FEDERAL RESERVE BANK OF ATLANTA THIRD QUARTER 2011

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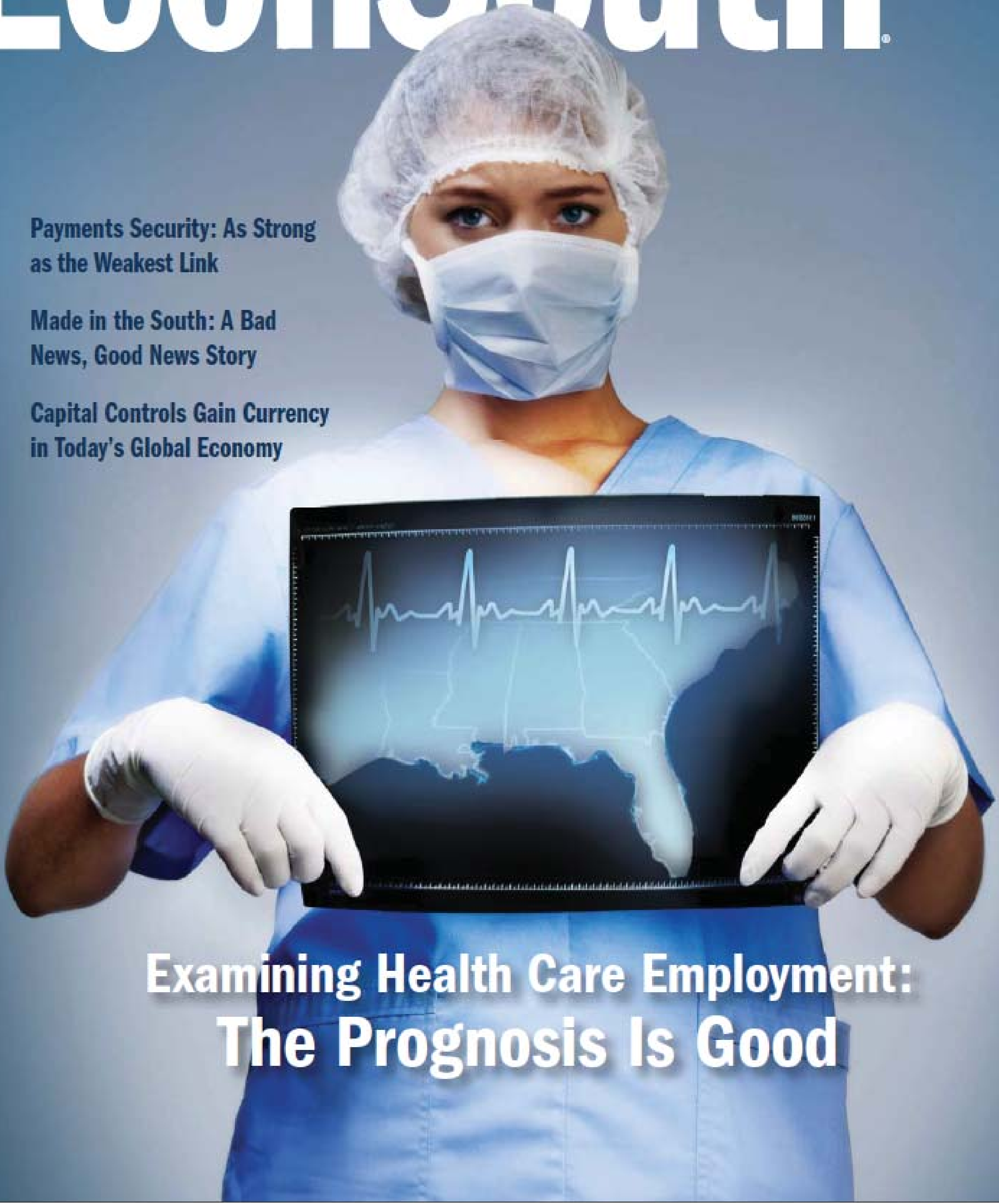
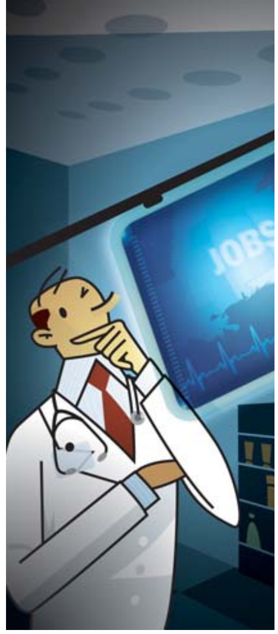


Payments Security: As Strong as the Weakest Link

Made in the South: A Bad News, Good News Story

Capital Controls Gain Currency in Today's Global Economy

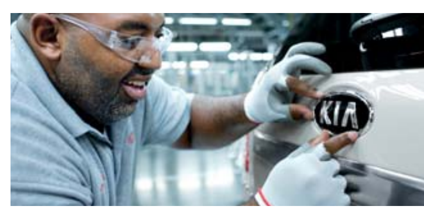
Examining Health Care Employment: The Prognosis Is Good



EconSouth

FEDERAL RESERVE BANK OF ATLANTA THIRD QUARTER 2011

DEPARTMENTS



SAMPLE

EDITOR'S NOTE: This issue of *EconSouth* is the first to contain an element that is becoming ubiquitous in our increasingly hyperlinked world: quick response, or QR, codes. Using an iPhone, Android phone, or other device and a downloaded reader application, you can scan the QR codes embedded throughout the issue. The codes will take you to locations on the Atlanta Fed's website that will provide enhanced information on the subject at hand.

on point

Taking the Pulse of Health Care

Much has been written of late about the jobless recovery, but this issue of *EconSouth* examines an industry that has remained largely unscathed by job losses: health care. Associate editor Nancy Condon, in looking at health care jobs, found signs of vigor in an otherwise ailing job market. Job growth in health care has been consistently strong for the past two decades, even through three recessions, and analysts forecast that it will continue to be strong for decades to come, thanks to aging baby boomers.

This is not to say that all has been rosy, Condon noted. She learned that many hospitals are cutting jobs or services to accommodate anticipated changes resulting from the Affordable Care Act signed into law last year. "The region's hospitals were already strained because of previous cuts to Medicare and Medicaid reimbursements over the past few years," she said. "The recent debt ceiling crisis put these programs on the cutting block again. And something else I learned that really surprised me was that more than half of the patients that hospitals treat are covered by Medicare and Medicaid. So when these programs get cut, so does the hospitals' ability to provide services and maintain their staff."

One of the stalwarts of the Southeast's economy—manufacturing—remains a sector in transition. Staff writer Charles Davidson examined the sector's profound changes and found that, though they are wrenching for many, they have resulted in a globally competitive infrastructure. "A few things struck me in doing the manufacturing story," Davidson said. "One was the sheer magnitude of the job losses. More than one in three factory jobs in the Southeast has disappeared since 2000, and that trend was established when the economy was humming. Finally, it's one thing to read and hear about how high-tech manufacturing has become," he added. "It's another to actually see a place like the Kia plant in West Point, Ga. The efficiency is staggering. It looks like every movement of robots, parts, and people has been planned down to the millisecond."

Once more, into the breach

Every business—as well as individuals—has become aware of the need to remain vigilant about personal data lest they fall victim to identity theft. Jennifer Windh, a payments risk analyst in the Atlanta Fed's Retail Payments Risk Forum, said that her research into the topic was eye-opening even for someone well informed about the issue. "I have been following news reports of data breaches for several years now, so I thought I had a pretty good idea of the magnitude of the problem," she said. "However, even I was taken aback by the volume of data breaches documented by the Identity Theft Resource Center. We all hear when high-profile players like Citibank or Sony have a breach incident, but we don't hear about the local university, hospital, or elementary school data breaches.

"When you start to think about the multitude of organizations that collect your personal information, from the government and your employer to the many stores where you shop and all the schools you've ever attended, it becomes a little overwhelming," she said. "The only reasonable attitude to take in an environment of such pervasive data collection is constant vigilance."

On Point continues on page 29

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Editor's note: Throughout this issue, Southeast refers to the six states that, in whole or in part, make up the Sixth Federal Reserve District: Alabama, Florida, Georgia, Louisiana, Mississippi, and Tennessee.

Photos p. 5: courtesy of Florence/Lauderdale Tourism; pp. 22 and 23 courtesy of Kia Motors; p. 25 courtesy of the Library of Congress photographic archives (top) and Kia Motors (bottom); p. 27 courtesy of the Library of Congress photographic archives (left) and Kia Motors (right); back cover courtesy of Kia Motors (left) and the Library of Congress photographic archives (right).

GDP Growth, the Unemployment Rate, and Okun's Law

PATRICK HIGGINS is an economist in the research department of the Atlanta Fed.

Since June 2009, when the most recent recession ended, the unemployment rate has declined only 0.4 percentage point, from 9.5 percent to 9.1 percent. Over the same two-year period, real gross domestic product (GDP) has grown at an annual rate of 2.4 percent. This estimate is in line with many analysts' and policymakers' reckonings of the "potential" growth rate of the economy.

Looking down the road

The Council of Economic Advisers, the people who advise the White House on economic matters, defines potential GDP growth as "the rate of growth of real GDP that could be sustained with the economy at full employment and steady inflation." The council projects average potential growth of 2.5 percent through the end of 2021. The Congressional Budget Office (CBO) projects a slightly lower potential growth rate:
2.3 percent over the same time period.

And the Federal Reserve Board of Governors' and Reserve Bank presidents' projections of longer-run real GDP growth range from 2.4 percent to 3 percent. (Longer-run real GDP growth is defined as the rate growth "would be expected to converge under appropriate monetary policy and in the absence of further shocks to the economy.") As Atlanta Fed President Dennis Lockhart discussed in a recent speech at Jackson Hole, Wyo., the Atlanta Fed's own estimate is that the current long-run trend growth rate is 2.5 percent.

The long arm of Okun's law

Okun's law describes one of the most famous empirical relationships in macroeconomics. Proposed by economist Arthur Okun in 1962, it basically states that if GDP grows rapidly the unemployment rate declines, if growth is very low or negative the unemployment rate rises, and if growth equals potential the unemployment rate remains unchanged. Considerable debate and disagreement take place about how close and stable a relationship these factors have under Okun's law. However, over the past two years, Okun's law has held up reasonably well—growth has been close to many estimates of potential and the unemployment rate, on balance, has not declined much since the end of the last recession.

The August issue of *Blue Chip Economic Indicators*, which surveys leading business economists, had a consensus projection for average GDP growth of 2.6 percent in the second half of 2011 and 2012. The panel did not forecast beyond 2012 in the most recent issue, but in

March it did, projecting just under 3 percent average growth in 2013–7. Are the *Blue Chip* growth forecasts high enough to bring the unemployment rate down to, say, 7 percent by the end of 2014?

Perhaps. Notwithstanding Okun's law, fairly large declines in the unemployment rate have occurred when the economy was growing fairly modestly.

Is GDP growth of 2.5 percent to 3 percent fast enough to substantially reduce the unemployment rate by 2014? Maybe or, alas, maybe not.

For example, in 1993–5, real GDP growth was 3 percent on average, and the unemployment rate fell almost 2 percentage points. Furthermore, current demographic factors may favor a growth rate of 2.5 percent to 3 percent being more capable of generating a decline in the unemployment rate than these factors were in the mid-1990s. The CBO's *Labor Force Projections through 2021* report estimates how large numbers of baby boomers reaching retirement age will affect labor force participation, concluding that the aging population "has already reduced the overall rate of participation by about 0.5 percentage points since 2007 and … it will do so by an additional 1.2 points by 2016." So hypothetically, if growth is only sufficient to keep the employment-to-population ratio constant, the unemployment rate could still decline if the aging population causes the labor force participation rate to fall.

Modeling the potential future

I have developed a simple model, based on the analysis of economist Robert Gordon and others, relating GDP growth to its constituent labor market-side components (such as productivity growth, average hours worked, labor force participation, and the unemployment rate). It builds in the consequences of population aging on labor force participation in much the same way the CBO does. Conditional on the *Blue Chip* growth projections for 2011–2 and 3 percent growth in 2013 and 2014, the model forecasts an unemployment rate of 8.6 percent in the fourth quarter of 2012—almost identical to the actual consensus *Blue Chip* unemployment projection—and an unemployment rate of 7.6 percent in the fourth quarter of 2014. The model's estimate of the uncertainty around the latter forecast is fairly large. There is a 30 percent chance that the unemployment rate at the end of 2014 would be 6.2 percent or lower, or 9 percent or higher, even if the growth assumption turns out to be exactly right.

So is GDP growth of 2.5 percent to 3 percent fast enough to substantially reduce the unemployment rate by 2014? Maybe or, alas, maybe not. A lot depends on productivity and labor force participation trends, which are very difficult to forecast. Real GDP grew only 0.7 percent (on an annualized basis) in the first half of 2011. Growth will probably have to exceed this rate to bring the unemployment rate down. ∎

grassroots

Muscle Shoals, Alabama

The Shoals Rounds a Long Curve

Crawling out of the economic morass of the Great Recession, the Florence-Muscle Shoals, Ala., metropolitan area is holding its own. By some measures, it is even a leader: from the bottom of the recession through May 2011, "the Shoals" led Alabama's 11 metro areas with employment growth of 3.5 percent, according to data compiled by the Federal Reserve Bank of Atlanta.

But you'll not likely hear talk of an economic bonanza. The Shoals, as the area along the Tennessee River in northwest Alabama is known, never reached the economic peaks of some places, and subsequently did not dip as dramatically, noted Kerry Gatlin, dean of the College of Business at the University of North Alabama in Florence.

"We like to say we have turned a corner," said Gatlin, who's lived in the Shoals for 29 years. "It's more of a curve than a corner, though. We are slowly improving, but it's not a booming economy."

In some ways, the Shoals has been rounding an economic curve for 25 years. The president of the Shoals Chamber of Commerce, Steve Holt, calls it an "island economy." That's because it is situated at least 65 miles from any other metro area and 50 miles from the nearest interstate highway. That location draws people from surrounding rural areas to shop, eat, and go to the doctor. Yet it also isolates the Shoals from the spinoff benefits that come from proximity to larger economic centers.

Manufacturing's decline rattled the area

Once, such relative isolation didn't much matter. Up until the 2000s, the Shoals economy for decades had comfortably relied on a handful of large manufacturers, particularly textile and metals makers, that paid comparatively high wages. "These industries began deteriorating in the 1980s and continued to throughout the 1990s and 2000s," Muscle Shoals Mayor David Bradford said in 2010 congressional testimony.

Bradford was speaking to a House committee studying the U.S. Commerce Department's Economic Development Administration, which helps distressed communities craft development strategies. The Shoals qualified for such assistance when its economic bedrock began crumbling.

First, a Ford Motor Co. assembly plant closed in the 1980s. Meanwhile, the local workforce at Reynolds Metals, now Wise Alloys, has gradually dwindled from nearly 6,000 to roughly 1,100 today. Local employment at the Tennessee Valley Authority (TVA), a federally owned electric utility, likewise has declined from a peak of 5,500 to fewer than 1,000. And thousands of jobs in textile mills evaporated in the 1990s and early 2000s.

All told, the area has lost nearly half its manufacturing employment in the past 16 years. Factory jobs declined from 14,300 in 1995 to 7,400 in June 2011, according to the U.S. Bureau of Labor Statistics (BLS). In 1995, one in four nonfarm jobs in Muscle Shoals was in manufacturing. Today that portion is 13 percent, which is still higher than the 8 percent national share.

To be sure, as once dependable manufacturing jobs have evaporated, lower-paying service jobs have multiplied, Gatlin said. But total nonfarm employment in Muscle Shoals has not changed much for two decades, according to BLS figures. In June 2011, the area had 55,300 nonfarm jobs, about 2,800 fewer than in 1995.

Muscle Shoals, Ala.

Population	12,803
Florence-Muscle Shoals statistical metropolitan area	143,096
Median household income	$49,065
Median owner-occupied home value	$121,900

Source: U.S. Census Bureau, 2005–9 American Community Survey

When Wilson Dam was completed in 1924, its locking facility of 100 feet was the world's highest single lock, and it remains the highest single-lift lock east of the Rockies.

One other figure helps to illustrate how wrenching the area's long economic transition has been. According to a December 2010 Brookings Institution study on the decline of metropolitan manufacturing, Florence-Muscle Shoals's inflation-adjusted average wage for all jobs fell 11 percent from 1980 through 2005, a slightly worse decline than that experienced in Flint, Mich. In the United States as a whole, average wages in those years rose 28 percent, according to Brookings.

"The '80s were a really, really tough time in the Shoals," Gatlin said. "We went through our most painful transition then." In the early part of that decade, Florence-Muscle Shoals's manufacturing employment plummeted from above 15,000 to about 12,000.

More balanced today

Today, the picture is different. This year's modest job growth results from a sprinkling of hiring across a mix of industries, according to Holt. Retailing, transportation, and even construction and manufacturing each added 100 or so jobs in recent months. "We're probably more balanced than we've ever been," Holt said.

In fact, improving industrial diversity is helping to stabilize the economy, according to a March 2011 report on the economy of Florence-Muscle Shoals by Moody's Analytics. As of May, the top 10 employers in the area included just two manufacturers—a Sara Lee Foods meat processing plant and the Wise Alloys aluminum can factory. Also in the top 10 are two hospitals, two public school systems, the University of North Alabama, the TVA, the city of Florence, and a distribution subsidiary of Books-A-Million Inc., founded in Florence but now based in Birmingham. During 2011, education and health services employment has been far and away the biggest source of job growth.

In recent years, international firms have accounted for most of the biggest one-shot job gains in Muscle Shoals. A Japanese automotive lighting maker and a Swedish tissue manufacturer located plants there in the mid-2000s. A high-end golf course, part of the Robert Trent Jones Golf Trail owned by the Retirement Systems of Alabama public pension fund, opened in 2005. It attracted a Marriott hotel and conference center that has drawn small conventions.

This year, Holt said, several major retailers have opened stores in the Shoals, including Ross, Publix, and Bed, Bath and Beyond.

Large-scale industry recruitment has certainly brought the Shoals sorely needed employment. But in the past 15 years, startup companies incubated by the Shoals Entrepreneurial Center have probably generated more jobs than the small number of large plant openings, Gatlin said. The Shoals Entrepreneurial Center's companies have created "just under 1,500 jobs," according to the center's website.

Before the recession, the unemployment rate in Muscle Shoals dipped as low as 3.8 percent, on average, for all of 2007. It averaged 8.8 percent through the first five months of 2011, which was lower than the Alabama rate of 9.3 percent and just below the U.S. jobless rate for the same period.

Judging from projections by the University of Alabama's Center for Business and Economic Research, the Shoals area appears likely to continue its modest progress. The center forecasts the metro area population will grow about 3 percent between 2010 and 2015, to 149,045.

Having seen the Shoals's darkest times, Gatlin harbors realistic hopes. "We'll probably be behind the national economy; we don't anticipate being out front," he said. "But we'll continue to improve." ▮

This article was written by Charles Davidson, a staff writer for EconSouth.


JOBS

Examining Health Care Employment: The Prognosis Is Good

In a region struggling with above-average unemployment, the Southeast has at least one industry with robust job growth: health care. New technologies and shifting demographics have combined to create job opportunities. But federal and state budgets under pressure, rising health care costs, and an aging populace are straining the health care system. Will this sector be able to maintain its robust growth?

Jobs in health care are alive and kicking. The U.S. Bureau of Labor Statistics (BLS) says that health care jobs have increased every month going back to July 2003. Of the 117,000 jobs the U.S. economy gained during the month of July, health care added 31,000, or about 26 percent of net gains. Over the past 12 months, employment grew in all of the major health care settings, with home health care showing the highest 12-month rate of increase (4.4 percent) and hospitals showing the lowest (1.2 percent).

Similarly, the Southeast's health care employment sector is doing well compared to the overall job market. For example, the Southeast economy lost a net total of 147,900 nonfarm jobs from May to June, but health care picked up 700 jobs. Looking at the year-over-year numbers (June 2010 to June 2011), five of the six southeastern states held a ranking in health care employment much higher than its overall employment ranking. Louisiana gained more health care jobs during that year than any other state in the nation (see the table on page 8).

During the 2007–9 recession, when most other industries were shedding jobs, the national health care sector continued to add jobs at a relatively vigorous rate of 22,000 on average per year. In fact, this segment had robust growth throughout the last three recessions, hiccupping only in this last one. Catherine Wood, an economist in the Office of Employment and Unemployment Statistics at the BLS, examined the health of health care employment during recessions in the April 2011

Health Care Jobs, Southeastern States

State	2011 rank, health care and social assistance jobs (total jobs rank)	Percent change, health care and social assistance 2010–11	Total jobs (thousands)	Health care jobs (thousands)
Louisiana	1 (30)	4.68	1,908.70	245.80
Tennessee	21 (35)	1.93	2,619.40	332.70
Florida	23 (33)	1.91	7,164.20	946.10
Mississippi	32 (41)	1.38	1,095.80	117.50
Georgia	33 (49)	1.37	3,818.60	399.00
Alabama	46 (48)	0.00	1,878.80	193.70

Note: States are ranked based on their percent change in job growth 2010–11.
Source: W. P. Carey School of Business, Arizona State University

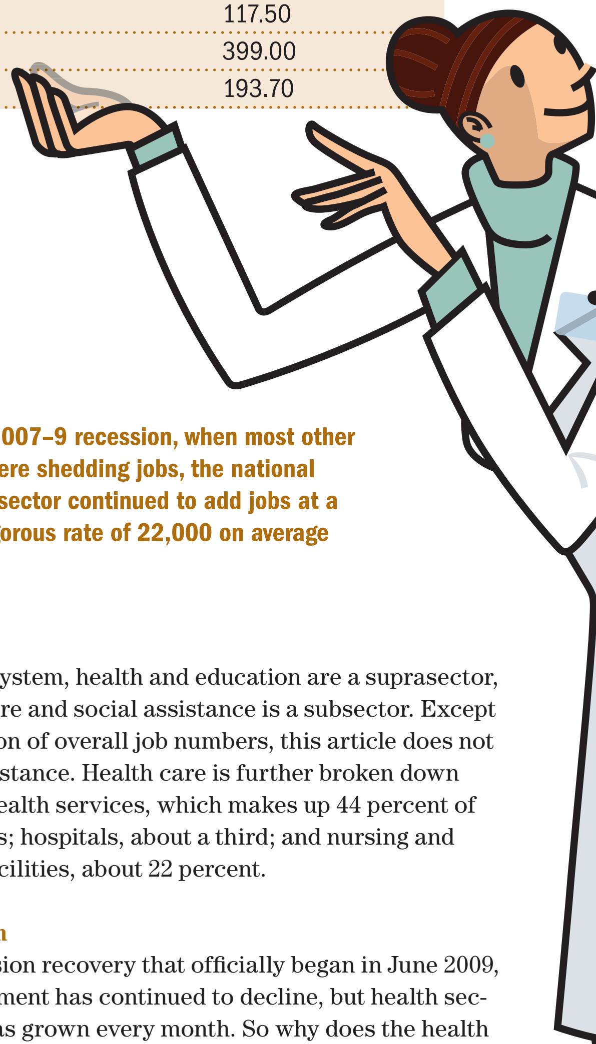
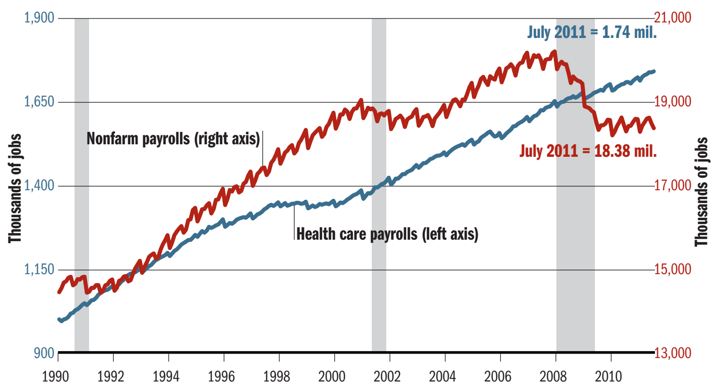


Chart 1
Southeastern Health Care Employment



Notes: "Health care" includes ambulatory health services, hospitals, and nursing and residential care facilities.
Gray bars represent recessions. Data are through July 2011 and are not seasonally adjusted.
Source: U.S. Bureau of Labor Statistics

During the 2007–9 recession, when most other industries were shedding jobs, the national health care sector continued to add jobs at a relatively vigorous rate of 22,000 on average per year.

issue of the *Monthly Labor Review*, a BLS publication. She wrote that "the industry has been among the leading contributors to overall job growth during recessions."

The industry continues to be a strong contributor to job growth. According to the BLS, health care employment reached an all-time high of about 10.74 percent of total employment in July 2011. This number is up 0.13 percentage points from the previous year, 1.24 percentage points from the start of the recession in December 2007, and more than 2.23 percentage points from a decade ago. To look at the numbers under a different microscope, national health care employment has increased 7.6 percent since the recession began, while non-health-care employment has fallen by 6.2 percent. This pattern is evident in the southeastern states as well (see chart 1).

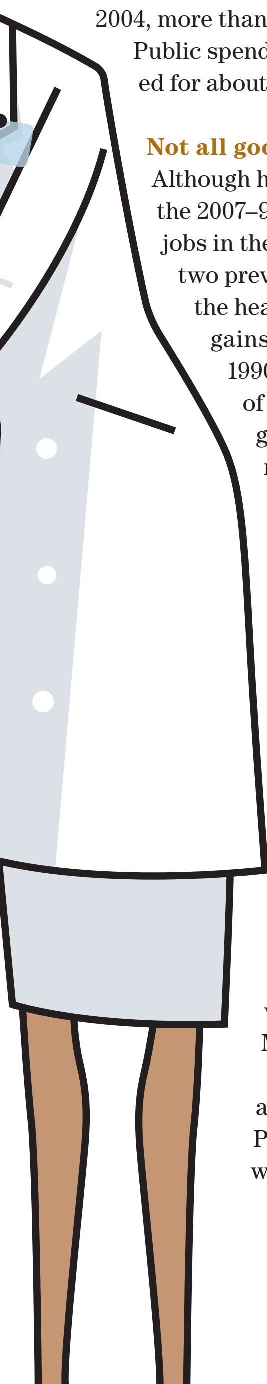
The BLS categorizes components of labor and employment according to the North American Industry Classification System (NAICS). By this system, health and education are a suprasector, of which health care and social assistance is a subsector. Except for in the discussion of overall job numbers, this article does not include social assistance. Health care is further broken down into ambulatory health services, which makes up 44 percent of all health care jobs; hospitals, about a third; and nursing and residential care facilities, about 22 percent.

A shot in the arm

For the postrecession recovery that officially began in June 2009, nonhealth employment has continued to decline, but health sector employment has grown every month. So why does the health care sector thrive even when the rest of the economy is ailing? When drops in consumer spending have resulted in a steep fall in consumer demand for elective medical procedures, how can the industry remain strong? According to the BLS's Wood, "Historically, health care employment has been immune from fluctuations in the business cycle, as shown by the industry's continued growth throughout previous recessions."

She went on to say that infusions of federal stimulus funds during the past three recessions have in large part built up the industry's resistance to downturns. Additional Medicaid subsidies and other health-related spending helped fund hospitals and make health care coverage more affordable for the unemployed.

Wood and other researchers have also noted that the growing and aging American population is naturally increasing demands for health care services. The American population tripled during the 20th century, for example, while adding on average 30 years to life expectancy. So as the American population grows and ages, it pours more money into the health care system. A 2010 study on longevity by researchers at the Stanford Center on Longevity (Adele M. Hayutin, Miranda Dietz, and Lillian Mitchell, *New Realities of an Older America*) reports: “Given the number of age-related health conditions, it is no surprise that per capita health care spending skyrockets with age. Annual per capita spending on those age 65+ totaled $14,800 in 2004, more than triple the amount spent on working-age adults. Public spending, including Medicare and Medicaid, accounted for about two-thirds of total spending for those 65+.”



Not all good news

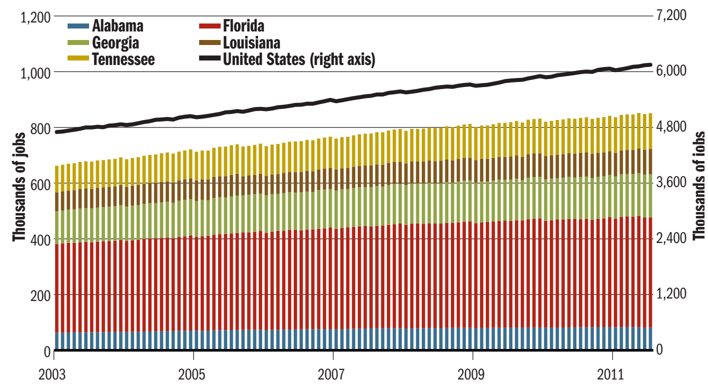
Although health care jobs did grow at a healthy pace during the 2007–9 recession—2009 saw the addition of 22,500 jobs in the sector—growth was slower compared to the two previous recessions. According to the BLS’s Wood, the health care sector averaged stronger monthly gains of 31,000 and 34,000 jobs during the 2001 and 1990–1 recessions, respectively. She cited a number of reasons to explain the difference, the biggest one being “the length and breadth of the most recent recession, which was the longest recession since World War II.” She also pointed to insufficient government subsidies, including COBRA and Medicaid subsidies, to meet higher health care costs and the lower growth rate of national health spending.

The June BLS jobs report caused some alarm in the industry. Nationally, health care added only 13,500 jobs in the month of May, the slowest pace since January, and hospitals lost jobs—4,000 of them, in the first month-over-month drop since July 2010. A drop in patient volume coinciding with significant reductions in per-person Medicare and especially Medicaid reimbursements are adding to the strain that hospitals are feeling, causing them to cut jobs or cut services. More than half of the patients who go to American hospitals are covered by Medicare or Medicaid.

In early June, Georgia’s Piedmont Healthcare—a nonprofit four-hospital system that includes Piedmont Hospital in Atlanta—announced that it was reducing its workforce by 5 percent, partly

Chart 2

Southeastern Ambulatory Health Care Employment



Notes: Data are through July 2011, not available before 2003, not available for Mississippi, and not seasonally adjusted.
Source: U.S. Bureau of Labor Statistics

through 293 layoffs and the rest through attrition. Piedmont’s spokesperson, Nina Day, said the hospital is cutting costs in preparation for significant changes in federal health care regulations that will be rolled out over the next several years. Day said that Piedmont is cutting costs so that it can break even on patients who are covered by Medicare reimbursements. “When 50 percent of your cost is labor, unfortunately that’s a big bucket you have to look at,” said Day.

By contrast, Woman’s Hospital in Baton Rouge, La., is thriving, according to its president and CEO, Teri Fontenot. Thanks to continued strong demand for health care in Louisiana and a thriving health care sector, she said that Woman’s has not had any organizational layoffs since 1996. (See the sidebar for a close-up of Louisiana’s medical employment situation.) “We *have* seen a decline in volume during the last two to three years” of about 2 percent, Fontenot noted, “but we’re a large organization, with almost 2,000 employees, so we can reduce staff through attrition in the areas of nondirect patient care.”

Woman’s has not been totally unscathed by the struggling economy. In 2007, because of state funding cuts, the hospital reduced the reach of its home health agency. “We were seeing patients within a 50-mile radius,” said Fontenot. “We cut that back to 25 miles.” She added that all but one of the caregivers providing home aid in the eliminated areas were transitioned into positions in the hospital.

With an investment of about $350 million, Woman’s is currently building a completely new facility five miles down the road. “When we move, we will most certainly add staff. Not only

Continued on page 12

Health Care Jobs Flock to the Pelican State

If health care employment has been the silver lining in a gloomy U.S. jobs market, then Louisiana is basking in the glow. The state currently ranks a healthy number one in the nation in health care job growth. In fact, according to Karen Zoeller, vice president for development at Louisiana Hospital Association and chair of the Louisiana Health Works Commission, the state has many more job openings in health care than it has skilled workers to fill them.

Much has changed since 2002, when the state had 11,000 health care vacancies, and 5,000 of them were in nursing. That year, the Louisiana state legislature created the Health Works Commission to address such shortages in trained health care workers. With the strong backing of the governor's office and an annual budget that at its highest was $29 million (in 2009), the commission set out to analyze workforce data related to health care employment and to work closely with the state's colleges and community and technical college system to make sure they were prepared to train students for these jobs.

Training skilled workers to fill these empty positions remained the focus of the commission from its start through 2009. "If a given [training] program was at capacity," explained Zoeller, "we would provide funding to hire additional adjunct professors." Nursing classes have on average around 10 students for one professor; pharmacy classes, about five students per professor. "We were able to add over four years an additional 5,000 nursing students and about 3,000 allied health professionals" to the Louisiana workforce, Zoeller said.

The shortage in qualified nurses in Louisiana has shrunk over the past few years, but demand for health care workers remains strong, and looks strong well into the future.

Position, fill thyself

The commission took this a step further when it created a student loan program that worked to fill some of those teaching positions with its own graduates. The commission offered loans of $10,000 per semester to students working on master's or doctoral degrees in a health care program. For every $10,000 a student accepted, he or she would agree to teach in a program in the state of Louisiana for one year. New graduates unable to secure teaching positions were required to work off the loans in one of the hospitals in the statewide charity hospital system.

But unfortunately, the program was more complicated than just training so many health care workers to plug into so many vacancies. “Being in a metro area, particularly in Baton Rouge, we have so many universities that we don’t have these shortages,” said Teri Fontenot, president and CEO of Woman’s Hospital in Baton Rouge. “The hardest places to attract and retain primary caregivers are in the rural areas—and we have lots of rural areas in Louisiana, so that’s an issue,” Fontenot continued.

Zoeller agrees. She said that Health Works discovered that most graduates stay within 25 miles of where they do their clinicals. “I understand,” she said. “They want to be close to their friends and social lives—most young folks just want to be in the metro areas.”

Nevertheless, the commission made great strides in aligning programs in the state’s colleges with the health care workforce shortages. “Things were going very well,” said Zoeller. According to the commission’s 2009 summary report, for each academic year between 2002 and 2008, the commission funneled almost $54 million into educating nurses and allied health workers, through direct loans and stipends, salaries for new faculty, or other means.

“Then the recession finally caught up,” said Zoeller. Throughout the 2007–9 recession, Louisiana’s economy had remained strong, bolstered by post-Katrina recovery efforts. But when the state experienced a $1.8 billion shortfall in its budget in 2010, it was forced to make heavy cuts to state programs. Funding of many of the state’s industries, including agriculture and transportation, is constitutionally protected, while funding of education and health care is not. In 2010, the Health Works Commission lost all of its financial support.

Things are looking better for Health Works this year. With a budget of $2 million, it is again able to provide some financial support for the education of health care workers. However, Zoeller said the commission is turning its attention to getting more physicians and pharmacists into the rural areas, where it sees the greatest need.

“This year, we hope to pick up about 12 medical students and four pharmacy students,” she explained. The commission will pay for the last year of medical school for these students. In turn, when the students complete their residencies, they will work in a rural area for five years and work with Medicaid patients. “Most research shows that if you can get physicians into rural settings and get them established for five years, they will feel they are part of the community and will stay at the end of the five years,” Zoeller observed.

Workforce of the future

Looking ahead, the commission will continue to work with the state’s education system to make sure that it offers training programs for forecasted workforce needs. Two big workforce issues the commission sees ahead, for example, are the growing need for health care information technology (HIT) workers and the switch to a new coding system for reimbursements.

The Patient Protection and Affordable Care Act, signed into law in 2010, put a 2014 deadline on the implementation of electronic medical records (EMR). By computerizing patient records, EMR systems allow caregivers to coordinate patient care. But these systems are incredibly complex. Software developers require specialized training so that they not only can program these applications but also have at least a rudimentary knowledge of health care coding and requirements. Currently, Delgado Community College, based in New Orleans, offers the only four-year HIT program in the entire state. By working with the commission, Delgado is now offering online training for HIT specialists.

The second issue the commission foresees is in the area of medical coding, the system that caregivers use to document treatment for reimbursement from insurance companies as well as from Medicare and Medicaid. By October 1, 2013, every health care provider in the nation must be using a new coding system, the ICD-10. (ICD is short for International Classification of Diseases.) “This is going to be a huge, huge change,” said Zoeller. “One day we’re speaking English, and the next day, we’re speaking Chinese.” She explained that whereas the ICD-9 system offered practitioners perhaps seven codes for a medical problem, the ICD-10 system will offer up to 700. Currently, only five people in the state are certified as ICD-10 instructors.

The shortage in qualified nurses in Louisiana has shrunk over the past few years—recent cuts in Medicare and Medicaid have seen to that—but demand for health care workers remains strong, and looks strong well into the future, according to state forecasts. As the boomers continue to age, the need for physical therapists, occupational therapists, and home health workers will continue to grow. ∎

Continued from page 9

will it be a larger campus, with more square footage, but we'll have the opportunity to add services." True to its name, Woman's Hospital specializes in services for women, and is best known for its obstetrics and gynecological services. The new services in the new campus will still cater to women, Fontenot said. For example, the hospital will offer an orthopedic specialty "for the shoulder problems that women tend to experience because they sling those heavy purses over their shoulder," said Fontenot.

Prognosis

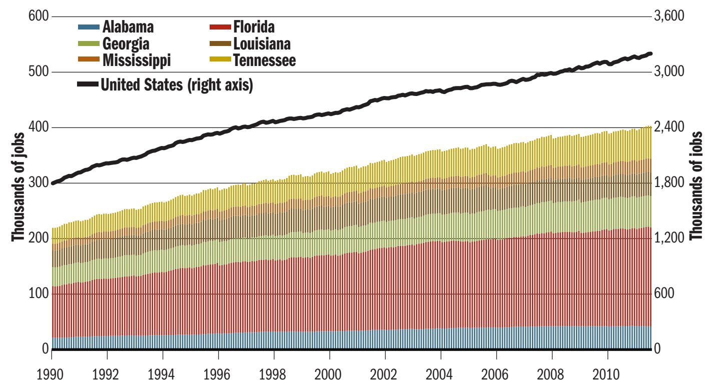
With the August BLS release of July employment data, the industry appeared to have regained some of its momentum. Of the 31,300 health care jobs added, ambulatory health services added 6,300 jobs in doctor's offices (see chart 2) and 3,100 in home health care services (see chart 3) while outpatient care centers lost 500 jobs.

According to the Occupational Outlook Handbook, 2010–11 Edition (OOH), the BLS's biennial compendium of job-growth estimates for the decade 2008–18, projected rates of employment growth for the various segments of the industry range from 10 percent in hospitals, the largest and slowest growing industry segment (see chart 4), to 46 percent in the smaller home health care services.

Indeed, of the top 20 fastest growing jobs that the OOH lists, eight are related to health care. On the national level, home health aides will increase by 50 percent; physician assistants by 39 percent; physical therapist aides by 36 percent; medical assistants by 34 percent; physical therapist aides, dental hygienists, and dental assistants by 36 percent; medical assistants by 34 percent; and physical therapist assistants by 33 percent.

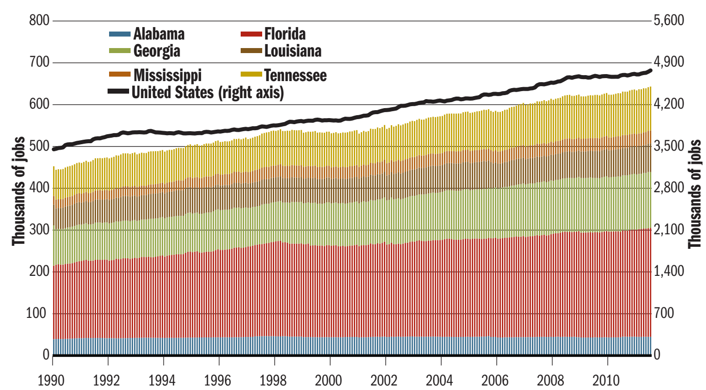
Although the BLS also estimates that wage and salary employment in the health care industry will increase 22 percent through 2018, for most of these positions—with the exception of physician's assistant, with a master's degree—education requirements are comparatively minimal and wages are on the lower end of the pay scale. Still, the average earnings of nonsupervisory workers in most health care segments are higher than the average for all private industry ($20.38 per hour as opposed to $18.08 per hour), with hospital workers earning considerably more than the average and those employed in nursing, residential care facilities, and home health care services earning less. Despite the significant challenges the health care sector is facing in a weakened economy—including budget cuts, Medicare and Medicaid cuts, uncertainty regarding upcoming changes, and a few stops and starts in the month-to-month look at the industry's growth trajectory—in the long run, health care will almost certainly remain a growth area, the BLS predicts, as America's

Chart 3
Southeastern Nursing and Residential Care Employment



Note: Data are through July 2011 and are not seasonally adjusted.
Source: U.S. Bureau of Labor Statistics

Chart 4
Southeastern Hospital Employment



Notes: Data are through July 2011 and are not seasonally adjusted.
Source: U.S. Bureau of Labor Statistics

population ages and federal health care legislation gives more people insurance. Indeed, according to Lee McPheters, director of the JPMorgan Chase Economic Outlook Center at the W. P. Carey School of Business at Arizona State University and editor of the *Western Blue Chip Economic Forecast* newsletter: "The brightest spot in the jobs growth picture is health care, the strongest employment sector in the nation right now." ▮

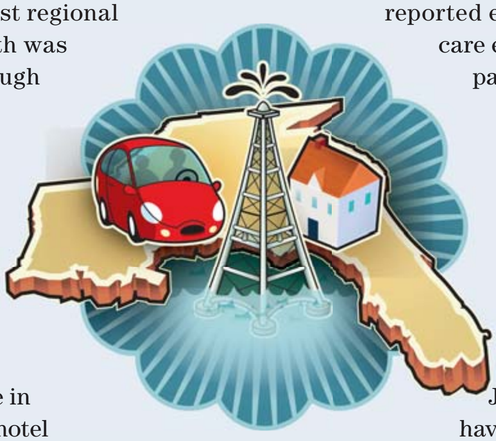
This article was written by Nancy Condon, associate editor of EconSouth.

Regional Update: Uncertainty Dominates the Regional Outlook

As of this writing, it is difficult to assess how recent market developments will affect the regional economy. Difficulties with European sovereign debt, the downgrade of U.S. sovereign debt, weaker-than-expected national economic data, and the mid-August decline in international equity markets will surely be felt in months to come, but just how recent events will play out in the Southeast will take time to ascertain. That said, downside risk to the southeastern economy has clearly risen.

Regional results mixed

Leading up to the August setbacks, regional business contacts described economic activity as little changed in June and July. National economic data from the first half of the year showed that consumer spending has been soft. Most regional merchants reported that retail sales growth was modest in the early summer months, although some luxury goods retailers noted steady-to-improving sales. The majority of retail contacts stated that they were keeping inventory levels lean and had no plans to increase supply in the near term. Among big-ticket items, auto sales from Japanese manufacturers slowed, but dealers noted that the effects of supply disruptions from Japan are ending.



Leisure activity continued to accelerate in most areas. Contacts reported increases in hotel room occupancy and rates in many areas. Strong attendance at theme parks, festivals, and coastal destinations was noted. Cruise bookings have risen as well, and airport contacts observed increases in passenger traffic. The overall outlook for tourism remained positive. (See this issue's "On the Ground" to read in more detail how our regional executives describe the Southeast's tourism activity.)

Real estate's slow pace continues

Residential real estate was also little changed. According to reports from brokers, home sales were only slightly ahead of last year's weak levels. Gains continued to be driven largely by reports from Florida brokers. Outside Florida, the majority of contacts reported that sales declined. Brokers continued to report declining home inventory levels as fewer homes enter the market, adding that home prices were flat to slightly down compared with a year earlier.

Homebuilders reported that new home sales and construction weakened somewhat compared with year-ago levels. Builders continued to report downward pressure on new home prices. Residential contractors reported that home improvement construction increased from earlier in the year.

The pace of commercial development was flat to slightly up compared with weak levels from a year earlier, but backlogs reportedly continued to shrink. Contractors commented that construction in health care and apartments was up and that renovations in commercial and apartment space had increased. With regard to existing commercial structures, contacts reported that credit availability and absorption improved, especially in light industrial, warehousing, health care, and energy-related space.

Manufacturing: An uneven summer

Manufacturing activity in the region was rather strong in the first half of the year, but reports from July showed that production and new orders increased at a much slower pace than reported earlier in the year. Producers of health care equipment and electrical components in particular noted stronger orders, and supply chain disruptions due to the disaster in Japan were beginning to moderate.

Many manufacturers reported increased investment in technology equipment in efforts to increase efficiency. Reflecting slower manufacturing and retail activity, freight forwarding and parcel shipping contacts reported a gradual slowing of domestic volume momentum in June and July. On the energy front, energy contacts have noticed a considerable uptick in early-stage fabrication of oil and gas extraction capital goods. Shipbuilding for shallow-water supply boats has also increased. Shale exploration has increased as firms employed directional drilling techniques for oil and gas liquids.

Hiring outlook remains uncertain

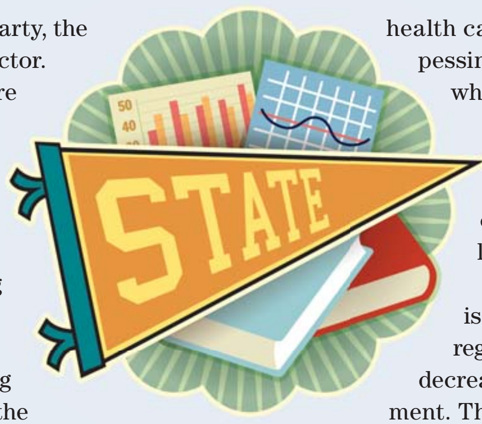
Job growth in the region was positive, but modest, in the second quarter of 2011. Florida led the Southeast with a net increase of just over 50,000, nearly two-thirds of the region's total increase of almost 77,000. Louisiana added a net 17,300 jobs, while Georgia and Alabama added a net 6,000 and 4,000 jobs, respectively. Tennessee shed a net 1,500 jobs in the second quarter, while Mississippi lost only 600 jobs.

Most business contacts indicated that their hiring plans remained modest. Uncertainty regarding future demand and the regulatory environment were the most commonly cited reasons for the muted hiring outlook. Of those that reported plans to increase employment, many pointed to having reached maximum productivity with existing staff. Staffing agency contacts continued to experience high demand for temporary or contract workers. According to reports, demand for qualified, higher-skilled candidates is robust, especially in the technology sector.

Looking at indicators of inflation, most contacts said that they did not experience significant upward wage pressure and characterized annual increases and bonuses as modest. Firms' expectations for unit cost increases are more tempered than noted earlier in the year. Nonlabor input costs have moderated but remained elevated. However, downward price pressures from productivity gains were reportedly tapering off. While regional contacts have continued to report that margins remained squeezed, there have been more frequent reports that some contacts are attempting to pass through input costs. The cost of fuel and other inputs continued to challenge shippers' operating margins. However, maritime contacts cited some success in passing along fuel surcharges. Input costs for trucking contacts—such as costs related to tires, replacement parts, and new vehicles—remained high.

Overall, the outlook for the regional economy has clearly suffered from negative August developments. To what extent is difficult to measure because events remain fluid. The Atlanta Fed will continue to watch the data closely as it looks to its business contacts to help develop a clearer view. ▮

University Studies



On a national scale, the Conference Board's Consumer Confidence Index and Reuters/University of Michigan Index of Consumer Sentiment give us insight into how consumers are feeling about the economy. From a regional perspective, we gain the same insight by looking at publications released by members of the Local Economic Analysis and Research Network (LEARN) that examine both consumer and business confidence.

Gauging recent events' local impact

The most recent data released by the Conference Board showed that consumer confidence increased by only 1.9 points to 59.5 in July, after declining a total of 8.4 points over May and June, while the University of Michigan Consumer Sentiment Index fell 8.8 points to 54.9 in August. These reports indicate that the decrease was most likely related to concerns stemming from deficit-ceiling negotiations and weaker-than-expected economic data. Did these issues affect confidence in our region?

According to the University of Florida's Bureau of Economic and Business Research, consumer confidence in Florida rose 2 points in July to 68 points. The increase in the overall index "does not represent a big change. Most of the increase can be attributed to an increase in optimism about whether it is a good time to buy [big ticket items]. This component is now back to the level it was last fall," said Chris McCarty, the bureau's survey director. "Looking ahead, there are two factors most likely to affect consumer confidence. One is the potential downside to housing prices. Florida is different from other states in the backlog of foreclosures and the relatively high price tag for homes along the coast which will be affected by the change in the FHA [Federal Housing Administration] rate [for mortgage insurance]. The other is the aftermath from the change to the debt ceiling and deficit reduction."

Business outlook dims

As for businesses, according to the University of Alabama's Center for Business and Economic Research, sentiment fell in the third quarter of 2011 as expectations for Alabama's economic performance decreased by 4.8 points from the second quarter to 52.5. However, a reading above 50 is still considered expansionary. Panelists in sectors related to finance, insurance, and real estate; transportation, information, and utilities; and retail trade were the most optimistic. Manufacturers were expecting a weaker quarter, with sales and profits expected to decline. The health care industry held a pessimistic outlook as well, which is notable because health care has been the only sector that has added jobs consistently over the last several years.

The Gulf Coast is another area in the region that experienced a decrease in business sentiment. The Gulf Coast Business Council's CEO and Business Owner Confidence Index fell 9 points, to 53, in the second quarter of 2011. Although the reading was slightly above neutral and above the level from a year ago, business confidence in the local economy has fallen substantially since the end of 2010. The report cites a decline in sales tax collections and diminishing job growth as reasons. ▮

On the Ground: An Interview with the Atlanta Fed's Regional Executives

Tourism-related spending has been fairly healthy in the region. Based on what your contacts have shared with you, how do you square your area's positive tourism reports with the slow-growth environment experienced in the region as a whole?

Tom Cunningham, regional executive at the Atlanta Fed: Atlanta is a little tough to pin down in terms of "tourism." The travel and hospitality sector in the city is doing better, but my sense from conversations with those in the sector is that the increase is driven mostly by business-related travel. This is not very surprising—Atlanta has long been a center of conventions and meetings. Unlike some other cities in our region, notably Miami, Orlando, New Orleans, and Nashville, Atlanta is more of a business travel destination than a pure tourist destination. Certainly, all those other cities have very active convention businesses, but in terms of the overall mix of motivations for travelers, Atlanta is more heavily weighted toward business. Hotel occupancy rates declined sharply during the recession and have been recovering since. I think part of the apparent strength here is partly just the arithmetic of the recovery. Another issue with the hospitality industry in the Atlanta area is a notable increase in supply that was constructed in the prerecession '00s. Some of these properties have struggled, and the extra capacity has held down overall lodging prices. This isn't a lot of fun if you are a competitor in that market, but at the margin this makes the city comparatively attractive as a destination.

Lesley McClure, regional executive at the Birmingham Branch: Reports from my contacts along Alabama's Gulf Coast have been very positive for this summer season. I think it's important to recognize that in many cases we're comparing this season to last year's season, which was hurt by the oil spill. Nevertheless, tourism activity has been healthy to date. I attribute the disconnect between soft overall consumer spending nationally and strong tourism-related activity regionally to the disproportionate impact of the downturn and recovery. Our contacts have noted this frequently—those with financial resources are doing quite well, while others who had no financial cushion are struggling. Families and individuals with resources have loosened their purse strings and are spending some of their savings on vacations that were in many cases postponed by the recession.

Chris Oakley, regional executive at the Jacksonville Branch: Contacts in the central Florida area are generally bullish on tourism both in terms of the current volume and future bookings. There is a positive combination of both leisure and business travelers to the area. Attendance at Orlando's convention center is very strong, with February activity setting a record. Luxury brands are also performing very well. The amount of discounting to maintain volumes that most hospitality and attraction contacts implemented has been reduced, though pricing is not back to prerecession levels.

So what are the sources of strength for this sector of Florida's economy, especially when domestic economic growth is slow and spotty? Two things stand out. First, the volume of international visitors is up and there has been a bit of a shift with where they are coming from—the area is experiencing increasing numbers of tourists from Latin America. Second, domestically, area contacts have noted some improvement in confidence and described a typical American's perspective on vacations as "nonnegotiable." Some of these visitors express a willingness to offset spending elsewhere in order to afford an annual trip for their families.

Juan del Busto, regional executive at the Miami Branch: Our travel and tourism contacts have been reporting positive business growth the past few months, and their outlook is strong for the industry. This improved outlook includes the hotel benchmarks (occupancy, room rate, revPAR [revenue per available room], etc.) and cruise booking activity. During the recession, the cruise operators had to lower prices significantly to fill rooms, and they noted that the discretionary spending onboard was down. This has turned around over the past several months, and onboard spending has increased and bookings are strong enough to allow for raising some prices. Convention bookings have had some moderate gains.

The increased activity in spite of the slow-growth economy has probably occurred for a variety of reasons. Businesses had cut back and postponed many meetings and conventions during the recession, and there was pent-up demand for bookings once things got even a little better. On the leisure side, this has also probably had some impact with folks who still had jobs but decided to cut back on vacations and hunker down during the worst of times. These folks have felt a little better recently, but they still spend money on vacations cautiously. Additionally, a big contributor to our tourism activity has come from abroad, where folks with money are traveling from. The area has seen more international tourists, who fly over to take a cruise and typically stay at least one night before and after in a local hotel, as well as spend money at local restaurants and retail establishments.

Lee Jones, regional executive at the Nashville Branch: East Tennessee generally, and the Smoky Mountain-Gatlinburg-Pigeon Forge tourist areas specifically, experienced a mini-boom

On the Ground continues on page 29

Data Corner: Macroprudential Supervision

When traveling on a cloudless day in an airplane at 30,000 feet, the view from on high looks dramatically different from the view on the ground. The same effect applies to the role of financial institutions in the nation's financial system. Prior to the Dodd-Frank Act, financial system regulators were statutorily required to regulate financial institutions. However, there was no explicit mandate for federal regulators to regulate and consider the aggregate effect of all financial institutions on the broader economy. Specifically, regulators were not required to study how the largest financial institutions affected both the national and global financial systems.

To address weaknesses that led to the financial markets crisis, the Dodd-Frank Act—the regulatory overhaul of the U.S. financial system passed in 2010—established a *macro*prudential approach to supervision, which includes the analysis and regulation of the collective impact of financial institutions on the broader economy, with a particular emphasis on identifying risks posed by those institutions. This broad supervision is intended to be conducted concurrently with *micro*prudential supervision, the analysis and regulation of individual financial institutions. The Federal Reserve, under the Dodd-Frank Act, will add macroprudential responsibilities to the bank supervision and regulation responsibilities it had before Dodd-Frank.

Under the authority granted to federal regulators by the Dodd-Frank Act, nonbank financial firms that are deemed systemically important are subject to enhanced prudential standards. If a particular firm or a firm's activities are deemed to pose a systemic threat to the domestic financial system, regulators have the authority to force a firm to divest itself of or spin off certain activities or subsidiaries.

The Financial Services Oversight Council (FSOC) was established by the Dodd-Frank Act to coordinate macroprudential supervision activities by the federal financial regulators, such as the Office of the Comptroller of the Currency, the Federal Deposit Insurance Corporation, the Bureau of Consumer Financial Protection, the Securities and Exchange Commission, and the National Credit Union Administration.

Macroprudential supervision seeks to identify and mitigate systemic risk. The systemic part of the threat refers to the likelihood that the entire financial system could be affected by a single (and presumably large) financial company. The FSOC is charged with designating systemically important financial companies and is also responsible for suggesting improvements in the supervision and regulation of such companies. Congress receives reports of these suggestions. ∎

Econ 101: Inflation Targeting

A low and stable rate of inflation is generally considered by economists to be an important underlying factor for healthy economic performance over time. Central banks, including the Federal Reserve, are charged with monitoring inflation pressures and adjusting monetary policy to maintain long-term price stability. Inflation targeting, whereby policymakers set an explicit numerical objective for inflation, is a practice employed by many of the world's central banks—though not currently by the U.S. Federal Reserve. By publicly communicating its objective for inflation, a central bank can help anchor the public's inflation expectations.

A quantitative inflation target (sometimes expressed as a range of inflation) is not intended to be a binding policy constraint—policymakers are still free to weigh other factors, like the unemployment rate and the stability of financial markets during their deliberations—but rather a mechanism for explicitly communicating a framework for monetary policy.

Although the Federal Reserve does not currently employ an explicit inflation target, it does publish members' projections for longer-run inflation, conditional on what Federal Open Market Committee (FOMC) members view as the appropriate path for monetary policy. The economic projections are released four times a year at the Fed chairman's press conference, following the meeting of the FOMC. These projections can be found at federalreserve.gov/monetarypolicy/fomccalendars.htm. Longer-run projections for personal consumption expenditure inflation currently range from 1.5 percent to 2 percent, with the central tendency between 1.7 percent and 2 percent. ∎

Payments Security:

As Stron as the Weakest Link

Each year, millions of Americans fall victim to identify theft because of data breaches. Several economists discuss the payments industry's vulnerability to breaches and also give advice on increasing security.

Imagine receiving your monthly credit card statement and cautiously reviewing it as you do every month. But this time, as your eyes scan down the page, some of the purchases are unfamiliar. An entry for $532.78 at Barneys New York? Over $700 spent at NeimanMarcus.com? Your pulse quickens. You never visited these sites! You begin to panic as you realize that someone with extravagant fashion taste has stolen your credit card information. Along with the millions of Americans each year whose identities are stolen, you have been the victim of a data breach. (See the table for a yearly breakdown of exposed information records.)

Several major data breaches occurred in the first half of 2011 alone. In one breach that lasted from February through May, thieves tampered with PIN pads at Michaels Stores across the country. When the company finally discovered the breach, it had to replace 72,000 devices. In another incident, this one made public in April, Sony had to shut down its PlayStation Network when it discovered that personal data had been stolen from more than 77 million accounts. Given the unprecedented magnitude of this pilfered data, consumers and politicians fiercely criticized Sony for failing to disclose the breach until almost a week after learning of the incident.

Data breaches like these are becoming a disturbingly common feature of today's headlines, yet the experts still cannot calculate with any reasonable confidence their ultimate cost. It may be some time yet before it is possible to estimate the full extent of the financial losses from these breaches, as the stolen data work through the criminal supply chains that buy, sell, and use personal information for fraudulent purposes.

Meanwhile, what makes the payments industry vulnerable to fraud? What steps can the industry take to protect your data? Economists may be able to supply some of the answers.

Annual U.S. Data Breaches

Year	Data breaches	Number of records exposed
2007	446	127,717,243
2008	656	35,691,255
2009	498	222,477,043
2010	662	16,167,542
Q1 2011	112	5,460,925

Source: Identity Theft Resource Center

The externalities of personal data collection

According to Will Roberds, a research economist and senior policy adviser at the Federal Reserve Bank of Atlanta, personal data collection creates some consequences—or "externalities," in the parlance of economics—in the normal course of enabling consumer payments. An externality is an unintended side effect of a transaction imposed on those who are not party to the transaction. A positive externality, for example, is when your neighbors plant a rose garden for their own benefit, but you also benefit because you enjoy the beauty and fragrance of the flowers whenever you walk by their yard.

On the other side of the spectrum, Roberds says, is the negative externality that banks and other payments providers create whenever they verify payer identities by collecting personal data. "As more and more of that data is assembled and it becomes more and more extensive," says Roberds, "it becomes a [broad] target for theft by talented individuals who are able to access that data, use that [data] to construct pseudo-identities that allow them to illegitimately purchase goods and services, and thereby impose costs on everyone else who's working within the credit system." Because the banks and payments providers do not bear the full cost of this criminal activity—they cannot reimburse victims for time spent dealing with identity theft, for example, nor for damaged reputations—they collect more personal data than they really have to. This over-collection of data continues in part because there are so many different entities active in the payments system, making coordination difficult among the diverse parties.

Security as a weakest-link public good

At the same time that private companies are over-collecting personal data, they may be under-providing beneficial public goods. Public goods are products and services that can be consumed by more people at no additional cost. The late economist Jack Hirshleifer, who taught at the University of California, Los Angeles, discussed a specific subset of public goods as the weakest-link public good. A classic example of this kind of public good, in Hirshleifer's mind, is a dike system that provides flood protection to a below-seawater area. The dikes provide protection—but only so much as the shortest dike in the system. Said Hirshleifer, "If the dike is not breached, little to no loss will be suffered, but once breached, even by a little bit, the whole structure may give way."

In the payments world, the level of protection that consumers get is determined by whoever makes the least effort to maintain his or her portion of the system. In other words, the security of payments data often functions as a weakest-link public good. According to Roberds, "Data is only as secure as the weakest place within the system that's using it in terms of its security and its ability to be breached by hackers and other malefactors who would like to exploit the credit system." Consequently, the security of the total payments system depends on the actions of those players who have the least to lose in the event of a data breach—or those who are the least savvy in implementing security standards.

Google's chief economist, Hal Varian, explored what economists call the unequal incentives dilemma of weakest-link public goods in a 2004 paper, "System Reliability and Free Riding." He concluded that the participant with the lowest benefit-cost ratio would determine the amount—of security, in this case—provided. In terms of data breaches, those companies with low revenues but high security costs will determine the level of protection for the entire industry. Furthermore, the U.S. payments industry includes many small merchants accepting card payments as well as technology start-ups offering new electronic payment products on a shoestring budget, which may make consumers more vulnerable to breaches. Start-up companies often have less risk-management experience and less to lose than more established firms, but a breach of one of these small players may pose broader threats to the integrity of the payments system.

A self-policed marketplace

Economic theories about externalities and weakest-link public goods illustrate how excessive data collection and poor risk mitigation can result from mismatched incentives. Payment systems are a type of shared infrastructure facilitating economic activity, very much like the highway system or postal service.

In the payments world, the level of protection that consumers get is determined by whoever makes the least effort to maintain his or her portion of the system.

This view of the payments system as a shared infrastructure explains why in many countries the government plays a strong role in managing payments.

In the United States, though, it's the market that provides and manages payments. This country's free-market approach has created a robust and innovative payments industry—but it has also created problems. Specifically, negative externalities and under-provision of weakest-link public goods may be major contributors to the increasing incidence of data breaches in the United States.

To date, the payments industry has managed many of the risks through market mechanisms. Pricing is one such tool. For example, part of the reason that credit cards cost more than debit cards for merchants to accept is that credit cards have a higher incidence of fraud. Insurance, another tool, ensures that most participants protect themselves against risk. Card issuer guarantees, whereby the issuers promise to pay merchants when the merchants accept their cards, are yet another tool. Making such guarantees motivates issuers to keep the credit risk of their cardholders low.

The industry also manages risk through self-regulation. Card network rules, for example, require that merchants follow certain standards or risk losing the right to accept cards. Private contracts between merchants and their banks may require that participants meet card network security standards like the Payment Card Industry Data Security Standard (PCI-DSS). Contracts may also require that parties make specified anti-fraud efforts or face increased liability for losses.

Unfortunately, criminals are also increasingly sophisticated. As data security threats evolve, the market's ability to manage risk may be challenged. For example, Cindy Merritt, assistant director of the Atlanta Fed's Retail Payments Risk Forum, recently commented on the value of PCI-DSS in the United States today in the Atlanta Fed's blog dedicated to payments security issues. She said that although PCI-DSS is the current industry security standard for merchant card acceptance, "[a]s schemes become increasingly sophisticated, however, these guidelines will likely be less and less effective—a possibility that should give the industry pause."

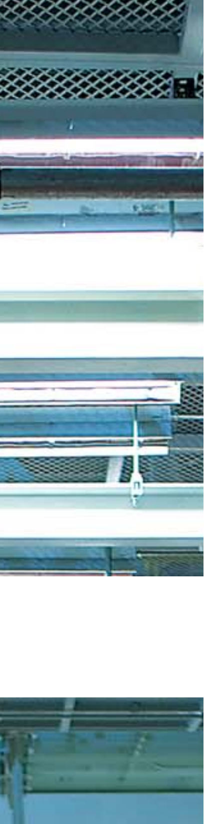
Merritt's concerns highlight the fact that sometimes the market may not be able to adequately align incentives or ensure cooperation in fighting data breaches and financial crimes. In such cases, there may be a role for regulatory intervention. Well-designed regulations can support industry efforts to coordinate risk management and enforce standards.

Despite the generally robust market response to risks in the payments industry, government intervention is appropriate when market failures result in data breaches. Regulators have the ability to offer incentives for private companies to provide more public goods, like payments data security, and disincentives for creating negative externalities, like the over-collection of data. Regulators and industry working collaboratively can prevent data breaches. That way, you won't have any unpleasant surprises when you open your credit card statement. ∎

This article was written by Jennifer C. Windh, a payments risk analyst in the Retail Payments Risk Forum at the Atlanta Fed.

Made in the South:

A Bad News, Good News Story



“Made in the Southeast” isn’t as catchy as “Made in the USA,” but it’s becoming more commonplace following years of disappearing manufacturing jobs in the region. Manufacturers are setting up shop, but can affordable land and labor offset other looming challenges?

Like a hulking red-brick tombstone for a bygone era, the abandoned textile mill looms over the main street in Lanett, Ala. The WestPoint Home Inc. sign out front is fading. Windows are broken. Vines creep up the 120-year-old façade.

After its workforce dwindled over decades from 2,500 to 370, the Lanett Mill finally closed in 2006. It was among dozens of plants that produced sheets, towels, clothes, and other textile products in this area known as “the Valley” that straddles the Alabama-Georgia border near Interstate 85. The mills once employed tens of thousands here and throughout the Southeast. But automation and rock-bottom wages overseas claimed nearly nine of every 10 apparel and textile manufacturing jobs in Alabama and the Southeast between 1990 and 2010, according to figures from the U.S. Bureau of Labor Statistics, or BLS (see chart 1 on page 24).

A new arrival makes a big splash

Forlorn as the Lanett Mill is, the present and future of U.S. manufacturing is nearby. Just five miles–but, figuratively, light-years—from the ghost mill stands the year-old, $1 billion Kia Motors assembly plant. With 3,000 workers and its own Georgia Power electric substation and water tower on site, the Korean carmaker’s first North American factory is like a small city sprawling over 2,200 acres. Immaculate, hushed production floors churn out an average of a vehicle a minute. Employees in Kia-logoed polo shirts move among stations. Many of the workers stand or walk on wood—a flooring more accommodating to the human anatomy than concrete. Precisely choreographed robots look like alien creatures, dipping and swiveling, welding doors and hoods, and gently fitting windshields into automobile skeletons.

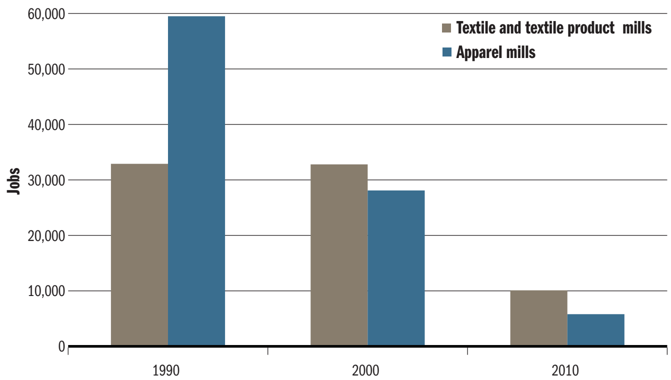
“You can get into the rhythm, and it’s like ice skating; it just looks like a natural flow,” said Randy Jackson, Kia Motors vice president and the first local hire at the West Point, Ga., plant. “That comes with technology being right, processes being right, but also having humans that understand how they’re functioning in their processes and roles.”

There’s been no shortage of humans hoping to fill Kia’s roles. Three waves of hiring drew more than 120,000 applications. The overwhelming response, Jackson noted, was typical for the industry. It also was probably no surprise in the Valley region. Unemployment in Troup County, home of West Point and the Kia plant, reached 14.3 percent during 2009, the year before Kia opened. Seven miles from the plant, the town of Valley, Ala., suffered joblessness of 19 percent during 2009. Both rates as of May remained above the national level but were considerably lower than two years ago—11 and 12.1 percent, respectively.

Many Kia employees are former textile workers, Jackson said, but the “team members,” as Kia calls its staff, also include seasoned autoworkers, ex-nurses, teachers, and fast-food employees. They came through a screening that includes role-

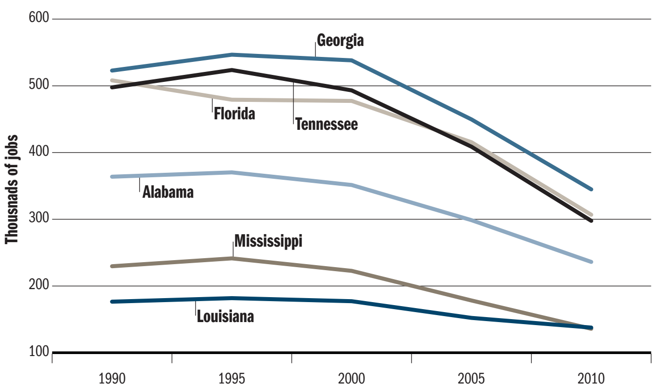
The Kia Motors plant in West Point, Ga., has had a large economic impact since it began production in 2010, employing 3,000 people and producing 300,000 cars annually.

Chart 1
Alabama Apparel and Textile Jobs



Source: U.S. Bureau of Labor Statistics

Chart 2
Southeastern Manufacturing Employment

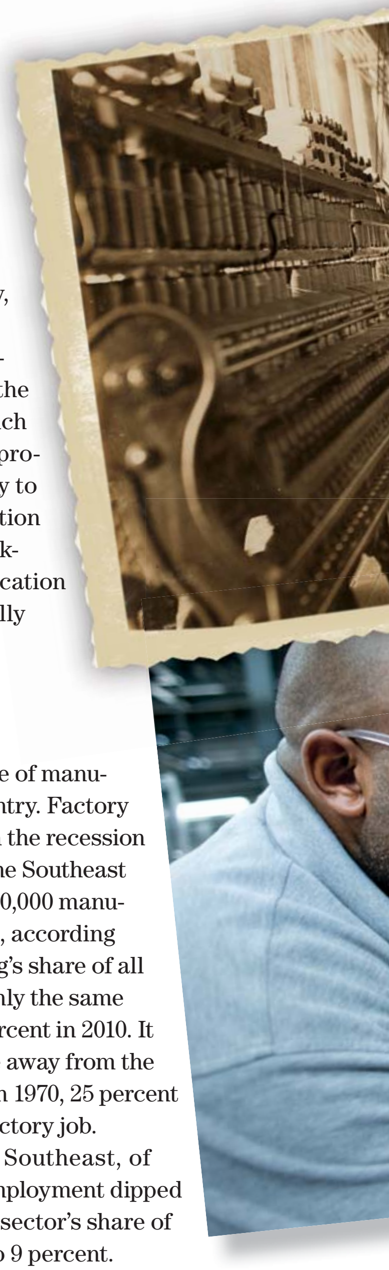


Source: U.S. Bureau of Labor Statistics

playing with Kia teams and a 20-hour tryout on Kia production equipment. Employees at the plant receive anywhere from 30 to 300 hours of training.

At Kia and other manufacturers, low-skilled, repetitive work is as obsolete as a hollowed-out textile mill, experts say. A few hours north, in Chattanooga, the German automaker Volkswagen opened a plant in May 2011. The company is joining a local community college and Tennessee Technological University to create a bachelor of science degree in industrial technology to train workers for VW, its suppliers, and other manufacturers. In recruiting prospective staff, Kia officials want people who value learning, flexibility, and—critically—showing up consistently and promptly, Jackson said.

In fact, earlier this year the Georgia General Assembly acknowledged the growing importance of "soft skills" such as punctuality, the ability to learn, appropriate workplace attire, and the ability to work as a team when it passed legislation allowing the Governor's Office of Workforce Development to establish certification in soft skills. The initiative is informally referred to as "Punctuality 101."



The Southeast reflects nationwide trends

Conditions in the Valley reflect the state of manufacturing in the Southeast and the country. Factory employment was in steep decline when the recession hit in 2007 and made it even steeper. The Southeast from 2000 through 2010 lost roughly 800,000 manufacturing jobs, or 35 percent of its total, according to the BLS (see chart 2). Manufacturing's share of all nonfarm jobs in the region fell by roughly the same degree: from 12 percent in 2000 to 8 percent in 2010. It had been 16 percent in 1990. This move away from the factories is a long-term phenomenon. In 1970, 25 percent of employees in the Southeast held a factory job.

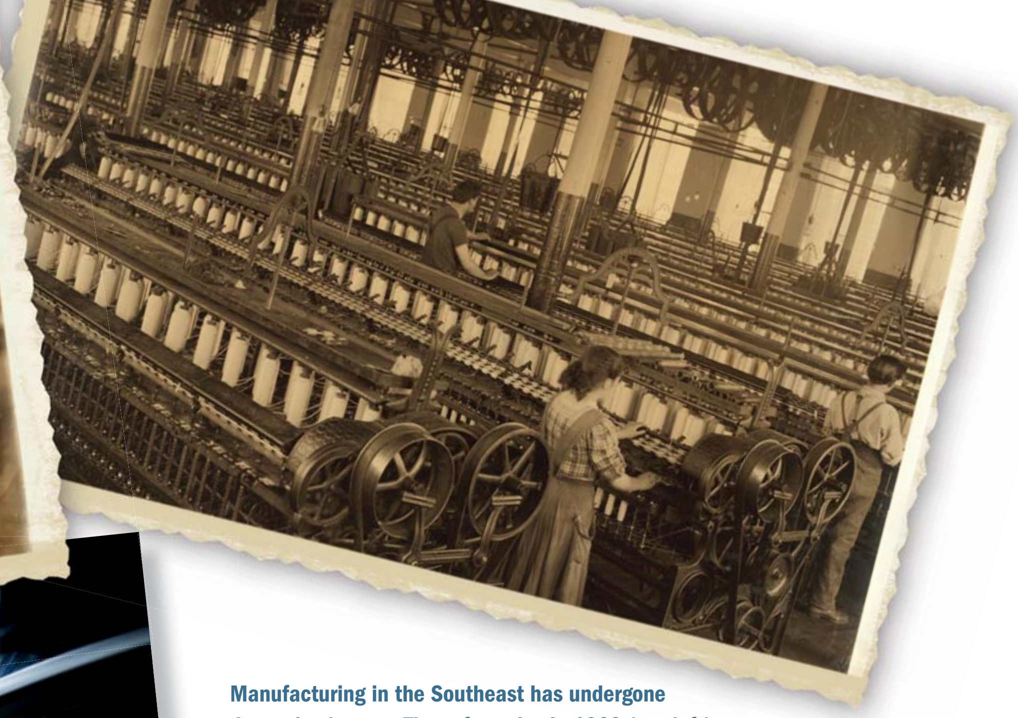
This trend is not isolated to the Southeast, of course. Nationwide, manufacturing employment dipped by a third from 2000 to 2010, while the sector's share of all nonfarm jobs fell from 13 percent to 9 percent.

The shuttered mill in Lanett is among hundreds across the Southeast. Textiles and apparel were some of the largest manufacturing employers in most southeastern states until well into the 1990s but have suffered the heaviest job losses. Other sectors with dramatic declines include furniture, in Mississippi and Tennessee, and wood products. Across the region, jobs have vanished in virtually every category of manufacturing.

Plants like Kia's have helped limit some of the losses. So far in the 21st century, transportation equipment and food stand out as manufacturing sectors that have either gained jobs, in a state or two, or at least recorded smaller losses than other industries. There are exceptions. Florida in the past 20 years has lost nearly half of the 62,000 transportation equipment jobs it had. The Sunshine State has also shed more than half of the 91,000 computer and electronic product manufacturing jobs it boasted in 1990.

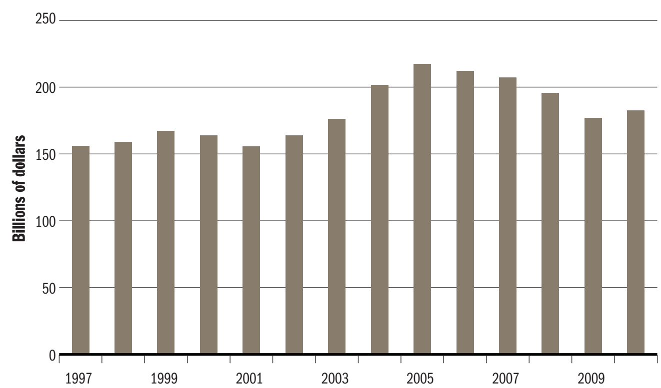
Output remains strong

For all that, the news in manufacturing is not all grim. Even as many factories have closed or downsized, output has not fallen



Manufacturing in the Southeast has undergone dramatic changes. These factories in 1909 (top left) and 1912 (top right) helped make textiles a regional economic powerhouse, but a century later they have been supplanted by plants such as Kia Motors' gleaming facility.

Chart 3
Southeastern Manufacturing Output



Note: Dollars are expressed as 2005 dollars.
Source: U.S. Bureau of Economic Analysis

dramatically. In the conventional view of an American manufacturing decline—we don't make anything anymore—one truth is often overlooked: manufacturing as a share of the nation's gross domestic product has remained steady at 11–13 percent for the past 25 years, according to the U.S. Bureau of Economic Analysis (BEA).

The same dynamic has held in the Southeast in recent years. In real 2005 dollars, manufacturing's share of the region's annual economic output fluctuated between 11 and 13 percent from 1997 through 2010, according to BEA figures. The peak in the region was in 2005, the trough in 2001.

What's more, manufacturing has helped to lead the nation's economic recovery, tepid though it's been. Manufacturing value-added—a measure of an industry's contribution to GDP—rose 5.8 percent in 2010, a sharp return to growth after declining for two straight years, according to the BEA. Likewise in the Southeast, factory output in 2010 inched up 3 percent from the year before after falling the previous two years (see chart 3). As a result of this modest rebound, each of the six states in the Southeast has seen a small bump in manufacturing employment since the recessionary lows of late 2010 or early 2011. However, manufacturing once again showed signs of slowing by mid-2011.

Doing about the same with less

Manufacturers are on a relentless march to increase productivity. Offshoring work to lower-wage countries has cost jobs, particularly in nondurable goods-making industries like textiles and apparel. In addition, though, productivity per worker in U.S. manufacturing in recent years has been soaring by 10–15 percent annually. "That is nothing less than astonishing," said Matthew Murray, who studies manufacturing as a professor of economics and associate director of the University of Tennessee Center for Business and Economic Research in Knoxville.

Productivity in manufacturing has increased faster on average than in the overall economy, Atlanta Fed President Dennis Lockhart pointed out in a speech this year. At Kia's Georgia plant, it is easy to see why. It takes workers just six minutes to adjust three-story-high stamping presses, which exert 2,400 tons of pressure on sheets of steel, so that instead of forging hoods they mold trunks or doors, said Kia spokesperson Corinne Hodges. In another tactic aimed at flexibility, the plant stocks just a four-hour supply of many parts. Trucks carrying seats made in neighboring Harris County arrive every hour throughout the plant's three daily shifts. The factory must be nimble enough to swiftly reconfigure its processes to produce only what wholesale distributors have already ordered.

"We're building vehicles that are sold," Hodges said.

This sort of hyper-efficiency across manufacturing means fewer jobs but also higher wages. Nationwide, manufacturing workers on average are paid $200 more a week than employees in all of private industry—double the premium of 20 years ago, Lockhart said. In Tennessee, according to Murray's team of researchers, the average pay for a manufacturing job last year was about $52,000, 23 percent higher than for all nonfarm jobs. Manufacturing wages in the state also increased about 6 percent from 2009 to 2010, twice as much as overall average pay.

Manufacturing jobs remain important to communities and the regional and national economy for several other reasons as well. In small towns and rural areas, especially, factories are often among the few large employers and municipal taxpayers, Murray said. Consequently, those areas suffer acutely when a big plant closes or lays off workers.

Making things also generates more ancillary economic activity than service industries do. Jay Moon, CEO of the Mississippi Manufacturers Association, said in a recent Atlanta Fed podcast that manufacturing is "far and away the largest income-generator of any sector in the economy." He also said every manufacturing job, on average, creates three to four other jobs to support it, though some economists believe the ripple effect, while real, is less potent.

One job means more jobs

Auto assembly operations are an oft-cited case of this "multiplier effect." For example, Jackson, the Kia vice president, said nearby suppliers to the company's West Point plant employ nearly 8,000 people. Kia also notes that some three dozen other new businesses have started in the West Point area since the plant's arrival.

3-D Printing Adds New Dimension to Manufacturing

The jewelry business is set in its ways. Jewelers today still use a technique that is thousands of years old to create new pieces of jewelry. Called lost-wax casting, this process starts with a pencil-and-paper sketch of a ring, necklace, or other piece. The sketch eventually becomes the model for a mold. The entire process takes more than 40 hours.

Jewelers use the mold, or prototype, to mass-produce hundreds or thousands of units, much as automakers churn out cars. This process has worked for, well, thousands of years.

Moving past the cookie cutter

But the way jewelers create new models is changing. Thanks to an emerging method of manufacturing known as three-dimensional printing, companies like Stuller Inc. in Lafayette, La., can fashion a custom-made prototype or even a finished piece of jewelry in just 15 hours—less than half the time it takes using the traditional method of lost-wax casting, said Coby Blanchard, Stuller's chief supply chain officer. Stuller typically uses 3-D printing to build a piece based on a unique design e-mailed by a customer, a retail jewelry store. Stuller also uses the technique to rapidly build prototypes so that, for instance, a merchant can see a piece and give input while the piece is still in development.

Over the past year, the volume of product Stuller made using 3-D printing rose by 200 percent. "It is a significantly growing part of our business," Blanchard said. "But, overall, it's relatively small and new." Stuller Inc.'s founder and chairman,

Foreign automakers have come to be viewed as something akin to manufacturing saviors in the Southeast. States fight fiercely for the plants with generous tax breaks, publicly funded training programs, and other financial incentives. The "transplants" indeed appear to be the main reason transportation equipment has remained one of the region's biggest manufacturing employers. Since 1990, foreign-based automakers have opened 15 assembly plants in the United States, nine of those in the six states in the Atlanta Fed's district, and another in South Carolina, according to a report from the Congressional Research Service (see the table on page 28).

"This southern migration is largely attributable to foreign investors being drawn to the U.S. South's low-cost land and labor, along with states that promote more flexible labor regulations and do not appear to have a strong pro-union sentiment," the report states.

The Congressional Research Service report noted that from 2003 through 2009, Alabama added more than 12,000 automo-

Matthew Stuller, serves on the board of directors of the New Orleans Branch of the Atlanta Fed.

Printing in 3-D does not happen on paper. A CAD (short for "computer-aided design") image is fed to a special 3-D printer. Instead of spraying ink onto paper, the printer shoots a substance such as wax, plastic, or a composite material onto a surface. Then the syringe moves a fraction of a millimeter at a time and builds an object by depositing the material layer by layer.

This process is known as "additive manufacturing," since it makes something by adding material, in contrast to traditional "subtractive manufacturing" that fashions a product by cutting, drilling, or smashing it out of a bigger original piece of metal or plastic. The method has been around, with continuous refinement, since humans made their first arrowhead. Additive manufacturing, on the other hand, has been around for only about 20 years, but its uses have recently expanded and gained more attention. Additive manufacturing is used by jewelers like Stuller, as well as makers of dental and medical implants, automotive parts, aerospace companies, and others.

Multiplying uses

Firms large and small are making things with 3-D printing technology. In May this year, General Electric established an Additive Manufacturing Lab. GE Aviation designers believe the new designs and material properties "hold the promise of radically improved performance, reduced weight, fuel consumption and greenhouse gases in the exhaust of aircraft engines," according to a GE website.

The *Economist* magazine in February declared that 3-D printing from digital designs "will transform manufacturing." The *New York Times* reported in September 2010 that while some question how the technology will move from manufacturing applications to producing consumer goods, "its use is exploding."

Additive manufacturing apparently rebounded quickly from the recession. In 2010, revenues produced by all additive manufacturing products and services grew 24 percent after declining 10 percent in 2009, according to Wohlers Associates Inc., a Colorado-based consulting firm. ∎

Auto Plants in the Southeast

Year Open	Company	Location	Employees	Annual production capacity
1948	General Motors[a]	Shreveport, La.	923	
1983	Nissan	Smyrna, Tenn.	6,000	550,000
1997	Nissan (powertrain assembly only)	Decherd, Tenn.	1,250	n/a
1997	Mercedes-Benz	Vance, Ala.	2,800	174,000
2001	Toyota (engine plant only)	Huntsville, Ala.	768	n/a
2001	Honda	Lincoln, Ala.	4,000	300,000
2003	Nissan	Canton, Miss.	4,500	400,000
2005	Hyundai	Montgomery, Ala.	2,500	300,000
2010	Kia	West Point, Ga.	3,000	300,000[b]
2011	Volkswagen	Chattanooga, Tenn.	2,000[c]	150,000
Fall 2011[d]	Toyota	Blue Springs, Miss.	2,000	150,000

Notes: [a]Slated to close in 2012; [b]projected to be 360,000 in 2012; [c]projected to be 2,300 by fall 2011; [d]projected opening date
Sources: Companies, Congressional Research Service, news accounts, chambers of commerce

tive manufacturing jobs while the United States as a whole lost 231,000. Alabama in the past decade has attracted assembly plants owned by Mercedes-Benz, Honda, and Hyundai, along with a Toyota engine factory.

That influx helped Alabama become the only southeastern state to gain transportation equipment-making employment between 2000 and 2011. Longer term, since 1990, the region's employment in the sector has declined by 5 percent, a less dramatic drop than in most other manufacturing categories.

Of course, major automobile plants do not open often. Amid short-term economic difficulties and longer-term challenges, the transformation of southern manufacturing continues. "Southern states built the manufacturing sector on the backs of unskilled labor," Murray said. "But we continue to see the shift away from low-wage, low-skill manufacturing to a much more technologically based production process."

That sort of work demands a different breed of worker, as Kia and Volkswagen's hiring and training requirements illustrate, making it crucial that more of the region's people at least complete high school, Moon noted. For now, the Southeast lags in high school graduation rates and college attendance. Among the region's states, only Florida meets or exceeds the U.S. ratio of 84.6 percent of people 25 and over with a high school diploma, according to the U.S. Census Bureau. All the southeastern states are below the national average in the percentage of people with bachelor's degrees.

Other trends might hold more promise. For one, because of shipping costs, it makes sense to build bulky, durable products—cars, tractors, and appliances, for instance—close to the consumers, Murray and others said. That factor bodes well for the United States and the Southeast. Second, labor costs and other expenses are rising rapidly in some developing countries, notably China. As the cost gap with China shrinks, U.S.-based companies are more likely to locate plants in the United States, according to the Boston Consulting Group, which has offices in 42 countries. Hal Sirkin, a senior partner at the firm, points to NCR's decision to return some production of its ATMs to the United States, and Columbus, Ga., specifically, as an example of this phenomenon. In an October 2009 announcement, an NCR executive said "in-sourcing" ATM production would "decrease time-to-market, improve our internal collaboration, and lower our current operating costs."

Sirkin said Chinese manufacturing wages are rising 15–20 percent a year as employers compete for scarce skilled workers. Boston Consulting figures that flexible work rules and government incentives are making states—including Mississippi, Alabama, and South Carolina—"increasingly competitive as low-cost bases for supplying the U.S. market."

Nonetheless, the region is unlikely to reverse the drastic loss of manufacturing jobs, said UT's Murray. Rather, the Southeast will probably continue to see fewer, but higher-paying and more sophisticated, production jobs. "We'll still create some manufacturing jobs," Murray said. "But the net will continue to decline." ∎

This article was written by Charles Davidson, a staff writer for EconSouth.

On the Ground continued from page 16

in tourism last year. This increase was attributed to a variety of factors but most predominantly was a combination of consumers wanting to travel shorter distances and economize on their vacation spending and wanting to avoid the issues related to the impact of the oil spill on the Gulf Coast beaches.

Turning to 2011, east Tennessee tourism was reported as being solid during the first four to five months of the year, with most businesses up slightly from the same period in 2010. However, based on recent anecdotal information gathered from our contacts in the area, summer tourism through July is down about 10 percent compared with last year and has returned to more of a trend growth rate. This information seems to confirm reports we've been hearing from my regional executive colleagues in Florida, that tourists have returned there this summer. The Gulf Coast beaches are back to their pristine condition, and apparently consumers have adjusted to the current level of gas prices.

Robert Musso, regional executive at the New Orleans Branch: I think several factors are contributing to the recent uptick and success we have seen in the tourism arena. First, New Orleans is considered one of the three "brand" cities in the United States, and with the value of the dollar down this has been attracting many foreign visitors. Second, many U.S. citizens who cannot go abroad have chosen New Orleans as a destination because it is seen as exotic, with a European flavor. Finally, the renaissance the city has undergone since Hurricane Katrina has made it a very attractive destination. There's more shopping, better museums, more restaurants, better accommodations, etc. ▮

On Point continued from page 1

Thinking globally, acting locally

The global economy is more interconnected than ever, as unfolding events in Europe have vividly illustrated. For his story on capital controls, research analyst Andrew Flowers looked at how some nations have attempted, with varying success, to control the effects of outside investment on their economies. "The issue that interested me the most during the course of my research for this article was the ebb and flow of the power of the International Monetary Fund," he said. "Following the Asian financial crisis of the 1990s and continuing through the relatively stable era of global growth in the 2000s, the IMF seemed to have lost a good deal of its influence as a policy-making institution. With regard to loans and policy monitoring, economists and emerging-market policymakers began to see either other institutions or the international financial markets themselves as having more influence on policy.

"Then—during and following the financial crisis—things changed. The IMF suddenly had much more of a prominent role, whether it was facilitating policy responses on the international level, providing loans to emerging market countries in distress, or being a key player in the ongoing attempt to resolve the European sovereign debt crisis. And on the subject of my article—capital controls—the IMF has in this area, too, gained great visibility in restarting this conversation about the efficacy of such policies, whether it's reasonable for countries to implement them and under what conditions."

In our next issue, we will feature our outlook for the regional, national, and international economies in 2012. The Atlanta Fed's research department always delivers an insightful look ahead at the coming year. ▮

Lynne Anservitz
Editorial Director

Question & Answer

"You Need to Have a Much More Agile Mind"

An Interview with William Krueger of Nissan Americas

WILLIAM J. KRUEGER

Title	Vice Chairman
Organization	Nissan Americas
Website	nissanusa.com/about/corporate-info/
Other	Krueger is responsible for daily operations of Nissan Americas' business in the United States, Canada, Mexico, Brazil, and 37 other Latin American and Caribbean countries. He oversees all manufacturing and supply chain management for Nissan's three plants in the United States and its two plants in Mexico. Before joining Nissan, Krueger held management positions at Toyota, General Motors, and Harley Davidson. Krueger is also a member of the board of directors of the Atlanta Fed's Nashville Branch.

Nissan was a pioneer among foreign-based automotive manufacturers that have built assembly plants in the southeastern United States. The Japanese automaker became the region's first "transplant" with the 1983 opening of its Smyrna, Tenn., factory. It originally made Datsun pickup trucks. Today, it produces six Nissan models. Nissan subsequently opened an engine plant in Decherd, Tenn., in 1997 and another vehicle assembly plant in Canton, Miss., in 2003. *EconSouth* spoke with William J. Krueger, vice chairman of Nissan Americas, about the evolution of vehicle building and what that means for the workers who build them.

EconSouth: *Nissan's move into the South has apparently worked out okay. How does the company feel about that original decision to come to the region, and how did Nissan decide to come to the southeastern United States?*
William Krueger: It's worked wonderfully well. As I understand it, the initial decision was based on the fact that we were very centrally located to where the customer base was. This goes back to a time when Lamar Alexander was governor of Tennessee. He had a satellite photo of the United States at night. He took it to Japan and showed it to all the automakers. It essentially showed where civilization was; the clusters of lights were major population centers. Smyrna, Tenn., was accessible to the bright lights of the Northeast, the Midwest, the Midsouth, the Southeast, the mid-Atlantic. It was an almost optimal spot to access a huge, huge buying population. So for inbound and outbound logistics, it was a great geographic position.

ES: *Has automobile manufacturing changed much in just the last few years?*
Krueger: There's been a sea change from, let's say 20 years ago, when entire vehicles were manufactured piece by piece by the automakers. Since then, the structure and construction of vehicles have turned more modular. That means we've divided the final assembly work and shifted more of the design and expertise of certain components to our supply base. So the auto manufacturers became more integrators of products from multiple key suppliers that supplied seats or interior packages like the instrument panel that already had the radio installed, the air bags, and a lot of that stuff.

The competition became not between OEMs [original equipment manufacturers, or the major automakers] as much as between big suppliers. Many suppliers shifted their labor outside of the United States. First it went from the [American] North to the [American] South, then out of the country. For Nissan I think we're seeing that shifting back to putting [the supplier base] in-house or near our site because the transportation costs and the need to be much more responsive to the marketplace have driven us to that next evolution.

ES: *What does this mean for your workforce? How has their work changed?*
Krueger: The integration of parts, of modules, requires that our skilled workforce be much higher skilled. Specifically, our maintenance organization has shrunk, but expectations of their capabilities have grown pretty much the way technology has grown. Cars used to be bolts and pulleys; now they're electronics.

> **"Our maintenance organization has shrunk, but expectations of their capabilities have grown pretty much the way technology has grown."**

ES: *More specifically, how does that evolution change the demands on factory workers?*
Krueger: There's a greater mental burden. In our Smyrna plant, we're making the two-door and four-door Altima. We're producing the Maxima, Pathfinder, Xterra, and the Frontier for export and domestic markets. Technicians need to have the capability to understand multiple different products going to multiple different countries, which adds to the complexity of building them. You're not screwing the same bolt 10,000 times a shift. There are different option configurations for different vehicles. So you need to have a much more agile mind.

ES: *Can you give me a quick example of how a Maxima going to, say, the Middle East would be different from one sold in this country or South America?*
Krueger: There are different engines with different requirements for durability and different safety features. What's standard in one country is an option in another. In the Middle East, for example, people often drive 100, 110, or 120 mph for six hours. They use the entire fuel tank, then slow down and stop. In South America, the terrain is much more severe than in the United States—elevation changes and road conditions are different from America. That calls for different suspension packages. And different countries and regions have different emission control expectations.

The flexibility of our workforce and the capability of our workforce really allowed us to weather the 2008 financial crisis with zero layoffs. We got through it by reallocating and shifting our model mix and volume, and absorbing different levels of work into our workforce.

ES: *How did the flexibility allow you to avoid layoffs?*
Krueger: It has a lot to do with mutual trust and mutual respect that the leadership and workforce have for each other. We are focused on training people to understand and comprehend what we're doing. We engage workers in [planning and carrying out] line-speed changes, model mix rebalancing, and new model introductions. It's not a management-dictated type of system. It's very much full teamwork. So skill sets we look for in recruiting are flexibility, communications skills, and a team concept. ∎

This interview was conducted by Charles Davidson, a staff writer for EconSouth.

Capital Controls Gain Currency in Today's Global Economy

Global investors have poured money into some emerging-market economies (EMEs) because they offer higher returns than do the more advanced economies. That's a win-win for everyone—right? Not necessarily. For many EMEs, this deluge of foreign capital can create economic imbalances that traditional monetary policy alone may not be able to fix. What can EME policymakers do?

Policymakers often argue for a particular policy with the intention of making their country, state, or city a good place to invest or more attractive for foreign capital. The flow of capital into the United States, for example—whether through a Japanese automaker building a plant in Georgia or a Swiss banker purchasing shares of Apple—is considered by most a desirable outcome. But for some EMEs experiencing high rates of growth and growing inflows of foreign capital, such investment demand can bring many challenges.

But isn't foreign capital a good thing?

What sort of challenges do these fast-growing EMEs face? Doesn't development theory predict that it's exactly these countries that *should* have higher rates of return on investment? China, for one, has had sustained growth rates of more than 10 percent for most of the past two decades. Likewise, India and Brazil have seen their economies expand with enormous speed in recent years. But an influx of foreign capital brings with it a host of unintended side effects. Exchange rate appreciation, for example, can occur rapidly, which can harm the competitiveness of domestic exporters. It's precisely this concern that has compelled China to implement strict domestic investment restrictions and deliberate exchange rate management. The country's policymakers want to prevent the renminbi from appreciating so rapidly that it puts its export-oriented growth model at risk.

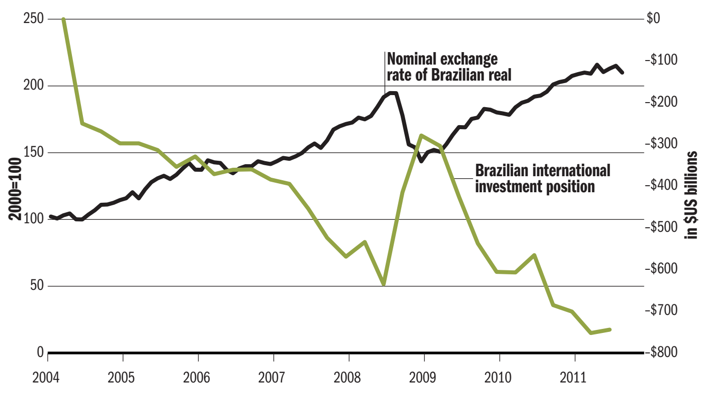
Foreign capital inflows can also be fickle. Receiving countries may be susceptible to "sudden stops," when foreign investors quickly run for the exits at the first sign of trouble in an economy. The Asian financial crisis of the late 1990s was a painful reminder of how foreign capital—at first a sign of burgeoning growth—can severely exacerbate an emerging financial crisis. Following a run-up in asset prices, which were fueled by foreign investment, the economies of Indonesia, Thailand, and South Korea, for example, saw their currencies depreciate sharply as foreign credit abruptly fled their troubled financial systems.

The experience of these Asian countries has been an important lesson for EME policymakers, especially in the recovery from the recent global financial crisis. Many global investors have poured money into some of these EMEs because they offer higher returns than the more advanced economies. This deluge of capital combined with the fear of overheating and of "sudden withdrawal" has led some countries to implement capital controls. By imposing limits on the amount or type of foreign capital flowing into or out of a country, these tools help EMEs manage their risk.

Capital controls may take the form of a tax on foreign capital inflows or quotas on investment. EMEs can also limit volatility in flows by requiring that a certain percentage of foreign investment be held in reserve for a specified number of days at the receiving country's central bank. This type of control, called a "lock-in" policy, prevents sudden withdrawals of capital.

Although EME policymakers are increasingly turning to capital controls, these tools have not necessarily been popular, at least among most economists and policymakers in developed countries, not to mention in the financial services industry. Advocates of international financial liberalization see capital controls as having inefficient, distortionary effects for any country adopting them. Sebastian Edwards of the University of California, Los Angeles, for example, argued in a 1998 paper that the 1980s Latin American implementation of capital controls was counterproductive. And until recently, the International Monetary Fund (IMF), seen as the global authority on matters of foreign capital management, had maintained a policy that capital controls were ineffective (at best), if not harmful (at worst). However, capital controls are increasingly being called for by domestic-oriented manufacturers and exporters in EMEs with strong currencies—and, under certain circumstances, even approved by the IMF.

Brazil's Capital Inflow



Sources: Banco Central do Brasil, JP Morgan

Brazil's paradox of riches

A look at Brazil may help us better understand what situations could lead EME policymakers to institute capital controls. The country's economy has experienced rapid growth in recent years, despite a small, short respite during the global recession of 2007–9. Unprecedented amounts of foreign capital have flowed into Brazil. This ostensible blessing, however, could also be considered Brazil's curse. The country's large growth rates, along with its high domestic interest rates, have caused these huge investment flows, which in turn have pushed up the value of Brazil's currency, the real. (Brazil's interest rates are the second highest, after Croatia's, among the 55 countries that Bloomberg tracks.) The increase in the value of the real has largely hurt Brazilian domestic exporters and stymied the central bank's attempt to reduce inflationary pressures in the economy. Brazil is overheating, and foreign investor interest in the Brazilian economy is exacerbating attempts to slow the economy down.

Chart 1 illustrates Brazil's struggle with foreign capital. The black line tracks the exchange rate of the real, in nominal terms and trade-weighted according to Brazil's trading partners. Plotted against the left axis, this line shows that the real has appreciated tremendously since 2008. The green line tracks Brazil's net international investment position, which is the amount that Brazilians have invested abroad—assets—minus the amount of foreign investment into Brazil—liabilities. Plotted against the negative numbers of the right axis, this line shows the surge of foreign capital into Brazil's booming economy.

ECONSOUTH NOW PODCAST

Capital controls are the subject of an in-depth interview. On frbatlanta.org, select "Podcasts."

The chart also shows that sharp reversals in both the international investment position and the real occurred in 2008. Before the financial crisis, the currency was strengthening and foreign investment was surging (that is, the investment position was trending negative). However, from the onset of the crisis in 2008 and then continuing into early 2009, the real depreciated sharply and the net investment position dramatically rebalanced as foreign investors withdrew large amounts of capital. The trend lines for both series reverted back to their pre-crisis trend after late 2009—and, if anything, have strengthened in that direction.

What's wrong with traditional monetary policy?

Brazil's experience is a clear example of two potentially negative side effects of high foreign capital inflows: 1) in good times, the EME's currency appreciates strongly, perhaps too strongly, and asset bubbles, if there are any, are exacerbated; and 2) in bad times, the capital pours out of the country, which leads to greater financial volatility, less credit availability, and sharp downward swings of the exchange rate.

Monetary policymakers in Brazil and in other EMEs experiencing similar problems could choose to raise interest rates in order to cool the economy and mitigate the volatility. But a hike in the domestic interest rate could lead to a third negative side effect of high foreign capital inflows. An interest rate increase actually widens the spread between the EME's return on investment and a developed country's return, making the EME even more attractive for foreign investment. This spread is often the main cause for the foreign investor's interest. In cases like these, monetary policy has the potential to make a bad situation worse.

Take high-quality corporate bonds as a hypothetical example: investors could choose from Japan at, say, 3 percent, the United States at 6 percent, or Brazil at 14 percent. Under these conditions, Brazil would naturally be a very attractive option. This spread could also fuel the so-called

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carry trade of borrowing in a low-yielding currency and investing in a high-yielding one, leading to further exchange rate imbalances.

For overheating EMEs, tempering inflation is a top priority. If these countries do not have recourse to the usual, appropriate tool, which is to tighten monetary policy, what steps can they take without digging themselves deeper?

So are capital controls a useful solution or a misguided policy?

Brazil has not been alone in its struggles with foreign capital inflows. During the recent global financial crisis and recession, financial market panic led to a spike in foreign capital redemption from many emerging market economies. Iceland, Latvia, Pakistan, and other countries all experienced a sudden outflow of foreign capital to safer investments—mostly developed-country sovereign debt. Many of these countries, reliving the experience of East Asia but on a global scale, began to question the conventional wisdom that rejected capital controls.

Witnessing the recent experiences of the EMEs post-crisis and looking back to the Asian experience, the IMF—along with several other economists across the globe—began to rethink its position against capital controls. These economists saw that the inherent volatility of capital flows to EMEs, along with the relative impotence of domestic monetary policy to combat the negative spillovers, gave room for appropriately deployed capital controls to be used. The economists also conceded that perhaps some circumstances justified capital management, to allow overheating EMEs to avoid problems such as those that Brazil and East Asia experienced. Consequently, in February 2010, the IMF released a position statement that argued that capital controls could sometimes be used appropriately if other tools were already employed (Jonathon D. Ostry, Atish R. Ghosh, Karl Habermeier, Marcos Chamon, Mahvash S. Qureshi, and Dennis B.S. Reinhardt; "Capital Inflows: The Role of Controls," *IMF Staff Position Note*). This change in official policy toward capital controls is extremely significant, given the rebound in capital flows.

Likewise, Brazil's finance minister, Guido Mantega, shifted from his earlier position of censuring the use of capital controls (see, for example, "Mantega denounces capital controls," available at www.emergingmarkets.org/Article/2028450/Global/Mantega-denounces-capital-controls.html) to strongly supporting their use and even criticizing the IMF's move to create a framework for their use: "We oppose any guidelines, frameworks or 'codes of conduct' that attempt to constrain, directly or indirectly, policy responses of countries facing surges in volatile capital inflows." Mantega has partly justified his reversal by pointing to the rapid appreciation of the Brazilian real as foreshadowing a "currency war." Indeed, many emerging economies' policymakers blame accommodative U.S. monetary policy—especially the Fed's second round of so-called quantitative easing—for causing an increase in the flow of capital into their markets. Mantega has also criticized Chinese economic policy in recent months, with the undervaluation of the Chinese renminbi (see the first quarter 2010 *EconSouth* article "Brazil and Peru Set to Flourish in a Postrecession World"). Indeed, Brazil, which was in the difficult position of trying to slow an overheating economy and counteract an excessively strong currency, instead instituted a foreign financial transaction tax.

The debate goes on

If global capital flow imbalances persist, Brazil and other EMEs may increasingly turn to capital controls to regain equilibrium in their economies, while some large developed economies—usually with relatively weak currencies—will likely continue to argue against them. Complicating the debate is the fact that some advanced economies have begun to employ currency interventions, measures that are quite similar to capital controls but less interventionist. For example, in recent weeks, Switzerland and Japan have also intervened to dampen excessive appreciation of their currencies, the franc and the yen. One certainty is that the debate over capital controls, which only recently appeared to have been settled, is far from over. ∎

This article was written by Andrew Flowers, an economic analyst at the Atlanta Fed.

closing numbers

10.74

Total U.S. employment, in percent, made up of health care jobs

Source: U.S. Bureau of Labor Statistics, as cited in *EconSouth*'s article, "Examining Health Care Employment: The Prognosis Is Good"

82

Percent of U.S. population living in urban areas in 2010

Source: Central Intelligence Agency World Factbook

15

Number of foreign-based automaking plants that have opened in the United States since 1990

Source: Congressional Research Service, as cited in *EconSouth*'s article, "Made in the South: A Bad News, Good News Story"

152

Number, in thousands of miles, of petroleum pipelines in the United States in 2010

Source: Central Intelligence Agency World Factbook

340.9

Number, in thousands of miles, of natural gas pipelines in the United States in 2010

Source: Central Intelligence Agency World Factbook

2.032

Number, in millions, of passengers departing for cruises from Miami in 2009

Source: Central Intelligence Agency World Factbook

121

Number of unruly passengers on U.S. passenger planes in 2010

Source: Federal Aviation Administration

7.7

Percent of U.S. adults who sleep less than six hours a night

Source: Centers for Disease Control National Health Interview Survey, 2005–7

16.2

Number, in millions, of records exposed in data breaches in 2010

Source: Identity Theft Resource Center, as cited in *EconSouth*'s article, "Payments Security: As Strong as the Weakest Link"

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CHANGE SERVICE REQUESTED

now and then

Manufacturing in the Southeast remains a big employment sector, though modernization has transformed it. What was once state-of-the-art manufacturing technology in the spinning room at Magnolia Cotton Mills in Mississippi in 1911 (above right) is now symbolized by the production floor at Georgia's new Kia Motors plant.