

# Manufacturing

## Industry Summary

### Industry Definition

The Manufacturing sector comprises establishments engaged in the mechanical, physical, or chemical transformation of materials, substances, or components into new products. Major sectors include the manufacture and processing of food, textiles, metals, chemicals and drugs, paper and printing, machinery, electrical, electronic, and transportation equipment, and medical devices.

### Industry Profile

In all, the manufacturing industry category contains 21 separate sub-sectors engaged in the processing and manufacture of food, natural resources, and equipment. Nationwide, 16.6% of firms in the manufacturing category fall into the fabricated metal products sub-sector, followed by printing (10.3%), miscellaneous manufacturing (8.9%, which includes medical equipment, toys, and jewelry manufacturing), and machinery manufacturing (8.6%). In terms of employment, the transportation equipment sub-sector accounts for the largest percentage in the manufacturing category (12.5%), followed by fabricated metal products (10.7%), food manufacturing (10.4%), and computer and electronic products (9.2%).

### Industry Trends

The manufacturing sector is one of the largest in the U.S. and contributes 14.2 million jobs to the economy. This ranks third behind the retail sector (15.3 million jobs) and health services (14.3 million jobs). Employment in manufacturing nationwide has decreased 13.4% between 2001 and 2005, due largely to a recessionary downturn and overseas competition. Greater Phoenix has weathered the manufacturing downturn better than the U.S. as a whole, with employment declining 11.7%. Several sectors, such as measuring and controlling devices, aircraft, and furniture manufacturing increased employment in the Greater Phoenix region between 2001 and 2005 while declining nationally. The U.S. Bureau of Labor Statistics (BLS) projects a 0.6% annual decline in manufacturing employment nationwide between 2004 and 2014. Indeed, all of BLS's most rapidly declining industry sectors for wage and salary employment between 2004 and 2014 are in manufacturing, although bright spots appear in sectors such as pharmaceutical and drug manufacturing (2.3% average annual increase between 2004 and 2014), aerospace product and part manufacturing (0.8% average annual increase), and machine shops (0.4% average annual increase).

### Workforce Profile

The manufacturing sector accounted for 70% of production jobs nationwide in 2004. In the Greater Phoenix region, the majority of manufacturing firms are small to medium in size. Over 80% of firms employ fewer than 50 workers. Medium size firms with 20 to 499 workers account for nearly 60% of manufacturing employment, but a substantial portion (21.0%) is accounted for by the 0.4% of manufacturing firms in the region with 1,000 or more employees.

### Workforce Trends

The American manufacturing sector is expected to lose more than half a million jobs between 2004 and 2014. In the BLS's latest occupational employment outlook report, a full third (ten of thirty) occupations BLS expects to experience the largest job declines nationally between 2004 and 2014 were production occupations.