EVV-CRANE I-69 INNOVATION CORRIDOR

The Future Is Now: *Join Us Moving Forward*

University of Southern Indiana

Index

1. Project Vision, Goal, and Strategic Framework

Vision, Mission and Strategic Priorities

Process Overview

Shared Strategic Framework

- Brainpower
  Start with sound education and imaginative, entrepreneurial educators that can generate 21st century brainpower with skills to support globally competitive businesses
- Innovation and Entrepreneurship Networks
  Business development networks (clusters, entrepreneurial support, venture capital, mentors) capable of converting brainpower into wealth through innovation and entrepreneurship
- Quality, Connected Places
  Mobile people and companies that are innovative will choose to locate in places with high quality of life and that are connected to the rest of the world
- Branding Experiences
  Regions need to tell its story effectively, defining most distinctive attributes. Brain drain can be avoided by showing young population that region has a future that is vibrant and exciting
- Civic Collaboration
  Leaders skilled in the art and discipline of collaboration

Note: To learn more, read the attached pdf, Guidelines for Regional Investment Decisions.

2. Business Case for Transformational Change

Economic Characteristics of the I-69 Corridor Region

Introduction

Historically, the success of economic regions within the United States has been uneven. Moreover, regional disparities occur whether there is convergence or divergence in regional specialization of economic activity. A key determinant of regional success is the extent to which regional specialization of economic activity facilitates the adaptive capacity of regions when there are major structural changes within the national or the global economy. During the past three decades, changes such as the relative shift in the structure of output and employment towards service related activities, rapid innovation in information processing and communications technology, and the globalization of financial, resource, and commodity markets have highlighted notable differences in adaptive capacity among economic regions.

Regions with high adaptive capacity tend to have relatively strong and sustained performance in income growth, wage levels, job creation, and the number of business establishments. Dynamism in successful regional economies is also associated with the existence of innovation clusters. Innovation clusters are characterized by companies, support services, and specialized infrastructure that reflect a culture of networks, global connections, and sustainable innovation. The more innovative the industry clusters are within a region the more likely the region will have a high adaptive capacity. In addition to innovation clusters, a region's capacity to cope and adapt to structural or external change are influenced by

- how institutions and the population interpret risk associated with change
- the capacity to plan, learn and reorganize, as well as the willingness to experiment
- the prevailing perception within organizations and among individuals of their ability to cope with changes
- interest in adapting to change

An examination of the I-69 Corridor Region with regard to its performance trends, asset base, innovation capacity, and clusters of economic activity provides the context for evaluating the future impact of the I-69 highway on the region.

Regional Profile

The I-69 Corridor Region from the 1970s to the present

The I-69 Corridor Region – comprised of Daviess, Dubois, Gibson, Greene, Knox, Martin, Pike, Posey, Spencer, Vanderburgh, and Warrick Counties in Indiana – represents a mix of rural and urban communities. Since 1970, this region has experienced significant structural changes in employment and income. As Table 1 shows, the share of manufacturing employment declined from 26 percent of total employment in 1970 to 14.2 percent in 2010. During the same time period the share of total employment accounted by services related activities increased from 46.3 percent to 61.2 percent.

Table 1: Shares of Total Employment and Earnings from 1970 to 2010 in the I-69 Corridor Region (%)

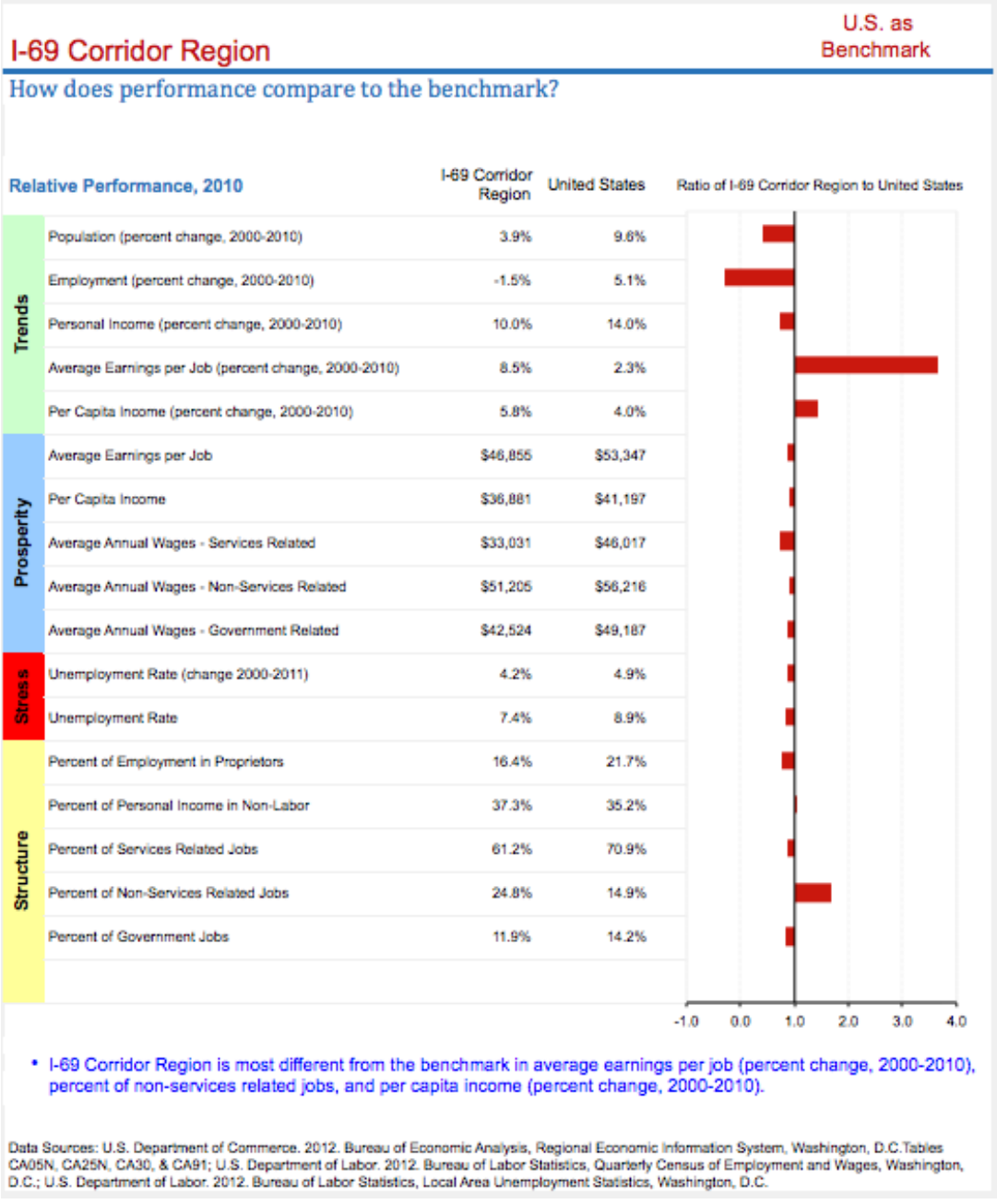
	1970	1980	1999	2000	2010
EMPLOYMENT					
Services-related	46.3	51.3	56.4	59.4	61.2
Non-services related	39.9	36.4	31.3	29.4	24.8
Manufacturing	26.0	21.2	18.9	17.8	14.2
EARNINGS					
Services-related	39.8	41.5	44.7	49.1	50.5
Non-services related	49.4	46.3	39.4	37.0	33.7
Manufacturing	33.5	30.1	26.7	24.9	21.0

The trajectories are similar with regard to total labor earnings accounted for by manufacturing activities and services-related activities. As the region adapted to changing patterns of demand for goods and services it is significant that this was associated with less severe disruptions to the regional economy than have been experienced by a significant number of regional economies across the country. As Figure 2 shows, between 1970 and 2011 a key indicator of economic stress – the unemployment rate – was consistently lower in the I-69 Corridor Region compared to the average for the national economy.

Figure 1 provides a comparison of the performance of the I-69 Corridor Region with United States between 2000 and 2010. During the last decade the I-69 Corridor Region experienced relatively stronger performance in the trend of average earnings per job and in per capital income. During the same time period, percentage changes in

population, employment, and personal income were lower in the region compared to the national economy. As Figure 2 shows, this pattern of slower regional growth in population, employment, and personal income in comparison with the national economy has been occurring over the past three decades as well.

Figure 1: Performance of the I-69 Corridor Region Relative to the U.S. Economy since 2000



Since the early 1980s there has been a sustained divergence in the growth paths of population, employment, and personal income between the I-69 Corridor Region and the national economy. While major developments such as decisions by Toyota and AK Steel to locate in the I-69 Corridor Region have served to expand and increase regional economic resiliency, paths of major indicators of regional vitality that are below the national average suggest the existence of serious challenges to future competitiveness and success for the I-69 Corridor Region.

Figure 2: Trends in Population, Employment, Personal Income, and the Unemployment Rate for the I-69 Corridor Region and the U.S. since 1970

Community Asset Inventory

Quality of life measures for the I-69 Corridor Region illustrate a mixed picture among the counties that form the region. Table 2 shows the rankings of the counties with regard to a set of indicators used to describe the conditions of life, education, and health of the population; the impact of government and economic conditions; the existence of changeable and static public amenities, and the quality of place reflected by the offerings in the arts, entertainment, and recreation. Variability in the rankings among the counties helps to identify conditions that need to be addressed for overall improvement within the region.

Table 2: Community Asset Inventory and Rankings

CATEGORY	Daviess	Dubois	Gibson	Greene	Knox	Martin	Pike	Posey	Spencer	Vanderburgh	Warrick
People	C	A	A	C-	C	C	C	C	C	A	B
Human Capital: Education	D	B+	B	C	D	C	C	A	A	D	A
Human Capital: Health	C	A	B	D	C	C	F	C	C	B-	A
Government Impact & Economy	F	C	C	A	D+	C+	C-	B	D+	C	B+
Public Amenities: Changeable	90.9	105.9	99.6	94.5	96.9	87.1	99.1	102.6	111.6	114.1	103.9
Public Amenities: Static	124.4	114.2	117	108.4	112	116	120	127.8	104.2	100.8	115.6
Arts, Entertainment, & Recreation	C	C	C-	D	C-	F	F	C	C	A	B

Source: Indiana Community Asset Inventory and Rankings 2012 prepared by the Center for Business and Economic Research, Ball State University

Aggregating the scores within each category and allowing for size differences among the counties result in the overall rankings for the I-69 Corridor Region shown in Table 3. Public amenities represent highly positive influences on the region's quality of life, while education, the impact of government, and economic conditions represent areas for improvement. Since population, employment and personal income growth are embedded within a number of the quality of life measures, it is not surprising to find that the rankings are reflective of the long-term trends in the region's economic performance.

Insights about a key source of sustained regional vitality are provided by those regions that have experienced growth paths in population, employment, and personal income above or at the same level as the national economy. Since the 1970s, the regions that have sustained population, employment, and personal income growth at or above the national average tend to be associated with existing and emerging innovation hubs. These innovation hubs leverage the core assets of regions and serve as magnets to form concentrations of economic activity characterized by connectivity, synergy, knowledge

flows, innovative activity, and cost and productivity advantages that enhance the adaptive capacity and dynamism of regions.

The next section examines the asset base of the I-69 Corridor region, its innovative capacity, and primary industry clusters. Emerging technologies and megatrends provide the context for exploring possibilities related to strengthening the innovation capacity of the region.

Table 3: Community Asset Inventory Rankings for the I-69 Corridor Region

CATEGORY	I-69 Corridor Region Average (weighted by population)
People - the conditions of the people within a community. Factors include population growth, poverty rate, unemployment rate, private foundations revenue per capita, and other nonprofit revenue per capita.	B
Human Capital: Education - Factors include percent of students who passed the ISTEP English section, percent of students who passed the ISTEP math section, educational attainment (highest degree earned), and high school graduation rate.	C
Human Capital: Health - Factors include fertility rate, death rate, premature death rate, poor and fair health rate, poor physical and mental health days, motor vehicle crash death rate, cancer incidence rate, lung and bronchus incidence rate, asthma rate; number of primary care providers; and access to healthy food.	B-
Government Impact & Economy - Factors include crime rate, effective tax rate, main street rate, and metropolitan development.	C
Public Amenities: Changeable - include public parks, historic and cultural sites, fishing and boating areas, camping or RV parks, hiking/walking trails, beaches, and school grounds. Amenities use an index with 100 points as average.	104.4
Public Amenities: Static - include forests, fish and wildlife areas, dedicated nature preserves, bodies of water, and shore lines. Amenities use an index with 100 points as average.	109.3
Arts, Entertainment & Recreation - Factors include per capita personal income, employment per 1,000 people, and average compensation per employee; number of marinas, fairgrounds, athletic fields, and golf courses; and accommodation and food services per capita income.	B

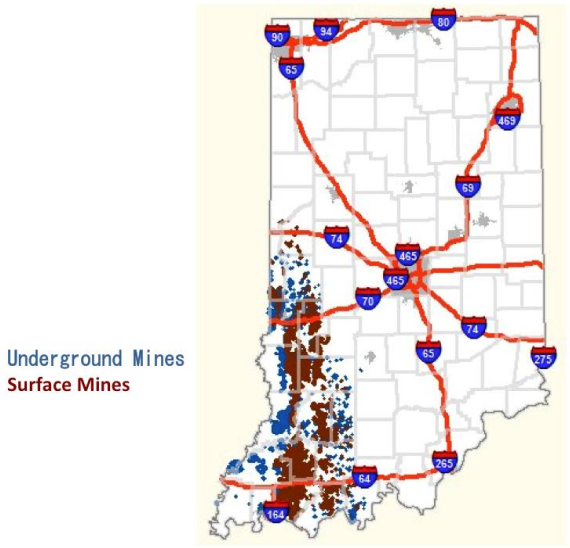
I-69 Corridor Region Asset Base

Natural resources

The distribution of coal mining activity and coal reserves shown in Figures 3 and 4 highlights the significance of this natural resource within the I-69 Corridor Region. In addition, the concentration of oil and gas wells within the I-69 Corridor Region represents the existence of a specialized infrastructure and support services within the oil and gas extraction value chain. Table 4 identifies the land area of the region and the proportion under use as farmland.

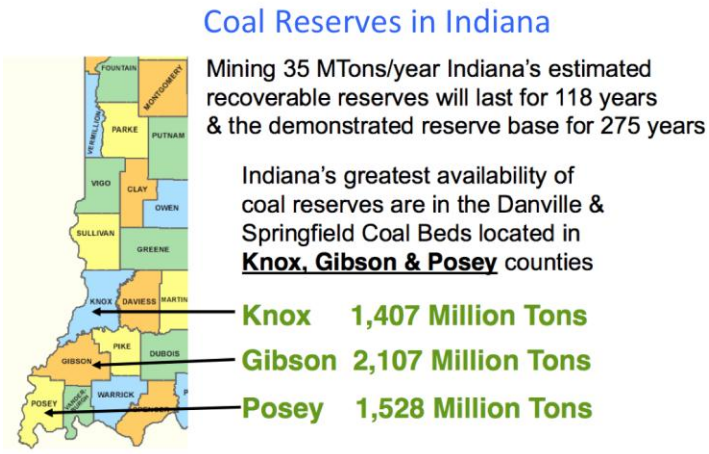
Figure 3: Coal Mining in Indiana

Underground and Surface Mines



Source: Indiana Coal Mine Information System - http://coalminemaps.indiana.edu/viewer.htm

Figure 4: Coal Reserves in the I-69 Corridor Region



Source: Indiana Center for Coal Technology Research

Figure 5: Oil and Gas Wells Concentration in Southwest Indiana

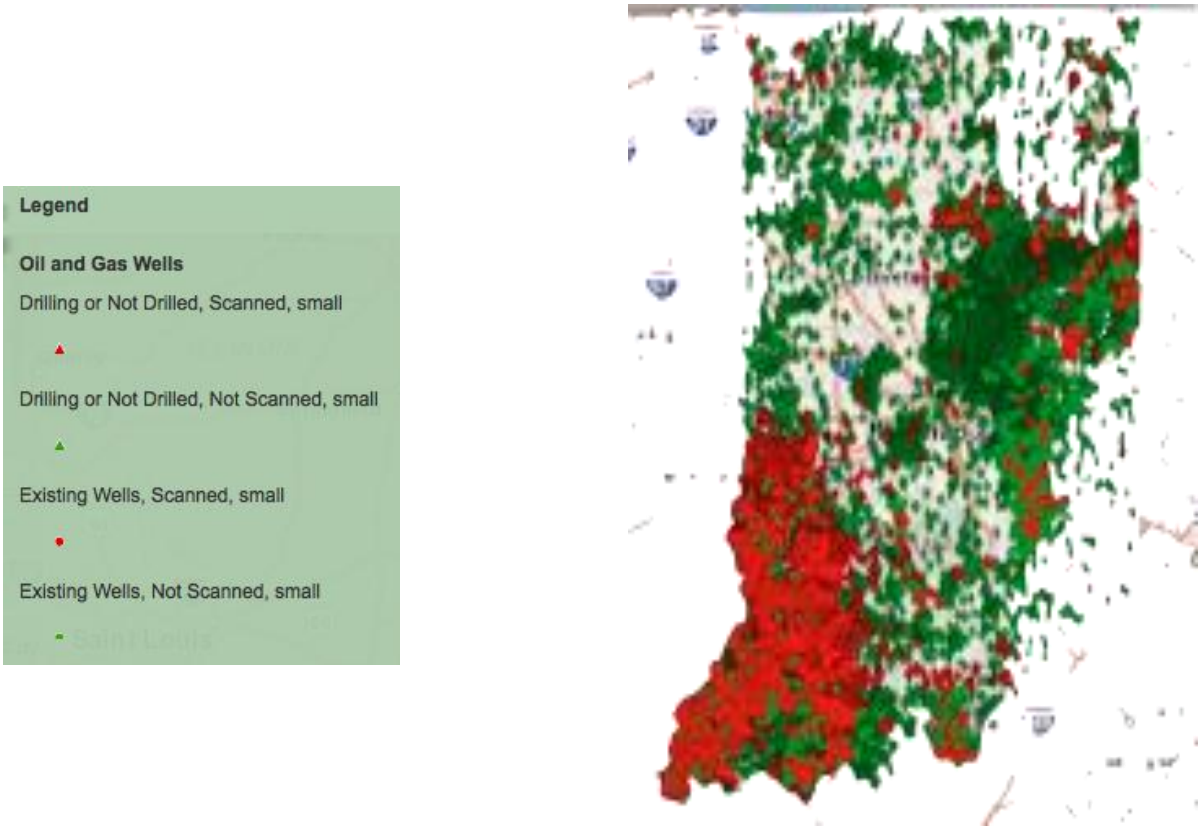
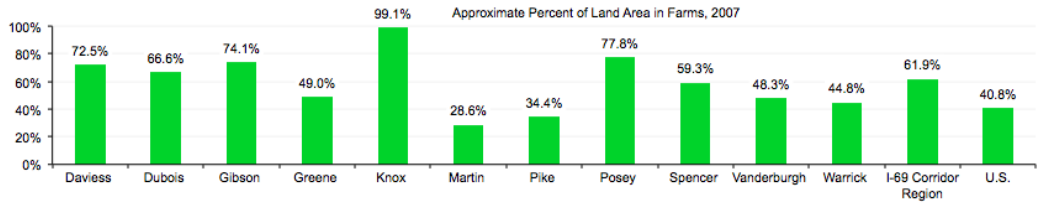


Table 4: I-69 Corridor Region - Land Area and Farms — Farm Land and Type

Number of Farms and Land in Farms (Acres), 2007

	Daviess	Dubois	Gibson	Greene	Knox	Martin	Pike	Posey	Spencer	Vanderburgh	Warrick	I-69 Corridor Region	U.S.
Number of Farms	969	761	590	799	568	278	334	438	632	335	413	6,117	2,204,792
Land in Farms (Acres)	199,367	182,175	231,082	169,750	327,267	61,331	73,612	204,004	150,244	71,927	109,932	1,780,691	922,095,840
Average Farm Size (Acres)	206	239	392	212	576	221	220	466	238	215	266	3,251	418
Approximate Land Area (Acres)	274,861	273,453	311,980	346,699	330,192	214,682	213,912	262,196	253,569	148,945	245,432	2,875,921	2,260,994,361
Approximate Percent of Land Area	72.5%	66.6%	74.1%	49.0%	99.1%	28.6%	34.4%	77.8%	59.3%	48.3%	44.8%	61.9%	40.8%

- In 2007, Knox County, IN had the largest percent of land area in farms (99.1%), and Martin County, IN had the smallest (28.6%).

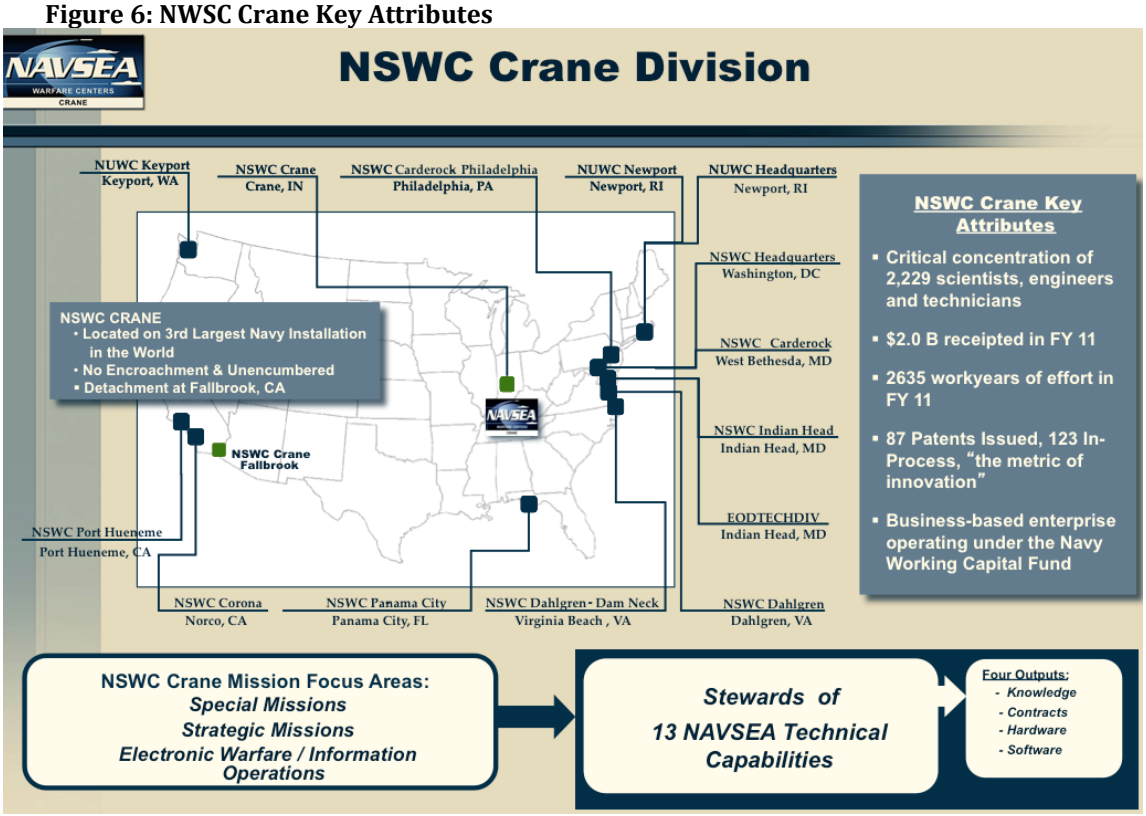


Data Sources: U.S. Department of Agriculture. 2009. National Agricultural Statistics Service, Census of Agriculture, Washington, D.C., Table 8.

NSWC Crane Assets and Economic Impact

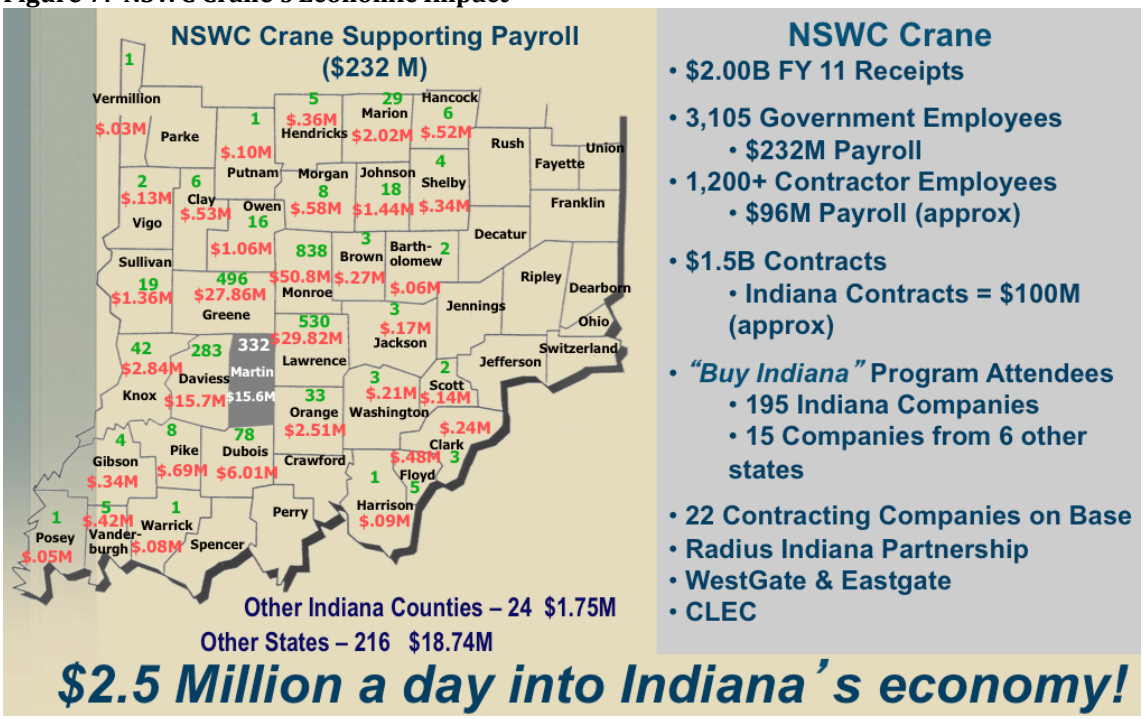
NSWC Crane is a critical asset in the I-69 Corridor Region. It is a naval laboratory and a field activity of Naval Sea Systems Command (NAVSEA) with focus areas in Special Mission, Strategic Missions and Electronic Warfare/Information Operations. Key aspects of NSWC Crane's operations and impact are provided in Figures 6 and 7. The focus of NSWC Crane's research and development efforts is to provide capabilities and resources to advance technologies for the military. At the same time there is a strong emphasis on
technology transfer and partnership development aimed at facilitating the application and commercialization of federal inventions.

Figure 6: NWSC Crane Key Attributes



As Figure 7 shows, the economic impact of NSWC Crane's operations is uneven among the eleven counties within the I-69 Corridor Region. However, the I-69 Corridor Region receives about 30 percent of NSWC Crane's supporting payroll resulting in expenditures that with considerable impact on business sales.

Figure 7: NSWC Crane's Economic Impact



Education

The impact of educational attainment is arguably more evident over the past three decades than in prior decades. As the chart shows, education attainment with regard to college degrees in the United States has increased since 1980, but over time there is widening gap between urban and rural areas. Increases in educational attainment at a faster rate have been shown to have productivity spillover effects. Educational attainment in the I-69 Corridor Region has also increased over time as shown in Figure 9. However, there has been a slight widening of the gap between national average and the I-69 Corridor Region over the past three decades.

Figure 8: National Trends in Percent of Adults with a College Degree

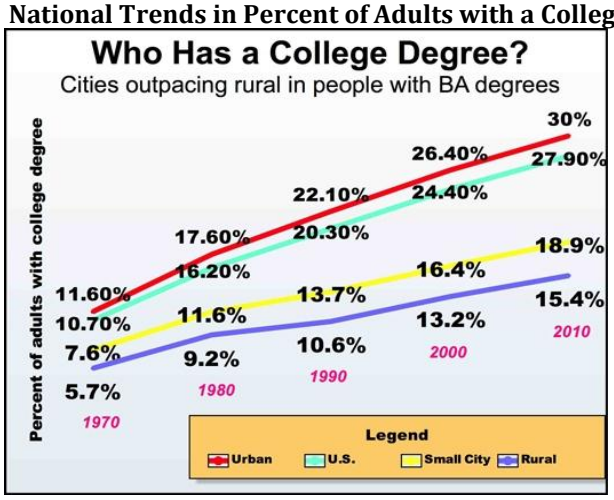
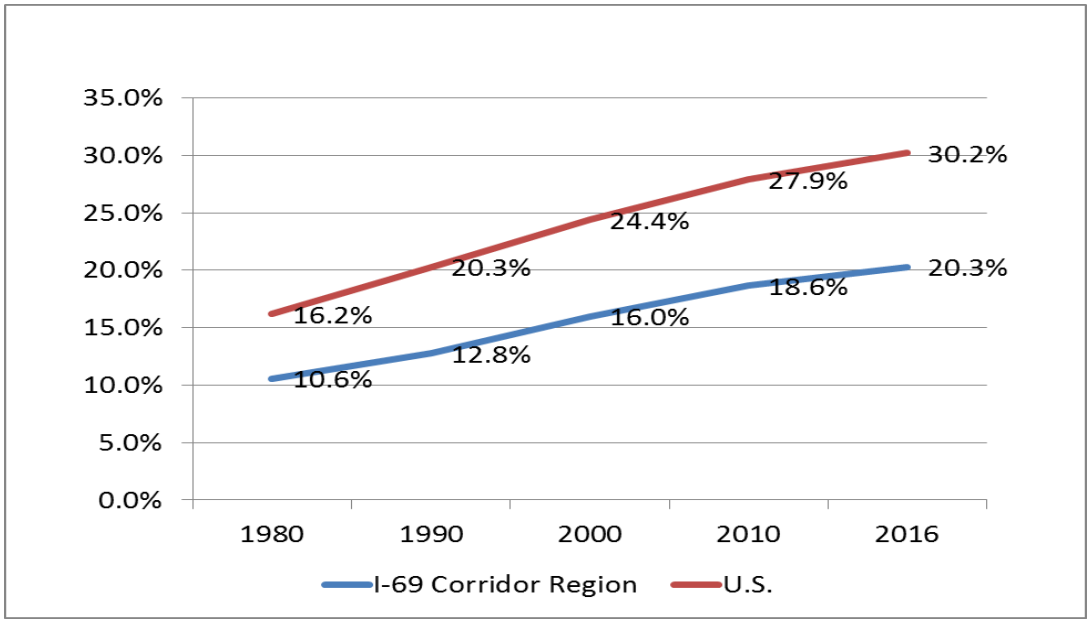


Figure 9: Percent of Population 25 Years and over with a Bachelor's Degree or Higher: U.S. and the I-69 Corridor Region



Within the I-69 Corridor Region, the educational attainment profile by age group shown in Figure 10 highlights gaps in relation to the Bachelor's degree. Figure 11 illustrates the positive relationship between earnings and educational attainment within the I-69 Corridor Region. It is also important to note that even though the I-69 Corridor Region has made significant gains in graduation rates and higher education, a significant gap exists in the number of students graduating in STEM areas and STEM job openings. Demand is rapidly outgrowing supply of specialized workforce in technical areas.

Figure 10: Educational Attainment in the I-69 Corridor Region – 208-2010

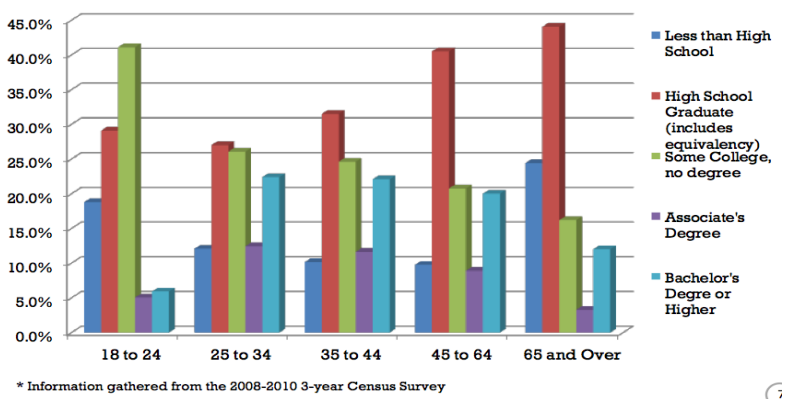
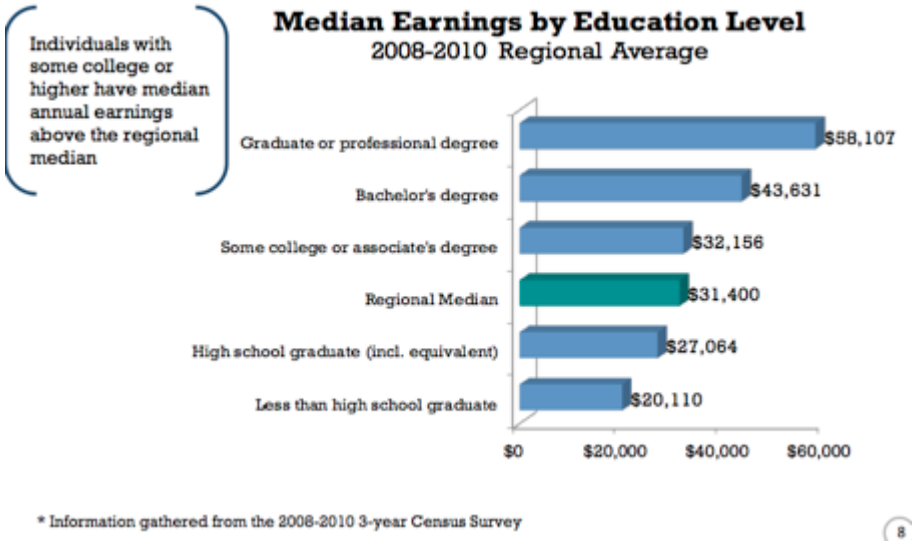


Figure 11: Median Earnings in the I-69 Corridor Region – 2008-2010



Innovation Capacity

An innovation index prepared by the Kelley School of Business at Indiana University provides a snapshot of how a region is doing in terms of innovation. It allows for comparisons among regions as well as with the U.S. (index =100) as a way of assessing innovation capacity. The index includes the following components: human capital, economic dynamics, productivity and employment, and economic well-being. Each of the first three components has a 30 percent weight and the last component has a 10 percent weight. Table 5 shows the most recent innovation index values for counties in the I-69 Corridor Region.

Table 5: I-69 Corridor Region – Innovation Index and its Components by County

	Innovation Index		Human Capital	Economic Dynamics	Productivity & Employment	Economic Well-Being
Daviess	71.7		63.4	71.6	70.5	100
Dubois	81		71.4	89.4	74.6	103.7
Gibson	85.3		102.3	68.7	78.4	105
Greene	73.8		70.8	76.9	66.4	95.6
Knox	76.7		78.9	69.8	73	101.6
Martin	78.6		85.5	57.4	86.4	98.6
Pike	68.1		59.5	60.7	74.9	95.8
Posey	87.6		101.2	68.8	88.1	101.4
Spencer	74		64.9	67.5	79.8	103.2
Vanderburgh	83.6		93.5	78.7	73.6	99
Warrick	84.9		87.3	83.1	78.7	102

As Table 6 shows, the I-69 Corridor Region is performing below the national average with an index value of 81.6. A comparison with specific regions known for their innovation capacity or the existence of innovation hubs such as San Jose-Sunnyvale-Santa Clara; Boise; and Portland, shows that the I-69 Corridor Region lags particularly in the human capital economic dynamics components.

Table 6: Innovation Index (U.S. =100)	
I-69 Corridor Region	81.6
Boise, ID	102.0
Indianapolis, IN	88.2
Kansas City, MO-KS	92.4
Knoxville, TN	81.7
Portland, OR	98.0
San Jose-Sunnyvale- Santa Clara, CA	128.5

Cluster Analysis

An industry cluster is a group of firms that, through their interactions with each other and with their customers and suppliers, develop innovative, cutting-edge products and processes that distinguish them in the market place from firms in the same industry found in other places.

Cluster analyses tend to show that once a cluster is established it is hard to move it. A key implication is that regions without an innovation cluster will find it difficult to start one. Within the I-69 Corridor Region there are ten primary industry clusters that account for nearly forty percent of regional output. Each of these clusters exhibit similarities to comparable national clusters but there are some differences with regard to the extent of the networks that have developed within the I-69 Corridor Region.

Figures 12 and 13 show the existing linkages for the Biotechnology and the Plastics clusters for the I-69 Corridor Region. The red sectors represent activities that are part of the national clusters but do not currently exist in the I-69 Corridor Region. In Figure 12, the red arrows indicate linkages that exist in the national Biotechnology cluster that do not currently exist in the I-69 Corridor Region. The sectors that are linked in the I-69 Corridor Region are connected by the black arrows. Two sectors that are integral to the Biotechnology cluster in the I-69 Corridor Region are plastics materials and resin manufacturing and truck transportation. Figure 13 shows that of the sixteen key sectors that comprise the Plastics cluster at the national level nine do not currently exist in the I-69 Corridor Region.

Figure 11: Sector Linkages in the Biotechnology Cluster

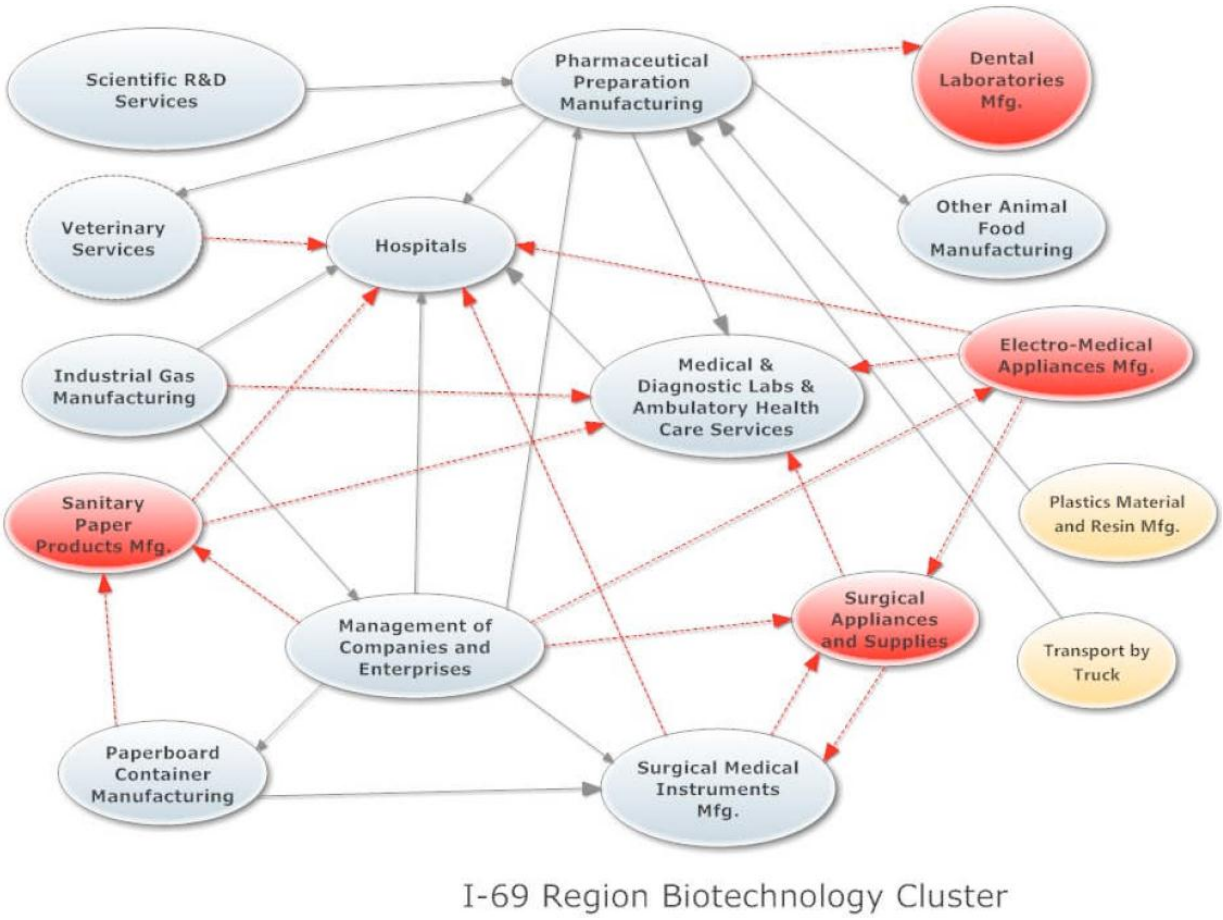
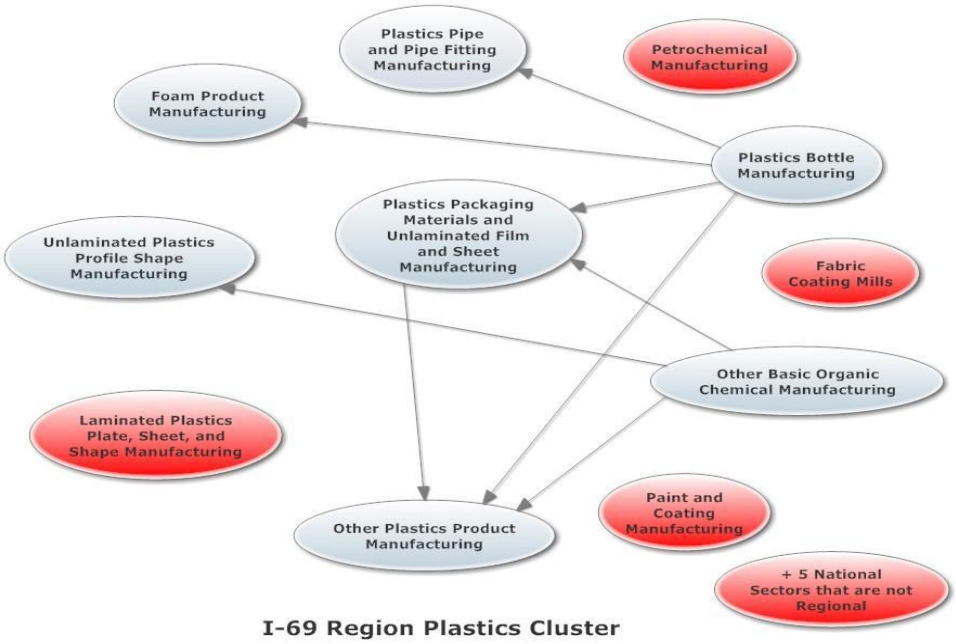


Figure 12: Sector Linkages in the Plastics Cluster

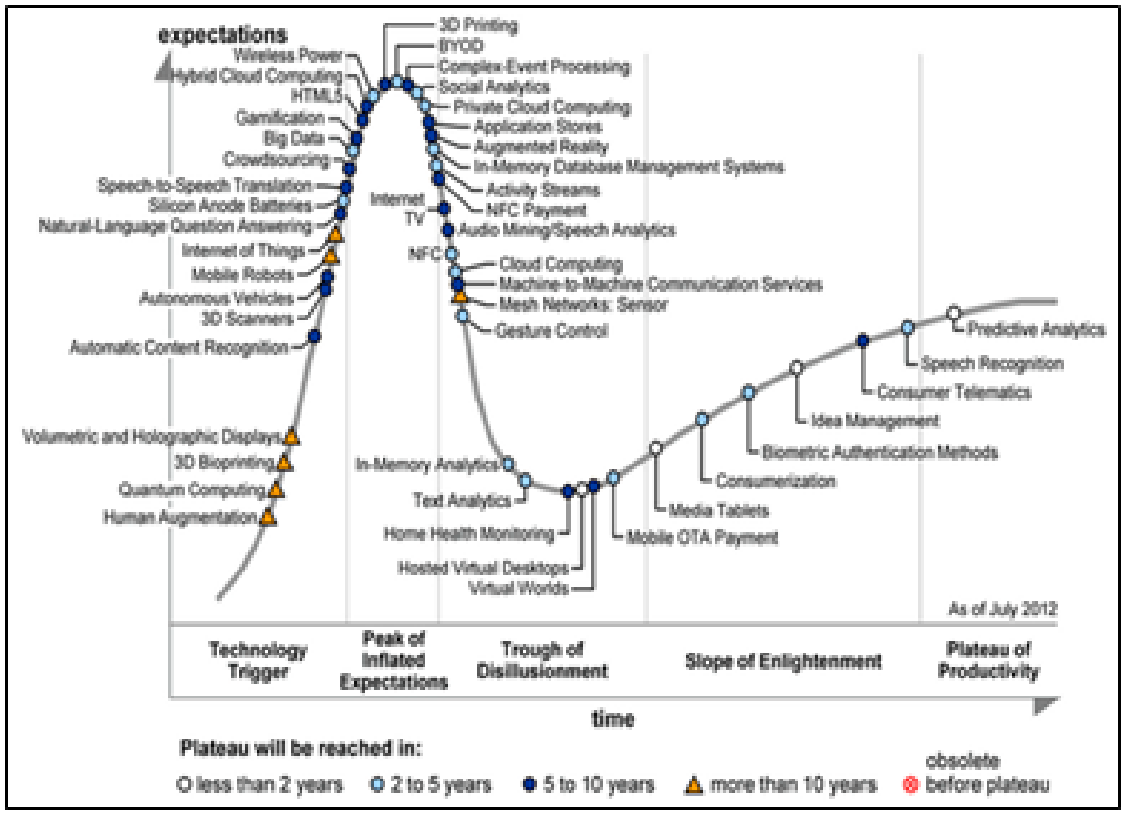


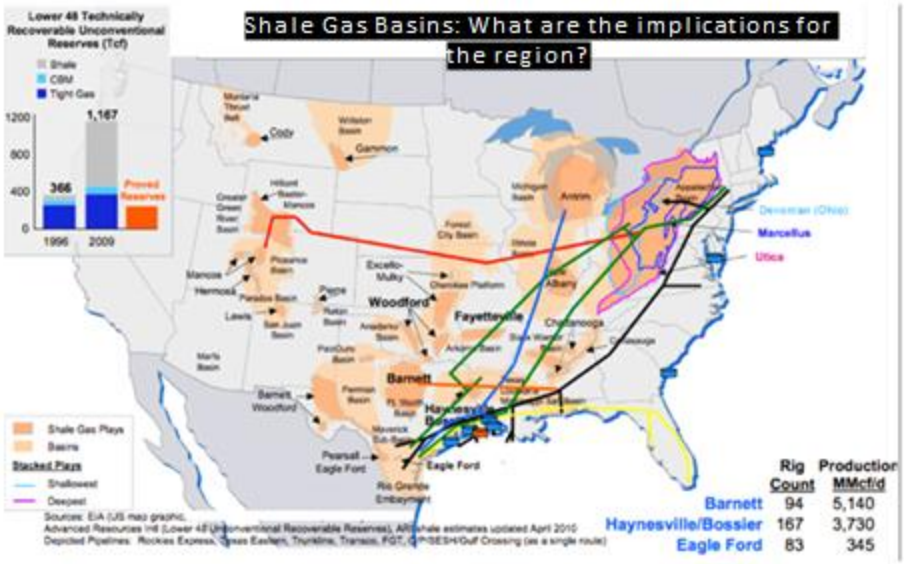
Can the I-69 Corridor provide an impetus for regional transformation?

Consider two illustrations from an Environmental Scan

The acceleration of innovation is an important aspect of the landscape impacting the future trajectory of regions. The Gartner Group has identified the following as the most prominent emerging technologies and their projected time to maturation as of July 2012.

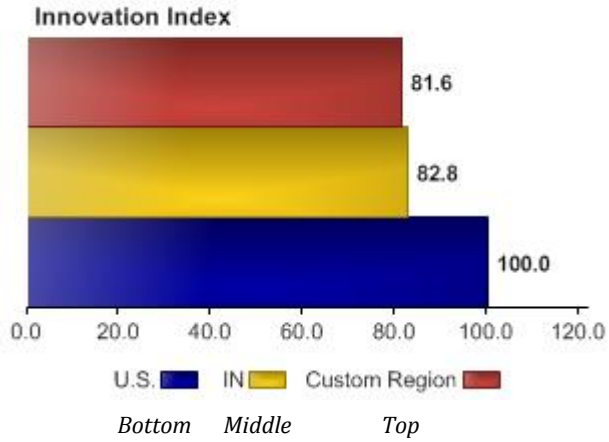
Key Emerging Technologies and Applications:
What are the likely impacts on the I-69 Corridor Region?




Shale Gas Basins: What are the implications for the region?
Lower 48 Technically Recoverable Unconventional Reserves (Tcf)
Shale
CBM
Tight Gas
1,167
366
Proved Reserves
1996
2009
Woodford
Fayetteville
Barnett
Eagle Ford
Marcellus
Utica
Shale Gas Plays
Basins
Stacked Plays
Shallowest
Deepest
Rig Count
Production MMcf/d
Barnett 94 5,140
Haynesville/Bossier 167 3,730
Eagle Ford 83 345

3. Innovation Index Explanation and Details

Innovation Index – Custom Region is I-69 Corridor Region



The Innovation Index consists of the following components (importance of each component indicated by %).

Human Capital: 30 %
Economic Dynamics: 30 %
Productivty and Employment: 30 %
Economic Well-Being: 10 %

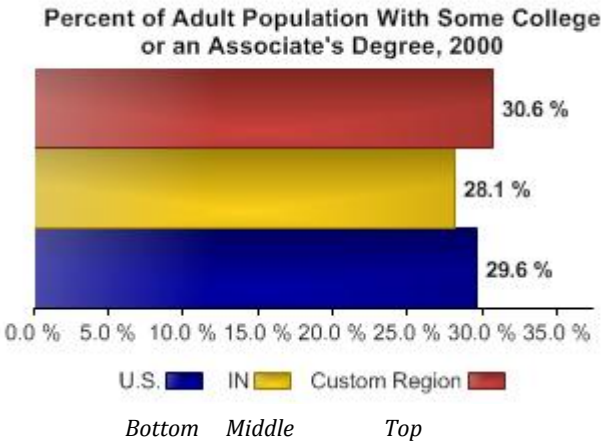
	Innovation Index		Human Capital	Economic Dynamics	Productivity & Employment	Economic Well-Being
I-69 Corridor Region	81.6		86.1	76.7	75.1	100.8
Daviess	71.7		63.4	71.6	70.5	100.0
Dubois	81.0		71.4	89.4	74.6	103.7
Gibson	85.3		102.3	68.7	78.4	105.0
Greene	73.8		70.8	76.9	66.4	95.6
Knox	76.7		78.9	69.8	73.0	101.6
Martin	78.6		85.5	57.4	86.4	98.6
Pike	68.1		59.5	60.7	74.9	95.8
Posey	87.6		101.2	68.8	88.1	101.4
Spencer	74.0		64.9	67.5	79.8	103.2
Vanderburgh	83.6		93.5	78.7	73.6	99.0
Warrick	84.9		87.3	83.1	78.7	102.0

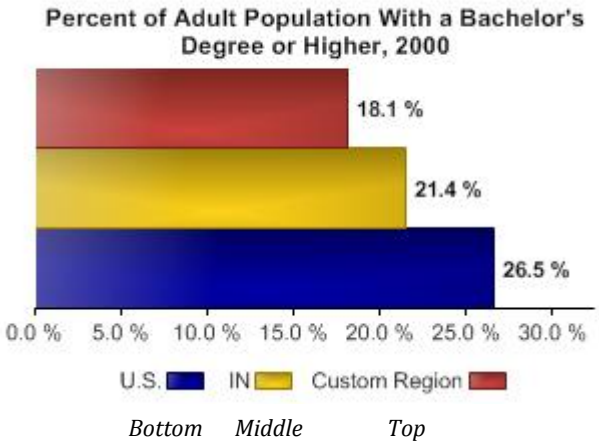
I-69 Corridor Region Human Capital Index = 86.1

Human Capital Components – I-69 Corridor Region is Custom Region

Educational Attainment

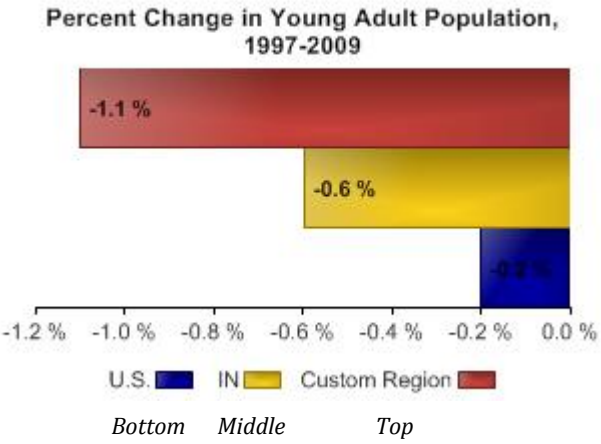
Educational attainment is a measure of the population's capacity to contribute to innovation with necessary skills and knowledge. 2 component indicators are presented for education to measure not only highly educated residents (ages 25 to 64) with a bachelor's degree or higher, but also residents with some college. Research shows that the some college/ associate's degree indicator has a significant effect on GDP per worker growth.





Population Growth Rates

High population growth rates for younger working age persons (ages 25 to 44) suggest new residents are attracted to an area, growing the workforce, adding to the innovative base and launching new businesses. Research shows this indicator has a significant effect on GDP per worker growth.

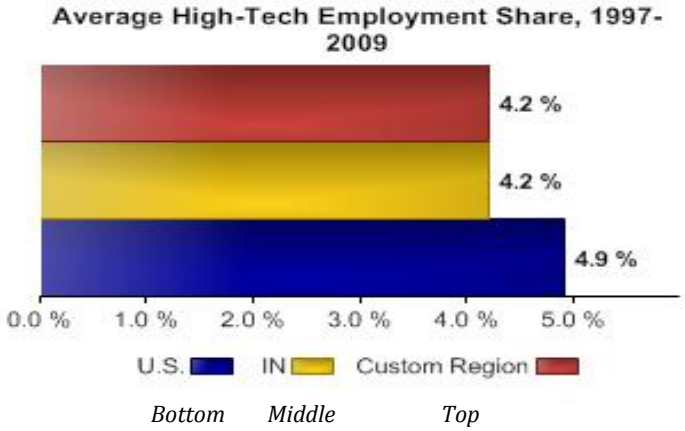


I-69 Corridor Region Human Capital Index = 86.1

Human Capital Components – I-69 Corridor Region is Custom Region

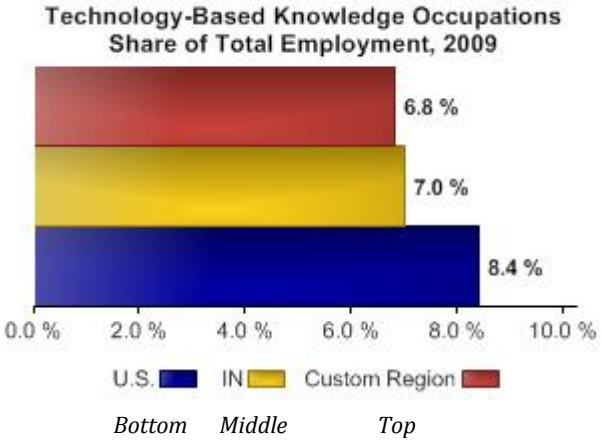
High-Tech Employment Share

Firms requiring a highly skilled and specialized workforce contribute to innovation in a region by providing a resource for workers, other firms and other industries.



Technology-Based Knowledge Occupations

These 6 occupation clusters are often thought to be closely associated with the production of innovations. They include information technology; engineering; health care and medical science practitioners and scientists; mathematics, statistics, data and accounting; natural science and environmental management; and postsecondary education and knowledge creation.

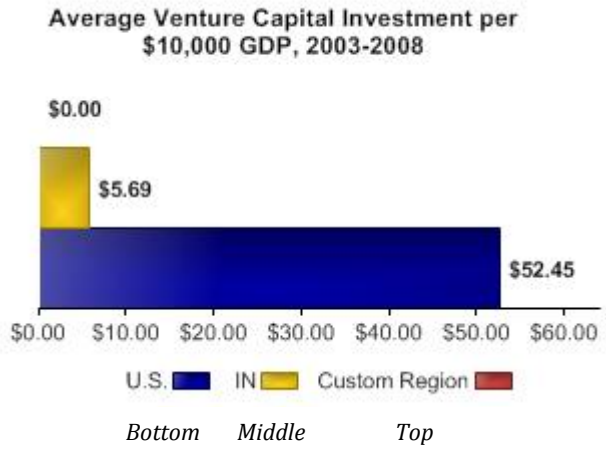


I-69 Corridor Region Economic Dynamics Index = 76.7

Economic Dynamics Components – I-69 Corridor Region is Custom Region)

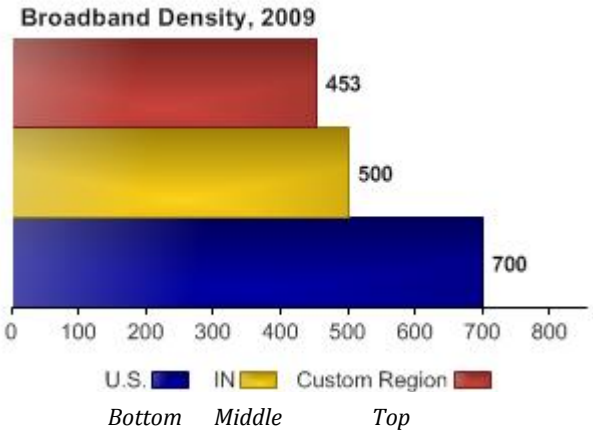
Average Venture Capital

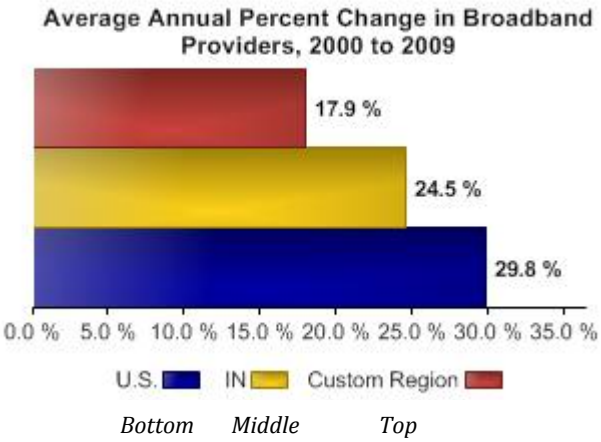
Venture capital provides a source of funds to launch new ideas or expand innovative companies.



Broadband Density and Penetration

Innovation and knowledge are linked to widespread Internet usage for individuals and businesses. There are two measures to gauge Internet usage. One measure is the level of Internet penetration, or broadband density. This measure is residential broadband fixed connections per 1,000 households. For the custom region the midpoint for the region is calculated as the weighted average of the midpoints of all the counties in the region. The second measure is a proxy for the rate of Internet adoption. This indicator is defined as the change in the number of broadband providers available to residents in a given county from 2000 to 2009.



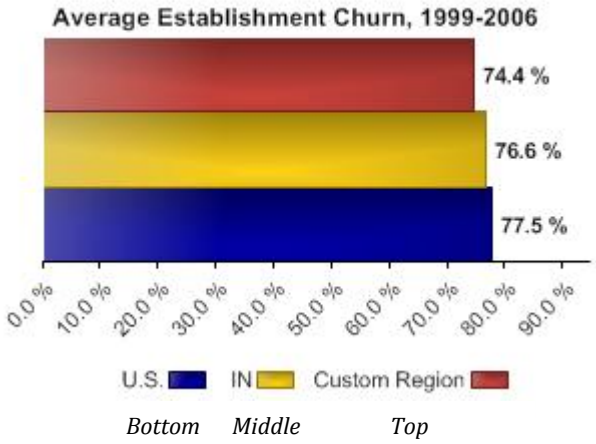


I-69 Corridor Region Economic Dynamics Index = 76.7

Economic Dynamics Components – I-69 Corridor Region is Custom Region)

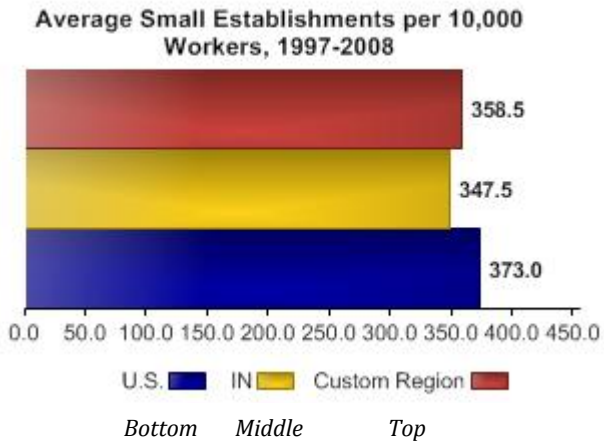
Establishment Churn

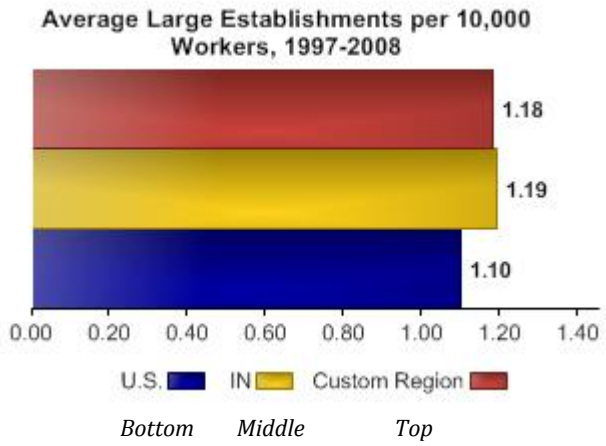
Innovative and efficient companies replace outdated establishments, or those firms unable to modernize techniques and processes. Average churn is a measure of total establishment births and deaths, and expansions and contractions, relative to the total number of firms in a region for all years available.



Establishment Sizes

The sizes of establishments provide an indication of a regional economy's structural composition. Small establishments with fewer than 20 employees are flexible and not overburdened by a bureaucratic organizational structure enabling rapid changes to implement new ideas and evolve with technology. On the other end of the spectrum, large establishments with more than 500 employees have both the capital and labor resources to fund research and other innovative activities. Research shows that the average share of small establishments has a significant effect on GDP per worker growth.



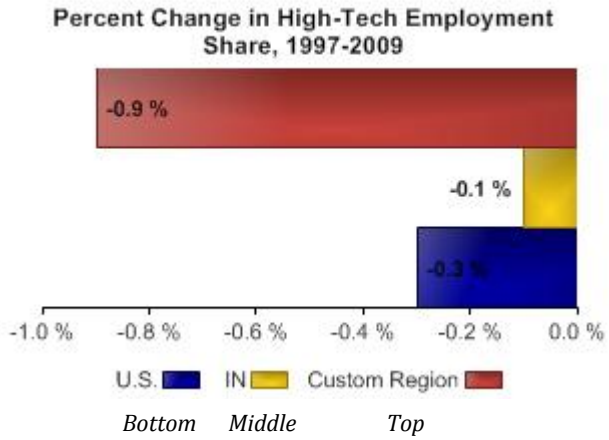


I-69 Corridor Region Productivity and Employment Index = 75.1

Productivity and Employment Components – I-69 Corridor Region is Custom Region

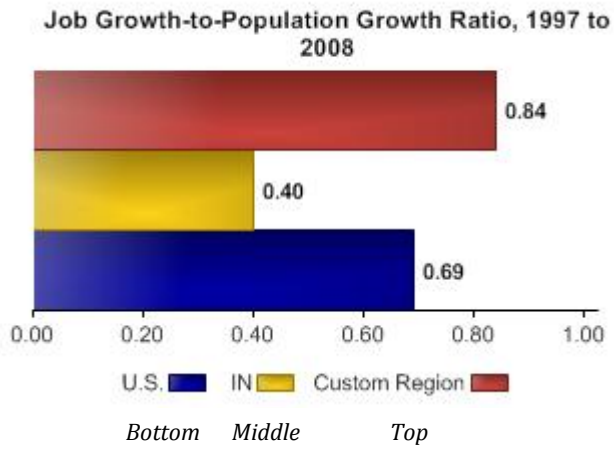
Change in High-Tech Employment

Firms requiring a highly skilled and specialized workforce are drawn to innovative areas. Growth in this sector suggests the increasing presence of innovation. High-tech employment measures an aggregation of employment in key sectors (e.g., telecommunications, Internet providers, scientific laboratories) as an average annual rate of change in the share of high-tech employment. Research shows this indicator has a significant effect on GDP per worker growth.



Job Growth

High employment growth relative to population growth suggests jobs are being created faster than people are moving to a region. A high ratio between these 2 variables indicates strong economic growth.

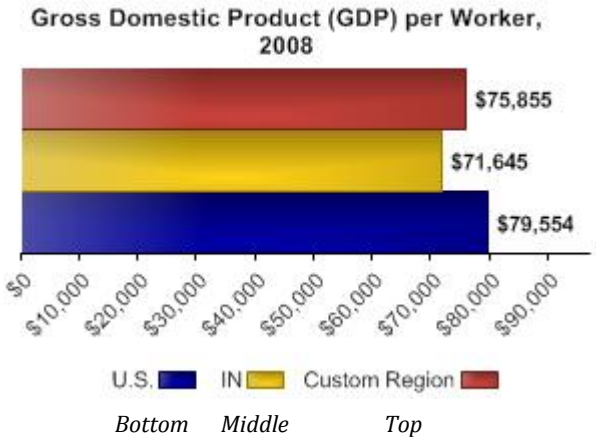


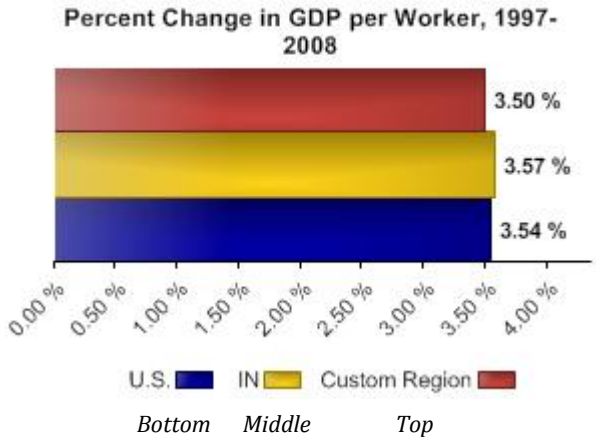
I-69 Corridor Region Productivity and Employment Index = 75.1

Productivity and Employment Components – I-69 Corridor Region is Custom Region

Gross Domestic Product per Worker

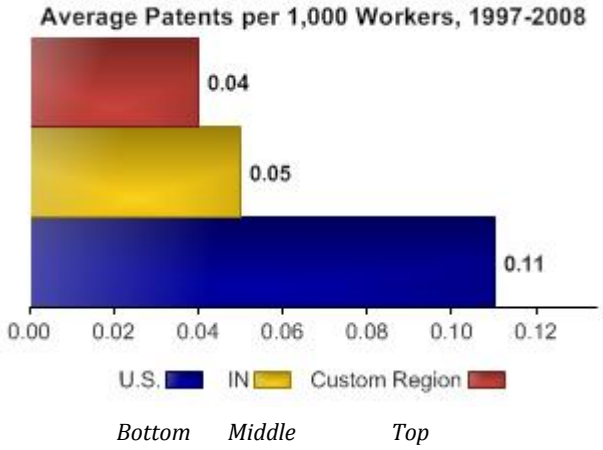
GDP serves as a measure of county-level economic output, while increases in GDP per worker measures increases in worker productivity.





Average Patents per 1,000 Workers

New patented technologies provide an indicator of individuals' and firms' abilities to develop new technologies and remain competitive in the economy. Patents are presented as total number per 1,000 workers.

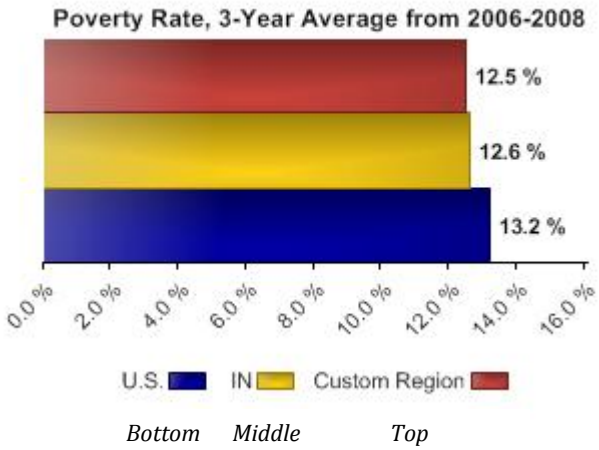


I-69 Corridor Region Economic Well-Being Index = 100.8

Economic Well-Being Components – I-69 Corridor Region is Custom Region

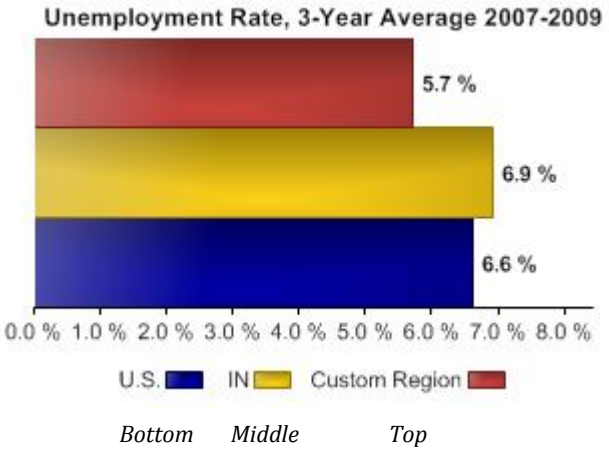
Average Poverty Rate

Innovative economies are thought to be less poverty stricken as a result of elevated employment opportunities and a more highly educated workforce with diverse skills that open the doors to an increased number of employers. As poverty rates decrease, presumably innovation has increased.



Average Unemployment Rates

Innovative economies have greater employment opportunities and lower unemployment rates.

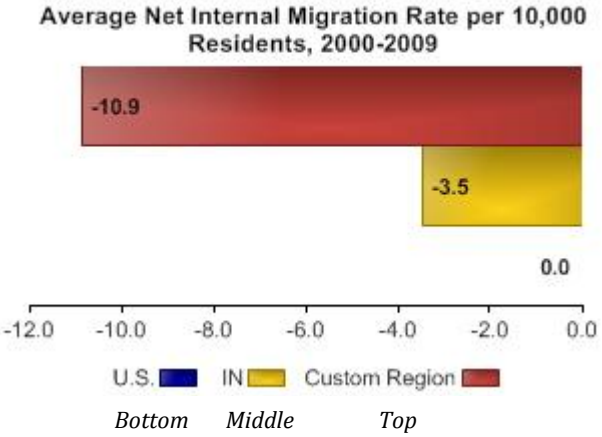


I-69 Corridor Region Economic Well-Being Index = 100.8

Economic Well-Being Components – I-69 Corridor Region is Custom Region

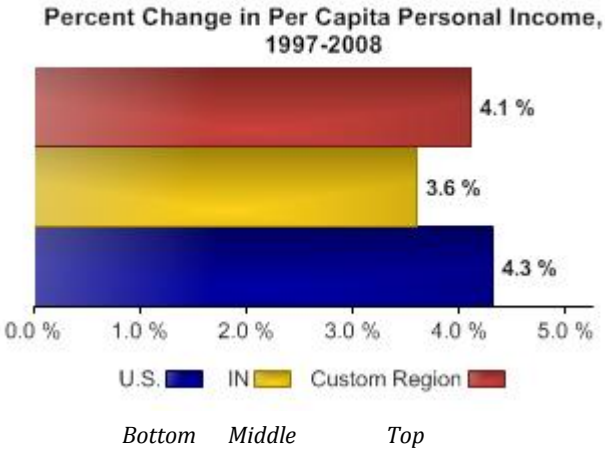
Average Net Migration

Total migration of all persons into a region serves as an indicator of whether a region is attractive to job seekers and families.



Average Growth in Per Capita Personal Income

Personal Income is the broadest measure of a person's income because it includes rental income, dividends and interest payments, in addition to salary, wages and benefits. As a result, it is probably the best measure of well-being.

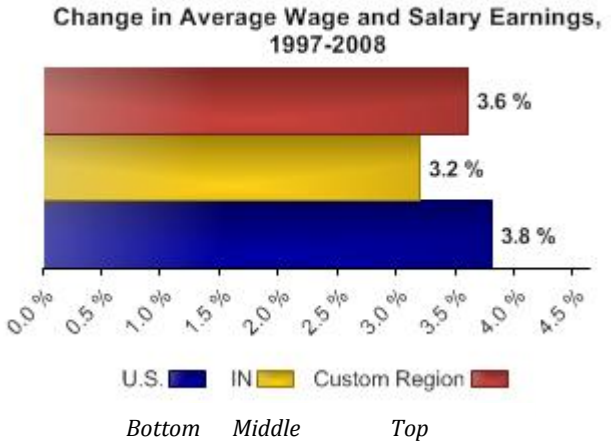


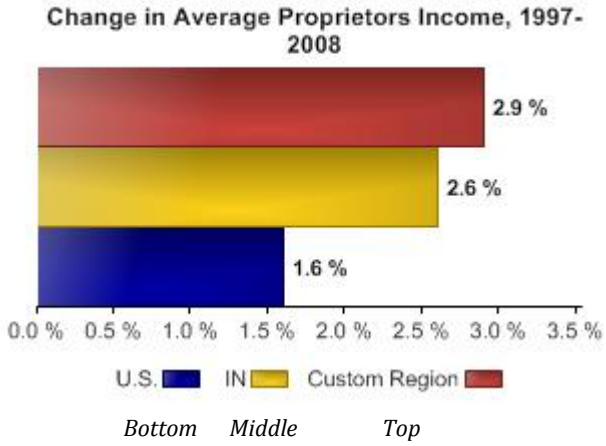
I-69 Corridor Region Economic Well-Being Index = 100.8

Economic Well-Being Components – I-69 Corridor Region is Custom Region

Compensation

Improvements in earnings per worker, or compensation, signify a postive trend in economic growth being passed on to workers. 2 specific categories of workers are considered: wage and salary employees and nonfarm proprietors.





INNOVATION INDEX EVV - CRANE CORRIDOR

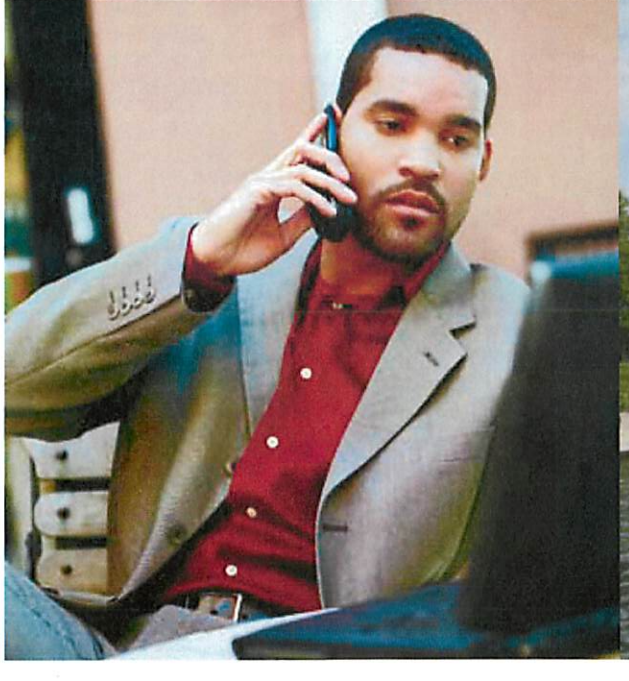
		Vanderburgh	Warrick	Posey	Gibson	Spencer	Pike	Dubois	Martin	Greene	Knox	Daviess	Region	US
Innovation Index	**WGHT**	**83.6**	**84.9**	**87.6**	**85.3**	**74**	**68.1**	**81**	**78.6**	**73.8**	**76.7**	**71.7**	**81.6**	**100**
Human Capital	**30%**	93.5	87.3	101.2	**102.3**	64.9	**59.5**	71.4	85.6	70.8	78.9	63.4	86.1	100
% pop. With Assoc. Deg. (2000)	20%	31.60%	33.70%	31.10%	32.50%	29%	25.30%	**25%**	26%	29.60%	**34.20%**	25.60%	30.60%	29.60%
% pop. With Bachelor Deg. (2000)	20%	22%	**24.10%**	16.80%	14.40%	13.60%	**8.80%**	16.20%	10.10%	12.30%	16.30%	11.10%	18.10%	26.50%
% Change in Young Adult Pop ('97-'09)	20%	**-0.60%**	-0.70%	**-2.60%**	-1.10%	-2.20%	-2.00%	-1.70%	-2.20%	-1.60%	-1.00%	-0.70%	-1.10%	-0.20%
Avg. High Tech Emp Share ('97-'09)	20%	4.50%	3.10%	7.70%	**9.70%**	2.10%	**1.30%**	3.20%	3.30%	1.70%	2.50%	2.30%	4.20%	4.90%
Share of total emp. Tech-based knowledge occ (2009)	20%	7.40%	6.10%	8.80%	4.80%	4.50%	5.60%	5.10%	**19.70%**	7.40%	6.30%	3.90%	6.80%	8.40%
Economic Dynamics	**30%**	78.7	83.1	68.8	68.7	67.5	60.7	89.4	57.4	66.4	69.80	71.60	76.70	100
Avg Venture Capital inv per $10k GDP ('03-'08)	25%	-	-	-	-	-	-	-	-	-	-	-	-	$52.45
Broadband density (2009)	12.5%	500	**86**	300	300	300	300	500	300	300	500	300	453	700
% change in Broadband providers ('00-'09)	12.5%	15.40%	18.90%	18.90%	15.40%	15.40%	16.70%	21.60%	**13.90%**	17.90%	**20.80%**	**20.80%**	17.90%	29.80%
Avg. establishment churn ('99-'06)	25%	**76.90%**	76%	73.20%	72.70%	71.80%	67.30%	**70.50%**	74%	71.80%	73.30%	70.90%	74.40%	77.50%
Avg. Small Establishment per 10k workers ('97-'08)	12.5%	332.2	**487.3**	356.8	353.4	355.6	413.1	312.6	**251.6**	472.2	399.40	409.90	358	373
Avg. Large Establishment per 10k workers ('97-'08)	12.5%	1.36	1.04	0.71	0.72	0.63	**0**	**2.61**	**0**	0.2	0.45	0.83	1.18	1.1

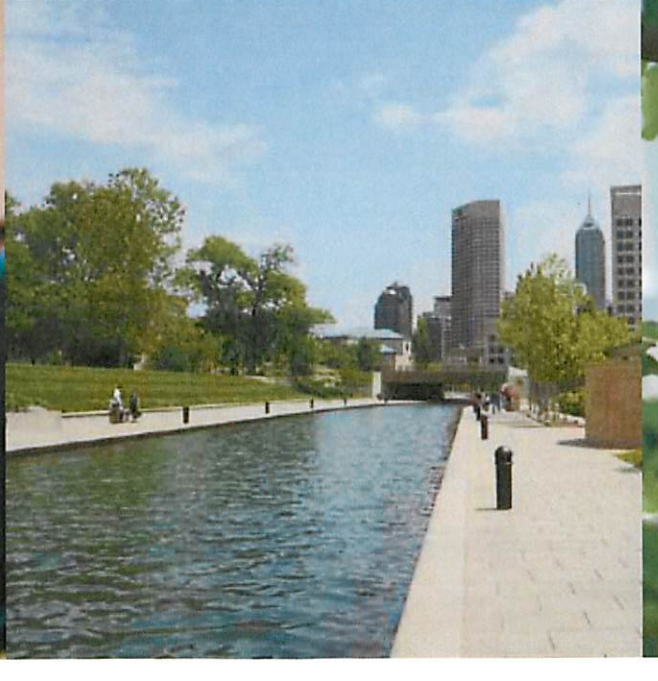
		Vanderburgh	Warrick	Posey	Gibson	Spencer	Pike	Dubois	Martin	Greene	Knox	Daviess	Region	US
Productivity & Employment	**30%**	73.6	78.7	88.1	78.4	79.8	74.9	74.6	86.4	76.9	73.00	70.50	75.5	100
% change in high tech emp ('97-'09)	25%	-3.30%	4.00%	3.60%	-0.80%	1.50%	0.10%	-0.70%	**8.70%**	3.30%	0.10%	-1.30%	-0.9%	-0.30%
Job growth to pop growth ratio ('97-'08)	25%	0.32	0.33	2.56	**9.16**	0.29	**0.27**	0.52	0.99	1.52	0.33	0.88	0.84	0.69
GDP per worker (2008)	12.5%	$80,238	$69,433	**$116,354**	$79,972	$73,326	$77,098	$65,542	$91,762	**$58,621**	$61,346	$59,842	$75,855	$79,554
% change in GDP/worker ('97-'08)	12.5%	3.58%	3.37%	**4.72%**	5.03%	**1.40%**	3.18%	2.87%	3.90%	3.81%	2.77%	3.17%	3.50%	3.54%
Average patents/1000 workers ('97-'08)	25%	0.04	0	0.03	0.05	0.1	0	0.06	0	0.01	0.02	**0.11**	0.04	0.11
Economic Well-Being	**10%**	99	102	101.4	105	103.2	95.8	103.7	98.6	95.6	101.6	100	100.8	100
Avg poverty rate ('03-'08)	20%	15.10%	6.90%	8.90%	10.50%	9.30%	10.20%	**7.70%**	12.50%	14.40%	**17.80%**	14.70%	12.50%	13.20%
Unemployment rate ('07-'09)	20%	6.00%	5.40%	5.80%	6.30%	6.20%	6.50%	4.80%	5.40%	**6.60%**	5.50%	**4.30%**	5.70%	6.60%
Avg net internal migration per 10k residents ('00-'09)	20%	-9	**78.1**	-46.7	-13.5	-42.2	-46.1	-10.6	**-55.4**	-27.1	-40%	-45.6	-10.9	0
Avg growth in per capita income ('97-'08)	20%	**3.80%**	4.30%	**4.80%**	4.20%	4.40%	3.90%	4.30%	4.20%	4.00%	4.50%	4.40%	4.10%	4.30%
Change in wage & salary ('97-'08)	10%	3.40%	**2.70%**	3.60%	**6.20%**	3.30%	3.40%	3.20%	4.20%	3.40%	3.80%	3.90%	3.60%	3.80%
Change in prop. Income ('97-'08)	10%	4.60%	1.30%	-1.50%	1.40%	6.20%	-1.70%	**5.60%**	**-2.10%**	-1.90%	3.70%	0.20%	2.90%	1.60%

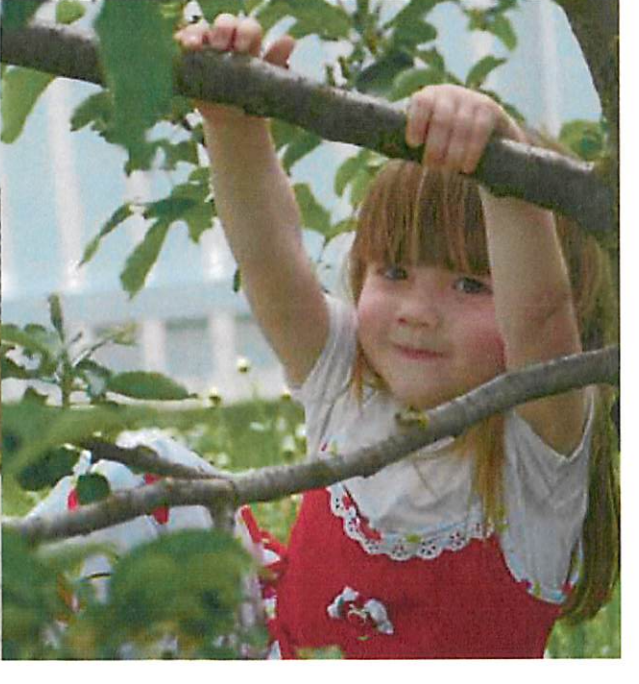
4. Ball State's Community Asset Inventory

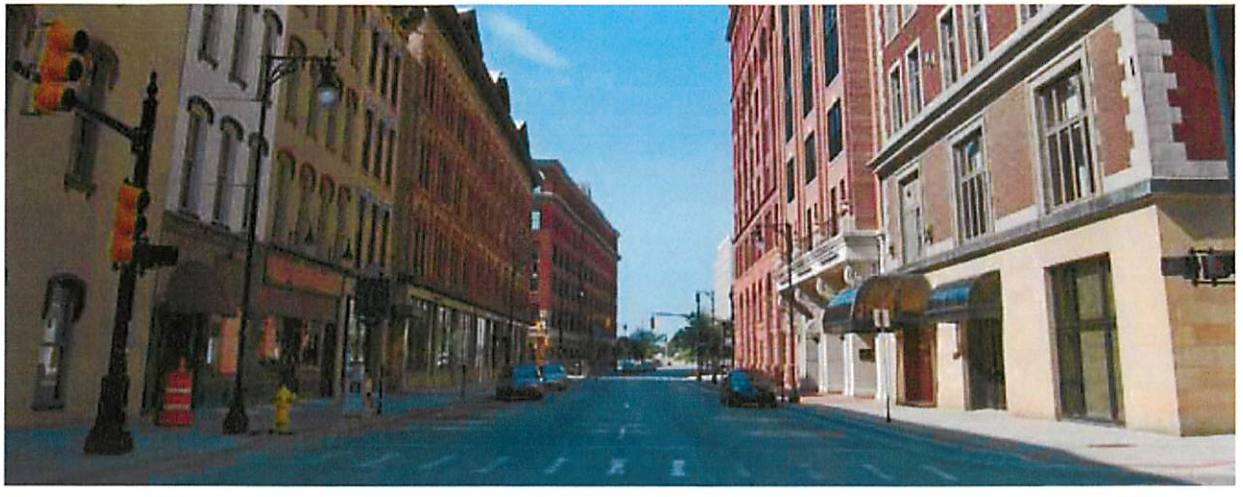
CENTER FOR BUSINESS AND ECONOMIC RESEARCH · BALL STATE UNIVERSITY

Indiana Community Asset Inventory and Rankings 2012









PURPOSE

This report outlines the first Indiana Community Asset Inventory and Rankings (CAIR), a new analysis featuring an interactive website produced by Ball State University. The purpose of this inventory and ranking is to provide policy makers and residents within Indiana's counties an objective, data-focused assessment of the factors that influence the quality of life and the economic conditions within each county.

METHODOLOGY

The CAIR provides a detailed asset inventory of variables that describe the educational attainment and health of Hoosier citizens, the performance of K-12 education and local government efficiency and cost, the availability of natural resource and cultural amenities, the level to which these have been augmented by local public investment and private recreational and arts activities.

All of these data sets have been carefully selected from secondary sources and are based on existing research of the factors[1] that contribute to the quality of life of residents through educational attainment and resources, the government, and the assets and activities that make communities livable, vibrant places.

These data sets have been aggregated to the county level for each of Indiana's 92 counties, with local scores adjusted for population within sub-jurisdictions in each county. A grade has been assigned to each county for those factors that are realistically within the control of public or private entities within a county. Each county is then graded in several areas, with grades ranging from A to F. We grade on a curve; an equal number of A and F grades are given, an equal number of B and D grades are given, and average performers receive C grades. For areas in which a community has no short-term control, such as the presence of naturally occurring assets (e.g. lakes and rivers) we assign an index number with average being 100 points.

IMPACT

This is the first such attempt at this ranking, and will inevitably see more refinement in later updates. Nonetheless, we are confident that we have described those very factors that make places more attractive to residents and draw business investment. To illustrate this relationship, we provide comparisons of county economic performance by overall grades, and grades on educational attainment. The correlation between economic performance and grades is startlingly strong. *See Figure 1 and Figure 2.*

It is our hope that this index be used for a frank and honest self-assessment, and that without regard to individual grades communities can use this CAIR to motivate positive and lasting improvement in Indiana.

1. We have not weighted individual data elements because there is not yet an objective ranking process. Because most data elements within each major category are covariates (they tend to vary in the same direction in each county), the inclusion of more variables reduces problems associated with unweighted data.

FIGURE 1: POPULATION CHANGE BY COUNTY GRADES FOR HUMAN CAPITAL, 2000-2009

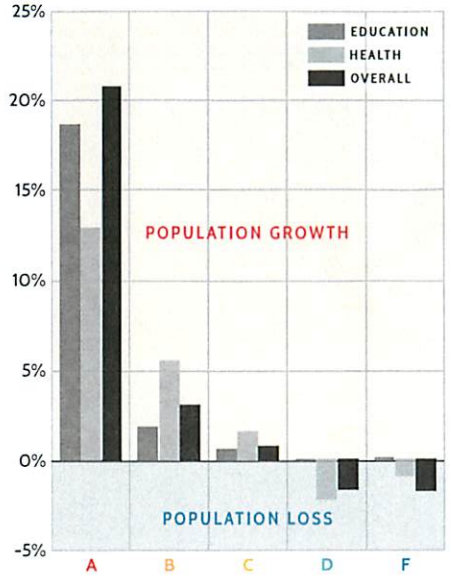
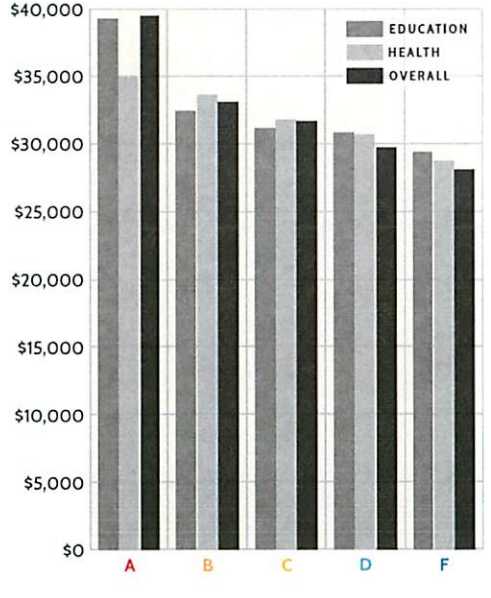
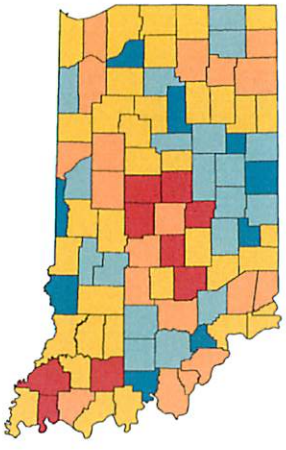


FIGURE 2: PER CAPITA INCOME BY COUNTY GRADES FOR HUMAN CAPITAL, 2009





PEOPLE

This category considers the conditions of the people within a community.

Factors include population growth, poverty rate, unemployment rate, private foundations revenue per capita, and other nonprofit revenue per capita.

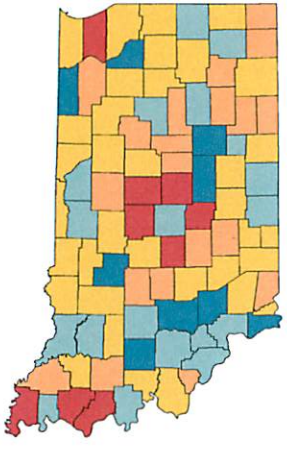
INDIANA COMMUNITY ASSET INVENTORY AND RANKINGS 2012

We grade on a curve: an equal number of A and F grades are given, an equal number of B and D grades are given, and average performers receive C grades. Public amenities receive an index number with average being 100 points.

An interactive version of this data assessment can be found online. The website includes a FAQ section and a full report profile for each county.

Community Asset Inventory and Rankings online: **asset.cberdata.org**

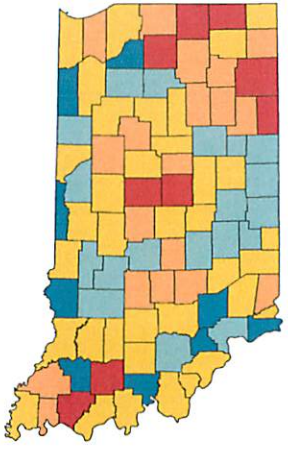
GRADES	POINTS
A	115.0-129.9
B	105.0-114.9
C	95.0-104.9
D	85.0-94.9
F	70.0-84.9



HUMAN CAPITAL: EDUCATION

When businesses consider an expansion or relocation, the education of a community's workforce plays a key role.

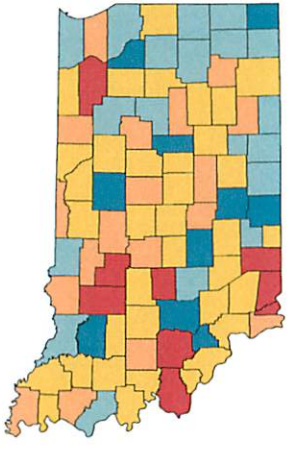
Factors include percent of students who passed the ISTEP English section, percent of students who passed the ISTEP math section, educational attainment (highest degree earned), and high school graduation rate.



HUMAN CAPITAL: HEALTH

This category focuses on the well being of the human capital in a community. The healthier the workforce, the less expensive it is to insure.

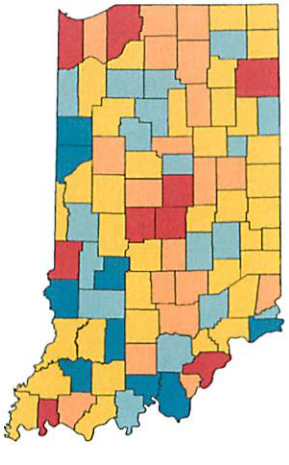
Factors include fertility rate, death rate, premature death rate, poor and fair health rate, poor physical and mental health days, motor vehicle crash death rate, cancer incidence rate, lung and bronchus incidence rate, asthma rate; number of primary care providers; and access to healthy food (presence of food deserts).



GOVERNMENT IMPACT AND ECONOMY

Government influences and economic conditions affect the likelihood that a business will settle in a community.

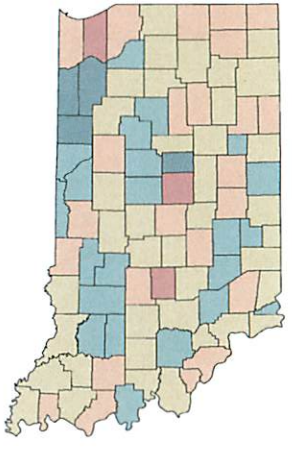
Factors include crime rate, effective tax rate, main street rate, and metropolitan development.



ARTS, ENTERTAINMENT, AND RECREATION

Visitors and residents alike enjoy the quality of a place through its offerings in the arts, entertainment, and recreation. These offerings are often private, that is, not owned by the county.

Factors include per capita personal income, employment per 1,000 people, and average compensation per employee; number of marinas, fairgrounds, athletic fields, and golf courses; and accommodation and food services per capita income.



PUBLIC AMENITIES: CHANGEABLE

Some public amenities can be changed by a community through voting, grants, initiatives, etc. These features may be created, expanded, or downsized as the needs of the community change.

Changeable public amenities include public parks, historic and cultural sites, fishing and boating areas, camping or RV parks, hiking/walking trails, beaches, and school grounds. *Amenities use an index with 100 points as average.*

PUBLIC AMENITIES: STATIC

Some public amenities are relatively static, that is, they are not easily changed.

Static public amenities (often natural features) include forests, fish and wildlife areas, dedicated nature preserves, bodies of water, and shore lines. *Amenities use an index with 100 points as average.*

TABLE 1: COMMUNITY ASSET INVENTORY GRADES AND INDEX POINTS

FIPS Code and County	People	Human Capital: Education	Human Capital: Health	Government Impact and Economy	Public Amenities: Changeable	Public Amenities: Static	Arts, Entertainment, and Recreation
18001 Adams	C- 50.0	B 70.5	A 79.8	D+ 62.8	107.4	79.6	D 46.9
18003 Allen	B 69.8	C 59.0	A 75.8	C- 64.3	104.5	101.4	A 87.9
18005 Bartholomew	A 82.4	C 44.5	B 63.1	D+ 62.0	95.4	97.6	B 73.6
18007 Benton	C 51.4	C 50.8	D 41.7	B 78.5	82.1	80.2	F 36.4
18009 Blackford	F 20.0	D 36.0	D- 37.8	D- 56.3	85.2	76.4	D 45.6
18011 Boone	A 81.0	A 96.3	A 78.8	B 78.8	93.8	77.4	B- 70.1
18013 Brown	C 57.4	B 71.5	B 62.3	A 86.8	116.1	115.8	B 70.9
18015 Carroll	C 54.8	B 68.8	B- 62.0	B- 75.8	89.5	100.6	D 46.6
18017 Cass	C- 47.0	D 33.5	C 56.1	D 56.5	94.6	87.4	D+ 50.0
18019 Clark	B 68.6	D+ 40.8	C 53.7	C 69.8	110.2	106.0	A 81.3
18021 Clay	D 40.8	C 44.5	D 40.0	B 82.3	86.8	107.0	D 42.6
18023 Clinton	C- 47.2	C- 42.5	C+ 60.0	C- 63.0	88.9	74.8	C 54.9
18025 Crawford	F 26.6	C 49.8	F 29.8	C+ 74.3	101.4	114.0	F 32.9
18027 Daviess	C 59.4	D 37.3	C 52.3	F 53.3	90.9	124.4	C 59.3
18029 Dearborn	B 68.2	B- 67.8	B 62.3	A 84.0	99.5	93.8	B 74.9
18031 Decatur	C 54.4	C+ 62.8	C+ 60.8	C+ 73.8	91.5	79.8	C+ 64.5
18033 DeKalb	B- 64.6	B 73.0	B 64.8	D 57.3	102.4	88.2	C 61.5
18035 Delaware	D+ 45.4	C 61.3	C- 49.4	C 71.8	106.8	86.0	B+ 80.1
18037 Dubois	A 87.6	B+ 81.8	A 84.1	C 70.0	105.9	114.2	C 64.3
18039 Elkhart	C+ 60.0	D+ 40.0	A 77.3	D 57.5	109.8	105.2	B 75.8
18041 Fayette	F 26.2	C- 42.8	D+ 46.2	D- 56.0	89.4	78.4	C 56.6
18043 Floyd	B 69.4	B 72.3	C 50.8	C 73.0	107.2	104.6	B- 69.0
18045 Fountain	D- 37.2	D 34.3	D 43.9	C+ 74.5	92.4	101.0	C- 51.5
18047 Franklin	C 53.4	C 47.8	C 58.0	A 89.3	104.9	93.6	C- 52.1
18049 Fulton	D 41.8	C 47.8	D 45.5	C 70.5	97.1	98.0	D- 40.1
18051 Gibson	A 76.6	B 76.5	B 64.0	C 72.3	99.6	117.0	C- 54.4
18053 Grant	D 41.8	F 30.8	D 44.8	C- 64.0	97.6	87.0	C 61.8
18055 Greene	C- 48.6	C 47.8	D 41.1	A 93.3	94.5	108.4	D 43.5
18057 Hamilton	A 94.6	A 96.5	A 86.7	C 70.8	120.1	96.4	A 84.8
18059 Hancock	A 78.8	A 83.0	C+ 60.9	B 79.8	104.9	76.6	C 64.0
18061 Harrison	B+ 70.8	C+ 62.5	C- 50.3	A 84.0	97.1	108.6	F 33.3
18063 Hendricks	A 78.8	A 96.8	B+ 72.8	C 65.8	97.5	83.2	A 82.6
18065 Henry	D- 33.4	C- 41.3	D 42.7	F 55.3	108.6	92.6	C 55.1
18067 Howard	D- 34.6	B 68.0	C 51.8	F 55.8	104.6	79.4	B 71.4
18069 Huntington	C 52.4	B+ 79.5	B 66.2	C- 63.5	103.8	102.6	C 62.0
18071 Jackson	B- 62.6	F 29.3	C- 47.5	F 51.0	97.6	116.8	B 72.6
18073 Jasper	B+ 74.4	B- 65.8	C 57.7	A 88.0	80.2	94.4	C- 53.3
18075 Jay	D 39.2	C 46.0	D 45.4	D- 56.3	99.2	84.8	C- 51.8
18077 Jefferson	C+ 60.0	D- 31.3	D 43.3	C 69.5	102.1	103.2	C 64.3
18079 Jennings	D 40.6	F 15.3	F 32.3	C 72.0	89.6	102.0	D- 41.6
18081 Johnson	A 81.2	A 89.0	B 68.4	C 70.3	97.6	95.8	B+ 77.6
18083 Knox	C 53.8	D 36.0	C 54.3	D+ 62.8	96.9	112.0	C- 50.5
18085 Kosciusko	B+ 71.0	C 58.3	B 63.7	D 56.5	104.5	122.4	B+ 78.5
18087 LaGrange	D+ 44.2	C 50.8	A 75.4	D 59.3	108.9	122.0	D+ 49.3
18089 Lake	C 50.8	C- 42.5	C 56.1	D 57.8	109.8	120.8	A 93.3
18091 LaPorte	C- 50.2	C 50.5	C 56.4	D 60.3	108.6	115.6	A 84.1
18093 Lawrence	D 38.0	D 39.8	C- 48.2	C 66.5	96.6	107.4	C 59.9
18095 Madison	D 42.2	F 31.0	C 52.7	B- 76.3	103.6	78.0	B 76.8
18097 Marion	B 70.4	D- 32.8	C+ 61.0	C- 64.3	106.4	109.6	A 95.4
18099 Marshall	C+ 60.0	C+ 61.8	A 73.2	D 56.8	101.8	101.4	B- 69.6
18101 Martin	C 58.4	C 53.0	C 51.8	C+ 74.5	87.1	116.0	F 34.6
18103 Miami	F 28.8	B 70.0	C- 50.7	B 78.3	111.2	89.2	C 55.5
18105 Monroe	B 67.4	B 73.3	B+ 69.8	C 70.5	113.9	122.0	C+ 65.1
18107 Montgomery	B- 61.4	B+ 81.0	C 51.7	F 54.0	100.2	86.0	C 60.8
18109 Morgan	B 67.6	C- 41.8	D+ 46.8	B+ 83.8	101.6	104.2	C 56.5
18111 Newton	D 44.0	F 18.0	F 36.4	C- 63.8	84.5	103.4	D 41.9
18113 Noble	D 38.6	D+ 40.0	C+ 60.8	D+ 62.0	113.1	118.6	D+ 49.5
18115 Ohio	C 52.4	C 55.0	C- 49.1	A 94.0	94.8	88.8	D- 38.9
18117 Orange	D 44.0	F 27.5	C 53.7	B 78.0	104.9	113.0	B 70.9
18119 Owen	D- 36.4	F 19.0	D- 37.5	A 94.0	92.8	102.4	F 34.6

(CONT.) TABLE 1: COMMUNITY ASSET INVENTORY GRADES AND INDEX POINTS

FIPS Code and County	People	Human Capital: Education	Human Capital: Health	Government Impact and Economy	Public Amenities: Changeable	Public Amenities: Static	Arts, Entertainment, and Recreation
18121 Parke	C- 46.0	D 35.0	C- 47.1	C 67.8	108.1	100.2	D+ 50.0
18123 Perry	C 57.0	D+ 40.0	C- 47.1	C 71.0	94.4	116.4	D 43.0
18125 Pike	C 51.2	C 48.3	F 32.4	C- 63.0	99.1	120.0	F 37.1
18127 Porter	B 70.4	A 87.3	B- 61.5	B- 77.3	118.8	102.8	B+ 79.3
18129 Posey	C 58.2	A 89.3	C 51.8	B 79.5	102.6	127.8	C 60.1
18131 Pulaski	C 55.2	C- 42.8	D 43.3	C- 65.3	103.6	93.2	D 42.4
18133 Putnam	C+ 60.8	C 50.3	C 51.6	B+ 82.8	98.8	100.2	C- 52.1
18135 Randolph	F 27.2	D 39.3	D- 39.6	D 61.0	91.9	82.8	C+ 64.5
18137 Ripley	B 66.8	C+ 61.5	C 57.7	C 68.5	111.1	96.8	C 58.0
18139 Rush	D+ 44.2	B- 66.0	D+ 45.9	C 67.0	86.5	75.2	D 45.8
18141 St. Joseph	C 59.4	C- 42.8	B+ 71.7	C+ 74.3	97.5	117.6	B 72.6
18143 Scott	F 32.2	D- 31.8	F 34.9	F 52.3	97.1	76.4	C 55.1
18145 Shelby	C- 49.6	B- 64.0	D 40.2	A 85.8	110.5	109.2	D 44.8
18147 Spencer	C 54.6	A 86.0	C 58.8	D+ 62.5	111.6	104.2	C 55.0
18149 Starke	F 27.6	F 16.5	F 30.9	F 50.8	91.1	105.6	C 56.9
18151 Steuben	C 50.6	B- 64.0	C 54.7	F 47.5	109.1	126.8	C+ 66.4
18153 Sullivan	F 31.4	C 50.0	F 36.8	B 80.8	96.4	122.8	F 36.1
18155 Switzerland	C+ 60.2	F 30.5	F 28.8	B- 77.8	99.5	103.4	F 36.9
18157 Tippecanoe	B- 62.0	C 55.8	B 69.4	C 66.0	112.6	97.2	B 73.9
18159 Tipton	C- 48.4	B+ 80.3	B 68.3	C 66.5	83.2	72.4	D 46.0
18161 Union	C 55.4	C 54.8	C 52.4	C- 64.3	96.9	95.0	C 62.4
18163 Vanderburgh	A 76.4	D 35.3	B- 61.7	C 71.0	114.1	100.8	A 95.8
18165 Vermillion	F 23.4	C 60.3	F 30.3	B+ 82.8	87.6	100.4	C- 52.9
18167 Vigo	C 55.0	C- 42.3	C- 49.6	D 59.0	112.8	113.2	A 84.9
18169 Wabash	C 52.6	D 35.5	B 64.6	C 71.3	108.5	109.6	B- 68.6
18171 Warren	B 65.2	C 55.5	C 52.5	C 66.3	89.5	90.4	F 32.9
18173 Warrick	B 70.2	A 83.5	A 73.2	B+ 82.8	103.9	115.6	B 73.9
18175 Washington	D+ 45.6	D- 31.3	D- 37.8	A 90.5	93.1	102.0	D- 40.1
18177 Wayne	D+ 45.6	D 35.8	D+ 46.4	F 50.5	98.4	87.4	C 64.1
18179 Wells	C 55.2	B 75.3	B+ 69.8	B 79.0	105.4	83.2	C- 50.1
18181 White	C- 50.4	C 45.8	C 55.3	D 57.8	95.2	97.4	C+ 67.0
18183 Whitley	B+ 72.2	B 76.0	B 66.2	B 81.0	100.4	98.4	C 56.6

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5. Practitioners Guide

A Practitioner's Guide

To Economic Development Tools for Regional Competitiveness in a Knowledge-Based Economy

This project was supported by a grant from the
U.S. Economic Development Administration

Research conducted by

- Center for Regional Development, Purdue University
- Indiana Business Research Center, Kelley School of Business, Indiana University
- Center for Regional Competitiveness, Rural Policy Research Institute, Truman School of Public Affairs, University of Missouri
- Strategic Development Group, Inc.
- Economic Modeling Specialists, Inc.

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Introduction

All of our economies—community, regional, state, and national—are undergoing fundamental changes. That means that the job of the economic development practitioner is also shifting dramatically.

To understand how to develop prosperity within their economies, economic development practitioners need new tools, new frameworks, and new practices. In every dimension, economic development has become more complex and challenging. We are moving from a relatively simple game of checkers to a sophisticated game of chess.

These challenges create exciting, new opportunities.

- Entrepreneurs and high-growth companies are finding new ways to leverage the resources of our colleges and universities.
- New regional energy systems are emerging around renewable energy sources.
- Old-line manufacturers are coming together to explore new opportunities in emerging markets in health-care equipment, fresh water technologies, renewable energy, advanced materials, and advanced transportation.
- New agribusiness systems are emerging around regional foods and organic farming.
- State and local policymakers are shifting their focus to entrepreneurs, innovation, collaboration, and new ways to support emerging, high-growth companies.

To take advantage of these new opportunities, this practitioner's guide introduces a new set of tools for the practitioner that leverage the power of the Internet. On one hand, they generate quick insights that can help the economic development practitioner find new opportunities. On the other hand the tools can assist both practitioners and community leaders in steering a course for long-term growth.

The four tools are:

- **Industry Cluster Analysis:** With a useful set of 17 clusters, this tool helps the practitioner see networks of businesses that are creating wealth in their local or regional economy. This tool enables economic development professionals to define their own regions. As such, it represents a major advance in both the ease and flexibility of industry cluster analysis.
- **Regional Innovation Index:** Businesses generate new wealth through innovation. Until now, economic development practitioners had no practical way to measure the innovation capacity of their local or regional economy. This innovation index represents a breakthrough in regional economic analysis. For the first time, professionals can examine the capacity of their economy to support innovative companies. Like the industry cluster tool, practitioners can design their own region by deciding which counties to include in their analysis.
- **Occupational Cluster Analysis:** One of the major transformations underway involves the closer integration of education, workforce development and economic development. For many economic development practitioners, this shift opens unfamiliar territory to their practice. The occupation cluster tool provides fast insights into the talent base that drives a local or regional economy. With this tool, economic development professionals can begin to structure effective collaborations with businesses managers, educators, and workforce development professionals. Like the industry cluster

analysis and the regional innovation index, the occupation cluster analysis is flexible. It starts at the county level, but practitioners can assemble their own regions by grouping individual counties.

- **Guidelines for Regional Organization and Investment Decisions:** In the new world of economic development, collaboration matters, but it is often tricky. The guidelines for regional organization and investment decisions help leaders move forward as a region. These guiding principles provide frameworks for establishing investment priorities and making investment decisions. Unlike general guides on collaboration, these guidelines are designed specifically to meet the needs of economic development professionals who must structure investments among cooperating partners.

This guide will introduce each tool and give examples of how the tools might be used. The development team for these tools includes:

- The Purdue Center for Regional Development
- The Indiana Business Research Center
- Strategic Development Group, Inc.
- The RUPRI Center for Regional Competitiveness
- Economic Modeling Specialists, Inc.

Benefits to Practitioners

For economic development professionals, regional planners, and community leaders, the four tools offer new ways to understand and strengthen their regional economy. Specifically, the four tools offer the following benefits.

Industry Clusters

Industry cluster analysis undertakes a sequence of steps to identify and locate the clusters present in a region's economy, as well as providing a way to gauge the clusters' strengths and weaknesses compared to the national economy. Such insights can assist in maintaining or increasing cluster strengths by strategic resource targeting. Industry cluster analysis can also help identify new and emerging clusters to replace old and fading ones. Specifically, this tool allows practitioners to:

- Describe how industries in a region compare to each other.
- Identify growth trends through regional location-quotient analysis of industry clusters.
- Reveal emerging industries in a region.
- Analyze the mix of clusters in a diverse region that might include both rural and urban areas.
- Apply a cluster matrix analysis to evaluate potential growth opportunities.
- Rethink business expansion strategies using cluster analysis.
- Reveal groups of industries that have similar workforce needs.
- Build sustained business-to-business connections.
- Prioritize groups of firms that have growth potential.
- Create regional identities and improve marketing effectiveness.

Innovation Index

The *innovation index* provides some perspective on how well a regional economy translates knowledge and innovation capacity into prosperity. Innovation is a critical capability for regional economies, and this is the first practical tool that can assess how well any regional economy innovates. Specifically, this tool allows practitioners to:

- Understand how a region compares to the nation, other regions and states in terms of innovation capacity and innovation results.
- Use online tools to test regional scenarios with different sets of county partners.
- Reveal the individual innovation index components of a region, for example, the occupational mix, level of educational attainment, high-tech industry employment, R&D investment, venture capital investment, and broadband density.
- Use the economic well-being sub-index to help communicate the need for new development.

Occupation Clusters

Occupation clusters offers insights into the knowledge, skills and abilities of the regional workforce that go beyond the relatively simple measure of educational attainment, such as highest degree earned. Specifically, this tool allows practitioners to:

- Analyze the regional knowledge-based workforce in greater detail.
- Combine industry and occupation cluster data to gain new insights into the regional economy.
- Understand the local workforce and educational situation within the broader regional economic development context.
- Bridge the gap between workforce and economic development when constructing a regional economic development strategy.
- Use the local and regional occupation cluster mix to diagnose how well positioned the region and its communities are to participate effectively in a knowledge-based innovation economy.
- Determine how well occupation cluster strengths align with the region's industry cluster strengths.

Regional Investment Decisions

Guidelines for regional investment decisions offer useful frameworks for building a collaborative regional strategy and making strategic investment decisions. Specifically, this tool allows practitioners to:

- Align regional leaders in a common direction for development.
- Capitalize on fundamental elements for regional success.[1]
- Improve the regional strategy process through coaching.
- Use data to help leaders reach consensus on investment decisions.

[1] The five fundamental elements of regional development are: brainpower; innovation and entrepreneurship networks; quality, connected places; branding and storytelling; and collaborative leadership.

Why Focus on Regions and Innovation?

Regional Development

These four tools have been crafted to assist local practitioners in implementing regional approaches to economic development. Economic development professionals have long recognized that marketing an individual community is not the most effective means to long-term prosperity. Today, this is increasingly true. Whether considering new basic employer recruitment or workforce development, a regional approach has significant advantages.

In the arena of new business recruitment, it is easier to gain a site locator's attention by promoting a regional area. In a globalizing economy, site locators rarely restrict themselves to city or county boundaries. A sub-state or multi-state region is easier to market to prospects on the other side of the country or the world.

The brainpower that fuels your economy is regional. Commuters daily ignore county boundaries to travel from home to their place of work outside of their communities. In many larger communities, more than 30 percent of the workforce resides outside of the city's borders. Understanding and developing the workforce requires a regional perspective.

A Knowledge-Based, Innovation-Driven Economy

The four tools are focused on identifying and developing sources of knowledge and innovation in a regional economy. Today's *new economy* is about neither goods nor services per se. Prosperity in today's economy depends on our ability, both individually and collectively, to generate and apply knowledge. The most valuable economic resource is no longer capital, nor natural resources, nor labor (the traditional term economists have used for routine-type work). It is knowledge and our ability to apply knowledge.

Innovation turns knowledge into useful products and services. It is fundamental for building prosperity today and in the future. Undifferentiated commodities, such as soybeans, and routine work, such as data entry, will tend to go to the lowest bidder or the cheapest labor—here or abroad. However, when regions innovate, low-value added commodities, such as soybeans, can become higher-value added products like crayons and candles. One of the most important keys to a strong economy is continuous innovation. Having the ability to create new ideas, products, and services is a critical element in economic development, at the local, regional, and state levels. In today's connected world, innovation can take place anywhere; it is not limited to large metropolitan areas.

Data-Driven Strategies

To be successful with a regional strategy, local leaders face a number of challenges: designing a process of collaboration, defining the practical boundaries of the region, establishing a governance process, finding funding, creating shared regional initiatives, making collective investment decisions, agreeing on clear outcomes and metrics, and determining how to evaluate and adjust. Leaders who have access to critical information are able to make better decisions more quickly.

To support civic leaders willing to take on the important work of regional strategy, a website provides the four tools discussed in this report, as well as a host of the most current data available to keep these tools updated and useful: www.statsamerica.org/innovation/data.html.

Using the Tools

The following section outlines how practitioners can utilize the four tools created through this project in their daily work. These tools are designed to be intuitive and user-friendly and development professionals should find them easy to adapt into their daily practice.

Industry Cluster Analysis

With this tool, county-level industry cluster data are accessible in a user-friendly format via the Internet. This tool allows users to combine individual counties to define custom regions. Users can also use this tool to quickly compare their region with others. The industry cluster tool focuses on 17 clusters across the United States in order to provide a framework that is easy to analyze and understand. This tool can assist users in identifying the basic competitive strengths in their regional economy. The data enable a practitioner to extend and deepen the analysis of a region.

Example: Understanding Regional Basic Employers

With data provided by the tool, users can create a matrix to show industry employment location quotients above 1.2 for each county in the region and for the region as a whole. (A location quotient over 1.0 means that a region has a higher concentration of employment in a particular industry than the national average. Using a location quotient of 1.2 or more provides a conservative estimation for this example.) This matrix enables users to see the overall competitive strengths of the region, as well as those of individual counties. Understanding a region's industrial strengths provides valuable insights into how different sectors within a region can be connected.

For example, in **Table 1**, one sees that the region is strong in advanced materials, concentrated in Owen and Lawrence counties. At the same time, Brown County has competitive strength in apparel and textiles. Can the competitive strengths in advanced materials be connected to the businesses in apparel and textiles? Is there a future, for example, in using nano-structured coatings that provide wear-resistance and water-proofing for fabrics in apparel and textiles? Chances are, the people managing apparel and textile businesses in Brown County have no idea of what is taking place with advanced materials in Owen and Lawrence counties. By using the data provided through this tool, economic development professionals can start these conversations.

Additional examples further illustrate the benefit of this tool. What if Martin County has a strong electrical equipment manufacturing sector? Development professionals in that community would likely benefit from knowing how connected the individual firms in the cluster actually are and whether some firms have access to specialized equipment that could be shared more widely? In another example, Milwaukee manufacturers within the water technology cluster, who were asking similar questions among themselves, discovered that they had sophisticated laboratory facilities that could be more widely shared within the region to mutual benefit.

Table 1: Clusters with Location Quotients ≥ 1.2 in Counties of Indiana Economic Growth Region 8

Clusters	Monroe	Greene	Brown	Owen	Lawrence	Martin	Orange	Daviess
Advanced Materials	1.5			6.6	4.1	1.3		
Agribusiness, Food Processing and Technology		1.4						6.3
Apparel and Textiles			4.1				1.4	1.6
Arts, Entertainment, Recreation and Visitor Industries			4.5				1.8	
Biomedical/Biotechnical (Life Sciences)	1.3			2.7				1.2
Business and Financial Services								
Chemicals and Chemical-Based Products	1.7				3.8	2.6		
Defense and Security						10.8		
Education and Knowledge Creation	5.6							
Energy (Fossil and Renewable)		3.5				1.5	2.7	1.3
Forest and Wood Products				2.3			11.4	2.2
Glass and Ceramics			1.9		4.7			
Information Technology and Telecommunications								
Manufacturing Supercluster					3.6			
Computer and Electronic Product Mfg								
Electrical Equip, Appliance and Component Mfg	7.1					5.4		
Fabricated Metal Product Mfg					2.6			
Machinery Mfg					2.4			
Primary Metal Mfg					18.1		3.3	
Transportation Equipment Mfg					4.9			
Mining	1.6			3.0	9.8	2.7	7.6	
Printing and Publishing	1.2			1.4				
Transportation and Logistics								1.5

Innovation Index

The ability of a regional economy to innovate drives healthy growth, but innovation is a complex concept. How can you measure innovation in order to improve it? This index provides leaders and practitioners with the first tool for comparing regional innovation performance with that of the United States, a state, or other regions. Like the cluster tool, the primary advantage of the innovation index is its flexibility. Users can design their own region and easily make comparisons across regions.

A word of caution is in order: measuring regional innovation can be tricky. As a result, this tool allows the exploration of the different dimensions of innovation. In a sense, the index opens the "black box" of innovation so users can look inside. As with any complex process, a better understanding is gained by taking multiple perspectives. For example, when describing the weather, one does not simply use a single measurement, such as temperature. The weather is usually described from a variety of perspectives. In addition to temperature, it might be useful to know whether it is cloudy or sunny, whether it is humid or dry, how strong the wind is blowing and in which direction. A composite of all of these measures provides a better understanding of the weather.

So it is with innovation. No single measure will do. Innovation must be viewed from a variety of perspectives. First, the innovation index comprises two broad categories: inputs to innovation, which measure innovation capacity, and outputs of innovation, which measure the results. Within each large class, the index provides additional detail and individual measures that collectively compose the broad categories. (For those who are interested, the website also points to the research that demonstrates why a particular indicator is important to innovation.)

So, for example, economic dynamics play an important "input" role in innovation. The term "economic dynamics" captures a variety of indicators: venture capital, broadband penetration, investments in R&D, and business formation. The index enables one to explore each of these variables in depth and download detailed data by simply clicking the drill-down feature. Human capital is also a vital input to innovation. Therefore, the index provides different perspectives to evaluate a region's human capital.

In addition, this tool includes state-level indicators—total R&D spending and science and technology graduates—that can help evaluate the strength of a state's investments to support innovation.

Innovation is not only about inputs, however. A region's economy must translate these inputs into productive outcomes: employment in high-technology firms, greater output per worker, the creation of patents, to name a few. By examining the output indicators, one can explore how well your economy converts innovation inputs into performance.

Because the index is not dealing with simple linear relationships, there is no direct cause-and-effect connection between inputs and outputs. The innovation index is designed to show the innovation process more clearly. The tool, in general, lets the practitioner explore innovation within your region by guiding questions and conversations about the region's performance. Generally, the tool provides information on how users can improve their region's innovation capacity by aligning, linking, and focusing relevant energy and investments.

Example: Create a Quick Snapshot of the Innovation Level and Innovation Elements of a Region

Using the online Innovation Index tool at www.statsamerica.org/innovation:

1. Select a standard region or create a custom region by using the custom region manager.
2. Compare that region with other regions and the U.S. average for the Innovation Index. (An example is shown in **Figure 1**.) An option to download all of the data in the index is also available.
3. Drill down to the four sub-indexes to compare that region with competing regions or the United States. **Figure 2** graphically compares three regions and the United States for the Human Capital, Economic Dynamics, Productivity and Employment, and Economic Well-Being sub-indexes.)
4. Compare regions using the numerical values, as shown in **Table 2**.
5. Click on the graphical sub-index comparison and see graphical comparisons (for the selected regions) for all the variables used to construct the sub-index.
6. Click on the graphical comparison for one variable and see the granular data, county by county, for that variable for each region selected.

Figure 1: Innovation Index for Three Regions and the United States

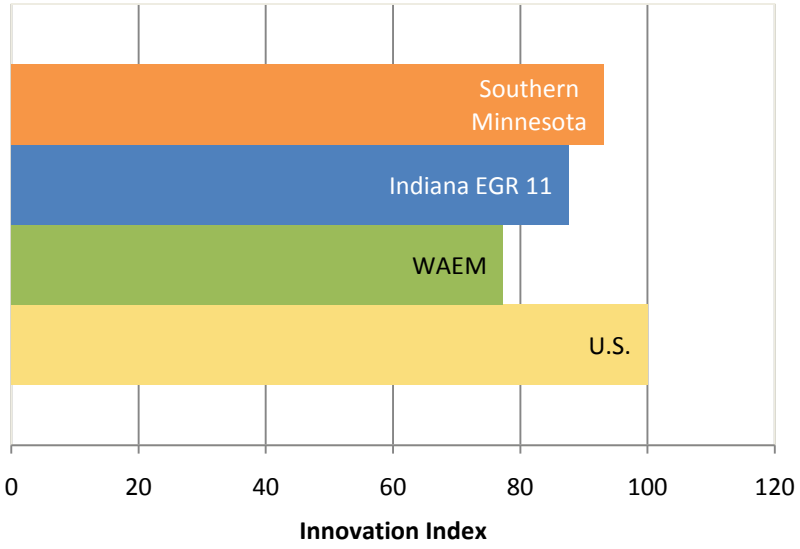

Figure 2: Comparing Innovation Sub-Indexes for Three Regions and the United States

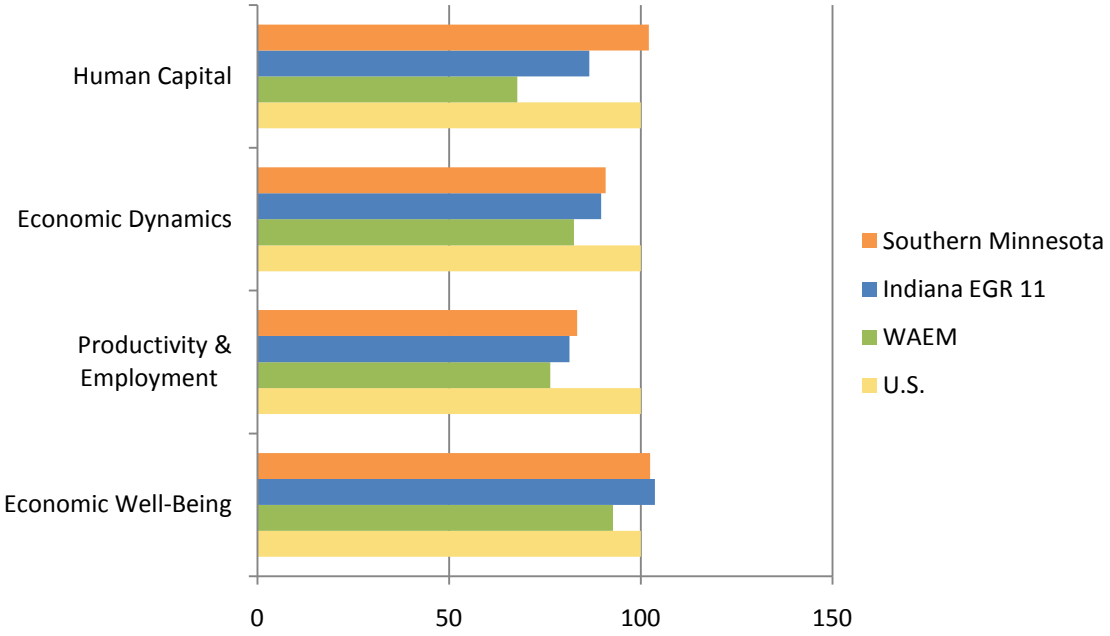

Table 2: Innovation Index and Sub-Index Values for Three Regions and the United States

	U.S.	WAEM	Southern Minnesota	Indiana EGR 11
Innovation Index	100	77.3	93.1	87.6
Human Capital	100	67.8	102.1	86.5
Economic Dynamics	100	82.6	90.8	89.6
Productivity & Employment	100	76.4	83.4	81.4
Economic Well-Being	100	92.8	102.5	103.6

Occupation Clusters

Occupation cluster analysis is a relatively new approach in regional development. In contrast to industry clusters that focus on what businesses produce, occupation clusters focus on the knowledge, skills and abilities of the individuals who work for those businesses. Like the industrial cluster tool, this tool enables users to explore their regional economy from a different perspective. Like the other tools, its main advantage is flexibility: users can define custom regions and make comparisons easily.

The swift transformation taking place in the global economy makes occupation cluster analysis particularly valuable. The global integration of markets has eliminated many regional competitive advantages. Low-cost land with transportation and communications infrastructure in place is no longer scarce. Technology quickly jumps national borders. Reliable unskilled labor costs only a few dollars a day in many places across the globe.

In this low-cost competitive environment, a region's best chance to differentiate itself is with its brainpower: the education, knowledge, skills, and abilities of its workforce. From this perspective, every region has the potential to be competitive.

Until recently, economic development practitioners paid scant attention to workforce issues, but this is changing. In addition to globalization, the retirement of the Baby Boom generation and the move of businesses toward more innovative, knowledge-based markets have combined to make the skills of the workforce central to economic development.

Until now, economic development practitioners had few tools to evaluate the knowledge, skills, and abilities of their workforce. Occupation cluster analysis provides insight into the workforce. Regions in the United States are in the beginning stages of creating knowledge-driven economic development strategies. The extensive array of labor force data compiled by the U.S. Department of Labor is giving regional leaders a greater understanding of this economic development asset.

Exploring occupation clusters within one's region represents a first step. Working with occupational data can quickly become overwhelming. To simplify analysis and aid in understanding, the tool identifies a set of important occupation clusters. The following examples offer details on how the tool can be used to assist in daily practice.

Example 1: Identify the Fastest Growing Occupations in a Region

Occupation cluster analysis helps identify the fastest growing occupations within the region. Here is an example from one region in Indiana (Economic Growth Region 11). This region is a center for riverboat gaming. The data show how the growth of this business sector has created new demands for different occupations. **Table 3** helps quickly identify those occupations with the strongest percentage change and the largest increase in the number of jobs from 2001 to 2007. So, for example, agents and business managers of artists, performers, and athletes had the largest percentage change, but that occupational segment is relatively small. Photographers represent the largest growth category in absolute terms, with 99 new jobs added in that occupational category.

This type of analysis is useful in a number of different ways. By understanding the dynamics of growth within an occupation cluster, an economic development professional can communicate more effectively with educators and workforce development professionals to build a talent pipeline needed to support businesses within the region.

Table 3: Fast Growing Occupations in the Arts, Entertainment, Publishing and Broadcasting Cluster in Indiana Economic Growth Region 11

Arts, Entertainment, Publishing and Broadcasting Cluster Fastest Growing Occupations	2001 Cluster Jobs	2007 Cluster Jobs	Change, 2001-2007	Percent Change, 2001-2007
Total Arts and Entertainment Cluster	3,095	3,348	253	8.2%
Agents & business managers of artists, performers, and athletes	19	25	6	31.6%
Writers and authors	272	346	74	27.2%
Multi-media artists and animators	76	95	19	25.0%
Set and exhibit designers	28	35	7	25.0%
Choreographers	12	15	3	25.0%
Radio operators	4	5	1	25.0%
Fine artists, including painters, sculptors, and illustrators	71	88	17	23.9%
Fashion designers	28	34	6	21.4%
Interior designers	51	61	10	19.6%
Music directors and composers	137	163	26	19.0%
Art directors	84	99	15	17.9%
Jewelers and precious stone and metal workers	28	33	5	17.9%
Photographers	606	705	99	16.3%
Musicians and singers	225	249	24	10.7%
Camera operators, television, video, and motion picture	10	11	1	10.0%
Interpreters and translators	95	104	9	9.5%
Camera and photographic equipment repairers	11	12	1	9.1%
Graphic designers	274	295	21	7.7%
Editors	118	127	9	7.6%
Desktop publishers	73	78	5	6.8%
Musical instrument repairers and tuners	15	16	1	6.7%

Example 2: Identifying "Clusters of Opportunity"

At the level of the cluster as a whole, occupation cluster analysis can help to identify which clusters of occupations provide the best opportunities for investment to build different types of skills, supporting existing or emerging industry clusters, and which occupation clusters show a competitive skills advantage in the region. **Table 4** shows employment growth by cluster, the 2007 location quotient for the cluster and the percent change in the location quotient between 2001 and 2007 in Indiana Economic Growth Region 11. Twelve occupation clusters showed an increase in employment. Only the skilled production workers cluster had a location quotient higher than 1.2, indicating a concentration of such workers within the region compared to the United States overall. However, the health care and medical science cluster not only had the highest rate of growth in employment, but had a location quotient of 1.04—an increase of just over 6 percent since 2001. Likewise, the building, landscape, and construction design cluster increased in employment by

almost 11 percent during the period, and the location quotient grew by 7.5 percent. These two occupation clusters merit a closer look by policymakers and economic development professionals, and they should likely be compared with the regional industry clusters to discern needs for expanded training and development of the skills embedded in the clusters.

Table 4: Occupation Clusters of Opportunity in EGR 11

Occupation Cluster	Employment Growth (%), 2001-2007	2007 LQ	% Growth of LQ
Health Care and Medical Science	14.6%	1.04	6.1%
Building, Landscape, and Construction Design	10.9%	0.72	7.5%
Arts, Entertainment, Publishing, and Broadcasting	8.2%	0.63	3.3%
Public Safety and Domestic Security	6.4%	0.69	3.0%
Postsecondary Education and Knowledge Creation	6.3%	0.64	-3.0%
Natural Sciences and Environmental Management	5.0%	0.78	1.3%
Skilled Production Workers: Technicians, Operators, Trades, Installers, and Repairers	4.6%	1.38	1.5%
Primary/Secondary and Vocational Education, Remediation, and Social Services	4.0%	0.84	0.0%
Managerial, Sales, Marketing, and HR	3.4%	0.72	-1.4%
Legal and Financial Services, and Real Estate	2.0%	0.78	-6.0%
Information Technology	1.4%	0.48	2.1%
Personal Services	0.2%	0.84	-8.7%

Occupational analysis provides economic development practitioners with insights into the talent base within a region. Each occupation represents a portfolio of knowledge, skills and abilities. In Southeast Wisconsin, the Milwaukee 7 region, economic and workforce development professionals are looking at the occupational composition of 15 targeted industry groups, including pharmaceuticals, plastics, and industrial machinery. Based on the occupational structure of these industry clusters, they are identifying the core knowledge, skills, and abilities that must come through their talent pipeline to supply these businesses. So, for example, production occupations within these clusters share a common need for high levels of quality control analysis, oral comprehension, and the skills of active learning.

Additionally, occupational analysis opens the door to uncovering clear career pathways. So, with some additional analysis, Southeast Wisconsin is learning the career connections between welders and machinists and between machinists and mechanical engineers.

Guidelines for Regional Investment Decisions

This framework and tool helps regional leaders prioritize public investments in economic development. For a region to prosper, a relatively small number of well-placed public investments can unlock the region's strongest economic potential. They can open up and leverage new possibilities for private sector investment, the key driver of any region's success.

Leaders in successful regions think and act strategically, but they do not necessarily follow lockstep a traditional strategic planning process. Instead, they improvise within a clear strategic framework. They make complex decisions about investments by designing their own collaborative process. The Guidelines for Regional Investment Decisions are designed to help development professionals and regional leaders understand and implement this process.

The investment process is similar to improvisation in jazz. Musical improvisations are not free-form and chaotic; they are based on a foundation. The structure gives players a focus within which to develop their ideas. In the end, sound strategies adapt as circumstances change and new opportunities arise.

Successful regions design a process for making public economic development investments that answer three core questions:

1. **The Who:** Who guides the strategy and investment process? Successful regions recruit leaders who share some common characteristics. They are not drawn from a static list of "stakeholders." Instead, successful leaders are people willing to supersede traditional organizational and political boundaries. They partner in new ways.
2. **The What:** What investments hold strong potential for the region? Successful regions define their strategies within a clear strategic framework. This framework provides stability and focus over the years.
3. **The How:** How do we prioritize investments that hold the most promise for the region? Successful regions produce effective strategies in an open, collaborative process that marries transparency with objective analysis. Public economic development investments that are the product of narrow political considerations normally fail. In contrast, public investments that are the product of open participation and strategic thinking can create sustainable transformations.

The Who: Building a Leadership Team Capable of Thinking and Acting Together

As regional leaders grapple with these design questions, they learn to become more trusting of one another. As these relationships grow, leaders' capacity to think and act quickly on complex strategic issues can increase dramatically. Stronger, more focused leadership networks emerge that are capable of taking on the challenges of transforming a regional economy.

Successful regions build stable, pragmatic partnerships composed of people who share important qualities. These individuals possess the personal integrity needed to strengthen the bonds of trust within the team. They have access to resources that they are willing to link, leverage and align with the region's strategy. Finally, effective leaders represent individuals willing to cross both political and organizational boundaries. They provide a model of more productive collaborative behavior.

Developing an effective leadership team involves a process. Over time, an effective team develops a comfortable discipline of working together. They develop the ability to balance their conversations both on big strategic questions and small next steps. The best regional leadership teams operate in a warm permissive atmosphere in which honest perspectives, whether hostile or friendly, can be accepted and discussed in an objective way.

How did these leadership teams evolve? First, they do not emerge magically from a static list of "stakeholders." They evolve through three distinct phases. In the first phase, leaders get to know each other. They set some ground rules for their discussions. They begin to pool their knowledge and share their perspectives. Economic developers can facilitate these early discussions by sharing stories of what other regions have accomplished by working together. The stories help regional leaders form a shared perspective on the opportunities in front of them. Sharing the stories of other regions naturally leads to the question, "If Region A could accomplish so much through collaboration, why can't we?"

To begin building the regional partnership during this first phase, economic development professionals guide the leadership team through an exercise of mapping a region's assets. Individual leaders rarely have the complete grasp of all the different economic development assets within a region. Mapping these assets—literally marking them on a wall-sized map of the region—can help leaders see the future in a new way.

Mapping regional assets goes beyond compiling lists of economic development assets. Critically, the team's conversations must focus on how the region's assets can be linked to create new opportunities. The economic development professional might focus on how a region's community college could be connected more effectively to its manufacturers. For example, Metro Denver is investing in Red Rocks Community College to develop the college's Green Jobs Pathway, a program that will prepare high school students to enter a variety of careers in the green jobs industry.

The second phase in the development of an effective regional partnership involves moving toward a shared strategic framework—a shared mental model—of the opportunities ahead. This phase involves exploring where the region's most promising economic opportunities lie.

The third phase of development for a leadership team tests the team's ability to make strategic decisions together. At this stage they must effectively answer "the How" question ("How do we decide among competing alternatives for investment?").

The What: Building a Shared Strategic Framework

Developing a shared framework for strategy is often a complex and confusing process that can be simplified by starting with a flexible, comprehensive strategic framework. The framework divides strategy into five categories of connected activity and investment: Brainpower; Innovation and Entrepreneurship Networks; Quality, Connected Places; Branding Experiences; and Civic Collaboration. A balanced regional economic development strategy will have activities and investments in each of these focus areas.

The logic of this strategy framework is straightforward, inclusive, and easy to communicate. The framework's strategy message runs as follows:

- **Brainpower:** To compete globally, a region needs 21st-century brainpower—people with the skills to support globally competitive businesses. Economic development starts with sound education and imaginative, entrepreneurial educators.

- **Innovation and Entrepreneurship Networks:** A region needs business development networks to convert this brainpower into wealth through innovation and entrepreneurship. These networks include cluster organizations, angel capital networks, mentoring networks, and so on.
- **Quality, Connected Places:** Third, a region needs a strategy to develop quality, connected places. Skilled people and innovative companies are mobile; they can move virtually anywhere. They will choose to locate in places that have a high quality of life and that are connected to the rest of the world.
- **Branding Experiences:** Next, a region needs to tell its story effectively through defining its most distinctive attributes and communicating them. These stories are important, especially for regions facing a "brain drain." Young people want to live in regions with a future, and they can see this future most clearly through the stories they hear about a region.
- **Civic Collaboration:** Finally, a region needs leaders skilled in the art and discipline of collaboration. The economy demands the ability to collaborate to compete. Economic and workforce development investments involve multiple partners. A region that understands how to collaborate will be more competitive.

Economic development professionals can use this strategic framework in a variety of different ways. As a first step, it is useful in mapping current regional economic development activities. In most regions, these activities are spread across a variety of different organizations. Leaders of these organizations often do not communicate effectively with each other. By listing each organization's major focus and activities on the grid, important patterns and gaps emerge.

So, for example, workforce development activities—STEM education at the local high school, adult literacy initiatives, retraining initiatives for displaced workers, on the job training in lean manufacturing—naturally fit within the Brainpower component of a regional strategy. Entrepreneurship and small business development activities—an entrepreneurship course at the local college, the activities of a Small Business Development Center, an angel capital network, or an incubator—fall within Innovation and Entrepreneurship Networks.

Most tourism and business recruitment activities fall into the Quality, Connected Places component of a regional strategy. Finally, leadership programs, annual meetings, and citizen forums represent the core elements of Civic Collaboration.

Development professionals can use the same framework to map their existing strategy. To what extent is the region's strategy balanced across the different dimensions? To what extent does the region have a clear set of shared outcomes within each category of investment? This framework provides a regional leadership team with a base map on which to plot strategy. In this way, the framework can help clarify development initiatives and sustain momentum to fulfill regional goals. Most importantly, a shared strategic framework helps the regional leadership develop common understandings, stay focused, and not get lost in side issues.

The How: Focusing Public Investment in the Region's Economic Future

The capstone in successful regional collaboration is reaching agreement on the region's economic development investment priorities. During the first two phases of its evolution, the regional team explores the region's assets and identifies a range of strategic opportunities—new pathways to regional prosperity. The team must then select its top economic development investments from among a long list of opportunities. These investments represent a small number of relatively large commitments that will unlock the region's

most promising economic opportunities. Effective economic development investments align with the region's core economic strengths or competitive advantages. These development investments both leverage the region's existing economic strengths and extend the region's economy into new areas unlocked through transforming innovations.

The dilemma every regional leadership team must resolve is how to select those investments projects most likely to spur growth in areas that will produce the desired outcomes for the region in the long-term. This is no small feat, since the leadership team must weigh the likely returns with associated risks, as well as questions of equity ("Are we investing to benefit the entire region or just a part of it?"). The Guidelines for Regional Investment Decisions help a region prioritize investments through guided, focused discussions within the leadership team. The Regional Investment Portfolio Tool represents the most advanced tool within these guidelines. Drawing on lessons from portfolio management, the Portfolio Tool amounts to a high-level summary of information on alternative investments. As shown in **Figure 3**, the tool combines comparable information for competing projects (the rows in the table) and allows leaders to compare the projected returns and risks. Obviously, the power of this comparison depends upon sound information. Thus, this tool requires a careful preparation step in addition to in-depth facilitation. To ensure objective comparisons, the discussion should be facilitated by a professional external to the region.

The Regional Investment Portfolio Tool helps regional leaders focus on the strategic dialogue on the issues that matter. In the end, the quality of the leadership team's conversations drives the quality of its decisions. If these conversations are focused, respectful, capable of exploring dissenting views, connected to objective facts in the market, and based on a commitment to transparency, they will create more powerful, lasting impacts.

For Further Information

The staff at the Purdue Center for Regional Development and the Indiana Business Research Center will be happy to talk with you about any aspect of the tools.

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812-855-5507
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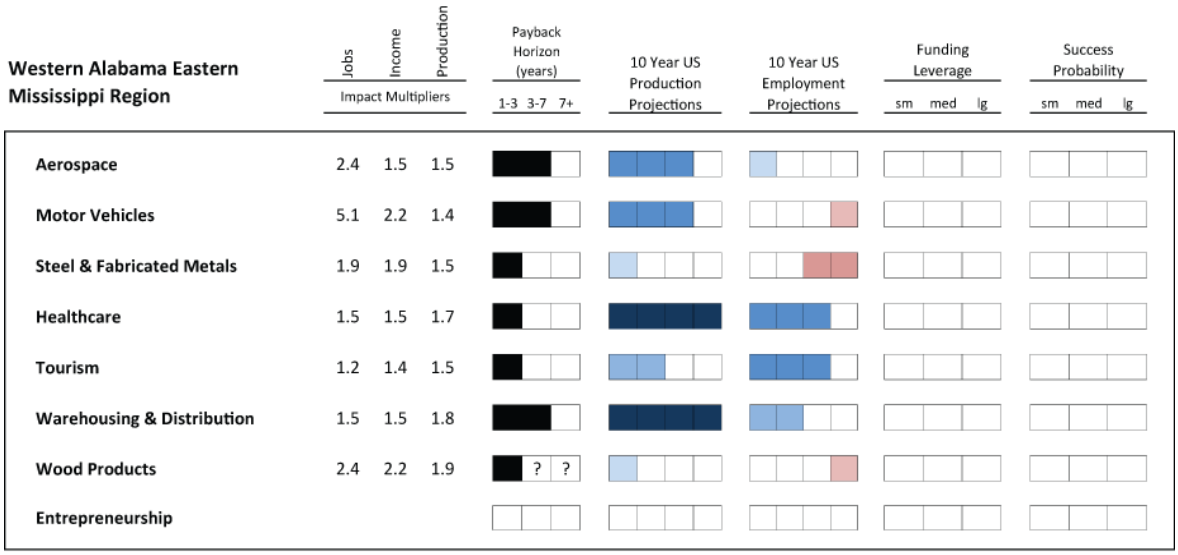
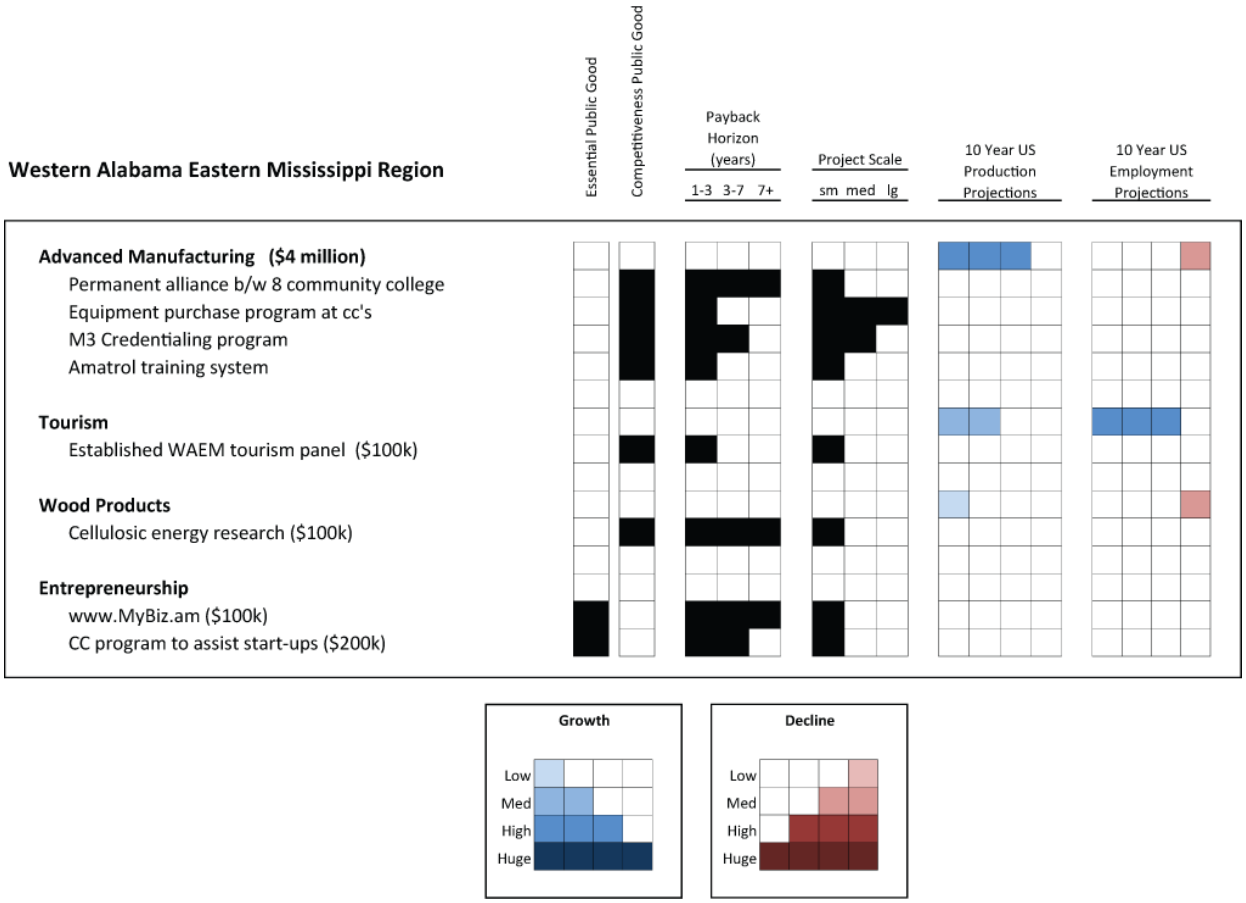
Figure 3: Components of the Regional Investment Portfolio Tool

Investment Allocation Matrix (Principal Investments)



Investment Prioritization Matrix (Subcomponent Detail)



6. Counties in Region

Regional Makeup

County	Population	Main cities
Posey	25,720	Mt Vernon
		New Harmony
		Poseyville
Vanderburgh	179,703	Darmstadt
		Evansville
Warrick	60,275	Newburgh
		Boonville
		Chandler
Gibson	33,505	Princeton
		Oakland City
Spencer	20,952	Rockport
		Chrisney
		Dale
Pike	12,845	Petersburg
		Spurgeon
		Winslow
Dubois	42,199	Jasper
		Huntingburg
		Ferdinand
Knox	38,440	Vincennes
		Bicknell
		Edwardsport
Daviess	31,978	Washington
		Plainville
		Montgomery
Martin	10,332	Loogootee
		Crane
Greene	33,165	Bloomfield
		Linton
	489,114	

7. I-69 Corridor Executive Committee

I-69 Corridor Executive Committee

Name	Organization
Bernhard, Mark	University of Southern Indiana
Brothers-Bridge, Tonya	Office of Lt. Governor
Dedman, Joe	German American Insurance
Dement, John	NSWC Crane Division
Dewey, Debbie	Growth Alliance for Greater Evansville
Ellspermann, Sue	Office of Lt. Governor
Gordon, Scott	University of Southern Indiana
Hafer, Ed	Vectren Energy Delivery
Heck, Jim	Grow Southwest Indiana Workforce
Khayum, Mohammed	University of Southern Indiana
LoBue, Dorrie	
Pittman, Chad	Indiana Economic Development Corporation
Recker, Gene	USI at Innovation Pointe
Skillman, Becky	Radius Indiana
Schaefer, Steve	City of Evansville, Mayor's Office
Schulte, Donald	NSWC Crane Division
Sebree, Mark	Vectren Energy Delivery
Sendelweck, Ken	German American Bancorp
Thyen, Jim	Kimball International
Vidal, Daniela	University of Southern Indiana
Wathen, Greg	Economic Development Coalition of Southwest Indiana
Winnecke, Lloyd	City of Evansville, Mayor's Office