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The rise in women's share of nonfarm employment during the 2007–2009 recession: a historical perspective

This article uses data from the Current Employment Statistics survey to examine changes in women's and men's employment during the 2007–2009 recession. The article also places these changes in historical context, comparing them with longer term employment trends observed throughout previous economic downturns. The analysis suggests that the resilience of women's employment during recessions resulted in women's holding an unprecedented 50 percent of nonfarm jobs during the most recent downturn. Women's employment has made some notable strides over the past several decades, strides that partly reflect the payroll growth of women in an expanding group of service-providing industries that employ more women than men.

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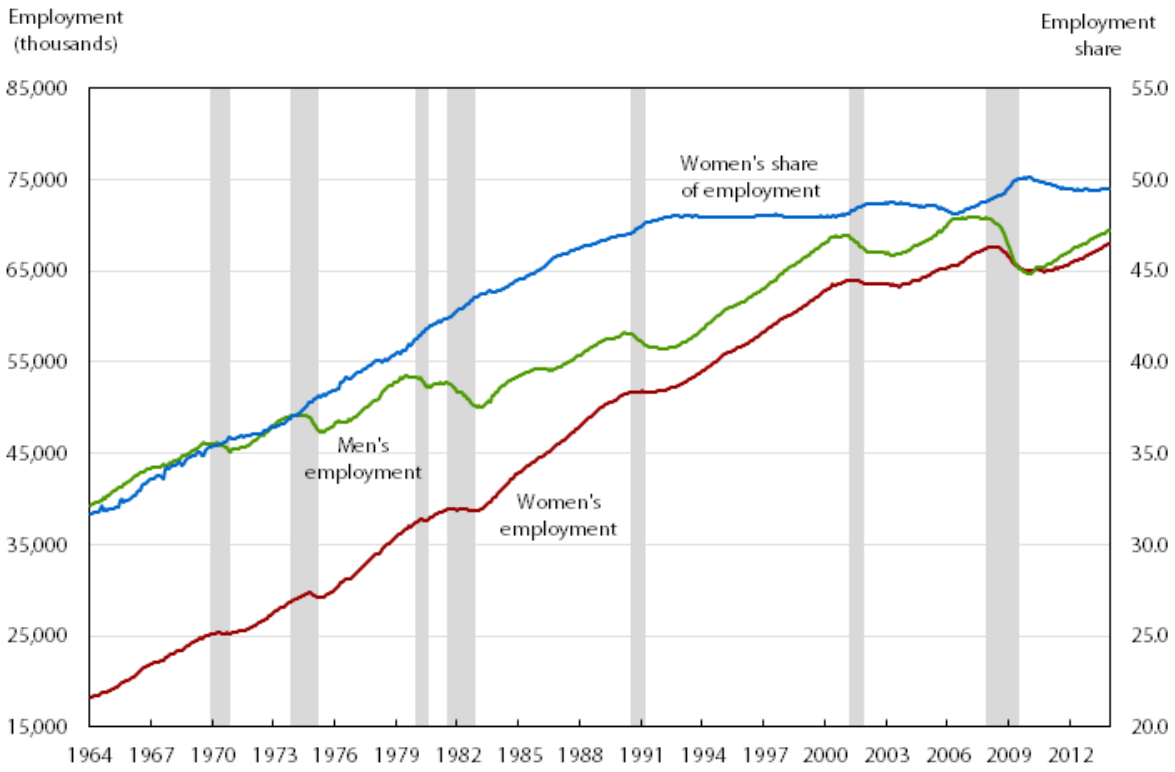
During the most recent recession, which began in December 2007 and ended in June 2009,[1] job losses among men outnumbered those among women by 2.6 to 1. Also during this period, women's employment reached 50.0 percent of total nonfarm employment for the first time since the series began in 1964. This article discusses the long-term trend in the employment share of women and men on nonfarm payrolls. It highlights the sustained growth of women's employment during previous downturns and contrasts this long-term growth with the female employment experience during the most recent recession, in which women lost more jobs than they did in any of the previous downturns. The article also examines the diverging trends of job losses between women and men working in industries that were most and least affected by recent recessions and analyzes employment dynamics in the most recent recession and postrecessionary period. Data presented in the article are based on estimates from the Current Employment Statistics (CES) survey.

Long-term expansion of women's employment

The CES payroll survey first began to produce employment estimates of women for all industry sectors in January 1964, at which point women held 31.7 percent of total nonfarm jobs.[2] Women's employment has continued to expand nonfarm payrolls over the past half century and accounted for an unprecedented 50.0 percent of all payroll jobs in the last month of the most recent recession. The women's share of payroll jobs held at that level for 11 consecutive months and then edged down; as of December 2013, however, that share was still high, at 49.5 percent.

Figure 1. Employment of women and men, in thousands, and women's share of employment, seasonally adjusted, 1964–2013



Note: Shaded areas represent recessions as determined by the National Bureau of Economic Research.
Source: U.S. Bureau of Labor Statistics, Current Employment Statistics.

Over the past 49 years, women's employment has largely expanded relative to men's employment. Between 1964 and 1991, the share of women's employment rose steadily, as women's employment rose faster than men's. (See figure 1.) That share leveled off soon after the 1990–1991 recession, and, except for periods of recession when the women's share of employment saw gains, the rates of job growth for both genders have been similar since then. After reaching a recent low in June 2006, the women's share of employment rose throughout the 2007–2009 recession and has edged lower since March 2010.

As shown in table 1, the share of women's employment has expanded in each of the past seven recessions, as men have historically experienced the majority of net job losses and women's employment has tended to fluctuate less in the business cycle. The table presents annualized rates of change, which remove the effect of the varying lengths of recessions and represent a measure that is comparable across scales. Annualized rates also more clearly show the continued resilience of women's employment to sustained job losses during downturns.

Table 1. Annualized rates of employment change, seasonally adjusted, previous seven recessions, 1969–2009

Dates of recession	Annualized rates of change			
	Total nonfarm employment	Women	Men	Women's share of employment
December 1969–November 1970	-1.3	0.5	-2.2	1.8
November 1973–March 1975	-1.2	1.3	-2.7	2.6
January 1980–July 1980	-2.1	.5	-4.0	2.7
July 1981–November 1982	-2.3	-.4	-3.7	2.0
July 1990–March 1991	-1.7	.0	-3.2	1.7
March 2001–November 2001	-1.8	-.5	-3.0	1.3
Average	-1.7	.2	-3.1	2.0
December 2007–June 2009	-3.6	-2.1	-5.1	1.6

Note: Beginning and ending months of recessions are determined by the National Bureau of Economic Research.

Source: U.S. Bureau of Labor Statistics, Current Employment Statistics for employment data.

The CES survey versus the CPS survey

The Bureau of Labor Statistics produces two monthly employment series that are independently obtained: (1) the estimate of total nonfarm jobs, derived from the CES survey, also called the establishment or payroll survey; and (2) the estimate of total civilian employment, derived from the Current Population Survey (CPS), also called the household survey.[3] The two surveys use different definitions of employment, as well as different survey and estimation methods. The data used in this article are from the CES survey, a survey of employers that provides a measure of the number of payroll jobs in nonfarm industries. The CPS is a household survey that provides a measure of employed people ages 16 years and older in the civilian noninstitutional population.

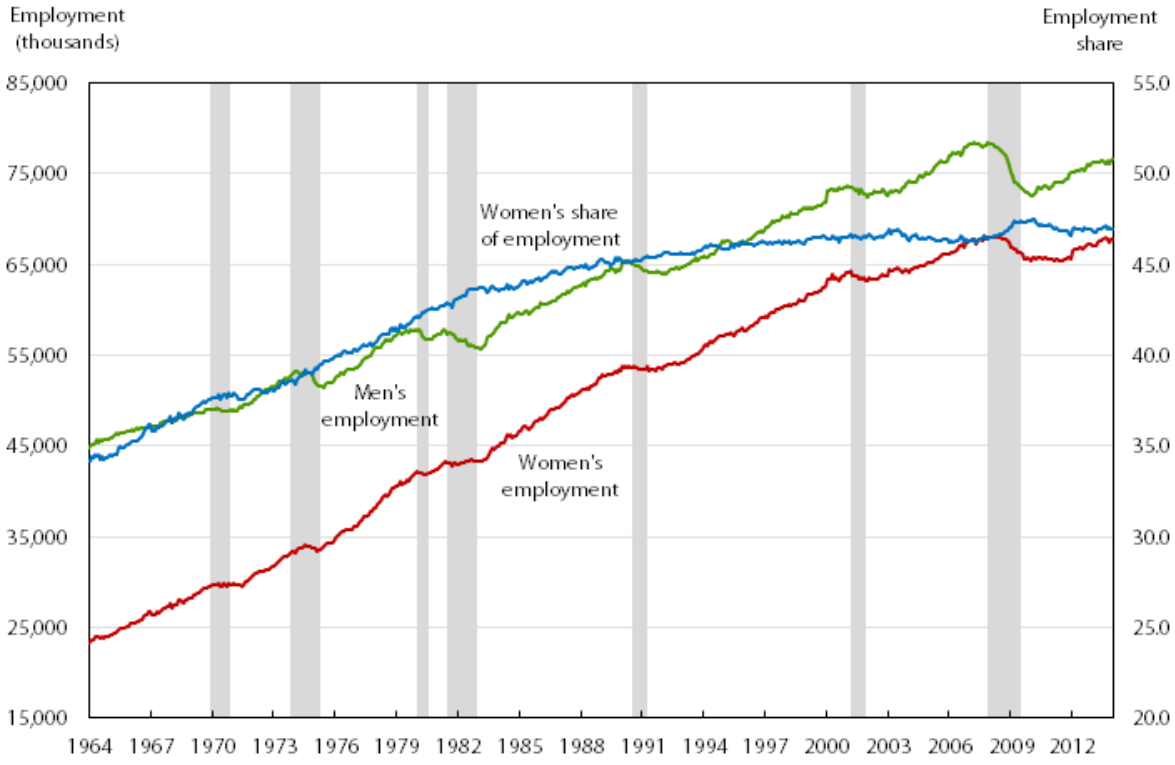
Whereas CES payroll employment estimates are restricted to nonagricultural wage and salary jobs and exclude private household workers, CPS estimates are based on a broader employment definition. Employment estimates from the CPS provide information about workers in both the agricultural and nonagricultural sectors and about all types of work arrangements; that information captures workers with wage and salary jobs (including employment in a private household), the unincorporated self-employed, unpaid absences from work, multiple job holders, and those doing unpaid work for at least 15 hours a week in a business or farm operated by a family member. As a result of this broader definitional scope, employment estimates derived from the CPS survey are higher than those derived from the CES survey. In addition, while periodic discrepancies in employment trends have occurred, the payroll and household surveys track well over the long term.

Because of the rich demographic detail available in CPS data, these data are generally preferred for the analysis of employment trends among women and men. In addition, the CPS survey estimates employment series separately for women and men, whereas the CES survey estimates employment series for total employment and women, as well as production or nonsupervisory employees. As a result, the employment series for men, as estimated by the payroll survey, must be calculated by the data user.

However, the CES survey offers certain benefits that provide for an enhanced analysis in this paper. While both surveys are subject to sampling error, the payroll survey has a much larger sample size than the household survey.[4] The payroll survey's monthly sample includes approximately 554,000 business establishments of all sizes,

representing about one-third of total nonfarm employment. By contrast, the monthly sample size of the household survey is much smaller, at 60,000 households, and covers a smaller fraction of total employed people. Over-the-month changes in household survey employment are therefore subject to a larger sampling error, about four times that of the payroll survey. Because of its larger sample size, smaller sampling error, and more accurate estimation processes, the CES survey allows a more representative analysis of employment trends among men and women across industries.

Figure 2. Civilian employment of women and men, in thousands, and women's share of employment, seasonally adjusted, 1964–2013



Note: Shaded areas represent recessions as determined by the National Bureau of Economic Research.
Source: U.S. Bureau of Labor Statistics, Current Population Survey.

The household survey first began to estimate civilian employment of men and women in 1948, whereas the establishment survey first produced women's employment estimates in 1964. Although long-term employment trends have been similar for both surveys, the women's share of employment, as measured by the household survey, has not risen as steeply as it has risen when measured with the use of payroll data. (See figure 2.) In terms of employment shares, in January 1964, women accounted for 34 percent of household employment and 32 percent of payroll employment; by December 2013, these shares had grown to 47 percent and 49 percent, respectively.

Employment shares, when broken down by gender, reveal an interesting and not entirely explainable shift between the two surveys: in earlier periods, the household survey accounted for a larger share of women's employment (relative to the payroll survey) than it does today. It is likely that this shift is partly due to the broader definition of employment adopted in the household survey. For example, civilian employment, as measured by the household survey, includes unpaid family workers in both agriculture-related and nonagricultural industries. Historically, this

class of workers has been represented predominantly by women and has suffered a long-term contraction, with its share of total employment falling from 1.8 percent in 1964 to less than 0.1 percent in 2013. An additional reason for the decline in the employment share of unpaid family workers is the 1994 CPS redesign, which classified a substantially smaller proportion of women as unpaid family workers.[5]

Another possibility for the discrepancy between civilian and payroll employment estimates is the inclusion of unincorporated self-employed workers in the household measure of employment. While men have consistently maintained higher levels of self-employment, the female share among the self-employed has risen over time. In 2013, 41 percent of all self-employed people working in nonagricultural industries were women, compared with 27 percent in 1976. Despite extensive analyses of adjusted employment series and of many conceptual differences between surveys, research has been inconclusive as to why household employment series adjusted to the payroll definition remain consistently higher. Given the advantages and disadvantages of each survey, the following analysis focuses solely on establishment data. A similar analysis could be performed with the use of household data, but its conclusions may be different.

How women fared during recessions and why their experience was different in the 2007–2009 recession

During the first three recessions of the study period—those of 1969–1970, 1973–1975, and 1980—women's employment continued to expand in terms of both net and percent change. (See table 2.) In the following three recessions, women's job losses as a percentage of total job losses were minimal, at 7.0 percent in 1981–1982 , 1.3 percent in 1990–1991, and 13.4 percent in 2001. In the 1981–1982 recession, for example, women lost 198,000 jobs, largely because of a reduction in federal aid to state and local governments and a resulting loss of 184,000 government jobs held by women.[6] During the 1990–1991 recession, and then to a greater extent in the 2001 and 2007–2009 recessions, women began to lose jobs in retail trade and professional and business services, industries that had not been particularly affected in previous recessions.

Table 2. Net change in jobs for women and men on nonfarm payrolls, in thousands and in percent change, seasonally adjusted, previous seven recessions, 1969–2009

Dates of recession	Total nonfarm employment		
	Net change		
	Total	Women	Men
December 1969–November 1970	-831	114	-945
November 1973–March 1975	-1,263	503	-1,766
January 1980–July 1980	-965	99	-1,064
July 1981–November 1982	-2,819	-198	-2,621
July 1990–March 1991	-1,256	-16	-1,240
March 2001–November 2001	-1,581	-212	-1,369
Average	-1,453	48	-1,501
December 2007–June 2009	-7,406	-2,082	-5,324
Dates of recession	Percent change		
	Total	Women	Men

See footnotes at end of table.

Table 2. Net change in jobs for women and men on nonfarm payrolls, in thousands and in percent change, seasonally adjusted, previous seven recessions, 1969–2009

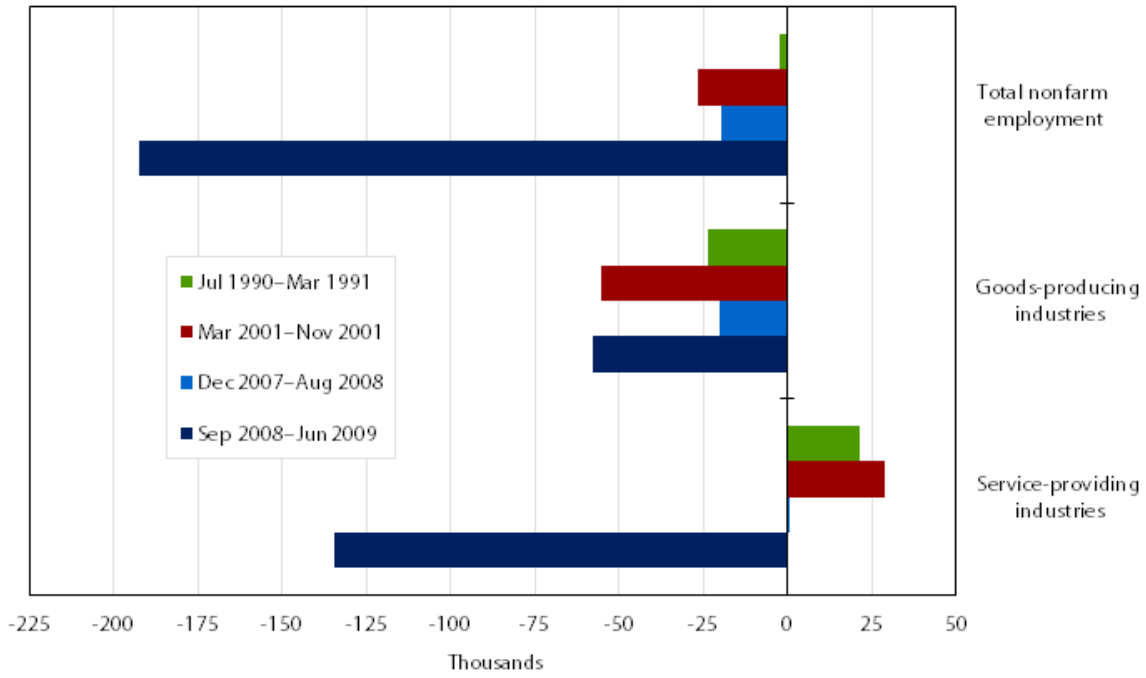
Dates of recession	Total nonfarm employment		
	Net change		
	Total	Women	Men
December 1969–November 1970	-1.2	0.5	-2.1
November 1973–March 1975	-1.6	1.8	-3.6
January 1980–July 1980	-1.1	.3	-2.0
July 1981–November 1982	-3.1	-.5	-5.0
July 1990–March 1991	-1.1	.0	-2.1
March 2001–November 2001	-1.2	-.3	-2.0
Average	-1.5	.3	-2.8
December 2007–June 2009	-5.4	-3.1	-7.5

Note: Beginning and ending months of recessions are determined by the National Bureau of Economic Research.

Source: U.S. Bureau of Labor Statistics, Current Employment Statistics for employment data.

While the long-term expansion of women's employment cooled off modestly over the past four recessions, and notably so in the two most recent downturns, it was only in the 2007–2009 recession that women faced substantial job losses of about 2.1 million, or 3.1 percent. In December 2007, however, women held 48.9 percent of total nonfarm jobs, and their share continued to trend upward throughout the recession, reaching 50.0 percent for the first time in June 2009, the final month of the recession. Women held that percentage through April 2010, at which point their employment share edged down to 49.9 percent, as men began to add more jobs in the economic recovery than did women.

Figure 3. Average monthly change in total nonfarm employment of women, by selected components, in thousands, seasonally adjusted, previous three recessions by selected periods, 1990–2009



Note: Beginning and ending months of recessions are determined by the National Bureau of Economic Research. To show comparable periods, the December 2007–June 2009 recession has been split into two periods of 8 months (December 2007–August 2008) and 10 months (September 2008–June 2009), respectively.
Source: U.S. Bureau of Labor Statistics, Current Employment Statistics.

Over the 18 months from December 2007 to June 2009, monthly job losses averaged 411,000 and resulted in a total employment decline of 7.4 million, or 5.4 percent. (See tables 2 and 3.) The duration and depth of these losses far surpassed those of the previous six recessions, which lasted an average of 11 months and saw average monthly declines of 141,000 jobs. In the first 8 months of the recession, from December 2007 to August 2008, women averaged monthly employment losses of 20,000 jobs, lower than the monthly declines of 192,000 jobs seen in each of the following 10 months. (See figure 3.) The 1990–1991 and 2001 recessions each lasted 8 months, and monthly job losses for women averaged 2,000 and 27,000, respectively; by comparison, the women's monthly job losses during the first 8 months of the 2007–2009 recession averaged 20,000. In addition, large job losses occurred in the service-providing industries, primarily in the latter 10 months of the 2007–2009 recession, and in industries that had posted net job gains for women in the previous two recessions.

Table 3. Net change in nonfarm payroll employment, in thousands, seasonally adjusted, previous seven recessions, 1969–2009

Dates of recession	Length (months)	Net change	Average monthly change
December 1969–November 1970	11	-831	-76
November 1973–March 1975	16	-1,263	-79
January 1980–July 1980	6	-965	-161
July 1981–November 1982	16	-2,819	-176

See footnotes at end of table.

Table 3. Net change in nonfarm payroll employment, in thousands, seasonally adjusted, previous seven recessions, 1969–2009

Dates of recession	Length (months)	Net change	Average monthly change
July 1990–March 1991	8	-1,256	-157
March 2001–November 2001	8	-1,581	-198
Average	11	-1,453	-141
December 2007–June 2009	18	-7,406	-411

Note: Beginning and ending months of recessions are determined by the National Bureau of Economic Research.

Source: U.S. Bureau of Labor Statistics, Current Employment Statistics for employment data.

Which industries lose more jobs during recessions

In order to understand why women have lost fewer jobs than men have in each of the last seven recessions, it is necessary first to analyze which industries experience the majority of job losses during downturns. (See table 4.) Historically, the goods-producing industries—manufacturing, construction, and mining and logging—have accounted for the overwhelming majority of job losses.[7] Their share of total nonfarm employment has suffered a long-term decline, dropping from 32 percent in 1969 to only 14 percent in 2013. By contrast, the service-providing industries, which represent the majority of payroll employment and whose share of total nonfarm employment has risen from 68 percent in 1969 to 86 percent in 2013, have historically accounted for a much smaller percentage of recessionary job losses and, in some cases, contributed to net job gains during recessions.[8]

Table 4. Net change in jobs for women and men on nonfarm payrolls, in thousands and in percent change, seasonally adjusted, previous seven recessions, 1969–2009

Dates of recession	Goods-producing industries			Service-providing industries		
	Net change			Net change		
	Total	Women	Men	Total	Women	Men
December 1969–November 1970	-1,539	-374	-1,165	708	488	220
November 1973–March 1975	-2,445	-722	-1,723	1,185	1,226	-43
January 1980–July 1980	-1,251	-296	-955	286	395	-109
July 1981–November 1982	-2,566	-553	-2,013	-253	355	-608
July 1990–March 1991	-966	-190	-776	-290	174	-464
March 2001–November 2001	-1,198	-442	-756	-383	230	-613
Average	-1,661	-430	-1,231	209	478	-270
December 2007–June 2009	-3,554	-737	-2,817	-3,852	-1,345	-2,507
Dates of recession	Percent change			Percent change		
	Total	Women	Men	Total	Women	Men
December 1969–November 1970	-6.7	-7.0	-6.6	1.5	2.5	0.8
November 1973–March 1975	-10.3	-12.6	-9.6	2.2	5.3	-.1
January 1980–July 1980	-5.0	-4.6	-5.1	.4	1.3	-.3
July 1981–November 1982	-10.6	-8.7	-11.2	-.4	1.1	-1.7
July 1990–March 1991	-4.1	-2.9	-4.5	-.3	.4	-1.1

See footnotes at end of table.

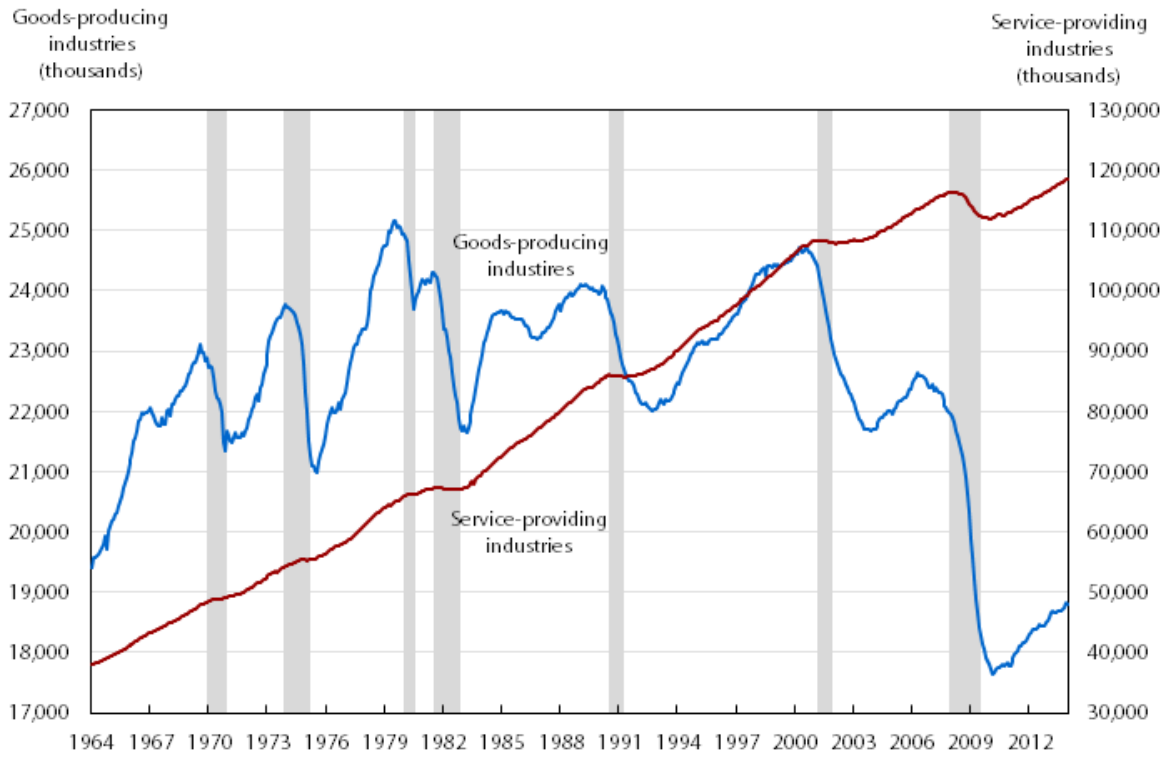
Table 4. Net change in jobs for women and men on nonfarm payrolls, in thousands and in percent change, seasonally adjusted, previous seven recessions, 1969–2009

Dates of recession	Goods-producing industries			Service-providing industries		
	Net change			Net change		
	Total	Women	Men	Total	Women	Men
March 2001–November 2001	-4.9	-7.2	-4.1	-.4	.4	-1.2
Average	-6.9	-7.2	-6.9	.5	1.8	-.6
December 2007–June 2009	-16.2	-14.7	-16.6	-3.3	-2.1	-4.7

Note: Service-providing industries include government. Beginning and ending months of recessions are determined by the National Bureau of Economic Research.

Source: U.S. Bureau of Labor Statistics, Current Employment Statistics for employment data.

Figure 4. Employment in the goods-producing and service-providing industries, in thousands, seasonally adjusted, 1964–2013



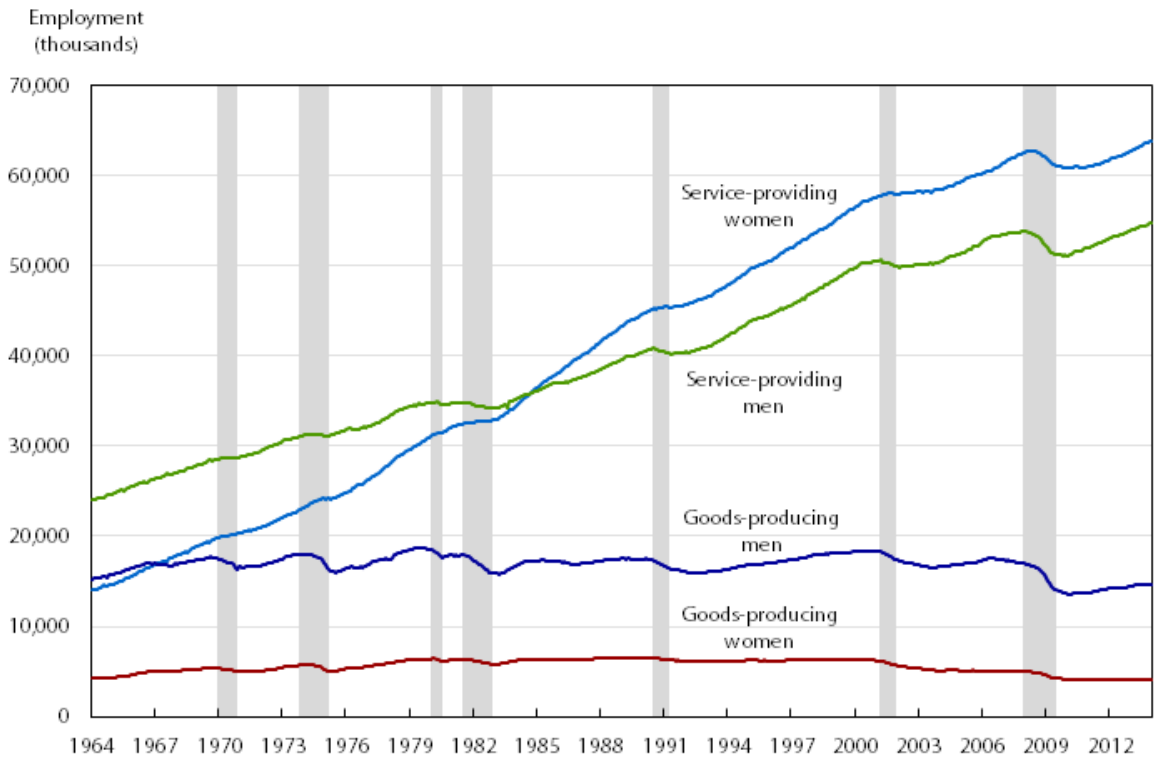
Note: Shaded areas represent recessions as determined by the National Bureau of Economic Research.
Source: U.S. Bureau of Labor Statistics, Current Employment Statistics.

Because the nature of employment in the goods-producing industries is more cyclical, these industries have seen periods of job expansion and contraction. This pattern contrasts with that in the service-providing industries, which have experienced relatively consistent long-term job growth. (See figure 4.) In addition, the nature of cyclical movement in the goods-producing industries has changed over time, as employers have recalled fewer employees after the last two recessions than they have in the previous five downturns; as a result, employment in these

industries has seen a long-term contraction. Yet, in a sharp reversal from the pattern established in the previous six recessions, the service-providing industries shed more jobs in the 2007–2009 downturn than did the goods-producing industries; employment declines in these industries were 3.9 million and 3.6 million, respectively. In percentage terms, however, the goods-producing industries suffered the lion's share of job losses—a share of 16 percent, which is substantially larger than the 3-percent share for the service-providing industries. Finally, both men and women lost more jobs in both goods-producing and service-providing industries during the 2007–2009 downturn than they did in each of the previous recessions.

Why men lose more jobs during recessions

Figure 5. Employment of women and men in the goods-producing and service-providing industries, in thousands, seasonally adjusted, 1964–2013

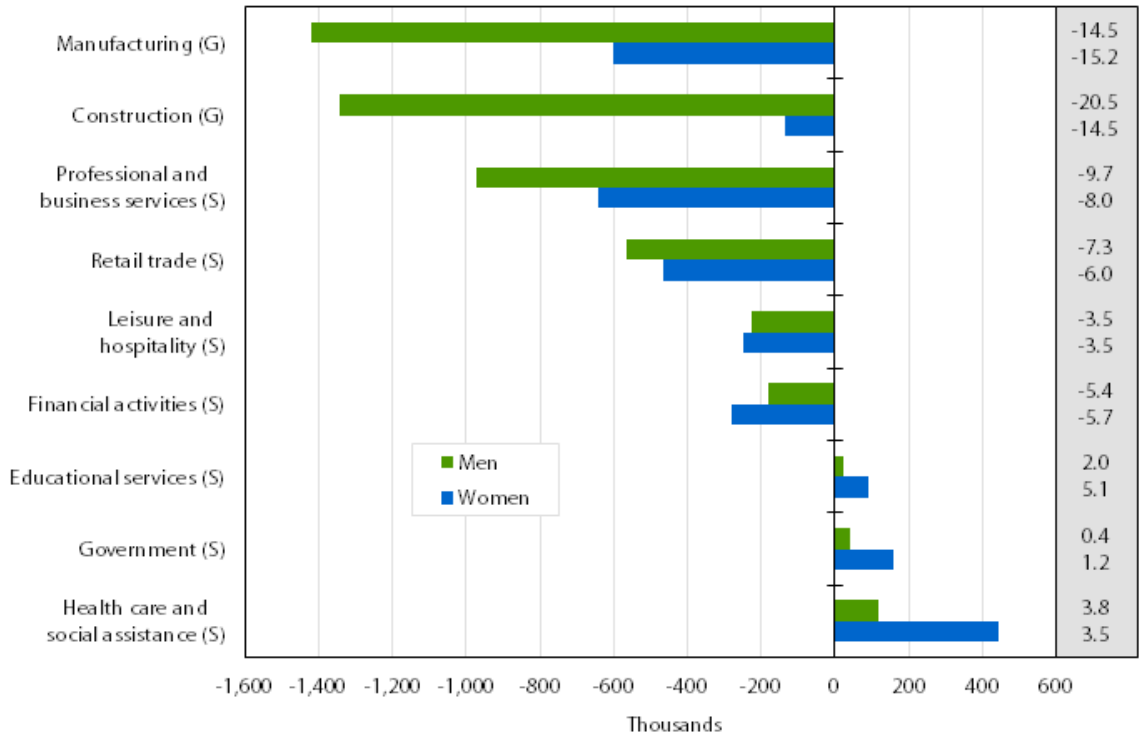


Note: Shaded areas represent recessions as determined by the National Bureau of Economic Research.
Source: U.S. Bureau of Labor Statistics, Current Employment Statistics.

Men hold the overwhelming share of jobs in a group of goods-producing industries that are considerably more sensitive to changes in the business cycle, while women hold the majority of positions in the less cyclical service-proving industries. Typically, as demand declines for goods such as automobiles, furniture, and new homes, employment in the related industries that supply those goods falls. In 2013, 78 percent of all jobs in the goods-producing industries were held by men, whereas 54 percent of all jobs in the service-providing industries were held by women. The share of female employees in the service-providing industries has expanded over time, as women have increased their presence in a growing group of such industries. (See figure 5.) Because the widespread growth within the service-providing industries has historically been resistant to changing business cycles, women

have experienced smaller job losses relative to men in each of the last seven recessions. In addition, on net, women have lost fewer jobs than men have in the goods-producing industries in each of the past recessions.

Figure 6. Net and percent change in jobs for men and women on nonfarm payrolls, by selected industry, in thousands, seasonally adjusted, 2007–2009 recession



Note: Beginning and ending months of recessions are determined by the National Bureau of Economic Research. G denotes goods-producing industries and S denotes service-providing industries. The shaded area contains percent changes in women's and men's employment.

Source: U.S. Bureau of Labor Statistics, Current Employment Statistics.

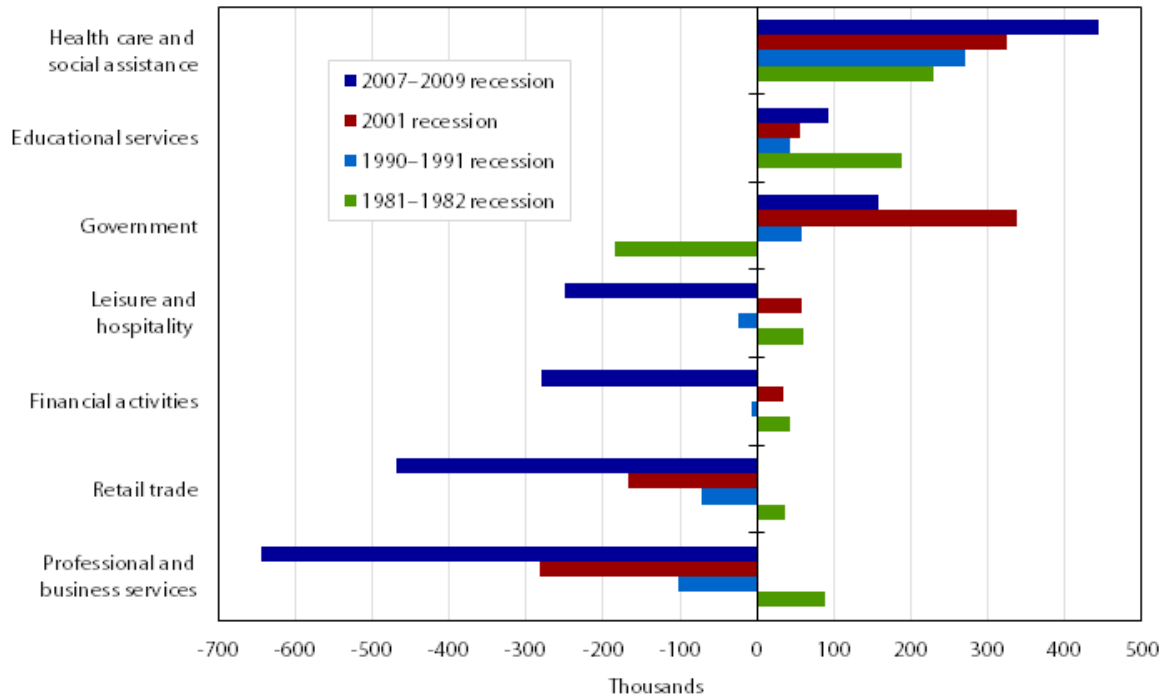
Goods-producing industries. Within the goods-producing industries, construction and manufacturing—two male-dominated industries whose shares of men's employment in 2013 were 87 percent and 73 percent, respectively—faced the most severe employment contractions in the 2007–2009 recession. (See figure 6.) Between these two industries, job losses among men accounted for more than one-third of the total 7.4 million jobs lost during the downturn. The 2007–2009 recession was closely tied to the 2006 collapse of the housing market, a market that served as "one of the key drivers of growth throughout much of the decade."[9] The housing credit market deteriorated over the course of 2007, as delinquency rates rose and home foreclosures reached historically high levels. The construction industry was severely affected by these developments and, consequently, so was the employment of men. Employment in construction fell by 1.5 million, or 20 percent, and men held more than 9 out of every 10 jobs lost.

Likewise, the manufacturing industry suffered substantial job losses during the 2007–2009 recession; employment in the industry declined by 2.0 million, and 70 percent of these losses were among men. Because many detailed manufacturing industries provide inputs for the construction industry, the severe job losses within construction fueled further job losses within construction-related manufacturing industries. As one source puts it, "Wood products and furniture and related products, together, accounted for 14 percent of the total job losses in manufacturing. . . . Machinery manufacturing supports the efforts of other industries—including construction and

mining—and was affected by their recession-related declines. The machinery industry accounted for more than 8 percent of manufacturing job losses during the recession."[10] Overall, the goods-producing industries shed 3.6 million jobs in the 2007–2009 downturn, and nearly 8 out of every 10 jobs lost had been held by men.

Service-providing industries. During the 2007–2009 recession, several service-providing industries managed to see small job gains or at least maintain their prerecession levels of employment. Even during economic downturns, society still requires services such as health care and education. In addition, during economic recessions, the industries that provide those services may benefit from increases in government funding. Examples of such increases include the expansion of Medicaid subsidies and other stimulus funds to cover increased hospital emergency room usage,[11] as well as increased stimulus for programs such as the Supplemental Nutrition Assistance Program, which can be used to fund workforce and educational programs.[12] Because the health care and education industries employ more women than men, their continued growth throughout the past four recessions resulted in continued job gains for women in both industries. For example, in 2013, women held 80 percent of all jobs in the health care and social assistance industry, 61 percent in educational services, 58 percent in financial activities, and 57 percent in government.

Figure 7. Net change in jobs for women on nonfarm payrolls, by selected industry, in thousands, seasonally adjusted, previous four recessions, 1981–2009



Note: Beginning and ending months of recessions are determined by the National Bureau of Economic Research. For health care services, data for the 1981–1982 recession reflect not seasonally adjusted Standard Industrial Classification (SIC) system estimates; see http://www.bls.gov/ces/cesnaics.htm for details. Intermittent census workers have not been excluded from estimates for government, because data are not available by gender.

Source: U.S. Bureau of Labor Statistics, Current Employment Statistics.

Employment in the health care and social assistance industry has benefited from a long-term growth trend that has persisted even through changing business cycles.[13] As evidenced by its strong job gains in each of the past four recessions, the industry has been fairly immune to fluctuations in the business cycle. (See figure 7.) As one source explains it, "Job gains in the industry are highly correlated with the aging baby boomer population as well as

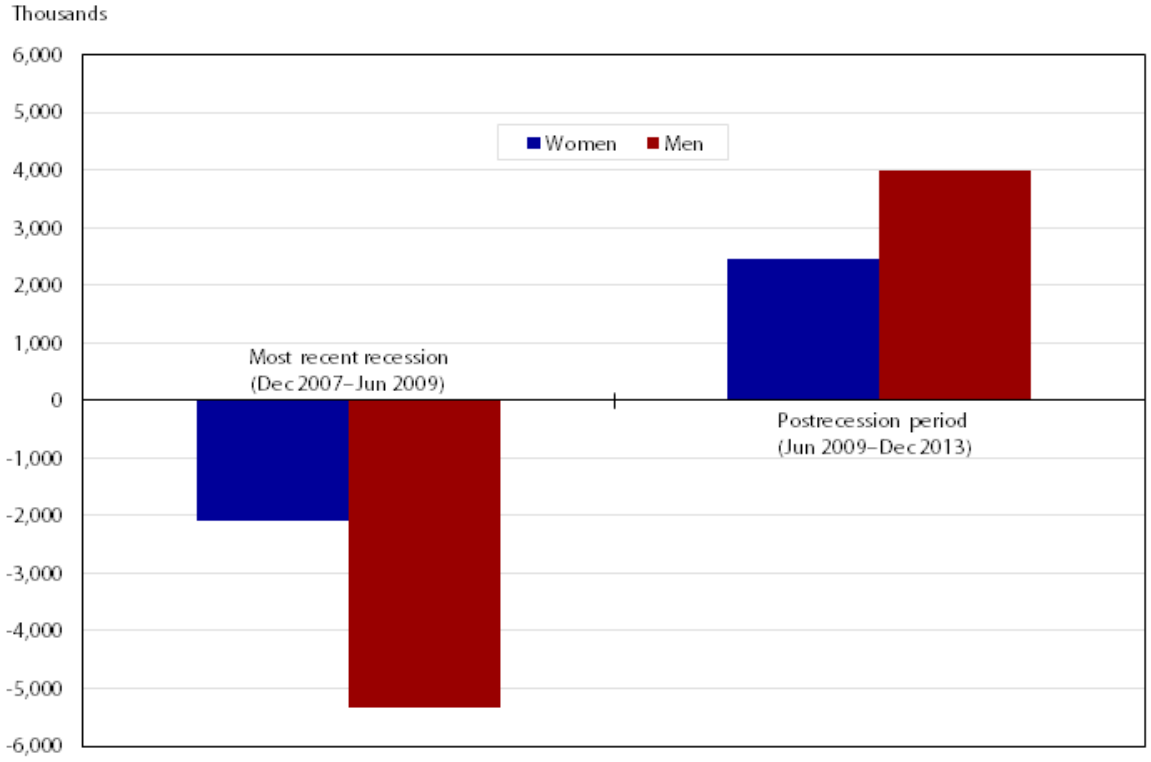
advancements in medical technologies, which can drive up demand for new procedures."[14] While total nonfarm employment contracted by 5 percent during the 2007–2009 recession, employment in the health care and social assistance industry expanded by 4 percent over the same period. Hospital employment, for example, has an extremely high proportion of female employees and has shown exceptionally robust growth during both economic expansions and recessions.[15] Further, throughout the 2007–2009 recession, employers in the health care and social assistance industry hired nearly four female employees for each male employee; of the 561,000 jobs added by the industry during the recession, 444,000 jobs went to women.

Government is the largest sector of the economy in terms of employment, employing nearly 22 million workers at the federal, state, and local levels, and comprising 16 percent of total nonfarm employment in 2013. A large majority, 57 percent, of government workers in that year were women, with their share of employment trending up from 53 percent in January 1990. This long-term trend is primarily due to local government employment, which accounted for nearly two-thirds of government employment and the highest share of female employees (61 percent in 2013) among the three major components (federal, state, and local). Within the local component, local government education had an even higher share of female employees (73 percent in 2013) and accounted for 55 percent of local government employment.

Historically known for providing substantial job security to employees, government accounted for the largest share of jobs added during the 2001 recession and the second-largest share during the 1990–1991 and 2007–2009 recessions, trailing only the health care and social assistance industry in this regard. Although government employment is generally affected by recessions, its contractions usually occur with a lag, as declines in state and local tax revenues reduce future fiscal year budgets. Employment in government rose by 191,000 during the 2007–2009 recession, after removing the temporary hiring effects of intermittent 2010 Census workers.[16] In the postrecessionary period, between June 2009 and December 2013, the government sector shed 722,000 jobs; of those, 74 percent were at the local level and 16 percent at the state level.

Why men have added more jobs in the economic recovery

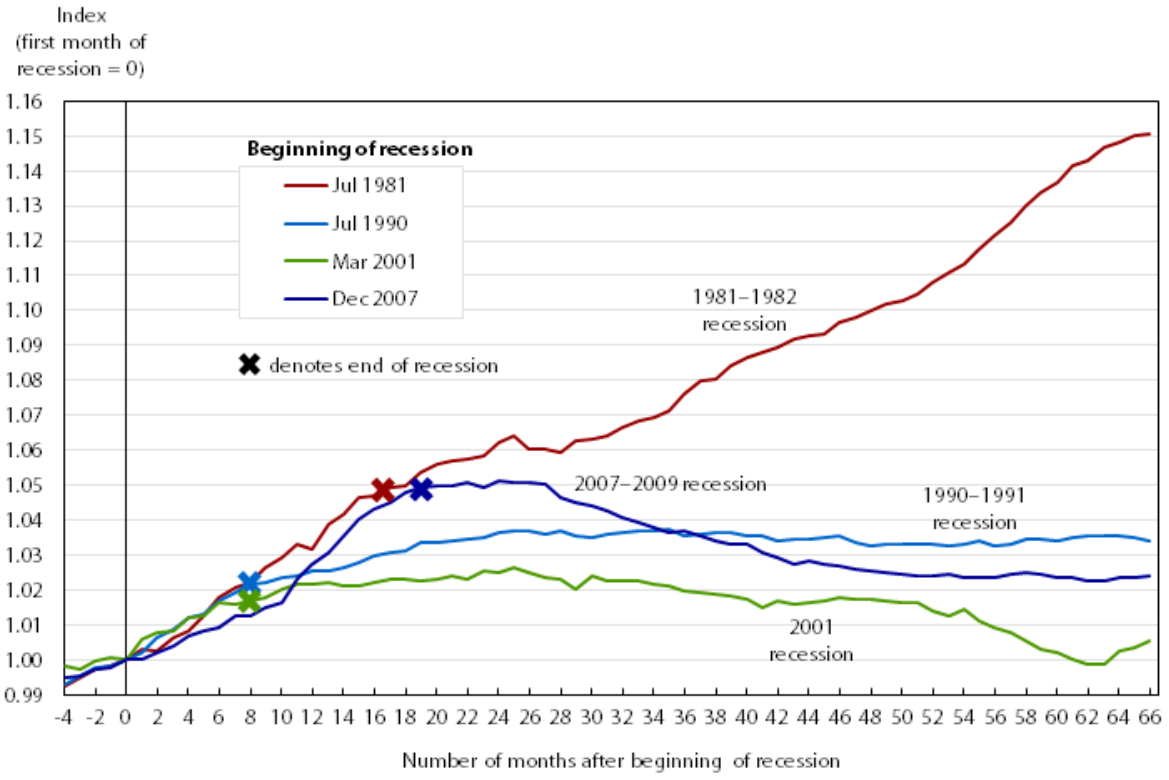
Figure 8. Net change in jobs for women and men on nonfarm payrolls during the 2007–2009 recession and 2009–2013 postrecession period, in thousands, seasonally adjusted



Note: Beginning and ending months of recessions are determined by the National Bureau of Economic Research.
Source: U.S. Bureau of Labor Statistics, Current Employment Statistics.

While job losses among men outnumbered those among women by 2.6 to 1 during the 2007–2009 recession, that trend reversed itself in the economic recovery of June 2009–December 2013. (See figure 8.) In numerical terms, men lost 5.3 million jobs during the recession and regained 4.0 million of those jobs in the recovery period. Over the same timeframe, women lost 2.1 million jobs and then added 2.5 million jobs. By December 2013, men's employment had recovered 75 percent of recessionary job losses and women's employment had more than fully recovered. Nevertheless, women have experienced weaker job growth after the end of the 2007–2009 downturn than they had experienced in the previous three recessions. (See figure 9.) During each of the past four recessions, the ratio of women's to men's employment shares has expanded. After the 2001 downturn, and then to a greater extent following the 2007–2009 recession, the ratio exhibited a long-term decline.

Figure 9. Index of women's to men's employment share ratios, seasonally adjusted, previous four recessions, 1981–2013



Note: Beginning and ending months of recessions are determined by the National Bureau of Economic Research.
Source: U.S. Bureau of Labor Statistics, Current Employment Statistics.

In the economic recovery, which began in June 2009 and is reported through December 2013 in this analysis, the job gains among men (4.0 million) largely exceeded those among women (2.5 million). (See table 5.) Although women's employment has fully recovered from the job losses of the 2007–2009 recession, men's employment has performed better in industries that have historically employed more women. For example, in (1) leisure and hospitality and (2) financial activities—two industries that have traditionally employed more women than men—men's employment gains have outpaced women's in the economic recovery. Indeed, within the financial activities industry, in which the women's share of employment stood at 58 percent in 2013, men's employment has fully recovered the jobs lost during the recession, whereas women's employment has continued to contract. In addition, while both men and women have regained the jobs lost in the service-providing industries, women have continued to lose jobs in the goods-producing industries, while men have recovered 18 percent of their losses in those industries. In the manufacturing industry, for example, men's employment has recovered 30 percent of the 1.4 million jobs lost during the recession, while women's employment has continued to decline.

Table 5. Net change in jobs for women and men on nonfarm payrolls, by selected industry, in thousands and percent of jobs recovered, seasonally adjusted, 2007–2009 recession and 2009–2013 postrecession period

Industry	Women			Men		
	Recession (Dec 2007–Jun 2009)	Recovery (Jun 2009–Dec 2013)	Jobs recovered	Recession (Dec 2007–Jun 2009)	Recovery (Jun 2009–Dec 2013)	Jobs recovered
	Net change		Percent	Net change		Percent
Total nonfarm	-2,082	2,462	118	-5,324	3,989	75
Total private	-2,239	2,892	129	-5,367	4,281	80
Goods-producing	-737	-130	–	-2,817	519	18
Service-providing	-1,345	2,592	193	-2,507	3,470	138
Mining and logging	0	20	–	-54	176	326
Construction	-136	-55	–	-1,344	-79	–
Construction of buildings	-55	-17	–	-319	-25	–
Residential building	-48	-5	–	-214	2	1
Nonresidential building	-7	-12	–	-105	-27	–
Heavy and civil engineering construction	-15	-16	–	-146	51	35
Specialty trade contractors	-66	-22	–	-879	-105	–
Manufacturing	-601	-95	–	-1,419	422	30
Durable goods	-395	-39	–	-1,130	438	39
Wood products	-25	-2	–	-118	5	4
Nonmetallic mineral products	-17	-9	–	-80	-4	–
Primary metals	-15	1	7	-87	47	55
Fabricated metal products	-50	3	5	-212	147	69
Machinery	-32	9	28	-138	82	60
Computer and electronic products	-58	-40	–	-70	-30	-
Semiconductors and electronic components	-31	-9	–	-36	7	19
Electrical equipment and appliances	-19	-14	–	-37	18	49
Transportation equipment	-114	35	31	-266	174	65
Motor vehicles and parts	-101	39	39	-233	176	76
Furniture and related products	-36	-14	–	-98	-2	–
Miscellaneous durable goods manufacturing	-30	-8	–	-25	2	6
Nondurable goods	-206	-56	–	-289	-16	–
Printing and related support activities	-47	-24	–	-47	-53	–
Chemicals	-8	-23	–	-46	15	32
Plastics and rubber products	-54	10	18	-80	33	42
Trade, transportation, and utilities	-717	393	55	-1,089	855	79
Wholesale trade	-142	20	14	-318	199	63
Durable goods	-81	2	2	-236	91	38

See footnotes at end of table.

Table 5. Net change in jobs for women and men on nonfarm payrolls, by selected industry, in thousands and percent of jobs recovered, seasonally adjusted, 2007–2009 recession and 2009–2013 postrecession period

Industry	Women			Men		
	Recession (Dec 2007–Jun 2009)	Recovery (Jun 2009–Dec 2013)	Jobs recovered	Recession (Dec 2007–Jun 2009)	Recovery (Jun 2009–Dec 2013)	Jobs recovered
	Net change		Percent	Net change		Percent
Nondurable goods	-41	-27	–	-65	56	86
Retail trade	-468	332	71	-567	393	69
Motor vehicle and parts dealers	-68	37	54	-203	157	77
Automobile dealers	-55	32	57	-175	116	66
Furniture and home furnishings stores	-61	-11	–	-61	15	25
Electronics and appliance stores	-14	16	121	-57	-16	–
Building material and garden supply stores	-46	62	135	-79	5	6
Clothing and clothing accessories stores	-99	32	32	-52	6	12
General merchandise stores	-36	75	210	-47	45	96
Miscellaneous store retailers	-31	-9	–	-47	16	35
Transportation and warehousing	-95	49	52	-219	264	120
Truck transportation	-21	14	63	-135	111	82
Information	-115	-95	–	-113	-27	–
Publishing industries, except Internet	-46	-33	–	-55	-30	–
Telecommunications	-32	-75	–	-33	-33	–
Financial activities	-280	-103	–	-181	183	101
Credit intermediation and related activities	-103	-53	–	-99	61	62
Depository credit intermediation	-45	-63	–	-28	25	90
Securities, commodity contracts, investments, and funds and trusts	-15	-3	–	-39	15	39
Real estate	-71	-15	–	-10	73	702
Rental and leasing services	-53	-15	–	-35	-5	–
Professional and business services	-644	981	152	-971	1,425	147
Professional and technical services	-129	242	188	-196	481	245
Accounting and bookkeeping services	-14	-12	–	-40	15	37
Architectural and engineering services	-42	10	24	-90	48	53
Administrative and waste services	-490	651	133	-752	779	104

See footnotes at end of table.

Table 5. Net change in jobs for women and men on nonfarm payrolls, by selected industry, in thousands and percent of jobs recovered, seasonally adjusted, 2007–2009 recession and 2009–2013 postrecession period

Industry	Women			Men		
	Recession (Dec 2007–Jun 2009)	Recovery (Jun 2009–Dec 2013)	Jobs recovered	Recession (Dec 2007–Jun 2009)	Recovery (Jun 2009–Dec 2013)	Jobs recovered
	Net change		Percent	Net change		Percent
Administrative and support services	-491	649	132	-741	755	102
Employment services	-405	496	122	-610	561	92
Temporary help services	-335	484	145	-466	538	115
Services to buildings and dwellings	-29	61	207	-86	102	118
Education and health services	536	1,164	–	140	541	–
Educational services	92	131	–	24	142	–
Health care and social assistance	444	1,032	–	117	399	–
Health care	335	739	–	97	331	–
Ambulatory health care services	195	574	–	39	204	–
Home health care services	80	193	–	17	40	–
Hospitals	68	44	–	34	83	–
Nursing and residential care facilities	70	120	–	25	45	–
Social assistance	115	298	–	15	64	–
Leisure and hospitality	-250	650	260	-224	709	317
Arts, entertainment, and recreation	-54	72	135	-48	118	248
Amusements, gambling, and recreation	-47	69	148	-32	75	234
Accommodation and food services	-197	578	193	-176	591	337
Accommodation	-69	95	137	-64	20	32
Food services and drinking places	-120	480	401	-120	574	479
Other services	-32	32	100	-112	76	68
Repair and maintenance	-17	-1	–	-81	63	78
Government	157	-430	–	43	-292	–
Federal	41	-31	–	17	-47	–
Federal, except U.S. Postal Service	70	4	–	65	28	–
U.S. Postal Service	-37	-37	–	-39	-74	–
State government	-38	35	92	75	-147	–
State government education	-18	65	374	56	-21	–
State government, excluding education	-18	-34	–	16	-124	–
Local government	154	-434	–	-49	-98	–
Local government education	147	-277	–	-94	-58	–

See footnotes at end of table.

Table 5. Net change in jobs for women and men on nonfarm payrolls, by selected industry, in thousands and percent of jobs recovered, seasonally adjusted, 2007–2009 recession and 2009–2013 postrecession period

Industry	Women			Men		
	Recession (Dec 2007–Jun 2009)	Recovery (Jun 2009–Dec 2013)	Jobs recovered	Recession (Dec 2007–Jun 2009)	Recovery (Jun 2009–Dec 2013)	Jobs recovered
	Net change		Percent	Net change		Percent
Local government, excluding education	0	-152	–	52	-46	–

Note: Total private employment in selected industries increased or declined by greater than 50,000 during the 2007–2009 recession. Dashes indicate industries that did not contract during the 2007–2009 recession, or have continued to contract during the recovery. Beginning and ending months of recessions are determined by the National Bureau of Economic Research.

Source: U.S. Bureau of Labor Statistics, Current Employment Statistics for employment data.

For both genders, the trend in government employment established during the 2007–2009 recession saw a major reversal in the recovery period. Government added 200,000 employees to its payrolls during the recession and lost 722,000 jobs between the recession's end and 2013.[17] Throughout the economic recovery, job losses have been widespread at the local government level; as tax revenues declined and federal stimulus funding expired in the wake of the prolonged recession, municipalities struggled to balance budget deficits and avoid laying off school teachers. As one economist explains the environment, "Tax revenues are sensitive to the business cycle, and severe declines in tax revenues following the most recent recession took a heavy toll on local governments. Some local governments cut employment after exhausting measures such as furloughs, pay freezes, cuts in service, and larger classroom sizes."[18] More than three out of every four government jobs added during the recession were positions held by women; however, a reversal of this trend occurred during the recovery through 2013, with women accounting for 60 percent of total job losses, virtually all of which were at the local level. Women's employment in local government continued to decline each year since the recession ended, for a total drop of 434,000, before leveling off in 2013; by contrast, over the same period, men's employment experienced less than one-quarter of those job losses. At the state level, women's employment declined by 38,000 during the recession, while men's employment increased by 75,000. In the recovery period, women regained 35,000 jobs, while men lost 147,000 jobs. In total, women's employment in government expanded by 157,000 during the 2007–2009 recession and has since lost nearly three times as many jobs.

WHILE RECESSIONS HAVE A PROFOUND EFFECT on both women's and men's employment, they tend to have a more severe employment effect on men. One of the main causes of this differential effect is that the goods-producing industries, which predominantly employ men, are more cyclical in nature and more sensitive to changes in the business cycle. Since reaching a peak in April 2006, employment in the goods-producing industries has fallen by 3.8 million, or 17 percent. Conversely, employment in the service-providing industries has expanded by 2.2 million since these industries' most recent employment peak in January 2008. Throughout the 2007–2009 recession, the female share of total employment increased in percentage terms because of women's employment dominance in service-providing industries and these industries' historical employment inelasticity during downturns.

Women's employment has made some notable strides over the past several decades—strides that have been particularly noteworthy during recent recessions. Women held an unprecedented 50.0 percent of nonfarm jobs during the 2007–2009 recession—a considerable gain from January 1964, when the CES survey first estimated that women held 32 percent of payroll jobs. This long-term trend reflects the employment growth in service-providing industries that employ more women than men and contrasts with the trend in the goods-producing industries, which are dominated by men and more severely impacted by recessions and changing business cycles.

As employment in the construction and manufacturing industries plunged during the 2007–2009 recession, men accounted for roughly 8 out of every 10 jobs lost in those two industries—2.8 million jobs in total. Over the same period, the health care and social assistance and government sectors, both of which employ more women than men, continued to expand at a modest rate. Although the job losses experienced by both women and men during the most recent recession were severe, the resilience of women's employment and its long-term growth are historic.

SUGGESTED CITATION

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NOTES

1 Recessions in the United States are identified by the National Bureau of Economic Research, according to which the most recent recession began in December 2007 and ended in June 2009. The previous three recessions were from March 2001 to November 2001, from July 1990 to March 1991, and from July 1981 to November 1982, respectively. For a complete list of business cycle dates, see "U.S. business cycle expansions and contractions" (Cambridge, MA: National Bureau of Economic Research, September 20, 2010), http://www.nber.org/cycles/cyclesmain.html.

2 The CES program is a monthly survey of about 144,000 nonfarm businesses and government agencies, representing approximately 554,000 individual worksites. The CES program produces employment estimates for all employees and for female employees. In this article, employment estimates for men are calculated as the difference between estimates for all employees and estimates for women. For more information on the survey's concepts and methodology, see "Technical notes to establishment survey data published in *Employment and Earnings*" (U.S. Bureau of Labor Statistics, April 1, 2013), https://www.bls.gov/web/empsit/cestn.htm. To access CES data, see "Current Employment Statistics—CES (national)" (U.S. Bureau of Labor Statistics, April 1, 2013), https://www.bls.gov/ces. Unless otherwise noted, the CES data used in this article are seasonally adjusted.

3 The labor force data used in this section of the article are from the CPS, a monthly survey of approximately 60,000 households conducted by the U.S. Census Bureau for the Bureau of Labor Statistics. The CPS program produces comprehensive data on the labor force, employment, unemployment, and people not in the labor force. Studies based on the CPS cover a broad range of topics, including the nation's overall labor market situation as well as that of special worker groups, such as minorities, women, foreign-born workers, school-age youth, older workers, the disabled, veterans, contingent workers, and displaced workers. To access CPS data, see https://www.bls.gov/cps.

4 For additional information on the distinct survey concepts, definitions, and methodologies used in the CES and CPS surveys, see https://www.bls.gov/web/empsit/ces_cps_trends.htm.

5 Anne E. Polivka and Stephen M. Miller, "The CPS after the redesign: refocusing the economic lens" (U.S. Bureau of Labor Statistics, March 1995), pp. 1–48 (especially p. 36), https://www.bls.gov/osmr/research-papers/1995/pdf/ec950090.pdf.

6 William Goodman, Stephen Antczak, and Laura Freeman, "Women and jobs in recessions: 1969–92," *Monthly Labor Review*, July 1993, pp. 26–35 (especially p. 26), https://www.bls.gov/opub/mlr/1993/07/art3full.pdf.

7 For definitions of goods-producing industries, see https://www.bls.gov/iag/tgs/iag06.htm.

8 The service-providing industries include wholesale trade, retail trade, transportation and warehousing, utilities, information, financial activities, professional and business services, education and health services, leisure and hospitality, other services, and government. For definitions of service-providing industries, see https://www.bls.gov/iag/tgs/iag07.htm.

9 Christopher J. Goodman and Steven M. Mance, "Employment loss and the 2007–09 recession: an overview," *Monthly Labor Review*, April 2011, p. 4, https://www.bls.gov/opub/mlr/2011/04/art1full.pdf.

10 Megan M. Barker, "Manufacturing employment hard hit during the 2007–09 recession," *Monthly Labor Review*, April 2011, pp. 28–33 (especially p. 30), https://www.bls.gov/opub/mlr/2011/04/art5full.pdf. (Data in the referenced article have been revised and updated.)

11 Renee M. Gindi, Robin A. Cohen, and Whitney K. Kirzinger, "Emergency room use among adults aged 18–64: early release of estimates from the National Health Interview Survey, January–June 2011," *National Center for Health Statistics*, May 2012, http://www.cdc.gov/nchs/data/nhis/earlyrelease/emergency_room_use_january-june_2011.pdf.

12 See, for example, Dottie Rosenbaum, "SNAP is effective and efficient," *Center on Budget and Policy Priorities*, March 11, 2013, http://www.cbpp.org/cms/?fa=view&id=3239.

13 With the release of data in the January 2014 Employment Situation on February 7, 2014, the Bureau of Labor Statistics introduced its annual benchmark revision, and historical estimates were revised. This year's benchmark was substantially affected by the inclusion of employment that was previously in Private households and considered out of scope by the establishment survey. Specifically, historical data for services for the elderly and the disabled were reconstructed and incorporated into the CES survey back to 1979. For more information, see https://www.bls.gov/web/empsit/cesbmart.htm.

14 Sutton E. Puglia and Parth A. Tikiwala, "Slow and steady: payroll employment grew moderately in 2012," *Monthly Labor Review*, March 2013, pp. 22–30 (especially p. 27), https://www.bls.gov/opub/mlr/2013/03/art2full.pdf.

15 Catherine A. Wood, "Employment in health care: a crutch for the ailing economy during the 2007–09 recession," *Monthly Labor Review*, April 2011, pp. 13–18 (especially p. 13), https://www.bls.gov/opub/mlr/2011/04/art2full.pdf.

16 "Census 2010 temporary and intermittent workers and federal government employment," from CES survey, last modified on June 8, 2012, https://www.bls.gov/ces/tables/census-temporary-intermittent-workers-government-employment.htm.

17 Intermittent census workers have not been excluded from these estimates because their impact on employment was minimal.

18 John P. Eddlemon, "Payroll employment turns the corner in 2010," *Monthly Labor Review*, May 2010, pp. 23–32 (especially pp. 30–31), https://www.bls.gov/opub/mlr/2011/03/art2full.pdf.

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