

## Patterns in Wisconsin Manufacturing

Manufacturing has been, and to a large extent remains, a major component of the Wisconsin economy. Today manufacturing accounts for about 485,000 jobs, which remarkably is about the same level of employment as in 1970 (Figure 1). While the fluctuation in manufacturing employment is clear over recessionary periods, the strong decline in manufacturing employment for the larger U.S. economy, as well as manufacturing dependent states such as Illinois and Michigan, suggests that manufacturing may no longer be a significant source of employment growth. This downward trend in manufacturing employment in Wisconsin is clearly evident in the period after 1990.

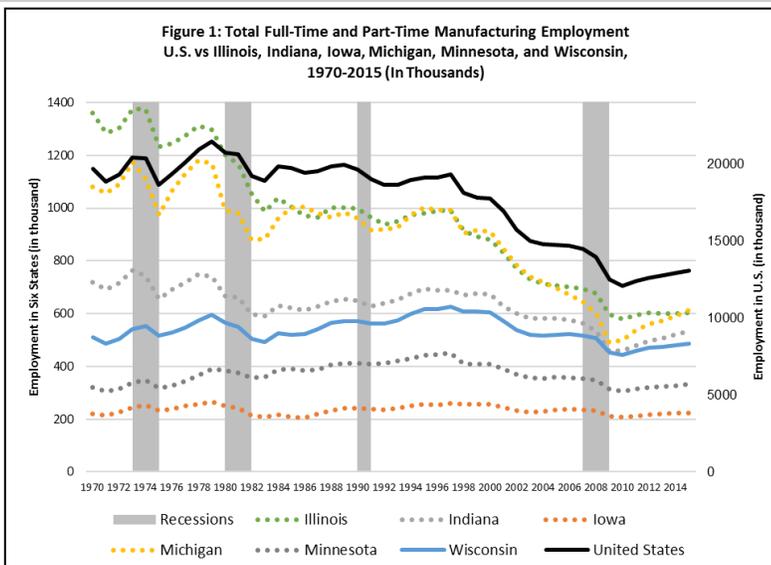
Manufacturing employment today is about the same level as 1970, but the shorter-term trends since 1990 are downward.

Though the level of employment in manufacturing seems stable, manufacturing employs a smaller *share* of all workers.

In recent decades, manufacturing's contribution to Wisconsin Gross State Product has been stable.

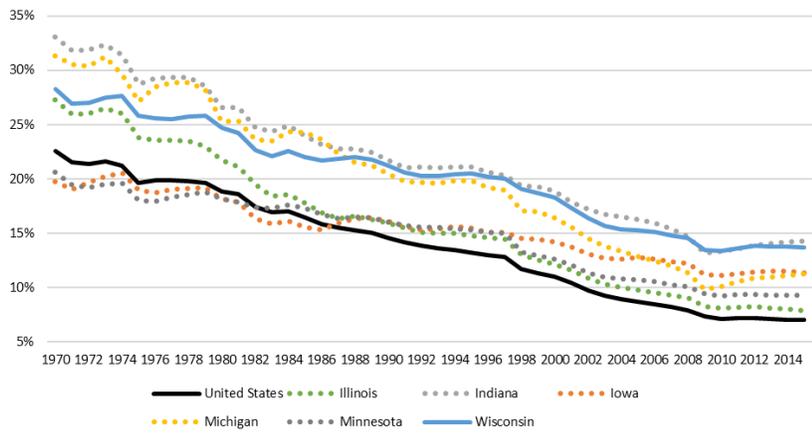
Much like employment, longer-term trends see manufacturing productivity trending upward, but since the end of the Great Recession growth in productivity has been flat.

Wisconsin manufacturing productivity per worker is far below the national average and other Midwestern states.



While employment in manufacturing is about at the same level today as it was almost 50 years ago, other industries have grown which is driving employment growth in Wisconsin. As a result, the share of total state employment in manufacturing has declined from about 28% in the early 1970s to just under 14% today (Figure 2). In terms of employment the size of the Wisconsin pie has been growing, but manufacturing's share of

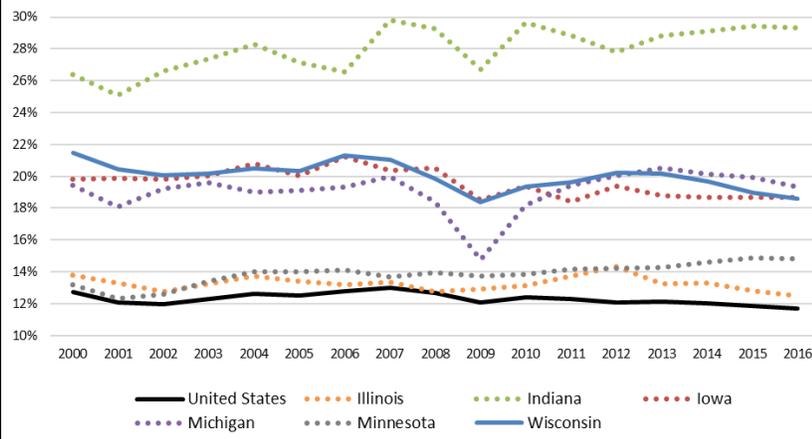
**Figure 2: Manufacturing Employment as a Share of Total Nonfarm Employment by State, 1970-2015**



that pie has been declining.

While Wisconsin's elected officials tend to focus economic policy discussions around jobs an additional important measure of manufacturing's contribution is gross domestic product (GDP). Unfortunately, state level data for GDP (referred to a gross state product, GSP) at the industrial level begins in 2000 which limits our analysis to a shorter-term timeframe. Over the 2000 to 2016 period manufacturing's contribution to Wisconsin GSP declined slightly from about 21.5% to 18.5%. This compares to the U.S. where manufacturing accounted for about 12% of GDP over the same time period. Only Indiana has a higher level of dependency on manufacturing.

**Figure 3: Manufacturing's contribution to State GDP 2000-2016 (Adjusted for Inflation, in 2009\$)**



One reason that manufacturing employment has been declining over the past several years is increases in worker productivity (Figure 4). From 1997 to before the start of the Great Recession Wisconsin manufacturing productivity has been increasing, but in the recovery period starting in 2010 gains in productivity has been flat if not slightly declining. On its own this should be alarming, but it mimics national trends. Perhaps more of a concern is that compared to the nation and other Midwestern states Wisconsin's productivity per worker is the lowest. This raises serious questions about the ability of manufacturing to remain a vibrant piece of the growth and development puzzle. Even with the potential surrounding Foxconn, it by itself is too small to impact these larger trends in Wisconsin manufacturing.

**Figure 4: Manufacturing Industry Gross State Product per Worker (Adjusted for Inflation, \$2009)**

