

THE GENDER PAY GAP ON THE ANNIVERSARY OF THE LILLY LEDBETTER FAIR PAY ACT

Introduction

Today marks the 7-year anniversary of the Lilly Ledbetter Fair Pay Act, the first major piece of legislation President Obama signed into law. The Act extended the time period in which claimants can bring pay discrimination claims, enabling victims of pay discrimination to seek redress when they otherwise could not. In spite of this legislation and other actions taken by the Administration to support working women, a gap persists in the wages earned by men and women. In 2014, median earnings for a woman working full-time all year in the United States totaled only 79 percent of the median earnings of a man working full-time all year. Phrased differently, she earned 79 cents for every dollar that he earned.

By expanding the time period for filing pay discrimination claims, the Lilly Ledbetter Fair Pay Act changed the legal process around claims of gender discrimination, one of many factors contributing to the pay gap. For years Lilly Ledbetter was paid at least [15 percent](#) less than the lowest-paid man in her equivalent position. She filed a lawsuit, which eventually reached the Supreme Court, but was not awarded damages due to the expiration of the statute of limitations for claims of that type. Her experience was the motivating factor behind the [Lilly Ledbetter Fair Pay Act](#).

The gender wage gap has many causes and contributors, including differences in education, experience, occupation and industry, and family responsibilities. But even after accounting for these factors, a gap still remains between men's earnings and women's earnings. On the anniversary of this important legislation, this issue brief explores the state of the gender wage gap, the factors that influence it, and policy implications.

The Pay Gap

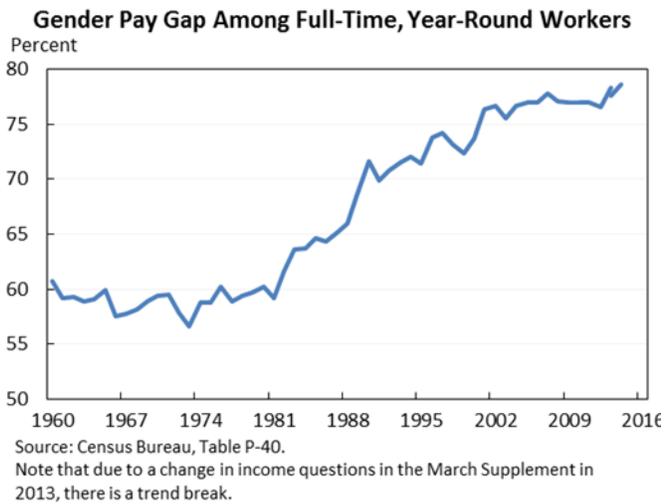
Over the past century, American women have made substantial strides in entering and remaining in the

workforce and building their skills. Today, women account for 47 percent of the labor force, up from 29 percent in 1948. However, the typical woman working full-time full-year [earns](#) 21 percent less than the typical man. In addition, while the pay gap closed by 17 percentage points between 1981 and 2001, it had remained flat since 2001. In the past two years, some modest progress has been made, with the gap closing by 1.8 percentage point from 2012 to 2013 and by an additional percentage point between 2013 and 2014.¹

Breaking the pay gap down by race reveals further disparities. While the typical non-Hispanic white woman earned 75 percent of what the typical non-Hispanic white man earned, women of color face a wider pay gap in comparison to white men. For example, the typical non-Hispanic black woman made only 60 percent of a typical non-Hispanic white man's earnings, while the typical Hispanic woman earned only 55 percent. Women of color face smaller disparities in earnings when compared to men of color, highlighting the role of disparities in pay by race as well. For instance, the typical black non-Hispanic woman earns 82 percent of what the typical black non-Hispanic man does, and the comparable number for Hispanic women is 88 percent.

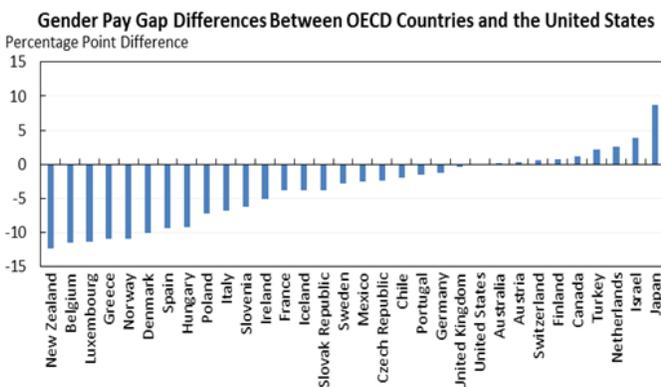
¹ Note that in 2013 changes were made to the income questions of the Current Population survey that affect measures of the gender pay gap. Two numbers were produced in 2013, one of which is consistent with income measures in prior years while the other is consistent with

measures going forward. For comparison purposes both 2013 measures of the gender pay gap are plotted in the chart.



While the gender pay gap in the United States has not changed substantially over the last 15 years, other industrialized nations have made greater progress in closing the gap. From 2000 up to the latest data available, the pay gap fell fastest in the United Kingdom (by almost 9 percentage points), followed by Japan, Belgium, Ireland, and Denmark (around 7 percentage points each).

As a result, the U.S. gender pay gap is currently larger than that of many other industrialized nations. According to the Organisation for Economic Co-operation and Development (OECD), the gender wage gap in the United States is about 2.5 percentage points larger than the OECD average. For comparison, the gender wage gap in New Zealand is less than a third of what it is in the United States. In Norway, it is 11 percentage points less than it is in the United States, and in Italy it is 7 percentage points lower.

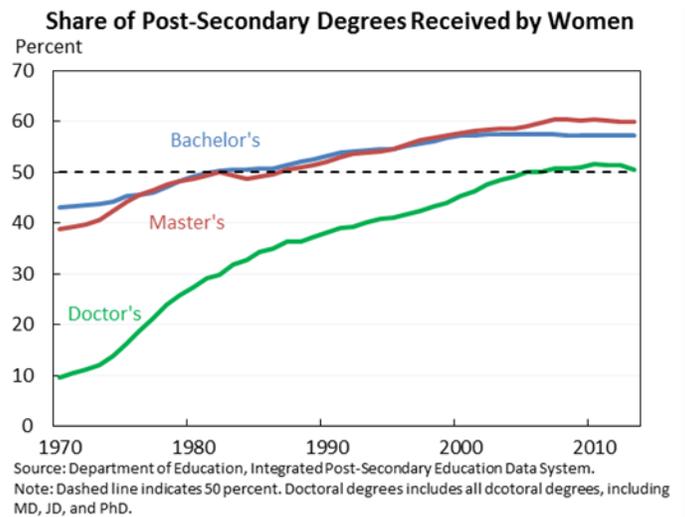


Source: OECD Statistics.
Note: Data are for the most recently reported year for each country, ranging from 2010 to 2013.

The Role of Education and Experience

Much of the decline in the pay gap that occurred in the 1980s and 1990s was due to education and experience gains by women. While men were more likely than women to graduate from college in the 1960s and 1970s, in recent decades the pattern has switched: since the 1990s, women have been awarded the majority of all undergraduate and graduate degrees.

Because women have increasingly become our most educated workers, accounting for relative education levels actually widens the pay gap.

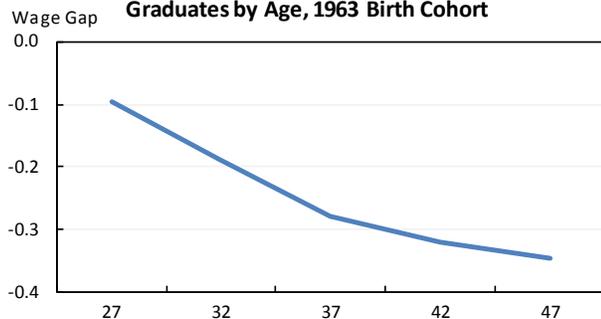


On-the-job experience is another important determinant of wages, and in the past, women often left the labor force after marrying or having children. Today, even though women are still more likely than men to temporarily exit the labor force, they are more likely than in the past to work throughout their lifetimes. Economists Francine Blau and Lawrence Kahn found that one-third of the decline in the pay gap during the 1980s was due to women's relative gains in experience (whereas the major factor in the pay gap decline in the 1990s was increases in women's educational attainment). Today, even the majority of mothers with an infant are in the labor force.

In general, the pay gap grows over workers' careers, although it appears to rebound somewhat in later years. Young men and women tend to start their careers with more similar levels of earnings, but over time, a gender gap emerges and grows. As shown in the chart below (from research by Harvard economist Claudia Goldin,

the approximate percentage difference between women's earnings and men's earnings for college graduates born in 1963 (controlling for hours, weeks worked, and further education), roughly doubled from age 27 to 32 and more than tripled from age 27 to 42.

Difference Between Female and Male Earnings Among College Graduates by Age, 1963 Birth Cohort



Source: Calculations by Claudia Goldin.
Note: Data are derived from a regression specification for white, native-born, non-military college graduates, of all employment statuses from the 1963 birth cohort, corrected for hours, weeks, and further education. Data are trimmed and corrected for income truncation. Wage gap is the log ratio of female to male earnings.

The Role of Occupation and Industry

As women's labor market participation and education increased, so did their career opportunities. Women are increasingly entering occupations that were once heavily male-dominated, part of what Claudia Goldin has [termed](#) the "quiet revolution." However, despite this trend, [research](#) from Francine Blau and Lawrence Kahn shows that differences in occupation and industry still play an important role in the gender pay gap.

A key question is why men and women continue to work in different occupations, even as women have gained labor market experience and education. Many economists debate whether one should account for differences in industry and occupation when studying the gender wage gap. If these differences stem from preferences for different jobs, it is reasonable to account for them. On the other hand, if men and women face different job choices because of discrimination or the anticipation of discrimination, we should not account for industry and occupation in estimating the gender pay gap. In many situations, the delineations between discrimination and preferences are ambiguous.

For example, in computer science, the share of women in the field is [lower](#) today than it was in 1985. This gap starts long before workers begin making career choices; rather, it results from a series of events and decisions that begin at young ages. A recent OECD [report](#) finds that

even high school girls who score highly on math and science tests report low levels of confidence and perceived proficiency in math and science. Among women who begin a science-related career, [more than](#) half leave by mid-career. Around forty percent of those who leave [cite](#) a hostile or "macho" culture as the primary reason. Given the reasons women leave these fields, at least some occupational differences appear to be driven by negative factors that prevent the full range of talented Americans from succeeding in the workplace.

Even when women and men are working side-by-side performing similar tasks, however, the pay gap does not fully disappear. Blau and Kahn [looked](#) at the roles of various factors driving the pay gap and concluded that occupation and industry differences accounted for 51 percent of the pay gap. However, unexplained factors still accounted for 38 percent of the pay gap.

Given this research, it is unsurprising that within occupation, the pay gap often [remains](#). The Bureau of Labor Statistics (BLS) only reports one occupation in which women out-earned men in 2014, as measured by weekly earnings among full-time workers: stock clerks and order fillers. There are also occupations in which the pay gap is particularly large, such as personal financial advisors (where the pay gap is 39 percent), physicians and surgeons (38 percent), and securities, commodities, and financial services sales agents (35 percent). There is not a strong relationship between the size of the gender pay gap in a given occupation and either the percentage of women in that occupation or its median weekly wage.

The Role of Family Responsibilities

As mentioned above, the pay gap tends to grow over the course of women's careers. At the early stages of their careers, each generation of young women has fared better than the previous generation. For example, in 1980, the typical 18-34-year-old woman who worked earned about 74 cents an hour for every dollar the typical man earned, but by 2014, this figure had increased to 91 cents.

One potential reason the gender wage gap has narrowed faster among younger women is that the age of first birth has risen. [From](#) 2000 to 2014, the average age of mothers at first birth increased from 24.9 to 26.3.

Because motherhood is [associated](#) with a wage penalty, these delays in childbirth have helped narrow the pay gap. Research has shown that [delaying](#) childbirth for one year can increase a woman's total career earnings and experience by 9 percent. Economists Marianne Bertrand, Claudia Goldin, and Lawrence Katz [examined](#) the salaries of MBA graduates from a top business school and found that although men and women had fairly similar earnings at graduation, after a decade men earned approximately 60 percent more than women. Although this study concerns a highly educated subset of women, it documents the trajectory of the gender pay gap for these women. The researchers found that much of the growth in the earnings gap in the first decade after graduation was due to women's higher likelihood of taking time away from work (often associated with childbirth) and working fewer hours (often related to family and caregiving responsibilities).

If they have children, women typically earn less and are more likely to leave the labor force. However, many of these outcomes are informed by existing workplace and government policies. For example, [research](#) shows that when women have access to paid maternity leave, a year after giving birth they work more and have higher earnings. Lack of access to leave or affordable, quality childcare prevents some women who would like to work from doing so. Research examining both maternity leave programs in [other](#) countries and in [California](#) concludes that paid leave can help new mothers maintain a connection to the labor force. Importantly, differences in family leave policies can explain a substantial fraction of the differences in the female labor force participation rate across countries. Research from Francine Blau and Lawrence Kahn [show that](#) if the United States had family-friendly labor market policies comparable to those in other OECD countries, the female labor force participation rate would be four percentage points higher. Ensuring that women have access to paid sick and paid family leave, along with other policies that support working families, can thus help improve labor market outcomes for women, including participation and earnings.

The Role of Differences in Negotiations

Given the growth in the pay gap over the course of a woman's career, even among workers who have no children, some have hypothesized that the growing gap

is due in part to differences in negotiating salaries and receiving promotions.

Research shows that women, even highly-educated women, are [less](#) likely to negotiate their first job offer than men. Furthermore, when women do negotiate, if the norms of negotiation and salary expectations are not transparent, they are likely to receive lower compensation than men. Research [shows](#) that disparities in negotiated salaries were small in situations where ambiguity over salary ranges and negotiation norms were low, but that in high-ambiguity situations women received about \$10,000 less than similarly-qualified men.

Although negotiation can lead to better career prospects and higher wages, it can create detrimental impressions of female workers. Hannah Riley Bowles, Linda Babcock, and Lei Lai [found](#) that women were more often penalized for initiating negotiations, which the authors attribute to "perceptions of niceness and demandingness." While pay transparency can help reduce the ambiguity of negotiating situations, it cannot by itself eliminate the social penalties some women face for initiating negotiations.

Eliminating pay secrecy can play an important role in helping women negotiate. A [review](#) of the literature on pay secrecy by Andrew Chamberlain and Glassdoor emphasized that salary transparency can help alleviate the pay gap.

Underlying many of the possible explanations for the gender pay gap is the potential for implicit or explicit discrimination. Some [work](#) has in fact suggested that implicit biases are more common and also detrimental. If implicit, or subconscious, biases are at play, a pay gap stemming from discrimination will be more difficult to overcome.

The Role of Discrimination

As this issue brief has discussed, a variety of factors can impact the pay gap. For example, what women choose to study in school, the industry or occupation in which they choose to work, the likelihood of negotiation, and even the chances that they will continue working in their chosen profession. Among many other influences, these decisions may be impacted by the existence of discrimination or the anticipation of discrimination along

a certain path. It is thus difficult to exactly disentangle how much of the pay gap is due to discrimination.

When holding education, experience, occupation, industry, and job title constant, a pay gap remains. As mentioned above, some research has found that this unexplained portion is a substantial share of the total gap. By definition one cannot explain the remaining part of the wage gap, but the impact of discrimination and biases contribute to the “unexplained” portion of the gap.

While it is difficult to measure the role of biases using standard datasets, more experimental research has found evidence of discrimination in hiring, pay, and advancement. [Resume studies](#) have shown that, among identical resumes where only the name differs, perceived gender affects whether the candidate is hired, the starting salary offered, and the employer’s overall assessment of the candidate’s quality. These findings echo the conclusions of earlier [audit studies](#).

In addition, some economists [believe](#) that anti-competitive forces have contributed to the rise in corporate profits in recent years, and it is possible that profits arising from non-competitive behavior are distributed in a discriminatory way. For instance, [research](#) has shown that anti-competitive profits stemming from banking regulation were largely shared with men, rather than women. Thus, the role that discrimination plays in the pay gap could conceivably rise if non-competitive profits continue to increase.

The Gender Pay Gap and Policy Implications

In addition to measures that specifically address discrimination, the President’s broader policies aim to ensure that all workers are treated fairly in the workplace and are able to select jobs that best match their skills, which in turn benefits the overall labor market and economy.

Since the beginning of the Administration, the President has prioritized eliminating workforce discrimination and enforcing anti-discrimination policy. Many workers, however, are unaware whether they face wage discrimination. For example, a 2010 [survey](#) found that 19 percent of employees reported that their employer formally prohibited discussing salaries and another 31 percent are discouraged from discussing compensation.

A pay gap stemming from discrimination is particularly [likely](#) to exist under conditions of pay secrecy, where it is harder for workers to know whether they receive lower compensation than similar colleagues.

In order to improve pay transparency and help ensure fair pay, the President has called on Congress to pass the Paycheck Fairness Act, which would ensure workers’ right to discuss compensation without fear of retaliation. For the same reasons, the President [issued](#) an Executive Order that prohibits federal contractors from discriminating or retaliating against workers who discuss their pay. As an important additional measure, the Equal Employment Opportunity Commission announced today that it will soon start collecting pay data broken down by gender and race from all businesses with at least 100 employees that will enable the Commission to better target enforcement efforts.

Other policies that can help ensure fair pay include modernizing outdated overtime regulations and raising the minimum wage. Of the [nearly five million](#) workers who will benefit from the President’s modernization of overtime regulations, 56 percent are women. Raising the minimum wage and the tipped minimum is particularly [important](#) for women because women are disproportionately represented in lower-wage sectors. To help all low-wage workers, the President signed an [Executive Order](#) raising the minimum wage to \$10.10 for workers on new Federal contracts and also raised the minimum wage for tipped workers. The President has also called on Congress to raise the minimum wage for all workers.

Family-friendly workplace policies can also help workers choose jobs in which they will be most productive. [Increasingly](#), mothers and fathers are sharing caregiving and family obligations, but many workplaces have been slower to adapt, and both men and women value these policies when choosing a workplace. For example, [work](#) by Claudia Goldin shows that women are particularly likely to select careers that offer flexibility, like pharmacy. The demand for family-friendly workplace policies, however, is not limited to women. For example, nearly half of all working parents have [reported](#) declining a job because they felt the position would interfere with their family responsibilities. In fact, fathers in dual-earner couples are [more likely](#) to report work-family conflict than mothers in dual-earner couples. Recognizing the importance of family-friendly workplace

policies, the President recently issued an Executive Order requiring that Federal contractors provide paid sick leave to their workers on federal contracts. The President has also called on Congress to pass the Healthy Families Act, which would provide workers with the ability to earn paid sick days, and to pass a law that would give all families access to paid family and medical leave. The Family Act is one such proposal. The President has also [proposed](#) tripling the maximum child care tax credit to \$3,000 per young child, helping families afford quality care for their children.

When workers are matched to jobs that are well-suited to their skills and qualifications, businesses also benefit. From a business's perspective, these policies can also increase worker productivity and worker retention. For example, a [survey](#) of California employers found that most employers reported that paid leave did not harm productivity (89 percent), profitability (91 percent), turnover (93 percent), or morale (99 percent).

Moving forward on policies that ensure fair pay for all Americans and help workers find jobs that best suit their talents are key aspects of the President's middle class economics agenda. While these policies can help narrow the pay gap, they also allow businesses to attract and retain the strongest talent, which boosts labor productivity and benefits the economy as a whole.

References

Appelbaum, Eileen and Ruth Milkman. 2011. "Paid Family Leave Pays Off in California." *Harvard Business Review*, January 19, 2011.

Babcock, Linda and Sara Laschever. 2003. *Women Don't Ask: Negotiation and the Gender Divide*. Princeton University Press.

Bertrand, Marianne, Claudia Goldin, and Lawrence F. Katz. 2010. "Dynamics of the Gender Gap for Young Professionals in the Financial and Corporate Sectors." *American Economic Journal: Applied Economics*, 2: 228-255.

Black, Sandra E., and Philip E. Strahan. 2001. "The division of spoils: rent-sharing and discrimination in a regulated industry." *American Economic Review*: 814-831.

Blau, Francine and Lawrence Kahn. 2006. "The US gender pay gap in the 1990s: Slowing convergence." *Industrial & Labor Relations Review* 60(1): 45-66.

Blau, Francine and Lawrence Kahn. 2007. "The Gender Pay Gap: Have Women Gone as Far as They Can?" *Academy of Management Perspectives*, 21(1): 7-23.

Blau, Francine and Lawrence Kahn. 2013. "Female Labor Supply: Why Is the United States Falling Behind?." *The American Economic Review* 103(3): 251.

Blau, Francine D., and Lawrence M. Kahn. 2016. "The Gender Wage Gap: Extent, Trends, and Explanations."

Bloom, Nick Tobias Kretschmer, and John Van Reenan. 2009. "Work-Life Balance, Management Practices, and Productivity." In *International Differences in the Business Practices and Productivity of Firms*, eds. Richard B. Freeman and Kathryn L. Shaw, University of Chicago Press, pp. 15-54.

Bowles, Hannah Riley, Linda Babcock, and Lei Lai. 2007. "Social Incentives for Gender Differences in the Propensity to Initiate Negotiations: Sometimes it Does Hurt to Ask." *Organizational Behavior and Human Decision Processes*, 103: 84-103.

Budig, Michelle J. and Paula England. "The Wage Penalty for Motherhood." *American Sociological Review*, 66(2): 204-255.

Bureau of Labor Statistics. 2014. "Table 6: Employment Status of Mothers With Own Children Under 3 Years Old by Single Age of Youngest Child and Marital Status: 2012-2013 Annual Averages."

Chamberlain, Andrew. 2015. "Is Salary Transparency More than a Trend?" Glassdoor.

Council of Economic Advisers. 2014. "Eleven Facts About American Families and Work."

Council of Economic Advisers. 2014. "Fifteen Economic Facts About Millennials."

Council of Economic Advisers. 2014. "The Impact of Raising the Minimum Wage on Women."

- Council of Economic Advisers. 2015. "The Economics of Family-Friendly Workplace Policies." *Economic Report of the President*.
- Fetisova, Olga. 2014. "Effects of Anti-Secrecy Pay Laws on the Gender Wage Gap."
- Furman, Jason and Peter Orszag. 2015. "A Firm-Level Perspective on the Role of Rents in the Rise in Inequality."
- Goldin, Claudia. 2006. "The Quiet Revolution That Transformed Women's Employment, Education, and Family." *American Economic Review, Papers and Proceedings* 92(2): 1-21.
- Goldin, Claudia. 2014. "A Grand Gender Convergence: Its Last Chapter." *American Economic Review*, 104(4): 1091-1119.
- Goldin, Claudia and Lawrence F. Katz. 2008. "Transitions: Career and Family Life Cycles of the Educational Elite." *American Economic Review: Papers and Proceedings*, 92(2): 363-369.
- Goldin, Claudia and Cecilia Rouse. "Orchestrating Impartiality: The Impact of "Blind" Auditions on Female Musicians." *The American Economic Review* 90, no. 4 (2000): 715-741.
- Greenwald, Anthony G., and Linda Hamilton Krieger. 2006. "Implicit Bias: Scientific Foundations". California Law Review 94 (4). *California Law Review, Inc.*: 945-67.
- Hewlett, Sylvia, et al. 2008. "The Athena Factor: Reversing the Brain Drain in Science, Engineering, and Technology." *Harvard Business Review Report*.
- Institute for Women's Policy Research. 2010. "Pay Secrecy and Paycheck Fairness: New Data Shows Pay Transparency Needed." November 15, 2010.
- Mathews, T.J. and Brady Hamilton. 2016. "Mean Age of Mothers is on the Rise: United States, 2000-2014." NCHS Data Brief No. 232.
- Miller, Amalia. 2011. "The Effects of Motherhood Timing on Career Path." *Journal of Population Economics*, 24(3): 1071-1100.
- Moss-Racusin, Corinne A., et al. 2012. "Science Faculty's Subtle Gender Biases Favor Male Students." *Proceedings of the National Academy of Sciences*, 109(41): 16474-16479.
- National Center for Women and Information Technology. "By the Numbers."
- Neumark, David, Roy J. Bank, and Kyle D. Van Nort. 1996. "Sex Discrimination in Restaurant Hiring: An Audit Study." *Quarterly Journal of Economics*, 111(3): 915-941.
- Nielsen Holdings. 2014. "Vast Majority of Americans Favor Flexible Work Policies." Poll conducted online May 27-30, 2014.
- Organisation for Economic Co-operation and Development. 2015. *PISA 2012 Results: The ABC of Gender Equality in Education: Aptitude, Behaviour, Confidence*.
- Pradel, Dina, Hannah Bowles, and Kathleen McGinn. 2006. "When Gender Changes the Negotiation." <http://hbswk.hbs.edu/item/5207.html>
- Rossin-Slater, Maya, Christopher J. Ruhm, and Jane Waldfogel. 2012. "The Effects of California's Paid Family Leave Program on Mothers' Leave-Taking and Subsequent Labor Market Outcomes." *Journal of Policy Analysis and Management*, 32(2): 224-245.
- Steinpreis, Rhea E., Katie A. Anders, and Dawn Ritzke. 1999. "The Impact of Gender on the Review of the Curricula Vitae of Job Applicants and Tenure Candidates: A National Empirical Study." *Sex Roles*, 41(718).
- Waldfogel, Jane, Yoshio Higuchi, and Masahiro Abe. 1999. "Family Leave Policies and Women's Retention after Childbirth: Evidence from the United States, Britain, and Japan." *Journal of Population Economics*, 12: 523-545.
- White House. 2013. "Fifty Years After the Equal Pay Act: Assessing the Past, Taking Stock of the Future."
- White House. 2015. "Why Access to Free Community College Matters." January 9, 2015.

Wilde, Elizabeth Ty, Lily Batchelder, and David T. Ellwood. 2010. "The Mommy Track Divides: The Impact of Childbearing on Wages of Women of Differing Skill Levels." NBER Working Paper 16582.