Race and Gender Inequality

ECON 499: Economics of Inequality

Winter 2018

Limits of economic methodology

- Economics poorly equipped to answer moral questions
- Preferences are almost always assumed to be *exogenous*
- Social pressures can affect preferences (racism, sexism)
- Economic notions of "efficiency" and "optimality" cannot account for these influences

Competitive markets

- Markets with no barriers to entry
- Positive profits induce other firms to enter the industry, causes profits to fall
- Long-run (economic) profits are equal to zero

Discrimination and competitive markets

- Suppose two types of workers with identical productivities, different observable characteristics (race, gender, etc)
- Profit maximizing firms will choose the lower cost worker (more profits)
- Demand for lower-cost workers increases, wages increase
- Long run: no wage gap between workers

The Becker model

- Two types of workers, A and B (same productivity)
- Managers dislike type A workers (prejudice)
- Firms willing to pay premium for type B workers ($x in foregone profits)
- Only hire type A if they are $x cheaper than type B

Heterogeneous prejudice

- Firms differ in amount of profits willing to sacrifice to hire type B
- Firms with lower prejudice will hire only type A, have higher profits
- Lower prejudice firms will out-compete higher prejudice firms, eliminating wage gap (but firms are segregated)
- Employer discrimination cannot explain wage gaps

Worker discrimination

- Suppose type B workers don't like working with type A workers, demand a premium
- Firms will just hire type A workers if wage gap exists
- No long-run wage gap, but still segregation
- Prejudice of firms and workers not enough to generate persistent wage gaps

Imperfect competition in labor markets

- Simple model assumes workers and firms have perfect information, can match without cost
- In reality, firms may not perfectly observe productivity, search costs are borne by workers and firms
- If prejudice exists:
  1. Type A workers will not apply to jobs that type B workers apply to
  2. Type A workers will accept lower wages (harder to find work)
  3. Self-reinforcing: Willingness to take less suitable jobs will induce firms to offer lower wages to type A workers

Transaction costs

- Crossing "social distance" might be costly
- If type B people are the majority, then familiarity with type B culture and customs is more valuable in the workplace
- Recall discussions on institutions and neighborhood effects
- Social segregation self-reinforcing

Statistical discrimination

- Suppose type A and B have an equal percentage of high and low productivity workers
- Firms can only observe the productivity of type B workers (social distance?)
  - Observe only *average* type A workers
- High productivity type B workers earn the most, low productivity B workers earn the least
- All type A's earn the same amount
- Type A workers face little incentive to increase productivity (education)

Doleac and Hansen (2017)

- Many employers ask if applicants have been convicted of a crime
- Some jurisdictions have made such questions illegal, unfairly discriminates against minorities and former criminals (black men more likely to have convictions than white men)

> *We find that ban-the-box policies decrease the probability of being employed by 3.4 percentage points (5.1%) for young, low-skilled black men, and by 2.3 percentage points (2.9%) for young, low-skilled Hispanic men. These findings support the hypothesis that when an applicant's criminal history is unavailable, employers statistically discriminate against demographic groups that include more ex-offenders.*

Self-confirming expectations

- Suppose A and B have same productivities, and both can be observed after they are hired
- Workers can invest in skills, obtain "signals" (degrees, certifications, etc)
- Firms have different expectations about A and B workers: for a given signal, firms think type A less likely to have associated skills (affirmative action?)
- Signals are less valuable to type A workers, less willing to invest in obtaining them
- Different outcomes determined only by expectations, not information or intrinsic differences

Self-reinforcing inequality

- Competitive market forces tend to decrease inequality based on race/gender
- Other models show that initial inequality can persist, be self-reinforcing (like Piketty)
- Persistent inequality may be a *consequence* of initial inequality
- It's not clear that we can expect markets to correct or overcome historical (or current) injustices

Black/white wage gap

- As of 2016, the median black worker earns 79% of the earnings of the median white worker
- 50% in 1940
- Most of the gains happened in the 40s, 60s, 70s

Declining black/white wage gap

- Education
  - High-school completion rates have converged
  - College completion rates increasing for both groups, increasing faster for white students (particularly men)
  - Card and Kruger (1992): 15-20% of decline in wage gap attributed to better school quality (converging class sizes, length of school year, teacher compensation)

Declining black/white wage gap

- Migration
  - South to north migration accelerated in 1960s
  - Wage gap lower in the north
  - Recall mobility and wages

Declining black/white wage gap

- Labor-force participation
  - Black participation rates much lower today
  - Most of the people not in the labor force are low-skill men, would have low wages if still in labor force
  - Remaining workers have higher wages, composition effect

Declining black/white wage gap

- Institutions
  - Civil Rights Act (1964), Executive order 11246 (1965)
  - Made discrimination based on race illegal, affirmative action in government suppliers
  - Gap closed the most in the south and among military suppliers

Measuring discrimination

- Is there discrimination in labor markets?
- How do we distinguish statistical discrimination from other, more nefarious forms?
- Researches cannot randomly assign race or gender, strongly correlated with environment and experience which affect labor market outcomes
- Usual approach is to compare people of different races that are similar along other, observable dimensions
- In practice, impossible to control for cultural and institutional differences experienced by different races

Bertrand and Mullainathan (2004)

- Create fake job resumes with various skills and characteristics
- Randomly split the resumes into two groups, assign racially identifiable names to each group (Lakisha and Jamal vs Emily and Greg)
- Send the resumes to various employers in Boston and Chicago
- "White names" received call-backs 10.1% of the time
- "Black names" received call-backs 6.7% of the time (statistically significant difference)
- 5.1% of employers discriminated by calling white applicants instead of black applicants

Heckman (1998)

- Trained 15 actors to apply for jobs
- Actors have similar characteristics (other than race) and similar resumes
- 72 firms offered a job to just the white candidate
- 35 firms offered a job to just the black candidate

Controlling for other factors

- Consider men between 35 and 42. Controlling for age, black men earn 31% less than white men
- Controlling for education, black men earn 26% less
- Controlling for standardized test scores, black men earn 11% less
- Suggests that market prejudice is *not* the primary cause of wage gap

Including observable characteristics

- Black/white gap shrinks when we consider other factors that influence labor market outcomes
- These factors are not independent of race
- Different opportunities available? Different returns to education?
- Work preferences might be different based on experience/environment
- Relevant discrimination happens *before* workers enter the labor market

Black/white test score gap

- White Americans perform substantially better on IQ tests (about 15 points on average)
- American Psychological Association says 75% of differences in IQ score is genetics
- Because of this, many argue that social/environmental differences cannot explain the test gap
- What is being tested?

IQ scores over time

- Average IQ scores improve about 3 points per decade
- Average African American today has same IQ as average white American 50 years ago
- Difficult to explain using genetics
- Does the average African American today have a better environment than the average white American 50 years ago?
- Small environmental changes might explain the scores

Lead exposure

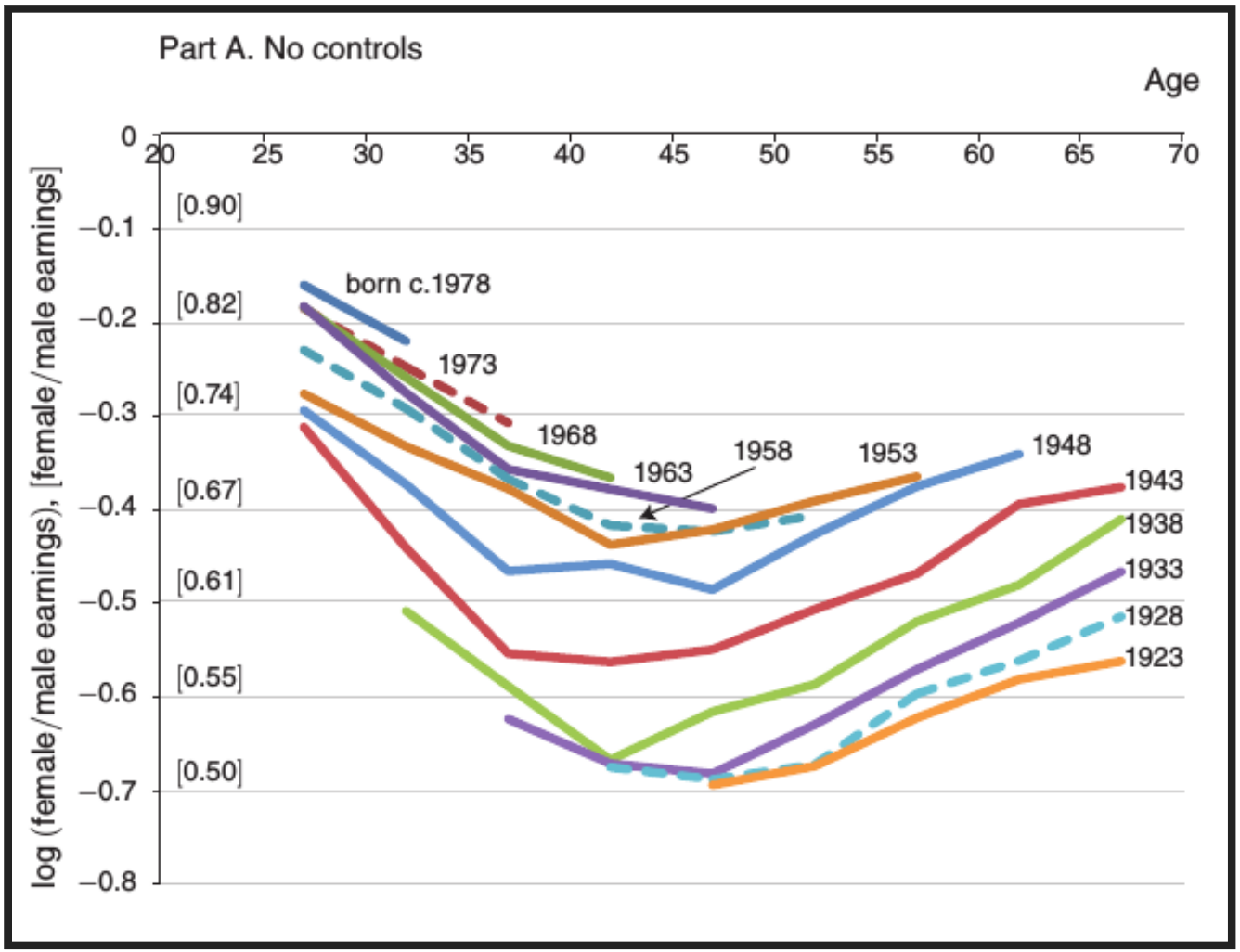
- One microgram/deciliter of lead concentration in blood results in a 0.25 reduction in IQ
- Lead concentrations among black children in the 1980s was 20 microgram/deciliter higher than white children
- Lead alone can explain 5 IQ points
- Lead exposure also highly associated with crime rates

Fryer and Levitt

- Initial IQ gap (kindergarten) explained entirely by non-IQ family characteristics
  - Environment explains *all* of initial gaps
- Gap becomes wider as time goes on (bigger gap in third grade)
- Initial environmental inequality causing small differences in IQ can persist and amplify over time

Gender wage gap

- The mean woman earns 72% of the mean man (median 77%)
- Heterogeneity across time (generational and life-cycle)
- "Observables" explain much of the difference, direct, labor-market discrimination is relatively less important
- Remember: Observables are not independent of gender!
  - As before: relevant discrimination happening before workers enter labor market


Part A. No controls
Age
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log (female/male earnings), [female/male earnings]
born c.1978
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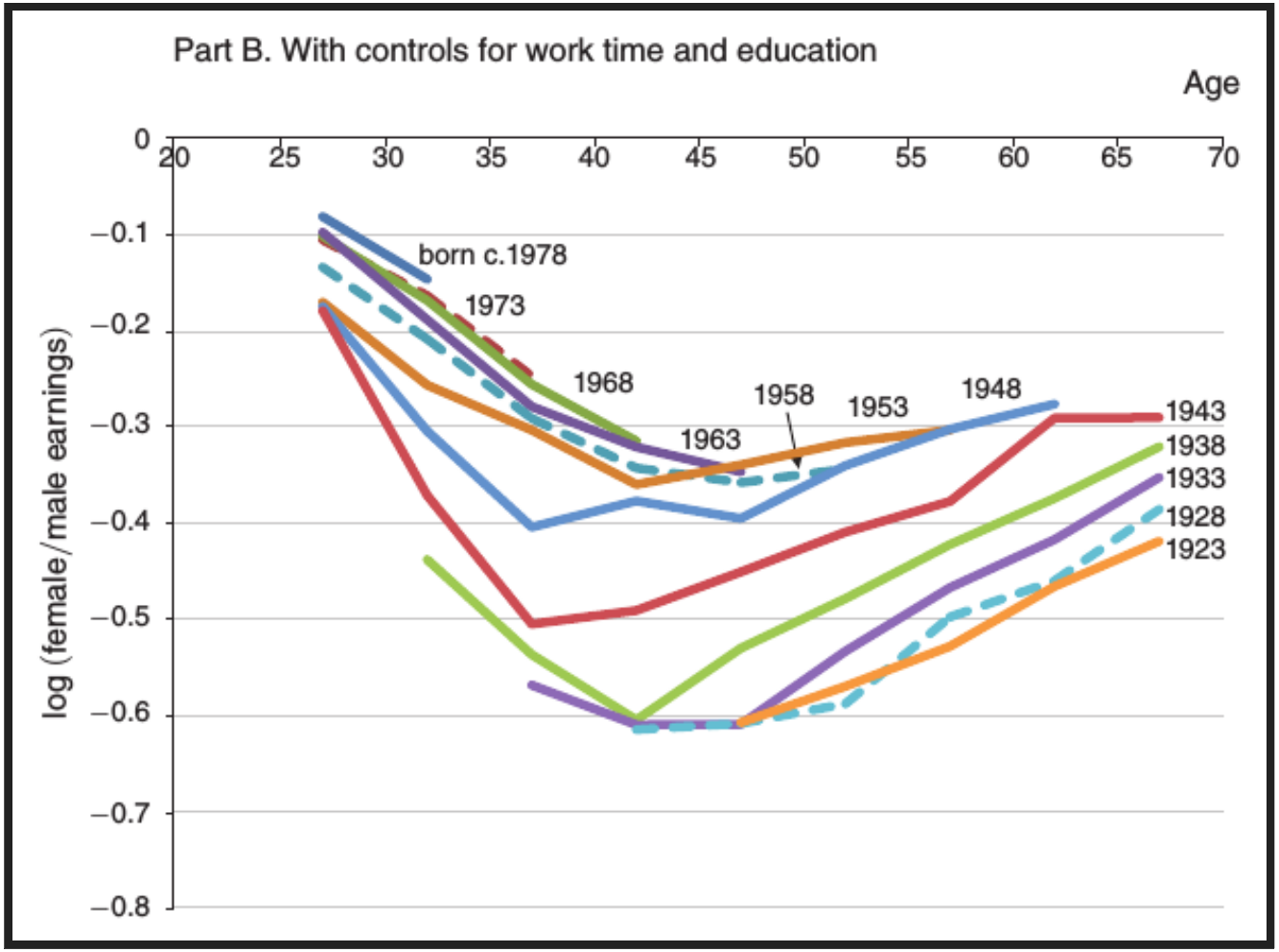
Part B. With controls for work time and education
Age
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−0.1
−0.2
−0.3
−0.4
−0.5
−0.6
−0.7
−0.8
log (female/male earnings)
born c.1978
1973
1968
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Between vs within occupation

- Women often choose different occupations than men
- If these occupations pay differently, then this will increase the gap
- Data suggest that within industry variation is more important than between industry variation
- Gap varies considerably by industry

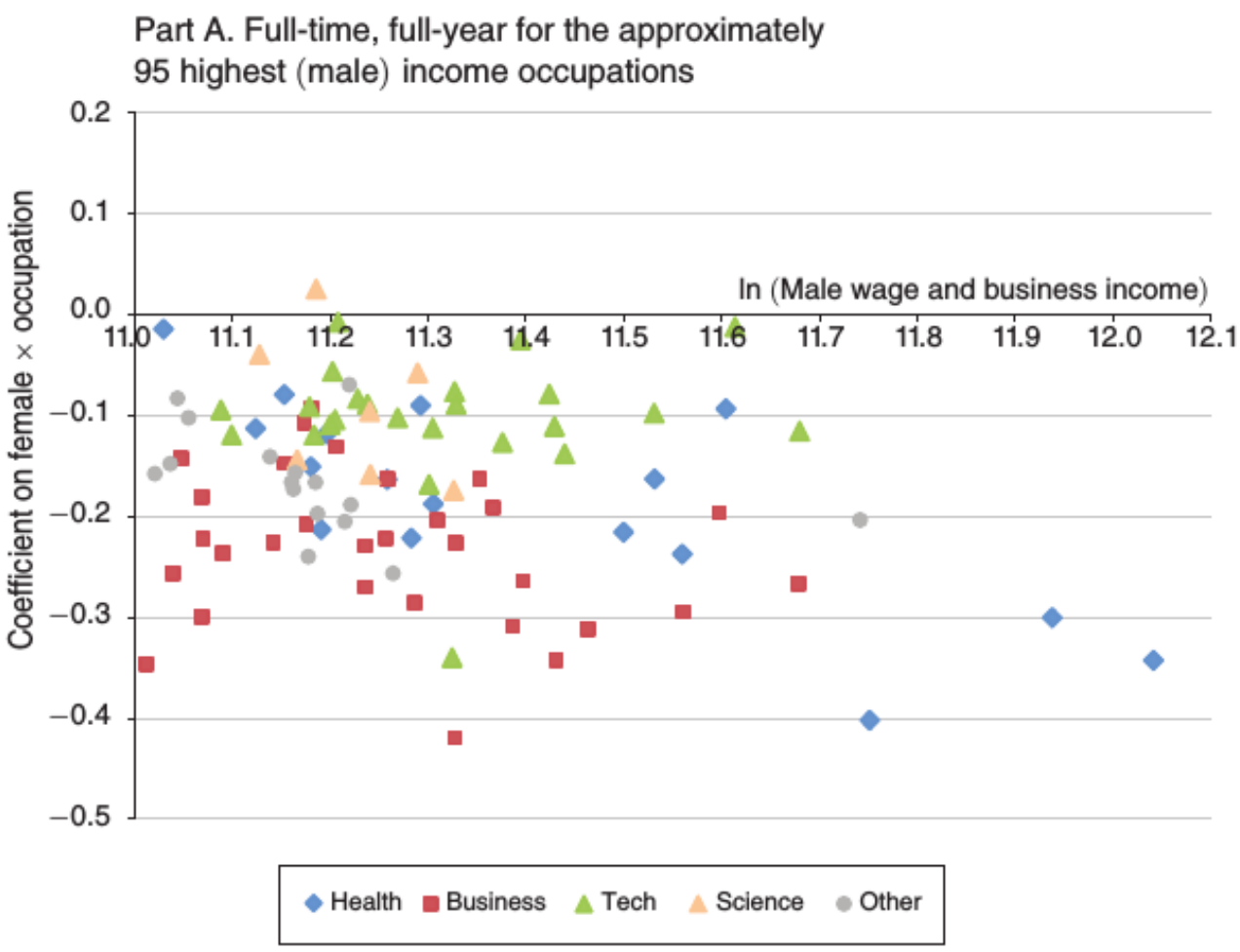

FIGURE 2A. GENDER PAY GAPS BY OCCUPATION: 2009 TO 2011

Goldin (2014)

- The relationship between hours and wages varies within industries
- Some jobs require workers to show up at a set time, work alongside other people (sales, service)
- Other jobs allow for flexibility in time, workers can replace each other easily (tech, science)
- Women are more likely to need time flexibility (expected to be primary caregivers of children)

Paternal leave

- Sweden mandates 480 days of paid leave for new parents
- 90 days allocated to fathers (cannot be transferred to mothers)
- Firms expect men to take same time off as women
- Has contributed to closing of gender gap, changing cultural norms

Labor force participation

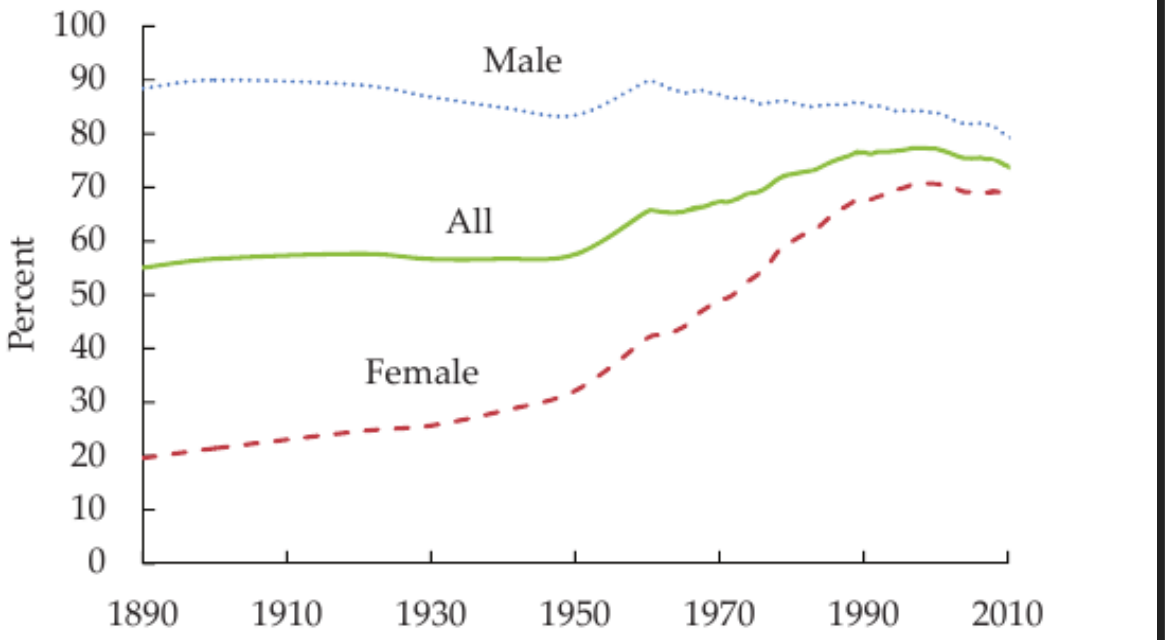

Figure 7: Labor Force Participation by Gender over Time, all persons 16-64 years

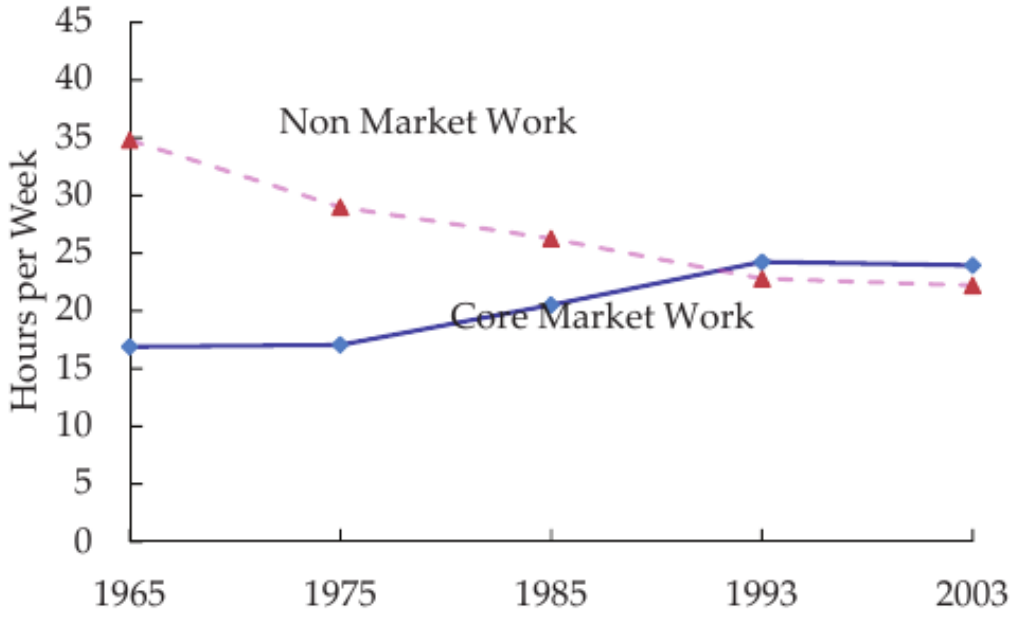

Figure 9: Women's Weekly Market Versus Non-Market (i.e., Home) Work Hours over Time, United States (Source: Aguiar and Hurst 2007, Table II)

Household and health technological change

- Increase in labor market participation coincides with home-production technology
- Allows women more time to work outside the household
- Health technology also changing at same time (infant formula, female contraception, etc)
- Decreasing wage gap improves women's bargaining power in the household

Missing women

- Women are 48.4% of the population in India and China
- 30-70 million "missing women"
- Many cultures exhibit preferences for male children, amplified by China's one child policy

Qian (2006)

- Increasing female income relative to men (in China):
  - Improves sex ratios (number of girls)
  - Improves education for all children
- Increasing male income relative to women:
  - Lowers sex ratios
  - Lowers educational attainment for women

Ashraf et al (2014)

- Women in Zambia randomly assigned vouchers for "concealable" contraception
- Half needed husband's presence to use voucher
- Women given access alone less likely to give birth, more likely to use concealable contraception, more likely to use family planning services
- Results consistent with men having preference for more children, more bargaining power in household