Glossary

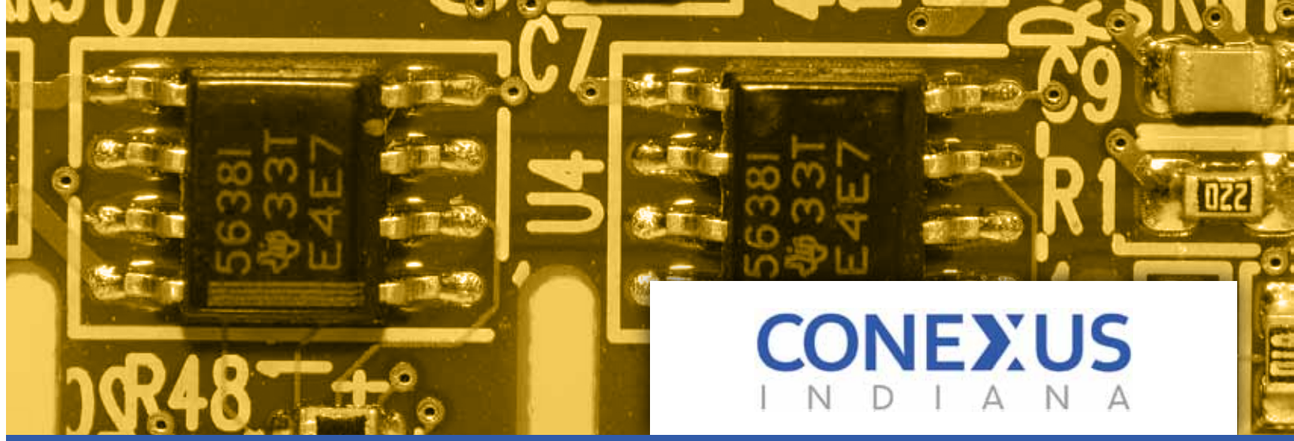
- **ADULT BASIC EDUCATION:** Education in basic reading and writing, offered through either community/technical colleges or state workforce development agencies.
- **COMMODITY FLOWS:** The value of shipments through a region.
- **EXPORTS:** Products or commodities sold to foreign individuals and firms.
- **FOREIGN DIRECT INVESTMENT:** Expenditures by foreign owned firms on plant and equipment in a region.
- **HUMAN CAPITAL:** A measure of educational and skills attainment, and in some settings health of residents and workers within a region.
- **IMPORTS:** Products or commodities purchased from foreign firms.
- **INCOME:** All direct compensation to workers.
- **INFRASTRUCTURE:** Road rail, bridge and other transportation related public goods.
- **LOGISTICS:** Transportation and warehousing industry groups.
- **MANUFACTURING:** The production of consumer durable and non-durable goods.
- **PRODUCTIVITY:** The value of goods sold by a firm adjusted to a per worker basis.
- **R&D:** Research and development, both in primary and applied science, usually measured in dollars.
- **UNEMPLOYMENT INSURANCE:** A federal program dating to 1933 that requires firms to participate in state regulated insurance plans to compensate workers who are laid off or discharged from work.
- **VALUE-ADDED:** Firm or industry measure of the value of the product sold, minus all input costs.
- **WORKERS' COMPENSATION:** A federal program dating to 1913 that requires firms to provide disability and death insurance through state-administered or regulated insurance plans.

Methodology

The categories in this report were chosen as those most likely to be considered by site selection experts for manufacturing and logistics firms, and by the prevailing economic research on growth. Each category included multiple variables that were aggregated and then ranked 1ST – 50TH, for each state—1ST being the most desirable. Within each category, the lowest aggregate score assigned provided the overall rank. Grades were assigned using a normal distribution of grades, A through F. Plus and minus scores were not assigned to A or F grades.

2011 National Scorecard

U.S. STATE	MANUFACTURING INDUSTRY HEALTH	LOGISTICS INDUSTRY HEALTH	HUMAN CAPITAL	BENEFIT COSTS	GLOBAL REACH	PRODUCTIVITY *and* INNOVATION	TAX CLIMATE	DIVERSIFICATION	VENTURE CAPITAL *per Capita*
ALABAMA	B	C	F	B+	B	C	B	B	F
ALASKA	F	D	C-	C-	D	D	A	F	F
ARIZONA	C	C	D+	C	F	C	B	C-	C
ARKANSAS	C+	C	D-	A	C-	F	D+	C	D-
CALIFORNIA	C+	B	C	D	C	A	D	D	A
COLORADO	D+	C-	C	C+	D+	B	B	C	A
CONNECTICUT	C+	D	B	C	B	B+	D-	A	B
DELAWARE	C-	F	C-	F	B+	A	B	C	C
FLORIDA	D	C+	C-	B-	D-	D+	B+	C+	C-
GEORGIA	D+	B+	D+	C	C+	F	C	B+	C
HAWAII	F	F	C	B	F	C-	B	C-	C-
IDAHO	C+	D	C	C	D	D	C+	F	D+
ILLINOIS	C	A	C	D-	B	C+	D	C	B-
INDIANA	A	A	C	C-	A	C+	A	C	C-
IOWA	A	B	B	C	D	C	F	C-	C
KANSAS	A	C	C+	A	C	D	C	D	C
KENTUCKY	B	B	D-	C	B+	C-	C	C+	D
LOUISIANA	C	B	F	C	C+	B	C	C	D
MAINE	C	D-	B	F	C	D	D	C	D-
MARYLAND	D	D	B	B-	D+	B	D	C-	B+
MASSACHUSETTS	C-	D	B-	C	C	B+	D	D	A
MICHIGAN	A	C+	D	D	A	C	C-	F	C
MINNESOTA	B-	B	A	C	C	D+	F	C	C
MISSISSIPPI	C+	C-	F	C	C-	C	B	A	F
MISSOURI	C	B	C	B+	B	D-	A	B	C-
MONTANA	D	D+	C+	C+	F	C-	A	C	D
NEBRASKA	C-	C+	A	C	F	D	C	D-	D+
NEVADA	F	D	D	B	D	B	C	D+	C
NEW HAMPSHIRE	B+	F	A	F	B	C-	C	D	C+
NEW JERSEY	C-	B-	C+	D+	C+	C	F	F	B
NEW MEXICO	F	D-	F	B	F	A	C	F	C
NEW YORK	D-	C	C-	C	C	C	F	C+	A
NORTH CAROLINA	B-	C	C	D	C	C	C-	B	B
NORTH DAKOTA	D	C	A	A	C	B-	C+	D+	F
OHIO	A	A	C	D	A	C-	D-	B-	C
OKLAHOMA	C	C	D	B	D	B	B	C	D
OREGON	B	C	C	D	C	A	C	D-	B-
PENNSYLVANIA	C	A	C	D	B-	C	D	B+	C+
RHODE ISLAND	D	F	C-	C-	D	D	F	B	B+
SOUTH CAROLINA	B+	D+	D	C-	A	F	C	A	D
SOUTH DAKOTA	D+	C-	B	A	D	F	B+	C	F
TENNESSEE	B	B+	D	B-	A	C+	C-	B	C-
TEXAS	C	A	D	B	B+	A	C	C	C+
UTAH	C	C-	B	A	C	C	A	B	B
VERMONT	B	F	B	C-	C	D-	C-	D	B
VIRGINIA	D-	C-	C	B	C	C+	B	A	B
WASHINGTON	C	C	A	F	C	B	C	A	A
WEST VIRGINIA	C-	C	F	F	B	C	D+	C-	D
WISCONSIN	B+	B-	B+	D-	C	D-	C-	B-	C
WYOMING	D-	C	B+	C-	C-	B	B	D	C



2011 MANUFACTURING + LOGISTICS

National Report

The 2011 Manufacturing and Logistics National Report grades the U.S.'s 50 states in several areas of the economy that underlie the success of manufacturing and logistics.

These specific measures include: manufacturing and logistics health, human capital, the cost of benefits, the global reach and diversification of the industries, state-level productivity and innovation, the tax climate, and venture capital activities.

About Conexus Indiana

Conexus Indiana is a private sector-led initiative focused on the advanced manufacturing and logistics sectors—two industries that combined employ more than one of every five Hoosiers. We are focused on making Indiana a global manufacturing and logistics leader by strengthening the state's human capital, building industry partnerships to capitalize on new opportunities and address key challenges, and promoting a better understanding of the importance of these industries to our economic future.

Conexus Indiana's most urgent mission is building tomorrow's manufacturing and logistics workforce, preparing Hoosiers to take advantage of high-tech careers in these exciting fields. We are also focused on developing a unified strategy to enhance our logistics capabilities, linking manufacturers with in-state suppliers to streamline supply chains and spur investment in Indiana, and undertaking other strategic projects that will help the manufacturing and logistics sectors thrive here at the Crossroads of America.

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About Ball State's CBER

The Center for Business and Economic Research (CBER) is an award-winning economic policy and forecasting research center housed within Ball State University's Miller College of Business. CBER research encompasses health care, public finance, regional economics, transportation, and energy sector studies.

The center produces the CBER Data Center—a one-stop shop for economic data, policy analysis, and regional demographics—and the Indiana Business Bulletin—a weekly newsletter with commentary on current issues and regularly updated data on housing, wages, employment, and dozens of other economic indicators.

In addition to research and data delivery, the center serves as the business forecasting authority in the Muncie area—holding the annual Indiana Economic Outlook luncheon and quarterly meetings of the Ball State University Business Roundtable.

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BALL STATE UNIVERSITY
CENTER FOR BUSINESS AND ECONOMIC RESEARCH

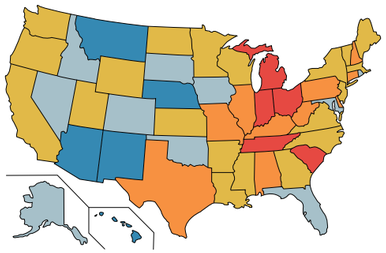
2011 MANUFACTURING + LOGISTICS

Categories + Grades

GRADING SCALE **A** **B** **C** **D** **F**

A methodology for grade calculation and a glossary of terms can be found on the back page, along with the 2011 National Scorecard. View the interactive version of this report online:
www.bsu.edu/cber » "Current Studies and Publications"

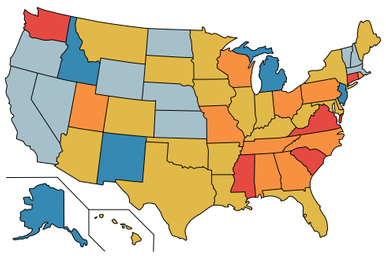
Global Reach



The level of international trade—both in exports and imports—is a robust measure of the region's competitiveness in the production, movement and distribution of consumer durable and non-durable goods. Both firms and regional governments focus considerable effort at improving ties with foreign firms, but for different reasons. Governments seek foreign investment in plant and equipment, while firms care about supplier relationships on both commodities and finished goods. Of course manufacturers want to make goods with a global market appeal. How well this is done is an important predictor of the health of manufacturing and logistics sectors into the future.

To measure global reach we include the export related measures of per capita exported manufacturing goods and the growth of manufacturing exports and the foreign direct investment measures of the amount of manufacturing income received annually from foreign owned firms in a state, the level of adaptability of the state's exporters to changing demand, as well as the reach of foreign direct investment, which is simply the variance or spread of foreign direct investments from different regions of the world. These data are collected from the Department of Commerce's International Trade Administration.

Diversification



There are both risks and rewards to economic diversification. States that have a high proportion of manufacturing activity in a single sector typically suffer higher volatility in employment and incomes over a business cycle. Less diversified regions are also more likely to experience greater effects of structural changes to the economy which involve a single sector. For these regions, state and local policy makers often focus on attracting and retaining more diverse economic activity within every group. One potential benefit of low levels of economic diversification is that specialization and the resulting agglomeration economies often emerge in these highly specialized regions. As a consequence, policies which seek to diversify the economy are typically pursued in concert with efforts to strengthen the supply chain of existing industries.

In this section we measure the diversification of manufacturing activity in each state using the well known Herfindahl-Hirschman Index at the 2- digit level of the North American Industrial Classification System. In this approach we calculate the total share of income in each manufacturing sector, which ranges from 0 to 100 percent. We then sum the squared values of all 22 sub sectors of manufacturing. If all the manufacturing in a state exists within one sector, the value of the HHI is 1002 or 10,000. If each of the sectors has an equal share of the manufacturing market, each industry share would be roughly 4.54 percent of the total. Squaring this value for each sector, and summing this result would yield an HHI of roughly 454. To obtain interstate comparisons, we then rank each state from the least to the most diverse.

VIEW THE INTERACTIVE VERSION OF THIS REPORT ONLINE:
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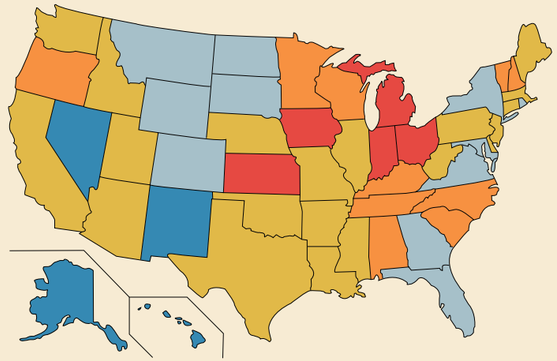
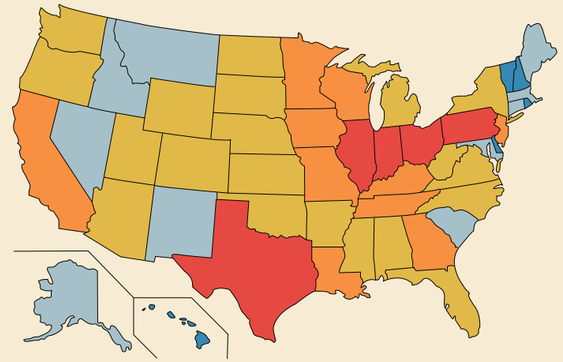


Manufacturing Health

The production of goods holds a particular place of interest in the U.S. economy. Manufacturing firms are not necessarily reliant on local demand for goods and are therefore footloose. Their location then depends more on local factors such as the quality and availability of the labor force, transportation infrastructure, non-wage labor costs, access to innovative technologies and the cost of doing business. Manufacturing is the production of both consumer durable goods such as automobiles, electronics and home appliances, and consumer non-durable goods such as clothing, processed foods, and other goods that are consumed after use.

To measure manufacturing we include three variables, the share of total income earned by manufacturing employees in each state, the wage premium paid to manufacturing workers relative to the other states' employees and the share of manufacturing employment per capita. These data are collected from the U.S. Department of the Census, and the Bureau of Economic Analysis, Regional Economic Information System.

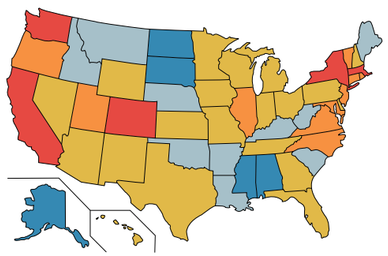


Logistics Health

The movement of goods is of central importance to the production of goods. Without a robust logistics industry, manufacturing and commodity production will not occur. Logistics comprises not merely the capacity to move goods, but to store inventory and manage the distribution and processing of manufactured goods. Logistics firms depend upon many of the same factors as manufacturing firms in their location decision, but there is a more complex interplay between local conditions and the existing or planned transportation networks of roads, rail, waterborne traffic and air.

To measure the logistics industry we include the share of total logistics industry income as a share of total state income, and the employment per capita. We also include commodity flows data by both rail and road. To this we measure infrastructure spending as the per capita expenditure on highway construction. These data are collected from the U.S. Department of the Census, the Bureau of Economic Analysis, Regional Economic Information System and the Center for Transportation Statistics, U.S. Department of Transportation.

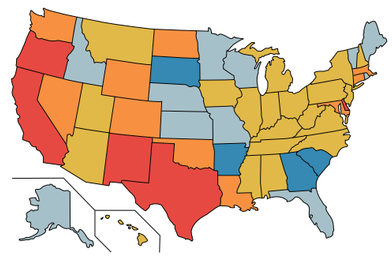
Venture Capital per Capita



Access to venture capital is a key step for nascent business expansion efforts. This seed money is offered by a small segment of financial service providers interested in high yield activities, typically involving technology or high-end intellectual property. Venture capital activities rely on deep industry research and analysis as well as a bridge of expertise in potential markets. This understanding of potential markets, the commercialization process and the core management assistance to new companies distinguishes venture capital (VC) from other investment tools. Both public activities like Indiana's 21st Century Fund and private firms engage in venture capital efforts. The presence of available venture capital is widely felt to be a key indicator of the maturity of the regions commercialization networks and is a widely used indicator of the health of innovation and creativity.

We rank states by total per capita venture capital expenditures as reported by the State Science and Technology Institute, then assign a grade.

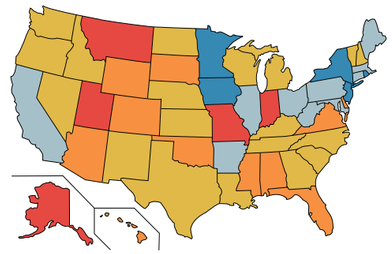
Productivity and Innovation



The value of manufactured goods per worker—productivity—as well as firm access to inventions and innovations is critical to the long term performance of a firm and the industry as a whole. Though innovations and inventions are aggressively sought from across the globe, the presence of local talent in these areas through access to university laboratories and non-profit research activities plays an important role in location decisions by manufacturers.

To measure productivity and innovation we use manufacturing productivity growth, industry research and development expenditures on a per capita basis, the per capita number of patents issued annually. These data are collected from the Census of Manufacturers, the National Science Foundation, the Patent Office and a study by PricewaterhouseCoopers/National for the Venture Capital Association.

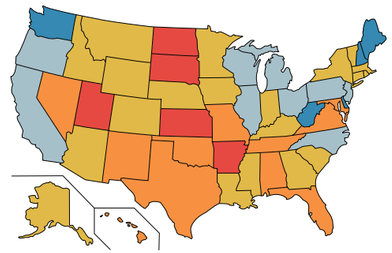
Tax Climate



Few factors garner as much policy interest as do state and local taxes. For firms which may operate virtually anywhere, tax rates—along with the quality of local public goods—matter a great deal in location decisions. Taxes on the business, individual income taxes (both on workers and small business), sales, unemployment, insurance and property taxes all play a role in assessing regions for a potential employer location.

To measure the tax climate we use data on corporate taxes, income and sales and use taxes, property and unemployment insurance tax data collected by the Tax Foundation.

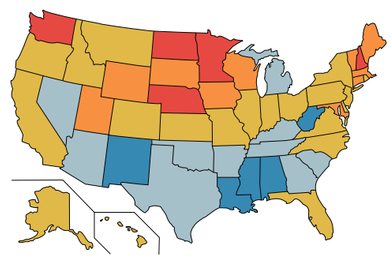
Benefit Costs



Non-wage labor costs represent an increasingly important part of total business costs. These are affected by local and state public policy as well as worker demographics, health, and industry and firm performance. Benefits range from a variety of health care issues, to liability and casualty insurance, workers compensation and other costs such as retirement and other fringe benefits.

To measure benefits costs, we include data on health care premiums and long term health care costs, workers' compensation costs per worker and fringe benefits of all kinds as a share of worker costs. These data are collected from the American Association of Retired Persons, Bureau of Economic Analysis, Regional Economic Information System and author's calculations from data produced from the national input-output model.

Human Capital



No factor matters more to businesses than the quality and availability of labor. Workers represent the largest single cost of doing business, but more importantly they are the source of most innovation and process improvements that distinguish successful firms from those that are not successful. Because produced goods have a high degree of value dependent on each individual worker in a production line or transportation leg or hub, a uniformly high quality of workers is required. These workers must possess the ability to understand increasingly complex production processes which are today mostly managed by computers with specialized software. The factories, rail yards, distribution facilities and machine shops of today are complex, highly technical and are dependent on workers who can work successfully in this environment. Human capital is the most important factor in firm location decisions, which, in the United States, is almost entirely made up of the quality of educational background.

Our human capital measurements include rankings of educational attainment at the high school and collegiate level, the first-year retention rate of adults in community and technical colleges, the number of associates degrees awarded annually on a per capita basis and the share of adults enrolled in adult basic education. These data are from the National Center for Educational Statistics.