



# Research Brief

The Commonwealth's Official Source for Population and Economic Statistics

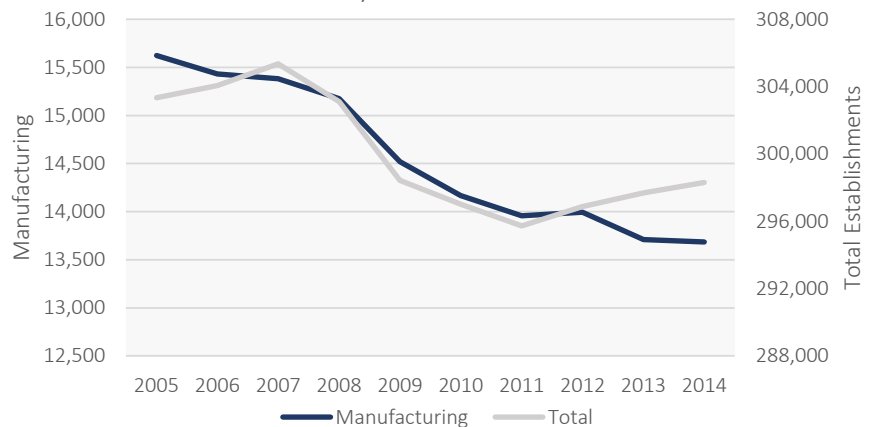
October 7, 2016

## Manufacturing Day 2016

PENN STATE HARRISBURG – Manufacturing Day seeks to expand knowledge about and improve general public perception of manufacturing careers and manufacturing's value to the economy. Pennsylvania's rich manufacturing industry includes many notable products, such as Harley-Davidson motorcycles, Zippo lighters, Martin guitar, Crayola crayons, and several popular snack foods. In recognition of the fifth annual Manufacturing Day, this brief provides an analysis of recent trends in the manufacturing sector for the Keystone State.

The number of manufacturing establishments in Pennsylvania has steadily declined between 2005 and 2014, according to data from the U.S. Census Bureau's County Business Patterns. Manufacturing-related establishments<sup>1</sup> in the Keystone State have dropped from 15,624 in 2005 to 13,684 in 2014, equating to a 12.4 percent decrease over the nine-year period. Except for the addition of 37 manufacturing establishments between 2011 and 2012, the sector experienced year-to-year declines since 2005. At the same time, overall business establishments in Pennsylvania declined by a total of 5,036, or 1.7 percent. As opposed to manufacturing, the decline in overall establishments began in 2007, hit bottom in 2011 and rose each year to 2014 (see Figure 1.). Manufacturing establishments accounted for 38.5 percent of the decline in overall business establishments in the commonwealth from 2005 to 2014.

Figure 1. Change in Manufacturing and Total Establishments, Pennsylvania: 2005-2014



The decline of manufacturing is not unique to Pennsylvania. Between 2005 and 2014, all but five states reported a decline in manufacturing establishments with more than half of states (29) losing 10.0 percent or more. The magnitude of the decline in Pennsylvania was similar to that of the nation overall (-12.4 percent compared to -12.3 percent).

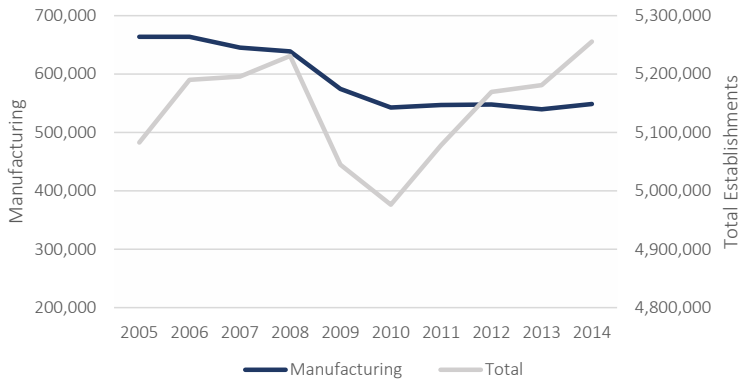
<sup>1</sup> Manufacturing comprises establishments engaged in the mechanical, physical, or chemical transformation of materials, substances, or components into new products. The assembling of component parts of manufactured products is considered manufacturing, except where the activity is appropriately classified in Sector 23, Construction.



## Manufacturing Employment

Manufacturing employment has also declined over the past nine years. Manufacturing establishments in the Keystone State employed 663,605 people in 2005. This figure declined by 114,933 employees or 17.3 percent to 548,672 employees in 2014. Because of the decline in manufacturing establishments and employment, the number of employees per establishment decreased from 42.5 in 2005 to 40.1 in 2014.

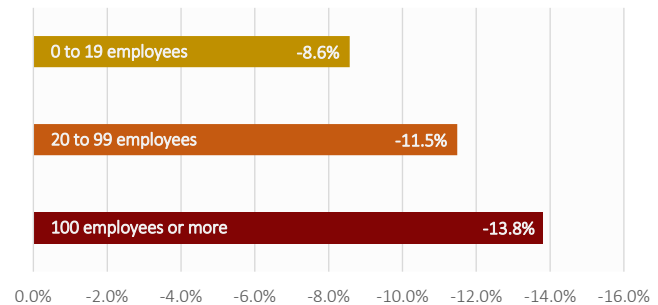
Figure 2. Change in Manufacturing and Total Employment, PA: 2005-2014



Comparing the manufacturing sector to that of all establishments reveals an earlier start to job losses for manufacturing employees (2006 versus 2009). Employment losses were greatest in both during 2009 and employment figures hit their lowest mark in 2010. Total business establishment employment increased each year since 2010 while manufacturing employment grew in 2011 and 2012, declined in 2013 and increased again in 2014.

Between 2008 and 2014, Pennsylvania experienced steeper losses in manufacturing establishments with a greater number of employees. Establishments employing greater than 100 individuals declined by 13.8 percent, while those with 20 to 99 employees decreased by 11.5 percent. Meanwhile, manufacturing establishments employing fewer than 20 employees declined by 8.6 percent. In 2014, approximately two-thirds (65.6 percent) of establishments employed fewer than 20 individuals, a quarter (25.3 percent) had 20 to 99 employees and 9.1 percent employed 100 or more.

Figure 3. Decline in Manufacturing Establishments by Employment Size, PA: 2008-2014



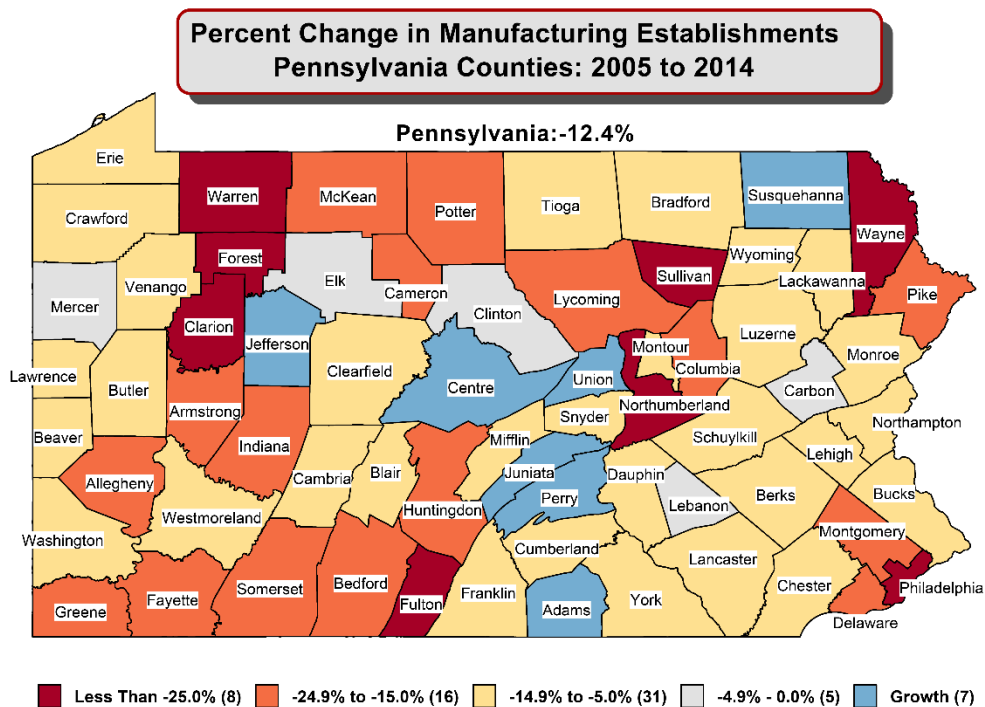
## Detailed NAICS Manufacturing

Within the manufacturing sector in Pennsylvania, the fabricated metal product manufacturing subsector (NAICS 332) was the largest employer with 88,444 employees, accounting for 13.3 percent of total manufacturing employees. Only two three-digit subsectors experienced growth in employment between 2005 and 2014. These were the beverage/tobacco product manufacturing (6.2 percent) and the electrical equipment, appliance, and component manufacturing (0.2 percent) subsectors. Among three-digit subsectors in Pennsylvania, apparel (-71.5 percent), leather and allied product (-56.6 percent), textile mills (-45.8 percent) and printing and related support activities (-37.6 percent) reported largest declines in employment over the period.

## Manufacturing Establishments by County

Among the 61 Pennsylvania counties with 20 or more manufacturing establishments, seven counties experienced growth in the sector between 2005 and 2014 (see map). Jefferson County has the largest growth rate at 16.5 percent, followed by Juniata County (11.1 percent) and Centre (6.8 percent). Clarion County had the steepest decline in manufacturing establishments over the period at 37.7 percent, followed by Northumberland (-29.8 percent) and Philadelphia (-29.3 percent).

In terms of employment, Delaware County experienced the largest numeric (2,341) and percent (18.4 percent) increase in employment between 2005 and 2014. Overall, nine counties with at least 20 manufacturing establishments had an increase in employment. Montgomery had the largest numeric decrease in manufacturing employees (-14,343) among Pennsylvania counties, while Union experienced the largest percent decrease (-49.7 percent).



### More about County Business Patterns

County Business Patterns (CBP) is an annual series published since 1964 that provides subnational economic data by industry. Data for establishments are presented by geographic area, 6-digit NAICS industry, legal form of organization (U.S. and state only), and employment size class. Information is available on the number of establishments, employment during the week of March 12, first quarter payroll, and annual payroll. Precautions are taken to avoid disclosing the operations of an individual employer.

CBP data are extracted from the Business Register, the Census Bureau's file of all known single and multiestablishment companies. Data comes from a variety of sources, including the Economic Censuses, the Annual Survey of Manufactures, and Current Business Surveys, as well as from administrative records of the Internal Revenue Service (IRS), the Social Security Administration (SSA), and the Bureau of Labor Statistics (BLS).

Source: U.S. Census Bureau, County Business Patterns

The Pennsylvania State Data Center is the commonwealth's official source for population and economic statistics. It is based at Penn State Harrisburg's Institute of State and Regional Affairs. The Pennsylvania State Data Center is part of the U.S. Census Bureau's National State Data Center Program.

**Editors: For additional data, contact the Pennsylvania State Data Center's State Capital Office at 717.772.2710 or for faculty comment on this topic, contact Penn State Harrisburg's Public Information Office at 717.948.6029.**

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