

OHIO MANUFACTURING FACT SHEET

A new report from the Brookings Institution Metropolitan Policy Program, [Locating American Manufacturing: Trends in the Geography of Production](#), analyzes our country's manufacturing sector and finds this sector is largely based in metropolitan areas, displays greater variety than may be commonly recognized, and falls into six broad patterns of clustering. Manufacturing also supplies much of our innovation and many good-paying jobs.

Manufacturing is still a growth machine. According to the Institute for Supply Management, U.S. manufacturing has been expanding for 33 consecutive months.

The report shows U.S. metropolitan areas continue to provide benefits to manufacturing in the form of innovation and productivity, and the advantages vary widely within regions and even states. Metropolitan areas in Ohio offer distinct advantages that neither nonmetropolitan areas, nor metropolitan areas in other regions can replicate.

To build upon existing competitive advantages, decision-makers in Ohio should be aware of some important facts:

1. Ohio is a manufacturing heavyweight. In both 2000 and 2010, Ohio was home to the third largest number of manufacturing jobs of any state. Despite losing 39 percent of its manufacturing jobs during that decade, the state retained 620,000 manufacturing jobs at the end of 2010. This strong manufacturing economy is heavily metropolitan, with 72 percent of these jobs concentrated in eight metropolitan areas: Cleveland, Cincinnati, Columbus, Dayton, Toledo, Akron, Youngstown, and Canton. Cleveland leads the state as the nation's 13th largest manufacturing employer.

Youngstown grew its manufacturing employment by 11.7 percent from the first quarter of 2010 to the last quarter of 2011. This represents over 1 percent of national manufacturing job growth during this period.

2. Manufacturing is a source of good-paying jobs in Ohio's metropolitan areas. In 2010, the average U.S. job paid \$47,300. Average earnings for manufacturing workers in Ohio's large metropolitan areas were notably higher than this, ranging from \$54,600 in Dayton to \$62,800 in Toledo. Toledo ranks 34th out of the nation's largest 100 metropolitan areas in terms of average manufacturing wages.

Manufacturing earnings in Ohio's metropolitan areas are not especially higher or lower than the national average for manufacturing, which in 2010 was \$58,500. Manufacturing earnings in Toledo and Cincinnati were slightly above this level, while manufacturing earnings in Columbus, Akron, Dayton, and Youngstown were slightly below it. Cleveland's manufacturing earnings match the national average.

3. Ohio's metropolitan areas are strongly specialized in manufacturing. In 2010, manufacturing's share of employment was at least 18 percent higher than the national share in each Ohio metropolitan area except Columbus. In fact, Ohio is the only state that hosts four of

the 20 most manufacturing-specialized large metropolitan areas in the nation: Youngstown (8th most specialized), Toledo (10), Akron (13) and Cleveland (14).

Mansfield, where manufacturing is 16.2 percent of all employment (91 percent higher than the national average), is Ohio's most manufacturing-specialized metropolitan area.

4. Metropolitan areas in Ohio belong to three distinct industry clusters. Those in western Ohio, especially those along I-75, specialize in transportation equipment manufacturing. Automotive and Aerospace manufacturing in Cincinnati, Dayton, Springfield, Lima, and Toledo form the basis of this cluster, with Columbus, Sandusky, and Youngstown also specializing in transportation.

A different set of metropolitan areas, mostly in eastern Ohio, specializes in chemical manufacturing. This cluster is based in Cleveland and Akron, but also includes smaller metropolitan areas on the West Virginia border, such as Parkersburg-Marietta, and Wheeling-Martins Ferry. Lima is also specialized in chemicals. Finally, metropolitan areas in Northeast and Southwest Ohio are specialized in machinery manufacturing. Cleveland, Akron, Mansfield, Sandusky, Dayton and Springfield form this cluster.

Thus, although Ohio is often categorized as a "rust belt" state, its ability to compete globally comes from local specializations, which are not homogeneous across the region.

5. Ohio is a stronghold for moderately high technology manufacturing, hosting 137,000 such jobs in 2010. This puts Ohio in third place nationally for moderately high technology manufacturing. In 2010, Cleveland ranked eighth nationally for moderately high technology employment. Cleveland, Cincinnati, and Columbus contain 47 percent of Ohio's moderately high technology employment, and three percent of the nation's.

Additionally, all Ohio metropolitan except Columbus are at least strongly specialized in moderately high technology manufacturing. Cleveland is the most highly specialized, with over twice the national share of moderately high technology employment.

This concentration of moderately high technology manufacturing reflects Ohio's strengths in chemicals, machinery, and electrical and appliance manufacturing. Because moderately high technology manufacturing and very high technology manufacturing tend to locate in distinct locations, all Ohio metropolitan areas except Dayton and Mansfield host below-average shares of very high technology manufacturing.

In sum, policy makers in Ohio should take manufacturing geography seriously. Policy that encourages clustering and rewards collaboration between firms will allow Ohio to build upon existing strengths; strengths that other states cannot replicate. Conversely, policy that rewards individual firms for moving out of metropolitan areas is both costly and compromises competitiveness. Local, state, and federal decision-makers should familiarize themselves with Ohio's manufacturing geography in order to craft public policy that will serve the state's best long-term interests.