



The Gender Pay Gap

680 Exchange
September 21, 2022

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- **This slide deck was authored by:**
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Outline

- What is gender wage gap?
- Gender wage gap in numbers.
- What are the potential causes for this gender wage gap?
- What can we do?



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The Issue of Gender Wage Gap

“We have to pass pay equity for women workers. It is not acceptable that women are making 78 cents an hour compared to men.”

-- Sen. Bernie Sanders (I-Vt.), [speech to the National Press Club](#), March 9, 2015

“...42% [women] in the United States say they have faced discrimination on the job because of their gender... One of the biggest gender gaps is in the area of income: ...25% [women] say they have earned less than a man who was doing the same job..”

-- 2017 Pew Research Center [survey](#)



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Popular Theories

- Occupational segregation
- Biased managers and co-workers
- Inferior bargaining skills
- Lack of competitiveness
- Labor market incentives
- And more

We will delve deeper into what is meant by the gender wage gap and how economists think about the issue.



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Significant strides have been made

- **Progress made in combating gender inequality and discrimination against women in workplace since the 1970s.**
 - The Fair Labor Standards Act of 1938,
 - The Equal Pay Act of 1963,
 - Title VII of the Civil Rights Act of 1964, and
 - The Pregnancy Discrimination Act of 1973 in conjunction with
 - Affirmative Action and other movements aimed at diversity
- **But not much since the 1970s.**



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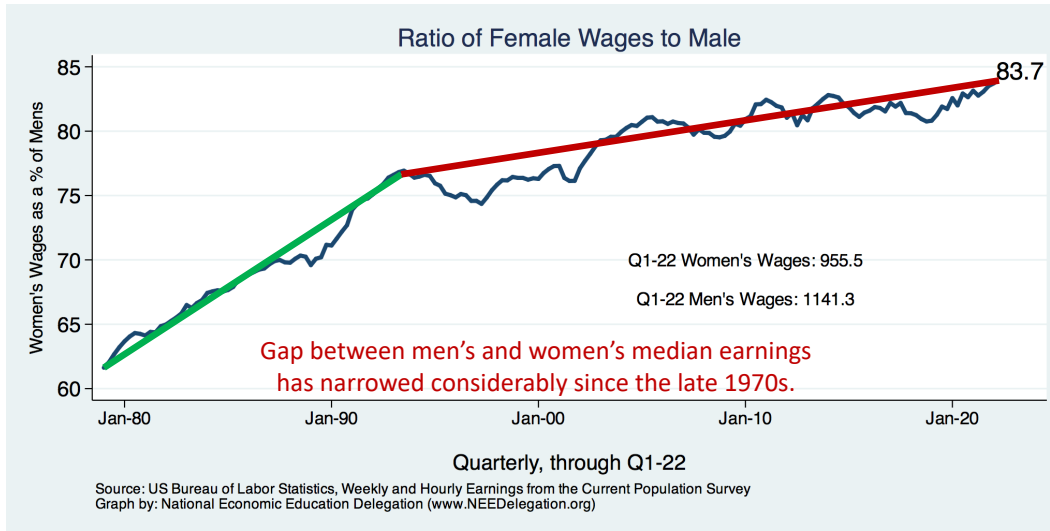
What is Gender Wage Gap?

- Gender wage gap represents the difference in average earnings of women relative to those of men.
- The gap is usually calculated as a ratio of women’s earnings to men’s earnings.
 - For example, in Q1, 2022, median weekly earning for full-time women workers was \$955.5, and that for men was \$1,141.3.
 - Therefore, the gender wage gap in Q1 2022 was:

$$\frac{\$955.5}{\$1,141.3} = 83.7\%$$

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Relative Wage Gap Over Time



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Sources of Reduction

- **Relatively more women in jobs with collective bargaining.**
 - Falling for both since 1981, but more for men than women.
- **Women are getting more education than men.**
- **Women's devotion to the labor market is growing.**



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The Wage Gap

- **Average wage comparison based on a limited sample. Men and women:**
 - Working full time
 - Working year round
- **Wage gap is not: Apples to Apples**
 - Does not compare wages of men and women in the same occupation or industry.



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What Does the Wage Gap Capture?

- It reflects gender differences in:
 - jobs,
 - hours worked,
 - years of experience,
 - educational attainment,
 - or personal choices that people make about their careers,
 - and discrimination.
- Which begs the question of why the non-discrimination aspects differ by gender?
 - Discrimination?
 - The structure of our economic system?

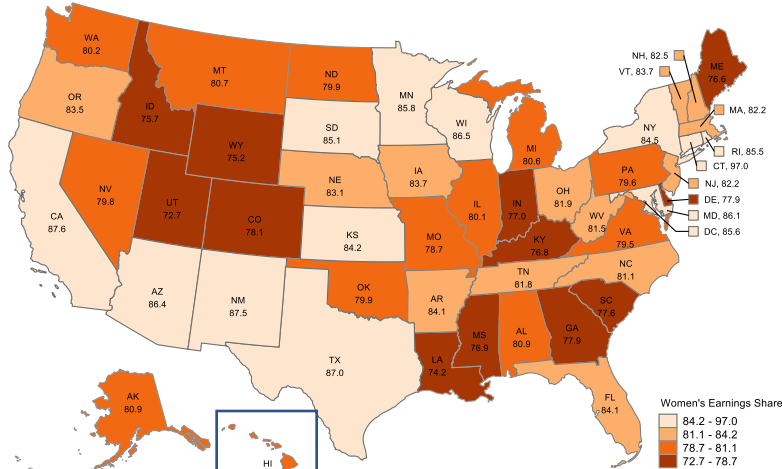
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Wage Gap by State

Women's Median Weekly Earnings as a Percentage of Men's, 2020

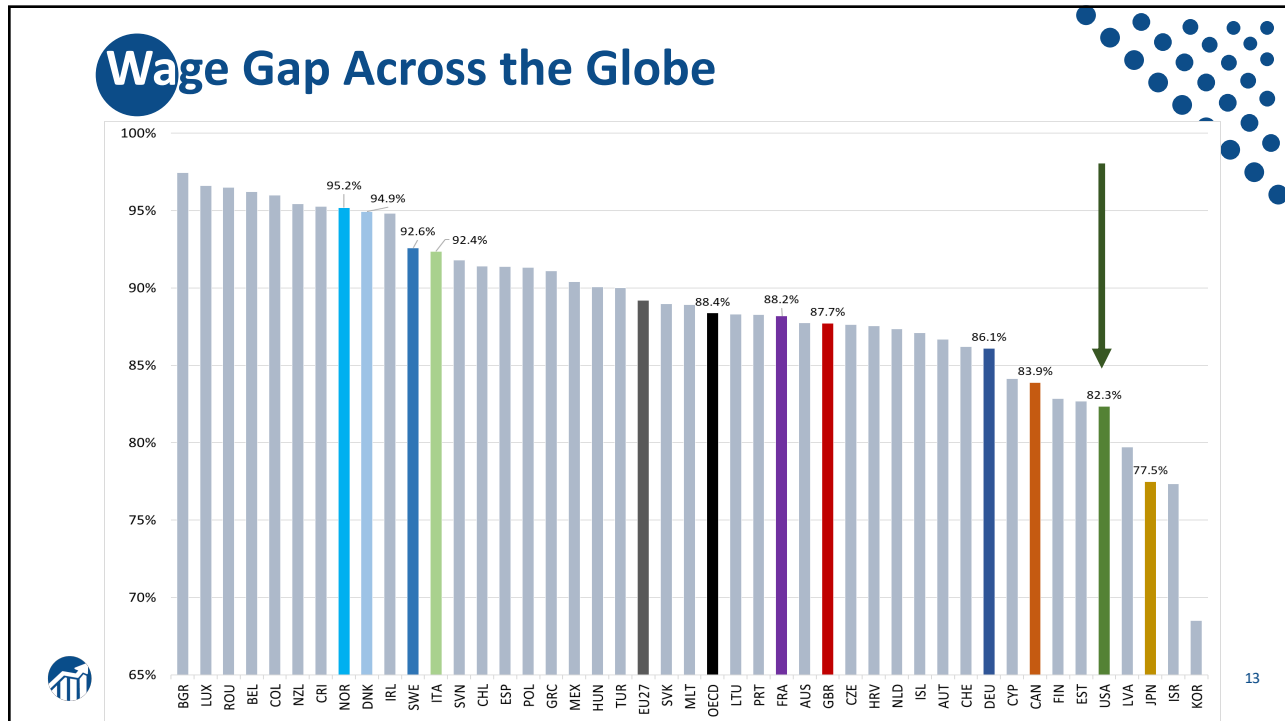
Leaders:
 Conn: 97.0
 CA: 87.8

Laggard:
 Utah: 72.7



Women's median weekly earnings, in the United States, accounted for 82.3% of men's earnings in 2020. Source: U.S. Bureau of Labor Statistics

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What is NOT included in these calculations?

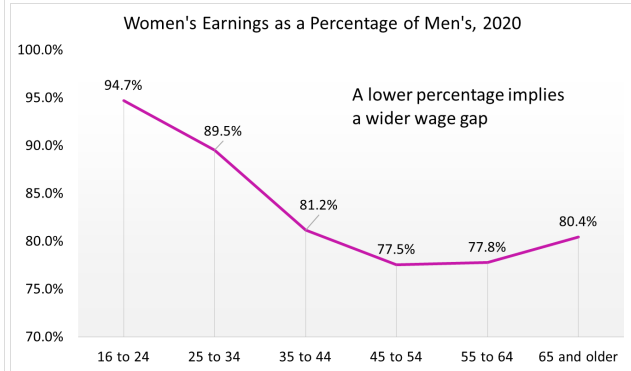
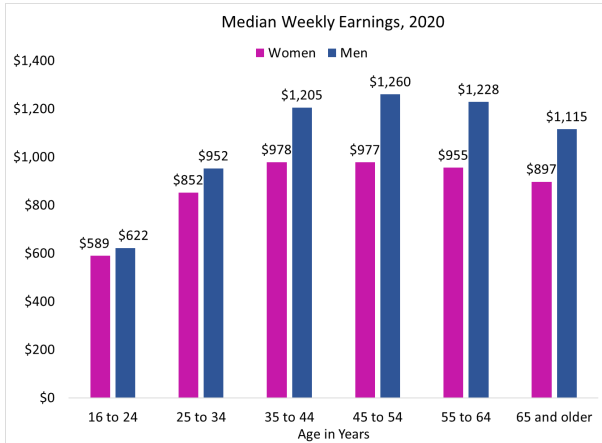
- These are unconditional or uncontrolled or raw wage gap.
- The difference doesn't take into account important determinants of earnings such as:
 - Age
 - Occupation
 - Educational attainment
 - Job skills and responsibilities
 - Work experience
 - Specialization
- Gender wage gap is not a single statistic; it is dynamic.

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Wage Gap by Age

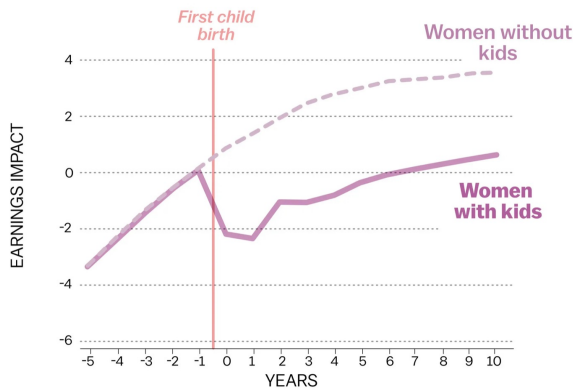
The gap between men and women's median earnings was the largest among those aged 45 years or older.



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The Kid Effect

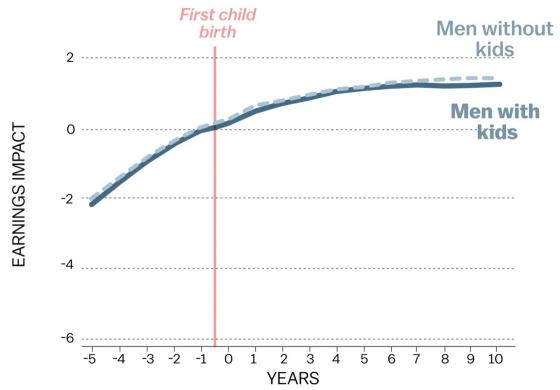
Having a kid correlates with lower earnings for women



Source: "Children and gender inequality: Evidence from Denmark," National Bureau of Economic Research



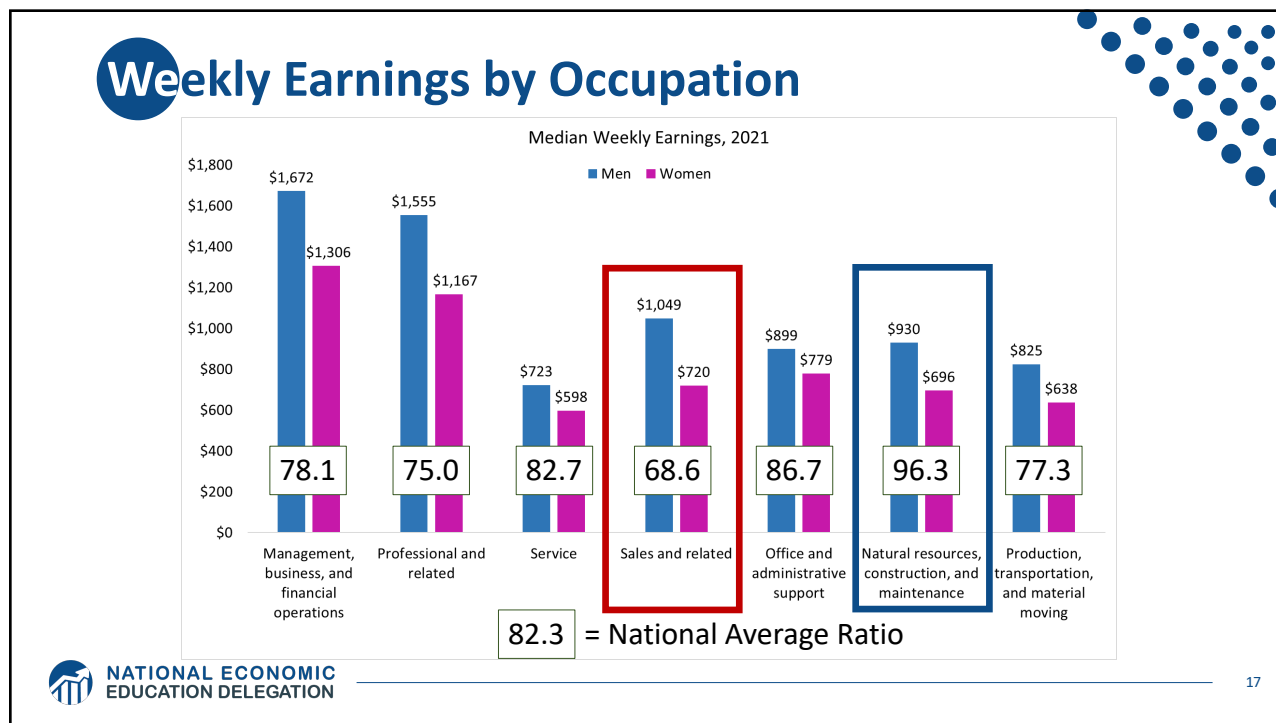
Having kids doesn't affect men's salaries



Source: "Children and gender inequality: Evidence from Denmark," National Bureau of Economic Research



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These are Still Unadjusted Wage Gap Numbers

- In the previous slides we controlled for one factor at a time that might affect earnings of workers.
- However, controlling for just one of the factors may not fully explain earnings differences.
- For example, when comparing median earnings differences by occupation, we still would like to know if these differences can be further explained by differences in other key factors such as
 - age,
 - job responsibilities,
 - work experience, and
 - other individual life choices such as marital status or to have children and to take time off to raise them.

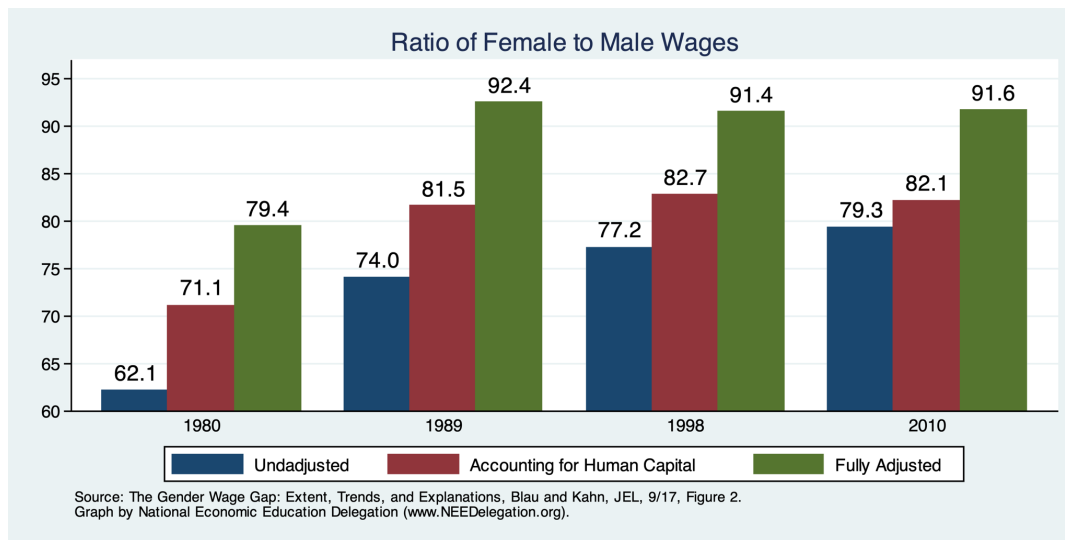
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Adjusting the Wage Gap

- Men and women make different choices. It is possible to account for some of those choices to explain the wage gap.
- Two possible adjustments:
 - **Adjustment 1 accounts for human capital:**
 - Education
 - Experience
 - Geographic region
 - Race
 - **Adjustment 2 also accounts for:**
 - Unionization
 - Industry
 - Occupation

Wage Gap With Adjustments

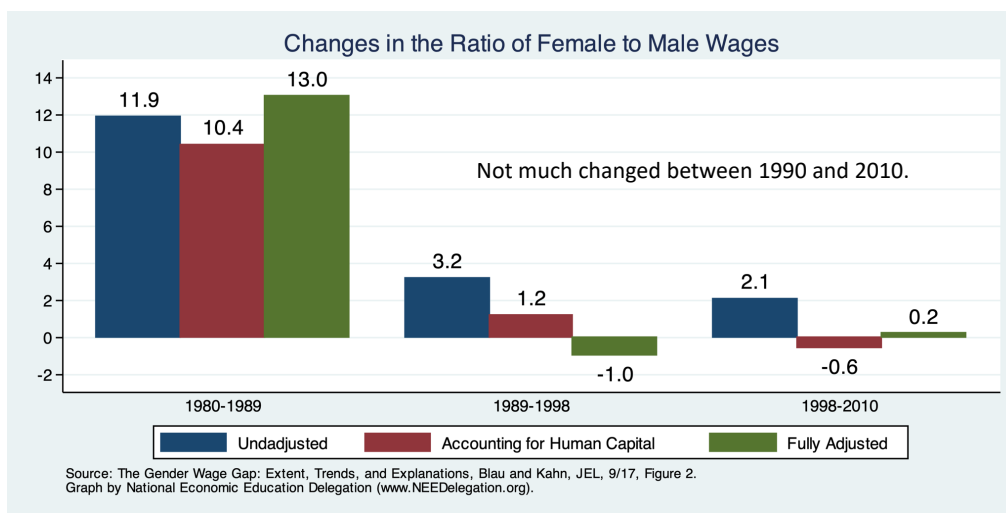


What do the Adjustments Tell Us?

- **Human capital decisions, as well as region and race, matter for the wage gap.**
- **Ultimate job matters:**
 - Is it unionized?
 - Is it an industry with a large gap?
 - Is it an occupation with a large gap?
- **Still 10% unaccounted for.**
 - Is this discrimination?
 - Perhaps, but not all of it.
 - Labor market decisions are influenced by discrimination or perceptions of women’s vs men’s majors, occupations, or industries.

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Changes Over Time



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Explaining Gender Wage Gap by Occupation

- **Women, traditionally, the “on-call” parent.**
- **Prefer occupations with:**
 - shorter hours,
 - fewer “on-call” hours,
 - predictable schedules
 - standardized products/services
 - greater substitutability of workers within teams
- **Men, traditionally, opt for jobs with greater time demands that pay more.**
- **Men appear to care less about time flexibility.**
 - Ready to work evening/weekend hours to meet clients



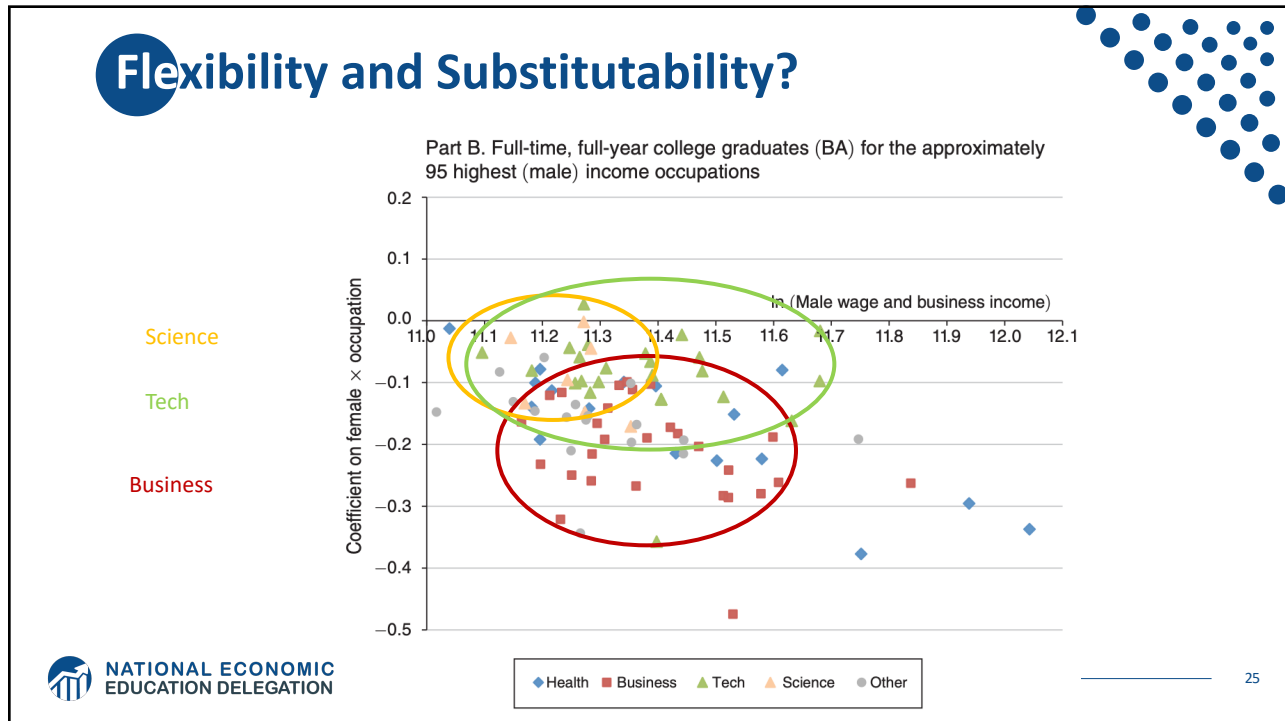
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Explaining Gender Wage Gap by Occupation

- **High time demand occupations:**
 - Contact with others
 - Frequency of decision making
 - Time pressure
 - Structured vs. unstructured work
 - Establishing and maintaining interpersonal relationships
- **Level of competition within an occupation**
- **Income inequality among men within an occupation.**
 - Leads to a higher gender wage gap.



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Gap Occurs Primarily WITHIN Occupations

Where does the wage gap come from?

| | Between Occupations | Within Occupations |
|-------------------|---------------------|--------------------|
| All Workers | 15% | 85% |
| College Graduates | 35% | 65% |

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Source: Reassessing the Gender Wage Gap: Sharing Jobs, Equalizing Pay, Right Now, the Expanding Harvard Universe.

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Occupations with the Smallest Wage Gap, 2021

| Occupation | Female-Male Median Weekly Earnings Ratio | Share of Women in the Occupation | Share of Women Workforce |
|--|--|----------------------------------|--------------------------|
| Compliance officers | 107% | 50% | 0.3% |
| Graphic designers | 106% | 51% | 0.2% |
| Clinical laboratory technologists and technicians | 104% | 65% | 0.4% |
| Pharmacists | 104% | 54% | 0.3% |
| Insurance claims and policy processing clerks | 102% | 77% | 0.4% |
| Billing and posting clerks | 101% | 87% | 0.7% |
| Teaching assistants | 100% | 86% | 1.3% |
| Purchasing agents, except wholesale, retail, and farm products | 100% | 62% | 0.3% |
| Cashiers | 99% | 72% | 1.7% |
| Fast food and counter workers | 98% | 64% | 0.3% |
| Bus drivers, school | 98% | 55% | 0.1% |
| Stockers and order fillers | 97% | 35% | 0.8% |
| Postal service mail carriers | 97% | 40% | 0.2% |
| Pharmacy technicians | 97% | 77% | 0.4% |
| Police officers | 96% | 15% | 0.2% |
| Computer programmers | 96% | 20% | 0.2% |
| Wholesale and retail buyers, except farm products | 96% | 55% | 0.1% |
| Miscellaneous agricultural workers | 96% | 17% | 0.2% |
| Industrial truck and tractor operators | 96% | 9% | 0.1% |
| Computer support specialists | 96% | 24% | 0.3% |
| Physical therapists | 95% | 64% | 0.3% |
| Packers and packagers, hand | 95% | 57% | 0.6% |
| Total | | | 9.3% |

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Occupations with the Biggest Wage Gap, 2021

| Occupation | Female-Male Median Weekly Earnings Ratio | Share of Women in the Occupation | Share of Women Workforce |
|--|--|----------------------------------|--------------------------|
| Securities, commodities, and financial services sales agents | 56% | 33% | 0.1% |
| Medical scientists | 60% | 51% | 0.1% |
| Personal financial advisors | 65% | 40% | 0.3% |
| Other engineering technologists and technicians, except drafters | 66% | 19% | 0.1% |
| Insurance sales agents | 67% | 54% | 0.5% |
| Medical assistants | 68% | 89% | 0.8% |
| First-line supervisors of production and operating workers | 70% | 19% | 0.3% |
| Chief executives | 70% | 30% | 0.7% |
| Sales managers | 70% | 30% | 0.3% |
| Bus drivers, transit and intercity | 72% | 39% | 0.1% |
| Credit counselors and loan officers | 72% | 51% | 0.4% |
| Supervisors of transportation and material moving workers | 72% | 22% | 0.1% |
| Financial managers | 73% | 56% | 1.3% |
| Inspectors, testers, sorters, samplers, and weighers | 73% | 38% | 0.6% |
| Market research analysts and marketing specialists | 73% | 60% | 0.4% |
| Claims adjusters, appraisers, examiners, and investigators | 73% | 58% | 0.4% |
| First-line supervisors of retail sales workers | 74% | 46% | 1.9% |
| Retail salespersons | 74% | 40% | 1.3% |
| Total | | | 9.8% |

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Non-Linearities in Pay and the Wage Gap

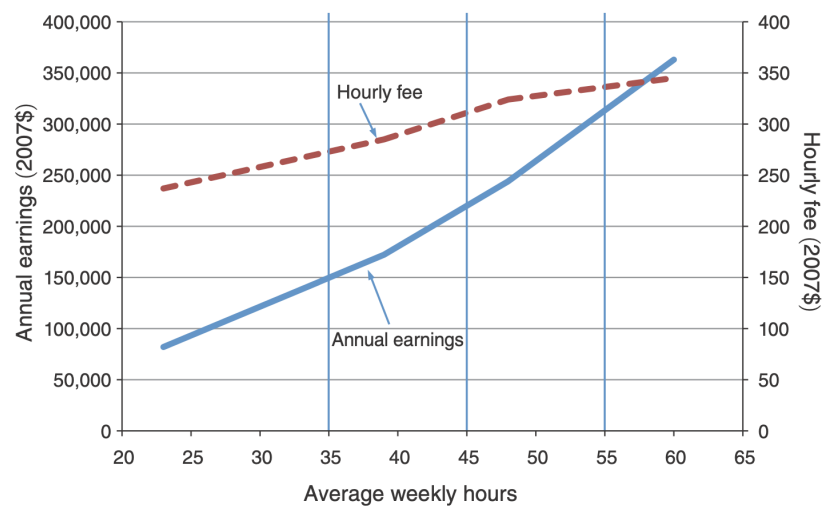
- Pay increases with the number of hours worked each week.

- Why?
 - In some occupations, workers are not good substitutes for each other.
 - To ensure continuity, employers value individual workers working more hours.
- Implications:
 - Households divide the work.
 - Rather than both working 40 hours, perhaps one works 80 and the other does not work.
 - Women are more likely to be the ones working fewer hours, receiving less pay.

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Evidence on Non-Linearities from Law Firms

Lawyers:
Hours go up
So does hourly pay



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Sorting

- **Sorting happens:**

- With the decision to go to college.
- With the election of a major.
- With the choice of an occupation.

- **Women tend to:**

- Go to college **more** than men.
- Select majors with **lower** expected wages.
 - o Though convergence WAS happening.
- Within a major, select occupations with **lower** wages.
 - o Though convergence IS happening.



Solutions to the Gender Wage Gap

- **Debiasing the labor market**

- Diversity training for supervisors and managers.
- Changing the organizational culture.
- Gender blind hiring/evaluation procedures.

- **Training women to be more competitive and removing unconscious bias.**

- **Legislative actions by federal and state governments.**



The System - Not Individual Bias is the Culprit

- **The “system” is characterized by:**
 - Decisions made by ordinary couples in terms of being on-call at work or at home.
 - Cost of time flexibility at work.
- **The higher the cost of time flexibility, the higher is the likelihood of a couple to forego equity in favor of higher family income.**
- **Substitution among workers needs to be encouraged in occupations with high gender pay gaps.**



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Private Sector is Responding...Slowly

- **With more women entering the profession.**
- **More men wanting equitable relationships with their life partners.**
- **Costly job training.**
- **Valuable client-employee relationships formed by the women in early years.**

Firms have incentive to retain the female employees now more than ever.



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What can we do?

- Reduce the cost of flexibility
- Increase or incentivize substitutability
- Reduce the cost of caregiving – childcare as well as elderly care
- Alter societal norms

“We need men to lean out at work, support their male colleagues who are on parental leave, vote for public policies that subsidize childcare, and get their firms to change their greedy ways by letting them know that their families are worth even more than their jobs. Dreams won’t come true, aspirations won’t be realized unless men are brought along for the rest of the journey.”

-- Claudia Goldin

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What Have We Learned?

- **The gap is significant and seemingly stubborn.**
 - Some, but not very much progress in the last 20 years.
- **Discrimination clearly plays a role, but we can’t identify how much.**
 - In wage setting, in people’s choices, as a result of market structures.
- **Gender roles in child rearing play an enormous role.**
- **Government policy can help, by:**
 - Implementing policies that reduce the child-bearing penalty for women.
 - Access to childcare, for instance.
 - Influencing the structure of labor markets, the workplace, hiring practices, and job flexibility.
 - Generally, address the hours/compensation relationship.

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Available NEED Topics Include:

- US Economy
- Healthcare Economics
- Climate Change
- Economic Inequality
- Economic Mobility
- Trade and Globalization
- Minimum Wages
- Immigration Economics
- Housing Policy
- Federal Budgets
- Federal Debt
- Black-White Wealth Gap
- Autonomous Vehicles
- US Social Policy



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Thank you!

Any Questions?

www.NEEDelegation.org

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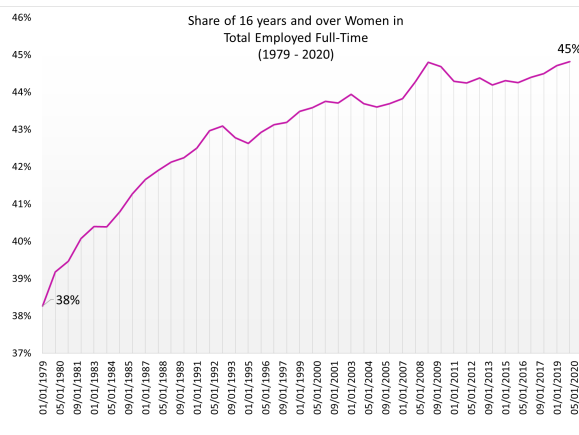
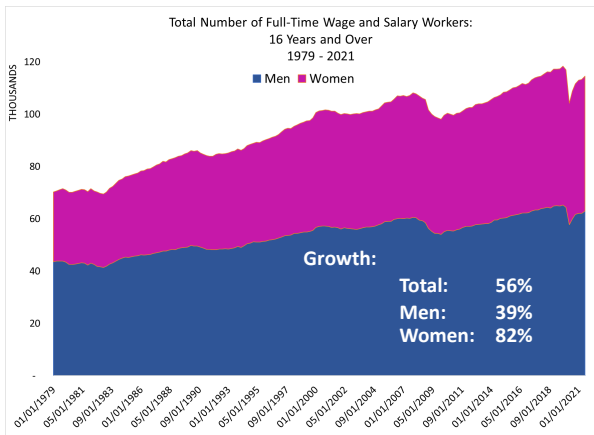


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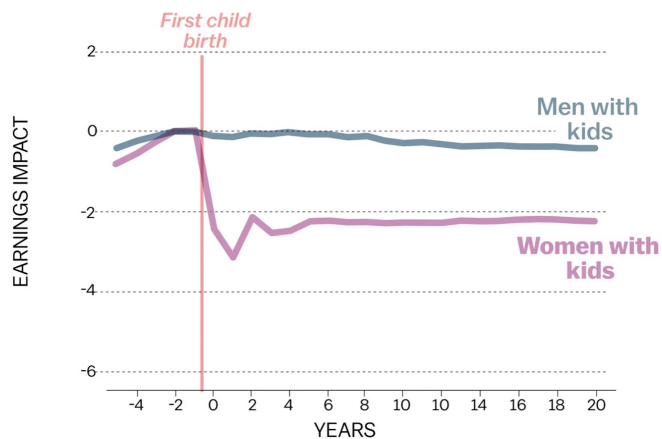
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Composition of the Full-Time Workforce



The Kid Effect

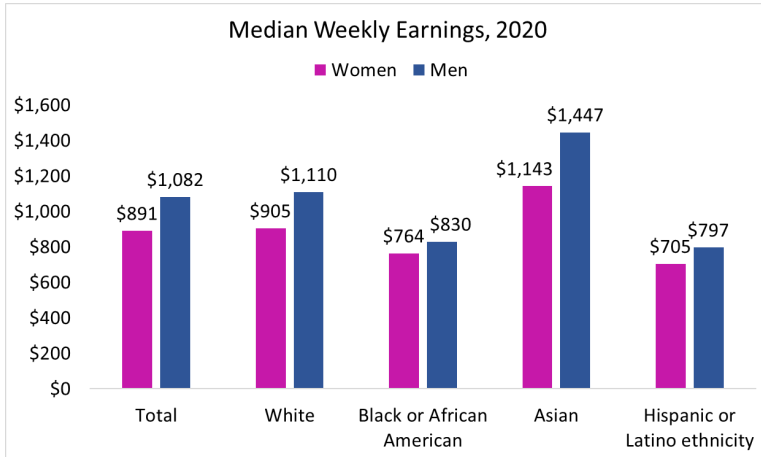
Women's earnings drop significantly after having a child. Men's don't.



Source: "Children and gender inequality: Evidence from Denmark," National Bureau of Economic Research



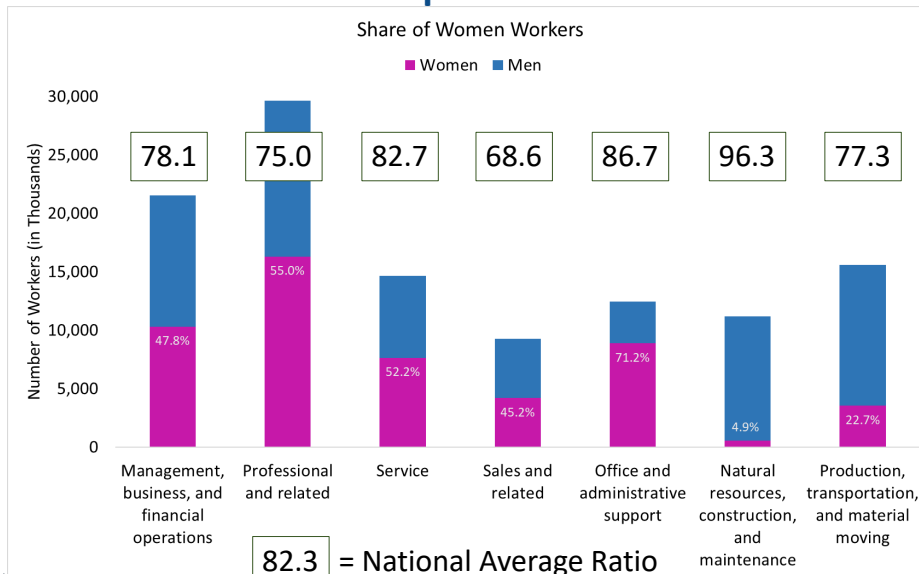
Wage Gap by Race/Ethnicity



- Earnings differences between women and men were largest among Asians and among Whites.
- Asian women earned 79% as much as Asian men, and White women earned 82% as much as White men.
- Black women had median earnings that were 92% of Black men's, and Hispanic women's earnings were 89% of Hispanic men.

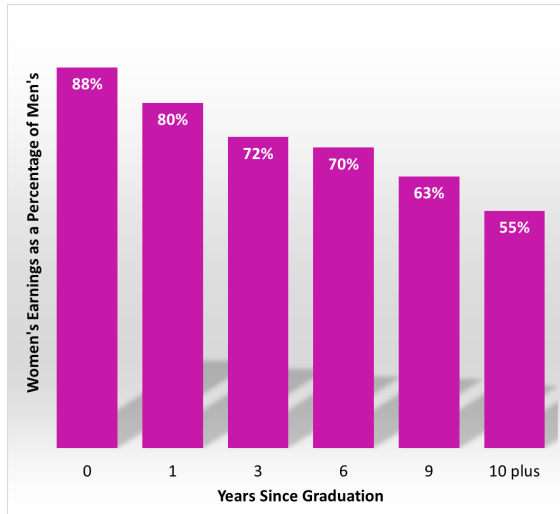
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Gender Distribution of Occupations



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Wage Gap Widens with Age and with Years After Leaving School



- From Bertrand, Goldin, Katz (2010)
- Directly following MBA receipt, average earnings are comparable among men and women, but they soon diverge.
- In the first 9 years after graduation, women's average earnings increase by 117%, while those of men increase by 208%.



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Wage Gap Among MBA Graduates Not Random

- **The sample controls for ability, training and education.**
- **Almost all the gap can be explained by:**
 - Career interruptions.
 - Differences in average weekly work hours.
 - o 49 hrs vs 57 hrs for men.
 - o More part-time, self-employed workers.
- **The gap grows largely with the arrival of children.**
 - Well-intentioned paternalism by supervisors.
 - Husband's position on the earnings distribution and its interaction with children also a factor.
- **Several studies, even those from Nordic countries, support these results.**



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Gap Occurs Primarily WITHIN Occupations

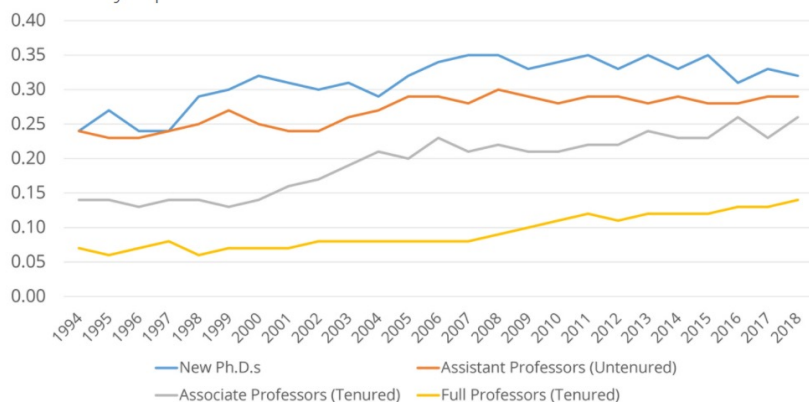
- Not all occupations have the same pay gap.
 - Depends on how substitutable workers are.

| | Ratio W/M Wages |
|--------------------------------|-----------------|
| Science and Health Professions | .892 |
| Business and Finance | .787 |
| Law | .815 |
| OVERALL | .780 |

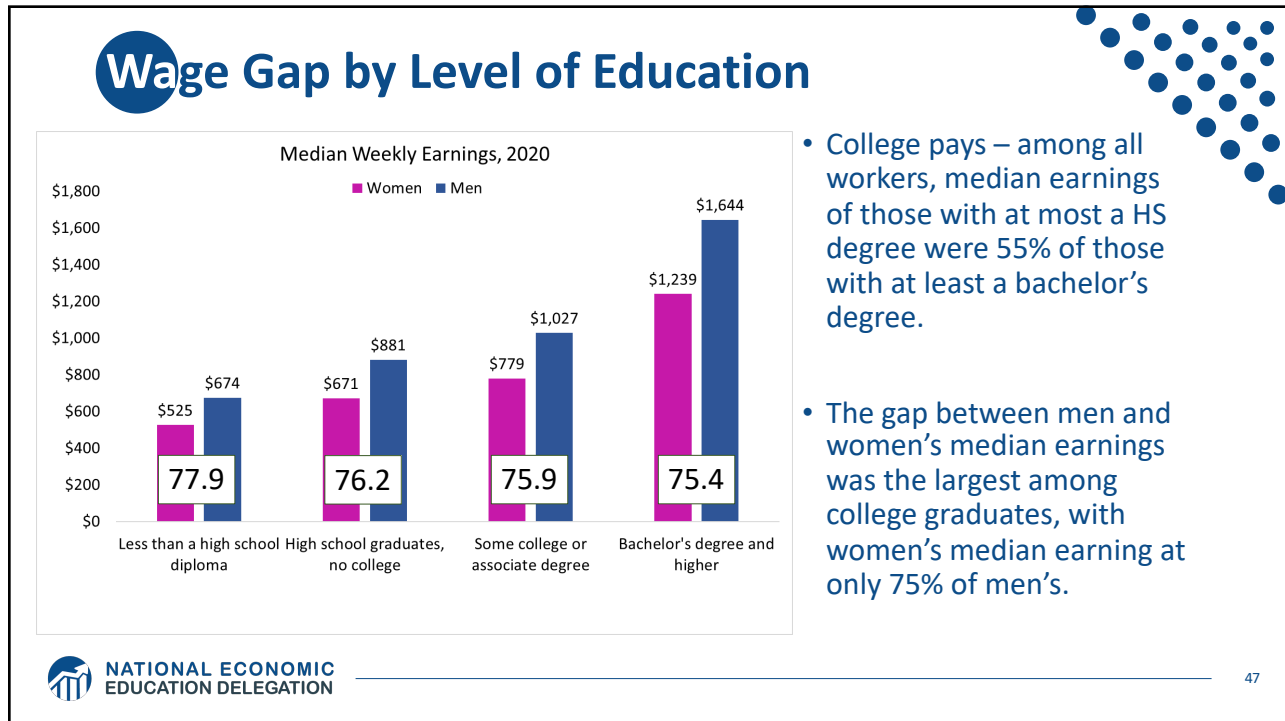
The Leaky Pipelines Phenomenon

- In many professional occupations
 - There's a more equitable gender distribution at entry level.
 - But at the higher ranks, number of female workers plummets.
- Time demands – likely explanation?

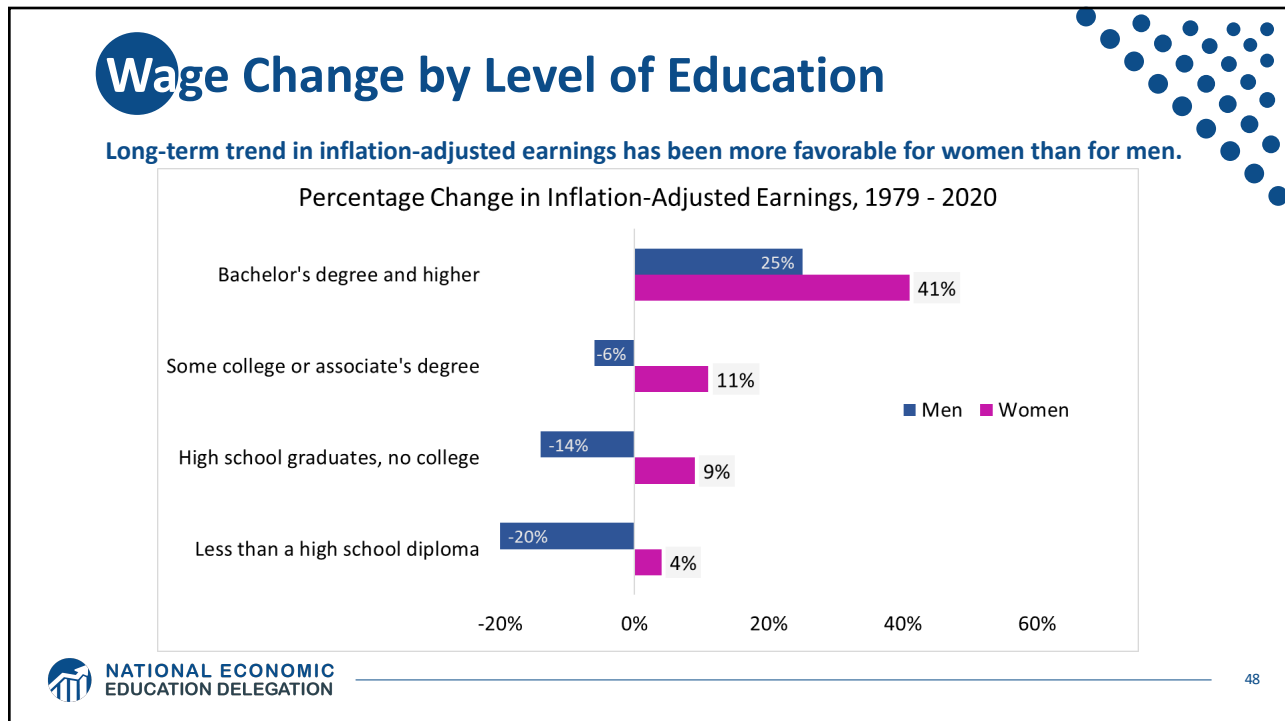
The Leaky Pipeline in Economics



Source: Committee on the Status of Women in the Economics Profession (CSWEP) Annual Survey of U.S. Economics Departments

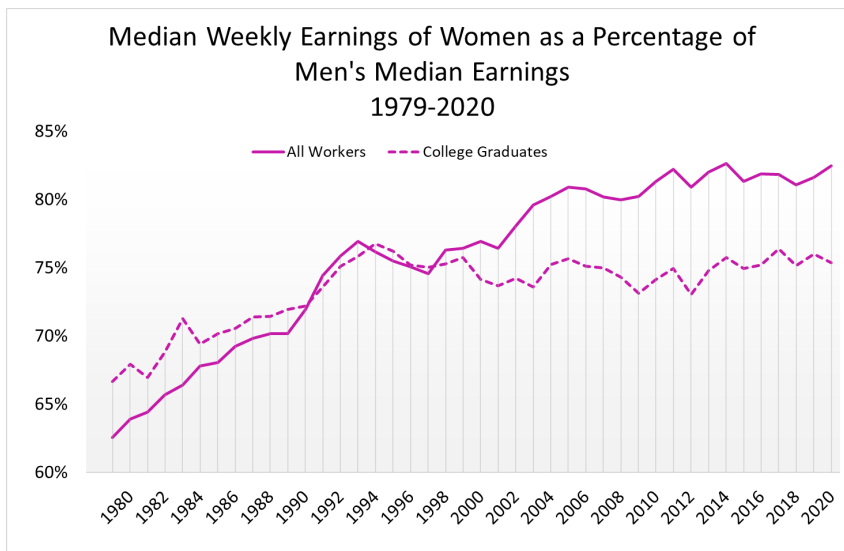


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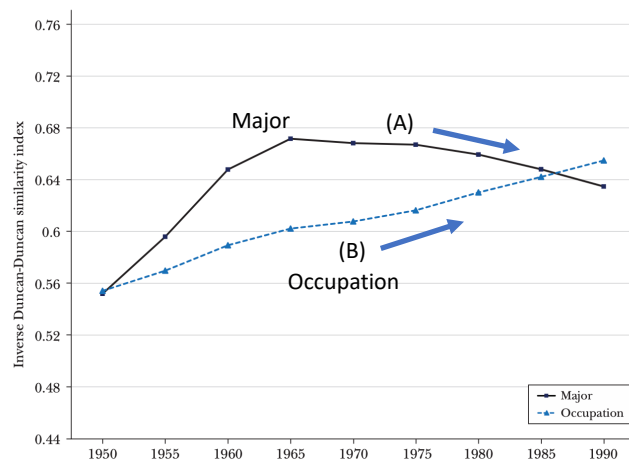
Gender Wage Gap Over the Years – College Graduates



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Occupation Convergence, Less So Majors

Gender Similarity in Major and Occupation by Cohort



Values close to 1 imply parity.

Less than 1

- women's choices correspond to lower wages

Greater than 1

- women's choices correspond to higher wages

(A) Women are increasingly choosing **majors** that **pay less than** the majors chosen by men.

(B) Women are increasingly choosing **occupations** that **pay as well as** the occupations chosen by men.

Source: College Majors, Occupations, and the Gender Wage Gap, Sloane, Hurst, and Black, JEP, Fall 2021.

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Earnings Penalty for Taking Time Out

- Occupations with the largest wage gap tend to also be highly skilled.
- Earnings penalty for taking time out for career paths with the most prestigious degrees is generally very high.
- Goldin and Katz (2008), Harvard and Beyond study:
Earnings penalty for taking time off, at 15 years since leaving college with a Bachelors:
 - Lowest for MDs
 - Highest for MBAs - at 1.4 times the penalty for MDs
 - Followed by JDs and PhDs - at 1.2 times the penalty for MDs
- Women with children tend to do less well than men.



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Time Demand Tradeoffs and COVID-19

- **COVID-19 may have accelerated some of the trends towards more workplace flexibility.**
- **Remote work may have lasting beneficial impact on all workers, including women.**
- **But there may also be losses.**
 - WFH = Working from Home or Working from Hell?
- **Women's attachment to labor market at risk due to:**
 - Difficulty in obtaining affordable, dependable childcare.
 - Unpredictability in school closures/re-openings.



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