tr>
</tbody>
</table>
Outline

1. Model

2. Evidence

3. Counterfactuals
### Share of Growth due to Changing Frictions (all ages)

<table>
<thead>
<tr>
<th></th>
<th>Share of growth accounted for by $\tau^h$ and $\tau^w$</th>
<th>Share of growth accounted for by $\tau^h$, $\tau^w$, $z$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Earnings per person</td>
<td>28.7%</td>
<td>29.2%</td>
</tr>
<tr>
<td>GDP per person</td>
<td>26.6%</td>
<td>27.3%</td>
</tr>
<tr>
<td>Labor force participation</td>
<td>55.1%</td>
<td>41.9%</td>
</tr>
<tr>
<td>GDP per worker</td>
<td>19.1%</td>
<td>23.5%</td>
</tr>
</tbody>
</table>
Rents as share of GDP in the Model

PERCENT OF GDP

Revenue from $\tau^w$

Revenue from $\tau^w$ and $\tau^h$

## Share of Growth due to Changing Frictions (young only)

<table>
<thead>
<tr>
<th>Economic Indicator</th>
<th>Share of Growth</th>
</tr>
</thead>
<tbody>
<tr>
<td>GDP per person (young)</td>
<td>38.8%</td>
</tr>
<tr>
<td>Earnings per person (young)</td>
<td>41.6%</td>
</tr>
<tr>
<td>Consumption per person (market, young)</td>
<td>31.8%</td>
</tr>
<tr>
<td>Consumption per person (home+market, young)</td>
<td>34.7%</td>
</tr>
<tr>
<td>Utility per person (consumption equivalent, young)</td>
<td>56.5%</td>
</tr>
</tbody>
</table>
Share of Growth due to Changing Labor- vs. Product-Market Frictions

<table>
<thead>
<tr>
<th>Metric</th>
<th>Share of growth accounted for by $\tau^h$ and $\tau^w$</th>
<th>$\tau^h$ only</th>
<th>$\tau^w$ only</th>
</tr>
</thead>
<tbody>
<tr>
<td>GDP per person</td>
<td>26.6%</td>
<td>18.3%</td>
<td>8.4%</td>
</tr>
<tr>
<td>GDP per person (young)</td>
<td>38.8%</td>
<td>26.9%</td>
<td>12.3%</td>
</tr>
<tr>
<td>Earnings per person (young)</td>
<td>41.6%</td>
<td>21.0%</td>
<td>20.5%</td>
</tr>
<tr>
<td>Consumption (market)</td>
<td>31.8%</td>
<td>16.3%</td>
<td>15.5%</td>
</tr>
<tr>
<td>Consumption (home+market)</td>
<td>34.7%</td>
<td>21.8%</td>
<td>13.0%</td>
</tr>
<tr>
<td>Utility per person (young)</td>
<td>56.5%</td>
<td>37.4%</td>
<td>15.7%</td>
</tr>
</tbody>
</table>
# Wage Gaps and Earnings by Group and Changing Frictions

<table>
<thead>
<tr>
<th></th>
<th>$\tau^h$ and $\tau^w$</th>
<th>$\tau^h$, $\tau^w$, $z$</th>
<th>$\tau^h$, $\tau^w$, $z$, $\Omega^{home}_g$</th>
<th>Full Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wage gap, WW</td>
<td>158.0%</td>
<td>171.5%</td>
<td>88.3%</td>
<td>104.9%</td>
</tr>
<tr>
<td>Wage gap, BM</td>
<td>85.4%</td>
<td>93.4%</td>
<td>81.0%</td>
<td>104.0%</td>
</tr>
<tr>
<td>Wage gap, BW</td>
<td>110.2%</td>
<td>124.6%</td>
<td>81.8%</td>
<td>98.0%</td>
</tr>
<tr>
<td>Earnings, WM</td>
<td>0.2%</td>
<td>0.0%</td>
<td>1.0%</td>
<td>104.6%</td>
</tr>
<tr>
<td>Earnings, WW</td>
<td>67.6%</td>
<td>68.2%</td>
<td>86.8%</td>
<td>100.2%</td>
</tr>
<tr>
<td>Earnings, BM</td>
<td>20.7%</td>
<td>20.4%</td>
<td>22.5%</td>
<td>96.0%</td>
</tr>
<tr>
<td>Earnings, BW</td>
<td>48.0%</td>
<td>49.5%</td>
<td>61.5%</td>
<td>96.9%</td>
</tr>
<tr>
<td>LF Participation</td>
<td>55.1%</td>
<td>41.9%</td>
<td>185.4%</td>
<td>79.4%</td>
</tr>
</tbody>
</table>
Wage Gaps in Model vs. Data: Black Women

Log Points (X100)

Model

Data

## Share of Growth in GDP per Person due to Different Groups

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$\tau^h$ and $\tau^w$</td>
<td>$\tau^h$ only</td>
<td>$\tau^w$ only</td>
</tr>
<tr>
<td>All groups</td>
<td>26.6%</td>
<td>18.3%</td>
<td>8.4%</td>
</tr>
<tr>
<td>White women</td>
<td>22.3%</td>
<td>15.2%</td>
<td>7.3%</td>
</tr>
<tr>
<td>Black men</td>
<td>1.4%</td>
<td>1.1%</td>
<td>0.3%</td>
</tr>
<tr>
<td>1960–1980</td>
<td>31.2%</td>
<td>12.6%</td>
<td>19.0%</td>
</tr>
<tr>
<td>All groups</td>
<td>24.9%</td>
<td>9.2%</td>
<td>16.1%</td>
</tr>
<tr>
<td>White women</td>
<td>1.5%</td>
<td>1.3%</td>
<td></td>
</tr>
<tr>
<td>Black men</td>
<td>2.8%</td>
<td>1.5%</td>
<td>1.3%</td>
</tr>
<tr>
<td>1980–2010</td>
<td>24.0%</td>
<td>21.5%</td>
<td>2.6%</td>
</tr>
<tr>
<td>All groups</td>
<td>20.8%</td>
<td>18.5%</td>
<td>2.5%</td>
</tr>
<tr>
<td>White women</td>
<td>0.6%</td>
<td>0.8%</td>
<td>-0.2%</td>
</tr>
<tr>
<td>Black men</td>
<td>0.6%</td>
<td>0.8%</td>
<td>-0.2%</td>
</tr>
</tbody>
</table>
Back-of-the-Envelope Calculations

- Log-normal model approximation:
  - Declining $\bar{\tau}$: 0.05 log points
  - Declining $\text{Var} \ln \tau$: 0.21 log points
  - $0.26/0.91 \approx 28.6\%$ of growth.

- Mechanically apply declining earnings gaps
  - Declining wage gaps and rising LFP
    $\Rightarrow 37.3\%$ of growth in earnings per person
  - Why larger? Attributes entire decline in gaps to frictions, whereas differential productivity growth and returns to schooling also mattered.
### Robustness to Alternative Counterfactuals

<table>
<thead>
<tr>
<th>Scenario</th>
<th>GDP per person growth accounted for by $\tau^h$ and $\tau^w$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benchmark</td>
<td>26.6%</td>
</tr>
<tr>
<td>Wage gaps halved</td>
<td>23.3%</td>
</tr>
<tr>
<td>Zero wage gaps</td>
<td>21.5%</td>
</tr>
<tr>
<td>No frictions in “brawny” occupations</td>
<td>22.9%</td>
</tr>
<tr>
<td>No frictions in 2010</td>
<td>26.4%</td>
</tr>
</tbody>
</table>
### Robustness to Parameter Values

<table>
<thead>
<tr>
<th></th>
<th>GDP per person growth accounted for by $\tau^h$ and $\tau^w$</th>
<th>$\tau^h$ alone</th>
<th>$\tau^w$ alone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benchmark</td>
<td>26.6%</td>
<td>18.3%</td>
<td>8.4%</td>
</tr>
<tr>
<td>$\theta = 4$</td>
<td>27.0%</td>
<td>15.2%</td>
<td>12.5%</td>
</tr>
<tr>
<td>$\eta = 0.05$</td>
<td>24.7%</td>
<td>6.4%</td>
<td>18.4%</td>
</tr>
<tr>
<td>$\eta = 0.20$</td>
<td>28.2%</td>
<td>25.0%</td>
<td>3.1%</td>
</tr>
<tr>
<td>$\sigma = 1.05$</td>
<td>27.0%</td>
<td>18.7%</td>
<td>8.4%</td>
</tr>
<tr>
<td>$\sigma = 10$</td>
<td>26.3%</td>
<td>18.1%</td>
<td>8.5%</td>
</tr>
</tbody>
</table>
Changing Only the Dispersion of Ability

<table>
<thead>
<tr>
<th>Value of $\theta$</th>
<th>GDP per person growth accounted for by $\tau^h$ and $\tau^w$</th>
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</thead>
<tbody>
<tr>
<td>1.9</td>
<td>13.0%</td>
</tr>
<tr>
<td>2.12 (baseline)</td>
<td>26.6%</td>
</tr>
<tr>
<td>3</td>
<td>67.1%</td>
</tr>
<tr>
<td>4</td>
<td>99.8%</td>
</tr>
<tr>
<td>5</td>
<td>128.4%</td>
</tr>
</tbody>
</table>
### More Robustness

<table>
<thead>
<tr>
<th></th>
<th>$\tau^h$ and $\tau^w$</th>
<th>$\tau^h$ only</th>
<th>$\tau^w$ only</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benchmark</td>
<td>26.6%</td>
<td>18.3%</td>
<td>8.4%</td>
</tr>
<tr>
<td>Weight on $p_{ig} = 1$</td>
<td>23.8%</td>
<td>21.9%</td>
<td>2.0%</td>
</tr>
<tr>
<td>Weight on $p_{ig} = 1/2$</td>
<td>25.2%</td>
<td>22.7%</td>
<td>2.4%</td>
</tr>
<tr>
<td>Weight on $p_{ig} = 0$</td>
<td>27.2%</td>
<td>8.1%</td>
<td>19.1%</td>
</tr>
<tr>
<td>50/50 split of $\hat{\tau}_{i,g}$ in 1960</td>
<td>26.6%</td>
<td>19.1%</td>
<td>7.7%</td>
</tr>
<tr>
<td>50/50 split of $\hat{\tau}_{i,g}$ in all years</td>
<td>28.8%</td>
<td>19.8%</td>
<td>9.3%</td>
</tr>
<tr>
<td>LFP minimum factor = 1/3</td>
<td>26.5%</td>
<td>18.6%</td>
<td>8.2%</td>
</tr>
<tr>
<td>LFP minimum factor = 2/3</td>
<td>26.4%</td>
<td>17.9%</td>
<td>8.8%</td>
</tr>
<tr>
<td>No constraint on $\tau^h$</td>
<td>26.4%</td>
<td>21.8%</td>
<td>4.6%</td>
</tr>
</tbody>
</table>
Labor Supply Elasticities for White Women

MODEL ESTIMATES

OLS Slope = 1.779
Std. Err. = 0.361
R^2 = 0.78
Model $\tau$’s for Black Men vs. Survey Measures of Discrimination, by U.S. State

- OLS Slope = 0.811
- Std. Err. = 0.109
- $R^2$ = 0.63
Absolute advantage correlated with comparative advantage:

- Talented 1960 women went into teaching, nursing, home sector?
- As barriers fell, lost talented teachers, child-raisers?

Separate paper:
Rising inequality from misallocation of human capital investment?
Extra Slides
Mean of $\tau^h$ and $\tau^w$: Black Men

\[ (1+\tau_h)^\eta \]

\[ \frac{1}{1-\tau_w} \]
Variance of $\tau^h$ and $\tau^w$: Black Men

\[ \frac{1}{1 - \tau^w} \]

\[ (1 + \tau^h)^\eta \]
Mean of $\tau^h$ and $\tau^w$: Black Women

\[ (1+\tau_h)^{\eta} \]
\[ 1/(1-\tau_w) \]
Variance of $\tau^h$ and $\tau^w$: Black Women