

UNEMPLOYMENT

A “Man”ufacturing Comeback: Men’s and Women’s Employment Gains and Losses in 2011

March 2012

In 2011 manufacturing employment increased for the first time in more than a decade, with annual average employment rising by 205,000 jobs.¹ Unfortunately, women did not share in these gains. In fact, between 2010 and 2011 men’s annual average employment in manufacturing increased by 230,000 jobs while women’s dropped by 25,000 jobs.

KEY FACTS

- **In three of the four highest-paying manufacturing fields with potential for job growth, women’s employment declined while men’s increased between 2010 and 2011, and in the fourth, gains went disproportionately to men.**
- **In ten other sectors where employment increased between 2010 and 2011, gains went disproportionately to men.**
- **In seven other sectors where employment decreased between 2010 and 2011, women bore a disproportionate share of the declines.**

As policy makers focus on promoting manufacturing employment in the U.S., they should ensure that women share in this growth by 1) investing in job training programs that prepare women for highly-skilled and high-paying jobs and 2) ensuring that women’s opportunities in this field are not hampered by discrimination or other barriers.

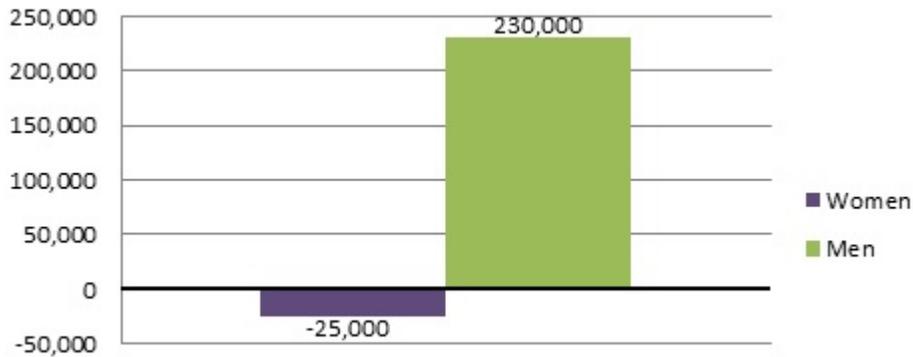
Women’s employment in manufacturing continued to drop as manufacturing employment increased between 2010 and 2011.

- Between 2010 and 2011 the annual average employment in manufacturing increased by 205,000 jobs, from 11.528 million jobs held on average each month in 2010 to 11.733 million jobs in 2011. However, this overall gain masked a sharp divergence: men’s annual average employment rose by 230,000 jobs, while women’s dropped by 25,000 jobs.

Technical Note:

This analysis uses data from the Bureau of Labor Statistics, Current Employment Statistics (CES) survey available at <http://data.bls.gov/pdq/querytool.jsp?survey=ce> to compare annual average employment for women and men in manufacturing overall, and its 21 sectors. These sectors include the durable goods manufacturing sectors of 1) wood products, 2) nonmetallic mineral products, 3) primary metals, 4) fabricated metal products, 5) machinery, 6) computer & electronic products, 7) electrical equipment & appliances, 8) transportation equipment, 9) furniture & related products, and 10) miscellaneous manufacturing; and the nondurable goods manufacturing sectors of 11) food manufacturing, 12) beverages & tobacco products, 13) textile mills, 14) textile product mills, 15) apparel, 16) leather & allied products, 17) paper & paper products, 18) printing & related support activities, 19) petroleum & coal products, 20) chemicals, and 21) plastics & rubber products. Durable goods manufacturing and nondurable goods manufacturing are not included as separate categories. Annual averages, which are the average of the number of employees for each month of the year, are used to examine the 21 manufacturing sectors for men and women because seasonally adjusted data are not available. CES data were also used to determine average weekly earnings for workers in the 21 sectors. All CES data were current as of March 9, 2012. All projections of employment growth in different sectors are from Susan Helper, Timothy Krueger, and Howard Wial, Brookings Institution, “Why Does Manufacturing Matter? Which Manufacturing Matters? A Policy Framework” (Feb. 2012) available at http://www.brookings.edu/papers/2012/0222_manufacturing_helper_krueger_wial.aspx.



Figure 1. Change in annual average employment in manufacturing, 2010-2011

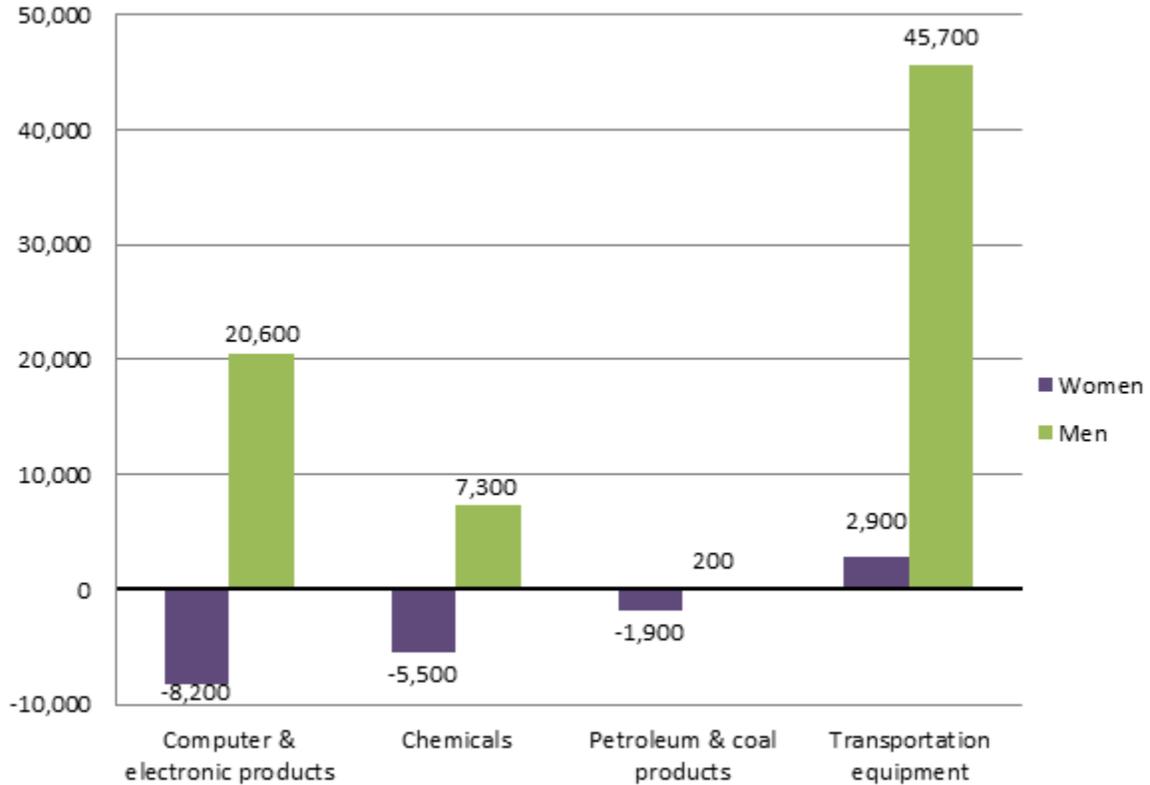
Source: NWLC calculations from Current Employment Statistics survey.

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- Between 2010 and 2011, there was not a single manufacturing sector where women's annual average employment increased while men's decreased, though the reverse was true in ten sectors.
 - The divergence of men's and women's employment in manufacturing during the recovery was a change from the trend during the recession. During the recession the decreases in annual average employment in manufacturing were borne proportionately by women and men. Women accounted for roughly 29 percent of the field and 30 percent of the decrease in annual average employment between 2007 and 2009.²
 - As the recovery took hold, however, women were left behind. Between 2009 and 2010 the annual average employment in manufacturing continued to drop, though not as steeply as during the recession, declining by 319,000 jobs. Women bore a disproportionate share of this decrease, 38 percent, despite accounting for only 29 percent of manufacturing workers in 2009, and continued to lose jobs when manufacturing employment increased between 2010 and 2011.
- In three of the four highest-paying manufacturing fields with potential for job growth, women's employment dropped while men's increased between 2010 and 2011.**
- In three of the four manufacturing sectors with the highest average weekly earnings, **chemicals, petroleum & coal products, and computer & electronics products**, women's annual average employment decreased while men's increased. In the fourth, **transportation equipment**, the increase in women's annual average employment was disproportionately small compared to men's.³ A recent analysis by the Brookings Institution projected strong job growth in chemicals and petroleum & coal products and modest job growth in computer & electronic products and transportation equipment.
 - **Computer & electronic products** saw the largest disparity between men's and women's employment: women's annual average employment decreased by 8,200 jobs and men's increased by 20,600 jobs.
 - **Chemicals**, a sector which includes pharmaceuticals, also experienced a wide divergence; women's annual average employment decreased by 5,500 jobs while men's increased by 7,300 jobs.
 - In **petroleum & coal products** women's annual average employment decreased by 1,900 jobs while men's increased by 200 jobs.
 - Annual average employment in **transportation equipment**, which includes the automotive and aerospace industries, increased by 48,600 jobs between 2010 and 2011. Women's increased employment accounted for only six percent of the growth in the field, despite the fact that women comprised more than 22 percent of the workers in 2010.

Figure 2. Change in annual average employment in the highest-paying manufacturing sectors, 2010-2011



Source: NWLC calculations from Current Employment Statistics survey.

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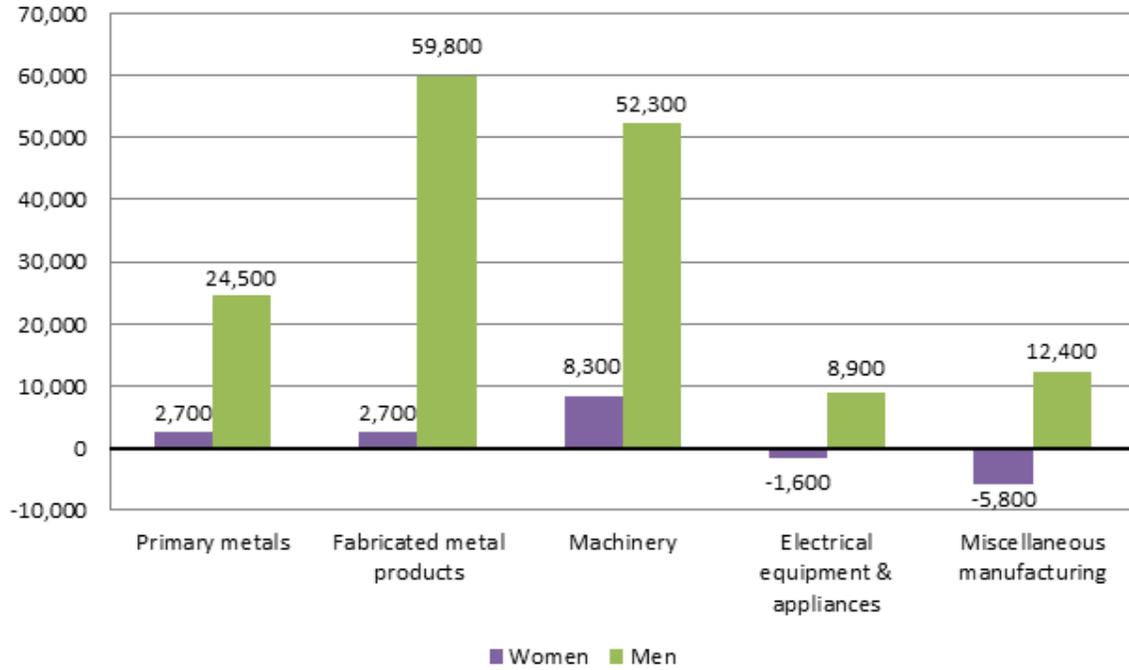
In ten other sectors which had increases in employment between 2010 and 2011, gains went disproportionately to men.

- In ten other sectors where annual average employment increased between 2010 and 2011, women's annual average employment decreased in four and increased in six.⁴
- In four of the six sectors where women's employment increased, women's share of the increase was smaller than their share of the workforce.⁵
- In only two sectors, **food manufacturing** and **beverage & tobacco products**, did women experience disproportionately large increases. Though food manufacturing is projected to have strong growth, it is a low-wage sector.⁶ Beverage & tobacco products manufacturing, a sector with mid-level wages, is projected to see future increases in employment.⁷

Even in sectors where employment decreased between 2010 and 2011, women bore a disproportionate share of the declines.

- Of the seven other sectors (besides petroleum & coal products) where annual average employment decreased between 2010 and 2011, men's annual average employment actually increased in three, meaning that declines in women's employment accounted for the entire decline in annual average employment overall.⁸
- In three of the four sectors where both men's and women's employment decreased, women bore a disproportionate share of the declines.⁹
- Women only experienced a disproportionately small loss in one sector – **printing & related support activities**. However, this sector is projected to continue losing jobs in the future.

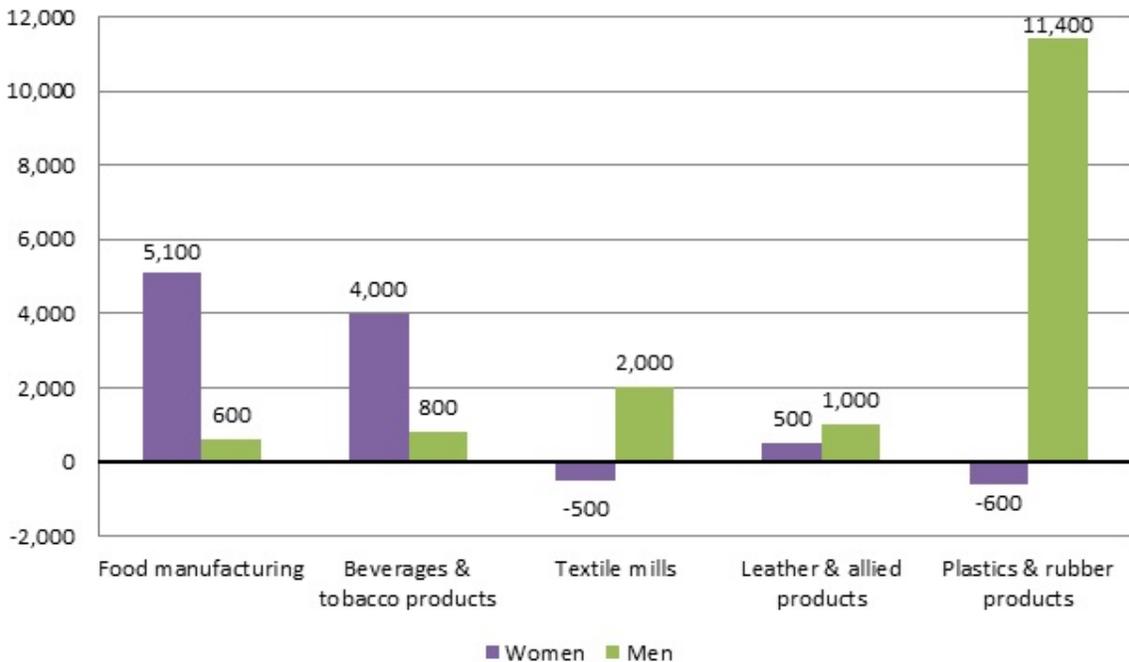
Figure 3. Change in annual average employment in other durable manufacturing sectors with employment increases, 2010-2011



Source: NWLC calculations from Current Employment Statistics survey.

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Figure 4. Change in annual average employment in other nondurable manufacturing sectors with employment increases, 2010-2011



Source: NWLC calculations from Current Employment Statistics survey.

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Figure 5. Change in annual average employment in other manufacturing sectors with employment decreases, 2010-2011



Source: NWLC calculations from Current Employment Statistics survey.



For women’s employment in manufacturing to grow, they need access to training and equal employment opportunities.

The government, community-based organizations, community colleges, employers, and unions must work to ensure that women have equal employment opportunities in manufacturing occupations. The government should provide more funding for outreach and support for women in manufacturing occupations through the Workforce Investment Act; encourage and increase funding for educational programs in science, technology, engineering and math (STEM) fields; and continue to hold federally funded vocational training programs accountable for serving women in nontraditional fields, including manufacturing. Community-based organizations should partner with colleges and unions to recruit women and improve women’s training for manufacturing positions, such as through the Manufacturing Skills Certification System. To ensure that women are retained in manufacturing positions, the government should increase enforcement of nondiscrimination mandates, and employers and unions should address work-life balance needs and combat gender stereotypes, discriminatory employment practices, sexual harassment, and other barriers women face in nontraditional fields.

- 1 The last time annual average manufacturing employment increased was between 1997 and 1998.
- 2 Between 2007 and 2008 annual average manufacturing employment decreased by 473,000 jobs and between 2008 and 2009 it declined by 1,559,000 jobs.
- 3 Highest-paying sectors were determined by examining both the average weekly earnings of all employees and the average weekly earnings of production and nonsupervisory employees. For both measures, chemicals, petroleum & coal products, computer & electronics products, and transportation equipment were the top four highest-paying sectors in 2011. The average weekly earnings of all employees in each of these sectors were above \$1,100 in 2011. The average weekly earnings of production and nonsupervisory employees in each of these sectors were above \$900. By comparison, the overall average weekly earnings of manufacturing employees were \$960 in 2011 and for production & nonsupervisory employees they were \$785.
- 4 The ten other sectors (besides computer & electronic products, chemicals, and transportation equipment) in which annual average employment increased between 2010 and 2011 are 1) electrical equipment & appliances, 2) miscellaneous manufacturing (includes sporting goods & jewelry), 3) textile mills, 4) plastics & rubber products, 5) primary metals, 6) fabricated metal products, 7) machinery, 8) food manufacturing, 9) beverages & tobacco products, and 10) leather & allied products. Of these ten sectors, women only saw increased employment in 1) primary metals, 2) fabricated metal products, 3) machinery, 4) food manufacturing, 5) beverages & tobacco products, and 6) leather & allied products.

Appendix:

Change in annual average manufacturing employment by sector, 2010-2011

Sector	Percentage of workers who are women (2010)	Women's employment change	Men's employment change
Manufacturing	28.3%	-25,000	230,000
Durable goods	24.4%	-10,000	220,000
Wood products	15.1%	-1,400	-5,500
Nonmetallic mineral products	17.4%	-2,300	-2,000
Primary metals	14.4%	2,700	24,500
Fabricated metal products	19.1%	2,700	59,800
Machinery	19.8%	8,300	52,300
Computer & electronic products	33.4%	-8,200	20,600
Electrical equipment & appliances	32.2%	-1,600	8,900
Transportation equipment	22.3%	2,900	45,700
Furniture & related products	26.6%	-7,100	2,700
Miscellaneous manufacturing	42.5%	-5,800	12,400
Nondurable goods	34.5%	-15,000	11,000
Food manufacturing	35.4%	5,100	600
Beverages & tobacco products	27.2%	4,000	800
Textile mills	39.3%	-500	2,000
Textile product mills	54.8%	-3,700	1,500
Apparel	68.3%	-4,200	-600
Leather & allied products	47.5%	500	1,000
Paper & paper products	24.6%	-5,200	1,800
Printing & related support activities	37.1%	-3,300	-15,000
Petroleum & coal products	21.0%	-1,900	200
Chemicals	32.4%	-5,500	7,300
Plastics & rubber products	30.4%	-600	11,400

Source: NWLC calculations from Current Employment Statistics survey.



- 5 Of these six sectors, women's share of the increased employment was disproportionately small in 1) primary metals, 2) fabricated metal products, 3) machinery, and 4) leather & allied products.
- 6 The average weekly earnings for all food manufacturing employees in 2011 were \$695 and for production & nonsupervisory employees they were \$590. By either earnings measure, food manufacturing was in the bottom one-third of manufacturing sectors in terms of earnings in 2011.
- 7 Helper, Krueger, and Wial, p. 18, predict employment growth in tobacco products manufacturing. The average weekly earnings in the beverage & tobacco products sector in 2011 were mid-level – \$815 for all employees and \$785 for production & nonsupervisory employees. See overall weekly earnings of manufacturing employees in note three.
- 8 The seven other sectors (besides petroleum & coal products) in which annual average employment decreased between 2010 and 2011 are 1) furniture & related products, 2) textile product mills, 3) paper & paper products, 4) wood products, 5) nonmetallic minerals, 6) apparel, and 7) printing & related support activities. Despite overall declines, men saw gains in three of these sectors: 1) furniture & related products, 2) textile product mills, and 3) paper & paper products.
- 9 These three sectors include 1) wood products, 2) nonmetallic minerals, and 3) apparel. In wood products women comprised 15 percent the field in 2010 but bore 20 percent of the decline in employment between 2010 and 2011.