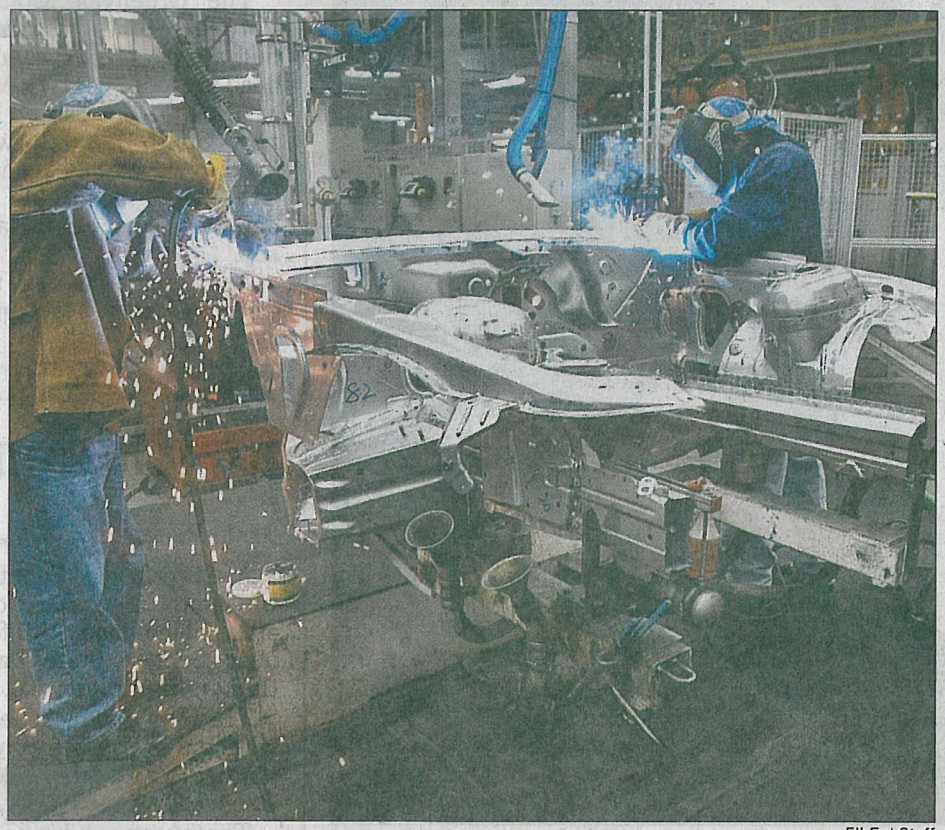
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Upstate growing on brain power



FILE / Staff

Skills such as welding that are in high demand on factory floors are part of the knowledge-based economy the area is working to develop.

Knowledge-based jobs span labs to factories

Greenville faces challenges, experts say

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Knowledge — what's in a worker's brain — is the critical building block for the Upstate's economic future, and what ultimately would rescue the region from persistently high unemployment, economists and workforce experts say.

Brawn is no longer enough, they say, but that doesn't mean manufacturing won't be a key component of the region's fortunes. Many manufacturing jobs are now knowledge-based, he said, citing jobs at BMW Manufacturing Co. and Parker Hannifin, a Spartanburg plant that does injection molding.

Dr. Bruce Yandle, dean emeritus of Clemson University's College of Business and Behavioral Science, said the knowledge economy is broader than many people realize.

"We're not just talking about people with MBAs or engineering degrees who are having coffee at Starbucks with their laptops," he said. "It's not solely firms that can ship products at a click of the mouse. It can be manufacturing or any industry in which products and activities contain a large amount of intellectual activity."

As the overall economy struggles, the Greenville Metropolitan Statistical Area faces real challenges as it tries to build a knowledge-based economy, said Yandle. But it's on the way to that goal.

"I think the road's wide," he said. "I don't see any barriers. There will be bumps in the road."

Hank Hyatt, Greater Greenville Chamber of Commerce vice president for economic development, said, "You need to build on what you've got. But the human capital component becomes increasingly important."

In 2007, Greenville ranked 39th out of 114

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Southern metropolitan statistical areas studied in a project that Yandle and Kristine Koutout, a Clemson graduate student, launched to develop a knowledge economy index. Now, Yandle and students are studying migration patterns to cities to see how that fits into the economy industry puzzle.

The index looks at educational attainment, the number of fast-growth firms and industrial research and development expenditures. It shows where Greenville is "hurting" relative to other nearby cities, Yandle said.

The Greenville MSA ranks "in the upper half" of the index, he said. "Charleston comes in strong (No. 22). Columbia comes in strong (No. 12). Rock Hill-Charlotte is very strong (9)."

One of Greenville's challenges, he said, is overcoming what it lacks — a research university, a medical university, or both — that make it more likely to be an MSA that would rank high on a knowledge-economy index.

"It's the research component that is generating spin-off" in the economy, he said. "Greenville is not likely to have a major research university any time soon."

But it has a nucleus — a strong complement of undergraduate universities and colleges, university-sponsored activities, growing consortia based on research, such as one formed around the Greenville Hospital System, and the possibility that Clemson's International Center for Automotive Research would take the place of a research university.

"Greenville can do this," he said. "I think the major elements are in place."

"Connectivity" is the key, he said.

Hyatt agreed: "South Carolina is a small state. We can talk across the state about issues."

Yandle said that although manufacturing is part of the knowledge industry, "We will have a different manufacturing picture — fewer people with more knowledge." He added that the driving force is no longer industrial expansion, rather the expansion of professional people, who can be found in manufacturing and services as well as the more commonly thought of knowledge professions.

Such knowledge workers tend to be looking for a different lifestyle than workers of the past, he said.

"It may mean greater emphasis on symphonies than on sewer lines," Yandle said, adding it also could mean adding younger professional workers to local advisory boards to add their voices to the mix.

Looking at the entire South, the index ranked Austin as the top city. Nationwide, Massachusetts ranked as No. 1 among the 50 states, with South Carolina at No. 39.

Massachusetts got a big head start over South Carolina by beginning to build its knowledge economy in the 18th century, Yandle said.

"In a way, we are sort of newcomers. Important strides have been made in recent years," he said.

Bill Mahoney, chief executive officer of the South Carolina Research Authority, said Boston and Silicon Valley have a 30-year to 50-year head start on South Carolina when it comes to the knowledge economy. But this state has made progress quickly.

A second economic index, this one by the Kauffman Foundation, showed South Carolina ranked 34th in 2008, up from 39th the year before.

"This represents a substantial move," Yandle said, with the immigration of knowledge workers who had a foreign address a year ago leading the improvement.

Clemson's knowledge-economy index also showed improvement for the state. Its score was 100 in 2007, up from 86.9 in 2000, he said.

And the state's growth in many areas has been rapid — third in the rate of venture capital growth and fourth in the number of new startup companies, Mahoney said. In fact, SCLaunch has supported 118 technology startup companies in the past three years. Of those, three have failed, and three have moved out of state. But several others have obtained more funding, are hiring and are moving into production.

Indexes such as those developed by Yandle, the Kauffman Foundation and the Chamber's Report card may use different indicies, but they "foster dialogue and focus attention on the issues," Hyatt said.

The transition from manufacturing that demanded a relatively low-skilled work force won't be easy.

"We have big challenges. The biggest one is improving educational attainment," Yandle said. Greenville and South Carolina can improve their standing by improving the local education community so more people complete high school and then graduate from college, he said.

"You grow your own brains," he said.

But the second method of increasing education levels — which is faster — is that "you can attract brains from other places," he said. That means making a community attractive — low taxes, a "cool" city, diversity, a large scientific and technical community, places that are fun, the arts and a lively nightlife.

Greenville's weakness in the "cool" area seems to be drawing young professionals, especially unmarried people, onto advisory boards and into politics, Yandle said.