

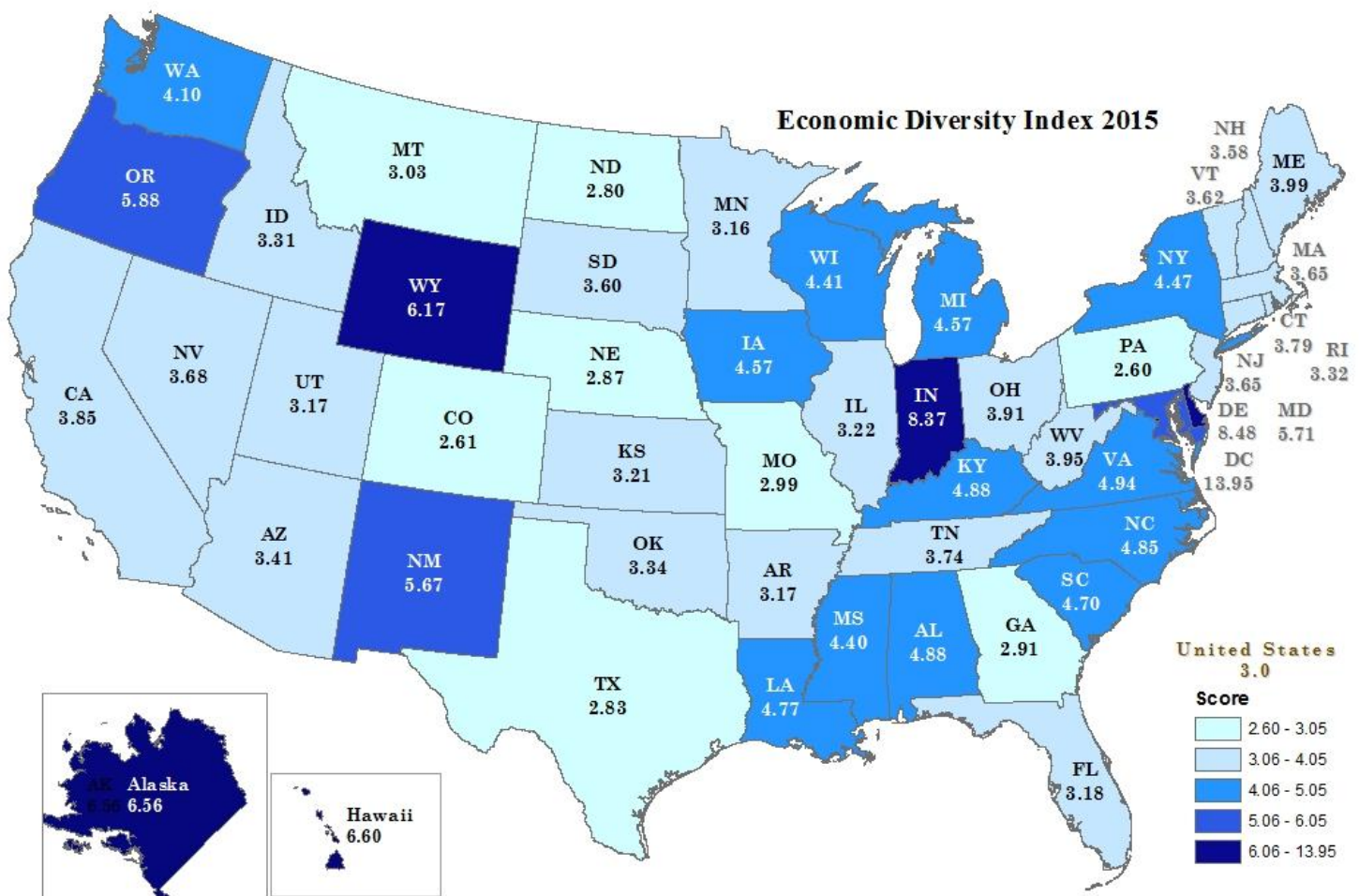


Missouri Economic Indicator Brief: *Economic Diversity 2015*

Diversification Index

A diversified economy is one that can better manage the ups and downs of the business cycle in contrast to an economy specialized in a few industries. For example, a state economy with a disproportionate number of workers in the mining industry would suffer should one or more mining operations lay-off workers or even fail. A more balanced economy, on the other hand, could absorb the economic shock as other industries show stronger performance.

In 2015, Pennsylvania was the most diversified state in the country followed by Colorado, North Dakota, Texas, Nebraska and Georgia. Missouri ranked seventh, down from last year's third place ranking in the index.¹ The map below shows each state's 2015 score.



The lower a score, the more diversified a state's economy; the higher a score, the more specialized its economy.

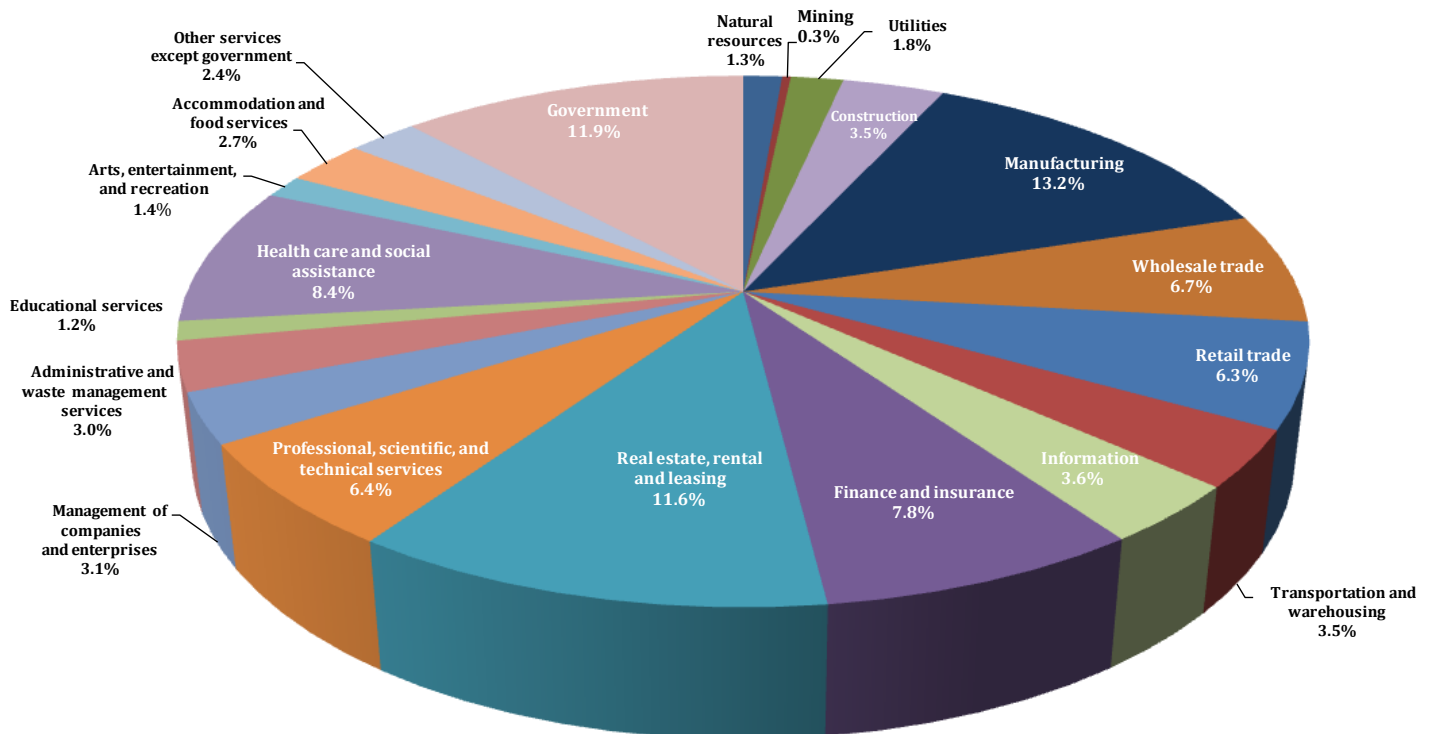
Gross Domestic Product

The broadest measure of economic activity is the Gross Domestic Product.² In calculating each state's diversification index, the gross product by industry was measured against total state gross product.

Missouri's total gross domestic product (GDP) increased from \$257.9 billion to \$262.5 billion in 2015. The state's top five industries, not including Government, are *Manufacturing* (13.2 percent of total GDP), *Real Estate* (11.6 percent), *Health Care* (8.4 percent), *Finance and Insurance* (7.8 percent) and *Wholesale Trade* (6.7 percent).

A half dozen industries experienced dramatic change, between 2014 and 2015, in share of GDP as well as value. The *Mining* industry fell from a 0.5 percent share to a 0.3 percent share of GDP: Missouri's mining industry lost over one-third of its value; *Information*, which fell from a 4.4 percent share to 3.6 percent, lost about 15 percent in value; and *Natural Resources* lost 12.5 percent in value. *Professional, Scientific, and Technical Services* increased its GDP share from 5.9 percent to 6.4 percent which translates to a near 15 percent increase in value; the value of the *Real Estate* industry increased 14 percent, *Retail Trade* 10 percent, and *Manufacturing* 8 percent.

Missouri Industry Share of Gross Domestic Product, 2015



Notes

¹Diversification Index

There are a handful of indices available to measure an economy's diversification: Herfindahl, Hachman, and competitive share among others. Data used to construct an index may include employment, earnings, per capita income, capital investment or gross domestic product. In this brief, a modified Herfindahl Index (H_i) based on gross domestic product data was constructed.

$$H_i = \left\{ \sum_{i=1}^n \frac{GDP_i}{GDP_s} \left(\frac{GDP_i}{GDP_s} - \frac{1}{n} \right)^2 \right\} \times 100$$

Where n is the number of industries in the state economy, and GDP_i is the gross domestic product for each industry (i) in the state, and GDP_s is a state's total gross domestic product. The number of industries (n) analyzed in each state (s) is constant. Thus, the analysis focuses on the distribution of GDP. Those states with an index value closer to 0 are diversified, i.e., the distribution of GDP across industries in that state is in balance. States with an index value closer to 1 are specialized— some industries in the state play a more outside role than others. For visualization, the index was converted to scores by a multiple of 100.

²Gross Domestic Product

A state's Gross Domestic Product is estimated by the U.S. Bureau of Economic Analysis. This estimate is the sum of value-added from each industry in the state for a given time period. Value-added is effectively an industry's net revenue: income minus costs of production.

Other Studies

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